

THE BAHAMAS NATURAL RESOURCE FUND



A Policy Research Whitepaper

By

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Natural Resource Fund Governance: The Essentials

Executive summary

Natural resource funds—a subset of sovereign wealth funds—held approximately \$3.5 trillion in assets as of the end of 2013. This money, which belongs to the public and comes from extraction of non-renewable resources, should serve the public interest. Governments can use these funds to cover budget deficits when resource revenues decline; to save for future generations; to earmark for national development projects; or to help mitigate Dutch disease by investing abroad. They can also be used to reduce spending volatility, in turn improving the quality of public spending, promoting growth and reducing poverty, and protect oil, gas and mineral revenues from corruption. Citizens in Chile, Norway, some Persian Gulf countries and some U.S. states have experienced these benefits.

Unfortunately, poor natural resource fund governance has often undermined public financial management systems and funds have been used as sources of patronage and nepotism, with dramatic results. Ostensibly designed to steady macroeconomic management or set aside savings for the future, many funds have lacked clear goals or rules, and thus have complicated public finance without making it more effective. And in places like Angola and Russia, they have been used to avoid public scrutiny, facilitating billions of dollars in wasteful spending.



The Natural Resource Fund Project

The Research focused on a global perspective to examine the best way forward for the Bahamas Sustainable International Investment was the thrust thereby a general sample was used and as a result a cluster was chosen ending in a survey of 22 natural resource funds worldwide, covering 18 national and subnational jurisdictions. The research methodology for these fund profiles drew on a number of resources for its analytical framework, including Edwin Truman's Sovereign Wealth Fund Scoreboard, RWI-NRC's 2013 Resource Governance Index and the Santiago Principles. Each profile is the product of in-depth study of the laws, regulations and policies governing one or a set of funds in a given country or subnational jurisdiction. Primary sources were used when available and all profiles were peer-reviewed by sovereign wealth fund experts, based in-country where possible.

Lessons from these case studies crystalized into five policy briefs examining fund management, investments, transparency and accountability to the public, as well as the fiscal rules that govern them.

This policy overview is a summary of the project's findings and conclusions.

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Why does natural resource fund governance matter?

Poor fund governance has resulted in the loss of billions of dollars in oil, gas and mineral sales. For instance, due to excessive risk-taking and lack of oversight, the Libyan Investment Authority lost much of a \$1.2 billion investment in equity and currency derivatives following the 2008 financial crisis. From the mid-1980s to 1992, the Kuwait Investment Authority lost \$5 billion on poor investments in Spanish firms. An absence of internal controls, supervision and transparency made possible not only mismanagement of assets but also high commissions and profits for insiders. The opacity of many natural resource funds provides a fertile environment in which these maladies can fester; of the 54 natural resource funds we have identified globally, half are too opaque to study comprehensively, raising questions about how they are being used or misused.

The indirect costs of poor natural resource fund governance may be even greater. Many natural resource funds either do not serve a well-defined purpose or do not meet their objectives. One self-declared savings fund, the Canadian province of Alberta's Heritage Savings Trust Fund, failed to save for much of a 25-year period, contributing to inflation and encouraging unsustainable consumption. And some self-declared stabilization funds have failed to mitigate expenditure volatility caused by swings in oil prices (e.g., Azerbaijan, Kazakhstan, Trinidad and Tobago, Venezuela). Expenditure volatility makes planning for the future, both by the government and the private sector, more difficult, leading to poor investment decisions. Additionally, when spending increases too quickly, money is often wasted on legacy projects such as concert halls and monuments, or can cause inflation. When spending is cut too quickly, roads are left half-built and economies can experience significant unemployment or bankruptcies.

Keyfindings

Natural resource funds are increasingly popular; 30 of the 54 funds currently active were established since 2000, with authorities in more than a dozen more countries considering or planning new funds.¹ Among both new and older funds, there is a clear trend toward codifying (in legislation or regulation) governance requirements, such as rules determining which types of revenues must be deposited, or rules detailing the management roles of different government agencies.

Transparency requirements and checks on corruption and patronage are often inadequate. We find that only about half of the funds in our sample of 18 release internal or external audits of their performance or publish the details of specific investments. Funds in Botswana, Equatorial Guinea, Iran, Kuwait, Mexico, Russia and Qatar remain relatively opaque despite their governments signing on to the Santiago Principles, a set of voluntary good governance standards. The Brunei Investment Agency, Equatorial Guinea's Fund for Future Generations and the Libyan Investment Authority still keep nearly all information about their activities secret. Amidst the overall weakness in fund transparency, there are a growing number of funds that have begun to publish audits and information about returns and investment managers.

Some governments also resist even the most basic operational rules, leaving them at greater risk of not fulfilling their macroeconomic objectives. The governments of Abu Dhabi (UAE), Azerbaijan, Botswana, Iran, Kuwait, and Russia, for example, have been unwilling to impose withdrawal rules on their respective funds, while the governments of Abu Dhabi and Botswana have not imposed deposit rules.

Additionally, most governments permit domestic spending directly through their funds' choices of asset holdings rather than through the budget process. This has undermined parliamentary accountability, democratic institutions and public financial management systems in some

¹ New funds are being planned or considered at the national level in Afghanistan, Israel, Kenya, Lebanon, Liberia, Mozambique, Myanmar, Niger, Peru, Uganda, Sierra Leone, South Sudan, Tanzania and Zambia and at the subnational level in many other countries.

countries. In Azerbaijan, for instance, government authorities have used the State Oil Fund (SOFAZ) to directly finance strategic government projects such as the railway between Azerbaijan, Georgia and Turkey. These expenditure items are not subject to the same reporting or public procurement requirements as those financed through the normal budget process, nor are they subject to as much parliamentary oversight. The Angola Sovereign Fund, the National Development Fund of Iran, and Russia's National Wealth Fund also bypass normal budgetary procedures and are used as vehicles for political patronage. In recognition of this danger—as well as the potential that domestic spending by the funds will undermine macroeconomic objectives like fiscal sterilization—some funds, including those in Abu Dhabi (UAE), Botswana, Chile, Ghana, Kazakhstan and Norway, have prohibited direct domestic investments.

Contrary to conventional wisdom, we argue that because of the risks associated with their existence outside the ordinary budget process, funds generally ought not to be used as vehicles for domestic investment through choices of domestic asset holdings. Instead, domestic spending of natural resource revenues should be made via withdrawals from the fund to the general or consolidated account, and can even be earmarked for specific health, education, infrastructure or sector-specific projects to encourage spending on development priorities.

The rhetorical appeal of natural resource funds as symbols of development and progress has sometimes outstripped their practical value as solutions to specific macroeconomic or budgetary problems. This lack of clarity represents a real danger, as poorly conceived funds can become channels for corruption.

Recommendations

We recommend that governments establishing or maintaining natural resource funds consider six steps that promote good natural resource fund governance, each of which is elaborated further in our other policy briefs:

1. Set clear fund objective(s) (e.g., saving for future generations; stabilizing the budget; earmarking natural resource revenue for development priorities).
2. Establish fiscal rules—for deposit and withdrawal—that align with the objective(s).
3. Establish investment rules (e.g., a maximum of 20 percent can be invested in equities) that align with the objective(s).
4. Clarify a division of responsibilities between the ultimate authority over the fund, the fund manager, the day-to-day operational manager, and the different offices within the operational manager, and set and enforce ethical and conflict of interest standards.
5. Require regular and extensive disclosures of key information (e.g., a list of specific investments; names of fund managers) and audits.
6. Establish strong independent oversight bodies to monitor fund behavior and enforce the rules.

Additionally, we stress that governments should establish these and other rules and institutions governing natural resource funds through a process that generates broad political consensus. Governments may not comply with even the best rules unless key stakeholders and the broader citizenry have bought into the need for government savings and constantly apply pressure to follow the rules. This has become apparent not just in natural resource-rich economies, but also in places like Europe where, from time to time, most member states breached the fiscal rules outlined in the EU's Stability and Growth Pact even prior to the 2007-08 global financial crisis.

Finally, we call on international institutions and advisers to carefully consider the implications of recommending the establishment of funds where public financial management systems are opaque

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and poorly functioning. International advisors should recognize that the establishment of a fund by itself will not improve resource governance. Rather, natural resource funds ought to be products of fiscal rules or macroeconomic frameworks that call for savings of oil, gas or mineral revenues. Minimum conditions (e.g., clear objectives, operational rules, investment risk limitations, effective oversight, transparency) must be present in order to improve natural resource governance.



The Natural Resource Fund

Given their collective size—approximately \$3.5 trillion in assets as of the end of 2013, and growing—and concerns about the motivations of their government owners, much has been written about natural resource funds (NRFs), their investments and their global influence.² However, funds' impacts on governance and public financial accountability at home has received far less attention.³

On the one hand, these funds can be used to serve the public interest—for example, by covering budget deficits when oil or mineral revenues decline, saving resource revenues for future generations, or helping to mitigate Dutch disease through fiscal sterilization.⁴ On the other hand, in many countries they have undermined public financial management and become sources of patronage and nepotism.

The Researchers were required to conduct a worldwide survey of natural resource funds—a subset of sovereign wealth funds—examining their management, investments, transparency and accountability to the public, as well as the fiscal rules that govern them.⁵

The goal of the project is to better understand current fund governance practices in order to foster cross-country experience sharing and improve fund performance. The five policy briefs, 18 natural resource fund profiles, this policy overview, that constitute the paper have been designed to equip government officials, policymakers, researchers and citizens with much of the necessary background and information to establish funds or reform existing ones.

Each profile—whether it covers a national fund like Kazakhstan's or a subnational fund like North Dakota's (USA)—is the product of in-depth study of the laws, regulations and policies governing one or a set of funds in a given country, province or state. Primary sources were used when available and all profiles were peer-reviewed by sovereign wealth fund experts, based in-country where possible.

This policy overview summarizes our results and conclusions. It defines a natural resource fund and provides a synopsis of the basic elements of good fund governance and recent trends in fund governance. It also recaps the five separate policy briefs which cover:

1. Institutional structure of natural resource funds
2. Rules-based investment for natural resource funds
3. Fiscal rules for natural resource funds—how to develop and operationalize an appropriate rule
4. Independent oversight of natural resource funds
5. Natural resource fund transparency

2 For example: Clark, Gordon L., Adam D. Dixon and Ashby H.B. Monk, *Sovereign Wealth Funds: Legitimacy, Governance, and Global Power*. Princeton University Press: Princeton (2013); Bolton, Patrick, Frederic Samama and Joseph E. Stiglitz (eds.), *Sovereign Wealth Funds and Long-Term Investing*. Columbia University Press: New York (2012); Truman, Edwin, *Sovereign Wealth Funds: Threat or Salvation?* Peterson Institute for International Economics: Washington, D.C. (2010); or the *Financial Times* and *Guardian* pages on sovereign wealth funds.

3 Key publications include: Bacon, Robert and Silvana Tordo, *Experiences with Oil Funds: Institutional and Financial Aspects*. World Bank: Washington (2006); Collier, Paul and Anthony J. Venables (eds.), *Plundered Nations? Successes and Failures in Natural Resource Extraction*. Palgrave MacMillan: New York (2011); and Johnson-Calar, Jennifer and Malan Rietveld, *Sovereign Wealth Management*. Central Banking Publications: London (2007).

4 Dutch disease is a decline in the manufacturing or agricultural sectors caused by a large inflow of foreign currency into the economy from, for example, oil sales to foreigners. The inflow causes exchange rate appreciation or inflation, making exports less competitive. Also, labor and capital move into the "boom sector," often the oil or mining sector, from the other sectors, further harming manufacturing or agricultural competitiveness. Consumers may be harmed by a rise of prices of "non-tradeables" such as taxis, haircuts and restaurant meals. Fiscal sterilization—essentially placing foreign currency income back outside the economy—can help mitigate the Dutch disease.

5 The NRFs were chosen based on three criteria: interest from policymakers on their governance, availability of information and available resources. Over time we expect to expand the number of NRF profiles available on www.revenuewatch.org/nrf.

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What are natural resource funds, why are they established, and are they successful?

In 2010, approximately \$1 trillion in oil and gas revenues alone were deposited into government accounts in resource-rich countries.⁶ Mineral production contributed tens of billions more to government coffers.⁷ These vast sums have the potential to transform economies for the better through public investments in health, education, infrastructure and social services, or through direct benefits to citizens.

In most countries, the vast majority of resource revenues are spent through the national budget. However, they are often collected or distributed by accounts or entities other than the budget as well. In Ghana, for instance, more than 40 percent of oil revenues in 2011 were transferred to the state-owned Ghana National Oil Company.⁸ In Mongolia, a portion of mining revenues has been transferred directly to citizens via a cash transfer program. And in Indonesia, Nigeria and Peru, sub-national governments receive a percentage of mineral or oil revenues according to a stated formula.

The largest non-budgetary allocations of oil, gas or mining revenues have been to special funds, sometimes called **sovereign wealth funds (SWFs)** or **natural resource funds (NRFs)**.⁹ A natural resource fund is a special-purpose investment fund owned by a government whose principal source of financing is revenue derived from oil, gas or mineral sales and that invests at least in part in foreign financial assets (see Box 1 for an explanation of the difference between natural resource funds and other extrabudgetary funds).¹⁰ This study has identified 54 such funds worldwide (see Table 1 and Figure 1 for a full list and Figures 2 and 3 for a breakdown of the funds by size and source of financing).

Natural resource funds have proliferated over the last decade. Since 2000, approximately 30 funds have been created (see Box 2 for a brief history of natural resource funds). Afghanistan, Israel, Kenya, Lebanon, Liberia, Mozambique, Myanmar, Niger, Peru, Uganda, Sierra Leone, South Sudan, Tanzania and Zambia are planning or considering new funds at the national level, while subnational jurisdictions in many other countries, including Canada and Indonesia, are considering them at the provincial, state or district levels.

6 Economist Intelligence Unit. EIU reports.

7 National oil companies often sell oil on behalf of the state and retain a portion of oil revenues to cover their costs and for reinvestment

8 purposes, following a formula (e.g., KOC in Kuwait) or on an ad hoc basis (e.g., Sonatrach in Algeria). Some other national oil companies function as commercial entities, paying the same tax rates as private companies (e.g., Statoil in Norway). In still others, oil revenues are pooled in a natural resource fund and transferred to the national oil company directly by the fund (e.g., Ghana).

9 Natural resource funds are a type of sovereign wealth fund. The difference between a sovereign wealth fund and a natural resource fund is that the latter is principally financed through oil, gas and mineral sales while the former may be financed through fiscal surpluses (e.g., from trade surpluses) or pension contributions.

10 This definition draws on a number of sources, namely the International Working Group on Sovereign Wealth Funds (IWG), consisting of 24 member governments which define sovereign wealth funds as "special purpose investment funds or arrangements, owned by the general government. Created by the general government for macroeconomic purposes, SWFs hold, manage, or administer assets to achieve financial objectives, and employ a set of investment strategies which include investing in foreign financial assets. The SWFs are commonly established out of balance of payments surpluses, official foreign currency operations, the proceeds of privatizations, fiscal surpluses, and/or receipts resulting from commodity exports" (IWG 2007). Edwin Truman (2010) defines sovereign wealth funds as "large pools of government-owned funds that are invested in whole or in part outside their home country." Truman includes subnational funds. Similarly, Castelli and Scacciavillani (2012) define them as "publicly owned investment vehicles with a mandate to transfer wealth to future generations by investing in an international portfolio of securities and assets, including companies." They specifically exclude investment vehicles primarily geared toward domestic development, such as state-owned enterprises or national development banks and entities financed primarily through transfers of central bank reserves. We have omitted funds created to shield national budgets from agriculture-based commodity cycles, such as the National Coffee Fund of Colombia, a stabilization fund that was created in 1940, because the macroeconomic impacts of agricultural revenues are usually small relative to oil, gas and mineral revenues, and they are renewable resource revenues, whose optimal saving-spending ratios are different from non-renewable resource revenues.

Table1:
List of all identified
natural resource funds
(as of December 2013)

Government	Fundname	Year established	Value of assets (2013, latest available or estimate) ¹¹	Financing resource
Abu Dhabi (UAE)	Abu Dhabi Investment Authority*	1976	\$627 billion	Petroleum
	International Petroleum Investment Authority	1984	\$65.2 billion	Petroleum
	Mubadala Development Company	2002	\$55.5 billion	Petroleum
Alabama (USA)	Alabama Trust Fund*†	1985	\$2.94 billion	Petroleum
Alaska(USA)	Alaska Permanent Fund*†	1976	\$48.6 billion	Petroleum
Alberta (Canada)	Alberta Heritage Savings Trust Fund*†	1976	\$15.7 billion	Petroleum
Algeria	Revenue Regulation Fund	2000	\$77.2 billion	Petroleum
Angola	Angola Sovereign Fund	2012	\$5 billion	Petroleum
Azerbaijan	State Oil Fund*†	1999	\$35.8 billion	Petroleum
Bahrain	Future Generations Reserve Fund	2006	\$0.2 billion	Petroleum
Botswana	Pula Fund*†	1994	\$4.6 billion	Minerals
Brunei	Brunei Investment Agency	1983	\$40 billion	Petroleum
Chile	Pension Reserve Fund*†	2006	\$7.3 billion	Minerals
	Social and Economic Stabilization Fund*†	2007	\$15.6 billion	Minerals
Colombia	Savings and Stabilization Fund	2011	Not yet operational	Petroleum
Equatorial Guinea	Fund for Future Generations	2002	\$0.2 billion	Petroleum
Dubai(UAE)	Investment Corporation of Dubai	2006	\$70 billion	Petroleum
Gabon	Gabon Sovereign Wealth Fund	1998	\$0.4 billion	Petroleum
Ghana	Ghana Heritage Fund*†	2011	\$0.1 billion	Petroleum
	Ghana Stabilization Fund*†	2011	\$0.2 billion	Petroleum
Iran	National Development Fund of Iran*	2011	\$54 billion	Petroleum
	Oil Stabilization Fund*	2000	No information available	Petroleum
Kazakhstan	Kazakhstan National Fund*†	2000	\$68.7 billion	Petroleum
Kiribati	Revenue Equalization Reserve Fund	1956	\$0.6 billion	Minerals
Kuwait	Kuwait Investment Authority*	1953	\$386 billion	Petroleum
Libya	Libyan Investment Authority	2006	\$65 billion	Petroleum
Louisiana (USA)	Louisiana Education Quality Trust Fund†	1986	\$1.2 billion	Petroleum
Malaysia	National Trust Fund	1988	\$1.7 billion	Petroleum
Mauritania	National Fund for Hydrocarbon Reserves†	2006	\$0.3 billion	Petroleum
Mexico	Oil Revenues Stabilization Fund	2000	\$6 billion	Petroleum
Mongolia	Fiscal Stability Fund†	2011	\$0.3 billion	Minerals
Montana (USA)	Montana Permanent Coal Trust Fund†	1978	\$0.6 billion	Minerals
Nauru	Phosphate Royalties Stabilization Fund	1968	No information available	Minerals

¹¹ Estimates are from primary sources, such as fund annual reports, using the latest year, where available. Otherwise we used secondary sources such as newspaper reports or the latest estimates from the Sovereign Wealth Fund Institute.

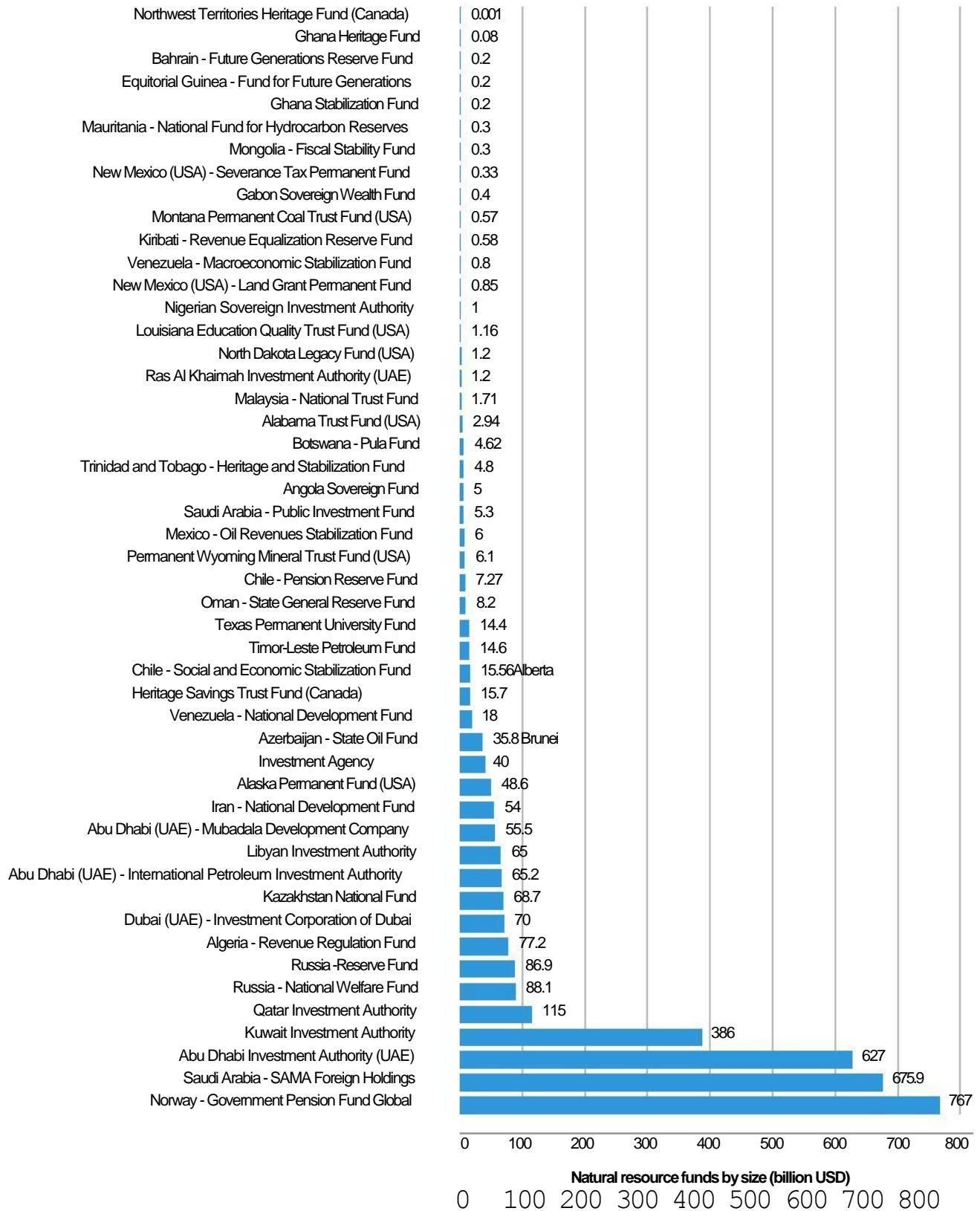
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Government	Fundname	Year established	Value of assets (2013, latest available or estimate) ¹	Financing resource
New Mexico (USA)	Land Grant Permanent Fund [†]	1898	\$0.9 billion	Minerals and land
	Severance Tax Permanent Fund [†]	1973	\$0.3 billion	Petroleum and minerals
Nigeria	Nigerian Sovereign Investment Authority	2011	\$1 billion	Petroleum
North Dakota (USA)	North Dakota Legacy Fund ^{*†}	2011	\$1.2 billion	Petroleum
Norway	Government Pension Fund Global ^{*†}	1990	\$767 billion	Petroleum
Northwest Territories (Canada)	Northwest Territories Heritage Fund	2012	\$0.001 billion	Minerals
Oman	State General Reserve Fund	1980	\$8.2 billion	Petroleum
Papua New Guinea	Papua New Guinea Sovereign Wealth Fund I	2011	Not yet operational	Gas
Qatar	Qatar Investment Authority	2005	\$115 billion	Petroleum
Ras Al Khaimah (UAE)	RAK Investment Authority	2005	\$1.2 billion	Petroleum
Russia	National Welfare Fund ^{*†}	2004	\$88.1 billion	Petroleum
	Reserve Fund ^{*†}	2004	\$86.9 billion	Petroleum
Sao Tome and Principe	National Oil Account	2004	No information available	Petroleum
Saudi Arabia	SAMA Foreign Holdings	1952	\$675.9 billion	Petroleum
	Public Investment Fund	1971	\$5.3 billion	Petroleum
Texas(USA)	Texas Permanent University Fund ^{*†}	1876	\$14.4 billion	Petroleum and land
Timor-Leste	Timor-Leste Petroleum Fund ^{*†}	2005	\$14.6 billion	Petroleum
Trinidad and Tobago	Heritage and Stabilization Fund ^{*†}	2000	\$4.8 billion	Petroleum
Wyoming (USA)	Permanent Wyoming Mineral Trust Fund ^{*†}	1974	\$6.1 billion	Minerals
Venezuela	Macroeconomic Stabilization Fund	1998	\$0.8 billion	Petroleum
	National Development Fund [†]	2005	\$18 billion	Petroleum

* Funds profiled in the natural resource fund study

† Funds that publish quarterly reports (non-operational funds excluded) - an indicator of transparency

Figure 1:
List of all identified natural resource funds
(as of December 2013)



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Figure 2:
Breakdown of the 54 identified natural resource funds by assets under management (number of funds), U.S. dollars

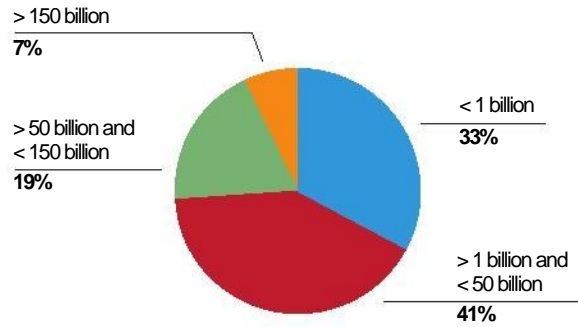
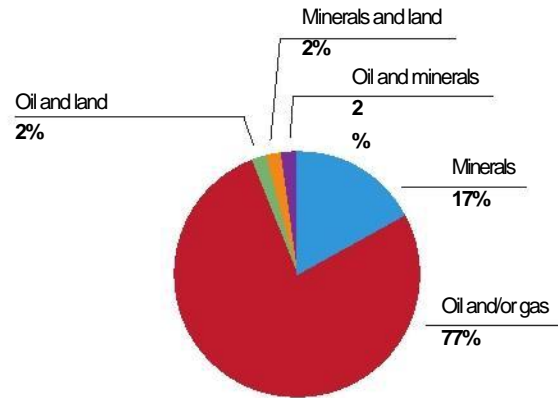


Figure 3:
Breakdown of the 54 identified natural resource funds by principal source of financing (number of funds)



Box 1: The difference between natural resource funds and other extra budgetary funds

Governments often exclude some revenues, expenditures or financing from their annual budget laws, instead using separate banking or institutional arrangements called extra budgetary funds to finance particular items. The most common extra budgetary fund is a pension fund, such as the Canada Pension Plan. Other types include development funds that earmark spending for specific purposes like roads or environmental protection (e.g., Alabama (USA)'s Forever Wild Land Trust Fund); donor funds that manage donor aid under special conditions (e.g., Liberia Health Sector Pooled Fund); and multi-year budgets that do not expire at the end of the fiscal year (e.g., Timor-Leste's Infrastructure and Human Capacity Development Funds).

These funds are established for many different reasons. On the one hand, they can address a need for guaranteed multi-year financing, save government revenues for future generations, earmark spending for projects that promote development rather than recurrent expenditures, or protect politically sensitive programs from budget cuts. On the other hand, they can be used to circumvent parliamentary or citizen oversight, skirt established procurement procedures or keep certain activities of the government secret.

Natural resource funds are a type of extra budgetary fund. What differentiates them from other types of government funds is that their principal source of financing is oil, gas or minerals, and they invest a portion of their funds in foreign assets with the goal of making a positive financial return. Also, their overall objective is generally to address macroeconomic challenges, such as Dutch disease or expenditure volatility.

While in most cases it is easy to distinguish between a natural resource fund and a multi-year financing, donor or development fund, at times the lines between them may be blurred. For example, the National Development Fund of Iran's main objective is to finance the domestic private sector, making it more of a development bank than a natural resource fund. However, because it has absorbed the Oil Stabilization Fund's foreign assets, along with its mandate to save oil revenues for future generations (in response to international sanctions), we have designated it a natural resource fund for the purposes of this project.

Sources: Allen, Richard and Dimitar Radev, Extrabudgetary Funds. IMF: Washington, D.C. (2010). <http://www.imf.org/external/pubs/ft/tnm/2010/tnm1009.pdf>.

Coppin, Erin, Marcus Manuel, and Alastair McKechnie, Fragile states: measuring what makes a good pooled fund. ODI Project Briefing No. 58 (2011). <http://www.odi.org.uk/sites/odi.org.uk/files/odi-assets/publications-opinion-files/7266.pdf>.

Why are natural resource funds established?

There are several strong rationales for establishing a natural resource fund. First, natural resource funds can help **smooth expenditures** in ways that improve public spending efficiency and the government's ability to spend thoughtfully. Since oil, gas and mineral revenues are volatile and unpredictable, governments may find themselves unable to set realistic budgets over the medium-to-long term. Worse, they may overspend when revenues are high, perhaps on extravagant legacy projects (e.g., hotels, concert halls, new airports) and have to either cut essential services or indebt themselves when revenues decline. This can lead to poor public investments and unfinished infrastructure. Governments can save a portion of revenues in stabilization funds when revenues are high and draw down on these funds when revenues decline in order to prevent these "boom-bust" spending cycles. For example, resource-rich U.S. states like Wyoming are able to grow through periods of temporary oil and mineral price declines due in part to the availability of a pool of funds to draw on during downturns.

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Second, funds can help governments **save resource revenues** when they either do not have the capacity to spend all the money efficiently when it comes in, or do not have significant immediate spending needs. Some governments, like in Timor-Leste, may find it difficult to spend all resource revenues as they are collected without generating significant waste because they do not possess the managerial systems, technology, labor or skills to spend vast sums effectively (also described as lack of "absorptive capacity"). In such cases, governments may elect to 'park' some revenues now in foreign assets until they develop enough capacity to spend the money well or the economy grows enough to absorb these revenues.¹²

However, even in advanced economies, saving revenues from a non-renewable resource may generate longer-lasting benefits than spending it all in the short-term. Oil, gas and minerals are finite assets. As such, some governments have recognized that saving a portion of extractive revenues, investing them in productive assets and living off the investment returns can extend the financial benefits of extraction beyond the life of the oil field or mine, perhaps even indefinitely. Additionally, there is an ethical case to be made about intergenerational equity; some believe that our children should receive the same share of financial benefits as the current generation. With small populations and vast oil wealth, many Persian Gulf countries like Kuwait, Oman, Qatar and the UAE have chosen to save for these reasons. In each, saving oil wealth has created an endowment for the benefit of future generations.

Third, funds can help **mitigate Dutch disease** by sterilizing large capital inflows, in this case foreign exchange inflows associated with oil, gas or mineral sales. Countries or regions with relatively small economies that scale up oil, gas or mineral production quickly may find that, if the economy cannot absorb it effectively, the large inflow of foreign currency associated with production can lead to the exchange rate appreciating or prices and wages increasing. This can cause local businesses to become less competitive internationally and harm the non-resource economy. Governments can help mitigate this so-called Dutch disease by saving a portion of resource revenues in foreign assets. This is called fiscal sterilization. Countries such as Norway and Saudi Arabia have kept their exchange rates under control or inflation lower than it would have been otherwise by saving resource revenues in foreign assets rather than spending them domestically.

Fourth, a natural resource fund can be a means of limiting the discretion of politicians in making spending decisions and **earmarking revenues for public investments** like roads, water systems, hospital equipment and education programs. Earmarking involves withdrawing money from a natural resource fund and requiring that it be spent on specific expenditure items through the budget process or as cash transfers to households. Importantly, it does not refer to making public spending decisions through the fund's choices of asset holdings, bypassing the formal budget process. This could damage the integrity of the public financial management system, possibly circumventing accountability mechanisms like parliamentary oversight and audits, and lead to the use of resource revenues for patronage.

Examples of earmarking include Ghana's rule that oil revenues must fund "development-related expenditures" and Alabama's (USA) earmarking of some oil and gas revenues for land conservation, municipal capital expenditures and senior services. In Alaska (USA), a portion of oil revenues are distributed directly to residents. Since governments that already spend considerable amounts on public investment projects may simply shift money around to make it seem like they are using natural resource revenues to finance these projects, earmarking may be most useful where there exists strong political pressure to overspend on recurrent expenditures such as public wages and

¹² In low-income, capital-scarce economies such as that of Timor-Leste, spending needs are immediate, so fiscal space must be provided to allow the government to build the "absorptive capacity" to transform resource revenues into long-lasting assets such as infrastructure and human resources.

fuel subsidies. Earmarking has the added benefit of drawing public attention to the exhaustible nature of oil, gas and mineral resources by stressing that the revenues derived from their production must be invested rather than consumed; otherwise, they will have little lasting benefit.

Fifth, some funds have been created to "**ring-fence**" **resource revenues** to protect them from corruption or mismanagement. Given their size and the complex nature of revenue streams (e.g., royalties, profit taxes, bonuses, license fees) entering government coffers from extractive companies, natural resource revenues are often a target of misappropriation. Separating resource revenues can help reduce the risk of corruption and mismanagement only where there are strict and comprehensive disclosure requirements for fund operations and where there is a formal and effective oversight mechanism to monitor these operations. For example, the Sao Tome and Principe National Oil Account is subject to rigorous transparency provisions that ensure that oil revenues are well accounted for, and fund operations are open to public scrutiny. Governments may also want to ring-fence resource revenues because oil, gas and minerals are non-renewable. Pooling revenues under the management of a single authority can help governments distinguish and isolate these finite revenues from other government revenues so that they can be treated differently (i.e., saved).

Finally, natural resource funds can provide governments with **greater political leverage, power and autonomy**. Legislators in the Northwest Territories in Canada, for instance, have stated that their newly established Heritage Fund, financed by mineral revenues, will give the territorial government greater political autonomy from the Canadian federal government. And in low- and middle-income countries, governments can draw upon precautionary savings in cases of financial crisis instead of borrowing from private banks or international financial institutions, both of which can impose burdens on a government. In short, natural resource funds can be a powerful source of protection against foreign influence and market forces.

That said, natural resource funds are not always established with the public or national interest in mind. In some countries, particularly but not exclusively those ruled by authoritarian regimes, natural resource funds have been established to avoid public scrutiny of specific projects or to bypass formal oversight. As such, many have been used as slush funds by the ruling family or party. The Libyan Investment Authority (LIA) under the Gadhafi regime is a case in point, where the late dictator's son, Saif al-Islam Gadhafi, had nearly full discretion to manage much of the fund's approximately \$65 billion. Billions of dollars were invested with Gadhafi's close acquaintances.¹³

Finally, one of the most common reasons for establishing a natural resource fund has been to make a global statement about self-determination. Natural resource funds have become symbols of development and progress and are not always promoted as solutions to specific macroeconomic or budgetary problems. As such, they sometimes represent form over substance and are created without a well-defined objective in mind. This lack of clarity presents a real danger, as poorly conceived funds can undermine public financial management systems and can lead to squandering of revenues.

¹³ Lina Saigol and Cynthia O'Murchu, "After Gadhafi: A Spent Force," *The Financial Times*, September 8, 2011. <http://www.ft.com/intl/cms/s/0/1b5e11b6-d4cb-11e0-a7ac-00144feab49a.html#axzz2PdPUcQK>.

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Box 2: A brief history of natural resource funds

Natural resource funds are not new. The oldest continually operating fund, the Texas Permanent University Fund (USA), dates back to 1876. The Kuwait Investment Board, the Kuwait Investment Authority's predecessor, was the first fund established at the national level in 1953, albeit while Kuwait was a British protectorate. However, it is only since the 2000s that natural resource fund growth has accelerated significantly. Their proliferation has been driven in part by historical context—a desire to learn from the mistakes of the 1970s-80s, when oil and gas windfalls were largely consumed without leaving many long-term benefits—but also by an emerging academic consensus on the optimal management of natural resource revenues windfalls, new large discoveries in several countries, and historically high oil and mineral prices in the 21st century, hence unexpectedly high government revenues.

In response to fears from recipient countries that sovereign wealth fund investments could be politically motivated, in 2007 the G7 called on the International Monetary Fund (IMF) to develop international standards for fund governance and transparency, which became known as the Santiago Principles. An International Working Group of Sovereign Wealth Funds (IWG) consisting of fund officials was established in 2009 to encourage compliance with these principles. Implementation to date has been slow.

When the term "sovereign wealth fund" was coined by Andrew Romanov in 2005 (the earliest known use of the term "natural resource fund" comes from a 2007 publication by Macartan Humphreys and Martin E. Sandbu, though several IMF staffers referred to "nonrenewable resource funds" in the early 2000s), natural resource funds held approximately \$1 trillion in assets. Just nine years later, they hold approximately \$3.5 trillion in assets.

Are natural resource funds meeting their policy objectives?

Natural resource funds have had varied success in achieving their policy objectives. In Chile, the Economic and Social Stabilization Fund has helped the government stabilize the budget despite large and unexpected rises and falls in government revenues, mainly caused by copper price volatility (see Figure 3). The Norwegian and Saudi Arabian funds have protected their economies from oil price shocks and sterilized capital inflows, helping to mitigate Dutch disease effects. In Timor-Leste, accumulation of oil revenues in the Petroleum Fund has helped the government smooth spending over the longer term. By keeping enormous capital inflows from overwhelming the economy, it has curbed wasteful public spending and has also helped to mitigate Dutch disease effects. Finally, funds in many countries and subnational jurisdictions, such as those in Ghana, Kazakhstan, Kuwait and North Dakota (USA), are saving revenues from non-renewable resources so that future generations may benefit from today's exploration, development and production.

However, many funds have served to undermine public financial management systems. In Azerbaijan, for example, billions of dollars' worth of strategic government projects are financed directly out of the State Oil Fund (SOFAZ), including a railway between Azerbaijan, Georgia and Turkey. These expenditure items are not subject to the same reporting or public procurement requirements as those financed out of the normal budget process.

Funds have also been used for patronage and nepotism. For example, the Libyan and Kuwaiti funds have incurred billions of dollars in avoidable losses due to financial transactions that benefited friends of the regime or investment managers. And in Nigeria, billions of dollars were withdrawn from the Excess Crude Account without plan or justification.¹⁴

¹⁴ See *Rules-based Investment for Natural Resource Funds* for references to the Libyan and Kuwaiti cases; M.U. Ndagi, "Nigeria: Devouring Excess Crude Account," *Daily Trust*, September 7, 2013. <http://allafrica.com/stories/201309090256.html>.

Fund operations are often opaque and not subject to independent oversight. The Algerian, Bruneian, Omani and Turkmenistani funds are some of the most extreme examples of weak transparency; a visit to the Brunei Investment Agency website provides business hours, an email address and not much else. However, even some governments, such as Equatorial Guinea, Iran, Kuwait and Qatar, that are signatories to the Santiago Principles which commit them to a basic standard of disclosure vis-à-vis their funds, fail to publish detailed information on investments or activities. This opacity and a lack of independent oversight raise questions around how these funds are being used and whom they are benefiting.

In many cases, funds have simply been ineffective. As Figure 4 illustrates, while funds in Norway, Chile and Saudi Arabia have helped smooth government spending despite having to deal with volatile oil revenues, self-declared stabilization funds in Kazakhstan, Trinidad and Tobago and Venezuela have failed to stabilize the budget. And some savings funds have failed to save as their mandate requires. For example, one of the objectives of the Alberta Heritage Savings Trust Fund in Canada is to save oil revenues for future generations. Yet despite sky-high production and historically high prices at times from 1987 to 2013, only two relatively small deposits were made into the fund over this period.

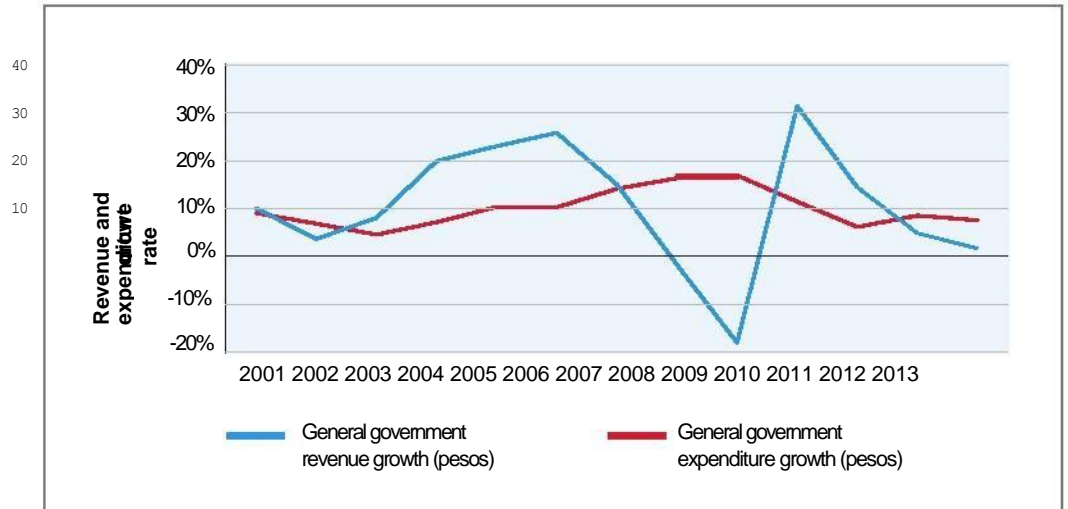


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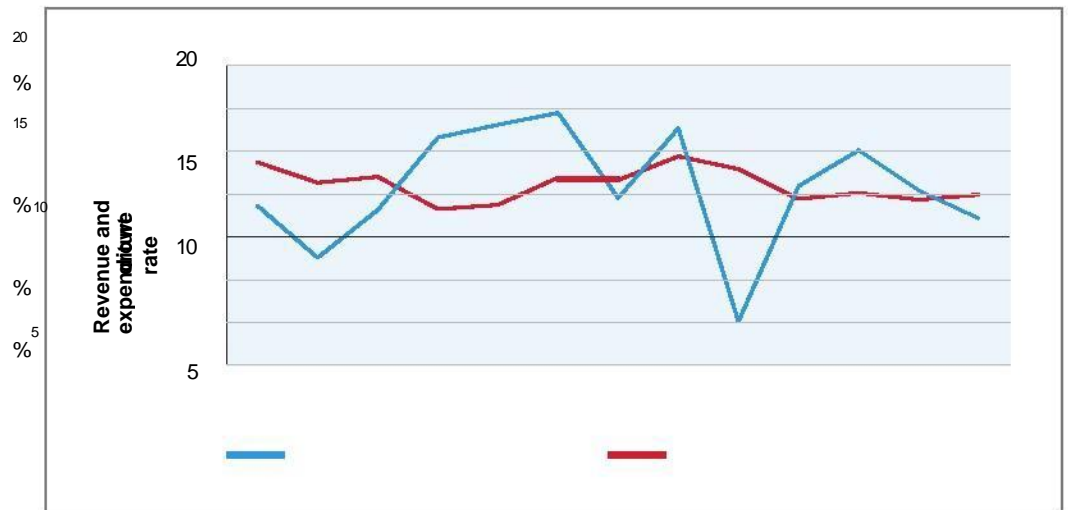
Figure 4:
Budget stabilization
in countries with
stabilization funds

Source: World Economic Outlook data (IMF)

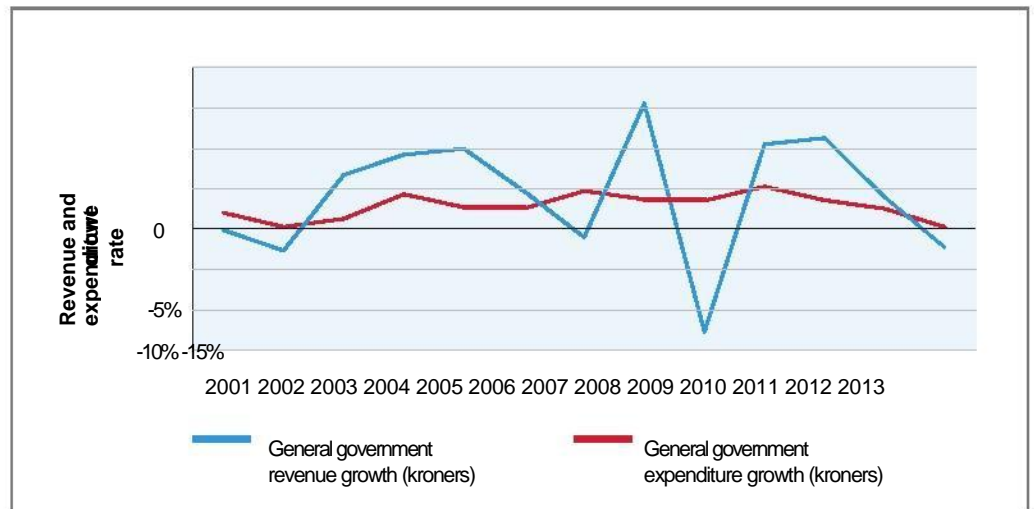
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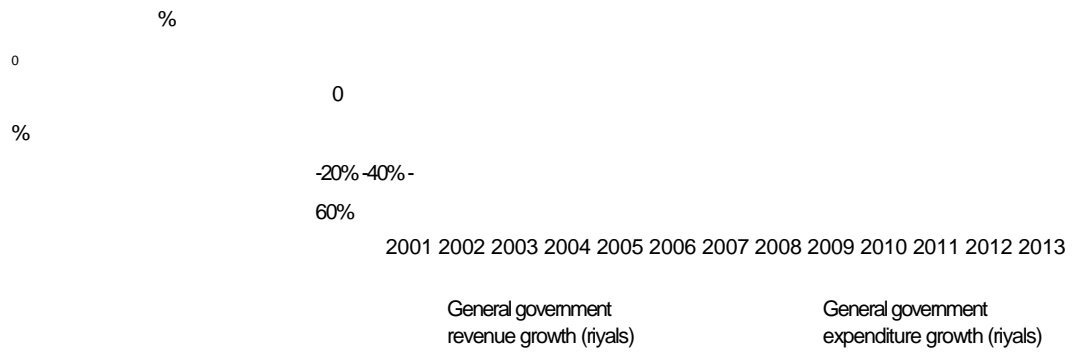
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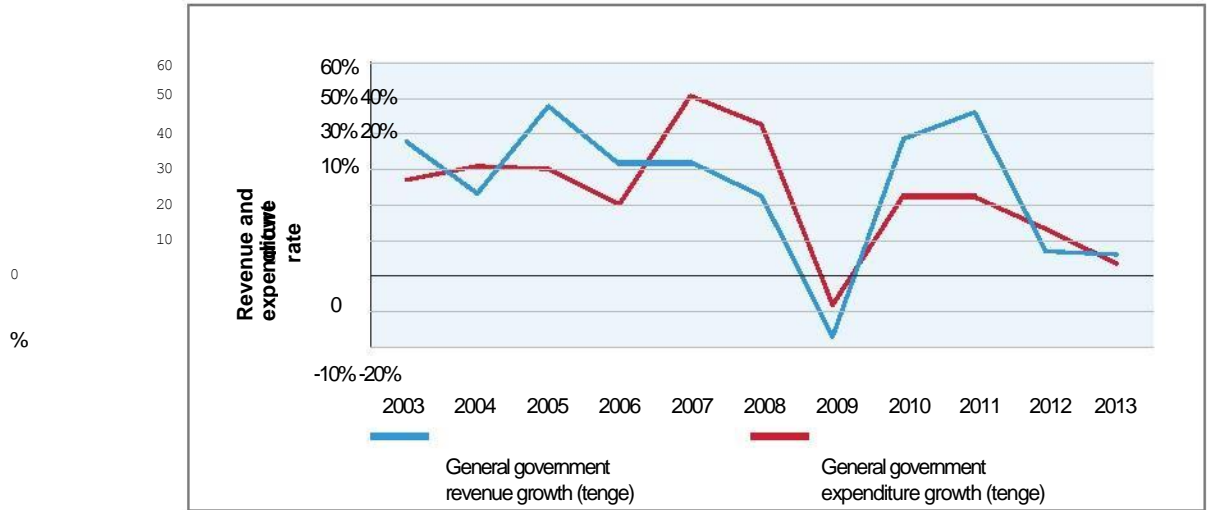
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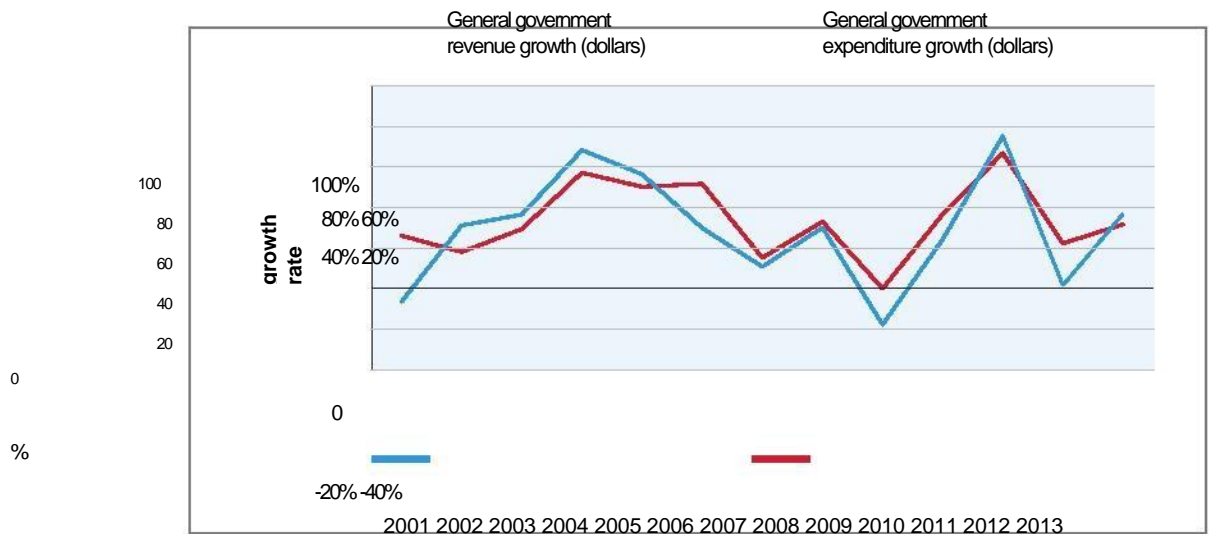
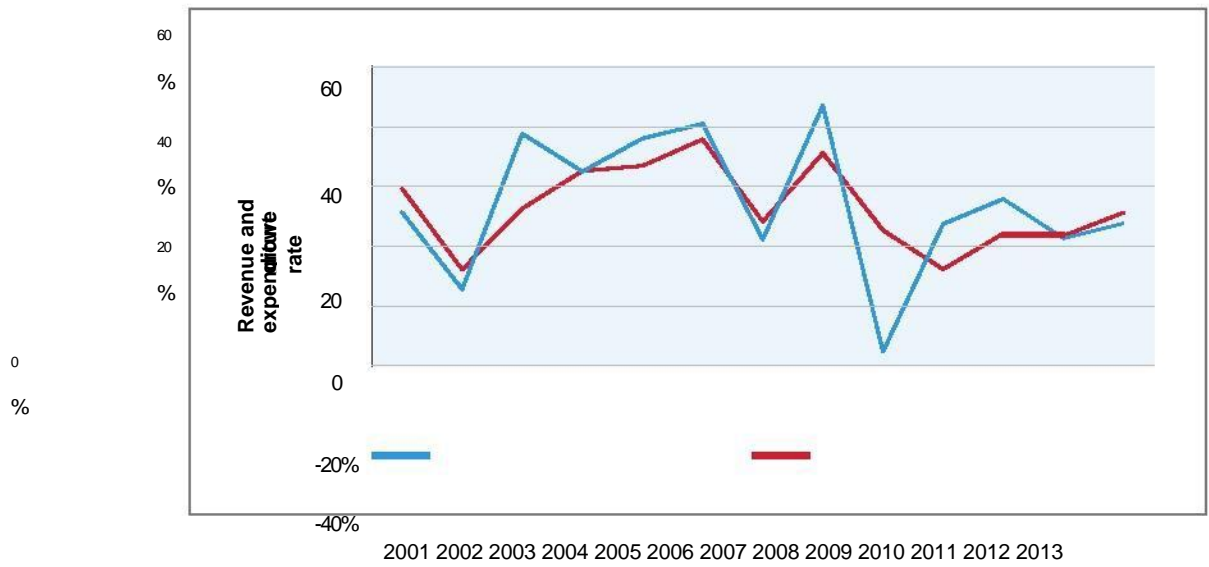
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Kazakhstan



Trinidad and Tobago



General government
revenue growth (bolivars)

General government
expenditure growth (bolivars)

Policy Overview

Key findings and recommendations

Given the size of revenues managed by these funds in the more than 40 countries that operate them—often in the many billions of dollars—and the dangers that weak governance can pose, good natural resource fund governance is essential for transforming natural resource wealth into citizen well-being. The proliferation of funds, especially in lower-income countries and low-capacity environments, will make good governance even more important in the coming years. But what constitutes good natural resource fund governance? And what can policymakers, oversight bodies and the international community do to improve natural resource fund governance?

The following are our findings from the study of 18 natural resource funds; secondary sources and in-country interviews; and discussions with policymakers and civil society in resource-rich countries (see Annex 2 for secondary sources and publications).

What is good natural resource fund governance?

Our survey of natural resource funds found several key elements of good fund governance: setting a single or multiple fund objectives; establishing appropriate fiscal rules; setting clear investment constraints; creating an effective institutional governance structure; making extensive information on fund operations public; and establishing strong independent oversight over these operations. These elements are reflected throughout the natural resource fund profiles and summarized in page 4 of each profile (see Annex 1 for an explanation of page 4 ["Good Governance Standards" page of the profile]). Below is a detailed summary of each of these elements.

Setting a single or multiple objectives

The objectives of natural resource funds should be clearly stated in government policy, regulation, legislation or even in the constitution. They could include:

- Saving for future generations
- Stabilizing expenditures as a response to oil, gas or mineral revenue volatility
- Sterilizing capital inflows
- Earmarking resource revenues for specific expenditures
- Protecting resource revenues from mismanagement, corruption or patronage
- Saving in case of environmental, financial or social crisis

Some funds serve a single objective, while others serve multiple objectives. For instance, in Ghana there are three funds. The Petroleum Holding Fund ring-fences all oil revenues and the law requires that the government use resource revenues withdrawn from the fund for development-related projects. The Ghana Heritage Fund saves revenues for the benefit of future generations. The Ghana Stabilization Fund helps to mitigate budget volatility. In contrast, the Timor-Leste Petroleum Fund serves as an all-in-one savings, stabilization, sterilization and ring-fencing fund.

At the same time, some resource funds are established without a well-defined objective, making it difficult for policymakers to decide on operational rules or manage the fund's investments. For example, Azerbaijan's State Oil Fund's three objectives are to accumulate and preserve revenues for future generations, finance major government projects, and "preserve macroeconomic stability by decreasing dependence on oil revenues and stimulate the development of the non-oil sector." Terms such as "preserve macroeconomic stability" are undefined. Furthermore, it is unclear what proportion of the fund is designated for each objective and what operational rules, if any, help the fund achieve them. Multiple objectives in and of themselves are not necessarily problematic, but the lack of operational rules to help funds meet those objectives and lack of clarity around objectives are.

Which objective or set of objectives a government chooses should be informed by the challenges the economy will face. For instance, if the government can absorb a large inflow of oil revenue and spend it efficiently but the inflow is so large that it will generate significant year-to-year budget volatility, a government may wish to establish a stabilization fund. However, if revenues will overwhelm the economy over the longer term, for example, by generating Dutch disease, it may be worthwhile to set up a fiscal sterilization fund. Where none of the problems associated with resource revenue inflows are expected to emerge—for instance, where resource revenues are small and where public financial management, transparency and oversight are effective enough that they will generate substantial benefits and economic growth—it may be preferable not to set up a fund at all.

Good practices: Funds in Chile, Ghana, Kazakhstan, Russia, and Trinidad and Tobago each have strong statements on objectives that make their purpose clear (though this does not mean that they achieve these objectives).

Establishing fiscal rules

(see "Fiscal Rules for Natural Resource Funds" policy brief)

Fiscal rules—multi-year numerical constraints on government finances—are perhaps the most important rules governing fund behavior. Whether a natural resource fund meets its objective(s) depends almost wholly on the suitability, clarity and enforcement of its fiscal rules. First, rules act as a commitment mechanism, binding successive governments to a long-term vision of public finances, so important in regions reliant on finite and unstable revenues. Second, they can facilitate the implementation of budgetary goals and hence improve the efficiency of the public financial management system. Third, they define the conditions under which deposits and withdrawals are made, which can stabilize government spending or generate savings.

Fiscal rules are operationalized through deposit and withdrawal rules. These rules should be clarified in legislation, regulation or a binding policy document. Exceptions to these rules—for example, in cases of environmental, financial or social crisis—should also be clarified.

The absence of clearly defined fiscal rules presents significant risks. In Azerbaijan, for instance, the lack of a withdrawal rule has led to discretionary withdrawals that have enabled the government to spend lavishly when oil prices are high and to cuts when oil prices have declined. The Alberta Heritage Savings Trust Fund (Canada) was established as a savings fund in 1976, though deposits were halted in 1987. As a result of this lack of a deposit rule, the fund saved less than \$4 billion in oil revenues over 25 years, despite hundreds of billions of dollars in oil revenues entering government coffers over the same period. In 2013, the Alberta government finally instituted a set of fiscal rules with long-term savings and fiscal stabilization objectives in mind.

No single rule is appropriate for every country; context should determine the design of fiscal rules and there must be political consensus on their suitability, or they may not be enforced. For example, in Timor-Leste, spending has exceeded what the fiscal rule calls for in nearly every year since 2010, partly a consequence of an overly constraining rule for a country desperately in need of domestic public investment. That said, strong internal controls and independent oversight can help enforce rules.¹⁵

Good practices: The parliaments of Chile, Ghana, and Trinidad and Tobago have established clear and appropriate fiscal rules for their countries (though both the governments of Ghana and Trinidad and Tobago tend to fiddle with their revenue projections in order to spend more and save less).

¹⁵ See policy briefs on Institutional Structure of Natural Resource Funds and Independent Oversight of Natural Resource Funds for how to enforce the rules.

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Establishing investment rules

(see "Rules-based Investment for Natural Resource Funds" policy brief)

Money deposited into a fund must be placed somewhere. One difference between natural resource funds and the government's consolidated/general fund is that some or the entire natural resource fund is invested in financial or other assets abroad.¹⁶ Investments may include stocks, bonds, derivatives, real estate or even infrastructure.

Investments can be riskier, with an expected higher long-term financial return, or less risky. A fund's investment risk profile should be a function of its policy objectives (e.g., stabilization fund assets should be more liquid than savings fund assets), the strength of the systems set up to prevent mismanagement, and the capacity to manage complex investments (or at least the capacity to manage the managers). No matter what risk profile is chosen, it should be well defined and enforced through explicit rules that limit exposure. For example, legislation, regulation or fund policy can detail the allocation between cash, fixed income investments, equities and alternative assets. Each can also prohibit investments in certain high-risk financial instruments or volatile currencies. Also, specific assets owned by the fund (e.g., real estate, Berkshire Fund stocks) should be listed in a publicly available document in order to generate a disincentive to invest in obscure or high-risk investments (the Alaska Permanent Fund [USA] is a model in this regard). Lack of rules around investment risk in an opaque setting can generate substantial losses for a fund. For example, the Kuwait Investment Authority lost approximately \$5 billion from poor investments in Spanish companies in the early 1990s due to a combination of lack of oversight and lack of investment rules.¹⁷

Investments can be made in either foreign or domestic assets. Although the governments of many resource-rich developing countries invest in domestic projects directly from natural resource funds, a better practice is to make these investments from the budget itself for at least two reasons. First, domestic spending through the fund can undermine rules designed for fiscal sterilization.¹⁸ But more importantly, such spending might undermine transparency and accountability systems. Bypassing the normal budget process could circumvent controls and safeguards such as project appraisal, public tendering and project monitoring, and enable patronage or financing for projects that support the political goals of government officials or fund managers. To avoid these outcomes, many funds—including those in Abu Dhabi (UAE), Botswana, Chile, Ghana, Kazakhstan and Norway—prohibit direct domestic investments.

Another common investment rule is to prohibit the use of some or all of fund assets as collateral. A multi-billion-dollar natural resource fund can be used to secure government loans. In brief, the government can promise creditors that if it defaults on its debt, the fund's assets can be used to pay them back. This is particularly useful for credit-constrained governments, those that are charged high interest rates, or those that have been locked out of international financial markets because of weak government finances. However, this strategy also puts natural resource revenues at risk—especially if the government has a tendency to default—and encourages over-borrowing. For example, from 2000 to 2004 Angola borrowed more than \$9 billion, all backed by oil revenues, from banks like Société Générale, China Eximbank, Barclays Bank and Royal Bank of Scotland.¹⁹ At the same time, the Angolan government was negotiating with the IMF to restructure its debt due to heavy debt-servicing commitments. One solution to this problem has been to restrict either

16 The consolidated fund or general fund is the government's main bank account, usually held at the central bank. Also, it is important to differentiate between funds and official reserves. While natural resource funds (along with the consolidated or general fund) belong to the government, official reserves belong to the central bank. Keeping these accounts separate helps prevent confusing fiscal and monetary policy operations.

17 Bazoobandi, Sara, *Political Economy of the Gulf Sovereign Wealth Funds: A Case Study of Iran, Kuwait, Saudi Arabia and the United Arab Emirates*. New York: Routledge (2012).

18 If one of the objectives of the fund is to mitigate Dutch disease, it may enact a fiscal rule that requires that a certain portion of resource revenues must be invested in foreign assets. However, reinvesting these revenues inside the country would undermine this objective.

19 Brautigam, Deborah, *The Dragon's Gift: The Real Story of China in Africa*. Oxford: Oxford University Press (2009).

part of all of a natural resource fund from being used as collateral. While this may not prevent over-borrowing—since international lenders might assume that in a crisis the fund would be used to bail out the government even though the fund assets are not formally pledged—it is important to make these rules explicit.

Good practices: Alberta (Canada), Chile, Norway and Timor-Leste have codified comprehensive investment rules that limit the risks fund managers can take and, in Norway's case, impose ethical investment guidelines on fund investments.

Clarifying division of responsibilities and enforcing ethical and conflict of interest standards
(see "*Institutional Structure of Natural Resource Funds*" policy brief)

Fiscal rules and investment rules must be implemented by government officials and fund managers. A clear division of responsibilities, strong internal controls and political independence, and strong internal capacity are essential for correct implementation.

Organizational structure is very context-specific. However, the roles and responsibilities of governing bodies—such as the legislature, executive, central bank, advisory bodies, fund governing board and fund executive—should be detailed in law, regulation or a government policy document. The same is true for the internal structure of the operational manager, whether it's a unit within the central bank, a unit in the ministry of finance, or a separate entity. Chile, for example, has regulation that designates the Minister of Finance as both the manager and ultimate authority over the two funds and the Central Bank of Chile as the day-to-day operational manager of fund investments. In Norway, the manager and operational manager are also the Minister of Finance and central bank, respectively, but the fund is ultimately accountable to the Storting (parliament).

The fund's governing structure must be made clear and governing bodies must enforce ethical and conflict of interest standards, preferably through concrete penalties such as dismissal, fines or even imprisonment. Staffing policies should encourage professionalism and compliance with operational rules. These measures should be complemented by transparency, independent oversight and political will to follow the rules.

Authoritarian regimes often lack these checks and balances that prevent mismanagement. In such settings, large pools of funds can become tempting targets. The Russian government, for instance, arbitrarily suspended its fiscal rules in 2010 and has since nearly emptied the Reserve Fund (valued at approximately \$150 billion in 2009) and raided the National Wealth Fund of tens of billions of dollars, which had been intended to finance future Russian pension liabilities.²⁰ In such an environment, political will is an essential element of good resource revenue management.

Good practices: Norway and Texas (USA) each have strong internal controls that include regular and publicly available internal audits, ethical guidelines for fund employees, effective monitoring of external managers, and independent oversight at every level, including over the board of directors, managers and staff.

Requiring regular and extensive disclosures and audits
(see "*Natural Resource Fund Transparency*" policy brief)

Good fund governance requires a strong degree of transparency for several reasons. First, transparency can encourage compliance with fiscal rules and investment rules by aligning public expectations with government objectives. Second, transparency can improve government

²⁰ Kryukov, Valery et al., "The contest for control: oil and gas management in Russia," *Plundered Nations?: Successes and Failures in Natural Resource Extraction* (eds. Paul Collier and Anthony J. Venables), New York: Palgrave Macmillan (2011).

efficiency, since ministries, parliaments and regulatory agencies benefit from improvements in data quality. Third, transparency is a prerequisite for accountability and compliance with governance rules, because oversight bodies cannot monitor fund operations and scrutinize fund performance without adequate information.

Transparency means not only publishing regular, accurate and data-disaggregated reports on fund activities in a format that is fully accessible to lay readers but also making the rules governing the fund clear and public. One way of institutionalizing transparency is by requiring the public release of all regulations, policy documents, quarterly financial statements and annual internal and independent external audits, and requiring that these meet international standards. Reports should not only be backward-looking; they should also clarify what will be achieved in the future to set benchmarks for performance and set public expectations.

Good practices: Funds in Alaska (USA), Chile, Norway, Texas (USA) and Timor-Leste can be considered models of transparency. Each discloses deposit and withdrawal amounts, specific investments (including type, location, currency composition and returns), significant fund activities and transactions, and fund managers.

Establishing strong independent oversight bodies to monitor fund behavior

(see "Independent Oversight of Natural Resource Funds" policy brief)

Effective internal control mechanisms are often not enough to ensure compliance with governance rules or management of natural resource funds in the public interest. Independent oversight bodies should also fund in order to exert external pressure on policymakers and fund managers. They should be politically accountable to the legislature; operationally accountable to the comptroller, auditor-general or other independent formal supervisory body; legally accountable to the judiciary; and scrutinized by civil society, the press and even international bodies like the IMF or policy institutes.

Governments sometimes circumvent their own rules due to weaknesses in independent oversight and lack of transparency. For instance, Abu Dhabi (UAE) has three natural resource funds, none of which require parliamentary approval for withdrawals. In addition, despite self-made claims of political independence, leading members of the ruling family sit on the Abu Dhabi Investment Authority's board of directors. This conflict of interest and lack of oversight, combined with a lack of transparency, has resulted in questions raised around the potential for politically motivated investments and misuse of funds. In Ghana, the Public Interest and Accountability Committee (PIAC), a body charged with monitoring compliance with oil revenue management legislation, has not been given an operating budget by the government, nor does it have formal powers to enforce its recommendations. Taking advantage of these weaknesses in independent oversight, the government has overestimated oil revenue projections in order to artificially inflate its spending allowances as fixed by Ghana's fiscal rule.²¹

Independent oversight bodies can encourage good financial management by praising compliance with the rules and good fund governance. In some cases, they can also discourage poor behavior by imposing punitive measures ranging from naming-and-shaming to fines, imprisonment or international sanctions. For example, Alberta (Canada) requires that its legislature conduct annual reviews of fund performance, ensuring compliance with regulations, and that it hold annual public meetings on fund activities. This is on top of periodic reviews of investment methodology

²¹ PIAC Report on Management of Petroleum Revenues for Year 2012. <http://piacghana.org/>. See Ghana's natural resource fund profile for further information.

and regular external audits that are publicly available.²² And in 2008, the Timor-Leste appeals court found that a \$290.7 million withdrawal from the Petroleum Fund was illegal.²³

While there are numerous types of oversight mechanisms, independent oversight is most effective when the oversight body has expertise in the topic under investigation, possesses the power or capacity to investigate, has access to information, holds enforcement powers, and is integrated with the institutional environment. If authorities decide to establish new bodies to oversee the natural resource fund (e.g., Ghana's PIAC or Timor-Leste's Petroleum Fund Consultative Council), which is not always necessary, these bodies should support existing institutions such as the comptroller's office or parliament by providing targeted reports on compliance with legislation or regulation. Where existing institutions have the potential to become more effective, they should be strengthened legislatively or through capacity building activities.

Good practices: Alberta (Canada), Ghana and North Dakota (USA) have introduced strong independent oversight requirements on their respective funds.

What are recent trends in natural resource fund governance?

Codifying rules. There is a trend toward establishing strict deposit, withdrawal, investment and other governance rules in legislation or regulation. The new Mongolian Fiscal Stabilization Fund is a case in point, with deposits and withdrawals determined by a set of fiscal rules (an expenditure growth rule, a structural balance rule and a debt ceiling). Often, new funds draw on a small

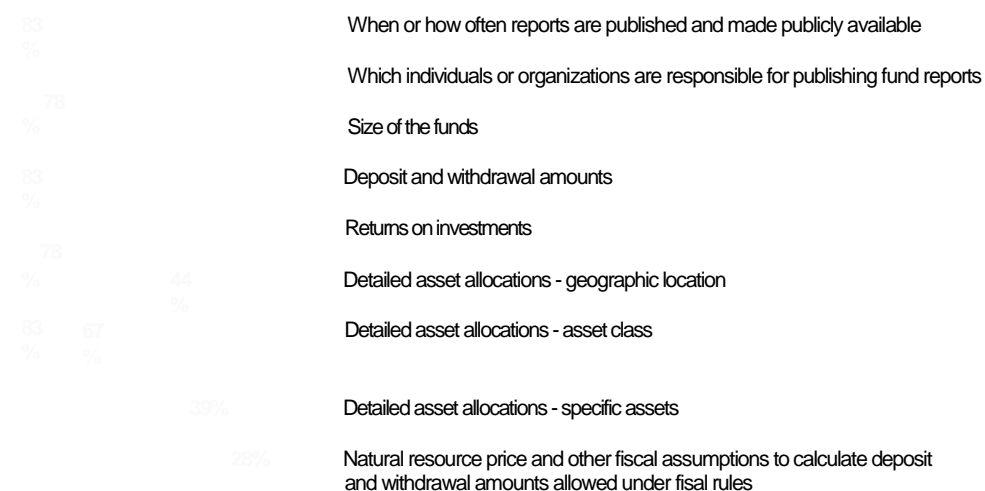
22 World Bank Institute, *Parliamentary Oversight of the Extractive Industries Sector*, 2010. http://www.agora-parl.org/sites/default/files/parliamentary_oversight_and_the_extractive_industries.pdf.

23 La'o Hamutuk, *Timor-Leste Appeals Court Invalidates 2008 State Budget*, 2008. <http://www.laohamutuk.org/econ/MYBU08/BudgetRuledUnconstitutional08.htm>.

number of model pieces of legislation. For example, the recently established Northwest Territories Heritage Fund drew on Alberta's legislation, the Mongolian Fiscal Stability Fund drew on the Chilean experience, and Norway was used as a model in Timor-Leste. This is partly due to the influence of the IMF, World Bank and international consultants, particularly from Norway and Chile, who act as principal advisors on the establishment of new funds. However, aspects of these models may be inappropriate in developing- or post-conflict contexts. Specifically, fiscal rules that generate significant savings and limit fiscal space for domestic investments in health, education and infrastructure may be too constraining for governments in capital-scarce countries (see "Fiscal Rules for Natural Resource Funds"). Also, foreign advisors often underemphasize enforcement mechanisms such as transparency and oversight requirements. While some of the advice around fiscal rules is changing, advisors should place added stress on rules around disclosure and compliance.

Greater transparency. Of the 23 natural resource funds scored by Allie Bagnall and Edwin Truman's Sovereign Wealth Fund Scorecard in both 2007 and 2012, all but three became more transparent over time. Specifically, many more funds are publishing audits, information about returns and investment manager information. Two Abu Dhabi funds, Chile's Economic and Social Stabilization Fund, and Trinidad and Tobago's Heritage and Stabilization Fund improved the most since 2007.²⁴ On the other hand, some funds, like Equatorial Guinea's Fund for Future Generations and the Libyan Investment Authority, still keep nearly all information about their activities secret. In Kuwait, it is against the law to disclose information about the Investment Authority to the public.²⁵ Transparency remains a serious challenge overall, with only about half of the funds studied releasing audits (internal or external) or publishing specific investments (see Figure 5).

Figure 5:
Percentage of funds publicly disclosing specific information (of 18 surveyed jurisdictions)



24 Bagnall, Alle and Edwin Truman, *Progress on Sovereign Wealth Fund Transparency and Accountability: An Updated SWF Scoreboard*. Peterson Institute for International Economics: Washington DC (2013). <http://www.piie.com/publications/pb/pb13-19.pdf>.

25 *2013 Resource Governance Index*. Revenue Watch Institute: New York. <http://www.revenuewatch.org/rgi>.

Policy Overview

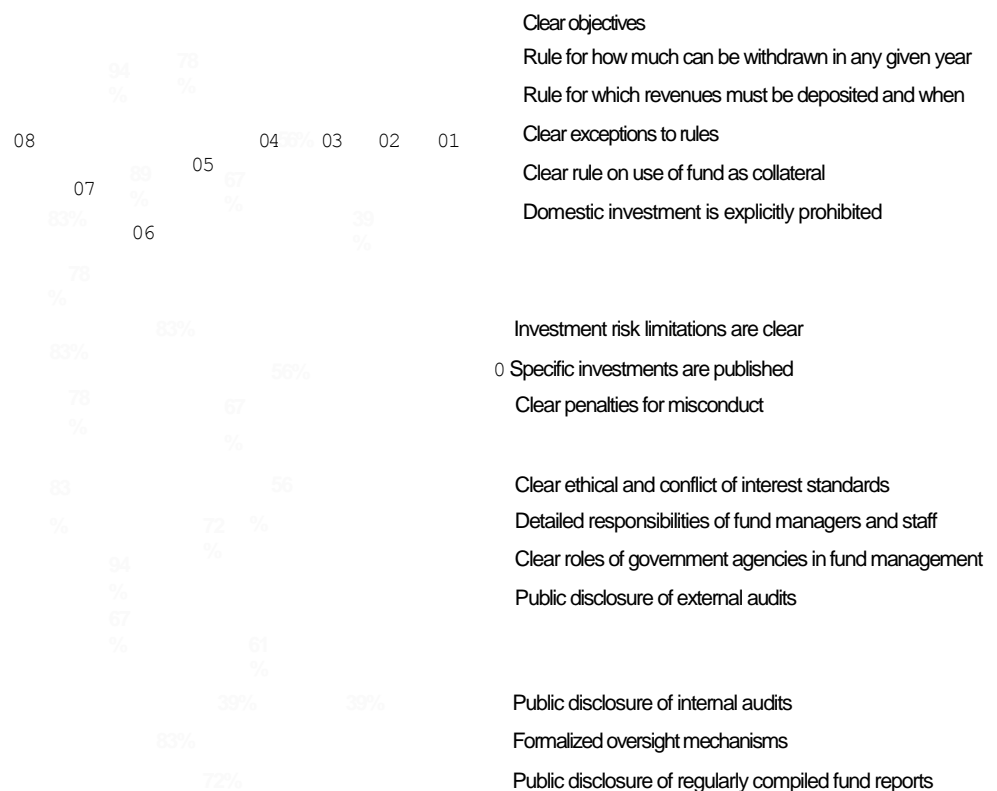
Continued resistance to some rules. While funds are becoming more rules-based, operational and fund management rules—for instance rules for which revenues must be deposited and when and the rules clarifying the roles of different government agencies in fund management—are much more common than transparency requirements or checks on corruption and patronage (see Figure 6). At the same time, some governments are resistant to even the most basic operational rules. The governments of Abu Dhabi (UAE), Azerbaijan, Botswana, Kuwait, and Russia, for example, have been unwilling to impose withdrawal rules on their respective funds, while the governments of Abu Dhabi (UAE) and Botswana have not imposed deposit rules.

Governments seem most resistant to prohibiting domestic investment through choices of asset allocation and publishing key information such as lists of specific investments or internal and external audits (see Figure 7 and Annex 1 for an explanation of different rules). Funds in Botswana, Equatorial Guinea, Iran, Kuwait, Mexico, Russia and Qatar, for instance, remain relatively opaque despite their governments signing on to the Santiago Principles.²⁶

Figure 6:
Percentage of funds that have clear and comprehensive legislation or regulation covering four different types of rules (of 18 surveyed jurisdictions)



Figure 7:
Percentage of funds that have clear legislation or regulation covering specific good governance requirements (of 18 surveyed jurisdictions)



²⁶ Opacity here is measured using Ali Bagnall and Edwin Truman's 2013 *Progress on Sovereign Wealth Fund Transparency and Accountability*.

An Updated SWF Scoreboard indicators 20-23. The Santiago Principles are a voluntary set of transparency principles and practices for sovereign wealth funds agreed upon by governments.

What steps should the international community, specifically the international financial institutions and other advisors who support governments in establishing and operating natural resource funds, take to improve fund governance?

First, international institutions and advisors should carefully consider the implications of suggesting the establishment of funds where public financial management systems are opaque and poorly functioning. In other words, international advisors should recognize that the establishment of a fund by itself will not improve resource governance. Rather, natural resource funds ought to be products of fiscal rules or macroeconomic frameworks that call for savings of oil, gas or mineral revenues, and minimum conditions (e.g., clear objectives, fiscal rules, investment rules, effective oversight and transparency) must be present if funds are to improve resource governance. Too often funds are established without a well-defined rationale, leading to poor outcomes.

Second, funds are often established by the executive branch of government, usually the finance ministry, on the advice of international experts from high-profile academic institutions or international financial institutions like the IMF and World Bank and through a technocratic process. This approach is doomed to fail in many countries. Unless there is political consensus on the use of resource revenues and informed civil society and oversight bodies to put pressure on governments to follow their own rules, even the best rules will usually not be followed. The international community can do a better job of encouraging multi-stakeholder consensus in order to agree on funds' operational rules and ensure compliance with those rules. In most cases, this will involve broad-based consultations around oil, gas or mineral revenue management legislation.

Third, the international community can better support oversight actors like legislators, auditors, the media and civil society in their work to promote compliance with fund governance rules. The IMF and World Bank, for example, often work exclusively with ministries and government officials, overlooking the important role that other actors play in promoting good governance. These other players must be as well informed as the government for funds to become better managed. Donors may therefore wish to consider added financial and technical assistance to these groups. They may also wish to remove the IMF and World Bank's constraints from working with oversight bodies or finance independent organizations to support the work of oversight institutions like parliaments, civil society and the media.

Fourth, the international community should promote enhanced global norms for good resource revenue management. Currently, there are a number of international standards for fund governance, notably the Santiago Principles and the IMF Guide on Resource Revenue Transparency. However, they do not go far enough. Both focus mainly on disclosure of information, clarification of roles and responsibilities, and political motivation of investments. None of the existing standards explicitly address funds' impacts on the citizens whose wealth they manage, or the issue of fiscal rules. Recently, several efforts have been made to codify fund behavior and create a global standard for fiscal rules. These include Edwin Truman for his Sovereign Wealth Fund Scoreboard; the IMF recent guidance note advocating a flexible approach on fiscal rules in its policy notes; the Extractive Industries Transparency Initiative (EITI) new standard, which includes information on fund management; and the Natural Resource Charter's inclusion of revenue volatility and management in precepts seven and eight.²⁷ However, there is still no international consensus on what good fund governance entails.

Finally, while national policy initiatives like the establishment of natural resource funds should be driven from within countries or regions, the international community can further encourage governments to better manage their resource revenues by placing natural resource

²⁷ Natural Resource Charter precept seven: "Resource revenues should be used primarily to promote *sustained, inclusive economic development* through enabling and maintaining *high levels of investment* in the country." Precept eight: "Effective utilization of resource revenues requires that *domestic expenditure and investment be built up gradually and be smoothed* to take account of revenue volatility."

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fund governance on the international agenda. Improved natural resource fund governance can prevent loss and mismanagement of billions of dollars that could go to health, education or infrastructure. It can also improve macroeconomic stability and mitigating Dutch disease, thereby improving the quality of investments, increasing growth rates and helping to diversify the economy. The indirect effects might even be much more significant than the direct ones. International institutions, academics and other influencers may be able to do more for poverty alleviation and growth by pushing for improved natural resource fund governance—such as encouraging codification of deposit and withdrawal rules and additional transparency—than through many other types of diplomatic interventions.

Annex 1: Explanation of the good governance standards in the natural resource fund profiles (page 4)

These good governance standards for natural resource funds draw on a number of sources including the 2013 Resource Governance Index questionnaire, Edwin Truman's Sovereign Wealth Fund Scoreboard and the Santiago Principles.

Operations

Are objectives clear: The objectives of natural resource funds should be clearly stated in government policy, regulation, legislation or even in the constitution.

Rule for how much can be withdrawn in any given year: Fiscal rules (withdrawal and deposit) are the most important rules governing fund behavior. Whether a natural resource fund meets its objective(s) depends almost wholly on the suitability, clarity and enforcement of its fiscal rules. These rules should be clarified in legislation, regulation or a binding policy document.

Rule for which revenues must be deposited and when: Same as above.

Are exceptions to rules clarified: Exceptions to fiscal rules—for example, in cases of environmental, financial or social crisis—should also be clarified.

Investment

Use of resource revenues as collateral: Using resource revenues to back government debt puts natural resource revenues at risk, especially if the government has a tendency to default, and encourages over-borrowing. One solution has been to restrict either part of all of a natural resource fund from being used as collateral. It is important to make these rules explicit.

Domestic investment is explicitly prohibited: Financing domestic investment directly by the fund is not recommended, because it can undermine transparency and accountability systems by bypassing the normal budget process, with its controls and safeguards, such as parliamentary approval, project appraisal, public tendering and project monitoring. All spending out of the fund should pass through the budget process and be subject to normal budgetary oversight processes.

Investment risk limitations: No matter what risk profile is chosen, it should be well defined and enforced through explicit rules that limit risk.

Publication of specific investments: In order to determine whether the risk limitations are being met, a public list of specific assets held by the fund should be published.

Management

Penalties for misconduct: Ethical and conflict-of-interest standards must be enforced by the fund's governing structure, preferably through concrete penalties such as dismissal, fines or even imprisonment.

Ethical and conflict of interest standards: Ethical and conflict-of-interest standards must be made clear in order for employees to understand the constraints they must abide by.

Detailed responsibilities of fund managers and staff: The roles and responsibilities of the operational manager, whether a unit within the central bank, a unit in the ministry of finance or a separate entity, should be detailed in law, regulation or a government policy document.

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Role of government agencies in fund management: The roles and responsibilities of the governing bodies—such as the legislature, executive, central bank, advisory bodies, fund governing board and fund executive—should be detailed in law, regulation or a government policy document.

Transparency and Oversight

Public disclosure of external audits: This is a prerequisite for accountability and compliance with governance rules, because oversight bodies cannot monitor fund operations and scrutinize fund performance without adequate information.

Public disclosure of internal audits: This is a prerequisite for accountability and compliance with governance rules, because internal managers cannot monitor fund operations and scrutinize fund performance without adequate information.

Formalized oversight mechanisms: Effective internal control mechanisms are often not enough to ensure compliance with governance rules or management of natural resource funds in the public interest. Funds should also be monitored by independent oversight bodies that exert external pressure on policymakers and fund managers.

Public disclosure of regularly compiled fund reports: This is a prerequisite for accountability and compliance with governance rules, because oversight bodies cannot monitor fund operations and scrutinize fund performance without adequate information.

Annex 2: Relevant publications

Bacon, Robert and Silvana Tordo, *Experiences with Oil Funds: Institutional and Financial Aspects*. World Bank: Washington (2006). http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2007/01/22/000020439_20070122164239/Rendered/PDF/ESM3210ExperiencesIOilFund01PUBLIC1.pdf.

Bagattini, Gustavo Yudi, *The Political Economy of Stabilisation Funds: Measuring their Success in Resource-Dependent Countries*. IDS Working Paper 356 (2011). <http://www.ids.ac.uk/go/idspublication/the-political-economy-of-stabilisation-funds-measuring-their-success-in-resource-dependent-countries-rs>.

Baunsgaard, Thomas et al., *Fiscal Frameworks for Resource Rich Developing Countries*. IMF Staff Discussion Note 12/04. IMF: Washington, D.C. (2012). <http://www.imf.org/external/pubs/ft/sdn/2012/sdn1204.pdf>.

Bazoobandi, Sara, *Political Economy of the Gulf Sovereign Wealth Funds: A Case Study of Iran, Kuwait, Saudi Arabia and the United Arab Emirates*. Routledge: New York (2012).

Bolton, Patrick, Frederic Samama and Joseph E. Stiglitz (eds.), *Sovereign Wealth Funds and Long-Term Investing*. Columbia University Press: New York (2012).

Castelli, Massimiliano and Fabio Scacciavillani, *The New Economics of Sovereign Wealth Funds*. Wiley: West Sussex (2012).

Clark, Gordon L., Adam D. Dixon and Ashby H.B. Monk, *Sovereign Wealth Funds: Legitimacy, Governance, and Global Power*. Princeton University Press: Princeton (2013).

Collier, Paul, Rick Van der Ploeg, Michael Spence and Tony Venables, *Managing Resource Revenues in Developing Countries*. IMF Staff Paper, Vol. 57, No. 1 (2010).

Collier, Paul and Anthony J. Venables (eds.), *Plundered Nations? Successes and Failures in Natural Resource Extraction*. Palgrave Macmillan: New York (2011).

Das, Udaibir S., Adnan Mazarei and Han van der Hoorn, *Economics of Sovereign Wealth Funds: Issues for Policymakers*. IMF: Washington, D.C. (2010).

Davis, J.M., R. Ossowski and A. Fedelino, *Fiscal Policy Formulation and Implementation in Oil-Producing Countries*. IMF: Washington, D.C. (2003).

Humphreys, Macartan, Jeffrey D. Sachs and Joseph E. Stiglitz (eds.), *Escaping the Resource Curse*. Columbia UP: New York (2007).

IMF Guide on Resource Revenue Transparency. IMF: Washington, D.C. (2007). <http://www.imf.org/external/np/pp/2007/eng/101907g.pdf>.

IMF Macroeconomic Policy Frameworks for Resource Rich Developing Countries. IMF: Washington, D.C. (2012). <http://www.imf.org/external/np/pp/eng/2012/082412.pdf>.

IWG Sovereign Wealth Funds: Generally Accepted Principles and Practices ("Santiago Principles"), 2008. <http://www.iwg-swf.org/pubs/eng/santiagoprinciples.pdf>.

Johnson-Calari, Jennifer and Malan Rietveld, *Sovereign Wealth Management*. Central Banking Publications: London (2007).

Kalyuzhnova, Yelena, *Economics of the Caspian Oil and Gas Wealth: Companies, Governments, Policies*. Palgrave Macmillan: New York (2008).

Natural Resource Charter, 2014.
<http://naturalresourcecharter.org/content/natural-resource-charter-pdf>.

The 2013 Resource Governance Index. Revenue Watch Institute: New York.
<http://www.revenuewatch.org/rgi>.

Schmidt-Hebbel, Klaus, *Fiscal Institutions in Resource-Rich Economies: Lessons from Chile and Norway*. Pontificia Universidad Católica de Chile, Instituto de Economía Working Paper 416 (2012). http://www.economia.puc.cl/docs/dt_416.pdf.

Truman, Edwin, *Sovereign Wealth Funds: Threat or Salvation?* Peterson Institute for International Economics: Washington, D.C. (2010).

Tsalik, Svetlana, *Caspian Oil Windfalls: Who Will Benefit?* Open Society Institute: New York (2003).

Yi-chong, Xu and Gawdat Bahgat, *The Political Economy of Sovereign Wealth Funds*. Palgrave Macmillan: Eastbourne (2010).

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Institutional Structure of Natural Resource Funds



Key messages

- A clear division of responsibilities—for example, between the legislature, president or prime minister, fund manager, operational manager and external managers—can help funds meet their objectives and prevent corruption.
- Putting day-to-day management in the hands of a capable and politically independent body with strong internal controls can help meet investment targets and prevent mismanagement. The choice of where to house this day-to-day operational manager—whether as a unit within the central bank, a unit in the ministry of finance, as a separate entity or at a custodial institution—is context-specific.
- Formal advisory bodies, drawn from the academic and policymaking communities, have made significant contributions to improving fund governance at the national level in countries like Chile, Ghana, Norway and Timor-Leste and at the subnational level in the United States.
- Codes of conduct and monitoring systems to prevent misconduct by the fund's executive, staff and external managers are useful tools for preventing patronage, nepotism and corruption. In order to be effective, such mechanisms must be vigorously enforced.
- Good fund governance requires that appropriate organization, staffing policies and internal controls be complemented by transparency, independent oversight and the political will to follow the rules.

What is natural resource fund management and why is it important?

Government decisions about the *institutional structure, staffing policies and internal controls* of a natural resource fund (NRF) have a huge impact on a fund's success. Establishing an effective organizational structure, clear lines of communication between different levels of the institutional hierarchy and a strong internal chain of accountability, both within an NRF and between the fund and higher authorities, can:

- Help the fund meet its objectives (e.g., savings; budget stabilization) by aligning the goals and strategic direction set by political authorities with the day-to-day decisions taken by operational and investment managers
- Prevent misuse of resource revenues for political purposes
- Prevent corruption by officials or external managers

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By contrast, a poorly designed management system can undermine government strategy and impede good governance. In particular, a failure to clarify roles and responsibilities of different bodies—such as internal advisory committees, board members and managing directors—can lead to turf wars or, at the other extreme, neglect of essential work.

In one notorious example of poor fund management, the Kuwait Investment Authority (KIA) invested \$7 billion in Spanish firms beginning in the mid-1980s. By 1992, these investments had declined in value to \$2 billion. According to audits and newspaper reports, these losses were facilitated by an absence of internal controls, supervision and transparency. For instance, the in-house managers of the London-based KIA subsidiary that made the investments refused to share trading information with the executive committee, which was meant to oversee fund activities. This system made possible not only mismanagement of assets but also high commissions and profits for insiders. In response, parliament now oversees KIA activities, a monitoring system was established and internal operational rules were tightened.¹

This policy brief focuses on NRF institutional structure, both at the macrolevel and within the body responsible for the fund's day-to-day operational management (the "operational manager"). The macromanagement structure involves the relationship between lawmakers, the executive, various advisory bodies, the auditor-general and the operational manager, which may be located within a ministry or the central bank, or in a separate dedicated organization. The internal management structure of the operational management entity involves a governing or supervisory board, the fund's executive office or committee, and various units organized around its front, middle and back office, which deal with investments (and possibly external fund managers), risk management and settlements, respectively (see Figure 1 for a model NRF organogram). The operational manager must also set standards for staff compensation and ethical behavior as well as ensure appropriate administrative capacity to meet the fund's mandate. Where applicable, the policy brief highlights the variations in the distribution of authority and responsibility seen among a number of well-established NRFs.

The macromanagement structure

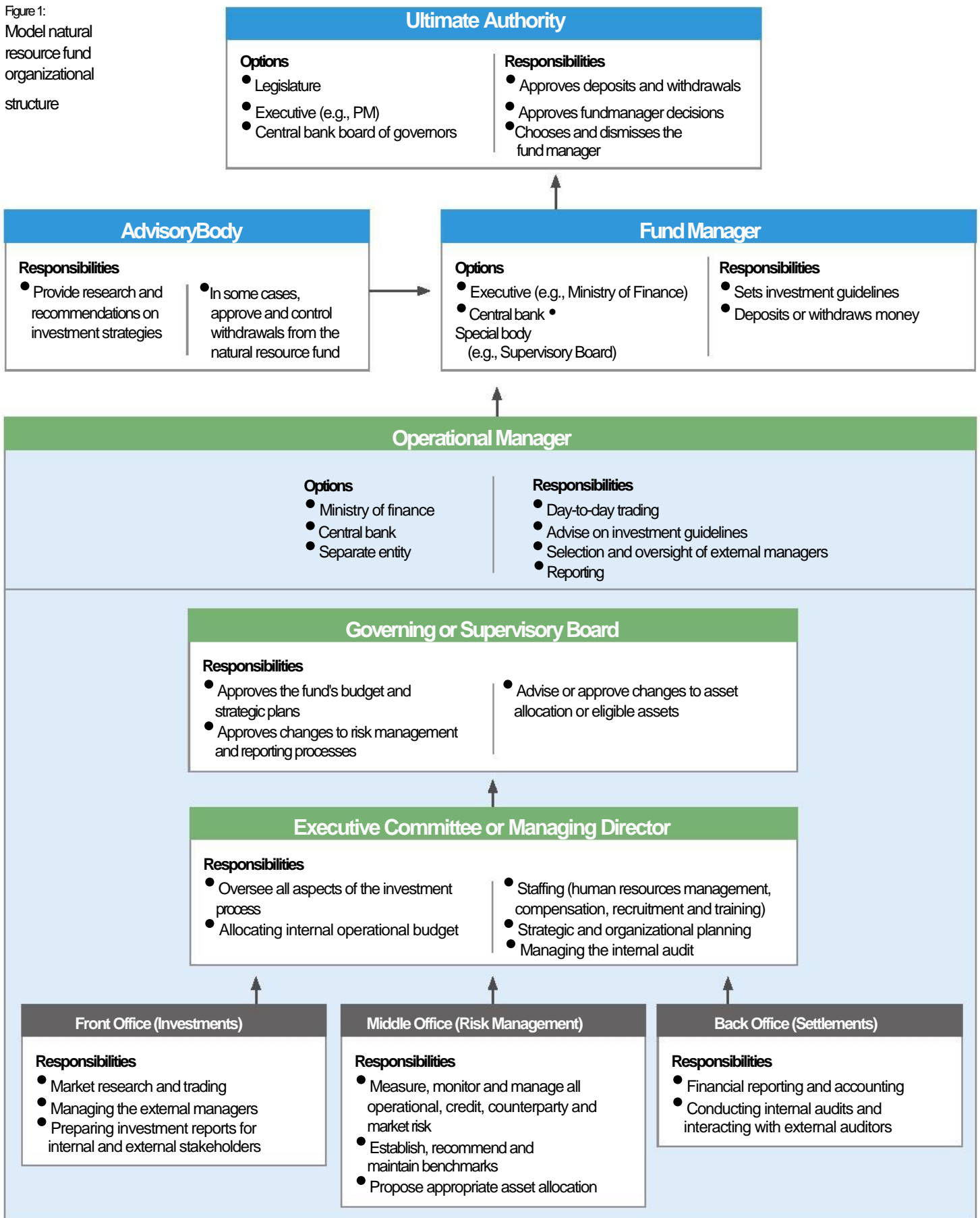
The macromanagement structure refers to the high-level arrangement among the legislative branch, executive branch, policy advisers and the senior operational management of the fund. This section outlines the different roles each of these actors may play. Specifically, it describes the impact of decisions on how and where funds are established, which body has ultimate control over fund behavior, which body manages the fund, who advises the fund manager, and how and by whom day-to-day operations are carried out. Finally, it discusses the role of legislatures in fund management.

Where and how is the fund physically established?

Natural resource funds can be established through the constitution or by legislation, regulation or executive decree. Though rare, national or subnational constitutions can call for the establishment of a fund. For example, Article 153 of the Niger Constitution makes reference to the creation of a petroleum fund. In the United States, Article IX, Section 15, of the State Constitution of Alaska establishes the Alaska Permanent Fund. The Alabama, North Dakota and Wyoming funds were also created through constitutional amendments. North Dakota took the process one step further by asking voters to approve the fund's creation.

¹ Sara Bazoobandi. *Political Economy of the Gulf Sovereign Wealth Funds: A Case Study of Iran, Kuwait, Saudi Arabia and the United Arab Emirates*. New York: Routledge, 2012.

Figure 1:
Model natural
resource fund
organizational
structure



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More commonly, funds are established through legislation (e.g., Abu Dhabi [UAE]; Alberta [Canada]; Botswana; Chile; Ghana; Norway; Russia; Timor-Leste; Trinidad and Tobago) or by executive decree (e.g., Azerbaijan; Kuwait). While the permanency of a constitution can institutionalize a long-term vision for managing resource revenues and promote policy consistency over many years, legislation and decrees are more flexible and often more detailed.

No matter what method is used in its establishment, by definition an NRF is ultimately owned by the government. That said, a fund can be set up legally as a unit within the central bank, as a unit within the ministry of finance or revenue authority, or as a separate legal entity.

The decision of where to physically locate the fund can have significant implications for fund transparency, accountability and effectiveness. For example, where central banks are independent professional public institutions with a high degree of operational capacity, placing the funds in the central bank's control can help prevent mismanagement. The governments of Botswana, Ghana, Norway, Russia and Trinidad and Tobago have each chosen to have their central banks host their respective funds on their behalf. Since subnational governments do not often have formal relationships with their central banks, subnational funds may be located within a nonpolitical department, such as the Department of Revenue (e.g., Alaska [USA]).

Abu Dhabi (UAE), Alberta (Canada), Azerbaijan and Kuwait have each chosen to establish separate entities to manage their natural resource funds. The Abu Dhabi Investment Authority (ADIA), Alberta Investment Management Corporation, the State Oil Fund of the Republic of Azerbaijan (SOFAZ) and KIA are essentially parastatals reporting directly to the executive. In low-capacity environments, this approach can generate islands of expertise within the government capable of managing complex financial instruments. However, creating these institutions can also be a way to maneuver around reporting and oversight requirements associated with central bank or ministry activities.

Many funds choose to appoint a custodial institution—such as JPMorgan Chase, BNY Mellon or Northern Trust—to hold their assets in safekeeping and perform additional financial services such as arranging settlements or administer tax-related documents. Custodial institutions are completely independent of the government, which can help minimize the chance of fund mismanagement. However, private banks can charge large management fees. Where custodial institutions are used, it may be important to set strict guidelines on their mandate and fee structure.

Who has ultimate control of the fund?

The body with *ultimate control* either approves the decisions of the fund manager or has the right to dismiss the fund manager. Regardless of where the fund is physically located, ultimate control over fund activities can rest with the legislature, the executive or the central bank. In Alaska (USA), Norway and Trinidad and Tobago, for example, the legislature approves the fund's annual budget. In Azerbaijan and Kazakhstan, the president has ultimate control. In Chile, Russia and Timor-Leste, the minister of finance has ultimate control, though that person reports to the president or prime minister. In a unique case, the Central Bank of Botswana's Board of Governors is responsible for the Pula Fund.

Who is the formal fund manager?

The *fund manager* sets investment guidelines and deposits or withdraws money from the fund. While the details vary from fund to fund, typically the official fund manager is a part of the executive branch (e.g., Office of the President, Office of the Prime Minister or Ministry of Finance), though responsibilities are sometimes delegated to a special body (e.g., Supervisory Board in Azerbaijan) or the central bank. While executive control allows the most senior government

officials to better coordinate government policy—for example, by ensuring that investment policy is consistent with fund objectives and that withdrawals are consistent with the government's macroeconomic framework—it may also politicize decisions around fund investments, inflows and outflows.

In some cases—for example, in Alaska (USA), Ghana, Timor-Leste and Trinidad and Tobago—legislation dictates the conditions under which deposits and withdrawals can be made, limiting the discretionary powers of the fund manager to manage (see section below on legislative oversight for more details). In others—for example, Norway—while there is no legislation, the parliament does control deposits and withdrawals. However, in most cases, the fund manager has a large degree of discretion, subject to oversight by the body with ultimate control over fund activities and independent monitoring groups.

What formal advisory bodies support the fund manager?

Many fund managers make use of formal advisory bodies whose members are drawn largely from the academic and policymaking community within or outside the country or region. In some cases, a formal advisory committee can in fact wield significant influence or even constrain government decision making—for instance, by approving and controlling withdrawals from NRFs (e.g., Chad's Collège de Contrôle et de Surveillance des Ressources Pétrolières). In other cases, it may simply make nonbinding recommendations and provide in-depth research and advice to the fund's executive committee (e.g., Alaska's Investment Advisory Group; Ghana's Investment Advisory Committee; North Dakota's Legacy and Budget Stabilization Fund Advisory Board).

Chile has one of the most elaborate sets of advisory bodies, some with binding formal powers and some without. The Advisory Committee for Trend GDP provides the Chilean Ministry of Finance with key projections that are used to calculate trend GDP and the output gap. The Advisory Committee for the Reference Copper Price provides the ministry with projections of the international long-term copper price. These two inputs are particularly important in Chile where objective projections of trend GDP and copper prices are used to calculate how much revenue to save and spend in any given year according to the fiscal rule. In this context, relatively accurate calculations are essential for helping mitigate expenditure volatility and saving revenues for future generations. The projections are binding on the government.

Chile also has an Advisory Committee for Fiscal Responsibility Funds—otherwise known as the Financial Committee—that is responsible for evaluating fund management by the Central Bank of Chile and issuing recommendations about fund investment policy and regulation to the Ministry of Finance as well as the two houses of Congress. While the committee's recommendations are not binding, a press release after each meeting and publication of an annual report on the funds' financial results and its recommendations on investment policy pressures the government to implement its recommendations.²

In the case of the Norwegian Pension Fund Global, the advisory structures (consisting of academics and investment consultants) serve on a much more ad hoc basis, providing detailed commissioned research to the Norwegian Ministry of Finance, the Norges Bank (Norway's central bank) Executive Board and the fund's executives on long-term strategic investments, risks and opportunities, the fund's investment performance, and changes and trends in the financial markets and investment industry. Reports and presentations submitted by the fund's external advisers are made public.

² Klaus Schmidt-Hebbel. "Fiscal Institutions in Resource-Rich Economies: Lessons from Chile and Norway" (working paper 416, Instituto de Economía, Pontificia Universidad Católica de Chile, 2012).

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Who is the day-to-day operational manager?

While the executive branch is usually the official fund manager, it often delegates day-to-day trading on financial markets, the selection and oversight of external portfolio managers and reporting duties to an *operational manager*. The operational manager can be chosen among the ministry of finance, central bank or a separate entity (see Table 1 for examples of the division of responsibilities). The operational manager, in turn, can delegate asset management responsibilities to a special unit within the central bank or external managers.

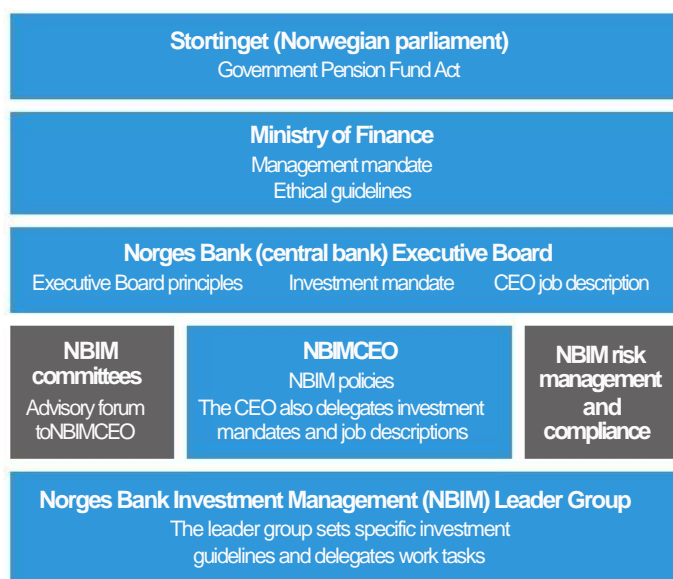
Table1:
Division of responsibilities
over fund management in
four resource-rich countries

	Azerbaijan	Botswana	Chile	Norway
Ultimate control	President	Central Bank Board of Governors	Minister of Finance	Storting (parliament)
Manager	Supervisory Board	Central Bank Board of Governors	Minister of Finance	Minister of Finance
Operational manager	Executive Director of the State Oil Fund of the Republic of Azerbaijan (SOFAZ)	Bank of Botswana Investment Committee	Central Bank of Chile	NorgesBank (central bank) Executive Board
Physical location	Bank of New York Mellon and National Depository Center of the Republic of Azerbaijan	Bank of Botswana	JPMorgan ChaseBank	JPMorgan ChaseBank

In the Norwegian case, which is widely regarded as an exemplary model of governance and intragovernmental organization, the parliament set the fund's legal framework in the Government Pension Fund Act, the Ministry of Finance has the formal responsibility over the fund's management, operational management is relegated to the Norges Bank, and Norges Bank's Executive Board has delegated fund management to a unit within the bank called the Norges Bank Investment Management (see Figure 2).³

Figure 2:
Management structure for
the Norwegian Government
Pension Fund Global

Source: Norges Bank Investment Management



³ "A Clear Division of Roles and Effective Controls," Norges Bank Investment Management, <http://www.nbim.no/en/About-us/governance-model>.

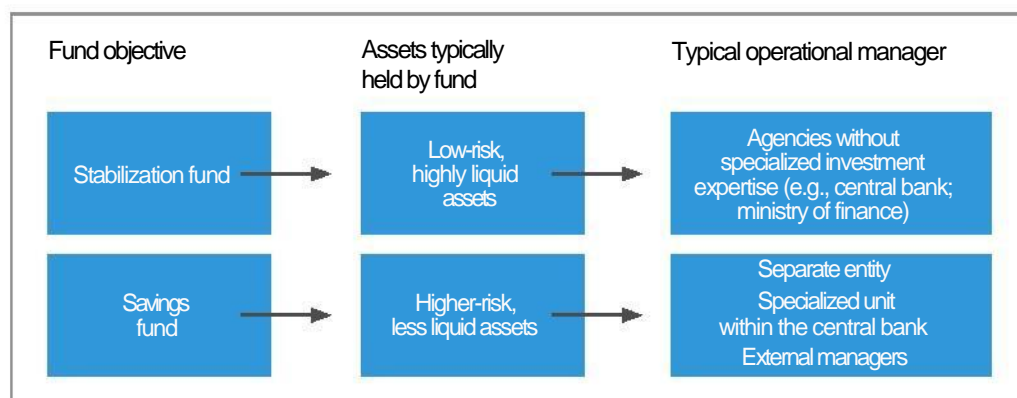
A fund's objectives and investment strategy should help determine which body acts as the operational manager (see Figure 3). In general, funds with relatively less complicated and low-risk investments, such as stabilization funds that invest exclusively in money-market instruments and highly liquid, short-duration sovereign bonds, can be placed under the operational management of agencies without extensive experience in managing complex financial instruments. These funds require comparatively less investment expertise and discretionary judgment, as they are essentially managed as cash balances within the overall fiscal framework or annual budget process.

In practice, many countries give their national central banks operational responsibility for the management of stabilization funds. This is due to their operational capacity for managing the kind of investments that stabilization funds make, which are typically very similar to those of the central bank's foreign exchange reserves. In addition, central banks tend to enjoy high levels of credibility and professionalism, which can make them good custodians of public assets. Examples of stabilization funds managed by central banks include the Algerian Revenue Regulation Fund, Trinidad and Tobago's Heritage and Stabilization Fund and Venezuela's Macroeconomic Stabilization Fund.

For NRFs with more complex investment strategies that require specialist skills—such as more diversified sovereign bonds, corporate bonds, equities and alternative assets—the operational management of the fund is typically relegated to a special unit within the central bank or a separate, dedicated fund management structure. In practice, when the allocation to more complex asset classes is largely done through "passive allocations,"⁴ the central bank often retains operational responsibility. This is true in Botswana, Ghana, Kazakhstan, Norway, Timor-Leste, and Trinidad and Tobago. In such cases, government ministries still have critical roles to play in terms of oversight and setting long-term strategic objectives for the fund. In addition, ministries need to ensure that NRF policies and cash flows are coordinated with other areas of economic policy, such as the annual budget and (in the case of domestic development funds) with public spending and investment more generally.

Where investment managers are given more discretion to take risks or where funds are owned by subnational governments, a dedicated investment management agency, corporation or authority is often created, as in the cases of Abu Dhabi (UAE), Alaska (USA), Alberta (Canada), Brunei, Kuwait, Nigeria and Qatar. The Alaskan NRF, for example, is managed by the Alaska Permanent Fund Corporation, which is described as "a quasi-independent state entity, designed to be insulated from political decisions yet accountable to the people as a whole."⁵

Figure 3:
Choosing an operational manager based on the fund's objective



4 This means that the fund essentially attempts to follow the movement of the market by tracking an index. Passive management is opposed to active management, where investor skill is employed to attempt to "outperform" the market.

5 Alaska Permanent Fund Corporation, "An Alaskan's Guide to the Permanent Fund," 2009

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Finally, in low-capacity environments or where investment strategies are more complex, operational managers—whether they are central banks or separate entities—often hire external managers. This puts the operational manager in the position of being a "manager of managers." While it may sound simple, managing the managers can be an incredibly analytical and data-intensive process (see Box 1).

Box 1: Manager of managers

Natural resource funds (NRFs) often make use of external fund or portfolio managers. This is true for funds that are largely passively managed (in which case fees are much lower), but more typically when the NRF's management seeks additional returns by outperforming the market using active strategies (which involve higher fees). The reasons for using external managers include: (i) the perceived superior technical and infrastructural capacity of external managers; (ii) allocations to highly specialized asset classes, such as real estate and land, private equity, emerging market debt and equities, and small-cap equities; and (iii) the need to develop internal investment capacity through technical training and skills transfer from an external manager.

The management of an NRF using external investment managers needs to guard against the principal-agent problem. Investment managers often push the sale of complex and high-risk financial instruments for at least two reasons. First, there are often higher fees associated with trade in more complex investments. Second, performance bonuses may be linked to large returns, while the external manager may not bear the burden of financial losses.

Operational managers can guard against excessive risk-taking, high fees and mismanagement in at least three ways. Following the customs of the investment industry, the NRF can involve a well-regarded global investment consulting firm to conduct a rigorous selection process. Operational managers can constrain the options available to external managers through strict investment guidelines and mandated restrictions. Finally, operational managers must constantly monitor and scrutinize their external managers.

The key point for legislators and other oversight bodies is that the use of external managers does not reduce the operational managers' responsibilities. Being a prudent and effective "manager of managers" requires comprehensive information systems, sound internal processes and constant monitoring, interaction and evaluation.

What role does the legislature play in overseeing the fund?

Legislators often have ultimate authority over establishing what the NRF can and cannot do. In many cases, NRFs are created through the passage of an act or a law that establishes most of the fundamental aspects of the fund, such as its purpose, deposit and withdrawal rules, investment objectives, risk tolerance and eligible assets. In short, parliamentary lawmakers often set the goalposts, even if the responsibility for scoring goals is delegated to other authorities.

Lawmakers also serve an important role in the year-by-year management and operation of any NRF, as well as potentially serving a critical role in ensuring appropriate levels of oversight, transparency and accountability. With regard to the former function, the most transparent, accountable and professionally run NRFs produce extension reports, presentations and testimonies to parliament. The relationship should be two-way. On the one hand, legislators should ask tough (but informed) questions around the fund's inflows and outflows, investment performance, management of risk and decision-making process. On the other hand, the NRF's managers should inform the legislature whenever the legal framework and provisions of the fund need to be changed in order to make prudent investment decisions (for example, if the fund needs

to be allowed to invest in new asset classes or to implement certain derivatives strategies in order to manage risk or enhance long-term investment returns).

In Norway, for example, the Storting (legislative body) approves the Government Pension Fund Global's annual budget, appoints members of a fund supervisory council and reviews the council's reports. In addition, legislative committees are often established to hold hearings and report on legal compliance, as well as identify cases of government mismanagement. In the Canadian province of Alberta, a standing committee is tasked with approving the fund business plan annually, reviewing quarterly reports on fund operations, approving the fund's annual report, reporting to the legislature on whether the fund is meeting its objectives and holding public meetings with Albertans on fund activities.⁶

The internal management structure

This section turns to the internal management structure within the operational management entity. A key decision is how to establish appropriate senior management and oversight structures. A commonly encountered management structure is a governing or supervisory board that oversees an executive committee or managing director. Front, middle and back offices, which handle investments, risk management and settlements, respectively, report to the executive committee or managing director. The separation and specification of duties of the different bodies may feature small variations from fund to fund but are broadly summarized below.

What is the operational manager's highest authority?

Most NRFs with significant assets under management and relatively sophisticated investment processes have a governing or supervisory board that sits on top of the fund's executive committee or managing director (though the managing director may sit on the board). The board, which is accountable to the official fund manager, typically approves the fund's budgets, strategic plans and changes to the investment, risk management and reporting processes. If the board is granted a relatively high degree of authority, it may advise on—and in some cases even approve—changes to the fund's asset allocation, permitted investment strategies and eligible assets (a less empowered board may simply help the executive communicate and explain these requirements to the ministry and/or parliament). The board typically reports to the minister of finance, council of ministers and/or parliament.

Board membership varies greatly from country-to-country, from technocratic independent experts to government officials to senior members of the executive branch of government. In Canada, the Alberta Investment Management Corporation's Board of Directors consists entirely of experienced private-sector executives appointed by the government. In Botswana, where the Pula Fund is managed by the central bank, the Board of Governors consists of the Governor of the Bank of Botswana, Permanent Secretary of the Ministry of Finance and seven other members of various backgrounds appointed by the Minister of Finance. The SOFAZ Supervisory Board consists of government ministers, central bankers, parliamentarians and other Azerbaijani officials. Finally, the Abu Dhabi Investment Authority's Board of Directors consists almost entirely of members of the ruling family.

In some more authoritarian systems, it is common for representatives of the fund manager to sit on the board. For example, in the cases of Azerbaijan's State Oil Fund, Kazakhstan's National Fund, the Kuwait Investment Authority and the Qatar Investment Authority, ministers, the speaker of parliament, economic advisers to the president or even the president himself may sit on the board of a supposedly independent operational manager.

⁶ World Bank Institute, Parliamentary Oversight of the Extractive Industries Sector, 2010. http://www.agora-parl.org/sites/default/files/parliamentary_oversight_and_the_extractive_industries.pdf.

Executive committee or managing director

The executive committee or the managing director is the highest management structure within the operational management entity. Its function is to bear responsibility and oversee all aspects of the investment process, across the front, middle and back offices. The executive committee or managing director is also responsible for allocating the internal operational budget, managing the internal audit, strategic and organizational planning and all aspects of staffing policy (human resources management, compensation, recruitment and training).

Where the operational manager is a state-owned corporation or entity, the executive reports to a board of governors or directors. For example, in Azerbaijan the SOFAZ Executive Director, though appointed by the president, reports to the Supervisory Board. In Abu Dhabi, the Abu Dhabi Investment Authority's Executive Committee reports to the Board of Directors. Where the central bank is the operational manager, the executive typically reports directly to the Minister of Finance (e.g., Chile; Botswana; Ghana; Norway; Russia).

Front office (investments)

The front office is the NRF's investment team (for further details on investment strategies, see policy brief on "Rules-Based Investment for Natural Resource Funds"). The exact specification of tasks and functions to be performed by the front office will depend on the size of the fund's assets under management, its basic investment style (passive, active or mixed), the size and number of external management mandates it operates and the complexity of the investment strategies being pursued. For larger organizations the views and concerns of the front office are consolidated and communicated to senior management and oversight bodies through an investment committee or department. The front office usually reports to the chief executive and chief investment officer of the fund. The following are tasks commonly associated with the front office:

- Investing internal portfolios, including trading in financial instruments
- Researching and analyzing financial market trends and asset valuations
- Monitoring the performance and managing the relationship with external fund managers⁷
- Facilitating feedback and skills transfer between external managers and the fund's employees
- Communicating and articulating the fund's evolving market views and investment philosophy, process and decisions
- Preparing quarterly and annual investment reports to the executive committee, as well as the governing board, ministry of finance and other external stakeholders

Middle office (risk management)

The middle office consists of the risk management and performance and attribution team. As with the front office, the views of the middle office can be consolidated and coordinated through a Risk Committee or Department that reports to senior management structures. The middle office usually reports to the chief operating officer and/or the chief investment officer. Some of the important tasks performed by the middle office are:

- Measure, monitor and manage all operational, credit, counterparty and market risk
- Propose appropriate asset allocation based on risk profile
- Enhance risk forecasting and modeling capabilities
- Establish, recommend and maintain benchmarks
- Determine how returns of the various portfolios are obtained by attributing the measured return to investment decisions made and the various internal and external managers

⁷ In a small number of cases, the oversight of external managers is the responsibility of the middle office. This is typically when external managers are tasked with pursuing highly passive (low fee) investment strategies that largely follow the market. In such cases, the monitoring of external managers essentially becomes exclusively a risk management issue, ensuring that external managers are not adding to underlying market risks by taking active bets of market movements.

Back office (settlements)

The back-office function is responsible for what is often described as "post-trade" activities that are critical to accurate and timely recording and documentation of investment activities (for further details on reporting, see policy brief on "Natural Resource Fund Transparency"). Many institutional investors, including public investors, outsource much of the back-office function to established custodians and asset servicing firms such as BNY Mellon, State Street, JPMorgan Chase or Citigroup. In such cases, the NRF's back office is responsible for supervising and interacting with external service providers, and ensuring that the required data is received in a timely and accurate manner and integrated with the central bank's own IT systems. The back office usually reports to the chief operating officer and chief financial officer. Some of the most important tasks performed by the back office include:

- Financial reporting and accounting in compliance with the NRF's stated accounting framework and standards, and in compliance with regulatory and tax requirements
- Clearing and settlement of trades

The back office also conducts internal audits and interacts with external auditors. An internal audit is an examination and evaluation of an organization or system's internal controls.

The goal of a natural resource fund internal audit is usually to assess compliance with governance and investment rules and make recommendations to improve the effectiveness of governance processes.

Nearly all NRFs have internal audits, overseen by an audit committee or internal auditor. These audits can either be performed in-house or by independent auditors. Internal audits are submitted to the executive committee or managing director. While some governments (e.g., Alaska [USA]; Chile; Ghana; North Dakota [USA]; Norway; Trinidad and Tobago) release their NRF internal audit reports to the public as a means of improving internal governance, this is not yet standard practice.

Preventing misconduct by managers and staff

Allegations of conflict of interest or outright misuse of public office for private gain by NRF board members, managers or staff is not unheard of. The Kuwaiti example in the first section of this policy brief is but one instance. Many of the Libyan Investment Authority's assets are yet to be identified, generating speculation of corruption or conflict of interest. And recently members of the Nigerian House of Representatives accused a manager at the Nigerian Sovereign Investment Authority of contracting his former employer, UBS Securities, as an external manager without following due process.⁸

Appropriate governance rules, internal supervision, external oversight and transparency are the key elements in preventing such mismanagement. However, codes of conduct and preventing conflicts of interest are also important. Most NRFs set out behavioral guidelines for board members, executives and staff, either in legislation or in manuals. These typically require individuals to disclose potential conflicts of interest and financial interests, while introducing significant penalties for abuse of inside information, fraud and unethical behavior. The most effective of these codes and guidelines clearly articulate the legal and professional implications of misconduct and unethical behavior, and establish clear processes for dealing with it once it is suspected or detected. Ideally, a compliance officer should be appointed to

⁸ Victor Oluwasegun and Dele Anofi, "APC Reps Question Management of \$200m Sovereign Funds by Foreigners," *The Nation*, <http://thenationonlineng.net/new/apc-reps-question-management-of-200m-sovereign-funds-by-foreigners/>.

ensure compliance with applicable laws, regulations and standards around ethics, conflicts of interest and misconduct.⁹

The University of Texas Investment Management Company's Code of Ethics is a good example of a comprehensive code of conduct for fund managers and staff.¹⁰ It includes sections on conflict of interest, acceptance of gifts, nepotism and financial disclosures. While the Texas Permanent University Fund's Chief Executive Officer (CEO) is responsible for enforcing the code, the Board of Directors is the highest authority in charge of ensuring that the CEO does so.

Conclusion

Research and practical experience among NRFs demonstrate that—along with strong transparency requirements, external oversight and the political will to manage resource revenues well—effective management and organizational structures are key determinants of good fund governance. Management structures that set out clear and unambiguous roles, powers and responsibilities for governing bodies and staff promote prudent investment and prevent misconduct, corruption and mismanagement.

The specific choices around who has ultimate authority over the fund, who manages the fund, how the operational manager is organized, where the fund is physically located and how these bodies interact, must be context-specific. Policymakers and oversight bodies have significant scope for pragmatically tailoring fund management structures in accordance with local requirements, preferences and competencies. That said, it is preferable to involve a number of public agencies and institutions—for example, ministries, central banks, public investment bodies, legislators and auditors—in the management process. In this way, different bodies can monitor one another, promote compliance with governance rules and make sure that the government is managing natural resource revenues in the public interest.

9 Comelia Hammer, Peter Kunzel and Iva Petrova, "Sovereign Wealth Funds: Current Institutional and Operational Practices" (working paper, International Monetary Fund 08/254, 2008). <http://www.imf.org/external/pubs/ft/wp/2008/wp08254.pdf>.

10 The University of Texas Investment Management Company's Code of Ethics can be found at <http://www.utimco.org/extranet/WebData/CORPORATE/CodeofEthics.pdf>.

Fiscal Rules for Natural Resource Funds: How to Develop and Operationalize an Appropriate Rule

April 2014



Key messages

- Natural resource funds by themselves do not guarantee sound macroeconomic management. In fact, they may complicate budgeting and make public spending less accountable.
- Fiscal rules—multiyear constraints on government spending or public debt accumulation—can help commit successive governments to stable macroeconomic policy, which is necessary for growing and diversifying an economy dependent on large, finite and volatile natural resource revenues. While some natural resource funds are governed by fiscal rules while others are not, fiscal rules generally improve government performance and public financial management.
- The Alaska (USA), Chile, Ghana, Kazakhstan, Norway, Timor-Leste, and Trinidad and Tobago natural resource funds are governed by fiscal rules that generate savings in years when oil, gas or mineral prices or production are high.
- The design of fiscal rules should depend on context; no single rule is appropriate for every country. For example, if a country needs financing for development projects and has the "absorptive capacity" to implement projects proficiently and efficiently, then the government may wish to spend more and save less. However, the government may also wish to save a significant fraction of resource revenues to generate a buffer in case of economic disaster or unanticipated downturns in oil, gas or mineral production or prices.
- In order to function properly, fiscal rules must be designed with specific objectives in mind (e.g., to address absorptive capacity constraints; to stabilize the budget), there must be political consensus on their suitability and they must be enforced through independent oversight.
- Most natural resource funds have deposit and withdrawal rules, which usually operationalize a fiscal rule. Their details matter a lot since they can sustain or undermine fiscal rules.

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What are fiscal rules and why are they useful?

Resource-rich countries often face three major macroeconomic challenges: Dutch Disease, short- to medium-term pro-cyclical fiscal policy and long-run boom-bust cycles.

During peak production on a new mine or oil or gas field, usually several years after production starts, a government may be flooded with a sudden cash windfall. Often, the government spends this entire windfall, without saving a portion. While government officials, politicians and the general public may expect spending to improve schools, electricity and other public services, the result instead may be a rise in domestic wages and prices without any substantial development

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outcome. Alternatively, the inflow of money can lead to exchange rate appreciation, which can harm domestic exporters. Together, these effects can cause a decline in non-oil or non-mineral industries and a lower standard of living for those disconnected from the resource sector.

This is commonly known as Dutch Disease.¹ There is strong evidence of Dutch Disease effects in Azerbaijan, Iran, Russia, Trinidad and Tobago and Venezuela, as well as at the subnational level in Brazil, Indonesia and Peru.

The extent of the damage caused by the Dutch Disease depends in part on the absorptive capacity of the economy and the government. If the economy and the government can easily absorb the inflow of cash, then the Dutch Disease can be mitigated. The ability to overcome the Dutch Disease depends, in part, on the existence of local public sector expertise to plan budgets, appraise projects and carry out public tenders efficiently, as well as the number and quality of engineers, construction workers, teachers or doctors to absorb new government spending.²

Second, governments are often disposed to spend what they receive in revenues. Since oil, gas and mineral prices and production are highly volatile, most resource-dependent governments exhibit "pro-cyclical fiscal policy," a tendency to increase spending when revenues go up and decrease spending when revenues decline. Temporary windfalls generate substantial incentives to spend now when revenues are high, leading to poor public expenditure decisions—for example, construction of concert halls, new airports and other legacy projects—and poor quality infrastructure since it takes time to adequately plan and execute projects. When revenues decline, governments often face debt crises or are unable to pay for government salaries or operations and maintenance of new infrastructure. The impact on the private sector can be equally devastating as businesses invest when they receive government contracts and scale back or go bankrupt when government contracts dry up.

Third, oil, gas and minerals are finite resources. Some large mines or oil fields only generate significant revenues for a decade, while others produce for several. Yet many resource-rich countries do not save or invest for the benefit of future generations when they are receiving their revenue windfalls, leading to a long boom period followed by an economic recession or even a depression. Nauru, a country rich in phosphates, is a case in point. It consumed its mineral wealth rather than saving or investing it. Following the start of large-scale production, Nauru went from one of the world's poorest nations to one of its richest, with GDP peaking at \$25,500 per citizen (2005 dollars) in 1973. By 2007, it had once again dropped to one of the world's poorest, with GDP less than \$1,900 per citizen. The economy never recovered.

A fiscal rule is a multiyear constraint on overall government finances defined by a numerical target (see Table 1 for examples). Fiscal rules can act as a commitment mechanism, binding successive governments to a long-term budgetary target and therefore a long-term vision of public financial management.

Fiscal rules are necessary given the finite and destabilizing nature of oil, gas and mineral revenues. They can discourage overspending and waste by limiting a government's ability to grow expenditures too quickly. They can encourage governments to employ "counter-cyclical fiscal policy" to mitigate the negative effects of revenue volatility (see Figure 1). And they can enhance the credibility of a government's commitment to stable fiscal policy, thereby stimulating private investment. That said, in order to function properly, they must be designed with specific

1 Dutch Disease refers to the negative effects on domestic trading industries, deindustrialization and resource dependence that can occur as a result of real exchange rate appreciation (rising prices/wages or a nominal exchange rate appreciation).

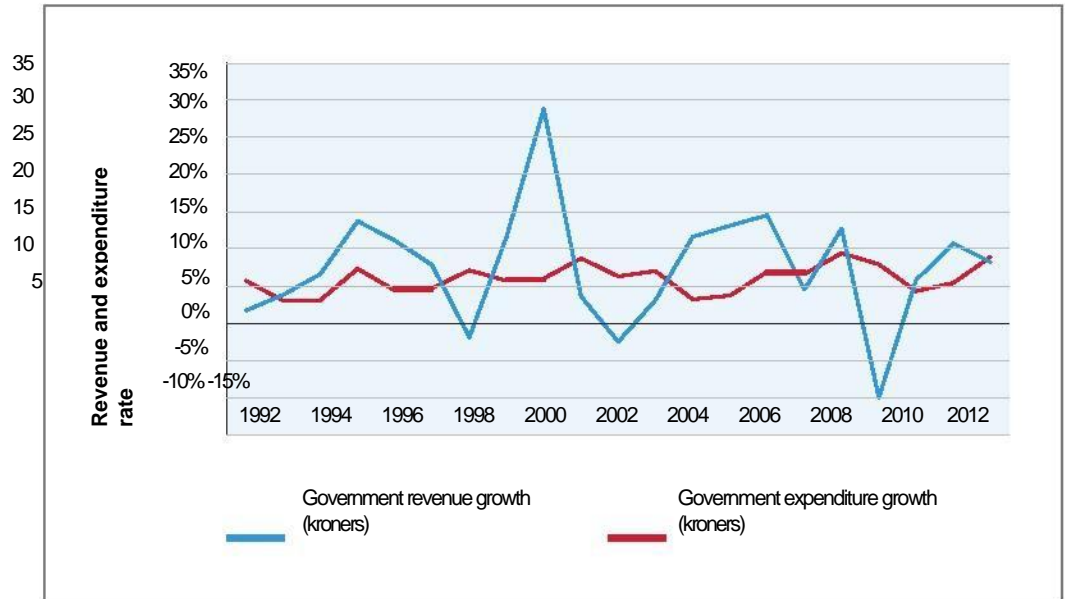
2 Dutch Disease may also be mitigated in three other ways: fiscal sterilization (the government saving resource revenues in foreign assets through a natural resource fund), monetary sterilization (the central bank saving resource revenues as foreign currency reserves) or revenues exiting the country through capital flight.

objectives in mind (e.g., to address absorptive capacity constraints; to stabilize the budget), there must be political consensus on their suitability and they must be enforced. Enforcement can be encouraged through formal agreement between political parties, independent control over the fiscal framework, judicial oversight, legislative oversight, independent audits, international peer pressure or having a well-informed and engaged citizenry and media to pressure the government to abide by its own rules.

Figure 1:
Effects of Fiscal Rules or
Lack Thereof on Revenue
and Expenditure Volatility in
Norway and Venezuela

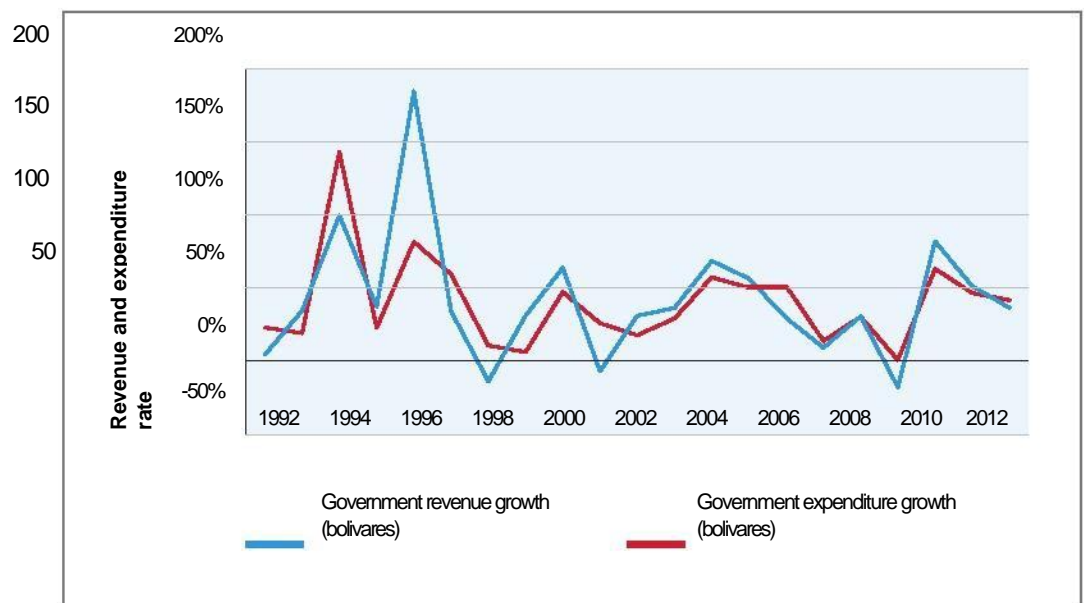
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Norway



Venezuela

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In general, there are four types of fiscal rules. They are explained in Table 1 along with examples from resource-rich countries.

Table 1:
Four Types of Fiscal Rules

Sources: RWI; Budina et al., "Fiscal Rules at a Glance: Country i Details from a New Dataset" (IMF Working Paper 12/273, 2012).

	Explanation ³	Example	
Balanced budget rule	Limit on overall, primary, or current budget balances in headline or structural terms	Chile (statutory since 2006) Mongolia (statutory since 2010; effective in 2013) Norway (political commitment since 2001)	Structural surplus of 1 percent of GDP with an escape clause. What constitutes a "structural balance" is informed by a 10-year forecast of copper and molybdenum revenues as determined by an independent committee. Structural deficit cannot exceed 2 percent of GDP. Non-oil structural deficit of the central government cannot exceed 4 percent, which is the expected long-run real return on sovereign wealth fund investments. The fiscal guidelines allow temporary deviations from the rule under specific circumstances.
Debt rule	Limit on public debt as a percent of GDP	Indonesia (coalition agreement since 2004) Mongolia (statutory since 2010; effective in 2014)	Total central and local government debt should not exceed 60 percent of GDP. Public debt cannot exceed 40 percent of GDP.
Expenditure rule	Limit on total, primary, or current spending, either in absolute terms, growth rates, or in percent of GDP	Botswana (statutory since 2003) Mongolia (statutory since 2010; effective in 2013) Peru (statutory since 2003; rule changed in 2009)	Ceiling on the expenditure-to-GDP ratio of 40 percent. Expenditure growth limited to non-mineral GDP growth. Real growth current expenditure ceiling of 4 percent. Exceptions made if Congress declares an emergency.
Revenue rule	Ceiling on overall revenues or revenues from oil, gas or minerals	Alaska (statutory since 1976) Botswana (political commitment since 1994) Ghana (statutory since 2011) Kazakhstan (government policy since 2010) Timor-Leste (statutory since 2005) Trinidad and Tobago (statutory since 2007)	50-75 percent of oil revenues minus income tax and property tax enters the budget; the rest is saved in the Alaska Permanent Fund, which saves some revenues and disburses the rest directly to citizens. Mineral revenues may only be used for public investment or saved in the Pula Fund. Maximum 70 percent of seven-year average of petroleum revenue enters the budget. Maximum 21 percent is allocated to a Stabilization Fund. Minimum 9 percent is allocated to a Heritage Fund for future generations. Percentages subject to review every three years. \$8 billion USD plus/minus 15 percent (depending on economic growth) of petroleum revenue is transferred from the National Fund to the budget annually. Revenue entering the budget from the Petroleum Fund cannot exceed 3 percent of national petroleum wealth. Exceptions made if the government provides a detailed explanation to parliament and certain reports. Maximum 40 percent of excess oil and gas revenue above estimated revenue is used to finance the budget; the rest goes into the Heritage and Stabilization Fund. An 11-year revenue average is used for budget estimates.

³ Overall fiscal balance means that expenditures equal revenues; primary fiscal balance means that total expenditures minus interest payments on debt equal revenues; current fiscal balance means that total expenditures minus spending on capital expenditures equal revenues; headline fiscal balance refers to expenditures equaling revenues at any time; structural fiscal balance refers to expenditures equaling revenues when the economy is working at "potential" or full capacity; a deficit refers to when expenditures are greater than revenues; a surplus is when revenues are greater than expenditures.

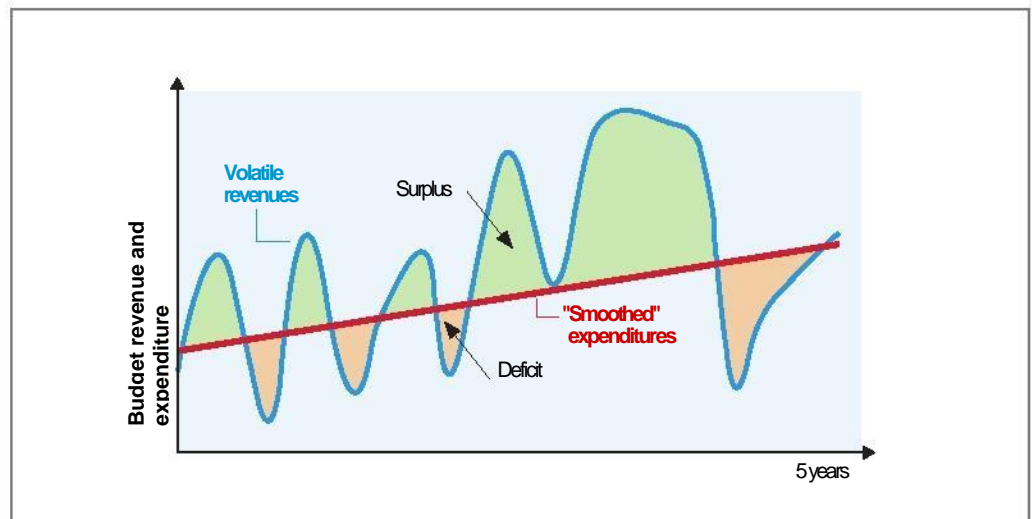
³ This is the footnote here but hidden

Employing a fiscal rule in a resource-rich country will likely generate periods of fiscal surplus and deficit (see Figure 2). For example, let us assume that Peru's government spends exactly what it receives in revenue in 2012 (i.e., it is in "fiscal balance"). If revenues grow by 5 percent in 2013, but the rule says that the government cannot increase expenditures faster than 4 percent per year, then Peru must decide what to do with the surplus revenue. Given the fiscal rule that limits additional spending, it only has three choices: lower taxes, use the surplus to pay down public debt or save the surplus in a sovereign wealth fund. Lowering taxes during a temporary windfall period may prove fiscally unsound in the long term and the country may already be in a sustainable public debt position, as is the case in Peru. Thus some fiscal rules can give rise to sovereign wealth funds/natural resource funds. In Peru's case, the government has chosen to pay down the public debt; however, discussions are now taking place on creating a natural resource fund.

Of course, some governments have established sovereign wealth funds without enacting fiscal rules or complying with existing rules. However, in these countries, macroeconomic and fiscal policy may be inconsistent, leading to volatile budgets, exchange rates or inflation (e.g., Kuwait), fiscal policy may be less credible, leading to weak private investment (e.g., Mexico) and government spending may be less accountable to the public, leading to poorer public investment decisions and execution (e.g., Azerbaijan).

In short, natural resource funds in and of themselves do not affect the pattern of government behavior. However, under the right circumstances, fiscal rules can give rise to natural resource funds, which in turn can provide a source of financing to support a steady scaling up of public investment, help stabilize budgets, and provide an endowment for future generations.

Figure 2
Effects of an Expenditure
Growth Rule—Periods of
Surplus and Deficit



What is an appropriate fiscal rule for a resource-rich government?

There is considerable academic debate around the appropriate fiscal rule for resource-rich governments. The International Monetary Fund (IMF) has previously advocated for the so-called permanent income hypothesis (PIH) rule, which limits spending from oil, gas or mineral revenues in any given year to the interest accrued on all oil, gas and mineral wealth. The idea is that, since oil, gas and minerals are nonrenewable, consuming them today is unfair to future generations. In short, the subsoil asset should benefit current and future generations equally.

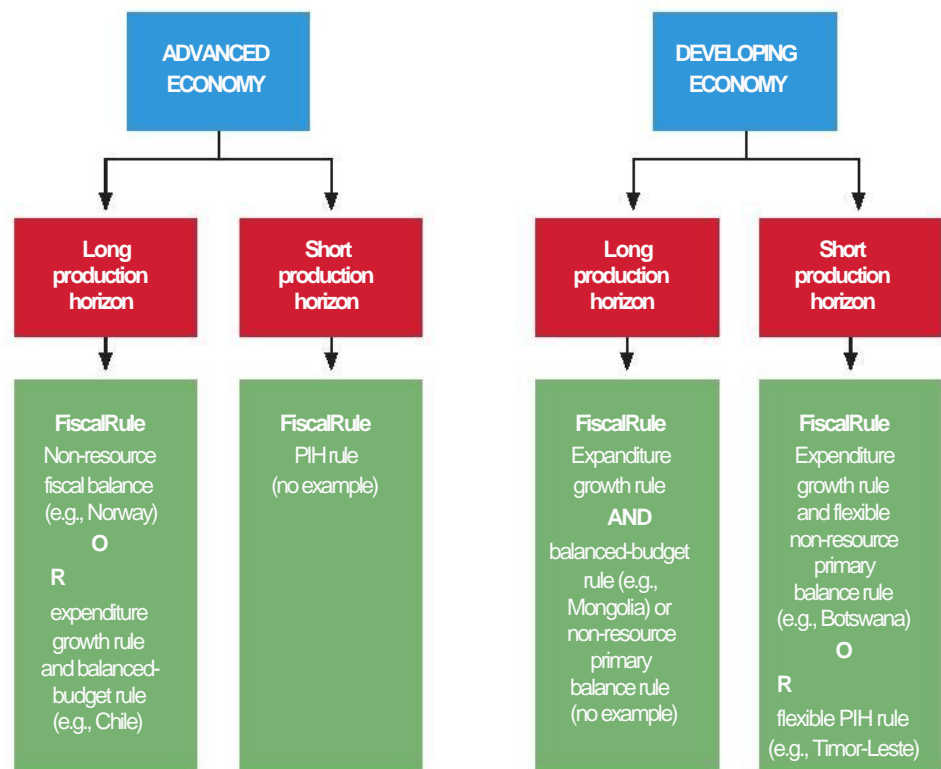
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Under this rule, extractive revenues would yield essentially the same amount of money for public spending for eternity, even though the original source of financing is finite (see Figure 4). This rule not only forces governments to save a significant proportion of natural resource revenue for future generations, especially at peak production, but also smooths expenditures, thereby addressing the budget volatility problem. However, the amount that governments are able to spend under the rule is susceptible to changes in oil, gas or mineral wealth estimates; governments can raise their price or production assumptions to make it seem like the value of all oil, gas or minerals is higher, thereby increasing the "fiscal space" available for current spending. Also, in developing countries that have significant infrastructure and social program financing needs, there may be good reason to increase spending in the early years of production to address development bottlenecks—like a shortage of electricity, clean water or qualified teachers—to spur growth and diversify the economy.

Recently the IMF's views have shifted somewhat. Recognizing that capital-scarce developing countries require public financing to grow their economies, IMF staff is now advocating a two-tiered approach. Governments in advanced economies should employ a PIH rule if they have less than a couple of decades of production remaining but may wish to employ a non-resource primary balance rule (e.g., Norway's rule) or an expenditure growth rule coupled with a "smoothed" balanced budget rule if they have long-lasting resources (e.g., Chile's rule). Governments in lower-income countries without many years of production remaining should employ an expenditure growth rule coupled with a "flexible" non-resource primary balance rule or a PIH rule that allows a special allowance for more spending in early years of production, as in Timor-Leste. However, lower-income countries with many decades or even centuries of resources remaining may wish to employ an expenditure growth rule along with either a "smoothed" balanced budget rule, as in Chile, or a "flexible" non-resource primary balance rule (see Table 1 for explanations of the different rules). The IMF's decision tree is provided in Figure 3.

Figure 3:
IMF Decision Tree on
Fiscal Rules for Resource-
Rich Countries

Source: Drawn from Baunsgaard
et al. (2012)



While the IMF's advice is now more nuanced and adaptable than the one-size-fits-all approach it has applied in the past, several notable academics including Paul Collier, Jeffrey Sachs and Michael Spence have suggested fiscal rules that take a more development-related approach. Fiscal policy should not focus exclusively on fiscal sustainability and intergenerational equity. Resource revenues should be used to finance public investments in infrastructure, government institutions, and health and education first and foremost. It is true that fast scaling up of public investment can cause Dutch Disease if there is a lack of absorptive capacity; after all, increased spending can simply cause a higher demand for imports, appreciating the exchange rate or incentivizing local contractors to raise their prices rather than expand supply. However, if done properly, public spending can "crowd-in" private investment by creating an environment in which the private sector can become globally competitive.

How much a government should spend on public investments or to boost immediate consumption for the poor and how much should be saved in financial assets (i.e., in a natural resource fund) should depend on two elements: the social return to public investment and the need for precautionary savings to buffer unanticipated downswings in government revenue. In short, if a country urgently requires public investment for the economy to grow, the government spends money well (i.e., there is high public sector absorptive capacity), and there is private sector capacity to build infrastructure and provide needed services, then the country is said to have a high social return to public investment. In this case, the government should spend more and save less. However, a government should actually save slightly more than a simple analysis of the social return to public investment would dictate since it will need a pool of funds to draw on to overcome cyclical downturns and prevent the boom-bust cycles so common in resource-rich countries (illustrated for Venezuela in Figure 1). Also, it may wish to offset the depletion of a finite asset and provide an inheritance for future generations.

Fiscal rules should therefore reflect national objectives and country circumstances. For example, if the objective is to stabilize the budget, the government could employ an expenditure growth rule. If the objective is to stabilize the budget and save for future generations, it could employ a PIH-type rule or a revenue rule that is dependent on a long-term average of resource revenues. If the objective is to stabilize the budget and provide financing for development in early years of production but still have a pot of money in case of cyclical downturns or emergencies, then the government could employ a more eclectic rule, such as depositing 70 percent of an 11-year average of mineral revenues in the budget and depositing the remaining amount in a Petroleum or Mineral Stabilization Fund, which would be used to make up shortfalls in expected revenue (see intermediate rule in Figure 4).

As a general guideline, the percentage saved should increase if there is a high expected rate of return on foreign investments, a fast depletion rate, or there is a large risk of negative fiscal or financial shocks to the economy. Conversely, fiscal space should increase as absorptive capacity rises, when there are significant development needs, when there is high absolute poverty, and if public debt is unsustainable and needs to be paid down (see Table 2). The domestic political situation should also be considered. If there is likely to be significant political pressure on the government to spend more, the fiscal rule ought to allow for extra fiscal space, as in the Ghanaian case. On the other hand, if future governments are likely to spend revenues more effectively than the current government, it may be worthwhile to constrain today's government's freedom to spend.

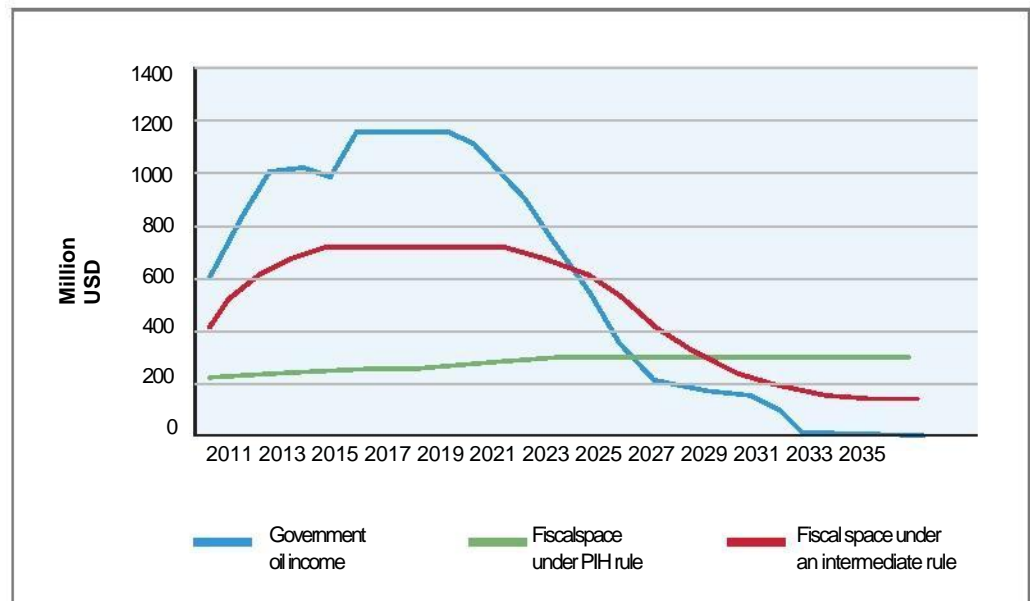
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Table 2:
Guideline for Designing
a Fiscal Rule/Saving-
Spending Ratio

Less Fiscal Space	More Fiscal Space
Low government capacity to spend effectively	High government capacity to spend effectively
Government performance not improving	Government performance improving
Low private sector absorptive capacity	High private sector absorptive capacity
Adequate public infrastructure and investment	Inadequate public infrastructure and investment
High rate of return on foreign investments	Low rate of return on foreign investments
Fast depletion rate	Slow depletion rate
High risk of negative economic, environmental or social crises	Low risk of negative economic, environmental or social crises
Low poverty rate	High poverty rate
Sustainable public debt path	Unsustainable public debt path

Finally, if fiscal rules are too flexible, then they cannot act as an effective commitment mechanism linking successive governments' policies. If they are too rigid, then they will limit the government's ability to respond to changing circumstances or the government will find a way around them. It is therefore crucial that they be designed appropriately, there is national consensus on the fiscal rules and they are enforced.

Figure 4:
Spending and Saving
under Different
Fiscal Rules



Operationalizing fiscal rules for NRFs: Deposit and withdrawal rules

In countries with natural resource funds, fiscal rules are often converted into two sets of operational rules known as deposit and withdrawal rules. Deposit rules define which oil, gas or mineral revenues are deposited into the fund and when. Withdrawal rules define how much revenue can be withdrawn from the fund in any given quarter or year and where the money goes.

Deposit Rules

Deposits are usually made by electronic transfer directly into the fund by the entity bearing the payment obligation or they pass through the national revenue authority before being deposited into the fund. Which payments are included depends on regulation or legislation. The most comprehensive rules require all extractive sector and related payments streams to be deposited.

The full list can include:

- Interest on natural resource fund investments
- Bonuses (including signature, discovery and production bonuses)
- Royalties (including royalties-in-kind)
- Profit taxes (including windfall, resource rent, income and production taxes)
- Sales of "profit oil"
- Net consumption-based taxes (including excise, fuel and carbon taxes)
- Capital gains tax derived from the sale of ownership of exploration, development and production rights
- Withholding taxes
- Dividends from equity stakes or sales of state property
- Fees (including development, exploration, license, rental, and concession fees)
- Production entitlements (by value and volume)
- Transportation and terminal operations fees
- Customs duties/import and export levies
- Fines/penalties paid to government

Commonly, certain streams are excluded. For example, the Alaskan constitution does not require property taxes or income taxes to be deposited into the Alaska Permanent Fund. These two payments alone may represent up to two-thirds of petroleum revenue in any given year. Wyoming only requires a 2.5 percent excise tax on oil, gas and minerals to be deposited into its Wyoming Permanent Mineral Trust Fund.

Minimum deposits may also be required, especially in jurisdictions with expenditure growth or balanced budget rules. Wyoming, for example, must deposit 75 percent of the surplus over and above its Spending Policy Amount, which is a limit on expenditure growth. Similarly, Chile must deposit all mineral revenue that causes it to exceed the 1-percent-of-GDP-structural-surplus limit on spending.

Some governments also specify which companies are covered. In Kazakhstan, for example, the government sets the list of companies whose payments make their way into the National Fund. By changing the list every year, it can determine how much revenue is placed in the budget and how much is deposited into the fund. In addition, publicly owned companies may be treated differently from private companies. Payments from national oil companies (NOCs) or state-owned mining companies are usually deposited directly into the fund but may be subject to special rules allowing them to retain certain profits. For example, only 10 percent of the Kuwait Oil Company's (KOC) profits are deposited into the Kuwait Investment Authority. The KOC retains costs, 50 cents per barrel and revenue from sales to refineries. The remaining amount is transferred to the government.

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Other deposit rules specify which stages among exploration, development, production, transportation, processing and export are covered. For example, the Timor-Leste revenue management legislation specifies payments "from all petroleum operations including prospecting, exploration, development, exploitation, transportation, sale or export of petroleum and other related activities." In contrast, the Abu Dhabi Investment Authority simply states that deposits "are derived from petroleum revenues."

Finally, some natural resource funds require that payments be made from non-extractive as well as extractive revenues. For example, proceeds from the sale of agricultural land are deposited into the Kazakhstan National Fund.

Withdrawal Rules

Withdrawal rules specify how often withdrawals can be made, where they must go, the amount of any transfer and whether they need to be approved by parliament. In terms of timing, withdrawals can be limited to a single annual transfer to the treasury (e.g., São Tomé and Príncipe; Trinidad and Tobago), limited to quarterly transfers to stabilize the budget (e.g., Ghana), or can be left to the discretion of the government (e.g., Brunei).

Transfers are usually made to the state treasury, though on occasion there are exceptions. The Alaska Permanent Fund disbursed just under 50 percent of deposits in any given year directly to households in the form of a citizen dividend. Interest from the Texas Permanent University Fund is disbursed directly to the University of Texas and Texas A&M University.

Withdrawals can also be earmarked for development purposes. Withdrawals from Chile's Pension Reserve Fund, not to exceed the fund's investment returns from the previous year, must finance pensions, welfare and social security liabilities. Russia's National Wealth Fund should be used to pay for pension liabilities. Ghana's oil revenues must finance national development projects. Texas Permanent University Fund withdrawals must be spent on specific academic purposes such as scholarships, fellowships and student services. And Botswana's mineral revenues must be spent on public investment. Regrettably, earmarking may be ineffectual since money is fungible; it is interchangeable with other money so it is rarely possible to monitor and verify compliance. For example, say Botswana collects \$10 billion non-resource taxes and spends \$1 billion on infrastructure. If it collects an additional \$1 billion in diamond revenues, this does not mean that it will spend \$2 billion on infrastructure. Instead, it may simply claim to spend the diamond revenue on infrastructure, maintaining the \$1 billion infrastructure budget, and shift \$1 billion in non-resource taxes from infrastructure spending to another line item, such as government wages.

Amounts permitted for withdrawal are usually determined by fiscal rules, which, where they exist, are more often than not legislated. In countries with expenditure or balanced budget rules (e.g., Botswana, Norway and Chile), withdrawals must not exceed the maximum budget deficit or minimum surplus.⁴ Countries with revenue rules have more varied withdrawal rules. In Trinidad and Tobago, for example, where the petroleum revenues collected in any financial year fall below the estimated petroleum revenues for that financial year by at least 10 percent, either 60 percent of the revenue shortfall or 25 percent of the fund's balance can be withdrawn, whichever is the lesser amount. In Timor-Leste, the amount withdrawn in any given year cannot exceed 3 percent of national petroleum wealth, unless justification is provided to parliament. In Ghana, the Ghana Stabilization Fund has a different set of withdrawal rules than the Ghana Heritage Fund. In case of a greater than 25 percent shortfall in expected petroleum revenue in any given quarter, the lesser of either 75 percent of the estimated shortfall or 25 percent of the fund's balance will be withdrawn from the Ghana Stabilization Fund. Withdrawals from the Ghana Heritage Fund can only

⁴ Norway's balanced budget rule is a political commitment and has not been legislated.



be made once oil revenues are depleted and the two funds are merged. At that point, withdrawals cannot exceed the interest on the combined fund.

Some countries have specified the conditions under which exceptions to fiscal rules may be made. Statutory exceptions allow for flexibility while maintaining the long-term perspective prompted by fiscal rules. Timor-Leste, for example, allows for additional withdrawals from the Petroleum Fund provided they are justified to parliament. Norway's fiscal guidelines allow for deviations from their fiscal rule when the economy is working well below full capacity and when there are large changes in their natural resource fund's value. Ghana's parliament reviews the percentage split between the Stabilization Fund and the Heritage Fund once every three years.

While the countries mentioned have comprehensive rules, others' rules are constantly changing, are insufficient or simply do not exist. Kazakhstan, for example, has had three drastically different withdrawal rules since 2005, limiting the effectiveness of its fiscal rules as a commitment mechanism. Russia suspended its long-term non-oil deficit target of 4.7 percent of GDP and resulting withdrawal rules for its Reserve Fund in 2009. Abu Dhabi, Azerbaijan and Brunei simply have no withdrawal rules.

Conclusion

Countries rich in nonrenewable resources face a specific set of macroeconomic challenges associated with their unique nature: Dutch Disease, volatility and exhaustibility. Each in its own way can lead to wasteful spending or boom-bust economic cycles. In recognition of this uniqueness, many countries have established natural resource funds. However, these funds by themselves do not guarantee sound macroeconomic management—just the opposite: They may lead to less government accountability.

Fiscal rules are a key set of tools that resource-rich countries can use to promote sound macroeconomic management. They can help mitigate budget volatility, help governments save in case of emergency, help mitigate Dutch Disease or help benefit future generations. Most important, they can help commit successive governments to a common macroeconomic policy, bringing a

long-term vision to government financial decisions in the countries that need it most. The challenge is in finding the right set of context-specific fiscal rules, generating consensus on the rule(s), effectively converting the rule(s) into operational deposit and withdrawal rules, and enforcing them.

Related readings

Baunsgaard, Thomas et al. "Fiscal Frameworks for Resource Rich Developing Countries." IMF Staff Discussion Note 12/04, IMF: Washington, D.C., 2012. <http://www.imf.org/external/pubs/ft/sdn/2012/sdn1204.pdf>

Bell, Joseph C. and Teresa Maurea Faria. "Critical Issues for a Revenue Management Law." In *Escaping the Resource Curse*, eds. Macartan Humphreys, Jeffrey D. Sachs and Joseph E. Stiglitz (New York: Columbia University Press, 2007).

Budina, Nina et al. "Fiscal Rules at a Glance: Country Details from a New Dataset." IMF Working Paper 12/273, IMF, Washington, D.C., 2012. <http://www.imf.org/external/pubs/ft/wp/2012/wp12273.pdf>.

Collier, Paul, Rick Van der Ploeg, Michael Spence and Tony Venables. "Managing Resource Revenues in Developing Countries." IMF Staff Paper Vol. 57, No. 1, IMF, Washington, D.C., 2010.

Davis, Jeffrey et al. "Oil Funds: Problems Posing as Solutions?" In *Finance and Development Magazine of the IMF*, Vol. 38, No. 4, 2001. <http://www.imf.org/external/pubs/ft/fandd/2001/12/davis.htm>.

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

April 2014

Independent Oversight of Natural Resource Funds



Key messages

- Oversight motivates a government to follow its own rules, meet its own objectives or manage public funds in the public interest.
- Independent oversight provides assurances of integrity that internal controls alone cannot provide.
- Legislatures, the judiciary, regulatory agencies, external auditors, the media, civil society organizations or citizens provide strong independent oversight of natural resource funds in Alaska (USA), Alberta (Canada), Chile, Ghana, Norway, Texas (USA) and Timor-Leste, among others.
- Natural resource funds in Abu Dhabi, Algeria, Azerbaijan, Equatorial Guinea, Libya, Kazakhstan and Qatar suffer from a lack of independent oversight. In Libya, this has resulted in huge losses on fund investments. In Azerbaijan, large arbitrary withdrawals have undermined macroeconomic policy objectives without the possibility of objection.
- Independent oversight bodies can encourage good financial management by praising compliance with the rules and good fund governance. In some cases, they can also discourage poor behavior by imposing punitive measures ranging from reputational damage to fines, imprisonment or international sanctions.
- Independent oversight is most effective when the oversight body has expertise in the topic under investigation, possesses the power or capacity to investigate, has access to information, holds enforcement powers, and is integrated with the institutional environment.

What is independent oversight?

Public oversight is the supervision of government behavior. Oversight bodies identify noncompliance with rules, waste, fraud, abuse and mismanagement, and suggest or enforce corrections. They are a chief force that induces a government to follow its own rules or principles—and meet its own objectives. They can also encourage governments to manage public funds in the public interest, rather than for private gain, and to follow the rule of law.

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Internal government agencies can provide natural resource fund oversight. In fact, effective internal oversight mechanisms may be essential for good natural resource fund management (see the RWI-VCC brief on Natural Resource Fund Management). However, independent oversight provides assurances of integrity that internal mechanisms alone cannot provide. Truly independent oversight bodies are not subject to political interference and provide honest assessments of compliance with rules or whether funds are being used for the public benefit.

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Independent oversight bodies gain their influence through different channels. In some cases, oversight bodies have the legal authority to force a government to change its behavior (e.g., the judiciary; some parliaments; some independent regulatory agencies). In others, they must rely on their legal or informal powers to persuade policymakers to change course (e.g., auditor general; supervisory committees; international financial institutions). For those without direct access to policymakers, they can try to persuade the public or influential groups to pressure the government (e.g., media; some civil society groups).

Why is independent oversight important for natural resource fund governance?

Natural resource fund management may be rules based, discretionary or a combination of the two. At one extreme, funds may be governed by a strong set of procedural and transparency rules, such as limitations on withdrawals and asset disclosure requirements. The Alaskan (USA), Chilean, Ghanaian, Norwegian and Timor-Leste natural resource funds are all governed in this way. These rules are usually enacted with the public interest in mind, and there is a general expectation that they will be followed. At the opposite extreme, funds may be managed with full discretion by the executive or by the Ministry of Finance, as in Algeria, Equatorial Guinea, Saudi Arabia and Qatar. In these cases, natural resource funds may still be governed by a set of principles or national policy objectives, such as fiscal sustainability, mitigating Dutch Disease or safeguarding resource revenues.

Whether or not rules are in place, independent oversight bodies have important roles to play in promoting good resource revenue governance and holding governments to account. They can incentivize compliance with rules or consistency with objectives in a number of ways: First, independent oversight bodies can raise concerns or identify gaps in good governance standards to help the government implement reforms and manage resource revenues better. For example, Ghana's Public Interest and Accountability Committee (PIAC) 2012 report (see Box 1) identified gaps in both surface rental payments and receipts from the Saltpond oil field. Within a few days, the Ministry of Energy issued a statement offering new information on royalty amounts paid in 2011 and the unpaid surface rental bill.¹ The PIAC report also raised concerns about overly optimistic petroleum revenue projections, which allowed for greater spending under Ghana's fiscal rule. The Ministry of Finance has since committed to addressing this issue, and 2013 projections are generally considered to be more realistic.

Second, independent oversight bodies can draw public and international attention to mismanagement of public funds, putting pressure on a government to rectify problems. In Chad, the Collège de Contrôle et de Surveillance des Ressources Pétrolières (aka, the Collège), a multistakeholder oversight committee, must approve disbursements from the Chad fund and oversee the management and use of revenues from the Chad-Cameroon pipeline. Publication of its 2005 report highlighting wells and schools that were paid for but not completed and inflated costs of computers, not to mention government efforts to undermine the institution, was a key factor in convincing the World Bank to suspend its program in the country.²

Third, they can provide a check on overconcentration of power in the hands of the executive or fund managers. For example, without adequate independent oversight, the executive may freely use natural resource fund assets as patronage or may withdraw funds arbitrarily, undermining long-term fiscal sustainability or macroeconomic stability objectives, as in the Azerbaijani and

1 Emma Tarrant Tayou, "Ghana Citizen Oversight Report Yields Debate, Disclosures," May 25, 2012, <http://www.revenuewatch.org/news/blog/ghana-citizen-oversight-report-yields-debate-disclosures>.

2 Ian Gary and Nikki Reisch, *Chad's Oil: Miracle or Mirage? Following the Money in Africa's Newest Petro-State* (Catholic Relief Services and Bank Information Center, 2005), <http://internationalbudget.org/wp-content/uploads/Chads-Oil-Miracle-or-Mirage.pdf>; Lydia Polgreen, "World Bank Ends Effort to Help Ease Chad Poverty," *New York Times*, September 10, 2008, http://www.nytimes.com/2008/09/11/world/africa/11chad.html?_r=0.

Kuwaiti cases. The threat of parliamentary or judicial hearings or penalties, or reputational damage leading to electoral defeat, can be major deterrents.

Independent oversight bodies

Legislature: Parliaments, congresses and legislative councils are often tasked with reviewing and evaluating selected activities of the executive branch of government. In many cases, legislatures have an explicit mandate to approve budgets and oversee budget formulation and execution. This oversight role often covers the management and flow of funds into and out of natural resource funds. In Norway, for example, the Storting (legislative body) is mandated to pass legislation governing the fund, approve its annual budget, appoint members of a fund supervisory council and review the council's reports. In addition, legislative committees are often established to hold hearings and report on legal compliance, as well as identify cases of government mismanagement.

In the Canadian province of Alberta, a standing committee is tasked with reviewing and approving the fund business plan annually, reviewing quarterly reports on fund operations, approving the fund's annual report, reporting to the legislature on whether the fund is meeting its objectives and holding public meetings with Albertans on fund activities.³

Judiciary: In many countries, the courts are explicitly mandated to determine the constitutionality of legislation and ensure government compliance with laws, including those governing natural resource fund management. Where the courts are free from political interference, judicial review is a strong form of independent oversight insofar as courts are able to enforce their decisions on the government. While this type of independent oversight is not commonly used to promote good fund governance, there have been cases of judicial review of fund operations. In 2008, the Timor-Leste appeals court found that a \$290.7 million withdrawal from the Petroleum Fund was illegal. The rationale was that it violated the 2005 Petroleum Fund Law requirements that the government provide a detailed explanation for the withdrawal and that petroleum revenues be managed for the benefit of current and future generations.⁴

Regulatory Agency: Some countries have established special government agencies to review performance of natural resource funds. For example, Norway's Supervisory Council, consisting of 15 members chosen by the Storting from Norwegian society, public administration and industry, supervises the Norges Bank's (Norway's central bank) activities and compliance with its rules, including the management of the Government Pension Fund Global. The council has a right to access all Norges Bank information and conduct independent investigations. In addition to its own investigations, it relies on the external auditor's statement to write its report, which is submitted to the Storting.

Independent Auditor: Some funds, such as Botswana's Pula Fund and Trinidad and Tobago's Heritage and Stabilization Fund, are subject to audit by an auditor general. In these countries, the Office of the Auditor General has a degree of independence; however, this is not always the case. In other jurisdictions, independent external audits are also conducted to ensure their integrity. For example, Chile's Economic and Social Stabilization Fund, Norway's Government Pension Fund Global and Texas' (USA) Permanent University Fund were last audited by Deloitte; Alaska's (USA) Permanent Fund was last audited by KPMG.

Multistakeholder Group: Some countries have established formal multistakeholder oversight bodies to reinforce and support the work of traditional bodies such as parliament and the judiciary or to provide an additional source of oversight. In Chad, Ghana and Timor-Leste, civil society

³ World Bank Institute, *Parliamentary Oversight of the Extractive Industries Sector*, 2010. http://www.agora-parl.org/sites/default/files/parliamentary_oversight_and_the_extractive_industries.pdf.

⁴ La'o Hamutuk, *Timor-Leste Appeals Court Invalidates 2008 State Budget*, 2008. <http://www.laohamutuk.org/econ/MYBU08/BudgetRuledUnconstitutional08.htm>.

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groups such as chartered accountants, trade unions, religious organizations and traditional leaders, as well as those closer to the government such as judges, politicians and central bankers, form formal oversight committees. Ghana's Public Interest and Accountability Committee (PIAC) (see Box 1) is mandated by law to simply monitor the management of petroleum revenues as outlined in the Petroleum Revenue Management Act. Timor-Leste's Petroleum Fund Consultative Council must advise parliament on fund operations and compliance with the fund's mandate. Chad's Collège has a stronger mandate not only to ensure that revenue management laws are followed but also to approve withdrawals from special oil revenue accounts. Recently, some Extractive Industries Transparency Initiative (EITI) multistakeholder groups have also begun examining the flow of monies into and out of funds. For example, Mongolia's last EITI report covers payments made from the Mongolian-Russian joint state-owned Erdenet Mining Corporation to the Budget Stability Fund.

Media: Television, movie, radio, newspapers and Internet coverage of fund management can encourage good fund governance. In Timor-Leste, for example, compliance with the Petroleum Fund Law is viewed by a proxy for good governance more generally. News of unjustified withdrawals from the Petroleum Fund caused a degree of disenchantment and indignation among some voters. In Libya, media coverage of Libyan Investment Authority mismanagement is anecdotally contributing to international and domestic congressional efforts to improve the fund's management and procedures.

International Organizations: A number of international organizations and think tanks provide independent assessments of fund operations and management. For example, the International Monetary Fund (IMF) includes regular assessments of natural resource fund performance in its Nigerian and Norwegian Article IV consultation reports. The International Working Group on Sovereign Wealth Funds (IWGSWF) government members have released a self-assessment of their own adherence to the *Santiago Principles* (see RWI-VCC brief on Natural Resource Fund Transparency). RWI assesses natural resource fund transparency and management as part of its Resource Governance Index. And Edwin M. Truman at the Brookings Institution periodically grades sovereign wealth funds using indicators of structure, governance, transparency, accountability and behavior.



Whether or not rules are in place, independent oversight bodies have important roles to play in promoting good resource revenue governance and holding governments to account.

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Box 1: Ghana's Public Interest and Accountability Committee (PIAC)

In 2011, the Parliament of Ghana passed the Petroleum Revenue Management Act, which included the establishment of the Public Interest and Accountability Committee (PIAC). The 13 civil society members of the committee—who include representatives of the unions, traditional chiefs, journalists, lawyers, chartered accountants and religious groups, and who are appointed by the Minister of Finance for two to three year secure terms—were mandated to:

- Monitor and evaluate compliance with the Petroleum Revenue Management Act;
- Provide a platform for public debate on whether petroleum revenues are being used to advance development priorities; and
- Provide an independent assessment of the management and use of petroleum revenues.

The PIAC represents the only legislated petroleum revenue management oversight body consisting entirely of civil society members and therefore completely independent. As such, there is keen interest from the international community to determine if it provides an effective model to promote compliance with fiscal rules and improve natural resource fund governance.

In May 2012, the PIAC released its first report. It provided basic information on petroleum revenue receipts and the flow of funds from the Petroleum Holding Fund to the two natural resource funds (Ghana Heritage Fund and Ghana Stabilization Fund), the national budget and the Ghana National Petroleum Company (GNPC), Ghana's national oil company. The PIAC highlighted several major challenges facing the system in Ghana, including:

- The GNPC retained 47 percent of all petroleum revenue collected in 2012. While legal, this represents a large implicit investment in the oil sector at the expense of other sectors.
- Under the Ghanaian system, higher revenue forecasts allow for greater spending and less saving in natural resource funds. The PIAC revealed that the Ministry of Finance overestimated corporate income taxes by nearly 100 percent, thereby creating extra fiscal space for the government.
- The Ghanaian petroleum revenue management act requires a minimum of 30 percent of oil revenue not allocated to the budget or the GNPC to be deposited into the Ghana Heritage Fund, with the rest allocated to the Ghana Stabilization Fund. In fact, 21 percent was allocated to the Ghana Heritage Fund and 79 percent to the Ghana Stabilization Fund.

Following the release of their report, PIAC members, led by chairman Major Daniel Sowa Ablorh-Quarcoo, met with officials from the government, including the Ministry of Finance and the GNPC, to share their concerns. They also held two public consultations on their findings, one in the oil-producing region. The press coverage and national debate that ensued led to at least one immediate result, the disclosure of new information on oil payments made to the government. While an official response to the PIAC's other concerns has not been released, the PIAC's next report on the government's management and use of petroleum revenues, due in mid-2013, should provide an indication of the committee's influence.

Conclusion

While there is no one-size-fits-all independent oversight model, several elements can improve oversight body effectiveness. First, expertise in natural resource fund management is essential. Expertise engenders credibility, which can help persuade policymakers to implement recommendations or influence the public or international community to pressure policymakers. While there are individuals and institutions in most countries with a strong understanding of natural resource fund governance, oversight bodies can also request support from organizations such as

the African Center for Economic Transformation, IMF, Norwegian Agency for Development Cooperation, RWI, and the World Bank, to improve their understanding of global good practices.

Second, the legal power to investigate fund operations could aid in assuring accuracy of information and comprehensiveness of assessment reports, provided that oversight bodies have easy access to information. Investigative powers also help keep fund managers in check.

Third, enforcement powers, such as the Chadian Collège's right to deny withdrawals from the oil fund, ensure that the government complies with legal obligations.

Finally, oversight mechanisms should be context specific. For instance, media coverage may be most effective in open, democratic societies, while multistakeholder groups may be most effective where civil society is an influential force.

Ultimately, the effectiveness of independent oversight will rely on the supervisory body's ability to incentivize the government to comply with its own rules or meet its own objectives. This can be done with carrots—for example, by publicizing that fund performance is improving—or with sticks, such as fines or imprisonment by the courts or sanctions by the international community for misappropriation of public funds. Which carrots and sticks are most effective depends wholly on the country's political and institutional environment.

Rules-based Investment for Natural Resource Funds

April 2014



Key messages

- Clear investment rules can enhance natural resource fund investment performance, limit excessive risk-taking and help prevent mismanagement of public resources.
- A fund's policy objective (e.g., saving resource revenues for the benefit of future generations; providing a source of short-term financing to stabilize volatile budgets) should inform its target financial return (e.g., 3-5 percent per year), which is an implicit statement of the fund's risk appetite.
- Most natural resource funds are governed by a set of detailed investment rules that constrain investment decisions. These generally include a target asset class allocation (percentage of investments in cash, fixed income, equities and alternative assets), restrictions on domestic investment, restrictions on risky asset purchases, and restrictions on the use of natural resource funds as collateral to guarantee public debt.
- In practice, there is significant scope for tailoring a natural resource fund's rules-based investment strategy to a country or region's specific needs, expertise and context. However, a large degree of discretion over investments is likely to lead to patronage or mismanagement.

Why are investment rules important?

The governments of resource-rich countries hold approximately \$3.3 trillion in foreign assets in natural resource funds (NRFs). These assets, purchased with the proceeds from oil, gas and mineral extraction and sales, belong to the government and by extension to the citizens of the country or region represented by that government. As such, NRF assets ought to be managed in the public interest and a fund's investment objectives narrowly tailored to policy objectives. For savings funds, objectives may include generating a high rate of return for the benefit of future generations while simultaneously limiting risk in order to protect the public's endowment. Investment rules might thus require an asset allocation that mixes safer, lower-return investments with higher-risk, higher-return investments, while prohibiting the riskiest types of investments (e.g., derivatives). In contrast, a stabilization fund requires assets to be turned into cash quickly to finance budget deficits. In this case, a rule can be crafted that forces investment managers to purchase exclusively or primarily liquid assets (e.g., U.S. Treasury bills).

Investment rules offer an important means of preventing mismanagement and addressing common challenges related to conflicts of interest, lack of managerial capacity and incentives rewarding excessive risk-taking. "Principal-agent" problems, wherein the managers of government assets act in accordance with personal rather than public interests, are a common

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source of conflict of interest. For example, a minister may have an interest in investing in businesses owned by his political allies in order to help him stay in power while the public interest may, depending on the economic context, favor investments in health and education, or in overseas assets for the benefit of future generations or to prevent Dutch Disease. To address this issue, most NRFs prohibit domestic investments.

Lack of managerial capacity to manage funds well or to oversee investment managers can lead to large losses. In this case, rules that limit the percentage of fund assets a single investment manager may control can help spread the risk of large losses due to misconduct or negligence. Similarly, rules can be written to ensure that only qualified managers manage fund investments.

Excessive risk-taking by investment managers can also create challenges. While the executive or ministry of finance is usually responsible for overall management of the NRF and sets investment policy, and the central bank or an independent agency acts as day-to-day operational manager, external managers are often hired to make some or all of the actual investments. Since much of their compensation comes from management fees and they can charge higher fees for trading more complex, higher-risk financial products, external managers have an incentive to push NRFs to invest in risky assets like derivatives.¹ While high-risk/high-return investments may have a place within even a very conservative private institutional investor's overall portfolio, as custodians of public funds NRF managers have a responsibility to safeguard NRF assets and prevent waste or excessive risk-taking. Detailed investment rules, such as those limiting purchases of high-risk assets, can help address excessive risk-taking.

The experience of the Libyan Investment Authority (LIA) under the Gadhafi regime illustrates the risk of failing to address the challenges of conflict of interest, poor managerial capacity and excessive risk-taking. In a prime example of using public funds for personal gain, the LIA invested in opaque hedge funds run by friends of the regime, including a \$300 million investment in Palladyne International Asset Management, a previously unheard-of fund with links to the former chairman of Libya's National Oil Corporation. Despite investing only slightly more than half of these funds, Palladyne recorded more than \$50 million in losses from 2008 to mid-2010. Many institutional investors, including NRFs with riskier investment strategies like Norway's Government Pension Fund Global and the Alberta Heritage Savings Trust Fund (Canada), lost significant amounts from 2008 to 2009 due to the global financial crisis. However, most had recovered all their losses by mid-2010. Several notable NRFs, including Azerbaijan's State Oil Fund, Chile's two funds, Timor-Leste's Petroleum Fund, and Trinidad and Tobago's Heritage and Stabilization Fund, actually made positive returns during the crisis thanks to conservative, low-risk investment approaches.²

Furthermore, the LIA did not carry out its due diligence when taking on risky structured financial products sold by investment banks and hedge funds such as Goldman Sachs, Permal and Millennium Global. For example, Permal was paid \$27 million in fees for managing \$300 million in investments. Rarely do management, transaction or expense fees combined exceed more than a few percentage points, much less reach the 9 percent paid to Permal. In a 2010 internal review, LIA management wrote, "High fees have been directly responsible for the poor results."

The LIA also took excessive risks. For example, it invested \$1.2 billion in equity and currency derivatives managed by Goldman Sachs. That investment lost 98.5 percent of its value by June 2010 due to the global financial crisis.³

¹ Derivatives are financial instruments that derive their value from other assets, indices or interest rates. They include swaps, futures and options, and are generally considered high-risk investments.

² P. Kunzel, Y. Lu, I. Petrova and J. Pihlman, "Investment Objectives of Sovereign Wealth Funds: A Shifting Paradigm," *Economics of Sovereign Wealth Funds: Issues for Policymakers* (eds. Udaibir S. Das, Adnan Mazarei and Hand van der Hooft), Washington D.C.: IMF, 2010.

³ Lina Saigol and Cynthia O'Murchu, "After Gadhafi: A Spent Force," *The Financial Times*, September 8, 2011. <http://www.ft.com/intl/cms/s/0/1b5e11b6-d4cb-11e0-a7ac-00144feab49a.html#axzz2PdPUcQK>.

Constraining fund investment choices is an important means of ensuring that NRFs are managed in the public interest. Clear investment rules, guidelines and targets guard against taking excessive risk, limit the discretionary power of NRF management, and can significantly enhance the transparency and effective monitoring of NRF actions, strategies and performance. This paper describes the policy options for a rules-based investment regime. We discuss setting investment goals and a target return that are consistent with NRF policy objectives. We then go into some detail on specific investment rules, notably setting a target asset class allocation, benchmarking, restrictions on specific types of investments, and restrictions on the use of NRFs for raising public debt. We close with a discussion of portfolio rebalancing.

Setting investment goals and a target return

Natural resource funds may be designed to address one or several of the following objectives:⁴

- **Savings:** Funds may be used to transform natural resources into financial assets and invest them to generate a long-lasting source of government revenue for the benefit of future generations (e.g., Botswana's Pula Fund; Chile's Pension Reserve Fund; the Kuwait Investment Authority; Norway's Government Pension Fund Global; Timor-Leste's Petroleum Fund).
- **Stabilization:** Funds may cover budget deficits caused by unexpected declines in oil or mineral revenues (e.g., Chile's Economic and Social Stabilization Fund; Timor-Leste's Petroleum Fund; Wyoming Permanent Mineral Trust Fund).
- **Fiscal sterilization:** Large sales of oil, gas or minerals draw foreign currency into the country, which can generate inflation or exchange rate appreciation and subsequently harm the economy. Proceeds of natural resource extraction can be invested in foreign assets to help mitigate these effects (e.g., Saudi Arabia's SAMA Foreign Holdings).
- **Development:** Natural resource revenues may be earmarked for specific expenditures, such as health, education or direct cash transfers (e.g., Alaska's Permanent Fund; Texas' Permanent University Fund).
- **Ring-fencing:** Since they are a national endowment and exhaustible, oil, gas and mineral revenues may be treated separately by the government and subject to a higher degree of transparency and oversight than other revenues (e.g., Timor-Leste's Petroleum Fund).

Investment goals often follow from fund objectives. While fund objectives are statements of fund purpose, the investment goals are statements of investment strategies that should be aligned with those objectives. For example, Chile's Pension Reserve Fund is essentially a savings fund and, as such, has a long-term investment horizon. To reflect this, its investment goal is "maximizing the expected return subject to a (clearly defined) risk tolerance." For Chile's Economic and Social Stabilization Fund, which must hold liquid assets to cover its short-term budget financing obligations, it is "maximizing the fund's accumulated value in order to partially cover cyclical reductions in fiscal revenues while maintaining a low level of risk."⁵

4 While most funds have explicit stated objectives, some may behave differently from their intended purpose. For example, the stated objective of the Alberta Heritage Savings Trust Fund (Canada) is long-term savings. However, since the government is not obliged by a fiscal rule to make payments into the fund and has taken a short-term perspective on fiscal policy, little has been deposited over the last decade, despite historically high oil prices.

5 Ministry of Finance, Chile, "About the Funds." <http://www.hacienda.cl/english/sovereign-wealth-funds/about-the-funds.html>.

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Investment goals are simply general policy statements. To operationalize them, they are often expressed as an explicit target return (e.g., a long-run real return of 3 percent annually). While it may seem counterintuitive, most NRFs start with a targeted percentage return and work from that figure toward an articulation of risk appetite (tolerance for short-term volatility, losses and illiquidity), rather than the reverse.⁶ In a sense, the target return is an implicit statement about risk tolerance; the higher the target, generally the greater the probability of price volatility, the less the liquidity, the longer the maturity or the larger the potential losses.⁷ Most institutional investors make their target return explicit, although NRFs have not universally used this practice.

Historically, the real return target (after accounting for the effects of inflation) of most long-term institutional investors has been around 4-6 percent per annum. An independent study commissioned by the Norwegian government to evaluate its NRF against global peers found that the peer group (consisting of various long-term investment funds) had a median target return of 5 percent per annum.⁸ The Norwegian Government Pension Fund Global has a real return target of 4 percent. The Kuwait Investment Authority (KIA) has a "target rate of return and a risk profile that would seek to enable KIA to double asset-under-management within ten years," which equals a 7.2 percent compound annual growth rate.⁹ Alaska's Permanent Fund targets a long-run real return of 5 percent.¹⁰

In practice, NRFs with a savings and investment purpose will typically have a higher target return than stabilization funds. This is because the former has a longer investment horizon and greater tolerance for risk (periodic volatility) than stabilization funds with short investment horizons, little appetite for volatility and a much greater need to hold liquid assets. Funds that have more of a developmental purpose tend to place less emphasis on target returns, although they express some long-run expected return criteria for domestic infrastructure investments.

Detailed investment rules

Most natural resource funds are governed by a set of detailed investment rules that constrain investment decisions. In practice these rules may be articulated in petroleum or mineral revenue management legislation (e.g., Ghana's Petroleum Revenue Management Act or Timor-Leste's Petroleum Fund Law) and/or in an NRF's investment guidelines, investment mandate or investment policy documents (e.g., Chile's Pension Reserve Fund Investment Guidelines or Norway's Management Mandate for the Government Pension Fund Global). The following elaborates on the more common rules.

Asset Allocation

The single most important decision an NRF's overseers and operational managers will make in terms of the fund's long-run risk and return characteristics is the specification of its strategic asset allocation. An investor's strategic asset allocation is its long-run target allocation to various asset classes, each of which has its own risk-return characteristics (shown in Figure 1):

- **Cash:** Highly liquid and low-risk, low-return assets such as money market instruments (e.g., short-term government bonds) and bank deposits

6 Liquidity is the ability to turn an asset into cash immediately.

7 Expected return is a function of risk—financial instruments and asset classes that are more volatile, less liquid and have longer maturities generally have higher expected returns. Investors are compensated for bearing these risks. Therefore, the target return is implicitly (and sometimes explicitly) a statement of the fund's risk appetite. For instance, for some truly long-term investors, such as university endowments with highly diversified portfolios, the real return target can be as high as 10 percent. But these funds' tolerance for short-term volatility, holding illiquid assets and assuming a long-term investment horizon is greater than for investors with lower target returns.

8 "Norwegian Government Pension Fund Global Investment Benchmarking Results," CEM Benchmarking, 2012. http://www.regjeringen.no/upload/FIN/Statens%20pensjonsfond/2012/GPFG_2010_investment_benchmarking.pdf.

9 Kuwait Investment Authority, "Overview of the Kuwait Investment Authority." http://www.kia.gov.kw/En/About_KIA/Objective_Strategy/Pages/default.aspx.

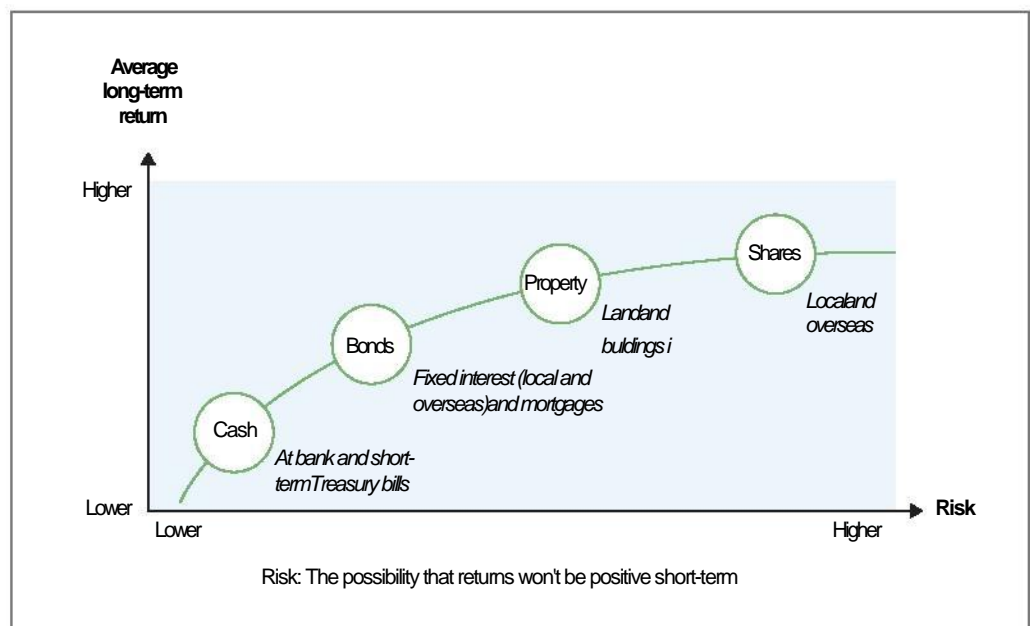
10 Alaska Permanent Fund Corporation, "Investments." <http://www.apfc.org/home/Content/investments/investindex2009.cfm>.

- **Fixed income/bonds:** Other debt instruments with slightly more risk and return (e.g., investment-grade government or corporate bonds)
- **Equities:** Stocks in companies with varying degrees of risk and return
- **Alternative assets:** More volatile and complex assets with higher long-run expected returns, such as real estate, infrastructure, derivatives and private equity¹¹

Research suggests that more than 90 percent of the variation in investment performance over time is explained by strategic asset allocation.¹² Asset allocation is generally a "top-down" decision made by the executive or through legislation, as opposed to a "bottom-up" approach where changes are made by day-to-day operational managers based on market prices. In some cases, asset allocation decisions may also rest with the operational manager, but they will always need approval from some legislative or executive authority, such as parliament and/or a minister. Asset allocation should be a medium- to long-term decision that requires extensive research and consultation between stakeholders; typically an NRF's strategic asset allocation will only be reviewed every two to four years and is often left unchanged at these intervals.

A fund's asset allocation is directly derived from its purpose, investment objective and target return. A more risk-averse investor, with shorter horizons and a high preference (or need) for liquid assets, would favor a relatively higher allocation to bonds and cash (or money market instruments). A stabilization fund for example, needs access to funds at short notice to stabilize fiscal revenues in the event of anticipated shocks in commodity prices and cannot afford sharp fluctuations in the value of its portfolio. Stabilization funds would therefore want to avoid investing in volatile assets (e.g., listed equities) and illiquid assets (e.g., alternative or private assets, such as private equity and real estate).

Figure 1:
The Risk-Return Profile
of Major Asset Classes



¹¹ The term "alternative assets" covers many different types of assets, the common characteristic being that they are traded in private, not public, markets. Some of these assets have higher risk-return characteristics.

¹² R. Ibbotson and P. Kaplan, "Does Asset Allocation Policy Explain 40, 90, or 100 Percent of Performance?" *Financial Analysts Journal*, 2000, Vol. 56, No. 1: 26-33.

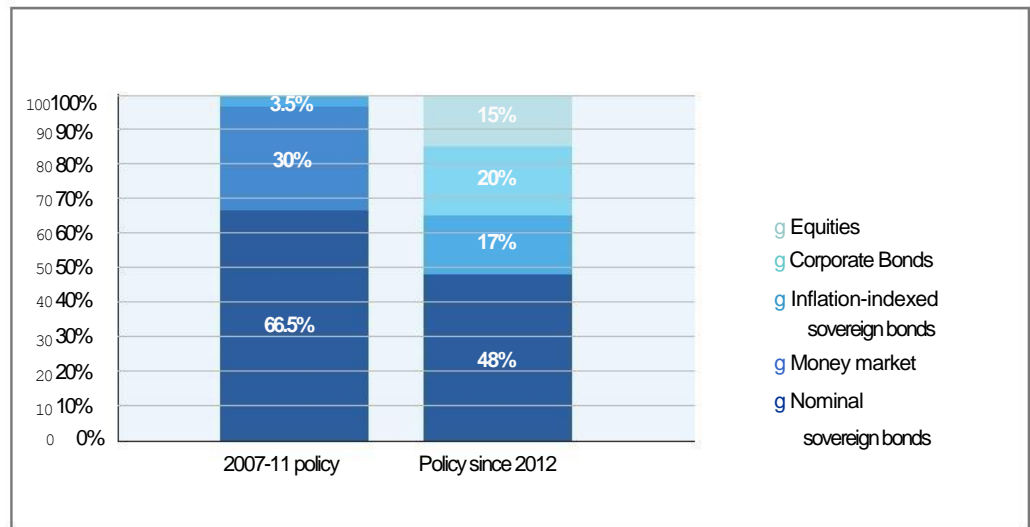
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In contrast, a long-term savings fund would be able to afford some degree of volatility and illiquidity and could therefore adopt a more diversified, higher-risk portfolio. In practice, however, many savings funds choose to invest in a smaller set of asset classes, for at least two reasons. First, public authorities lack the expertise to engage in complex trading operations. Second, it is often politically unfeasible to incur the occasional losses that inevitably come with investing in higher-risk, more volatile alternative assets.

Chile's Pension Reserve Fund, for example, invests only in bonds and equities despite being a long-term savings fund, though it has a high degree of diversification within those two asset classes. With the bond portfolio, the fund has allocations to nominal and inflation-linked sovereign bonds as well as agency and corporate debt. Its equities investments are in global stocks, which means the fund has a very large degree of geographic diversity in its equity portfolio.

Figure 2
Changes to the Strategic Asset Allocation of the Chilean Pension Reserve Fund

Source: Ministry of Finance, Chile



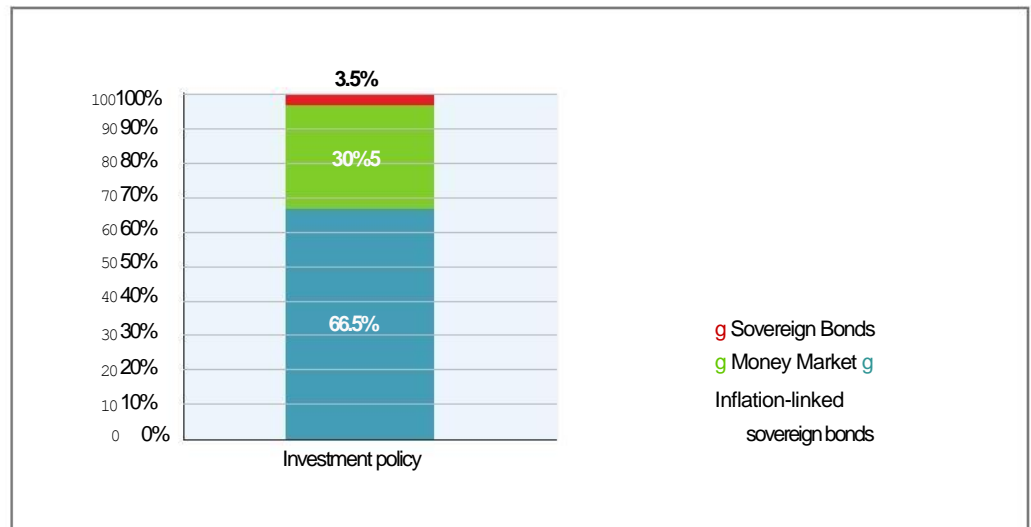
It is interesting to note that the fund made small changes to its strategic asset allocation in 2012 from the one that applied since its inception in 2007. The fund reduced its holdings of sovereign bonds, completely moved out of money market instruments, and made first-time allocations to equities and corporate bonds. The change to the strategic asset allocation, shown in Figure 2, was made because the Ministry of Finance and the fund's management felt that the fund had the required risk appetite to allocate part of the portfolio to more risky asset classes, such as corporate bonds and equities, in order to generate a higher long-run return. The fund's 2011 annual report stated that the new strategic asset allocation was "more in line with the return objectives and risk profile" of the fund and "more consistent with the underlying liability that needs to be financed in the future."¹³

The asset allocation of Chile's Economic and Social Stabilization Fund is naturally much more conservative, given its need for low risk and liquid assets. Consequently, it invests 66.5 percent in sovereign bonds, 30 percent in money market instruments and 3.5 percent in inflation-protected bonds, whose interest payments are not fixed but rather rise and fall with changes in the inflation rate (see Figure 3).

13 Ministry of Finance, Chile, *Sovereign Wealth Funds Annual Report 2011*.

Figure 3:
Strategic Asset
Allocation of the
Chilean Economic
and Social
Stabilization Fund

Source: Ministry of Finance, Chile



One way of ensuring that investment managers manage well within the constraints imposed on them by the asset class allocation is to select a series of benchmarks for each asset class. The benchmark is usually an index that reflects market performance so that the government and oversight bodies can measure investment manager performance against a market average, thus improving manager accountability.

Benchmark indexes help explain why returns may be high or low for any given period. For example, if the fund is down 5 percent over a period that the benchmark is down 5.6 percent, the investment performance may be deemed satisfactory. In contrast, if the fund is up 8 percent over a period that the benchmark returned 13 percent, investment performance may be deemed unsatisfactory (or at least require some detailed explanation).

Table 1:
Chilean Pension Reserve
Fund: Strategic Asset
Allocation and Benchmarks

Source: Ministry of Finance, Chile

Strategic asset allocation		Benchmarks
Asset class	Percent of total	
Nominal sovereign bonds and related assets	48%	Barclays Capital Global Aggregate: Treasury Bond Index (unhedged)
		Barclays Capital Global Aggregate: Government-Related (unhedged)
Inflation-indexed sovereign bonds	17%	Barclays Capital Global Inflation-Linked Index (unhedged)
Corporate bonds	20%	Barclays Capital Global Aggregate: Corporate Bond Index (unhedged)
Equities	15%	MSCI All Country World Index (unhedged with reinvested dividends)

In practice, NRFs disclose varying degrees of detail around their benchmarks. The NRFs of Alaska (USA), Alberta (Canada), Azerbaijan, Chile, Kazakhstan and Norway make detailed disclosures, not only of the benchmarks for each asset class but also of the funds' historic track record in managing funds relative to those benchmarks (see Table 4 for Chilean strategic allocation and benchmarks). Other NRFs, such as the Kuwait Investment Authority and Botswana's Pula Fund, provide some disclosures around the benchmarks they have selected for their funds but little information on the fund's actual investment performance relative to the benchmark.

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Like nearly all NRFs, the Chilean Pension Reserve Fund primarily takes a "passive approach" to investing, meaning that the fund's internal and external managers need to closely follow their respective benchmarks. The fund is not allowed to deviate from the benchmark by more than 0.5 percent on its sovereign bond portfolio, 0.3 percent on its equity portfolio and 0.5 percent on its corporate bond portfolio.

The main implication of sticking very closely to a benchmark is that it forces investment managers to "follow the market" rather than invest counter-cyclically by buying certain assets when their prices are falling and selling when their prices are rising. In order to outperform the benchmark by some margin, some funds use external private-sector managers to try to add some degree of value through active management—external managers are given a benchmark and some degree of flexibility in deviating from it in order to generate additional returns over the market. In practice, however, most NRFs only allow small deviations around conservative benchmarks (relatively small tracking errors). Only a very few, such as the Libyan Investment Authority under the Gadhafi regime, or the Kuwait Investment Authority, engage mainly in active management.¹⁴

Eligible Assets and Permitted Trading Strategies

An important part of a rules-based investment strategy is clear and unambiguous guidelines stating which asset classes (e.g., equities, fixed income, real estate) the NRF can invest in and which trading strategies the NRF is and is not permitted to use. This involves a trade-off between giving investment managers higher degrees of flexibility (and the ability to potentially generate higher returns) and the avoidance of certain financial instruments that are deemed too risky or complex (such as certain derivatives and structured financial instruments).

From an oversight and governance perspective, this decision requires careful consideration of whether the fund has the technical capacity to adopt complex investment practices. If they are well understood and carefully monitored, complex instruments and strategies, such as derivatives, leverage and short-selling, can help manage risks and enhance returns. However, very often they introduce significant operational and default risk, incur high management fees and become tools for excessive speculation.

Countries with NRFs employ several different types of detailed constraints on investments:

- Restrictions on domestic investment:** With very few exceptions (Azerbaijan; Iran), natural resource funds are explicitly prohibited from investing in domestic assets. There are at least three reasons why. First, investing in the country would undermine any fiscal sterilization objective. In countries like Botswana, Chile, Norway, Timor-Leste and Trinidad and Tobago, policymakers have argued either that the domestic market is too small to absorb all resource revenues or that resource revenues needed to be placed outside the country in order to reduce pressure of the local currency to appreciate or cause inflation, thereby aggravating the Dutch Disease. Second, spending directly out of the natural resource fund could lead to bypassing the normal budget process. This could result in inconsistencies with the budget and circumvention of controls and safeguards such as project appraisal, public tendering and project monitoring. Third, spending directly out of the natural resource fund could bypass parliamentary, auditor, media or citizen oversight. As a result, funds can become an easy source of patronage or financing for investments that support the political goals of fund managers.

¹⁴ Wharton Leadership Center (2010), *The Brave New World of Sovereign Wealth Funds*. http://knowledge.wharton.upenn.edu/papers/download/052810_Lauder_Sovereign_Wealth_Fund_report_2010.pdf.

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- **Minimum credit rating:** The Investment guidelines or revenue management law may specify minimum credit ratings for debt instruments that carry default risk. The major rating agencies, Fitch, Moody's and Standard & Poor's, all rate the credit quality (risk of default) of borrowers—the countries, companies and agencies who issue bonds and other debt instruments that NRFs invest in. Many NRFs are only allowed to buy bonds issued by borrowers with "Investment Grade" or "A- or higher" ratings from at least two of the major ratings agencies. This ensures that risk of default by the NRF's debtors is kept very low (although this also reduces returns). The same principles apply to the management of credit or default risk among the NRF's counterparties—the banks and custodians that trade and hold the NRF's assets. For example, the investment guidelines or NRF law may specify that transactions are only allowed with intermediaries that have a high credit rating, implying low risk of default. The Norwegian Government Pension Fund has mandated that "counterparties for unsecured deposits shall have a long-term credit rating of at least AA-/Aa3/AA- from at least one of the following three agencies: Fitch, Moody's or Standard & Poor's."¹⁵
 - **Restrictions on private market instruments:** Publicly traded instruments—stocks and bonds that are traded on public exchanges—have features that are desirable from a transparency and risk perspective. They can always be priced (their value can be determined at any point in time, because buyers and sellers interact through public exchanges to determine prices), trading volumes are much higher (so that there are always buyers and sellers for marketable securities), and there is no risk that a counterparty or investment partner will default. In practice, NRFs may look to start trading only in public assets and only gradually make allocations to private assets. The Norwegian Government Pension Fund Global, for example, made its first allocation to private assets (real estate) in 2011, almost two decades after the fund's inception. The Ministry of Finance, which oversees the fund, argued that the fund should target a maximum allocation to real estate of 5 percent of the overall portfolio (although by the end of 2012, only 0.7 percent had been allocated to real estate, given the long lead times associated with these investments).¹⁶
 - **Restrictions on other high-risk instruments:** Over-the-counter currency derivatives (futures, options) can help protect a portfolio against unwanted risks for exchange rate movements, if they are well understood and are used appropriately. But they also introduce bilateral counterparty risk because they are traded between two financial institutions rather than on an exchange and are often relatively complex and opaque. The key considerations for authorizing the use of derivatives are whether the fund has the requisite technical knowledge to understand the risks and obligations associated with these contracts and whether the investment guidelines ensure that the derivatives are being used for hedging (insurance) rather than speculative purposes.
 - **Currency restrictions:** Some countries restrict investments to assets denominated in convertible currencies or specific currencies. For example, Botswana's Pula Fund makes fixed income investments denominated in only convertible currencies, mainly the U.S. dollar, the Euro, pound sterling and yen. Chile's Economic and Social Stabilization Fund has a currency allocation of 50 percent in US dollars, 40 percent in Euros and 10 percent in yen. The rationale for this type of rule is that assets denominated in convertible and abundantly traded currencies can be traded or turned into cash relatively quickly.

15 Norges Bank Investment Management, "Investment Mandate," September 2, 2009. http://www.norges-bank.no/Upload/77273/4_mandate.pdf.

16 Norges Bank Investment Management, *Government Pension Fund Global Annual Report 2012*.

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Additional Investment Rules to Prevent Debt Crises

- **Restrictions on using the fund as collateral on general government debt:** A multi-billion-dollar natural resource fund can be used to secure government loans. In brief, the government can promise creditors that if it defaults on its debt, the NRF assets can be used to pay them back. This is particularly useful for credit-constrained governments, those that are charged high interest rates or those that have been locked out of international financial markets because of weak government finances. However, this strategy also puts natural resource revenues at risk, especially if the government has a tendency to default. It also encourages overborrowing.

In the past, governments in Algeria, Cameroon and Venezuela have used their oil revenues as collateral and borrowed excessively, only to face debt crises when oil prices and revenues declined. A similar trend is occurring today in countries like Kazakhstan, despite historically high oil prices. One solution has been to restrict either part of all of a natural resource fund from being used as collateral. For example, the Timor-Leste Petroleum Fund used to be prohibited from being used as a guarantee on public debt. Currently 10 percent of the Fund may be used as collateral. This reduces interest rates on loans yet protects 90 percent of the fund from any potential consequences of poor public financial management.

- **Restrictions on taking on debt:** Most NRFs are prohibited from using leverage, meaning that they cannot use fund assets to borrow money to purchase additional assets. While using leverage may increase financial returns, it also creates a risk that the additional investment will lose money, risking not only that asset but also additional fund principal required to pay off creditors. These restrictions essentially prevent managers from risking large losses on public funds.



Portfolio rebalancing

A final rule that applies to NRFs with long-term investment horizons and a diversified portfolio (i.e., the fund invests in a mix of asset classes) relates to rebalancing the portfolio. Over time, the divergent performance of the various asset classes in the NRF's portfolio will mean that its effective asset allocation drifts away from its strategic asset allocation. For example, if a fund decided on an allocation of 60 percent in equities and 40 percent in bonds at the start of a five-year period, and stocks then significantly outperformed bonds over that period, the fund's effective allocation at the end of period would be more than 60 percent in equities (due to faster capital growth in the equity portfolio).

The process of rebalancing ensures that the fund's overall portfolio is periodically returned to its target long-term strategic asset allocation. In practice, there are a number of technical considerations to take into account in the process of portfolio rebalancing. For example, how often should the fund rebalance, and should rebalancing be done at certain time intervals or should it be based on upper or lower limits for particular asset classes? Rebalancing rules have long been associated with sound risk management and the generation of higher long-run returns for long-term investors. A number of NRFs have clear and transparent rebalancing rules that form a key part of their overall investment strategy.

In its annual report for 2012, the Norwegian Government Pension Fund Global disclosed extensive information around its rebalancing rule. It is expressed as follows:

"The rule specifies a limit for how far the equity allocation in the benchmark index may deviate from the strategic allocation before rebalancing must be performed. The limit is set at 4 percentage points, which means that if the equity allocation in the benchmark index is less than 56 percent or more than 64 percent at the end of a calendar month, it will be returned to 60 percent at the end of the following month."¹⁷

The fund stated that its rebalancing rule was a "strategy that mechanically buys shares after prices have fallen, and sells following an upsurge in prices"—that is, the fund has a rule that forces it to go against the current in the markets and buy stocks when most investors are selling (and vice versa).

Conclusion

Investment rules have a disciplining effect on internal and external portfolio managers. If properly communicated and disclosed, the fund's investment rules contribute in a meaningful way to the governance, transparency and accountability of a NRF and, most important, promote understanding and agreement between oversight bodies, the fund's management and members of society around what the fund is expected and able to do. In practice, there is significant scope for tailoring the rules-based investment strategy of a natural resource fund to the specific needs, expertise and context of each country or region. However, a large degree of discretion is likely to lead to patronage or mismanagement.

¹⁷ Norges Bank Investment Management, *Government Pension Fund Global Annual Report 2012*.

Related readings

Ang, A. "The Four Benchmarks of Sovereign Wealth Funds," September 21, 2010.
<http://ssrn.com/abstract=1680485>.

Ang, A. and Kjaer, K. "Investing for the Long Run," Netspar Discussion Paper No. 11/2011-104, 2012.

Chambers, D., Dimson, E. and Imanen, A. "The Norway Model," 2011.
<http://ssrn.com/abstract=1936806>.

Darcet, D., du Jeu, M., and Coleman, T. S. "Managing a Sovereign Wealth Fund: A View from Practitioners," *Economics of Sovereign Wealth Funds: Issues for Policymakers* (eds. Udaibir S. Das, Adnan Mazarei and Hand van der Hoorn), Washington, D.C.: IMF, 2010.

Johnson-Calari, J. and Rietveld, M., eds. *Sovereign Wealth Management* (London: Central Banking Publications Ltd., 2007).

Kunzel, P., Lu, Y., Petrova, I. and Pihlman, J. "Investment Objectives of Sovereign Wealth Funds: A Shifting Paradigm," *Economics of Sovereign Wealth Funds: Issues for Policymakers* (eds. Udaibir S. Das, Adnan Mazarei and Hand van der Hoorn). Washington, D.C.: IMF, 2010.

NRF Key Terms

Asset Allocation: A long-term investor's target percentage allotment between different asset classes, namely cash, fixed income assets (e.g., bonds), equities (e.g., corporate stocks) and alternative assets (e.g., real estate; derivatives). Each asset class has a different risk-return and liquidity profile.

Budget stabilization: Mitigation of government expenditure volatility by either saving revenues in a fund or paying down public debt when revenues are high, and either drawing down on public savings or borrowing when revenues are low. Government expenditure volatility is usually a product of revenue volatility since, without a fiscal rule or long-term fiscal framework in place, governments typically spend all the revenues they receive in a given year.

Collateral: Assets that a borrower offers a lender to secure a loan. In a natural resource fund context, a fund's assets can be used as collateral on government debt. If the government stops making loan payments, the lender can seize fund assets to recoup its losses. Using the fund as collateral reduces the risk of losses to the lender, which can lead to the government being able to borrow on better terms (e.g., lower interest rates).

Deposit rule: A legal or regulatory requirement specifying which revenue streams (e.g., royalties; corporate income taxes) must be deposited into a fund, minimum deposit amounts, when deposits must be made, or which companies' payments are to be deposited into the fund (e.g., payments from all private oil companies; payments from the national oil company).

Domestic investment: Investment in assets – including bonds, equities, human capital (e.g., education) and physical capital (e.g., machinery) – by nationals or the government inside their home country or subnational jurisdiction.

Dutch Disease: Deindustrialization and uncompetitive exports caused by real exchange rate appreciation, which in turn is a response to large inflows of foreign currency. In resource-rich countries, increases in oil, gas and mineral sales to foreign markets often generate this large capital inflow.

Equities: Stocks or shares representing an ownership interest in a company.

External accountability: Monitoring, assessment and actions by an oversight actor (e.g., civil society group; media; parliament) that is free of government influence. The aim of external accountability is to guarantee honest and candid assessments of compliance with governance rules and whether funds are being used for the public benefit.

Fiscal rule: A multiyear constraint on overall government finances defined by a numerical target (see policy brief on [Fiscal Rules for Natural Resource Funds](#)). For example, public expenditure growth may be limited to 3% per year.

Fiscal surplus: The amount by which government revenues exceed expenditures.

Fiscal sterilization: Mitigating the negative effects of large revenue inflows on the economy (e.g., exchange rate appreciation; inflation) by investing revenues in foreign assets. Fiscal sterilization can help mitigate the negative effects of Dutch Disease.

Fixed income investment: An investment under which the borrower must make payments of a fixed amount on a fixed schedule. Government or corporate bonds are types of fixed income investments.

Foreign investment: Investment in assets – including bonds, equities, human capital (e.g., education) and physical capital (e.g., machinery) – by nationals or the government outside their home country.

Fund objectives: Natural resource funds can have five possible objectives: Savings, budget stabilization, fiscal sterilization, development and ring-fencing (see policy brief on [Natural Resource Fund Governance](#)).

Independent external audit: An examination and evaluation of an organization or system by an external auditor who is free of government influence. External auditors must be members of a recognized professional accountancy association and usually submit their reports to fund oversight bodies (e.g., parliament). The goal of the independent external audit is to ascertain, candidly and with assurances of integrity, the validity of information and provide an assessment of the effectiveness of internal controls.

Independent oversight: Supervision of government behavior without political interference, including identifying noncompliance with rules, waste, fraud, abuse and mismanagement, and suggesting or enforcing corrections (see policy brief on [Independent Oversight of Natural Resource Funds](#)).

Internal audit: An examination and evaluation of an organization or system's internal controls by an internal auditing department. The goal of an internal audit is often to study and make recommendations to improve the effectiveness of governance processes. Internal audit reports are usually submitted to fund managers or boards of directors.

Internal accountability: Monitoring, assessment and corrective actions taken by an organization's management or executive board. The aim of internal accountability is to align the interests of day-to-day operational managers with the executive's interests as well as prevent mismanagement and corruption by officials.

Investment rule: A constraint on the type or currency of permissible investments, or a restriction on the use of a natural resource fund as collateral to secure government loans (see policy brief on [Rules-Based Investment for Natural Resource Funds](#)).

Management: Institutional structure, staffing and internal controls (see policy brief on [Institutional Structure of Natural Resource Funds](#)).

Public disclosure: The act of making information or data easily accessible and disseminating that information widely, for example through the media, a public forum or on a website.

Santiago Compliance Index: A measure of sovereign wealth fund compliance with the Santiago Principles, a voluntary set of guidelines supported by the member governments of the International Working Group of Sovereign Wealth Funds. Available online [here](#).

Sovereign wealth funds: The International Working Group on Sovereign Wealth Funds describes them as “special-purpose investment funds or arrangements that are owned by the general government. Created by the general government for macroeconomic purposes, SWFs hold, manage, or administer assets to achieve financial objectives, and employ a set of investment strategies that include investing in foreign financial assets.” Natural resource funds are a subset of sovereign wealth funds.

Truman Sovereign Wealth Fund Scoreboard: A leading measure of sovereign wealth fund transparency and accountability. Available online [here](#).

Resource Governance Index Natural Resource Fund Scores: A measure of the quality of governance of natural resource funds in 23 countries. The natural resource funds scores are part of a larger 58 country study of the quality of governance in the oil, gas and mining sectors..

Withdrawal rule: A legal or regulatory requirement specifying the maximum amount of any transfer from a fund, where it must go, when withdrawals from the fund can be made, or whether they need to be approved by an oversight body such as parliament.

Doyle Roberts Bio



Doyle Roberts is CEO of Wilson & Roberts, a consulting company that specializes in International Trade & Business Finance. Founder of two internet companies including GlobalFinancier.com which he sold in 2009 he is presently the Managing Partner of Grove Global Builders a construction company that focuses on solar and renewable energy solutions.

Having studied History at the College of the Bahamas & Political Science with Law at the University of the West Indies Barbados he is an international business man & Financial Consultant having worked with organizations like the IDB (Inter-American Development Bank) and Bahamian Cooperatives such as the North Abaco Fisherman's Cooperative.

Mr. Roberts is a co-founder of the Global Financier Group which is an Investor Network consisting of 31 National Angel Investor Networks and 27 Angel Investor & Venture Capital Matching Databases responsible for global project funding solutions

Mr. Roberts founded his first bank and trust company (Ziba Bank & Trust TCI) at the age 27 and has sat on the Board of numerous companies like PCI Homes. Mr. Roberts has consulted in the formation of three seafood companies and a contributor to successive Bahamas Lobster Fisheries Improvement Projects.

Though he has consulted with Governments, Cooperatives, businesses and other NGOs he finds pleasure in seeing companies grow from business plan to IPO. An angel investor and venture capital funding expert his primary area of specialty is fundraising via Private Placement Offerings & Reverse mergers.

The author of five e-books - The Investor Mailing List, The Angel Investor Directory, The Science of Making Money & Getting Rich, Funding 101 The Insider's Guide to Raising Capital and What You Need to Know When Pursuing Wealth.

Born in Nassau Bahamas he is a Proud Bahamian Nationalist who seeks to better the Bahamas

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