Annex 1.2. Sovereign Wealth Funds

Note: This annex was prepared by a Monetary and Capital Markets Department staff team led by Udaibir S. Das, with inputs from the Fiscal Affairs and Statistics Departments.

Tentative estimates of foreign assets held by sovereigns include $5.6 trillion of international reserves and between $1.9 trillion and $2.9 trillion in types of sovereign wealth fund (SWF) arrangements. These amount to about 10 times less than the assets under management of mature market institutional investors ($53 trillion) and modestly higher than those managed by hedge funds ($1 trillion to $1.5 trillion) (Financial Stability Forum, 2007). Current IMF projections are that sovereigns (predominantly emerging markets) will continue to accumulate international assets at the rate of $800 billion to $900 billion per year, which could bring the aggregate foreign assets under sovereign management to about $12 trillion by 2012. Against the backdrop of this expected growth, this annex provides a taxonomy of SWFs, discusses their asset allocation frameworks, and highlights some operational issues.

Overview

The growth of SWF-type institutional arrangements can be seen as a policy response to the strong accumulation of foreign assets by the official sector. However, SWFs are not new, especially in countries rich in natural resources (e.g., oil). SWFs have recently gained prominence in several (non-oil) emerging markets and commodity-based developing countries, reflecting large balance of payments surpluses.

Large current account surpluses and capital inflows have prompted an ongoing debate on sovereigns' underlying policies and possible adjustments, such as the appropriate level of exchange rate flexibility, the "optimal" level of reserves, and the potential allocation of foreign assets to SWFs.

The growth in sovereign assets is turning the official sector into an active investor group.[50] Sovereigns' cross-border asset allocation choices are assuming importance in the context of prudent management of public financial assets. The recent literature on SWFs has focused on (1) issues of transparency in the external and government accounts; (2) different objectives of the funds, and approaches toward risk and longer-term investment horizons; and (3) the emphasis on "return" rather than "liquidity" for balance of payment needs. In particular, questions remain as to the potential impact of countries' asset allocations and strategic investments on international capital movements and asset prices.

Sovereign Wealth Funds: One Type or Several?

The reporting of sovereign financial assets has focused thus far on the appropriate methodological treatment of reserve assets (Box 1.5). Although there is no universally agreed-upon definition, SWFs can generally be defined as special investment funds created or owned by governments to hold foreign assets for long-term purposes. SWFs can be classified according to at least two criteria: (1) the sources of sovereign wealth, and (2) their policy objectives (Table 1.7).

Sources of Sovereign Wealth Funds

The funding of SWFs comes from different sources, which can be combined. Some funds are byproducts of fiscal budget surpluses accumulated due to a combination of revenues from exports and spending restraint. Fiscal surpluses and public savings generated domestically, such as privatization receipts, can also be sources for SWFs, as can large balance of payment surpluses, with or without a corresponding budget surplus.[51]

[50]See Chapter 2 of the April 2007 GFSR (IMF, 2007a).

[51]SWFs from public savings and privatization are more akin to nonrenewable resource funds, as they represent an increase in net financial wealth.

Box 1.5. Sovereign Wealth Funds: A Statistical Perspective

Statistical and data issues raised by the use of sovereign wealth funds (SWFs) are currently being studied by the International Monetary Fund. This box provides some information about these issues.

The draft sixth edition of the *Balance of Payments and International Investment Position Manual (BPM6)* includes a methodology for determining whether foreign assets held in SWFs should be included in reserve assets. To be included in reserves, the foreign assets of the SWF need to be readily available to the monetary authorities and be a liquid claim in foreign currency on nonresidents.

A specific issue for SWFs is whether there is some legal or administrative guidance that results in the assets being encumbered in a way that precludes their ready availability to the monetary authorities. If the SWF's external assets are on the books of the central bank or an agency of the central government that exercises control over the disposition of funds, then the presumption is that the assets are international reserves, provided all other criteria for being a reserve asset are met, particularly liquidity (*BPM6*). If, however, the funds are held in a long-term fund separately incorporated, the presumption is that they should not be included in reserves. But any final determination of whether an asset can be classified as a reserve asset depends upon close examination of the circumstances.

Assets held in a resident SWF that are claims on nonresidents but do not meet the criteria to be classified as reserve assets are classified in the financial accounts (transactions) and international investment position under the appropriate instrument and functional category.

A Taxonomy Based on Policy Objectives

The following types of funds can be distinguished, based on their dominant objectives:

- *Stabilization funds* are set up by countries rich in natural resources to insulate the budget and economy from volatile commodity prices (usually oil). The funds build up assets during the years of ample fiscal revenues to prepare for leaner years.
- *Savings funds* are intended to share wealth across generations. For countries rich in natural resources, savings funds transfer nonrenewable assets into a diversified portfolio of international financial assets to provide for future generations, or other long-term objectives (IMF, 2007c).[52]
- *Reserve investment corporations* are funds established as a separate entity either to reduce the negative cost-of-carry of holding reserves or to pursue investment policies with higher returns. Often, the assets in such arrangements are still counted as reserves.
- *Development funds* allocate resources for funding priority socioeconomic projects, such as infrastructure.
- *Pension reserve funds* have identified pension and/or contingent-type liabilities on the government's balance sheet.[53]

Additional objectives include enhancing transparency in the management of revenues from (commodity) exports and fiscal policy. In practice, SWFs typically have multiple or gradually changing objectives. For example, some countries set up funds for both stabilization and savings objectives. As circumstances change, the objectives of the funds may also change. This is especially true for countries that export natural resources. Initially, a stabilization fund is established to smooth fiscal revenue or sterilize foreign currency inflows. As the assets

[52]See IMF (2007c). While newer oil funds predominantly focus on stabilization objectives, the recent increase in oil prices has added emphasis to savings objectives, and in some cases, enhanced asset management.

[53]To some extent, development funds and even pension reserve funds can be considered as subsets of SWFs that are (explicitly or implicitly) linked to long-term fiscal commitments.

in the fund continue to grow beyond the level needed for the purpose of stabilization, country authorities may revisit the objectives and redesign the structure of the fund to broaden the objective. This often leads to assets being split into several tranches for different objectives, or to the creation of separate funds with different objectives.[54]

Sovereign Wealth Funds and Strategic Asset Management

Two major considerations usually guide the allocation and distribution of SWF assets. The first is the accumulation and withdrawal rules regarding the fund's future cash flows where applicable. The second is the fund's objectives. Together, these considerations drive the strategic asset allocation (SAA), which reflects the return objective, risk tolerance, and identified constraints (such as liquidity and financing needs, investment horizon, and legal and regulatory requirements).

SWFs may hold assets with negative correlation to the country's major exports (e.g., oil) or offset the price risk of future imports (depending on the country's risk profile) via its SAA decisions. Funds without identified liabilities allow for a more exclusive focus on a return objective and acceptable level of risk. However, for some SWFs, sterilization instruments used to mop up excess liquidity may need to be considered as liabilities, especially from an integrated asset and liability management perspective.[55] The objectives of SWFs could be undermined by the accumulation of liabilities elsewhere in the public sector.[56] Some funds, such as pension reserve funds, may have identified liabilities to be matched within the SAA framework to allow for a clear operational framework and transparent objectives.

SWFs' allocations of sovereign reserve assets to domestic investments have macroeconomic implications, especially for developing and emerging market economies. To invest domestically, SWFs would typically need to convert part of their accumulated assets back into domestic currency, possibly reversing the economic policies that led to reserve accumulation. Investing domestically could stimulate domestic demand with inflationary consequences. Issues of fiscal accounting, transparency, and risk could also emerge if those investments are actually government spending operations that should take place within the budget. Therefore, domestic investments are generally seen to be ruled out in SWFs.

Different types of SWFs could have markedly different SAAs reflective of their different objectives and constraints. Stabilization funds, for instance, are generally conservative in their SAA, using shorter investment horizons and low risk-return profiles, or other instruments (perhaps longer-term) that vary inversely with the risk the fund is meant to cover. Typically, such funds are designed to insulate the budget from terms-of-trade shocks and to meet contingent financing requirements. In this regard, they are akin to reserves, which are managed for safety and liquidity, and it is only after such considerations are satisfied that higher risk/return objectives are set.

SWFs with long-term objectives, such as savings funds, may be better able to accommodate short-term volatility in asset returns. Nonetheless, savings funds and pension reserve

[54]The institutional arrangements for managing these different types of arrangements are broadly of three categories. The first two pertain to those managed by the central bank and/or an independent agency. A third category of SWFs consist of those funds already established that acquire the modality of "tiers of accounts," that is, separate funds for different purposes. In some instances, the central bank transfers funds to the SWF, while in other cases funds are transferred to the central bank for management purposes.

[55]Returns on the SWFs are therefore net of interest payments to the holders of the sterilization instruments. At the same time, the currency mismatch, often resulting from issuing domestic currency liabilities, would need to be taken into consideration when setting the SWF's investment strategy.

[56]Accumulating assets in an SWF may not affect the net wealth of the public sector if, for instance, the fund is being financed by issuance of public debt.

Table 1.7. Size and Structure of Major Sovereign Wealth Funds

Country	Fund Name	Assets	Source of Funds	Ownership and Investment Management	Investment Strategy and Strategic Asset Allocation (SAA)
United Arab Emirates	Abu Dhabi Investment Authority (ADIA)/ Abu Dhabi Investment Council (ADIC)	$250 billion to $875 billion[1]	Oil	Owned by the emirate of Abu Dhabi, ADIA has been the primary conduit for investing oil surpluses in overseas assets since 1976. Recently a separate legal entity, the ADIC, was established to encourage competition with the ADIA. Abu Dhabi's surpluses will now be allocated to both the ADIA and ADIC.	Major global investor. Investment strategy and asset allocation is unknown.
Norway	Government Pension Fund—Global	$308 billion (as of March 31, 2007)	Oil	Owned by the government and managed by Norges Bank Investment Management.	Global asset allocation with 40 percent in equities and 60 percent in global fixed income.
Saudi Arabia	No designated name	$250+ billion[2]	Oil	Saudi Arabia Monetary Agency manages the foreign assets: $225 billion is held on its own balance sheet, a portion of which is designated as reserves, and $51 billion is managed on behalf of various government agencies.	Major global investor. Although the size of assets is known, the investment strategy and SAA is not known beyond broad indications.
Kuwait	Kuwait Investment Authority (KIA) General Reserve Fund (GRF) and Future Generations Fund (FGF)	$160 billion to $250 billion[1]	Oil	The KIA is an autonomous government body responsible for the management of the GRF and FGF, as well as any other funds entrusted to it on behalf of the government of Kuwait.	The GRF is invested in the local, Arab, and international financial markets. The FGF has a global asset allocation based on investment guidelines approved by the FGF board.
Singapore	Government Investment Corporation (GIC)	$100+ billion	Other	Separate investment corporation established in 1981, fully owned by the government.	Global asset allocation (not made public). Invests in all major asset classes.
	Temasek Holdings	$100+ billion	Other	Temasek Holdings is a private company, set up in 1974 to hold and manage investment previously held by the principal shareholder, the Ministry of Finance.	SAA weights unknown. Geographical distribution as of March 2006 was 38 percent Singapore assets, 40 percent in rest of Asia, 20 percent in the Organization for Economic Cooperation and Development, and 2 percent in "other" countries.
China	State Foreign Exchange Investment Corporation[3]	$200 billion	Other	To be determined.	To be determined.
Russia	Oil Stabilization Fund[4]	$127 billion (as of August 1, 2007)	Oil	Owned by the government and managed by the Russian Central Bank.	Invests largely in fixed-income assets, with 44 percent in U.S. dollars, 46 percent in euros, and 10 percent in pound sterling.

Table 1.7 *(concluded)*

Australia	Australian Future Fund	$42 billion (as of May 1, 2007)	Other	Established in 2006. Owned by the government and managed by the Future Fund Management Agency. The aim is to underwrite the government's future superannuation liabilities.	Australia
United States (Alaska)	Alaska Permanent Reserve Fund	$35 billion (as of June 30, 2007)	Oil and minerals	Owned by the state of Alaska, established in 1976, and managed by the state-owned Alaska Permanent Fund Corporation.	SAA consists of 53 percent equities, 29 percent fixed income, 10 percent real estate, and 8 percent alternative assets.
Brunei	Brunei Investment Authority General Reserve Fund[1]	$30 billion	Oil	Owned by the government and managed by the Brunei Investment Agency.	Invests in a large global portfolio of financial and real assets. SAA not made public.
Korea	Korea Investment Corporation	$20 billion	Other	Launched in 2005 to manage $20 billion of entrusted foreign exchange reserves, of which $17 billion is from Bank of Korea and $3 billion from the government.	Plans to invest in a global asset allocation. SAA not yet available.
Canada	Alberta Heritage Savings Trust Fund	$15 billion (as of March 31, 2007)	Oil	Owned by the government of the Province of Alberta, managed by Alberta Finance.	Invests in a global SAA with 30 percent fixed income, 45 percent equities, 10 percent real estate, and 15 percent alternative assets.
Chile	Economic and Social Stabilization Fund	$9.83 billion (as of July 31, 2007)	Copper	Established in 2006. Owned by the government and managed by the Central Bank of Chile as a fiscal agent.	SAA consists of 72 percent government bonds and 28 percent money market instruments in U.S. dollars, euros, and yen.
	Pension Reserve Fund	$1.37 billion (as of July 31, 2007)	Copper	Established in 2006. Owned by the government and managed by the Central Bank of Chile as a fiscal agent.	SAA consists of 79 percent government bonds and 21 percent money market instruments in U.S. dollars, euros, and yen.
Botswana	Pula Fund[2]	$5+ billion	Diamonds	Owned jointly by the government and the Bank of Botswana. The government's share of the Pula Fund is accounted for on the balance sheet of the Bank of Botswana.	The fund invests in public equity and fixed-income instruments in industrialized economies. The fund does not invest in emerging markets, as they may be highly dependent on commodities.

Sources: Public information from websites; IMF; and Morgan Stanley Research.

Note: Other countries with known sovereign wealth funds include Azerbaijan, Kingdom of Bahrain, Chad, Ecuador, Equatorial Guinea, Gabon, Islamic Republic of Iran, Ireland, Kazakhstan, Kiribati, Libya, Malaysia, Mauritania, Mexico, Oman, Qatar, Sudan, Taiwan Province of China, Timor-Leste, Trinidad and Tobago, Uganda, and Venezuela.

[1]Estimates by Morgan Stanley Research and PIMCO.

[2]In some countries, such as Saudi Arabia and Botswana, there is no formal sovereign wealth fund but the monetary agency manages foreign assets on behalf of various government agencies.

[3]Announced on March 9, 2007, the fund may be established at the end of 2007.

[4]Starting in February 2008, the Oil Stabilization Fund will be divided into two separate funds with distinct policy objectives (Stabilization Fund versus National Welfare Fund).

funds also aim to preserve a minimum amount of capital, in real terms, so that the purchasing power of the funds is guaranteed. Pension reserve funds with explicit liabilities typically design SAA benchmarks that preserve their solvency.

Some Issues for Consideration

The cross-border asset holdings of SWFs raise issues similar to those faced by other international market participants, including their role in global financial markets.

One view is that SWFs enhance market liquidity and financial resource allocation. This view recognizes that SWFs, especially the larger ones, typically use a mix of well-trained in-house expertise and well-regarded international external fund managers, and have longer investment horizons that can accommodate short-term volatility. Consequently, their investment operations may dampen asset price volatility and lower liquidity risk premia, compared with a situation in which these assets were to be managed with shorter duration.

Another view holds, however, that the limited publicly available information on some SWFs, their multiplicity of objectives, and a lack of clarity on their institutional structure and investment management, make it difficult to assess the SWFs' asset management activities and their impact on the capital markets. Without more public accountability, funds may alter their governance structures, perhaps as a result of losses, which, in turn, could lead to sharp changes in investment policies, possibly exacerbating market volatility in some asset classes. The public ownership of SWFs (and other state-owned entities) also raises questions about possible capital account restrictions initiated in recipient countries, especially to avoid certain types of foreign direct investment.

As their size, number, and use grows, and as domestic and international public attention directed toward them increases, SWFs may be faced with several institutional and operational challenges, including:

- *Defining objectives and setting and implementing sovereign asset allocation.* A well-defined SAA within a clearly articulated investment policy is a critical operational component for public investment funds, and as new developments arise, a reassessment of existing objectives and constraints might be needed and reflected in the overall risk tolerance.
- *Institutional arrangements*, including withdrawal and accumulation rules that reflect risk-sharing arrangements between the government and the SWF, or the central bank, and establishing responsibility for investment decisions and their outcomes.[57]
- *Accountability arrangements,* including fiduciary duty to citizens, the legal foundation, and the internal governance structure. In practice, the public disclosure of SWFs varies significantly in terms of the nature of information and its timeliness, providing for more or less public scrutiny of the sovereign assets.

There are a number of voluntary transparency initiatives that are relevant to SWFs.[58] These include the IMF's *Guidelines for Foreign Exchange Reserve Management, Balance of Payments* and *International Investment Position* data, as well as the Coordinated Portfolio Investment Survey, the *Code of Good Practices on Fiscal Transparency*, and the *Guide on Resource Revenue Transparency*. More targeted initiatives include the Joint Oil Data Initiative and the Extractive Industries Transparency Initiative.

References

Baddepudi, Rajeev, 2006, "Key Trends in Asian Hedge Funds," *The Hedge Fund Journal*, Issue 21 (October). Available via the Internet: http://www.thehedgefundjournal.com/commentary/index.php?articleid=26332327.

[57]For instance, in the case of some oil-related SWFs, it is often difficult to determine on which institutions' balance sheet the assets appear.

[58]Further advice on setting up SWFs or alternative uses of reserves is also being provided by the IMF as part of technical cooperation advice or by addressing specific requests from countries.

Bell, Brian, and Peter Dattels, forthcoming, "The Global Financial Stability Map: Concepts and Construction," IMF Working Paper (Washington: International Monetary Fund).

Federal Reserve Board, 2007, "The 2007 Senior Loan Officer Opinion Survey on Bank Lending Practices" (Washington, July). Available via the Internet: http://www.federalreserve.gov/boarddocs/Snloan Survey/200708/default.htm.

Fender, Ingo, and Janet Mitchell, 2005, "Structured Finance: Complexity, Risk and the Use of Ratings," *Bank for International Settlements Quarterly Review* (June), pp. 67–79. Available via the Internet: http://www.bis.org/publ/qtrpdf/r_qt0506f.pdf.

Financial Stability Forum, 2007, "Update of the FSF Report on Highly Leveraged Institutions" (Basel: Bank for International Settlements, May 19). Available via the Internet: http://www.fsforum.org/pub lications/HLI_Update-finalwithoutembargo19May 07.pdf.

Fitch Ratings, 2007a, "Subprime Worries? Financial Guarantors Exposure to Weaker RMBS Originator/ Servicers," Special Report (March 14). Available via the Internet: http://www.afgi.org/pdfs/Subprime Worries_FG_3.14.07.pdf.

———, 2007b, "Hedge Funds: The Credit Market's New Paradigm," Special Report (June 5). Available via the Internet: http://www.fitchrating.com/corporate/reports/report_frame.cfm?rpt_id=299928.

Froot, Kenneth A., Paul G.J. O'Connell, and Mark S. Seasholes, 2001, "The Portfolio Flows of International Investors," *Journal of Financial Economics*, Vol. 59 (February), pp. 151–93.

International Monetary Fund (IMF), 2005, *Global Financial Stability Report*, World Economic and Financial Surveys (Washington, April). Available via the Internet: http://www.imf.org/External/Pubs/ FT/GFSR/2005/01/index.htm.

———, 2006, *Global Financial Stability Report*, World Economic and Financial Surveys (Washington, April). Available via the Internet: http://www.imf.org/ External/Pubs/FT/GFSR/2006/01/index.htm.

———, 2007a, *Global Financial Stability Report*, World Economic and Financial Surveys (Washington, April). Available via the Internet: http://www.imf. org/External/Pubs/FT/GFSR/2007/01/index. htm.

———, 2007b, *World Economic Outlook*, World Economic and Financial Surveys (Washington, October).

———, 2007c, "The Role of Fiscal Institutions in Managing the Oil Revenue Boom," IMF Policy Paper (Washington, March 5), SM/07/88. Available via the Internet: http://www.imf.org/external/np/ pp/2007/eng/030507.pdf.

Irvine, Steven, 2007, "Why 'Syndicated Investing' Is the New Big Thing," *Finance Asia.com* (May 8).

Kealhofer, Stephen, 2003, "Quantifying Credit Risk I: Default Prediction," *Financial Analysts Journal*, Vol. 59 (January/February), pp. 30–44.

Laurelli, Peter, 2007, "Hedge Fund Industry Asset Flows and Trends," Hedge Fund Asset Flows & Trends Report No. 11 (New York: Channel Capital Group, Inc.). Available via the Internet: http:// www.iialternatives.com/AIN/fundflows/sample.pdf.

Moody's, 2007, "U.S. Subprime Market Crisis: Limited Impact on Asian Banks Due to Small Exposures," Special Comment (August). Available via the Internet: http://www.moodys.com/moodys/cust/ research/MDCdocs/02/2006800000444201.pdf

Ryback, William, 2007, "Hedge Funds in Emerging Markets," *Banque de France Financial Stability Review*, Special Issue on Hedge Funds, No. 10 (April).

Standard & Poor's, 2007a, "U.S. Bond Insurers Withstand Subprime Stress," *RatingsDirect* (August 2). Available via the Internet: http://www2.standard andpoors.com/portal/site/sp/en/us/page. article/3,1,1,0,1148446441747.html.

———, 2007b, "U.S. Subprime Impact Limited on Rated Asia-Pacific Banks and Insurers," *RatingsDirect* (August 3). Available via the Internet: http://www2. standardandpoors.com/portal/site/sp/en/us/ page.article/3,1,1,0,1148446442262.html.

Violi, Roberto, 2004, "Credit Ratings Transition in Structured Finance" (Basel, Switzerland: Bank for International Settlements, Committee on the Global Financial System Working Group on Ratings in Structured Finance, December). Available via the Internet: http://www.bis.org/publ/cgfs23violi.pdf.