

Sovereign Wealth Fund Acquisitions and Other Foreign Government Investments in the United States: Assessing the Economic and National Security Implications

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Chairman Bayh, ranking member Shelby, and members of the Committee on Banking, Housing, and Urban Affairs, it is a pleasure to appear before you this afternoon to discuss sovereign wealth fund acquisitions and other foreign government investments in the United States and their implications for US economic and national security.

In my testimony, I discuss the increasing relative importance of cross-border investments by governments, including by their so-called sovereign wealth funds (SWF), and the forces behind these phenomena. I outline some of the economic, financial, political, and national security issues that they raise. I present the results of a scoreboard on SWF that I have developed with Doug Dowson. Finally, I draw some implications for US economic and financial policy.

In brief, I make five points. First, sovereign wealth funds and related vehicles for external or cross-border investments by governments have been around for a long time, are growing in relative importance, and are here to stay. Second, the existence and growing importance of these types of cross-border investment vehicles raise profound questions about the structure and functioning of the international financial system. Third, the continuation of these trends does not currently pose a threat to US national or economic security that cannot be dealt with under existing laws, procedures, and regulations. Fourth, it would be desirable to consider possible improvements in the US statistical information base on foreign-government-related investments. Fifth, the US government should continue actively to encourage foreign governments with large cross-border investments to develop and follow a set of best practices with respect to managing those investments in their interests, in our

interests, and in the interests of the stability and openness of the international financial system. Our scoreboard provides a starting point for the development of such a set of best practices for sovereign wealth funds.

Sovereign wealth fund is the descriptive term applied to separate pools of international assets owned and managed by governments to achieve a variety of economic and financial objectives. They sometimes include domestic assets as well. Those assets may be managed directly by a government entity or may be subcontracted to a private entity inside or outside the country. Their objectives may include the accumulation and management of a tranche of reserve assets, the stabilization of the macroeconomic effects of sudden increases in export earnings, the management of pension assets, or the transfer of national wealth across generations. In practice, they usually involve multiple objectives. Moreover, SWF are only one form of governmental cross-border investment; other forms include foreign exchange reserves, other loosely organized collections of government assets, and government-owned or government-controlled financial or nonfinancial institutions.

Sovereign wealth funds are new only as a descriptive term. Previously they may have been described as stabilization funds, nonrenewable resource funds, trust funds, or similar terms. The first such fund was established by the Pacific island nation of Kiribati in 1956 to manage revenues from phosphate deposits. A number were established before 1980 in the context of the build-up of oil export revenues during the 1970s; at least a dozen have been established since 2000. Although most of them derive the major portion of their funding from revenues from natural resources, some countries have used fiscal surpluses, revenues from privatizations, and foreign exchange reserves to fund their SWF. Table 1 attached to this testimony provides a list of 32 SWF of 28 countries along with the dates on which they were established, the principal source of their funding, and estimates of their size. My total is \$2.1 trillion. Differences in definitions and timing can lead to different totals. My figures do not include the \$142 billion recently added to China's new SWF, the China Investment Corporation, or Libya's new \$40 billion Investment Authority. They do include, in some cases sizeable, holdings of domestic assets.

The growth of SWF and similar governmental activities reflect multiple, interrelated trends in the world economy and financial system: increased global integration, substantial elimination of restrictions on international capital flows, technological innovation, sustained spectacular growth rates in many emerging-market countries, ageing populations and the

expansion of pension funds and related pools of assets, recognition that diversification contributes to increased investment returns, loosening of “home bias” in investment decisions, rapid growth in foreign exchange reserves, and enormous wealth transfers from most traditional industrial countries to a number of emerging-market and developing countries as a consequence of the sustained rise in commodity prices in recent years. Most of these trends will not be reversed in the near future. SWF and similar governmental activities are here to stay.

What is distinct about these trends is that they involve a dramatic increase in the role of governments in the ownership and management of international assets. This characteristic is unnerving and disquieting. It calls into question our most basic assumptions about the structure and functioning of our economies and the international financial system. In the United States, we favor a limited role for government in our economic and financial systems; we have a market-based economy and financial system; we view central planning as a failed economic framework of the past; and we presume that most cross-border trade and financial transactions involve the private sector on both ends of the transaction. Unfortunately, our orientation is not congruent with certain facts, and we are being called upon to recalibrate our understanding of the world.

Table 2 attached to this testimony displays the holdings of foreign exchange reserves (as of June 2007) and the estimated size of the sovereign wealth funds (where relevant) for the 10 countries with the largest reserve holdings, for the 5 other countries with the otherwise-largest sovereign wealth funds, and for Saudi Arabia. Saudi Arabia has small official reserves and no formal SWF, but the Saudi Arabian Monetary Agency reports substantial holdings of international securities on and off its balance sheet (shown in the SWF column). The countries are ranked by the combined size of these holdings shown in the first column, adjusting as best we can for double counting. The combined total for the 16 countries is \$6 trillion.

More generally, total holdings of foreign exchange reserves and sovereign wealth funds are about \$9 trillion: about \$6 trillion in foreign exchange reserves, \$2 trillion in SWF, and \$1 trillion in miscellaneous financial holdings by countries like Saudi Arabia. The \$9 trillion represents at least 12 percent of all cross-border assets—a share that has probably doubled over the past five years and can be expected to continue to rise. The 12 percent figure does not include other cross-border investments by government-owned or

government-controlled financial and nonfinancial institutions other than SWF. The absolute and relative size of all such government-owned and government-managed cross-border assets is likely to continue to increase driven by the combination of economic and financial forces outlined above. These forces are shifting wealth toward countries with different conceptions of the role of government in their economic and financial systems.

These developments, in turn, give rise to a number of risks.

First is the risk that governments will mismanage their international investments to their own economic and financial detriment and with negative consequences for the global economic and financial systems.

Second is the risk that governments will manage those investments in pursuit of political or economic power objectives—for example, promoting state-owned or state-controlled national champions to global champions.

Third is the risk of an outbreak of financial protectionism in host countries, in *anticipation* of the pursuit of political or economic objectives by the owners of the investments or in *response* to the actual actions of those governments.

Fourth is the risk that in their management of their international assets, governments will contribute to market turmoil and uncertainty.

Fifth is the risk of conflicts of interest for government owners of the international assets and the domestic or foreign institutional or individual managers of those assets with an associated potential for corruption.

At this point, these risks, with one exception, are largely in the realm of the hypothetical, in particular, with respect to sovereign wealth funds. For example, on the fourth risk, most experienced observers with whom I have spoken do not see SWF posing a threat to financial-market stability on the basis of the past behavior of the owners and managers of these funds.

In my view, the most serious risk is to the economic and financial stability of the countries accumulating these huge stocks of international assets. This accumulation poses enormous political and policy challenges for the authorities. The understandable temptation is to try to use international assets to promote domestic economic development objectives. Doing so is essentially impossible without undermining or reversing the fiscal, monetary, and exchange rate policies that gave rise to the initial accumulations of the external assets. With the possible exception of exchange rate policies, such reversals are likely to boost inflation,

create wasteful distortions in domestic economies, and contribute to slower, not faster, growth and development.

It is important to remember that a number of countries have established SWF only to squander and liquidate the resources that have been set aside under short-term political pressures. Two examples are Ecuador's Stabilization Fund and Nigeria's Petroleum (Special) Trust Fund. Venezuela appears to be following a similar trend with its two SWF. Also recall that, in general, governments are not skilled investors. They are not good at picking winners. Government-owned banks tend not to be the most profitable. I was told recently that preliminary research suggests that recent mergers and acquisitions by Chinese corporations, many of which are government-owned or government-controlled, underperform other cross-border mergers and acquisitions.

Notwithstanding my view that the greatest risks are to the countries whose governments have accumulated the large stocks of international assets, authorities in the countries where those assets are invested also have legitimate concerns about how they will be managed. Those concerns focus primarily on acquisition of large or controlling stakes by foreign governments or government-controlled entities in institutions in the host countries, i.e., the United States. In this connection, with respect to sovereign wealth funds, it is important to appreciate that only a few such funds currently follow acquisition strategies. We have reasonably complete information on the investment strategies of 24 of the 28 countries with SWF listed in table 1.¹ At present, the SWF of only 8 of the 24 countries follow investment strategies involving the acquisition of significant or controlling stakes in companies: Brunei, Canada, China, Kuwait, Malaysia, Qatar, Singapore, and the United Arab Emirates. Moreover, in the cases of Canada and Malaysia, the companies involved are domestic.

Of course, this pattern could change, and foreign government-owned or government-controlled financial and nonfinancial institutions do acquire stakes in companies in other countries, including controlling stakes. The enactment of the Foreign Investment and National Security Act of 2007 revised the framework and procedures of the Committee on Foreign Investment in the United States. With these changes and the existing powers of the Securities and Exchange Commission as well as other US financial

¹ We lack sufficient information about Algeria, Iran, Oman, and Sudan.

regulators, we are well positioned, in my view, to evaluate and, if necessary, to block any US acquisitions by a SWF or other foreign government entity to protect our national security.

With respect to economic security concerns, my view is that the greatest risk to the US economy is that we will erect unnecessary barriers to the free flow of capital into our economy and, in the process, contribute to the erection of similar barriers in other countries to the detriment of the health and continued prosperity of the US and global economies. We may not in all cases be comfortable with the consequences of the free flow of finance and investment either internally or across borders, but on balance it promotes competition and efficiency.

However, I would identify one area in which those responsible for our financial system should monitor future developments: investments of SWF in private equity firms, hedge funds, and regulated financial institutions. Some observers of private equity and hedge funds have concerns about the implications of their activities for the stability of our economy and financial systems. I do not share most of those concerns though I have long favored increased transparency for large private equity and hedge funds.

For those who have deeper concerns about such pools of capital, I note that foreign governments via investments by their SWF or through other channels provide capital to them that subsequently is leveraged. This trend deserves watching. With respect to the acquisition by a SWF, or by a government-owned or government-controlled entity, of a stake in a US financial institution already subject to supervision and regulation, the responsible US authorities should continue to review and monitor such investments to limit the potential for distortions in the allocation of capital and conflicts of interest that are resolved in unhealthy directions.

Consideration should also be given to improving our statistical information in this area. The US government collects extensive data on foreign investments in the United States and US investments abroad. I applaud the painstaking efforts by several agencies of the executive branch over the past decade to improve the comprehensiveness and quality of these data.

With respect to information on the stocks and flows of investments in the United States by foreign governments, my understanding is that the published data cover foreign official institutions defined as central banks, finance ministries, and other government institutions, including sovereign wealth funds. However, our data collection system does not

presently permit the identification of holdings and activities in the United States by sovereign wealth funds separately from holdings and activities of other foreign official institutions. My understanding, as well, is that our data also do not separately distinguish financial and direct investments in the United States by government-owned (or government-controlled) banks and corporations.

Published data on US official assets abroad include holdings by the US Treasury, Federal Reserve, and other federal lending agencies, but my understanding is that foreign assets of US government owned or sponsored entities are included among private assets. Finally, my understanding is that we also do not identify separately holdings by government owned or sponsored entities at the state and local level, for example, by the Alaska Permanent Fund or state pension funds such as the California Public Employees' Retirement System (CalPERS).

I do not want to minimize the cost or complexity that would be involved in the collection and publication of more detailed data on US international assets and liabilities on the basis of whether the assets are owned (or, more complex, are controlled) by US or foreign governments at all levels. In addition, the usefulness of such data would depend on whether a large group of other countries were willing to participate in parallel data collection efforts. (Although US data include investments in the United States by SWF such as the Norwegian Government Pension Fund-Global as holdings by foreign official institutions, data published by Norway in its international accounts do not report those assets as official holdings or as subcategories of other types of investments.) The fifth edition of the IMF's Balance of Payments Manual provides for the reporting of countries' official holdings of foreign debt and equity securities other than as reserve assets in subcategories of holdings of such assets (and liabilities), but few if any countries report their data this way. Moreover, my understanding is that the draft sixth edition of the IMF's Balance of Payments and International Investment Position Manual contemplates a more complete categorization of international financial data in terms of the general government and other governmental subentities. However, the new manual has not yet been completed and published, nor are all its new features likely to be implemented widely once the manual has been adopted.

Nevertheless, it would be instructive for US statistical agencies to prepare information for the Congress on what statistical information is currently available on US assets and liabilities of governments and government owned or controlled entities broken

down by the nature of those entities, on the costs and complexities for the United States of expanding the collection of such information, and on prospects for encouraging similar efforts in other countries.

What should be done to make the world safer for sovereign wealth funds? They should increase significantly their accountability to the citizens of their countries, to the US citizens and our government as well as to the citizens and governments of other countries, and to participants in international financial markets. The increased size and scope of these funds and related cross-border governmental financial activities coupled with the prospect that their disproportionate expansion will continue has put them on the international radar screen, as their owners and managers know, and it is in their interests to respond appropriately.

The most effective way to increase the accountability of these activities is through the establishment of a standard or a set of best practices for international investments, in general, and for sovereign wealth funds, in particular. For sovereign wealth funds, best practices should cover four categories: (1) structure, (2) governance, (3) transparency and accountability, and (4) behavior. To aid in the development of a set of best practices for SWF my colleague Doug Dowson and I have developed a scoreboard for the 32 sovereign wealth funds of 28 countries listed in table 1. It is based on systematic, publicly available information about the 32 SWF. The scoreboard includes 25 elements grouped in the four categories.² At least one SWF receives a positive score on each element. The construction of the scoreboard is described in more detail in the appendix to my testimony.

Table 3 attached to this testimony summarizes our results. (Table 4, also attached, provides the scores for the 32 SWF on each element as well as subtotals for each category.) Out of a possible total of 25 points, the highest score is 24 recorded for New Zealand's Superannuation Fund, followed closely by Norway's Government Pension Fund-Global at 23 points.³ The Abu Dhabi Investment Authority (ADIA) and its Investment Corporation (ADIC) in the United Arab Emirates record 0.5 points. The average is 10.27 points. Six of the 10 largest SWF score at or below the average, including two of the three largest funds at

² As a point of reference, we also scored the California Public Employees' Retirement System. CalPERS assets were \$244 billion as of August 2007; its 2006 annual report states that 25 percent were foreign. CalPERS scores slightly lower than Norway's SWF at 21.75, the same as Timor-Leste's Petroleum Fund.

³ Norway's SWF has not strictly followed its rules on the use of earnings from its SWF, does not provide the currency breakdown of its investments, and is not subject to a fully independent audit. New Zealand's SWF has no formal guideline governing the speed of adjustment in its portfolio.

the bottom of the table. One of the two is the Government of Singapore's Investment Corporation (GIC). At the same time, Singapore's Temasek Holdings scores considerably above the average.

As is displayed in table 3, the 32 funds fall into five groups of 5 to 8 funds each; the first and third groups could be further subdivided as indicated. In the first three categories—structure, governance, and transparency and accountability—scores are correlated, but not perfectly, with overall scores. On balance, the scores are higher (relative to the potential maximum) in the structure category, which covers the clarity of the objectives of the fund, the source of its funding, the use of its principal and earnings, and its integration with the country's fiscal framework. The scores in the governance category are lower relative to the theoretical maximum. This category covers the respective roles of the government and managers and the existence of corporate governance and ethical guidelines. The relative average score is about the same for the larger transparency and accountability category, which is based on the nature of regular public reporting on the investments and performance of each fund. However, in this category the variance of the scores is the largest.

The development of a set of best practices for sovereign wealth funds, and similar understandings covering other cross-border government investments, offers the most promising way to increase the accountability of these activities, which are likely to increase in relative importance over the next decade. The associated increase in transparency, which is a means to the end of greater accountability, would help to reduce the mysteries and misunderstandings surrounding these governmental activities. At the same time, the environment for them would become more stable and predictable.

I endorse the efforts of the US Treasury to encourage countries with sovereign wealth funds to act collectively and cooperatively in establishing a set of best practices for those investment vehicles. The G-7 has embraced this approach to reinforcing the global framework governing cross-border investment. The willingness of the IMF, World Bank, and OECD to promote a dialogue on identifying best practices is also positive. In the end, it will be the governments of countries with the sovereign wealth funds and related activities that must decide that it is in their individual and collective self interest to participate in these efforts. It is in our self interest to facilitate this process.

Table 1: Sovereign Wealth Funds

Country	Name	Date Established	Source of Funds	Current Size ^a (billions of US dollars)
United Arab Emirates	Abu Dhabi Investment Authority and Corporation	1976	Natural resources	522 – 897 ^e
	Istithmar (Dubai)	2003	Natural resources	(500 – 875 ^e)
	Mubadala Development Company (Abu Dhabi)	2002	Natural resources	(12 ^e)
Singapore				(10 ^e)
	Government of Singapore Investment Corporation	1981	Foreign exchange reserves	208 – 438 ^{er}
	Temasek Holdings ^b	1974	Fiscal surpluses	(100 – 330 ^{er})
Norway	Government Pension Fund – Global	1990	Natural resources	(108)
Kuwait	Kuwait Investment Authority	1960	Natural resources	329
Russia	Stabilization Fund of the Russian Federation	2004	Natural resources	213
China	Central Huijin Investment Company ^b	2007	Natural resources	148 ^r
Qatar	Qatar Investment Authority	2005	Foreign exchange reserves	68 ^e
Australia	Future Fund ^b	2006	Natural resources	50 ^e
Algeria	Revenue Regulation Fund	2000	Fiscal surpluses	49
United States	Alaska Permanent Fund ^b	1976	Natural resources	43
Brunei	Brunei Investment Agency	1983	Natural resources	40
Korea	Korea Investment Corporation	2005	Natural resources	35 ^e
Kazakhstan	National Oil Fund	2000	Foreign exchange reserves	20 ^r
Malaysia	Khazanah Nasional ^b	1993	Natural resources	19
Canada	Alberta Heritage Savings Trust Fund ^b	1976	Fiscal surpluses	18
Venezuela			Natural resources	15
	National Development Fund ^c	2005		16
	Macroeconomic Stabilization Fund	1998	Natural resources	(15)
Chile	Economic and Social Stabilization Fund	2006	Natural resources	(1)
New Zealand	Superannuation Fund ^b	2001	Natural resources	10
Oman	State General Reserve Fund	1980	Fiscal surpluses	10
Iran	Oil Stabilization Fund	2000	Natural resources	10 ^e
Botswana	Pula Fund	1997	Natural resources	9 ^e
Mexico	Oil Income Stabilization Fund	2000	Natural resources	6
Azerbaijan	State Oil Fund of the Republic of Azerbaijan	2000	Natural resources	3
Trinidad and Tobago	Heritage and Stabilization Fund	2007	Natural resources	2
Timor-Leste	Petroleum Fund	2005	Natural resources	1
Kiribati	Revenue Equalization Reserve Fund	1956	Natural resources	1
São Tomé and Príncipe	National Oil Account	2004	Natural resources	<1 ^e
Sudan	Oil Revenue Stabilization Account	2002	Natural resources	<1
Total ^d				2,148

e = estimate, r = some or all assets are included in reserves

a. Data are from the end of 2006 or the most recent date available.

b. A portion of the holdings is in domestic assets.

c. A portion of these holdings is intended for domestic investment.

d. Total uses the midpoint of the range of estimates.

Table 2: Foreign Exchange Reserves and Sovereign Wealth Fund (SWF) Assets
 Billions of U.S. dollars

Country	Total	Foreign Exchange Reserves June 2007	SWF
China	1,401	1,333	68
Japan	893	893	–
United Arab Emirates ^e	743	43	700
Russia ^r	397	397	148
Norway	385	56	329
Singapore ^{der}	350	144	323
Saudi Arabia ^s	281	22	259
Taiwan	266	266	–
Korea ^r	250	250	20
Kuwait	233	20	213
India	206	206	–
Brazil	147	147	–
Hong Kong	136	136	–
Algeria	134	91	43
Malaysia ^d	116	98	18
Qatar ^e	56	6	50
Total	5,993	4,107	2,170

d = a portion of SWF holdings is in domestic assets.

e = size of SWF is estimated.

r = reserves include SWF in whole or in part.

s = the "SWF" is non-reserve holdings of international securities reported by the Saudi Arabian Monetary Agency.

Table 3: Summary Scoreboard for Sovereign Wealth Funds

		Structure	Governance	Transparency & Accountability	Behavior	Total
New Zealand	Superannuation Fund	8.00	4.00	12.00	0.00	24.00
Norway	Government Pension Fund – Global	7.50	4.00	10.50	1.00	23.00
Timor-Leste	Petroleum Fund	8.00	2.00	11.75	0.00	21.75
Canada	Alberta Heritage Savings Trust Fund	7.50	3.00	9.00	0.00	19.50
United States	Alaska Permanent Fund	7.50	2.00	8.50	0.00	18.00
Australia	Future Fund	8.00	2.00	7.00	0.00	17.00
Azerbaijan	State Oil Fund of the Republic of Azerbaijan	5.00	2.00	9.50	0.00	16.50
Chile	Economic and Social Stabilization Fund	7.00	2.00	6.50	0.00	15.50
Botswana	Pula Fund	5.50	2.00	7.00	0.00	14.50
Kazakhstan	National Oil Fund	6.00	2.00	6.50	0.00	14.50
Singapore	Temasek Holdings	4.00	1.50	8.00	0.00	13.50
São Tomé and Príncipe	National Oil Account	8.00	2.00	2.25	0.00	12.25
Trinidad and Tobago	Heritage and Stabilization Fund	6.50	2.00	3.75	0.00	12.25
Kuwait	Kuwait Investment Authority	6.00	3.00	3.00	0.00	12.00
Malaysia	Khazanah Nasional	4.00	1.50	4.00	0.00	9.50
Russia	Stabilization Fund of the Russian Federation	4.00	2.00	3.50	0.00	9.50
Korea	Korea Investment Corporation	6.00	2.00	1.00	0.00	9.00
Kiribati	Revenue Equalization Reserve Fund	5.00	2.00	0.50	0.00	7.50
Mexico	Oil Income Stabilization Fund	5.00	0.00	2.00	0.00	7.00
China	Central Huijin Investment Company	5.50	0.00	0.50	0.00	6.00
Venezuela	National Development Fund	1.50	0.50	4.00	0.00	6.00
Iran	Oil Stabilization Fund	4.00	1.00	0.50	0.00	5.50
Venezuela	Macroeconomic Stabilization Fund	3.00	0.50	2.00	0.00	5.50
Oman	State General Reserve Fund	3.00	0.00	2.00	0.00	5.00
Sudan	Oil Revenue Stabilization Account	4.00	0.00	1.00	0.00	5.00
Algeria	Revenue Regulation Fund	3.00	1.00	0.50	0.00	4.50
United Arab Emirates	Istiithmar	3.00	0.50	0.25	0.00	3.75
United Arab Emirates	Mubadala Development Company	3.00	0.50	0.00	0.00	3.50
Brunei	Brunei Investment Agency	1.00	0.50	1.00	0.00	2.50
Singapore	Government of Singapore Investment Corporation	1.50	0.00	0.75	0.00	2.25
Qatar	Qatar Investment Authority	2.00	0.00	0.00	0.00	2.00
United Arab Emirates	Abu Dhabi Investment Authority and Corporation	0.50	0.00	0.00	0.00	0.50
Total Possible Points		8.00	4.00	12.00	1.00	25.00
Average Number of Points		4.80	1.42	4.02	0.03	10.27
United States	California Public Employees' Retirement System	8.00	3.00	10.25	0.50	21.75

Table 4: Scoreboard for Sovereign Wealth Funds

		Structure								Subtotal
		Objective	Fiscal Treatment				Investment Strategy	Changing the Structure	Separate from International Reserves	
			Source of Funding	Use of Fund	Integrated with Budget	Guidelines Followed				
Algeria	Revenue Regulation Fund	1	1	0	0	0	0	0	1	3
Australia	Future Fund	1	1	1	1	1	1	1	1	8
Azerbaijan	State Oil Fund of the Republic of Azerbaijan	1	1	0.5	0.5	1	0	0	1	5
Botswana	Pula Fund	1	0.5	1	1	0	1	1	0	5.5
Brunei	Brunei Investment Agency	1	0	0	0	0	0	0	0	1
Canada	Alberta Heritage Savings Trust Fund	1	1	1	1	0.5	1	1	1	7.5
Chile	Economic and Social Stabilization Fund	1	1	1	0.5	1	0.5	1	1	7
China	Central Huijin Investment Company	0.5	1	1	1	1	0	0	1	5.5
Iran	Oil Stabilization Fund	1	1	1	0	0	0	0	1	4
Kazakhstan	National Oil Fund	1	1	1	0.5	0	1	0.5	1	6
Kiribati	Revenue Equalization Reserve Fund	1	1	1	1	0	0	1	0	5
Korea	Korea Investment Corporation	1	1	0	1	1	1	1	0	6
Kuwait	Kuwait Investment Authority	1	1	0	1	0	1	1	1	6
Malaysia	Khazanah Nasional	0.5	1	0	0	1	0.5	0	1	4
Mexico	Oil Income Stabilization Fund	1	1	0.5	1	0	0.5	0	1	5
New Zealand	Superannuation Fund	1	1	1	1	1	1	1	1	8
Norway	Government Pension Fund – Global	1	1	1	1	0.5	1	1	1	7.5
Oman	State General Reserve Fund	0.5	0.5	0.5	0.5	0	0	0	1	3
Qatar	Qatar Investment Authority	0.5	0.5	0	0	0	0	0	1	2
Russia	Stabilization Fund of the Russian Federation	1	1	0	1	1	0	0	0	4
São Tomé and Príncipe	National Oil Account	1	1	1	1	1	1	1	1	8
Singapore	Government of Singapore Investment Corporation	1	0.5	0	0	0	0	0	0	1.5
Singapore	Temasek Holdings	1	1	0	0	0	1	0	1	4
Sudan	Oil Revenue Stabilization Account	0.5	1	0.5	1	0	0	0	1	4
Timor-Leste	Petroleum Fund	1	1	1	1	1	1	1	1	8
Trinidad and Tobago	Heritage and Stabilization Fund	1	1	1	0.5	1	1	0	1	6.5
United Arab Emirates	Abu Dhabi Investment Authority and Corporation	0	0	0	0	0	0.5	0	0	0.5
United Arab Emirates	Istithmar	1	0.5	0	0	0	0.5	0	1	3
United Arab Emirates	Mubadala Development Company	1	0	0	0	0	1	0	1	3
United States	Alaska Permanent Fund	1	1	1	1	1	1	0.5	1	7.5
Venezuela	Macroeconomic Stabilization Fund	1	1	0	0	0	0	0	1	3
Venezuela	National Development Fund	0.5	0	0	0	0	0	0	1	1.5
Total^a		28	25.5	16	17.5	13	16.5	12	25	4.8
United States	California Public Employees' Retirement System	1	1	1	1	1	1	1	1	8

a. For each category the value under subtotal represents the average for all funds.

Table 4: Scoreboard for Sovereign Wealth Funds (continued)

		Governance					Transparency & Accountability				
		Role of Government	Role of Manager	Guidelines for Corporate Responsibility	Ethical Guidelines	Subtotal	Reports		Investments		
							Annual Report	Quarterly Report	Size of Fund	Returns	Types
Algeria	Revenue Regulation Fund	0	1	0	0	1	0	0	0.5	0	0
Australia	Future Fund	1	1	0	0	2	1	0	1	1	1
Azerbaijan	State Oil Fund of the Republic of Azerbaijan	1	1	0	0	2	1	1	1	1	1
Botswana	Pula Fund	1	1	0	0	2	1	1	1	1	1
Brunei	Brunei Investment Agency	0	0.5	0	0	0.5	0	0	0	0	0
Canada	Alberta Heritage Savings Trust Fund	1	1	1	0	3	1	1	1	1	1
Chile	Economic and Social Stabilization Fund	1	1	0	0	2	1	1	1	0	1
China	Central Huijin Investment Company	0	0	0	0	0	0	0	0	0	0.5
Iran	Oil Stabilization Fund	0	1	0	0	1	0	0	0.5	0	0
Kazakhstan	National Oil Fund	1	1	0	0	2	0.5	0.5	1	1	0.5
Kiribati	Revenue Equalization Reserve Fund	1	1	0	0	2	0	0	0.5	0	0
Korea	Korea Investment Corporation	1	1	0	0	2	0	0	1	0	0
Kuwait	Kuwait Investment Authority	1	1	0	1	3	0.5	0	0.5	0	0
Malaysia	Khazanah Nasional	0.5	1	0	0	1.5	0.5	0	1	0	0.5
Mexico	Oil Income Stabilization Fund	0	0	0	0	0	0	0	1	0	0
New Zealand	Superannuation Fund	1	1	1	1	4	1	1	1	1	1
Norway	Government Pension Fund – Global	1	1	1	1	4	1	1	1	1	1
Oman	State General Reserve Fund	0	0	0	0	0	0	0	0	0	0
Qatar	Qatar Investment Authority	0	0	0	0	0	0	0	0	0	0
Russia	Stabilization Fund of the Russian Federation	1	1	0	0	2	0	0	1	0	1
São Tomé and Príncipe	National Oil Account	1	1	0	0	2	0	0	0	0	0.25
Singapore	Government of Singapore Investment Corporation	0	0	0	0	0	0	0	0.25	0	0.5
Singapore	Temasek Holdings	0	1	0.5	0	1.5	1	0	1	1	0.5
Sudan	Oil Revenue Stabilization Account	0	0	0	0	0	0	0	1	0	0
Timor-Leste	Petroleum Fund	1	1	0	0	2	1	1	1	1	1
Trinidad and Tobago	Heritage and Stabilization Fund	1	1	0	0	2	0.5	0	1	0	0
United Arab Emirates	Abu Dhabi Investment Authority and Corporation	0	0	0	0	0	0	0	0	0	0
United Arab Emirates	Istithmar	0	0.5	0	0	0.5	0	0	0.25	0	0
United Arab Emirates	Mubadala Development Company	0	0.5	0	0	0.5	0	0	0	0	0
United States	Alaska Permanent Fund	1	1	0	0	2	1	1	1	1	1
Venezuela	Macroeconomic Stabilization Fund	0	0.5	0	0	0.5	0.25	0.25	1	0	0.5
Venezuela	National Development Fund	0	0.5	0	0	0.5	1	0.5	1	0	0
Total ^a		16.5	22.5	3.5	3	1.4	13.25	9.25	21.5	10	13.25
United States	California Public Employees' Retirement System	1	1	1	0	3	1	1	1	1	1

a. For each category the value under subtotal represents the average for all funds.

Table 4: Scoreboard for Sovereign Wealth Funds (continued)

		Transparency & Accountability							Subtotal	Behavior	Grand Total
		Investments				Audit				Speed of Adjustment	
		Location	Specific	Currency Composition	Mandates	Regular	Published	Independent			
Algeria	Revenue Regulation Fund	0	0	0	0	0	0	0	0.5	0	4.5
Australia	Future Fund	0	0	0	0	1	1	1	7	0	17
Azerbaijan	State Oil Fund of the Republic of Azerbaijan	0.5	0	1	0	1	1	1	9.5	0	16.5
Botswana	Pula Fund	0	0	0	0	1	0	1	7	0	14.5
Brunei	Brunei Investment Agency	0	0	0	0	1	0	0	1	0	2.5
Canada	Alberta Heritage Savings Trust Fund	1	0	0	0	1	1	1	9	0	19.5
Chile	Economic and Social Stabilization Fund	0.5	0	1	1	0	0	0	6.5	0	15.5
China	Central Huijin Investment Company	0	0	0	0	0	0	0	0.5	0	6
Iran	Oil Stabilization Fund	0	0	0	0	0	0	0	0.5	0	5.5
Kazakhstan	National Oil Fund	0	0	0.5	0.5	1	0	1	6.5	0	14.5
Kiribati	Revenue Equalization Reserve Fund	0	0	0	0	0	0	0	0.5	0	7.5
Korea	Korea Investment Corporation	0	0	0	0	0	0	0	1	0	9
Kuwait	Kuwait Investment Authority	0	0	0	0	1	0	1	3	0	12
Malaysia	Khazanah Nasional	1	0	0	0	1	0	0	4	0	9.5
Mexico	Oil Income Stabilization Fund	0	0	1	0	0	0	0	2	0	7
New Zealand	Superannuation Fund	1	1	1	1	1	1	1	12	0	24
Norway	Government Pension Fund – Global	1	1	0	1	1	1	0.5	10.5	1	23
Oman	State General Reserve Fund	0	0	0	0	1	0	1	2	0	5
Qatar	Qatar Investment Authority	0	0	0	0	0	0	0	0	0	2
Russia	Stabilization Fund of the Russian Federation	0.5	0	1	0	0	0	0	3.5	0	9.5
São Tomé and Príncipe	National Oil Account	0	0	0	0	1	0	1	2.25	0	12.25
Singapore	Government of Singapore Investment Corporation	0	0	0	0	0	0	0	0.75	0	2.25
Singapore	Temasek Holdings	1	0.5	0	0	1	1	1	8	0	13.5
Sudan	Oil Revenue Stabilization Account	0	0	0	0	0	0	0	1	0	5
Timor-Leste	Petroleum Fund	1	1	1	0.75	1	1	1	11.75	0	21.75
Trinidad and Tobago	Heritage and Stabilization Fund	0	0	0	0.25	1	0	1	3.75	0	12.25
United Arab Emirates	Abu Dhabi Investment Authority and Corporation	0	0	0	0	0	0	0	0	0	0.5
United Arab Emirates	Istithmar	0	0	0	0	0	0	0	0.25	0	3.75
United Arab Emirates	Mubadala Development Company	0	0	0	0	0	0	0	0	0	3.5
United States	Alaska Permanent Fund	0.5	0	1	0	1	0	1	8.5	0	18
Venezuela	Macroeconomic Stabilization Fund	0	0	0	0	0	0	0	2	0	5.5
Venezuela	National Development Fund	0	0	0	0	1	0	0.5	4	0	6
Total ^a		8	3.5	7.5	4.5	17	7	14	4.0	1	10.27
United States	California Public Employees' Retirement System	0.25	0	1	1	1	1	1	10.25	0.5	21.75

a. For each category the value under subtotal represents the average for all funds.

APPENDIX

Scoreboard for Sovereign Wealth Funds

This appendix presents the scoreboard that I have constructed with the assistance of Doug Dowson. It covers four basic categories: (1) structure, (2) governance, (3) transparency and accountability, and (4) behavior. Within each category, we pose a set of yes/no questions. The total number of questions is 25. For two of the categories, we group questions in subcategories.

For each of our 25 questions, the answer is yes for at least one SWF. If the answer is an unqualified yes, we score it as “1”. If the answer is no, we score it as “0”. However, for many elements, we allow for partial scores of 0.25, 0.50, and 0.75, indicated by (p) in the descriptions below.

We evaluate 32 SWF in 28 countries (table 1), as well as the California Public Employees’ Retirement System (CalPERS) as a reference point.⁴

In collecting the answers to our questions we looked for sources of systematic, continuously available, public information. For some of our facts we relied on independent, published reports, for example by the IMF or World Bank. However, in general, we required that the SWF produce an ongoing flow of detailed information. Consequently, for some SWF more is known about them than is reflected in our scoring, but that information is anecdotal and occasional rather than systematic and regular. It is not sufficient that an individual SWF provides information in ad hoc interviews with the press as has been done, for example, by the Government of Singapore Investment Corporation and the Abu Dhabi Investment Authority. Although we have tried to be rigorous and systematic in our evaluation of each SWF, some degree of subjectivity necessarily is present in our procedure.

⁴ In our evaluation of SWF, we include the funds of two subnational units, the Alberta (Canada) Heritage Savings Trust Fund and Alaska (United States) Permanent Fund. (We might have included Wyoming’s similar fund.) We also include two national pension funds, New Zealand’s Superannuation Fund and Australia’s Future Fund. We do not classify Norway’s Government Pension Fund – Global as a “pension fund” despite the inclusion of that word in its title because at present earnings from the fund are used to finance Norway’s general budget. For pension funds, such as CalPERS (whose portfolio is about 25 percent in foreign assets) that are established by law and generally subject to restrictions under such laws, it is somewhat easier to record a high score. For a revised scoreboard, we plan to include pension funds in (non-Quebec) Canada, France, Ireland, the Netherlands, Quebec, and Thailand, Hong Kong’s Investment Portfolio (which is part of its reserves), Dubai Holding, Nigeria’s “Excess Crude Account,” and the Harvard Management Company as an additional reference point.

Three points of qualification: First, the objective of this scoreboard is to provide a benchmark, such as might be provided by a set of best practices. Second, the scoreboard is based upon public information that we were able to access principally using the Internet, as is appropriate today. To be useful in establishing accountability and transparency, information should be public, but we may not have accessed all the information available, and we necessarily applied judgment in some of our interpretations. Third, any benchmark provides a basis for countries to assess their own practices and performance. Countries in different circumstances may conclude that particular elements are not relevant to their situations. However, the benchmark provides a reference point to assess and justify their decisions.

The four categories in our scoreboard are listed below with subcategories where relevant. The 25 questions are stated with comments on some of them. Table 3 summarizes the results of this exercise. Table 4 provides the scores of the 32 funds on each element as well as subtotals for each category.

Structure (8)⁵

1. Is the SWF's **objective** clearly communicated? (p - 28)⁶

Fiscal Treatment (4).⁷

Fiscal Treatment is central to a SWF's role in the macro-economic stability of the country. This involves several components including how a SWF receives its funding, how its principal and earnings may be employed by the government, and whether the government follows those procedures. As detailed, for example, in IMF (2007), basic principles of good public finance aim at limiting pro-cyclical influences on fiscal policy. It follows that the SWF should not be used as a second budget, should be integrated with the overall budget of the government, and the government should not explicitly or implicitly borrow against resources building up in the SWF. In addition, clear rules and principles help to limit the potential scope for corruption in the use of the SWF for foreign or domestic purposes.

⁵ The number in parentheses indicates the number of elements included in the category as well as the maximum number of points that can be recorded for each SWF in the category.

⁶ The number in the parentheses, for some elements preceded by a "p", indicates the total number of points out of 32 (the number of funds) recorded in this category. In other words, the number summarizes the score of the SWF as a group on each element. The figure is also at the bottom of each column in table 3.

⁷ The word or words in bold are keyed to the columns in table 4. The number in parentheses indicates the number of elements included in the subcategory as well as the maximum number of points that can be recorded for each SWF in the subcategory.

2. Is the **source of the SWF's funding** clearly specified? (p – 25.5)
3. Is nature of the subsequent **use** of the principal and earnings in the fund clearly stated? (p – 16)
4. Are these elements of fiscal treatment **integrated with the budget**? (p – 17.5) In some cases, the integration is looser than in others. For this element, as well as element #5, some SWF that have been recently established do not have an established record of compliance. In those cases, we gave the SWF full credit.
5. Are the **guidelines** for fiscal treatment generally **followed** without frequent adjustment? (p – 13)

Other Structural Elements (3)

6. Is the overall **investment strategy** clearly communicated? (p – 16.5)
7. Is the procedure for **changing the structure** clear? (p – 12) Where a SWF has been established by law, the procedure for changing many elements of the structure is clearer than when that is not the case.
8. Is the SWF **separate from** the country's **international reserves**? (25) A lack of separation between the SWF and international reserves creates ambiguity about the investment objectives of the SWF as well as about the management of the government's international reserves.

Governance (4)

9. Is the **role of the government** in setting the investment strategy of the SWF clearly established? (p – 16.5)
10. Is the **role of the manager** in executing the investment strategy clearly established? (p – 22.5)
11. Does the SWF have in place and publicly available **guidelines for corporate responsibility** that it follows? (p – 3.5)
12. Does the SWF have **ethical guidelines** that it follows? (3) It could reasonably be argued that the objectives of a SWF should be merely to implement its investment strategy and maximize financial returns subject to whatever risk management constraints that have been established. In this case, its “ethical guidelines” would involve ignoring ethical considerations, and we would score such a SWF with “1” even though we have not identified such an entity. However, in some cases, the SWF may implicitly limit its investments in certain instruments, entities, activities,

or countries without a clearly articulated set of guidelines. In the absence of any information on this point, a SWF receives a “0” in our scoring.

Transparency and Accountability (12)

Accountability is the principal objective of the scoreboard exercise and any set of best practices. Transparency is at the core of establishing accountability.

Reports (2).

Any SWF that does not provide some sort of regular public report on its activities does not score many points in this subcategory or for the category as a whole.

13. Does the SWF provide at least an **annual report** on its activities and results? (p – 13.25) In cases where there is an annual report, but it contains little or no information on the activities of the SWF, we give it a score of more than zero but less than 1. We also give partial credit (0.25), for example, for a report to parliament that is not published.
14. Does the SWF provide **quarterly reports** on its activities? (p – 9.25) As with element #13, we allow for a partial score. We acknowledge that views differ on the desirability of quarterly financial reporting. Some argue that it promotes too much focus on short-term returns. In our view, the principal argument for quarterly reporting rests on transparency. The entity should be able to withstand the influence of excessive short-term emphasis given that it is not generally subject to the disciplines of the market.

Investments (7).

15. Do regular reports on the investments by the SWF include the **size of the fund**? (p – 21.5)? Where a SWF states that it is “at least” of a certain size, we give partial credit (0.25).
16. Do regular reports on the investments by the SWF include information on the **returns** it earns? (10) In a number of cases, reports indicate the overall increase in the size of the fund without any distinction between the addition of new resources and earnings on resources previously incorporated in the fund. This practice receives no credit. Some reports on returns may provide an overall figure, perhaps translated into domestic currency, as well as additional detail, which one might think deserves extra credit, but we do not give extra credit.

17. Do regular reports on investments by the SWF include information on the **types** of investments? (p – 13.25) For example, in what sectors and in what instruments? A general description receives only partial credit.
18. Do regular reports on the investments by the SWF include information on the geographic **location** of investments? (p – 8) A listing of broad regions of the world receives only partial credit.
19. Do regular reports on the investments by the SWF include information on the **specific** investments? (p – 3.5) For example, which instruments, countries, and companies? In some cases, only “significant” investments are identified, receiving partial credit.
20. Do regular reports on the investments by the SWF include information on the **currency composition** of investments? (p – 7.5) Partial credit is given where a SWF provides information on broad groups of currencies.
21. Are the holders of investment **mandates** identified? (p – 4.5) The rationale is that by disclosing the holders of individual investment mandates the public both in the country and outside the country can check on the records, quality, and reliability of those intermediaries. Disclosure also limits the scope for sweetheart arrangements. To receive full credit, a SWF must publish the names of each holder of a mandate. If it merely states that it grants mandates, we give it no credit.

Audits (3).

Regular audits, preferably independent as well as published, are a central element of accountability. For this reason, we have assigned a maximum of three points to this subcategory.

22. Is the SWF subjected to a **regular audit**? (p - 17)
23. Is the audit **published**? (7)
24. Is the audit **independent**? (p – 14) In some cases, SWF are subjected to regular audits that are published, but the auditor is internal to the SWF in whole or in part, which detracts from objectivity and receives a partial deduction.

Behavior (1).

We include only one element in this category. One could imagine several other elements that might be included, for example, whether the SWF engages in short sales or the use of derivatives, which many SWF with moderately active investment strategies do in part and

also disclose that fact. In addition, it might be desirable if the SWF consulted with the country of location for any large investment or disinvestment or with the country of issue of the currency involved. In an initial version of this scoreboard, we included such an element, but because we were unable to find a SWF that followed such a practice, we dropped it from our scoring exercise.

25. Does the SWF indicate the nature and **speed of adjustment** in its portfolio? (p - 1)

This is done only by the Norwegian Government Pension Fund-Global, as far as we could determine. The declared policy of that fund is to use new inflows to make adjustments in its portfolio in light of market changes that move its existing portfolio away from its benchmarks, in other words, a policy of portfolio rebalancing. CalPERS states that it seeks to invest efficiently, bearing in mind the impact of management and transaction costs on the return on its assets, and we gave it partial credit.

Reference

IMF (International Monetary Fund). 2007. The Role of Fiscal Institutions in Managing the Oil Revenue Boom (March 5). Washington: International Monetary Fund.

Tables

Sovereign Wealth Fund Acquisitions and Other Foreign Government Investments in the United States: Assessing the Economic and National Security Implications
Edwin M. Truman, Senior Fellow, Peterson Institute for International Economics
Testimony before the Committee on Banking, Housing, and Urban Affairs, United States Senate, November 14, 2007

Table 1: Sovereign Wealth Funds

Country	Name	Date Established	Source of Funds	Current Size ^a (billions of US dollars)
United Arab Emirates	Abu Dhabi Investment Authority and Corporation	1976	Natural resources	522 – 897 ^e
	Istithmar (Dubai)	2003	Natural resources	(500 – 875 ^e)
	Mubadala Development Company (Abu Dhabi)	2002	Natural resources	(12 ^e)
Singapore	Government of Singapore Investment Corporation	1981	Natural resources	(10 ^e)
	Temasek Holdings ^b	1974	Foreign exchange reserves	208 – 438 ^{er}
Norway	Government Pension Fund – Global	1990	Fiscal surpluses	(100 – 330 ^{er})
Kuwait	Kuwait Investment Authority	1960	Natural resources	(108)
Russia	Stabilization Fund of the Russian Federation	2004	Natural resources	329
China	Central Huijin Investment Company ^b	2003	Natural resources	213
Qatar	Qatar Investment Authority	2005	Natural resources	148 ^f
Australia	Future Fund ^b	2006	Foreign exchange reserves	68
Algeria	Revenue Regulation Fund	2000	Natural resources	50 ^e
United States	Alaska Permanent Fund ^b	1976	Fiscal surpluses	49
Brunei	Brunei Investment Agency	1983	Natural resources	43
Korea	Korea Investment Corporation	2005	Natural resources	40
Kazakhstan	National Oil Fund	2000	Foreign exchange reserves	35 ^e
Malaysia	Khazanah Nasional ^b	1993	Natural resources	20 ^f
Canada	Alberta Heritage Savings Trust Fund ^b	1976	Natural resources	19
Venezuela	National Development Fund ^c	2005	Natural resources	18
Chile	Macroeconomic Stabilization Fund	1998	Natural resources	15
	Economic and Social Stabilization Fund	2006	Natural resources	(1)
New Zealand	Superannuation Fund ^b	2001	Natural resources	10
Oman	State General Reserve Fund	1980	Fiscal surpluses	10
Iran	Oil Stabilization Fund	2000	Natural resources	10 ^e
Botswana	Pula Fund	1997	Natural resources	9 ^e
Mexico	Oil Income Stabilization Fund	2000	Natural resources	6
Azerbaijan	State Oil Fund of the Republic of Azerbaijan	2000	Natural resources	3
Trinidad and Tobago	Heritage and Stabilization Fund	2007	Natural resources	2
Timor-Leste	Petroleum Fund	2005	Natural resources	1
Kiribati	Revenue Equalization Reserve Fund	1956	Natural resources	1
São Tomé and Príncipe	National Oil Account	2004	Natural resources	<1 ^e
Sudan	Oil Revenue Stabilization Account	2002	Natural resources	<1
Total ^d				2,148

e = estimate, r = some or all assets are included in reserves

- a. Data are from the end of 2006 or the most recent date available.
- b. A portion of the holdings is in domestic assets.
- c. A portion of these holdings is intended for domestic investment.
- d. Total uses the midpoint of the range of estimates.

Table 2: Foreign Exchange Reserves and Sovereign Wealth Fund (SWF) Assets
 Billions of U.S. dollars

Country	Total	Foreign Exchange Reserves June 2007	SWF
China	1,401	1,333	68
Japan	893	893	–
United Arab Emirates ^e	743	43	700
Russia ^r	397	397	148
Norway	385	56	329
Singapore ^{der}	350	144	323
Saudi Arabia ^s	281	22	259
Taiwan	266	266	–
Korea ^r	250	250	20
Kuwait	233	20	213
India	206	206	–
Brazil	147	147	–
Hong Kong	136	136	–
Algeria	134	91	43
Malaysia ^d	116	98	18
Qatar ^e	56	6	50
Total	5,993	4,107	2,170

d = a portion of SWF holdings is in domestic assets.

e = size of SWF is estimated.

r = reserves include SWF in whole or in part.

s = the "SWF" is non-reserve holdings of international securities reported by the Saudi Arabian Monetary Agency.

Table 3: Summary Scoreboard for Sovereign Wealth Funds

		Structure	Governance	Transparency & Accountability	Behavior	Total
New Zealand	Superannuation Fund	8.00	4.00	12.00	0.00	24.00
Norway	Government Pension Fund – Global	7.50	4.00	10.50	1.00	23.00
Timor-Leste	Petroleum Fund	8.00	2.00	11.75	0.00	21.75
Canada	Alberta Heritage Savings Trust Fund	7.50	3.00	9.00	0.00	19.50
United States	Alaska Permanent Fund	7.50	2.00	8.50	0.00	18.00
Australia	Future Fund	8.00	2.00	7.00	0.00	17.00
Azerbaijan	State Oil Fund of the Republic of Azerbaijan	5.00	2.00	9.50	0.00	16.50
Chile	Economic and Social Stabilization Fund	7.00	2.00	6.50	0.00	15.50
Botswana	Pula Fund	5.50	2.00	7.00	0.00	14.50
Kazakhstan	National Oil Fund	6.00	2.00	6.50	0.00	14.50
Singapore	Temasek Holdings	4.00	1.50	8.00	0.00	13.50
São Tomé and Príncipe	National Oil Account	8.00	2.00	2.25	0.00	12.25
Trinidad and Tobago	Heritage and Stabilization Fund	6.50	2.00	3.75	0.00	12.25
Kuwait	Kuwait Investment Authority	6.00	3.00	3.00	0.00	12.00
Malaysia	Khazanah Nasional	4.00	1.50	4.00	0.00	9.50
Russia	Stabilization Fund of the Russian Federation	4.00	2.00	3.50	0.00	9.50
Korea	Korea Investment Corporation	6.00	2.00	1.00	0.00	9.00
Kiribati	Revenue Equalization Reserve Fund	5.00	2.00	0.50	0.00	7.50
Mexico	Oil Income Stabilization Fund	5.00	0.00	2.00	0.00	7.00
China	Central Huijin Investment Company	5.50	0.00	0.50	0.00	6.00
Venezuela	National Development Fund	1.50	0.50	4.00	0.00	6.00
Iran	Oil Stabilization Fund	4.00	1.00	0.50	0.00	5.50
Venezuela	Macroeconomic Stabilization Fund	3.00	0.50	2.00	0.00	5.50
Oman	State General Reserve Fund	3.00	0.00	2.00	0.00	5.00
Sudan	Oil Revenue Stabilization Account	4.00	0.00	1.00	0.00	5.00
Algeria	Revenue Regulation Fund	3.00	1.00	0.50	0.00	4.50
United Arab Emirates	Istiithmar	3.00	0.50	0.25	0.00	3.75
United Arab Emirates	Mubadala Development Company	3.00	0.50	0.00	0.00	3.50
Brunei	Brunei Investment Agency	1.00	0.50	1.00	0.00	2.50
Singapore	Government of Singapore Investment Corporation	1.50	0.00	0.75	0.00	2.25
Qatar	Qatar Investment Authority	2.00	0.00	0.00	0.00	2.00
United Arab Emirates	Abu Dhabi Investment Authority and Corporation	0.50	0.00	0.00	0.00	0.50
Total Possible Points		8.00	4.00	12.00	1.00	25.00
Average Number of Points		4.80	1.42	4.02	0.03	10.27
United States	California Public Employees' Retirement System	8.00	3.00	10.25	0.50	21.75

Table 4: Scoreboard for Sovereign Wealth Funds

		Structure								Subtotal
		Objective	Fiscal Treatment				Investment Strategy	Changing the Structure	Separate from International Reserves	
			Source of Funding	Use of Fund	Integrated with Budget	Guidelines Followed				
Algeria	Revenue Regulation Fund	1	1	0	0	0	0	0	1	3
Australia	Future Fund	1	1	1	1	1	1	1	1	8
Azerbaijan	State Oil Fund of the Republic of Azerbaijan	1	1	0.5	0.5	1	0	0	1	5
Botswana	Pula Fund	1	0.5	1	1	0	1	1	0	5.5
Brunei	Brunei Investment Agency	1	0	0	0	0	0	0	0	1
Canada	Alberta Heritage Savings Trust Fund	1	1	1	1	0.5	1	1	1	7.5
Chile	Economic and Social Stabilization Fund	1	1	1	0.5	1	0.5	1	1	7
China	Central Huijin Investment Company	0.5	1	1	1	1	0	0	1	5.5
Iran	Oil Stabilization Fund	1	1	1	0	0	0	0	1	4
Kazakhstan	National Oil Fund	1	1	1	0.5	0	1	0.5	1	6
Kiribati	Revenue Equalization Reserve Fund	1	1	1	1	0	0	1	0	5
Korea	Korea Investment Corporation	1	1	0	1	1	1	1	0	6
Kuwait	Kuwait Investment Authority	1	1	0	1	0	1	1	1	6
Malaysia	Khazanah Nasional	0.5	1	0	0	1	0.5	0	1	4
Mexico	Oil Income Stabilization Fund	1	1	0.5	1	0	0.5	0	1	5
New Zealand	Superannuation Fund	1	1	1	1	1	1	1	1	8
Norway	Government Pension Fund – Global	1	1	1	1	0.5	1	1	1	7.5
Oman	State General Reserve Fund	0.5	0.5	0.5	0.5	0	0	0	1	3
Qatar	Qatar Investment Authority	0.5	0.5	0	0	0	0	0	1	2
Russia	Stabilization Fund of the Russian Federation	1	1	0	1	1	0	0	0	4
São Tomé and Príncipe	National Oil Account	1	1	1	1	1	1	1	1	8
Singapore	Government of Singapore Investment Corporation	1	0.5	0	0	0	0	0	0	1.5
Singapore	Temasek Holdings	1	1	0	0	0	1	0	1	4
Sudan	Oil Revenue Stabilization Account	0.5	1	0.5	1	0	0	0	1	4
Timor-Leste	Petroleum Fund	1	1	1	1	1	1	1	1	8
Trinidad and Tobago	Heritage and Stabilization Fund	1	1	1	0.5	1	1	0	1	6.5
United Arab Emirates	Abu Dhabi Investment Authority and Corporation	0	0	0	0	0	0.5	0	0	0.5
United Arab Emirates	Istithmar	1	0.5	0	0	0	0.5	0	1	3
United Arab Emirates	Mubadala Development Company	1	0	0	0	0	1	0	1	3
United States	Alaska Permanent Fund	1	1	1	1	1	1	0.5	1	7.5
Venezuela	Macroeconomic Stabilization Fund	1	1	0	0	0	0	0	1	3
Venezuela	National Development Fund	0.5	0	0	0	0	0	0	1	1.5
Total ^a		28	25.5	16	17.5	13	16.5	12	25	4.8
United States	California Public Employees' Retirement System	1	1	1	1	1	1	1	1	8

a. For each category the value under subtotal represents the average for all funds.

Table 4: Scoreboard for Sovereign Wealth Funds (continued)

		Governance					Transparency & Accountability				
		Role of Government	Role of Manager	Guidelines for Corporate Responsibility	Ethical Guidelines	Subtotal	Reports		Investments		
							Annual Report	Quarterly Report	Size of Fund	Returns	Types
Algeria	Revenue Regulation Fund	0	1	0	0	1	0	0	0.5	0	0
Australia	Future Fund	1	1	0	0	2	1	0	1	1	1
Azerbaijan	State Oil Fund of the Republic of Azerbaijan	1	1	0	0	2	1	1	1	1	1
Botswana	Pula Fund	1	1	0	0	2	1	1	1	1	1
Brunei	Brunei Investment Agency	0	0.5	0	0	0.5	0	0	0	0	0
Canada	Alberta Heritage Savings Trust Fund	1	1	1	0	3	1	1	1	1	1
Chile	Economic and Social Stabilization Fund	1	1	0	0	2	1	1	1	0	1
China	Central Huijin Investment Company	0	0	0	0	0	0	0	0	0	0.5
Iran	Oil Stabilization Fund	0	1	0	0	1	0	0	0.5	0	0
Kazakhstan	National Oil Fund	1	1	0	0	2	0.5	0.5	1	1	0.5
Kiribati	Revenue Equalization Reserve Fund	1	1	0	0	2	0	0	0.5	0	0
Korea	Korea Investment Corporation	1	1	0	0	2	0	0	1	0	0
Kuwait	Kuwait Investment Authority	1	1	0	1	3	0.5	0	0.5	0	0
Malaysia	Khazanah Nasional	0.5	1	0	0	1.5	0.5	0	1	0	0.5
Mexico	Oil Income Stabilization Fund	0	0	0	0	0	0	0	1	0	0
New Zealand	Superannuation Fund	1	1	1	1	4	1	1	1	1	1
Norway	Government Pension Fund – Global	1	1	1	1	4	1	1	1	1	1
Oman	State General Reserve Fund	0	0	0	0	0	0	0	0	0	0
Qatar	Qatar Investment Authority	0	0	0	0	0	0	0	0	0	0
Russia	Stabilization Fund of the Russian Federation	1	1	0	0	2	0	0	1	0	1
São Tomé and Príncipe	National Oil Account	1	1	0	0	2	0	0	0	0	0.25
Singapore	Government of Singapore Investment Corporation	0	0	0	0	0	0	0	0.25	0	0.5
Singapore	Temasek Holdings	0	1	0.5	0	1.5	1	0	1	1	0.5
Sudan	Oil Revenue Stabilization Account	0	0	0	0	0	0	0	1	0	0
Timor-Leste	Petroleum Fund	1	1	0	0	2	1	1	1	1	1
Trinidad and Tobago	Heritage and Stabilization Fund	1	1	0	0	2	0.5	0	1	0	0
United Arab Emirates	Abu Dhabi Investment Authority and Corporation	0	0	0	0	0	0	0	0	0	0
United Arab Emirates	Istithmar	0	0.5	0	0	0.5	0	0	0.25	0	0
United Arab Emirates	Mubadala Development Company	0	0.5	0	0	0.5	0	0	0	0	0
United States	Alaska Permanent Fund	1	1	0	0	2	1	1	1	1	1
Venezuela	Macroeconomic Stabilization Fund	0	0.5	0	0	0.5	0.25	0.25	1	0	0.5
Venezuela	National Development Fund	0	0.5	0	0	0.5	1	0.5	1	0	0
Total ^a		16.5	22.5	3.5	3	1.4	13.25	9.25	21.5	10	13.25
United States	California Public Employees' Retirement System	1	1	1	0	3	1	1	1	1	1

a. For each category the value under subtotal represents the average for all funds.

Table 4: Scoreboard for Sovereign Wealth Funds (continued)

		Transparency & Accountability							Subtotal	Behavior	Grand Total
		Investments				Audit				Speed of Adjustment	
		Location	Specific	Currency Composition	Mandates	Regular	Published	Independent			
Algeria	Revenue Regulation Fund	0	0	0	0	0	0	0	0.5	0	4.5
Australia	Future Fund	0	0	0	0	1	1	1	7	0	17
Azerbaijan	State Oil Fund of the Republic of Azerbaijan	0.5	0	1	0	1	1	1	9.5	0	16.5
Botswana	Pula Fund	0	0	0	0	1	0	1	7	0	14.5
Brunei	Brunei Investment Agency	0	0	0	0	1	0	0	1	0	2.5
Canada	Alberta Heritage Savings Trust Fund	1	0	0	0	1	1	1	9	0	19.5
Chile	Economic and Social Stabilization Fund	0.5	0	1	1	0	0	0	6.5	0	15.5
China	Central Huijin Investment Company	0	0	0	0	0	0	0	0.5	0	6
Iran	Oil Stabilization Fund	0	0	0	0	0	0	0	0.5	0	5.5
Kazakhstan	National Oil Fund	0	0	0.5	0.5	1	0	1	6.5	0	14.5
Kiribati	Revenue Equalization Reserve Fund	0	0	0	0	0	0	0	0.5	0	7.5
Korea	Korea Investment Corporation	0	0	0	0	0	0	0	1	0	9
Kuwait	Kuwait Investment Authority	0	0	0	0	1	0	1	3	0	12
Malaysia	Khazanah Nasional	1	0	0	0	1	0	0	4	0	9.5
Mexico	Oil Income Stabilization Fund	0	0	1	0	0	0	0	2	0	7
New Zealand	Superannuation Fund	1	1	1	1	1	1	1	12	0	24
Norway	Government Pension Fund – Global	1	1	0	1	1	1	0.5	10.5	1	23
Oman	State General Reserve Fund	0	0	0	0	1	0	1	2	0	5
Qatar	Qatar Investment Authority	0	0	0	0	0	0	0	0	0	2
Russia	Stabilization Fund of the Russian Federation	0.5	0	1	0	0	0	0	3.5	0	9.5
São Tomé and Príncipe	National Oil Account	0	0	0	0	1	0	1	2.25	0	12.25
Singapore	Government of Singapore Investment Corporation	0	0	0	0	0	0	0	0.75	0	2.25
Singapore	Temasek Holdings	1	0.5	0	0	1	1	1	8	0	13.5
Sudan	Oil Revenue Stabilization Account	0	0	0	0	0	0	0	1	0	5
Timor-Leste	Petroleum Fund	1	1	1	0.75	1	1	1	11.75	0	21.75
Trinidad and Tobago	Heritage and Stabilization Fund	0	0	0	0.25	1	0	1	3.75	0	12.25
United Arab Emirates	Abu Dhabi Investment Authority and Corporation	0	0	0	0	0	0	0	0	0	0.5
United Arab Emirates	Istithmar	0	0	0	0	0	0	0	0.25	0	3.75
United Arab Emirates	Mubadala Development Company	0	0	0	0	0	0	0	0	0	3.5
United States	Alaska Permanent Fund	0.5	0	1	0	1	0	1	8.5	0	18
Venezuela	Macroeconomic Stabilization Fund	0	0	0	0	0	0	0	2	0	5.5
Venezuela	National Development Fund	0	0	0	0	1	0	0.5	4	0	6
Total ^a		8	3.5	7.5	4.5	17	7	14	4.0	1	10.27
United States	California Public Employees' Retirement System	0.25	0	1	1	1	1	1	10.25	0.5	21.75

a. For each category the value under subtotal represents the average for all funds.