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Sovereign Wealth Funds - A Work Agenda

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Sovereign Wealth Funds—A Work Agenda

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LIST OF ACRONYMS

ADIA	Abu Dhabi Investment Authority
BoP	Balance of Payments
BP	British Petroleum
BPM6	Balance of Payments Manual 6
CalPERS	California Public Employees Retirement System
CIC	China Investment Corporation
CFIUS	Committee on Foreign Investment in the United States
COFER	Currency Composition of Foreign Exchange Reserves
CPIS	Coordinated Portfolio Investment Survey
FSA	UK Financial Services Authority
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GFSR	Global Financial Stability Report
GIC	Singapore's Government Investment Corporation
GIMF5	Global Integrated Monetary Fiscal Model
GPF	Norway's Government Pension Fund-Global
HFSB	Hedge Fund Standards Board
IIP	International Investment Position
IOSCO	International Organization of Securities Commissions
KIA	Kuwait Investment Authority
KIC	Korea Investment Corporation
NBER	National Bureau of Economic Research
OECD	Organization for Economic Cooperation and Development
PIMCO	Pacific Investment Management Company
PWG	President's Working Group on Financial Markets
SAA	Strategic Asset Allocation
SWFs	Sovereign Wealth Funds
UCITS	Undertakings for the Collective Investment of Transferable Securities
WEO	World Economic Outlook

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Sovereign Wealth Funds—A Work Agenda

I. Introduction

1. **Sovereign Wealth Funds (SWFs) are becoming increasingly important in the international monetary and financial system, attracting growing attention**. SWFs are government-owned investment funds, set up for a variety of macroeconomic purposes. They are commonly funded by the transfer of foreign exchange assets that are invested long term, overseas. SWFs are not new, and some of the longer-established funds—for example those of Kuwait, Abu Dhabi, and Singapore—have existed for decades. However, high oil prices, financial globalization, and sustained, large global imbalances have resulted in the rapid accumulation of foreign assets particularly by oil exporters and several Asian countries. As a result, the number and size of SWFs are rising fast and their presence in international capital markets is becoming more prominent.

2. **SWFs offer various economic and financial benefits.** In their home countries, they facilitate the saving and intergenerational transfer of proceeds from nonrenewable resources and help reduce boom and bust cycles driven by changes in commodity export prices. They also allow for a greater portfolio diversification and focus on return than traditionally is the case for central-bank-managed reserve assets, thereby potentially reducing (or eliminating) the opportunity costs of reserves holdings. For economies with plentiful foreign reserve assets, greater and prudent diversification reflects sound and responsible asset management. From the viewpoint of international financial markets, SWFs can facilitate a more efficient allocation of revenues from commodity surpluses across countries and enhance market liquidity, including at times of global financial stress.

3. **The growth of SWFs has also raised several issues**. Official and private commentators have expressed concerns about the transparency of SWFs, including their size, and their investment strategies, and that SWF investments may be affected by political objectives. They also raise the issue of the expanded role of governments in international markets and industries. There are also concerns about how growing SWFs fit into the domestic policy formulation of countries with SWFs, and how their investments might affect recipient countries with shallow markets. At the same time, countries with SWFs are concerned about protectionist restrictions on their investments, which could hamper the international flow of capital. Some SWFs have argued that they are vulnerable to changes in the regulatory climate, and thus have to operate cautiously as change can be costly.

4. **A better understanding of the role and practices of SWFs could help economies with SWFs to strengthen their domestic policy frameworks and also alleviate concerns and reduce protectionist pressures**. In this regard, the IMFC, in its Communiqué of October 20, 2007, welcomed the Fund establishing a dialogue among and with SWFs, with the goal of identifying best practices. The Fund is also analyzing the relevant issues for investors and recipients of SWF flows. A set of best practices could include public governance and accountability principles, with a view to supporting enhanced understanding of SWF operations and investments.

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5. **Fund staff has intensified work on several fronts**.[1] The Fund organized a first Roundtable of Sovereign Asset and Reserve Managers in November 2007, which facilitated a preliminary discussion of related issues with members and major SWFs. At the Roundtable, participants generally welcomed the Fund's efforts in starting a dialogue on best practices. Staff has also stepped up its analysis of SWFs, drawing out the macroeconomic and financial linkages and including assessments in the Global Financial Stability Report (GFSR), and has intensified contacts with financial market participants. Staff is coordinating its work with the OECD and is also liaising closely with the World Bank and others. The OECD is taking the lead on issues related to investment policies in host countries, including national security issues that are outside the purview of the Fund.

6. **This paper provides an overview of the key issues surrounding SWFs and the implications for the future work of the Fund.** It has two objectives. First, to set out ways to improve the Fund's surveillance over the operations of SWFs, given their importance for domestic economic policy and their effects on international financial markets. Second, to discuss the issues surrounding the development of a set of voluntary best practices which would provide guidance on how to improve institutional arrangements, organizational structures and risk management, and information dissemination practices.

7. **The paper is organized as follows.** Section II sets out what we know about SWFs; Section III explains the issues that they raise; Section IV discusses the operational implications for the Fund; and Section V focuses on identifying best practices. Section VI estimates resource costs, and Section VII lays out possible next steps and questions for the Board.

II. What Are SWFs and What Do They Do?

8. **SWFs are a heterogeneous group and may serve various purposes.** Five types of SWFs can be distinguished based on their main objective: (i) *stabilization funds*, where the primary objective is to insulate the budget and the economy against commodity (usually oil) price swings; (ii) *savings funds* for future generations, which aim to convert nonrenewable assets into a more diversified portfolio of assets and mitigate the effects of Dutch disease; (iii) *reserve investment corporations*, whose assets are often still counted as reserve assets, and are established to increase the return on reserves; (iv) *development funds*, which typically help fund socio-economic projects or promote industrial policies that might raise a country's potential output growth; and (v) *contingent pension reserve funds*, which provide (from sources other than individual pension contributions) for contingent unspecified pension liabilities on the government's balance sheet.

9. **These objectives may be multiple, overlapping, or changing over time.** For example, in some countries (e.g., Botswana, Russia) stabilization funds have evolved into funds with a

[1] Fund Management has set up an interdepartmental working group on SWFs, chaired by the FDMD. The group has been considering various policy, operational, and technical aspects of SWFs that are relevant for Fund surveillance.

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savings objective, as accumulated reserves increasingly exceeded the amounts needed for short-term fiscal stabilization. The various objectives of SWFs imply different investment horizons and risk/return trade-offs which have led to different approaches in managing these funds. SWFs with a stabilization objective would put more emphasis on liquidity and have a shorter-term investment horizon than SWFs with a saving objective, where liquidity needs are low.

10. **SWFs are already sizeable and are projected to grow further**. Their growth reflects high oil and non-oil commodity prices and general reserve accumulation in other countries. Estimates of foreign assets held by sovereigns include about US$7 trillion in international reserves (including gold) and an additional US$2 to 3 trillion in SWFs (Table 1). SWFs exceed the size of hedge funds (US$1.7 trillion), but the latter tend to be heavily leveraged, so that the comparison is somewhat misleading. While SWFs may still be relatively small in comparison with total global financial assets, estimated at US$190 trillion (Table 2), and even smaller relative to total global financial and real assets, they are significant relative to both mature market stock market capitalization and emerging market economies' debt and capital markets. SWFs are likely to become even more important in the future. Current Fund projections show that some sovereigns will continue to accumulate foreign assets as a result of large and persistent current account surpluses. These projections indicate that foreign assets under management of SWFs could reach US$6–10 trillion by 2013. Other commentators also project rapid growth over the next five to ten years. For example, Morgan Stanley projects that SWFs' assets could exceed official reserves by 2011, and Standard Chartered projects SWFs' assets to reach US$13.4 trillion over the next decade.[2]

[2] See: "*How Big Could Sovereign Wealth Funds be by 2015*," Stephen Jen, Morgan Stanley (May 3, 2007), "*State Capitalism: The Rise of Sovereign Wealth Funds*," Gerard Lyons, Standard Chartered (November 13, 2007). A McKinsey study of a broader set of "power brokers"—petro-dollar investors, Asian central banks, hedge funds, and private equity firms—also points to rapid growth ("*The New Power Brokers: How Oil, Asia, Hedge Funds, and Private Equity are Shaping Global Capital Markets*," McKinsey, October, 2007).

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Table 1. Market Estimates of Assets Under Management for SWFs

Based on Latest Available Information (As of February 2008)
(In billions of U.S. dollars)

	Name of Fund	Assets (range)	
		Lower	Upper
I. Oil and Gas Exporting Countries			
UAE	Abu Dhabi Investment Authority	250	875
Norway	Government Pension Fund-Global	380	380
Saudi Arabia 1/	*No designated name*	289	289
Kuwait	Reserve Fund for the Future Generations/ Government Reserve Fund	213	213
Russia	Reserve Fund	125	125
	National Welfare Fund	32	32
Libya	Libyan Investment Corporation	50	50
Qatar	State Reserve Fund/Stabilization fund	30	50
Algeria	Reserve Fund/Revenue Regulation Fund	43	43
USA (Alaska)	Alaska Permanent Reserve Fund	40	40
Brunei	Brunei Investment Authority	30	30
Kazakhstan	National Fund	21	21
Malaysia	Khazanah Nasional BHD	19	19
Canada	Alberta Heritage Savings Trust Fund	16	16
Nigeria	Excess Crude Account	11	11
Iran	Oil Stabilization Fund	9	9
Azerbaijan	State Oil Fund	2.5	2.5
Oman	State General Reserve Fund	2	2
Timor-Leste	Petroleum Fund of Timor-Leste	1.4	1.4
Venezuela	FIEM - Macroeconomic Stabilization Fund	0.8	0.8
Trinidad & Tobago	Revenue Stabilization Fund	0.5	0.5
II. Asian Exporters			
Singapore	Government Investment Corp.	100	330
China	China Investment Corporation	200	200
Singapore	Temasek Holdings	108	108
Korea	Korea Investment Corp.	30	30
Taiwan, Province of China	National Stabilisation Fund	15	15
III. Other Countries			
Australia	Australian Future Fund	54	54
Chile	Economic and Social Stabilization Fund	14.9	14.9
	Pension Reserve Fund	1.5	1.5
Botswana 1/	Pula Fund	4.7	4.7
Kiribati	Revenue Equalization Fund	0.4	0.4
Total		**2,093**	**2,968**

Sources: Deutsche Bank; Morgan Stanley; news articles; Peterson IIE; PIMCO; and SWF websites.

1/ Part of the investment tranches of these countries' central banks.

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Table 2. Selected Indicators on the Size of the Capital Market, 2006

(In trillions of U.S. dollars)

	GDP	Stock market capitalization	Debt Securities			Bank Assets	Bonds, Equities, and Bank Assets
			Public	Private	Total		
World	48.2	50.8	25.6	43.1	68.7	70.9	190.4
North America	14.5	21.3	6.9	21.1	28.0	12.1	61.5
Japan	4.4	4.8	6.8	2.0	8.7	6.4	19.9
European Union	13.6	13.1	7.7	15.5	23.2	36.6	72.9
EMC	14.1	11.7	3.9	2.2	6.1	11.3	29.0

Source: *Global Financial Stability Report* , October 2007 (page 139).

11. **While some information is available, there is no uniform public disclosure of the assets, strategies, and governance of SWFs, and a few funds reveal little at all.** Institutional arrangements, such as withdrawal and accumulation rules, investment management, and reporting channels are in a number of cases not publicly disclosed, and internal and external accountability arrangements are sometimes unclear. Furthermore, although the funds are clearly important for domestic policy management it is sometimes difficult to establish how the funds are integrated into domestic policy frameworks and macroeconomic data sets.[3] However, some SWFs are leading the way in disclosure (Canada and Norway) and others are already taking steps to increase the amount of information they disclose (for example, in 2007, the Kuwait Investment Authority disclosed its total assets). And others are beginning to strengthen organizational structures and provide more information on their investment policies.[4]

12. **The information that is available suggests SWFs have been largely conservative investors**. While some SWFs have acquired significant ownership and control of companies, many funds—including e.g., Norway's Government Pension Fund-Global (GPF) and some of the larger funds from the Middle East—are known to behave as portfolio investors, investing relative to a market index, and holding only small stakes in individual companies (Box 1). Some SWFs—in particular the newer funds—rely mostly on external fund managers, while others have come to manage more of their investments in-house. In contrast to hedge

[3] One example where information on the domestic policy framework is available is Singapore, where the SWFs are integrated in the fiscal framework through a constitutional rule that allows a transfer to the budget of up to 50 percent of dividends and interest earned. In practice, the allocation has been significantly less than this upper bound.

[4] For example, at the 2007 IMF Roundtable, several funds pointed to the need to establish a benchmark for SWFs in the area of prudent management of sovereign wealth. And several SWFs have started using speeches, interviews, and press releases to explain objectives, investment strategies, and investment decisions.

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Box 1. SWFs and Investment Strategies

SWFs are a heterogeneous group of investors that apply a wide range of investment strategies reflecting their different objectives. When executing their strategic asset allocation (SAA), some SWFs invest solely in publicly-listed financial assets (e.g., bonds and equities), while others invest across all major asset classes, including alternative investments. Some SWFs invest relative to market indices and sometimes put additional caps on the maximum holding of each company's shares with a view to ensuring diversification. Other SWFs that aim at maximizing absolute returns over longer time horizons may shift between different asset classes and acquire larger stakes in specific companies that they see as profitable investments. It is unclear how active a role they have in these companies. However, the evidence suggests that SWF are generally passive and long-term investors with no desire to impact company decisions by actively using their voting rights.[1] Some apply social responsibility or ethical guidelines to rule out specific industries (e.g., tobacco, military) that may not conform with the social and ethical objectives of their governments.

Most SWFs actively use external managers, either to match index returns or to create active risk-adjusted return.[2] Although, public sector investment managers—such as reserve managers—have significant experience in fixed-income markets, they often have limited capacity for investment in other asset classes, such as equities. Thus, the SWFs rely on external fund managers to implement their strategic asset allocation in areas where their capacity is limited. Some SWFs have, however, established in-house capacity and operate as highly professional investment managers (e.g., Norway, Abu Dhabi, and Singapore), and rely less on external managers than in their past. Some commentators have highlighted that by using external managers and passive index-based investment strategies, SWFs may be able to obtain the desired asset class returns, while avoiding potential scrutiny of their investments and how they execute their voting rights.

1/ This means that they vote by proxy and often ask external managers to vote on their behalf.

2/ Some SWFs taking larger stakes in companies have explicitly relinquished their voting rights as a condition for entering into private transactions; this was for instance the case when China Investment Corporation acquired a stake in Blackstone Group of close to 10 percent in May 2007.

funds and private equity firms, SWFs' use of leverage is generally thought to be low, although some funds have used leverage.[5]

13. **SWF portfolios typically involve more diversified asset allocations than traditional reserves holdings, with considerable stakes in equities and a wider geographical dispersion.** More precise portfolio compositions are known for only a few funds, but the higher risk profile is evident, for instance, in Norway's GPF, which currently invests some 40 percent of holdings in equities (and the balance in fixed income) and aims for an allocation of 60 percent in equities by 2010. This portfolio composition resembles that of the larger public sector pension funds, such as the Canadian Caisse de Dépôt et Placement du Québec and the Dutch Algemeen Burgerlijk Pensioenfonds, and some market observers expect newer SWFs to

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[5] See Setser and Ziemba, "*Understanding the New Financial Superpower—The Management of GCC Official Foreign Assets*," *RGE Monitor*, December 2007.

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move in this direction.[6] Consistent with their long-term orientation, SWFs are estimated to hold relatively large shares in emerging markets, which tend to be more volatile but generate higher returns in the long run.[7] A few SWFs have also made alternative investments including in hedge funds, private equity, and real estate.

14. **In the recent financial turmoil, SWFs have demonstrated that they can have a stabilizing influence on markets.** This is illustrated by the recent announcements of substantial injections of capital into several large banks by SWFs from East Asia and the Middle East (totaling over US$35 billion).[8] These are likely to facilitate the replenishment of the capital bases of systemically important banks and should help contain the impact on credit markets of large bank losses, and safeguard the continuation of bank lending. This supports the view that SWFs can mitigate market stress. However, in other circumstances SWFs could pose risks and it is difficult to assess whether SWF positions would remain steady and resilient in the face of other major macroeconomic shocks.

15. **There is no clear evidence that SWF investments have been motivated by narrow political objectives**. Thus far, it has not been evident that SWF governments have directly interfered with individual investment decisions of their funds or used them for political objectives. However, SWF governments are typically involved in determining the overall objectives of the funds, the broad investment framework, and the level of risk tolerance within which their funds are allowed to operate. A few also subscribe to ethical guidelines, for example in Norway, where such guidelines are endorsed by parliament, and where the GPF is subject to associated recommendations from an ethics council.

III. THE ISSUES SURROUNDING SWFS

A. The Macroeconomic Impact of SWFs in Home (and Host) Countries

16. **A key question is how SWFs affect policy and policy coordination in the domestic economy.** SWFs' assets, and the returns they generate, are likely to have a significant impact on a country's public finances, monetary conditions, the balance of payments, and balance-sheet linkages. They may also affect public sector wealth, and have implications for private sector behavior. Well-designed SWFs can support sound fiscal and monetary policies, and mitigate Dutch disease effects. At the same time, SWFs may also create macroeconomic policy challenges, and appropriate coordination between the SWF and the fiscal and monetary

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[6] See Morgan Stanley (Stephen Jen) "*Currencies—A 25–45–30 Long-Term Model for SWFs*," research note, October 11, 2007.

[7] For instance, it is estimated that 22 percent of investments from the Gulf are in Asia, the Middle East, and North Africa (McKinsey Global Institute).

[8] Prominent recent investments include participations by GIC (Singapore) and ADIA (UAE) in Citigroup; by Temasek (Singapore), KIC (Korea), and KIA (Kuwait) in Merrill Lynch; by CIC (China) in Morgan Stanley; and by GIC (Singapore) in UBS.

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authorities is therefore critical to achieve overall policy objectives. At least four policy angles are relevant: fiscal policy, monetary policy, balance sheet implications, and external stability.

17. **Fiscal policy**. An SWF can be a useful fiscal policy tool provided that it is well-integrated in a sound overall fiscal management framework. In particular, SWFs can facilitate fiscal stabilization, and/or the saving of fiscal resources for long-term purposes—for example, preparing for population aging or facilitating intergenerational transfers. They can also introduce more professional and comprehensive investment and risk management frameworks, and enhance the transparency and accountability in the management of government financial assets. Sound management of an SWF can result in higher risk-adjusted returns and could help to reduce (or eliminate) the opportunity costs of reserves holdings. However, SWFs may also pose fiscal risks when they are poorly managed. International experience has shown that oil funds with rigid operational rules and the authority to spend independently, or those that are involved in quasi-fiscal activities (including on-lending) have led to a fragmentation of the budget process. This has potential negative implications for the efficiency (and transparency) of resource allocation and cash management, in particular when control and monitoring mechanisms are weak.[9] Moreover, since SWFs can potentially generate losses, the fiscal authorities, given their fiduciary role, have a direct stake in ensuring an adequate risk profile and sound management of their SWFs. Finally, SWFs need to be taken into account in public sector solvency and debt sustainability assessments.

18. **Monetary policy**. In some circumstances, the activities of SWFs could have a bearing on the exchange rate as investment abroad, followed by the repatriation of returns, involves currency transactions. If SWFs have discretion over whether they invest domestically or abroad, then decisions over investments will require careful coordination with the monetary authorities. Otherwise, a sizeable shift from foreign into domestic assets would pose difficulties for the monetary authorities' sterilization operations. Possible SWF investments in domestic assets also raises an additional set of issues as they add to domestic demand, can cause local asset price bubbles, and may complicate monetary policy by injecting liquidity into the system.

19. **Public-Sector Balance Sheets**. One of the motives for setting up an SWF is to enable better management of the public-sector balance sheet and to ensure that the asset management strategy of the SWF is consistent with an economy's underlying macro-fiscal objectives, while taking into account associated risks. The objectives of an SWF will have implications for its investment policy and asset management strategy. For instance, stabilization funds, which serve short- to medium-term objectives, are normally more conservative in their strategic asset allocation, using shorter investment horizons and low risk-return profiles. By contrast, SWFs with long-term objectives typically aim at generating higher returns over a long time horizon, and effectively have higher risk profiles. SWFs with objectives to hedge against country-specific risks may hold assets with negative correlation to the country's major exports

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[9] See "*The Role of Fiscal Institutions in Managing the Oil Revenue Boom*," March 5, 2007, www.imf.org/external/np/pp/2007/eng/030507.pdf.

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to offset terms-of-trade shocks. SWFs with explicit (or even implicit) liabilities will need to take into account portfolio mismatches and the risks to balance-sheet soundness—for example, leveraging SWFs by borrowing domestically to accumulate foreign assets would substantially add to fiscal risks and call into question the adequacy of the overall policy mix. Where SWFs have multiple objectives, this can be problematic—especially if the different objectives conflict with each other. Therefore, clarifying and limiting the objectives of an SWF are important, as is effective coordination with the government and the monetary authorities.

20. **External stability**. SWFs may also have important implications for the assessment of members' external stability both in the current and capital account. These are relevant for both the surveillance of countries with SWFs and for countries that receive large SWF inflows.

- For countries with SWFs, the SWF is likely to be a key part of the assessment of external stability which requires the country's net external asset position to be evolving in a manner consistent with the country's structure and fundamentals, usually measured by the underlying current account.

    - For commodity exporters, it may be appropriate to run transitory current account surpluses during the period in which the resources are being extracted and exported, and to draw down the assets after the resources have been exhausted. And so the impact of transitory price shocks and the depletion of natural resources need to be taken into account when forming a view on a country's external stability position.

    - For other countries with SWFs—where the accumulation of net foreign assets may in some cases be related to exchange rate policies—the assessment of external stability is likely to be less affected by swings in commodity prices. In these cases, exchange rate policies may be aimed at an export-oriented development strategy or a desire to self-insure against economic and financial risks. The assessment of external stability would need to consider reserve adequacy.

- For countries that receive SWF inflows, these flows are likely to affect the capital and financial account, and relative prices, and thus may affect external stability. A better understanding of the character and motive of SWF-related inflows may lead to a better policy reaction, and could alleviate concerns that such flows might suddenly reverse. While the challenges in managing these capital flows will be small for large advanced economies, they may be acute for small open economies (if these flows are large relative to total capital flows), and for economies with nascent capital markets.

B. Implications for Global Financial Stability and Markets

21. **A key question is how SWFs affect global financial markets.** SWFs can play a stabilizing role in global financial markets. First, many commentators highlight that as long-term investors with no imminent call on their assets, and with mainly unleveraged

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positions, SWFs are able to sit out longer during market downturns or even go against market trends. Second, large SWFs may have an interest in pursuing portfolio reallocations gradually so as to limit adverse price effects of their transactions. Third, SWFs' investments may enhance the depth and breadth of markets. Fourth, SWFs could, as long-term investors and by diversifying the global investor base, contribute to greater market efficiency and lower volatility. Currently, SWFs are generally not regarded as highly leveraged and there is little evidence of sudden shifts in portfolio allocations.

22. **Although SWFs appear to have been a stabilizing force thus far, given their size, there are circumstances in which they could cause volatility in markets.** Having large, and often unclear, positions in financial markets, SWFs—like other large institutional investors—have the potential to cause market disturbance. For instance, actual or rumored transactions may affect relative valuations in particular sectors and result in herding behavior, adding to volatility.[10] Such effects could be especially pronounced in shallower markets. And so recipient countries with small markets would also need to consider how to manage these large capital inflows. Similarly, if SWFs begin to pursue riskier investment strategies, particularly involving the use of leverage and margin requirements that may be called quickly, they may act so as to amplify rather than stabilize cycles. Finally, involvement of SWFs in the financial sector—like any other foreign involvement—may complicate the crisis management and coordination efforts of a central bank in the face of financial turmoil.

23. **The shift from reserve assets to SWFs could have implications for the absolute and relative price of assets, the flow of funds between countries, and the evolution of global imbalances.** By their nature, SWFs are expected to invest in more diversified portfolios, and riskier assets, than traditional reserve holdings. And this is confirmed by recent private sector studies.[11] Fund staff research—using stylized scenarios of asset allocation for countries that are in the process of shifting away from holding reserves to more diversified assets—also suggest that the pattern of global capital flows will be affected by an increase in SWF assets (see Annex I for details).

24. **Significant effects may be felt on mature sovereign debt markets**. First, SWFs may increasingly diversify their existing portfolio away from low-risk, short-term instruments, such as U.S. Treasury bills, and into longer-term equity stakes. This may affect interest rates and equity prices. Second, if SWFs diversify away from dollar holdings, and invest more in line with global equity indices, a decline in capital inflows into the United States may cause an increase in real interest rate differentials and a dollar depreciation. However, at present this effect appears to have been offset to some degree by the announced large injections of capital

[10] See for example: Corsetti, Dasgupta, Morris, and Shin, *"Does One Soros Make a Difference? A Theory of Currency Crises with Large and Small Traders,"* (September 2001).

[11] McKinsey notes that petrodollar investments are allocated more to emerging markets, particularly Asia. Setser (Council of Foreign Relations) notes that Gulf central banks invest heavily in U.S. dollars but speculates that ADIA has diversified away from U.S. equities toward emerging market assets.

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into the U.S. banking sector. In the rest of the world, higher capital inflows would lead to lower real interest rates, more appreciated currencies (in real effective terms), and higher domestic demand. Estimates of this sort are inevitably subject to many caveats: these include uncertainties over shifts in asset allocation, and the fact that the reactions of other investors are not taken into account. But they demonstrate the likely direction of the effects, also supported by separate research based on a gravity model and other studies.[12]

25. **Overall, SWFs carry important implications for multilateral surveillance and financial stability analysis**. Their current and expected effects on capital flows and relative yields need to be examined. This is further discussed in Section IV.

C. SWFs' Investment Behavior, Corporate Governance, and the Risk of Financial Protectionism

26. **Good corporate governance of SWFs is a key issue for domestic stakeholders.** It provides the checks and balances that ensure that organizations are run efficiently and in accordance with the stated objectives of their owners. A clear relationship between the authorities and the SWF will also help improve the coordination and management of domestic economic policies. Many features of good corporate governance are universally applicable.[13] For instance, general principles regarding the rights of the shareholder and key ownership functions, the role of stakeholders, disclosure and transparency, the flow of information between management and the governing board, and the composition and responsibilities of the board are all relevant for SWFs. Also, internal risk management arrangements of SWFs would need to address various specific risks. These include for instance general operational risks—which tend to be especially high in new organizations and in developing countries with capacity shortages—and reputational risks, which may arise when high profile investments incur temporary losses and threaten to dent the reputation of the fund's management. Internal risk management must also provide adequate oversight for outsourced functions (including external fund management, custodians, fund administration) in order to prevent and minimize misstatements or misappropriations by external service providers. SWFs need to ensure that adequate risk-management processes and human and systems resources are present to correctly measure and monitor the financial and operational risks, including those arising from external fund managers.

27. **For the recipients of SWF investments, the most prominent concerns raised relate to SWFs' objectives and possible investment practices.** While many of these issues are

[12] Foreign official investors are estimated to have kept 10-year U.S. Treasury nominal yields 100 bps lower than otherwise. "*International Capital Flows and U.S. Interest Rates,*" NBER Working Paper 12560, Francis E. Warnock and Veronica C. Warnock, October 2006. Morgan Stanley estimates that over the next decade bond yields may rise by 30–40 basis points, while the equity risk premium falls by 50–70 basis points (Morgan Stanley: "*Economics and Currencies—Sovereign Wealth Funds and Bond and Equity Prices*," May 2007).

[13] Relevant guidance includes the OECD Principles of Corporate Governance and evolving good practices such as the *Myners Review of the Governance of Life Mutuals*, H.M. Treasury (December 2004).

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microeconomic in nature, they could have pronounced macroeconomic effects if others respond by impeding the flow of capital from SWFs. Although several observers believe that SWFs behave similarly to private and commercial entities, there are concerns that they may invest with political or "noncommercial" objectives or may target investments at areas perceived to be of strategic importance. This perception is likely to fuel resistance against investments, particularly those that are considered to jeopardize national security or that are seen as sensitive in other ways, and so could lead to arbitrary or targeted regulations on foreign investments and takeovers. Some are also worried that SWFs could potentially gain an unfair advantage in markets if their financial commitments are guaranteed by government or perceived to be so.[14] A parallel concern, though not unique to SWFs, is regulatory arbitrage—with SWF investments being directed to the host countries with the lightest restrictions.

28. **Some observers also worry that SWFs may reduce the effectiveness of corporate governance of the companies in which they invest**. Although these concerns, too, are not unique to SWFs and have also affected large private sector investors, the government ownership of SWFs adds a further dimension. One view is that SWFs may have too great an influence over the strategic direction of the firms they invest in. However, others take the very different view that SWFs may be too passive and may relinquish, or abstain from using, voting rights in the companies they own. In this view, a hands-off approach by SWFs—whether rooted in their central bank or public sector background, or in concerns of being perceived as too activist—would result in weaker oversight of poorly run companies and undermine the effective corporate governance in the private sector.

29. **Many observers have called for some ground rules or a standard for SWFs to allay prevailing concerns.** Some have called for a standard that could cover objectives and investment strategy, governance, accountability, and transparency.[15] Observers have also suggested specific changes to SWFs' investment behavior that might reduce perceptions of political influence.

- One proposal is that SWFs should invest at arm's length solely through intermediary asset managers, as is the case for some endowment funds.[16] However, others do not think that the use of mandates and outside managers would be sufficient to eliminate potential conflicts of interest since the SWF would still provide guidance to the asset manager.

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[14] See Robert Kimmit, "*Public Footprints in Private Markets, Sovereign Wealth Funds and the World Economy*, Foreign Affairs (January-February 2008).

[15] For example: Edwin M. Truman (Peterson Institute for International Economics) argues that a standard should cover all international investment activities of governments. He suggests that a standard should cover their i) objectives and investment strategy; ii) governance; iii) transparency; and iv) behavior—the scale and speed at which portfolio adjustments are made. See Peterson Institute Policy Brief "Sovereign Wealth Funds: The Need for Greater Transparency and Accountability" (August 2007). Mervyn Davies (Standard Chartered) has called for SWFs to adopt minimum standards on transparency and governance (*Financial Times*, January 22, 2008).

[16] Lawrence Summers, *Financial Times* (July 29, 2007).

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- Other proposals include upper limits on the ownership and/or voting rights of SWFs in foreign private sector corporations with the limits set below the typical threshold for a controlling minority in a firm.[17] A less onerous suggestion is that SWFs should publish a voting list on a regular basis.[18]

- There has also been discussion of a "negative list" of strategic and sensitive areas where SWFs should not invest.

While some of these proposals may be helpful, others may unduly inhibit the operations of SWFs and impinge upon the efficient flow of capital.

30. **Eliminating all the concerns about SWFs is likely to be difficult, but if left entirely unaddressed, they may fuel protectionism.** Yet such a response would be damaging, and could pose serious obstacles to the flow of capital and the investment of financial surpluses, as well as creating regulatory arbitrage, and decreasing underlying market transparency. Striking a balance between protecting sensitive sectors on national security grounds, and ensuring a free flow of capital through transparent and stable ground rules, will be necessary to avoid a slippery slope of retaliatory protectionism and restrictions on international investment flows.

D. Transparency and the Availability of Statistics

31. **For policymakers, the Fund, and other users, it is important that sufficient data on SWFs' activities are captured in the relevant macroeconomic datasets.** The absence of SWF data can hinder economic analysis and potentially mislead policymakers, market participants, and other commentators about a country's economic performance.[19] The flows and positions of SWFs should be covered in the national accounts, fiscal, monetary and financial, and external

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[17] See Philipp Hildebrand (2008), who has also suggested that SWFs be given independence from governments along the lines of independent central banks to reduce perceptions of political interference; see, "*The Challenge of Sovereign Wealth Funds*," www.teleos-eu.com.

[18] Some institutional investors disclose their voting policy. In the United States, mutual funds are required to disclose their proxy voting policies and records and these are published on the SEC website. A number of U.K. institutional investors have voluntarily published their voting records (e.g., Corporative Insurance, Friends Provident, and the Universities Superannuation Scheme). The 2006 U.K. Companies Act (Sections 1277–1280) gives the government a reserve power to issue regulations, which would require institutional investors to report publicly on how they vote their shares. The institutions to which these provisions apply are unit trust schemes, open-ended investment companies, investment trusts, pension schemes, insurance businesses, and collective investment schemes.

[19] Others argue that in the financial stability context, while transparency can be a powerful tool for limiting the moral hazard of investors and governments alike, care needs to be taken over the types of information provided. For example, Gai and Shin consider that the dissemination of information must be coherent and open but that disclosures may need to be selective. For example, in the midst of a crisis revealing more information about a troubled financial institution's trading positions may exacerbate speculative attacks and add to the difficulties of the crisis manager. See Gai and Shin, "Transparency and Financial Stability," Bank of England *Financial Stability Report* (December 2003).

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accounts. SWFs' activities could significantly affect the generation and distribution of income, consumption behavior, and accumulation activities of the economy, and so need to be included in the national accounts. Capturing SWFs' activities in public finance statistics is also crucial, so that accurate assessments can be made of the integration of SWF operations with the overall fiscal accounts, and the fiscal risks on the public sector's balance sheet. Whether held directly or indirectly, the net assets of the SWFs should be encompassed in the government's net worth. SWFs are often a significant part of an economy's external wealth. SWFs' activities are also important for monetary and financial statistics as they may affect monetary policy formulation, financial analysis, and the consistency of monetary statistics with other macroeconomic data sets. Given the prominence of external assets in SWF portfolios, capturing them in the balance of payments (BoP) and international investment position (IIP) data of member countries is also important.[20]

32. **There are currently significant gaps in the statistics on SWFs.** In a number of cases, data on SWFs are not included in a member's BoP and IIP positions or the member does not compile an IIP. Even where included in the data, the functional breakdown is often not available. There are also uncertainties over the coverage of economic datasets for many countries. And there are similar gaps in the Coordinated Portfolio Investment Survey. Efforts are underway to improve the coverage of SWFs in international statistics: for example, a voluntary data item on SWFs in the international investment position has been agreed for the draft Balance of Payments Manual.

IV. Operational Implications for the Fund

A. The Fund's Mandate

33. **The macroeconomic and financial stability implications of SWFs fall squarely in the Fund's mandate for surveillance and ensuring the effective functioning of the international monetary system.** The Fund already does—and should continue to—undertake assessments of the impact of SWFs on a member's economic management and vulnerabilities. Coverage of SWFs in the Fund's bilateral surveillance assessments should be evenhanded (i.e., affording similar treatment to members in similar relevant circumstances) across home and recipient countries. From the multilateral perspective, SWFs may affect international financial stability, for example, by having an impact on global liquidity conditions, asset prices, and capital flows.

34. **Activities of SWFs are also relevant for the Fund's mandate to provide technical assistance and advice to members on monetary, fiscal, and balance sheet risk management issues**. Given their importance in capital flows, SWFs may also be pertinent in the context of Fund advice to both SWF home countries and recipient countries, where the investment

[20] The draft sixth edition of the *Balance of Payments and International Investment Position Manual (BPM6)* includes guidance on the compilation and dissemination of external sector data on special purpose government funds, usually known as SWFs, in particular in relation to reserves.

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behavior of one or more large SWFs may have significant implications for the capital account. Recommendations on the structure of SWFs and their integration into fiscal policy have been covered by fiscal ROSCs. And the Fund has traditionally addressed issues in foreign exchange reserve management based on the *Guidelines for Foreign Exchange Reserve Management.*

35. **Some aspects of SWFs, however, are outside the purview of the Fund and are more appropriately addressed by others.** For example, under the Fund's Articles, members have the right to regulate international capital movements. To the extent that capital controls imposed by members with respect to SWFs' operations do not restrict payments for current international transactions or unduly delay transfers of funds in settlements of commitments, such controls would fall outside the Fund's jurisdiction.[21] In addition, outside of the Fund's jurisdiction on exchange matters under Article VIII, the Fund is not in a position to regulate financial markets, e.g., through setting rules on market integrity issues; neither is the Fund in a position to determine members' national security interests.[22] Market integrity issues are in the domain of domestic market regulators, such as the Securities and Exchange Commission in the United States and the Autorité des Marchés Financiers in France, and their activities are harmonized through the International Organization of Securities Commissions (IOSCO). National security issues are primarily in the domain of national safeguard procedures (e.g., the Committee on Foreign Investment in the United States (CFIUS)) and the OECD, which focuses its work on recipient countries and is developing good policy practices relating to the treatment of foreign investors with adequate safeguards for national security (Box 2 discusses relevant national regulations; Box 3 lays out the work of the OECD).

[21] See e.g., "*Capital Movements—Legal Aspects of Fund Jurisdiction under the Articles*," SM/97/32, Supplement 3 (02/21/1997), www.ieo-imf.org/eval/complete/pdf/04202005/report.pdf (p.31, footnote 4). Article VI, Section 3 generally preserves the members' right to impose capital controls to regulate international capital movements, including by limiting or prohibiting inward and outward capital transfers.

[22] However, where such issues have an impact on the member's domestic or external economic stability, or on international financial stability, they would fall under the Fund's surveillance authority.

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Box 2. Regulation of SWF Activities by Recipient Countries

Investments by SWFs may be subject to regulation by various agencies in recipient countries:

Securities Regulation and Corporate Governance. The investment activities of SWFs can be subject to securities market and related rules in three key dimensions: (i) reporting requirements on SWF shareholdings; (ii) application of corporate governance rules of the invested company; and (iii) market integrity rules that could apply to an SWF as an investor.

• Acquisition by SWFs of shares in publicly-traded companies above certain thresholds (5 percent in the United States, 10 percent in the EU) typically trigger requirements for an SWF to report its ownership interest to the invested company and to the securities regulator.

•Application of corporate governance rules of publicly-traded companies could in principle be extended to address perceived concerns of noncommercial influence of SWFs in such companies. (This principle differs from addressing corporate governance rules for SWFs themselves.) For example, company by-laws may require investors to notify the company when they acquire shareholdings that have not yet triggered the regulatory notification requirements.[1] In addition, to the extent that SWFs acquire influence over directors of a company, legal principles on fiduciary responsibility and avoidance of conflicts of interest would apply to moderate risks of noncommercial behavior by directors and the company.[2]

• Market integrity rules, addressing insider trading and other forms of market manipulation, may apply to SWFs in a manner similar to other investors, recognizing that enforcement against SWFs may be more difficult due to the potential application of sovereign immunity rules. (In contrast, normal investor protection rules are generally inapposite to SWFs, because these entities typically do not have private investors.)

Foreign Investment Vetting Agencies. Investment by SWFs may be subject to limitations imposed under the foreign investment regime, e.g., through capital controls. A number of countries have special agencies charged with the review of investments based on national security considerations. For example, the Committee on Foreign Investments in the United States reviews transactions from the perspective of U.S. national security. Even where countries have liberalized their foreign investment regimes through multilateral or bilateral investment treaties, they typically reserve the right to oppose foreign investments on public order and national security grounds.[3]

Financial Institution Regulation. Certain investments by SWFs in supervised financial institutions (such as banks and insurance companies) are subject to prudential rules. Acquisitions of significant shareholdings above, e.g., 10 percent, may be subject to prior approval by supervisors on the basis of a "suitability test" to safeguard sound and prudent management of the financial institution.

Regulation of Strategic Sectors. Beyond the financial sector, industries that are considered to be of strategic or social importance (e.g., energy, media and telecommunications) would often be subject to special laws that would include regulation of market structure and behavior, which may be applied to SWFs.

Anti-MonopolyAgencies. Without limitation to any particular sector, investment activities of SWFs may be subject to scrutiny by regulatory agencies applying anti-monopoly or take-over regulations, principally on market structure grounds.[4]

[1] The recent reported investment by the subsidiary of China's SWF of under 1 percent shareholdings in Australian banks illustrates the application of such reporting requirements.

[2] In this regard, the OECD's Principles of Corporate Governance address standards on the responsibilities of Board members.

[3] In the EU, there is no agency responsible for the vetting of foreign investments at the EU level. Subject to EU law provisions on the free movement of capital, individual EU member states retain authority to restrict capital inflows from third countries where justified on the basis, inter alia, of "public policy or public security."

[4] A well-known example involving an SWF arose from the review by the U.K. Monopoly and Mergers Commission of the investment by the Kuwaiti SWF in British Petroleum in 1988. The Commission decided that the Kuwaiti SWF, in having acquired 20 percent of BP's shares, would exercise influence over BP and constrain BP from acting competitively. Following the Commission's decision, the Kuwaiti SWF reduced its shareholding to 9.9 percent over a 12-month period.

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Box 3. The Work of the OECD

The OECD has long been at the forefront in efforts to develop international rules relating to capital movements, international investment, and of trade in services. Member governments have established “rules of the game” for themselves and for multinational enterprises based in their economies by means of “instruments.” The principal instruments are:

- *Codes of Liberalization*. The Code of Liberalization of Capital Movements and the Code of Liberalization of Current Invisible Operations constitute legally binding rules for all members, stipulating progressive, nondiscriminatory liberalization of capital movements, the right of establishment and financial services, and other current invisible transactions.

- *Declaration and Decisions on International Investment and Multinational Enterprises*. The Declaration is a political agreement among adhering countries for co-operation on a wide range of investment issues. It contains four related elements, each governed by binding decisions on implementation: the National Treatment instrument, the Guidelines for Multinational Enterprises, an instrument on incentives and disincentives to international investment, and an instrument on conflicting requirements. All 30 OECD member countries, and eight nonmember countries have subscribed to the Declaration.

The instruments have been regularly reviewed and strengthened over the years to keep them up to date and effective. The OECD’s Investment Committee provides the structure where adhering countries meet to discuss application and implementation of these legal instruments through a peer review process. The existing investment codes recognize the right of countries to protect essential security interests.

Under the “Freedom of Investment, National Security and ‘Strategic’ Industries” project, launched in early 2006 and endorsed by the G-8 Communiqué of June 2007, the Investment Committee has set out to clarify the concepts of national security and strategic industries, with a view to updating the investment instruments. A progress report on this work is expected in the spring of 2008, and the update is to be completed in 2009.

Separately, a Working Group is looking at the existing OECD guidelines for the Corporate Governance of State-Owned Enterprises with a view to exploring the extent to which these may be relevant for SWFs and should be extended to them. The specific output of this work is yet to be determined, but it is not envisaged at this stage that any new guidelines for SWFs will be drafted.

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B. Fund Surveillance

36. **Fund surveillance already covers SWFs but, given their increasing importance as active participants in the international monetary and financial system, a more systematic approach would be desirable.**

37. **Bilateral surveillance.** In the Article IV consultation process—for members where there are established SWFs and where new SWFs are being set up—the Fund should ensure that SWFs are fully captured in assessments of these countries' domestic and external stability, fiscal and monetary policy, and asset-liability management. This would also include highlighting any tensions between SWF activities and the effective coordination of monetary and fiscal policy, the spillover effects on other economies, and the implications for the external stability of members, paying special attention to the actual and potential implications of SWFs from the multilateral perspective.

38. **Multilateral surveillance.** The GFSR has already begun to analyze the growing impact of SWFs in financial markets and the policy implications, while previous work in the WEO and GFSR has looked at the impact of oil export revenues on global imbalances. The Fund is stepping up its multilateral surveillance to draw out in its analysis the macrofinancial linkages and the implications of SWFs; one example of this work is the analysis provided in Annex 1. Further work might consider the likely direction of capital flows, the effects on asset prices, and the impact on particular markets or institutions (such as the U.S. banking sector).

39. **Technical assistance and advice.** The Fund also needs to take account of SWFs in the context of managing balance sheet risks, reserve management, public finances, and financial stability work. Advice on the structure, workings, and policies of SWFs has been provided by the Fund through technical assistance missions and in the context of bilateral surveillance. The Fund could provide advice on SWFs, including on their governance structure and transparency arrangements. Such advice may be of interest to established SWFs but also, importantly, to those countries that are setting up new SWFs.

40. **Statistics.** The Fund should continue to work with countries to improve data provision consistent with existing data requirements such as promoting full coverage of SWFs in the BoP, IIP, public finance statistics, and national accounts. Adequate coverage of SWFs in the national accounts and public finance statistics, in line with other items, would require quarterly reporting (with a quarterly lag for aggregate balance sheets), and possibly some aspects of the

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composition of assets. In addition, increased participation should be encouraged in relevant data initiatives, including the Fund's Currency Composition of Foreign Exchange Reserves initiative (COFER)—which is voluntary and confidential, the CPIS and the Coordinated Direct Investment Survey which will be conducted for the first time at year end-2009. Data on returns and income could also be useful. These issues need to be considered further in the context of developing best practices and would be discussed with relevant statistical committees, including the IMF Committee on Balance of Payments Statistics.

V. Identifying Best Practices

41. **Identifying a set of best practices for SWFs on which there is broad agreement among SWFs would serve various purposes.** Best practices would help members to strengthen their domestic policy frameworks, they would be beneficial for international financial markets, and would ease the concerns that have been raised. The Fund has helped provide comparable operational guidance to members in the past, notably in the fields of fiscal transparency—through the Report on the Observance of Standards and Codes (ROSC)—and reserve management. And the Fund would thus seem well placed to coordinate the work on best practices for SWFs. An inclusive, collaborative approach would be pursued involving all relevant members, and the SWFs themselves. This section first briefly reviews the existing guidelines and their applicability to SWFs, and then proposes a tentative roadmap for best practices for SWFs.

A. The Fund's Existing Standards of Governance and Transparency

42. **There is already a range of existing Fund guidance for fiscal, monetary, and financial transparency and for reserve management that are widely applied.** They offer well-established internationally-accepted guidance on governance, transparency, accountability issues, and risk management frameworks.

- The fiscal transparency guidelines emphasize the clarity with which the legal structure of institutions specifies their roles, objectives, and responsibilities, the way in which their policy objectives and operations are coordinated, the flow of information, and assurances of integrity.[23]

- The reserve management guidelines stress the importance of clarity of roles, responsibilities, and objectives of financial agencies responsible for reserve management. They also emphasize an open process for reserve management operations and the public availability of information on foreign exchange reserves, the accountability and assurances

[23] Relevant Fund standards include: *The Code on Good Practices on Fiscal Transparency*, *Special Data Dissemination Standards, General Data Dissemination System*, and the *Code on Good Practices on Transparency in Monetary and Financial Policies*. These are supported by the *Guide on Resource Revenue Transparency* and the *Manual on Fiscal Transparency*.

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of integrity by reserve management agencies, and the existence of a sound institutional and risk management framework.[24]

43. **Several components of these guidelines could also be relevant for SWFs**. Common themes that are of particular relevance to SWFs include the need for:

- A clear legal framework that specifies the institutional structure within which a sovereign entity (and its subsidiaries) operates and ensures that its objectives, role, scope, and responsibilities are clearly laid out.
- Clear and publicly disclosed allocation of responsibilities and its relationships with counterparties (for reserve management entities).
- Mechanisms to ensure that the sovereign entity operates in a manner consistent with the pursuit of overall government policy objectives.
- A clearly specified risk management framework.[25]
- Regular and timely publication of accurate and comprehensive data on the size of sovereign entities, their sources and uses of funds, and their operations. Where financial asset holdings are significant, balances should be reported quarterly on the composition of assets and liabilities, including by type and class.[26]
- Annual independent external audits of the entity's financial statements that should be published in a timely fashion.
- Clear provisions to ensure the integrity of operations and of all published information.

B. Best Practices

44. **Given its wide membership, mandate, and experience, the Fund is well placed to coordinate work on a set of best practices, which would be adopted by SWFs on a voluntary basis.** These best practices would draw on the existing practices of SWFs. Where appropriate, they will also build on relevant existing guidelines, including those of the Fund (as discussed in the previous section) and the OECD. And they will be prepared with input from the SWFs, the OECD, the World Bank, other multilateral development banks, and others.

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[24] The *Guidelines for Foreign Exchange Reserve Managemen*t (GFERM).

[25] The fiscal transparency code suggests this should include a statement of objectives, the disclosure of investment guidelines, and measures to assess and audit the performance of the fund and its managers. The reserve management guidelines stress the need for a framework to identify and assess the risks of reserve management operations and that allows the management of risks within acceptable parameters and tolerance levels.

[26] The Fund's fiscal transparency manual also specifies the need to provide information on the returns obtained on financial assets.

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45. **In line with the Fund's mandate, best practices would focus on governance, institutional arrangements, and transparency**. The case for such a focus is two-fold: First, clear governance structures will help foster accountability and a disciplined and stable investment policy which reduces fiscal risk and promotes financial stability. Second, transparency contributes to the efficient allocation of resources by ensuring that markets and the public have information to identify risks and better assess SWF behavior. Having a blueprint which sets out the information needed, helps to create a level playing field and reduces the scope for different degrees of transparency between SWFs. By doing so this reduces uncertainty, and possibly volatility, in markets. This approach would also be consistent with those mentioned in the discussion documents on hedge funds and private equity companies which highlight the need for transparency of structure and accountability to the public (Box 4).

46. **Best practices would offer benefits to countries with SWFs**. They would allow countries to benefit from the experience of other countries, and may also provide a helpful benchmark against which existing or envisaged arrangements with respect to SWFs can be evaluated. In particular, best practices would help countries with an SWF—or that plan to establish an SWF—to strengthen their domestic policy frameworks and institutions. This would, for instance, help to ensure that SWFs further the interests of the country they serve, and safeguard against potential mismanagement and abuse.

47. **They would also help enhance the public understanding of how SWFs operate**. Best practices would help to improve the transparency and accountability of SWF-type arrangements. They would also make the investment process and objectives of SWFs more open and comprehensible to the public, markets, and recipient countries. Ways in which SWFs could improve accountability with respect to their operations and activities in using and managing sovereign wealth could also be addressed. SWFs could point to the principles and practices to demonstrate their adherence to standards accepted by the international community. In turn, this would help to ease concerns about SWF investment policies, and would contribute to an open global financial system.

48. **With respect to governance, a challenge well recognized by the SWFs is to ensure that investment decisions are autonomous.** Governance arrangements should provide for SWFs' independence in their investment decisions, both in an operational and functional, and political sense. At the same time, governance structures would need to allow for the different legal forms in which SWFs are established, adequate coordination with macroeconomic policies, and clear lines of accountability.[27]

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[27] The different legal structures of SWFs have a bearing on institutional arrangements and governance. Some SWFs take the form of a pool of assets administered by—but not legally separate from—the government or central bank (e.g., Botswana, Norway), while others have been established as a legal entity separate from the government or central bank. Of those SWFs with separate legal personality, some have been established under a specific constitutive law (e.g., Korea, Kuwait) and others take the legal form of a private corporation governed by general company law (e.g., Singapore's Temasek).

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Box 4. Recent Initiatives to Increase Transparency of Private Pools of Capital

The recent rise in size and prominence of private pools of capital, such as hedge funds and private equity companies, has given rise to financial stability and consumer/investor protection concerns. These, in turn, prompted regulators and legislators to consider subjecting them to higher scrutiny and disclosure. These efforts have been directed mainly at ensuring that regulated banks that lend to these entities are well supervised with regard to their on-lending and other activities. In addition, there have been some voluntary efforts, and some countries have introduced direct regulations for those hedge funds that have access to the retail market.

The two most prominent efforts so far are the two sets of best practices for hedge funds and private equity, prepared by the Large Group and the Walker Group, respectively. A similar set of guidelines was also published by the Dubai International Financial Centre.

The Large Group, or the U.K. Hedge Fund Working Group, led by Sir Andrew Large, prepared in cooperation with hedge funds, a set of voluntary best practices on disclosure of information to investors and counterparties, valuation of assets, prudential and risk management issues, and governance.[1] They were accepted on January 22, 2008, by the 14 large hedge funds who co-drafted the practices, and who encouraged other funds to adopt them. Compliance will have to be reported to a Hedge Fund Standards Board (HFSB) following the 'comply or explain' principle, but there will be no enforcement of the standards and the FSA will not monitor compliance.

The Walker Group, or the Private Equity Working Group on Transparency and Disclosure, led by Sir David Walker, published in November 2007 a set of best practices for private equity firms and portfolio companies.[2] As with the Large Group, the practices were co-written by representatives of such firms, and the compliance will be voluntary but encouraged by the British Venture Capital Association. The practices will apply to firms that are managing or advising funds that own or control "large" U.K. companies, or that have a designated ability to invest in such companies. The best practices cover such areas as disclosure of annual reports, structure, investment approach, valuation of assets, and governance.

Other initiatives were undertaken by the U.S. authorities, the European Union, the OECD, and IOSCO. In the United States, the President's Working Group proposed in February 2007 a set of best practices for private pools of capital, including hedge funds and private equity.[3] These are being finalized now by the U.S. Treasury and two working groups. In the EU, the authorities have been applying certain provisions of various EU directives to regulate investment funds, especially the UCIT directive, however, no separate set of best practices has been released. The OECD is working on applying the existing OECD Principles of Corporate Governance[4] to such funds, and is also studying the general implications of alternative investment vehicles in corporate governance, while IOSCO has issued a consultation report containing a number of principles on hedge fund valuation.[5]

Finally, in Hong Kong, Japan, and Singapore, regulations and disclosure rules are set very clearly for hedge funds. The investment products they offer are treated as regular financial securities, and hedge funds are therefore subject to the same regulation and supervision as issuers of other financial securities. Hong Kong and Singapore also have special requirements for hedge fund registration.

1/ *HFSB Standards*, http://hfsb.org/files/hfsb_(only_standards).pdf

2/ *Guidelines for Disclosure and Transparency in Private Equity*, http://walkerworkinggroup.com/files/wwg_report_final.pdf

3/ *Agreement Among PWG and U.S. Agency Principals on Principles and Guidelines Regarding Private Pools of Capital*, http://www.treasury.gov/press/releases/reports/hp272_principles.pdf

4/ *Consolidated Directive 85/611/EEC on the Coordination of Laws, Regulations and Administrative Provisions Relating to Undertakings for Collective Investment in Transferable Securities (UCITS)*, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:1985L0611:20050413:EN:PDF

5/ *Principles for the Valuation Of Hedge Fund Portfolios*, http://www.iosco.org/library/pubdocs/pdf/IOSCOPD240.pdf

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49. **An important part of the work would be to decide what types of transparency are desirable**. Transparency is of interest to very different groups—including the general public, markets, counterparties, recipient countries, and regulators—but their needs differ. Transparency also can be broadly divided into three categories: transparency with respect to: (i) objectives; (ii) organizational structure and institutional arrangements; and (iii) investment portfolio (size, composition, returns, risk indicators). Of these three, transparency regarding the investment portfolio is likely to generate considerable discussion. Here, a balance will need to be found between the market sensitivity of data on the one hand and the minimum required to verify stated objectives on the other hand.

50. **Formulating best practices would need to be a collaborative process, involving the SWFs themselves**. The process could be modeled after that of the drafting of the IMF guidelines for *Foreign Exchange Reserve Management*. An already agreed first step in this process will be to survey the SWFs, with respect to their practices in relevant areas: (i) their legal and regulatory framework; (ii) roles, responsibilities, and objectives; (iii) funding and withdrawal rules, fiscal treatment, and noninvestment functions; (iv) governance structure; (v) accountability; (vi) investment policy; (vii) risk management practices; (viii) inclusion of SWFs in existing economic statistics; and (ix) public information services adopted by the SWFs. This work is under way. The Survey will provide a basis for assessing the range of current structures and practices of SWFs (although not all elements need to be included in the best practices). Subsequently, staff will work with members to develop best practices, building on the practices currently used by SWFs, and the existing Fund guidelines that have already gained wide acceptance.

C. What Group of Institutions Should Be Covered by Best Practices?

51. **There is a range of definitions for SWFs and so it is important to be clear about the institutions to be covered in these best practices.** Generally, SWFs are considered to be government-owned investment funds, set up for a variety of macroeconomic purposes and which are typically funded by foreign exchange assets that invest long term overseas. They are quite distinct from government-owned pension funds which have well-defined liabilities and from state-owned enterprises whose primary function is production or the provision of services. Arguably, any definition should generally not extend to pension funds, state-owned nonfinancial corporations, or state-owned banks which are in any case captured elsewhere in the statistics.

52. **Fund staff proposes the following working definition**:

> *SWFs are special purpose public investment funds, or arrangements. These funds are owned or controlled by the government, and hold, manage, or administer assets primarily for medium- to long-term macroeconomic and financial objectives.* The funds are commonly established out of official foreign currency operations, the proceeds of privatizations, fiscal surpluses, and/or receipts resulting from commodity exports. These funds employ a set of investment strategies which include investments in foreign financial assets*.

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These, in principle, include: (i) fiscal stabilization funds; (ii) saving funds; (iii) reserve investment corporations; (iv) development funds; and (v) pension reserve funds (those without explicit pension liabilities), while it excludes inter alia: (a) government-employee pension funds; (b) social security funds; (c) government lending funds; and (d) government-owned banks.

This definition is similar to those used by other institutions and commentators (Annex II) but spells out in detail the types of institutions, funding source, purpose, and investments. Inevitably, however, given the multi-faceted and evolving nature of SWFs, any dividing line on coverage is to some extent arbitrary.

53. **The case for studying SWFs rather than a broader set of vehicles—including pension funds and highly leveraged institutions—rests on their differing purposes and issues raised.** While there are similarities between SWFs, other state-owned enterprises, and investment vehicles such as pension funds or hedge funds, there are also important differences. The government ownership of SWFs brings with it higher standards of accountability for their investment decisions. They are also within the sphere of macroeconomic management, and there is potential scope for strategies driven by noncommercial motives. By contrast, pension funds have well-identified liabilities that constrain their investment policies and horizons, there are specific international guidelines that cover these institutions, they are included in macroeconomic datasets and they tend to be more closely regulated than SWFs.[28] Hedge funds and private equity firms are privately owned and therefore subject to the control of their owners. Hedge funds are often opaque but, unlike SWFs, tend to be highly leveraged and so a different set of issues such as counterparty risk is much more important and so they need to be treated separately. A number of private-sector-led initiatives are underway to improve the transparency of highly leveraged institutions. The related issues have been closely studied by regulators and supervisors. The Fund is following these initiatives in the context of its other financial sector work and is also coordinating with the Financial Stability Forum.

VI. Resource Costs

54. **The program for identifying and developing best practices will entail some resource costs** (Table 3). In addition to the staff costs that are borne under the existing budget, further travel-related costs will need to be budgeted to take into account staff visits to: (i) selected SWFs to conduct technical discussions related to the SWF survey; (ii) OECD and groups working on private sector transparency initiatives; (iii) SWF roundtables; and (iv) SWF outreach and dissemination. Costs related to technical advice and analysis, and the hiring of an external expert for work on transparency and disclosure will also need to be budgeted. Resources amounting to two staff years (US$0.7 million) are expected to be required over the next fiscal year to cover the additional costs associated with these activities.

[28] Pension funds are covered by the OECD guidelines for Pension Fund Asset Management and are covered by the OECD guidelines on Corporate Governance for State-Owned Enterprises.

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Table 3. SWFs: Fund Resource Costs

	FY2008	FY2009	Total
Number of missions	7	15	22
Survey tabulation	3	0	3
Coordination	3	6	9
Roundtables	1	1	2
Outreach	0	8	8
Days/mission	11	8	…
Survey tabulation 1/	12	0	…
Coordination 1/	12	12	…
Roundtables 2/	7.5	7.5	…
Outreach 3/	0	5	…
Field time (in days)	80	119	199
Survey tabulation	36	0	36
Coordination	36	72	108
Roundtables	8	7	15
Outreach	0	40	40
Other costs (in days) 4/	60	260	320
Total resource costs (days)	140	379	519
Total resource costs (years)	0.5	1.5	2.0
Total resource costs (US$) 5/	110,939	330,037	440,977
Mission travel (US$) 6/	84,000	184,500	268,500
Total Costs (US$)	194,939	514,537	709,477

Source: Staff calculations.

1/ Three IMF staff will participate per mission (4 day visits on average).
2/ Three IMF staff will participate per mission (2.5 day visits on average).
3/ Two IMF staff will participate per mission (2.5 day visits on average).
4/ One external consultant in FY2008 and one staff year in FY2009 for technical advice.
5/ Based on standard costs for A9-15 staff and that of a short-term expert.
6/ Based on an average of 11 and 8 staff-days per mission in FY2008 and FY2009, respectively, and cost inflation of 2.5 percent in FY2009.

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VII. Next Steps and Questions for the Board

55. **If Directors agree, staff would begin to work with members and SWFs to facilitate the development of best practices.** The intention would be to draw principles for the establishment and operation of SWFs and to identify best practices currently used by them. The intention is not to develop a prescriptive code—but to have a set of best practices as a point of reference for members that operate or plan to establish SWFs, and that would inform the Fund's policy advice.

56. **The plan is to establish an international Working Group of SWFs and a Roundtable of SWFs will be convened in April to begin technical discussions and the drafting work.** Following discussion with the SWFs, subgroups would be established to undertake technical drafting work to set out the practices. The survey results will be processed and presented to SWFs along with a brief structure of what could constitute the SWF principles and practices.

57. **During the drafting process, the staff will also confer with others outside the Fund, and coordinate with the OECD as appropriate.** Consultations will cover agencies such as multilateral development banks, selected academics, market participants, international accounting and auditing bodies, legal practitioners, and others relevant to the field. The World Bank will provide technical inputs as the SWF practices are identified and elaborated. Meanwhile, it is important to set out how the economic statistics on SWFs need to be improved.

58. **A draft of the SWF principles and practices could be prepared by August 2008 and circulated for wider consultation over the following two months.** Further outreach with other stakeholders is also planned. The draft would also be issued to the Board for feedback and further guidance. Following consultations, a revised set of principles and practices would be sent to the Board for discussion ahead of the 2008 Annual Meetings.

59. **Do Directors agree with the approach proposed?** In particular:

- Has staff identified all aspects of SWFs that are relevant for the Fund's work?
- Do Directors share staff's assessment of the operational implications for bilateral and multilateral surveillance?
- Do Directors agree with the working definition of SWFs?
- Do Directors agree with the direction and thrust of the work on best practices?
- Are there any additional elements that Directors feel should be included in best practices?
- Do Directors have views on the types of transparency that should be included in best practices and what elements should be outside the scope of a set of best practices?
- Do Directors have any comments on process or timetable?

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Annex I. Portfolio Diversification by SWFs: A Study of the Implications for Global Financial Markets[29]

A. Illustrative Portfolio Analysis

1. SWFs typically have medium- to long-term investment horizons, suggesting that they are less likely to make abrupt portfolio shifts which could affect market stability. That said, even a benign shift toward greater portfolio diversification of reserve assets by sovereigns would have implications for the absolute and relative price of assets, the flow of funds between countries, and the evolution of global imbalances.[30] An analysis of the impact of potential asset diversification by SWFs is, however, challenging because of the lack of transparency of several large SWFs about their asset allocations.

2. To understand the possible implications of the growing presence of SWFs, illustrative scenarios of asset allocation were prepared for countries that are in the process of shifting away from holding reserves to more diversified assets through SWFs. The analysis assumes that countries that have either recently established SWFs (or announced their intention to establish one) will channel a portion of their prospective reserve accumulation to their respective SWFs.[31] More specifically, the exercise provides a range of estimates based on the assumption that these countries transfer between 25 percent (lower bound) and 50 percent (upper bound) of newly available foreign currency inflows to their SWFs to be invested in foreign assets. This results in a range of estimates for the impact on capital flows and asset prices (see Section II for details on the assumptions).

3. A note of caution is warranted on the scope of the exercise. As in many modeling exercises, the results are highly sensitive to the underlying assumptions. For instance, by focusing solely on new sovereign investments, the exercise provides only a partial picture of the possible magnitude of the impact on capital flows and asset prices arising from the diversification strategy, since sovereigns may also choose to diversify the existing stock of their reserve assets. That said, this limited exercise provides a sense of the direction and magnitude of the possible impact on markets.

4. The analysis suggests that the pattern of global capital flows would be affected, with industrial countries facing lower capital inflows and emerging market countries attracting substantially larger inflows (Section II for the methodology).

- Relative to reserve assets, which are predominantly dollar-denominated and generally held in the form of U.S. Treasury bills, SWFs are presumed to invest in more diversified

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[29] Prepared by the Research Department.

[30] Foreign official investors are estimated to have kept 10-year U.S. Treasury nominal yields 100bps lower than otherwise. "*International Capital Flows and U.S. Interest Rates*," NBER Working Paper 12560 (October 2006).

[31] This includes China, Russia, Korea, and Saudi Arabia.

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and therefore riskier portfolios. This suggests lower inflows into government bond markets, with attendant implications for interest rates. The shift away from reserve assets could have the most significant effect on markets in the United States, if countries diversify away from dollar holdings.

- Estimates show that inflows into the United States could decline by ¼–½ percent of U.S. GDP per year on average depending on the stylized asset allocation strategy that is used to capture investments by the prospective SWFs. Portfolios that are more weighted to emerging economies—such as the stylized diversified portfolio shown in Annex 1, Table 1—would result in lower flows into both dollar and euro assets, while flows to emerging economies would tend to increase substantially. By contrast, a portfolio similar to Norway's—which is heavily weighted to investments in Europe—would suggest somewhat lower investment in dollar assets and a less sizeable, but still positive, inflow to emerging markets.

Annex 1. Table 1. Stylized Portfolio Asset Allocation and Currency Composition

(In percent)

	COFER 1/	Norway 2/	Diversified Portfolio
Asset allocation			
Bonds	100.0	40.0	23.0
Equities	...	60.0	55.0
Real estate	...	...	7.0
Hedge funds	...	...	7.5
Private equity	...	...	7.5
Currency Composition			
U.S. dollar	59.0	31.8	38.0
Euro	29.7	35.0	13.9
Pound	5.8	13.6	13.9
Yen	3.0	6.9	10.2
Other	2.4	12.7	24.0

Source: Research Department, IMF.

1/ Aggregate data. COFER is an IMF database that maintains data on the currency composition of official foreign exchange reserves.

2/ At present, Norway's investments are invested in 40 percent equity and 60 percent bonds. However, the parliament has approved a change of the investment strategy to 60 percent equity and 40 percent fixed income.

- To quantify the implications of these potential changes in the pattern of capital flows on interest rates and exchange rates, simulations were undertaken using the IMF's GIMF5 model.[32] The results focus on the effects for the United States (Annex 1, Figure 1). They point to a 10–20 bp increase in U.S. real interest rates and a 2–5 percent depreciation of the U.S. dollar. The U.S. current account deficit could improve by ¼–½ percentage point of GDP—a consequence of a higher country risk premium driven by lower demand for U.S. assets. In the rest of the world, higher capital inflows would lead to lower real interest rates (and thus a larger interest rate differential with the United States) and more appreciated currencies (in real effective terms)—and domestic demand would be boosted. However, inflation in Asia would increase as a result of its continued reliance on a currency peg to the dollar.

[32] Simulations were performed on a five-region version of the Global Integrated Monetary Fiscal Model (GIMF5). GIMF5 is an extended version of the Kumhof and Laxton model and includes separate models for the United States, the Euro area, Japan, emerging Asia, and "remaining countries." See Kumhof and Laxton, "*A Party Without a Hangover? On the Effects of U.S. Fiscal Deficits*," IMF WP 07/202 (August 2007), www.imf.org.

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- While the model estimates do not suggest a disorderly depreciation of the U.S. dollar, or a disorderly unwinding of global imbalances, they do not take into account possible second round effects as other investors react to the change in the behavior of SWFs. Overall, the results suggest that the more difficult financing of the U.S. current account deficit would move the U.S. current account further in the right direction and help alleviate the overvaluation of the dollar. Without adjustment on the part of the surplus countries, the model predicts that current account deficits will appear in other regions—most notably Europe.

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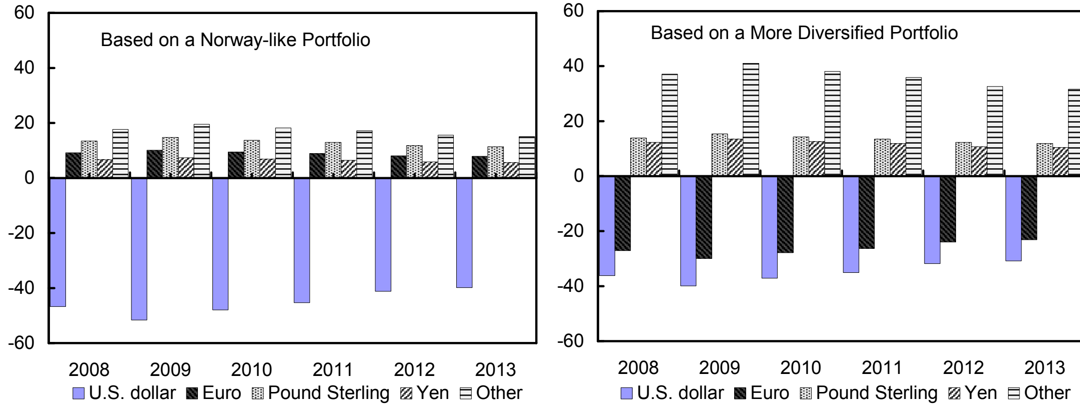
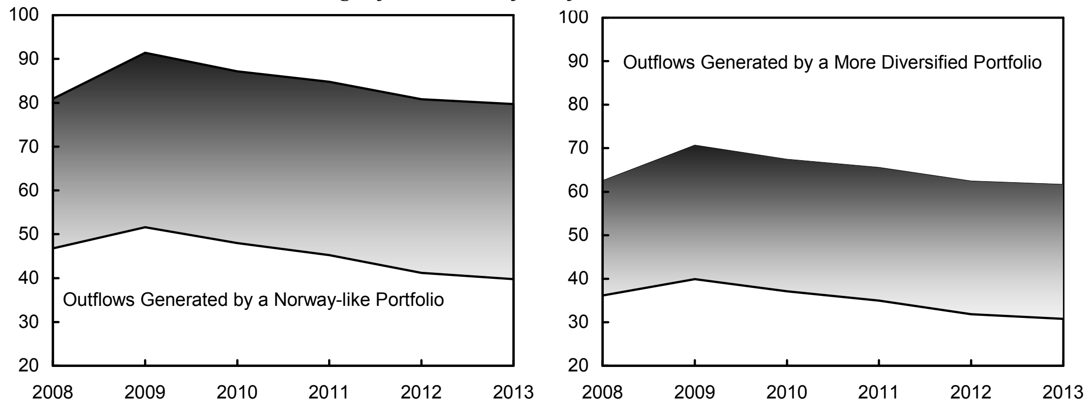
Annex 1. Figure 1. Simulation Results
(In billions of U.S. dollars, unless otherwise indicated)

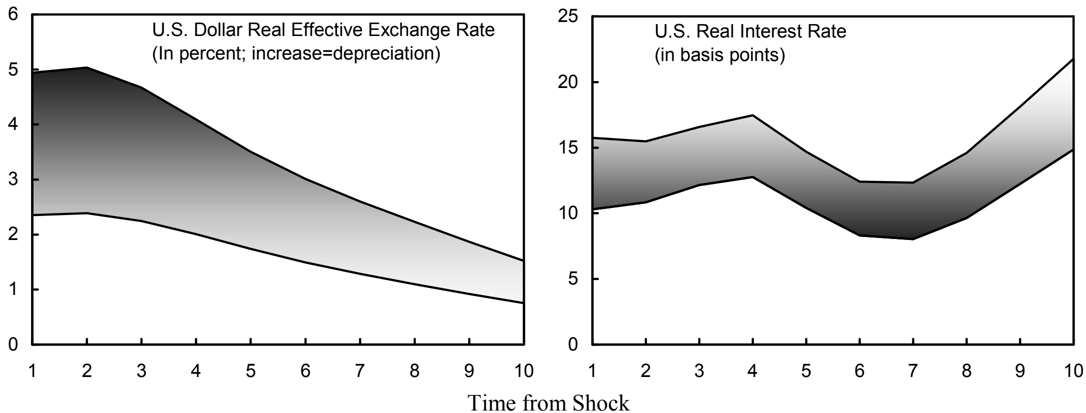
Possible Change in the Pattern of Capital Flows, by Currency 1/ 2/



Range of Possible Outflows from U.S. Dollar Assets 2/ 3/



Range of Possible Effects on U.S. Exchange and Interest Rates 2/ 3/
(Changes Relative to Baselilne)



Sources: World Economic Outlook; and Fund staff estimates.

1/ Based on assumption that 25 percent of available foreign currency flows to countries setting up new SWFs are placed with the SWF and invested in foreign assets.
2/ Includes China, Korea, Russia (National Welfare Fund only), and Saudi Arabia. This list aims to capture SWFs that are likely to change their investment behavior going forward.
3/ Lower bound of range is based on an assumption that 25 percent of available foreign exchange for countries listed in footnote 2 is placed with the SWF and invested in foreign assets. Upper bound assumes 50 percent.

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5. In the absence of reliable information both on assets under management and of the asset allocation strategy for several of the large SWFs, a separate exercise—using a gravity model—was also carried out to assess the geographic distribution of SWF assets. The exercise was conducted for Norway and Temasek (Singapore)—two SWFs for which data are available.

- The results of the gravity model reinforce the result that the geographic diversification of sovereign asset holdings may increase with the shift from reserve holdings to assets under the management of SWFs.[33] In particular, using the model to estimate the portfolio choices of existing SWFs shows that the United States and other advanced economies would likely receive lower inflows if assets are held by SWFs rather than as reserves. The model does a reasonably good job of predicting the pattern of investment for Norway, but does a poorer job for Temasek, which invests heavily in Asia (Annex I, Table 2; see Section III for details on the methodology).

Annex 1.Table 2. Gravity Model Estimates versus Actual Portfolio Allocations

(In percent)

	Equity		Debt	
	Gravity	Actual	Gravity	Actual
Norway 1/				
Asia and Pacific	8	15	12	5
Europe and Central Asia	64	50	60	61
Latin America/Caribbean	1	2	1	0
Africa and Middle East	2	1	0	0
North America	26	32	27	35
Temasek 2/ 3/				
Asia 4/	46	65	...	...
OECD 5/	51	32	...	...
Other	3	3	...	...

Source: Research Department, IMF.

1/ Actual portfolio as of September 2007.
2/ Actual portfolio as of March 2007. Excludes investments in Singaporean assets.
3/ Temasek provides only broad geographic groupings for its portfolio allocation.
4/ Excludes Australia, Japan, and New Zealand. Includes Korea.
5/ Excludes Korea. Includes Australia, Japan, and New Zealand.

6. In sum, the above analysis indicates that it is important for the Fund to monitor the behavior of investments by SWFs, with a view to assessing changes in capital flows to countries and the asset prices, all of which could have implications for financial stability.

B. Methodology for the Capital Flows Simulations

7. ***Assumptions***. The analysis pertains only to newly available foreign exchange flows; the allocation of existing stocks of foreign exchange assets is assumed unchanged. It is assumed that all new flows into SWFs are invested abroad. The new flows are calculated as the sum of each country's current account balance and net private capital flows, based on WEO projections for 2008–13. For countries that are in the process of setting up SWFs, and for which projections do not yet distinguish between reserve accumulation of asset accumulation in SWFs, new flows are calculated as the sum of the current account balance and net private capital flows. For these cases, it is assumed that 25–50 percent of all new funds flow to the SWF, with the 25 percent assumption forming the lower bound of the range estimates and the 50 percent assumption forming the upper bound.

[33] The gravity model uses data from the Coordinated Portfolio Investment Survey (CPIS) to predict investment patterns by broad geographic regions.

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8. ***Stylized Portfolios***. For the simulations reported in this work program, the focus is countries that are in the process of setting up SWFs, and which are most likely to be changing their investment behavior. At this preliminary stage of analysis, we are attempting to ascertain what would happen to global capital flows if countries shifted out of reserve holdings into more diversified portfolios. Two stylized, diversified portfolios are calibrated, and compared with a stylized portfolio of reserve assets (see Annex I, Table 1 above):

- The first stylized portfolio mimics that of Norway, with its objective to move to an allocation of 60 percent of assets invested in equities and 40 percent in bonds. The current currency composition of Norway's assets under management is used.

- The second portfolio is an attempt to reproduce a portfolio of a diversified well-established SWF. No hard data are available on asset allocation, but the stylized portfolio is based on information on asset allocation and currency composition provided in market analysis.[34] Assumptions are made for some asset classes.

- Using aggregate COFER data, we derive a stylized reserves portfolio, where it is simplistically assumed that assets are allocated exclusively to government bonds according to the COFER currency composition.[35]

9. ***Capital Flow Simulations***. Using the three portfolios above, we simulate how these future flows into SWFs might be allocated (by currency) under each of the portfolios. We also simulate future flows into government bonds for the three portfolios. The capital flows generated by the two stylized SWF portfolios are compared with capital flows under a scenario where these assets are retained as reserves.

10. The result of these simulations is a set of "differences" in capital flows between each of the stylized SWF portfolios and the reserve portfolio. These differences can be interpreted as possible changes in the pattern of capital flows if the newly established SWFs do indeed shift from holding reserve assets to holding more diversified portfolios.

C. Methodology for the Gravity Model

11. ***Data sources***: Equity and debt holdings are from the IMF's *Coordinated Portfolio Investment Survey*, bank loans from the BIS, FDI from the OECD, and trade from the IMF's *Direction of Trade Statistics*. Capital controls data are constructed by Fund staff based on the IMF's *Annual Report on Exchange Arrangements and Exchange Restrictions*. All dependent variables in natural logarithms, and measured in end-of-year 2004 U.S. dollars.

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[34] See, for example, "ADIA Unveils its Secrets," *Euromoney* (April 2006), Vol. 37, Issue 444.

[35] COFER is an IMF database that keeps end-of-period quarterly data on the currency composition of official foreign exchange reserves.

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12. ***Estimation***: The gravity estimation of country *i*'s private holdings of debt, equity, or FDI in country *j* is:

$$\log(Holding_ij) = b_dist*\log(dist_ij) + b_border*border_ij + b_comlang*comlang_ij + X_ijb + u_i + u_j + e_ij \quad (1)$$

where $dist_ij$ is the geographic distance between countries i and j, and *border* is a dummy variable which indicates whether countries i and j have a common border. *Comlang* is a dummy variable which indicates whether countries i and j share a common language. X_ij contains common colonial history, common legal origin, three dummy variables indicating whether (1) only country i has no capital controls, (2) only country j has no capital controls, and (3) whether both countries have no capital controls. u_i and u_j are country-specific fixed effects.[36]

Estimated betas from gravity model

Equity	Debt	FDI
b_dist=-.7649499	b_dist=-.8023374	b_dist=-1.286229
b_contig=.6357502	b_contig=.1403246	b_contig=.6324757
b_comlang=.4907374	b_comlang=.2249871	b_comlang=.5407307

Prediction of gravity for individual country i using equation (1)

- Take the estimated coefficients for distance, contiguity (contig) and common language and plug into (1). This gives a predicted value of log(Holding_ij) conditional on these three variables. Note that we do use other X variables given that they are not as relevant to exercise (e.g., colonial heritage), and data limitations.

- Convert log holdings to a natural number and multiply by some economic mass variable for the recipient countries j (which would be captured by the fixed effect u_j). This economic mass variable can be stock market capitalization, bond market capitalization, or GDP.

- Aggregate final predicted capital holding variable by region and world and take ratio for equity, debt, and FDI. This gives numbers presented in Equity, Debt, and FDI gravity tables.

[36] Source and host country specific (fixed) effects are 0/1 time-invariant dummy variables (u_i and u_j in the regression) that control for all variables that vary at the individual country-level (such as market size, quality of domestic institutions, financial development, etc.). These fixed effects do not control for variation at the country-pair level. For this reason, variables (such as distance and similarity of institutional arrangements) are included separately in the regression to account for this latter "bilateral" variation.

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Annex II. Selected Definitions of SWFs

1. OECD: November 2007 in international investment of sovereign wealth funds:

"Government-owned investment vehicles that are funded by foreign exchange assets."

2. Investopedia—Internet site for Forbes Media: December 2007

"Pools of money derived from a country's reserves, which are set aside for investment purposes to benefit the country's economy and citizens. The funding for SWFs comes from central bank reserves that accumulate as a result of budget and trade surpluses, and even from revenue generated from the exports of natural resources."

3. Edwin M. Truman—before the U.S. House Committee on Banking, Housing, and Urban Affairs, November 2007

"Separate pools of international assets owned and managed by governments to achieve a variety of economic and financial objectives. They sometimes hold domestic assets as well."

4. Deutsche Bank, September 2007

"Sovereign wealth funds—or state investment funds—are financial vehicles owned by states which hold, manage, or administer public funds and invest them in a wider range of assets of various kinds. Their funds are mainly derived from excess liquidity in the public sector stemming from government fiscal surpluses or from official reserves at central banks."

5. U.S. Treasury, June 2007

"There is no single universally accepted definition of an SWF. [In this paper,] the term "SWF" means a government investment vehicle which is funded by foreign exchange assets, and which manages those assets separately from the official reserves of the monetary authorities."

6. BPM6: March draft following world-wide consultation

"Some governments create special-purpose government funds, usually called sovereign wealth funds, to hold assets of the economy for long-term objectives. The funds to be invested commonly arise from commodity sales, the proceeds of privatizations, and/or the accumulation of foreign financial assets by the authorities."

7. McKinsey Global Institute, October 2007

"Sovereign wealth funds are usually funded by the nation's central bank reserves and have the objective of maximizing financial returns within certain risk boundaries." McKinsey contrast these funds with government holding corporations such as Temasek (Singapore) and Khazanah (Malaysia).

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8. Morgan Stanley, October 2007

"An SWF needs to have five ingredients: sovereign; high foreign currency exposure; no explicit liabilities; high-risk tolerance; and long-term investment horizon."

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