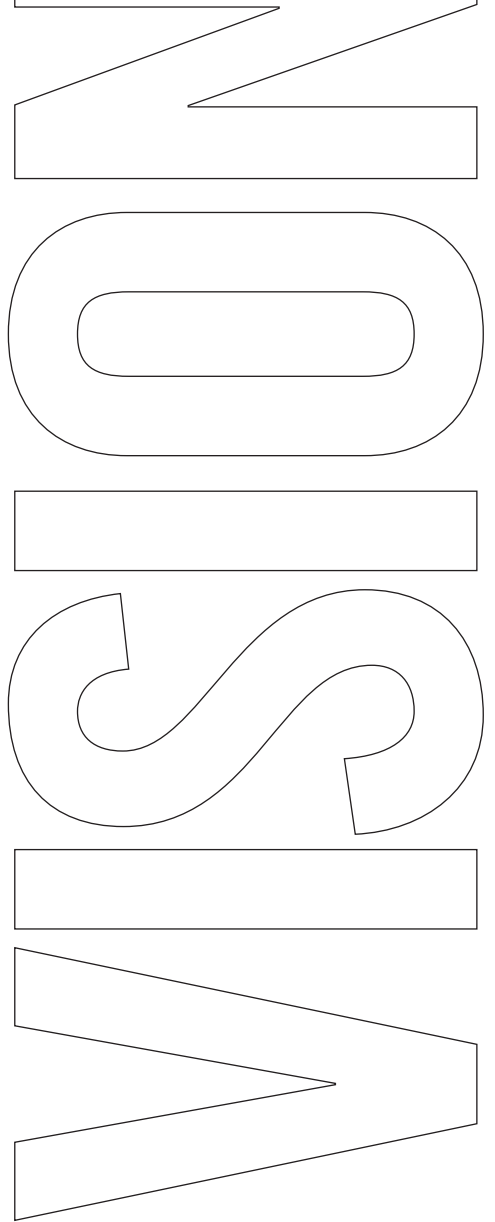


Volume IV • Issue 1



SOVEREIGN WEALTH FUNDS

**Emerging from
the Financial Crisis**



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Mr. Hoguet spent the first part of his career in emerging market and domestic corporate finance at Bankers Trust Company. From 1981 to 1985, he served at the US Treasury Department, first as US Alternate Executive Director to the World Bank and subsequently as Principal Deputy Assistant Secretary of the Treasury for International Affairs. At the Treasury Department, he worked on a broad range of international monetary issues, including the yen/dollar talks, IMF/World Bank policy coordination, and the Latin American debt crisis.

Mr. Hoguet has been published in *The International Economy*, *Emerging Markets Review* and the *Financial Times* and many other industry and academic journals. He is an accredited speaker for the CFA Institute in Charlottesville, Virginia, and has spoken at the National Bureau of Economic Research and many other academic and practitioner symposia on emerging markets. Mr. Hoguet is a graduate of Harvard College and Harvard Business School. He earned the Chartered Financial Analyst designation and is a qualified Financial Risk Manager, as certified by the Global Association of Risk Professionals. He is also a member of the Council on Foreign Relations in New York.



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Mr. Rozanov holds a master's degree in oriental studies, with a concentration in Japan, from Moscow University. He lived, studied and worked in Japan for 20 years and is fluent in English, Russian and Japanese. He is a Chartered Financial Analyst charterholder and also holds designations of Financial Risk Manager (FRM) from the Global Association of Risk Professionals and Chartered Alternative Investment Analyst (CAIA) from the CAIA Association. In 2005, Mr. Rozanov introduced the term "sovereign wealth funds" in one of his articles. His work has been published in *The Wall Street Journal*, *Central Banking Quarterly Journal*, *The World Today*, *Professional Investor* and *Vedomosti Financial Daily*. His research has been quoted or referenced in *Euromoney*, *The Economist*, *Reuters*, *Finance Asia*, *Les Echos*, *Smart Money* and *RGE Monitor*.

Foreword

The unprecedented financial turmoil of the last two years has significantly altered both the public perception of sovereign wealth funds (SWFs) and the way that these funds perceive their own role as very large institutional investors. In many ways, the crisis has marked a coming of age for the funds, underlining both their importance within the global financial system and the challenges they share with each other and with other investors. This recognition of shared interests has hastened the process of institutionalizing cooperation among the funds and the codification of best practices. It has also highlighted the growing mutual dependence between SWFs and the rest of the international financial community.

The financial crisis has led to an important shift away from SWFs' previous role as long-term investors that remained above the fray of day-to-day events. The funds have been called upon to help stabilize their national economies as well as troubled Western companies. Like other institutional investors that are experiencing sharp declines in their portfolios, the funds are re-evaluating their investment assumptions and choices. Perhaps most significantly, they are beginning to engage in the emerging debate about a new financial order that will follow the crisis.

These important changes have prompted State Street to revisit the themes it first addressed in its 2008 Vision report, "Sovereign Wealth Funds: Assessing the Impact." At that time, critics of the funds were suspicious of their growing resources and the possibility that political motives influenced their investments. State Street's report sought to add context and analysis to a discussion that had often cast more heat than light on the implications of the extraordinary growth in the size of these funds.

As a trusted partner to sovereign wealth funds for nearly 20 years, State Street has been well positioned to observe the funds' development as well as their impact on the capital markets. Working with many of the funds suggested they were neither sovereign "raiders" nor "saviors"; instead, they were simply very large, long-term investors whose sheer size and influence on global finance would be felt for many years.

This follow-up Vision report examines how SWFs have weathered the financial crisis and how the current climate may affect their future behavior. It discusses how the crisis has altered the public perception of SWFs, the immediate investment challenges that public perception raises, and its long-term consequences for both the funds and the global financial order. The report once again draws on the expertise of State Street's three leading authorities on SWFs: John Nugée, Andrew Rozanov and George Hoguet. These market practitioners analyze the effects of the crisis on SWFs by drawing on their many years of experience with official institutions and the global economy.

As John Nugée, the head of State Street Global Advisors' Official Institutions Group, observes in his chapter, "Sovereign Wealth Funds' Coming of Age: Unrivaled Titans to Uncertain Mortals," the global financial crisis has changed SWFs' public image. He traces dramatic shifts over the last three years as economic conditions changed and describes how the crisis has helped clarify principles and promote cooperation among SWFs. This cooperation culminated in an agreement over best practices set out in the Santiago Principles in 2008 and a commitment to regular consultations through the International Working Group of Sovereign Wealth Funds.

As it has with other institutional investors, the financial crisis or "Great Recession" has presented SWFs with serious liquidity and performance questions. They have also faced unprecedented criticism at home following significant losses. In the chapter "Long-Term Consequences of the Financial Crisis for Sovereign Wealth Funds," Andrew Rozanov, managing director and head of Sovereign Advisory at State Street Global Markets, explains how SWFs are re-examining their investment choices and assumptions. He describes the immediate investment consequences of the crisis on SWFs, examining how they determine adequate reserve levels, the role of the state in local economies and attitudes toward riskier assets as well as longer-term macroeconomic issues. Such issues are likely to include a greater focus on strategic policy objectives, which could revive concern about the politicization of SWFs, their more serious involvement in corporate governance issues and the deepening integration of SWF holdings into other state asset and liability considerations.

As part of the crisis facing SWFs, several countries with large foreign exchange reserves have expressed growing concern over their significant exposure to the US dollar. In the chapter “Sovereign Wealth Funds, Special Drawing Rights and the New Global Financial Architecture,” State Street Global Advisors’ managing director and global strategist George Hogue examines recent calls by China, Russia and Brazil to consider the development of a super-sovereign reserve currency, perhaps based on the International Monetary Fund’s Special Drawing Rights (SDRs). He looks at previous attempts to develop a global currency and considers the implications of a growing international dialogue on the subject. Hogue assesses how sovereign wealth funds may influence deliberations over the structure of global finance in a post-crisis world, especially with regard to managing global liquidity and international monetary arrangements.

Rounding out this Vision report is a supplemental article that examines recent research conducted by State Street Global Markets, State Street’s research and trading arm, into developing a more holistic asset allocation approach for SWFs. Building on modern portfolio theory, the new framework incorporates a broader definition of assets and liabilities, including both the investment portfolio and the commodity wealth of countries in a total portfolio optimization process.

Some observers have described the current crisis as the “Great Resetting,” as the highly leveraged positions of banks, consumers, hedge funds, real estate markets and other parts of the world economy slowly and painfully unwind. It is a period of rethinking investment choices, assumptions, risk management, financial regulation and the future of the financial world order. Part of that process also involves re-evaluating the relationships between SWFs and the rest of the financial world. Recognizing a growing interdependence raises new challenges, but it is an important step toward cooperatively adopting a changed financial landscape and creating structures that benefit all investors.

Sovereign Wealth Funds' Coming of Age: Unrivaled Titans to Uncertain Mortals

by John Nugée

What a difference a year makes. In 2008, sovereign wealth funds (SWFs) were completing their emergence into the public arena and, along with the rest of the financial world, rapidly coming to terms with their role as a major new force in international finance. At that time many issues remained, such as how SWFs would interact with the markets and companies in which they chose to invest, as well as the kind of regulatory framework that would apply to their activities. Nevertheless, the main questions, such as why SWFs existed and what their purpose and objectives were, appeared to be largely answered. On one subject there was unanimous agreement: collectively, SWFs were enormous and were poised to grow significantly larger. Some market observers openly predicted that they would reach \$12 trillion, \$15 trillion or even \$20 trillion by 2020.

A year later, much has changed. Although they have been in a stronger position than many players, SWFs have not escaped unscathed from the financial storm that has engulfed markets. They now face a very different environment as the world struggles to recover from the events of late 2008 and early 2009. At the same time, much remains true from last year's assessment. In fact, in some areas, SWFs have definitely progressed and developed despite the worst that markets have thrown at them. What remains undeniable is that for SWFs, as well as for everyone else in the financial world, the last 12 months have been a bumpy ride.

Emerging from the Shadows

In considering the funds' most recent experience, it is worth reiterating that, despite their relatively short time in the public eye, SWFs have a long history. The oldest SWF, the Kuwait Investment Agency (KIA), traces its origins back more than 55 years to 1953; several other funds have existed for 30 years or longer. For much of that time SWFs, however, while very well known to their business partners, were virtually anonymous in the wider financial community. This period can be characterized as the funds' Unknown Shadows phase; despite an occasional mention in the news, on the whole they sought and maintained a very low profile.

This pattern began to change in 2006, when some funds' attempts to diversify their rapidly growing portfolios by buying direct stakes in selected Western companies elicited a populist and protectionist response from certain Western politicians and media commentators. Suddenly, critics no longer saw the funds as Unknown Shadows, but rather as Unwanted Raiders. During this time, some Westerners seemed to believe they could do no right. Despite the funds' repeated assertions of goodwill, critics viewed them unfavorably, tantamount to barbarians at the gate scheming to control Western interests.

In late 2007, the start of what became the global financial crisis resulted in a third metamorphosis. Western financial institutions, desperate to recapitalize their balance sheets, turned to SWFs as a major source of new investment capital. Western politicians and media, eager to see solutions to the growing crisis sweeping markets, laid aside many of their previous concerns. Thus, the Unwanted Raiders changed again, this time into Unexpected Saviors, who injected tens of billions of dollars of fresh capital into the financial system.

As 2008 unfolded, it seemed that all the erstwhile giants of the financial sector were shaken. In a world of huge uncertainties, the only remaining certainty was that the major SWFs would continue to grow rapidly, an assumption made more plausible by the rapidly rising price of oil. In keeping with this, their image changed again. Although they were still viewed as Unexpected (but very welcome) Saviors of individual financial institutions, observers increasingly saw them as the Unrivaled Titans of the financial system.

Unrivaled Titans to Uncertain Mortals

By 2008, the rapidly burgeoning assets of SWFs made them almost the only investors in the market with enough capital to make major investments without concerns about liquidity or short-term performance. This position encouraged a move into riskier and less liquid investments such as direct equity stakes, real estate and other alternatives.

But as the market crisis deepened, even SWFs began to find that they were not immune to its consequences. Losses on their portfolios began to mount, and while the overall magnitude remains unknown in many cases, for some of the larger funds they are clearly substantial. Amid this buffeting, the Unrivaled Titans of summer 2008 became Uncertain Mortals like everyone else.

Facing Greater Scrutiny

SWFs have experienced a roller-coaster ride over the last three years as their public image has repeatedly changed, and their interaction with the rest of the financial world has had to quickly adapt to changing circumstances. Today, SWFs are under greater scrutiny than ever before, not least by their domestic audiences. In societies previously known for treating those in authority with deference, several funds and their governments have faced acute and even hostile questions about their decisions. For some, vehement criticism by the national media for their high-profile losses might even jeopardize their ability to take the long-term investment positions that have given them such a comparative advantage.

Even those SWFs that are not facing domestic criticism have largely slowed, if not altogether stopped, their headline activities. Sharply lower oil prices have reduced their income and their ability to invest new funds. Like all investors, many are uncertain about where value lies in today's markets and prefer a wait-and-see approach. They have not ceased their investment activities completely, although for a number of SWFs — like so many other investors — have put portfolio reorganizations on hold, delayed asset allocations and sought safety ahead of risk for their investments.

In addition, some countries have experienced the crisis more directly, as their own domestic markets and financial institutions face difficulties. Authorities in Russia, Ireland, Kuwait and Qatar, to name just a few, have used their national SWFs' resources to support domestic markets and institutions, in the process raising difficult questions about intergenerational equity and balancing future interests against present needs.

Organizing Principles

SWFs have experienced a more difficult environment than they expected in the last 12 months. They are therefore cautious with regard to more aggressive forecasts of their future wealth, driven largely by commodity prices, and more high-profile activities. At the same time, they have made progress on clarifying other issues. In particular, active debates have raged both within the SWF community and in the wider financial sector over two major questions:

- What are SWFs' legitimate objectives and activities?
- To whom are SWFs accountable and how?

With regard to the first question, the leading funds have been keen to respond to international concerns that their investment decisions may be motivated by political rather than economic considerations. Some would argue that a sovereign state has the right to use all of its assets and capabilities in any way it sees fit to achieve national objectives within the boundaries of international norms. Assuming that a state is not violating international law, norms or treaties, it could in theory use its SWF assets for strategic or geopolitical ends.

But SWF-owning states are careful to avoid such an absolutist position, because they recognize that such a stance would invite protectionism or worse on the part of recipient countries. In the end, such responses would harm the SWF state as much, if not more, than the countries that shunned it. Instead, SWF states are acutely aware of their dependency on open markets. They have made it clear over the last 24 months that they are mindful of the concerns of the governments of the markets they invest in and of the need to show a sensitive approach in their interaction with Western countries.

To this end, the leading SWFs formed the International Working Group of Sovereign Wealth Funds in early 2008. That October, they announced a set of 24 best-practice points, known as the Santiago Principles, which are provided in Appendix I on pages 45–49. The Santiago Principles contain three main strands, which specify guidelines for:

- A fund's legal structure and relationship with its sponsoring state, its policy and investment objectives, and its degree of coordination with the state's macroeconomic policies
- Institutional structure and governance mechanisms
- Investment and risk management frameworks

The principles are designed to codify the operational independence of SWFs and protect them from political manipulation, strengthen internal management and investment governance, and promote greater transparency and accountability. For some SWFs, the principles' most useful element may indeed be to establish best practices and clarify their relationship with their sponsoring state. In addition, the International Working Group hopes that the principles will ensure continued political and popular acceptance of SWF investment in the developed world.

In practice, much will depend on how SWFs implement the Santiago Principles. They are nonbinding and subordinate to existing laws and regulations in the SWF's home country. Therefore, an SWF can easily seek dispensation from a condition it finds difficult to meet while remaining generally Santiago-compliant. Moreover, adherence to these principles is self-monitored and self-certified; neither the principles themselves nor the International Working Group foresee third-party oversight to monitor SWF adherence to the code.

Despite these shortcomings, the principles have been warmly welcomed on all sides. Many hope that they will become a "mark of excellence" that SWFs strive to attain. In turn, this raises the interesting question of how Western authorities will likely respond. The authors of the code clearly hope that both individual companies specifically and Western financial markets in general will, over time, distinguish among SWFs and be more welcoming to Santiago-compliant funds.

Increased Coordination

One very positive development is that the International Working Group has decided to continue to meet and coordinate its activities. To facilitate this, it has created an International Forum of Sovereign Wealth Funds. The forum comprises a voluntary group of SWFs that will meet at least once a year to exchange views on issues of common interest and to promote the Santiago Principles. The purpose, mandate and membership of the forum are set out in the Kuwait Declaration, which was issued in April 2009 and is excerpted on page 8. Three subcommittees were created to work on 1) applying the Santiago Principles; 2) investment and risk management practices; and 3) international investment environment and recipient country relationships.

With the internal governance of SWFs now formally established, there is an opportunity to consider their accountability. In a narrow sense, SWFs must answer to their sponsoring governments and, through them, to their national constituencies. The degree to which this accountability is exercised differs among countries. Not all national governments, for example, have the same degree of public reporting. But the recent debate has focused on whether SWFs should be more accountable to SWFs or to the markets and companies in which they invest.

Initially, many SWFs said that they were merely users of markets with no obligations to others aside from adhering to established rules and refraining from roiling markets. While this minimalist position may have been reasonable as long as they kept a very low profile, it became increasingly open to question as SWFs became more capable of moving markets.

Kuwait Declaration: Establishment of the International Forum of Sovereign Wealth Funds

Purpose

The forum will be a voluntary group of SWFs. The purpose will be to meet, exchange views on issues of common interest, and facilitate an understanding of the Santiago Principles and SWF activities. The forum shall not be a formal supranational authority and its work shall not carry any legal force.

Mandate

The forum will operate in an inclusive manner and facilitate communication among SWFs, as well as with recipient country officials, and representatives of multilateral organizations and the private sector. Through its work, the forum will contribute to the development and maintenance of an open and stable investment environment, thereby supporting the four guiding objectives underlying the Santiago Principles:

- To help maintain a stable global financial system and free flow of capital and investment
- To comply with all applicable regulatory and disclosure requirements in the countries in which they invest
- To invest on the basis of economic and financial risk and return-related considerations
- To have in place a transparent and sound governance structure that provides for adequate operational controls, risk management and accountability

Membership

The forum members shall be the SWFs that participated in the International Working Group and endorsed the Santiago Principles as well as other funds that meet the Santiago Principles' definition of an SWF and endorse the Santiago Principles. Each member shall be entitled to nominate up to three senior level officials as representatives.

Resolving Accountability

The first area addressed was the funds' obligations to each other. Until 18 months ago, few SWFs had any communication with other SWFs, because they did not see a need to do so and had little sense of communal interest. The debate in the West in 2007 and 2008 and the quasi-protectionist stance that many Western politicians adopted made it clear that SWFs needed a collective response but had no institutional structure with which to coordinate it. This situation led to the International Working Group and the Kuwait Declaration, described above, which have created a genuine sense of community. Most SWFs now see value in working together, and few hold to the absolutist line that they are "solely market users."

A more interesting issue is SWFs' obligations to markets and the companies in which they invest. Shareholders in Western joint-stock companies have both rights and obligations. While the rights (to dividends, to a vote, to a directorship, etc.) are clear, the obligations are equally important. Their main obligation is holding management to account. Whereas rights can be waived at a cost only to the shareholder who relinquishes them, waiving obligations directly affects the company and all other shareholders.

There has been considerable interest in whether SWFs should exercise their rights and obligations as shareholders. Initially, the common response from SWFs was to register the concerns expressed by developed countries (e.g., that control over their companies was being ceded). Most SWFs then hastened to reassure their Western partners by declaring they would waive their rights to vote and to directorships. While they meant this as a friendly gesture, however, it has risked weakening corporate governance and the discipline applied to management. Moreover, transparency and accountability suffer further if the funds replace a public and visible influence, along with open board debate and voting, with private and invisible influence via private meetings with management.

There is no easy answer to this: SWFs are on the horns of a dilemma and face criticism whether they vote or not. This remains one of the central issues SWFs must resolve. With their large stakes, their global viewpoint and their very long investment horizons, many SWFs have the potential to make a major contribution toward the better governance of Western companies. The challenge remains finding a way for them to fill this role in a manner that is acceptable to all stakeholders.

Apart from this lingering uncertainty about how best to operate as a good corporate shareholder, there has been important clarification over the last year about SWFs' identity and their role in the global community. All now accept that SWFs are not above the law and do not exist in isolation from the markets. The West is learning to accept them as large and legitimate players in the global financial system. For their part, SWFs are learning to conduct their operations as important and responsible members of the world community, with all the rights and obligations this entails.

The recent economic crisis has hastened recognition that each side depends on the other: neither can dictate to the other or ignore its concerns. This reality presents an excellent basis on which SWFs and the rest of the global financial community can further their cooperation and forge a mutually beneficial coexistence. Such enhanced collaboration will be necessary as SWFs and other investors address the fallout from the current crisis and explore new ways to operate in an altered financial landscape.

Long-Term Consequences of the Financial Crisis for Sovereign Wealth Funds

by Andrew Rozanov

While the financial crisis has had a direct impact on SWFs' day-to-day operations and immediate future plans, there are also important long-term consequences. These include how sponsoring governments or the funds themselves will determine adequate reserve levels, what role the state might play in local economies and how riskier assets will be allocated in SWF portfolios. In addition, there could be even more significant developments regarding increased emphasis on strategic policy objectives for SWFs, greater involvement by SWFs in corporate governance issues, and a deeper integration of SWF holdings into other state asset and liability considerations.

Immediate Consequences

The dramatic drop in commodity prices, the collapse of world trade and the reversal of foreign capital flows are undermining funding sources for most SWFs around the world, just as sharp declines across various asset classes are decimating their portfolios. This is happening at the worst possible moment: many SWFs are being asked by their sponsors to help support domestic spending and investment and to help stabilize local banks and financial markets.

Their first response has been to refocus on liquidity; many SWFs that were moving into riskier asset classes in search of higher yields and diversification benefits have effectively put these plans on hold and started building up large liquidity buffers. This abrupt de-risking of investment programs has led to an increased appetite for traditional reserve assets, such as the US dollar and US government paper. Second, the pressing need to provide emergency support to local economies and institutions has shifted the funds' focus — in some cases, for the first time — to domestic markets. My colleague John Nugée alluded to the specific cases of Russia, Ireland, Kuwait and Qatar in the previous chapter. One can add Kazakhstan, South Korea, the United Arab Emirates and even France, where a new sovereign fund has been set up to invest in and provide support to strategically important industries and sectors.

Redefining 'Adequate' Reserve Levels Post-Crisis

Such policy adjustments help address immediate problems that the crisis presents. At the same time, they point to a bigger set of issues that SWFs and their sponsoring governments may need to consider in the longer term once the current crisis subsides. For example, many emerging market economies may want to revisit their criteria for determining reserve adequacy. Monetary authorities in some countries may have underestimated the amount of dollar liquidity they actually need in times of distress, especially in the context of a once-in-a-lifetime global financial crisis. Calculating sufficient levels of foreign exchange reserves is more art than science and will vary for individual countries. However, countries hit badly by the current crisis will most likely err on the side of caution in the future and set aside higher, rather than lower, reserves for prudential policy purposes.

Government as Regulator *and* Owner?

Another obvious long-term consideration is the role of the state in the local economy. It is one thing for a government to be a portfolio investor and a minority shareholder in a foreign company, which is located and regulated outside its jurisdiction. But when the government is a significant owner as well as regulator and referee for investee companies, the situation can be more challenging.

While the current financial crisis certainly favors pragmatism over ideological dogma, it is important to keep in mind that government interference can and often does result in corruption, waste and inefficiency — a lesson many societies have learned the hard way. But rather than questioning the right of governments to be active participants in the local economy and financial markets, it may be more productive to consider how to structure such participation to mitigate associated risks and to allow businesses to operate normally in free markets and under fair regulations.

The experience of several sovereign funds currently outside the narrowly defined scope of SWFs is illustrative, as they have invested in and run domestic business operations across a variety of sectors and industries. These include, among others, Abu Dhabi's Mubadala Development Company, Malaysia's Khazanah Nasional Berhad, Vietnam's State Capital Investment Corporation and Kazakhstan's Samruk-Kazyna National Wealth Fund. Most of these funds have been set up in ways that effectively put them on a commercial footing and at arm's length from the rest of the government. They tend to operate as any other private sector entity in a very market-friendly fashion.

Reconsidering Risky Assets

For a long time, investors have viewed portfolio diversification as the last available free lunch; incorporating a wide variety of less-than-perfectly correlated asset classes can improve a portfolio's return-to-risk profile. However, the downturn has severely tested this core tenet of modern portfolio theory. Many long-established and highly respected institutional investors — sovereign wealth funds as well as pension plans, endowments and foundations — looked on in horror as their broadly diversified portfolios composed of supposedly uncorrelated asset classes suddenly registered large double-digit percentage drops in value, as correlations across most investments rose in unison. Was this a statistical aberration, a so-called perfect storm, or has diversification failed? And if it has failed, what can SWFs and other large institutional investors do to protect their long-term financial wealth?

The question is not how much protective liquidity to maintain in the sovereign portfolio, but how to allocate the remaining capital to various asset classes to earn and accumulate risk and liquidity premia available to a large and patient investor with a very long investment horizon. SWFs are likely to conduct a thorough analysis of their asset allocation, portfolio construction and risk management approaches and assumptions. A new generation of risk models will emerge that use more robust scenario analysis and stress tests for the kinds of multiple standard deviation events that have occurred with disturbing frequency over the last few years. The funds themselves will need to engage in patient and consistent communication with their stakeholders and the general public to explain exactly what the problems are and how they are being addressed.

More Significant Consequences

These potential long-term consequences are extensions of the short-term policy responses that governments made during the crisis: building liquidity buffers, supporting domestic markets and temporarily curtailing diversification into risky assets. In addition, we see three other potential outcomes from the current crisis, which may not be as obvious but could have more significant implications:

- Sponsoring governments may put more emphasis on SWFs' strategic policy objectives
- SWFs may choose to become much more involved in corporate governance
- SWF assets may become more integrated with other state assets and liabilities

The first point may seem counterintuitive; in the last couple of years sovereign wealth funds have gone to great lengths to assuage concerns in the West about possible non-commercial motivations behind their investments. Many fund representatives have stated repeatedly that financial considerations of long-term return and risk drive their investment decisions. The major impetus behind the best practices of the Santiago Principles described in the previous chapter was to achieve an explicit commitment by the funds that "all investments are made on an economic and financial basis." Given this agreement, the expectation is to see fewer investments made for anything but financial reasons.

The vast majority of SWFs, with the exception of pure stabilization funds, operate at least partially, if not primarily, as intergenerational savings vehicles. As such, they invest for long-term returns, subject to acceptable risks. Given this fact, it is perfectly reasonable to expect financial considerations to drive their investment decision-making. Yet it is also true that most of these funds have a strong public policy element. They were set up for policy reasons and are available to policymakers to deploy in pursuit of certain policy objectives, which may or may not coincide with the optimal financial risk-return outcome.

SWFs and Strategic Objectives

The financial crisis has shown that even those sovereign funds charged with meeting specific pension liabilities have come under tremendous pressure to help ameliorate the credit crunch and liquidity squeeze. In some cases, even legislative directives regarding a fund's objectives and legitimate uses were not enough to prevent a shift in mandate. The overriding public policy task of mobilizing all available means to deal with the crisis was even more pronounced in sovereign wealth funds that had dual or multiple objectives. It was not just a case of increased spending; rather, a few sovereign funds needed to change their investment mandates and guidelines to allow allocations to domestic assets or targeted investments in specific domestic institutions, such as national commercial banks seeking recapitalization.

Even before the financial crisis erupted with full force, many sovereign funds, most notably in the Middle East and Asia, invested in certain overseas assets expecting not only an attractive risk-adjusted return but also certain policy benefits. For example, some countries have aimed to develop a local financial industry and infrastructure, hoping to become major regional financial centers. More than just a simple risk-return calculation, therefore, appears to have motivated at least some of their investments in well-established Western financial firms, banks and stock exchanges. Many SWFs also acquired shares in large firms in other sectors that seem important for their countries' strategic objectives of building up productive capital stock and diversifying their economies.

This practice seems to have motivated many of the investments in semiconductors and microchips; electrical engineering, tools and machinery; automobiles; aerospace; and consumer electronics. If it can be demonstrated that such sizable strategic investments can lead not only to superior long-term financial returns, but also to skill-enhancing and productivity-boosting transfers of proprietary information and technology, then combining a financial objective with a strategic policy objective could become more compelling. Such a strategy may also help a sovereign fund manager defend a large shareholding's temporary underperformance, if a case can be made for not only superior expected returns but also some tangible benefits accruing to the broader economy.

SWFs as 'Active Owners'

Expecting sovereign wealth funds to get more involved in corporate governance may also seem counterintuitive at first glance. After all, many SWFs were shying away from precisely such involvement when they decided to forego board representation and voting rights as they invested heavily in Western financial firms and banks in 2007 and early 2008.

However, such an unapologetically passive stance, while reassuring from a political perspective, has drawn criticism from other quarters. As the previous chapter discussed, if a large institutional shareholder removes itself completely from monitoring management and participating in corporate governance, it can be liable for not fulfilling its fiduciary duty to the underlying fund beneficiaries. More broadly, it opens itself to charges of aggravating the so-called agency problem, which arises when the interests of owners and managers are not properly aligned. A reluctance to take a stand becomes even more problematic during crises, when holdings are in trouble and shareholders require answers about how SWFs will address poor performance.

As a result, some SWFs may consider taking a more pro-active posture. But to do so in a politically acceptable and market-friendly way, they may need to consider joining forces with two other groups of market participants. The first is large institutional investors who exercise ownership rights to ensure long-term value creation and the sustainability of the underlying companies. They acknowledge that, apart from shareholders and management, companies have other important stakeholders. They understand that a business enterprise will be successful in the long term only if it creates a sustainable balance of interests among all constituents. In their corporate governance activities, they often look beyond purely financial considerations to issues such as the environment, labor practices and social responsibility.

The second group is the so-called activist hedge funds. While smaller in size, they tend to punch above their weight. Their strategy is more focused and aggressive; they tend to control larger stakes; and they are quick to escalate their activist efforts from quiet, behind-the-scenes discussions with management to widely publicized corporate insurgency, with no-holds-barred media campaigns and intense proxy fights. The interests of an activist hedge fund are not always aligned with those of large institutional investors. One example is the occasional attempt by an insurgent hedge fund to pressure a company into increasing its debt load and using the cash to buy back stock or pay out a special dividend.

These divergent interests reflect a fundamental difference in investment horizons: while an activist hedge fund may prefer to cash out quickly, many institutional investors, including large SWFs, may want to hold the stock over a much longer period. For long-term investors, lower leverage and higher cash reserves may prove more beneficial, as the company considers investing in new business lines or future acquisitions. Lower leverage can also be helpful in times of economic downturn and financial distress.

However, other issues may force an alignment of interests among activist hedge funds and institutional investors like SWFs. These include the composition, competence and independence of boards of directors; executive pay; “poison pills” and other takeover defenses; and merger, acquisition and divestiture proposals. Given SWFs’ current reluctance to assume a high public profile, it may be a while before we see a sovereign fund actually join forces with such activist players. But it is not unreasonable to expect that SWFs will gradually evolve to more closely resemble their large institutional peers in terms of active ownership and shareholder rights.

SWFs vs. Other National Assets and Liabilities

Lastly, the current crisis may lead some SWF nations to reconsider sovereign wealth in conjunction with other sovereign assets and liabilities. For example, what is the optimal SWF portfolio for a commodity-exporting nation at a given point in time? If there are no explicit liabilities attached to the investment policy, is the asset allocation decision simply a function of expected returns, volatility and the correlations of various financial assets and markets? Or should the asset allocation analysis and subsequent portfolio construction also account for the nation's natural resources, e.g., oil in the ground? As more of the commodity is extracted, exported and converted into financial assets — thereby becoming a relatively smaller part of national wealth — how does the optimal asset allocation change over time? (See “Optimization of Total Portfolio Sovereign Wealth” on page 35 for a more detailed discussion of this issue.)

For a commodity-importing nation, a similar type of analysis may be useful. One would look at the SWF's current commodity allocations in the context of all other physical and financial commodity-related holdings, which may be controlled by other state-owned investment vehicles and business entities. Beyond commodities, a similar logic could be applied to real estate to account for physical and financial real-estate-related holdings not just of the SWF, but of all state entities, including any real estate currently used by, for example, embassies or other overseas government offices.

On the liability side, if SWF assets are supported by interest-bearing government debt, often denominated in local currency, then this debt could be taken into account when determining the optimal asset mix and future investment strategy. Indeed, from an even broader national asset-liability management (ALM) perspective, it may be interesting to explore whether some foreign assets currently residing in a domestic-debt-funded SWF might be more optimally swapped against debt with the local government pension fund. This could potentially move SWFs that are reluctant holders of reserves to shrink their balance sheets, while helping the pension fund expand its foreign allocation without significant market impact. Other creative ALM ideas might include the innovative use of exchange-traded funds or exchangeable bonds to dispose of “excess” reserves in an orderly and market-friendly way.

While the global financial crisis has presented SWFs, like other institutional investors, with serious liquidity and performance challenges, it could also provide an important catalyst for SWFs to re-examine their identity, priorities and objectives in a new financial world order. These deliberations could have a significant long-term effect on how the funds operate in ever more closely intertwined capital markets around the world.

Sovereign Wealth Funds, Special Drawing Rights and the New Global Financial Architecture

by George Hoguet

We have seen how sovereign wealth funds have experienced very substantial losses in the current downturn. Like other investors, SWFs are focused not just on current tactical asset allocation, but also on a revised strategic asset allocation framework in light of growing uncertainties about the medium-term outlook for the global economy and the structure of global finance.

China and Russia, the sponsor states of two large sovereign wealth funds, have expressed concern about their exposure to the US dollar and have voiced their support for an intensified dialogue on reform of the international monetary system. One of their palpable worries is the timing and implication for financial markets of prospective “exit strategies” of central banks and national treasuries, which collectively have purchased trillions of dollars of illiquid and impaired assets. In particular, some market participants are concerned about accelerating inflation in the medium term in the United States and its impact on the US dollar.

Given the severity of the crisis, and indeed the frequency of international financial crises since the collapse of the Bretton Woods system in 1971, several leading thinkers, including economics Nobel Laureates Joseph Stiglitz and Robert Mundell, have advocated a fundamental re-examination of the structure and functioning of the international monetary system. In particular, they have advocated greater use of the International Monetary Fund’s Special Drawing Rights (SDRs), a basket of currencies

used as an internal accounting unit by the IMF and a limited number of other international bodies. In March 2009, the governor of the People's Bank of China, Zhou Xiaochuan, issued an essay entitled "Reform of the International Monetary System" in which he supported substantially greater use of SDRs and the adoption of a "super-sovereign" reserve currency.

SWFs are both participants in and observers of the evolving debate over a new global financial architecture. Because they are frequently new, large and growing government owned or sponsored investment funds, SWFs may be in a position to promote the private use of SDRs as a unit of account and store of value. Through the purchase of SDR-denominated bonds and securities, these institutions may be able to develop a private market for SDRs. Such a market could be one step in facilitating the greater *official* use of SDRs and could advance the dialogue on the development of a super-sovereign reserve currency.¹

The emergence of such a currency is the stated objective of China, the world's largest holder of foreign exchange reserves (roughly \$2 trillion). Russia, the world's third-largest holder of reserves (roughly \$368 billion), has also suggested expanding SDRs and including gold in the basket of currencies that constitute the SDR.² Brazil's President Luiz Inacio "Lula" da Silva has also supported studying a larger role for the SDR in international finance.

SWFs may decide to purchase SDR-denominated instruments to:

- Diversify their currency risk
- Create more efficient portfolios
- Promote the SDR as an alternative to the dollar as a reserve currency

For technical, political and other reasons, SWFs may not pursue such a course. But, given the tremendous uncertainty about the future of the world economy, as well as official institutions' portfolio choices, global investors should construct their strategic asset allocation to be highly diversified by asset class and, particularly, currency.

Origins and Implications of the Global Financial Crisis

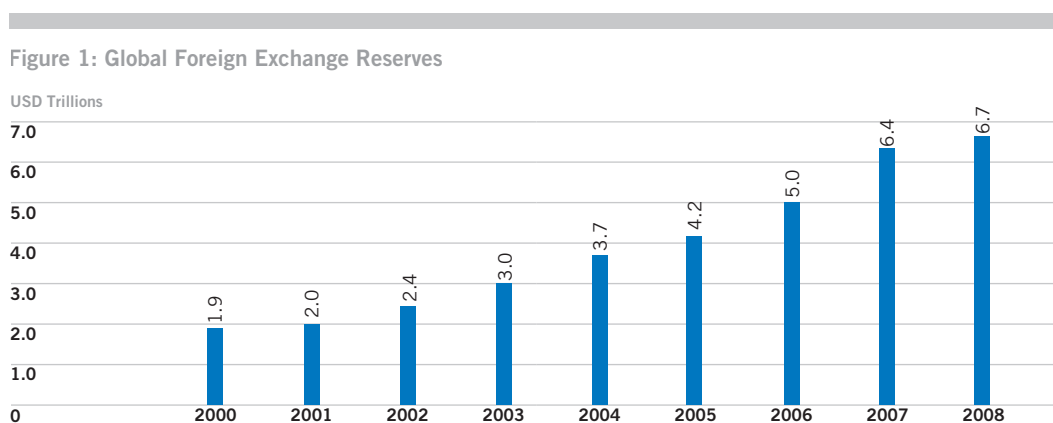
The Asian Development Bank estimates that total worldwide wealth losses from the current Great Recession approach \$50 trillion. In its *World Economic Outlook* in April 2009, the IMF estimated that global output will contract by 1.3 percent in 2009 and will not return to trend growth until 2011 at the earliest. It further suggests that write-downs in mature market economies could surpass \$4 trillion, approximately two-thirds of which may be taken by banks. The IMF further characterizes the current downturn as "the deepest post-World War II recession by far."

¹ The full text of the speech can be found on the Bank for International Settlements' website, www.bis.org.

² Ambrose Evans-Pritchard, "Russia Backs Return to Gold Standard to Solve Financial Crisis," *The Daily Telegraph*, March 29, 2009.

Furthermore, according to the International Labour Organization, worldwide unemployment will rise by 29 million in 2009 compared with 2007, and this total could reach 59 million if conditions continue to deteriorate.³ Although the crisis originated in the developed world, it heavily impacted the emerging world through credit, trade, commodity and other channels.

Both market and government failures contributed to the current crisis, including weak government regulation, fraud and excessive leverage. US Federal Reserve Chairman Ben Bernanke and other observers have pointed to the persistence of global imbalances as a significant cause of the crisis, in which surpluses from the developing world (particularly China) helped to fuel a consumption binge in the United States. To put this in perspective, reported global reserves grew from \$1.9 trillion to \$6.7 trillion from 2000 to 2008, roughly 17 percent per year and dramatically in excess of global output (see Figure 1).



Source: International Monetary Fund, Currency Composition of Official Foreign Exchange Reserves, June 2009.

To varying degrees, the official policy response to the crisis around the world has included massive monetary easing, large fiscal stimulus, and emergency financing to both industrial and, especially, financial institutions. It has also included substantial resource allocations to multilateral financial institutions. For example, on April 2, 2009, the Group of 20 agreed, among other measures, to increase resources available to the IMF through the New Arrangements to Borrow of up to \$500 billion. It also agreed to a general allocation of IMF Special Drawing Rights equivalent to \$250 billion to boost global liquidity. In addition, the group encouraged the IMF to study the possibility of issuing bonds. China has indicated that it will purchase \$50 billion of these bonds, which will be denominated in SDRs.

³ International Labour Organization, *Global Employment Trends*, May 2009 update.

Arguably this crisis may be seen as having three phases: stabilizing the patient (averting a global depression and systemic collapse); reviving the patient (restoring the world economy to trend growth); and inoculating the patient (designing and implementing a national and global financial architecture such that the massive output losses caused by financial crises can be avoided or at least mitigated).

While commentators may disagree about which phase of the crisis we currently face, analysts are increasingly focusing on the longer-term implications of the Federal Reserve's policy of "quantitative easing" and large budget deficits in the United States. The Congressional Budget Office estimates that the FY 2009 budget deficit will be 8.3 percent of GDP (although most forecasters now suggest a figure closer to 13 percent), and that the ratio of US federal debt held by the public to GDP will rise to from 40.8 percent in 2008 to 54.4 percent in 2011.⁴ Although powerful deflationary forces are at play in the global economy, Martin Feldstein, former chairman of the US Council of Economic Advisors (CEA), argues the risk of eventual inflation is high.

Alan Meltzer, one of the foremost historians of the US Federal Reserve System and a leading monetarist, has also expressed concerns about the prospect of sharply higher US inflation. It is likely that additional global policy measures will include sweeping regulatory reforms and additional discussion of the global financial architecture.

Financial Crisis Highlights Policy Issues

To the extent that any country's relative position is enhanced by the crisis, China would qualify. Its reserves currently stand at about \$2 trillion, or nearly 50 percent of GDP. China now accounts for roughly 28 percent of global reserves, while all emerging market countries plus Taiwan, Hong Kong and Singapore now hold roughly 71 percent of global reserves. In 2008, despite the global recession, China's reserves grew by more than \$400 billion.⁵

One statistic may give a sense of China's growing financial prominence. If China alone decided to use just one-half of its official assets (reserves plus sovereign wealth fund assets) to purchase global equities, as of July 9, 2009 it would be in a position to purchase 5 percent of every company in the FTSE® All World Index.⁶

China's sovereign wealth fund, the China Investment Corporation (CIC), controls some \$200 billion in assets. While the CIC currently ranks as the world's sixth-largest SWF, given the size of China's reserves as a percentage of its GDP and its continued pace of reserve acquisition, the CIC may well emerge as

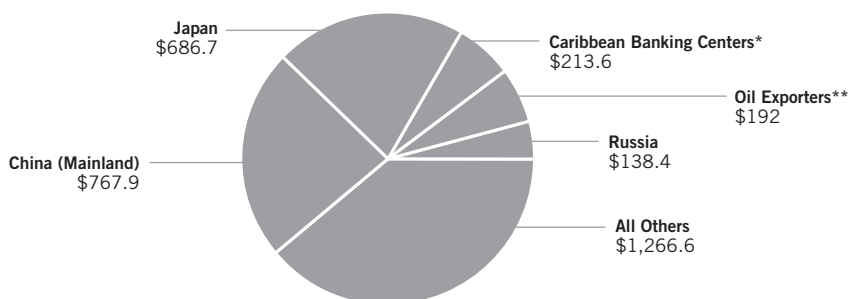
⁴ US Congressional Budget Office, "The Budget and Economic Outlook: Fiscal Years 2009 to 2019," January 2009. Note that debt held by the public does not include debt issued by Fannie Mae and Freddie Mac.

⁵ International Monetary Fund, "International Financial Statistics," May 2009.

⁶ FactSet analytics.

Figure 2: Major Foreign Holders of US Treasury Securities as of March 2009

USD Billions



Estimated foreign holdings of US Treasury marketable and non-marketable bills, bonds, and notes reported under the Treasury International Capital (TIC) reporting system are based on annual Surveys of Foreign Holdings of US Securities and on monthly data. Source: US Department of the Treasury, Federal Reserve Board, May 2009

*Caribbean Banking Centers include Bahamas, Bermuda, Cayman Islands, Netherlands Antilles and Panama.

**Oil exporters include Ecuador, Venezuela, Indonesia, Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, the United Arab Emirates, Algeria, Gabon, Libya, and Nigeria.

the world's largest SWF. As of March 2009, China owned \$767.9 billion in US Treasury securities or roughly 23 percent of the US debt held by foreign entities (see Figure 2). Analysts also estimate that China holds more than \$500 billion in US agency securities.

The US dollar serves as both a domestic and international currency. Roughly 65 percent of allocated global foreign exchange reserves are in dollars. More than half of all dollar bills by value are held outside the United States, and the dollar is used as a transaction currency between non-residents. The Bank for International Settlements estimates that global foreign exchange trading exceeds \$3.2 trillion daily and that more than 85 percent of all trading involves dollars.⁷

Traditional definitions of money highlight its role as: 1) a unit of account; 2) a medium of exchange; 3) a store of value; and 4) a standard of value. One of the expectations of a reserve currency is to provide financial stability. However, in light of the weakness of the US financial sector and the uncertain prospects for US inflation, China at least is worried about the prospect of large losses on its dollar holdings. In March Premier Wen Jiabao said, "We have made a huge amount of loans to the United States. Of course we are concerned about the safety of our assets. To be honest, I'm a little bit worried."⁸ Premier Wen reiterated his concerns the following month at the Boao Forum for Asia, China's version of the World Economic Forum in Davos.

⁷ Bank for International Settlements, "Triennial Central Bank Survey," December 2007.

⁸ "China's Premier Calls on Washington to Guarantee Safety of Chinese Holdings of US Treasuries," *Associated Press*, March 13, 2009.

People's Bank of China Governor Zhou Xiaochuan made three main proposals in his March essay:

1. Reforming the international monetary system and creating an international reserve currency that “is disconnected from individual nations and is able to remain stable in the long run, thus removing the inherent deficiencies caused by using credit-based national currencies.”
2. Expanding the use of the IMF's SDRs, including as a means of payment; currency of denomination of securities; commodity denomination and reserve currency.
3. Entrusting part of member countries' reserves to the centralized management of the IMF.

Zhou also implied that the currencies used to denominate the SDR should include the renminbi at some point in the future. Russia, a major gold producer, has also expressed concerns about the international monetary system. Government sponsors of other SWFs may have similar views though be less vocal because of different geopolitical circumstances.

The Definition and Role of Special Drawing Rights

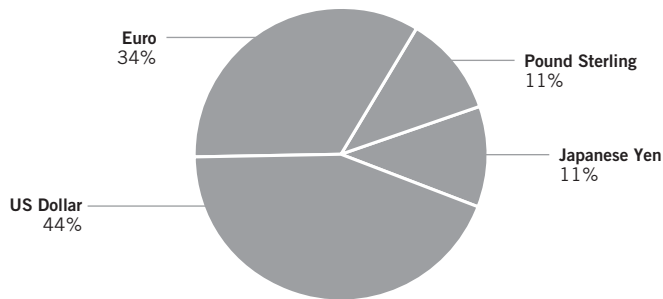
SDRs are an arcane and complex topic.⁹ According to the IMF's website, “The SDR is an international reserve asset, created by the IMF in 1969 to supplement the existing official reserves of member countries. SDRs are allocated to member countries in proportion to their IMF quotas. The SDR also serves as a unit of account of the IMF and some other international organizations. Its value is based on a basket of key international currencies.” Because SDRs can be created by the Fund out of nothing, but only with approval of 85 percent of the shareholders, they are sometimes referred to (somewhat erroneously) as “paper gold.” Note that the US exercises a *de facto* veto on the creation of SDRs.

The SDR is composed of a portfolio of currencies whose weights are reviewed every five years. The currencies included in the SDR are those currencies issued by Fund members whose exports of goods and services during the five-year period ending 12 months before the effective review date had the largest value *and* that are “freely useable.” SDR weights are based on the value of exports and the amount of reserves denominated in the respective currencies. At the latest review in 2005, the Fund established the weights for the SDR illustrated in Figure 3.

At each five-year review, the IMF Board establishes the initial weights of the currencies in the IMF basket, but *during* the five-year period the weights change on a daily basis as a function of movements in exchange rates in the constituent currencies. For example, appreciating currencies gain a larger share of the basket and depreciating currencies a smaller share.

⁹ For a fuller discussion, see the IMF's Articles of Agreement at www.imf.org as well as Peter B. Clark and Jacques J. Polak, “International Liquidity and the Roles of the SDR in the International Monetary System,” *International Monetary Fund*, December 2002. Margaret Garritson de Vries also wrote about SDRs for the IMF in 1976 and 1985.

Figure 3: Composition of the Special Drawing Right (SDR)



Five-year review period beginning January 1, 2006.
Source: International Monetary Fund

SDRs are an official reserve asset and bear interest. The SDR interest rate is based on the weighted average interest rate of the representative short-term money market rates of the SDR basket currencies. Under Article XXIII of the IMF’s Articles of Agreement, “each participant undertakes to participate with the Fund with the objective of making the Special Drawing Right the principal reserve asset in the international monetary system.” In this context, Zhou’s statement may be seen as, in effect, advocating that the international community implement already agreed upon — if not yet implemented — objectives.

The Origins of SDRs

The IMF created SDRs in 1969 as an international reserve asset meant to support the Bretton Woods fixed exchange rate system by supplementing the existing reserves of member countries. Today, SDRs are the basic unit of account used by the IMF and some other international organizations. These accounting uses may be more widespread than initially thought. For example:

- Some airlines now designate charges for overweight baggage in SDRs.
- Transit fees in the Suez Canal are denominated in SDRs.
- Some international organizations maintain their accounts in SDRs or accounting units linked to the SDR. For example, the Arab Monetary Fund maintains its accounts in Arab Accounting Dinars (AAD). In March 2003, the Bank for International Settlements decided to adopt the SDR as its unit of account, replacing the gold franc.
- In the past, some countries such as Latvia have pegged their currency to the SDR.

After US President Richard Nixon suspended the convertibility of the US dollar into gold in 1971, the fall in the dollar led to renewed interest in the SDR. However, once the US embarked upon a comprehensive anti-inflation program in the early 1980s (including very substantial increases in interest rates), interest in the SDR fell.

Until quite recently, the official SDR's modest status was reflected in its low level of issuance. Only 21.4 billion SDRs have been allocated since their inception in 1969, around 0.3 percent of current world reserves. However, as mentioned above, the G-20 agreement in April to create an additional \$250 billion in SDRs to boost global liquidity will eventually increase the share of SDRs in world reserves to roughly 4 percent. Only 144 of the IMF's 185 member countries hold SDRs, because the rest, notably countries in Central and Eastern Europe and Central Asia, joined the Fund after the last time SDRs were allocated in 1979.¹⁰

SWFs and the SDR

SWFs could potentially expand the market for SDRs as part of wider efforts to manage global liquidity. In 1981, US Federal Reserve economist Dorothy Sobol reviewed the private use of the SDR. She observed, "The official and private SDR are two distinct instruments. The public SDR exists in the framework of the IMF."¹¹ She further observed that public holders of SDRs can exchange their SDRs for currencies such as dollars or yen. Private holders cannot do so. But they can denominate private contracts in SDRs, thereby providing investors currency diversification.

Private markets in SDR-denominated instruments first emerged in 1975. These instruments included commercial bank deposits, syndicated credits, CDs, floating rate CDs, Eurobonds and floating rate notes. Sweden issued an SDR-denominated credit in 1981, and several other borrowers followed.

The private use of the SDR has not grown substantially, even though analysts noted more than 20 years ago that "the variance of the SDR exchange rate will always be lower than the weighted average of the variances of the component currencies in the basket."¹² They suggested that SDR-denominated securities had a role to play in the construction of efficient portfolios.

SDR contracts may suffer from technical handicaps that, although they can be addressed in legal frameworks, may impede their adoption by SWFs. Such handicaps include: safeguard clauses that specify what happens if the IMF changes the composition of the SDR; currencies used to repay interest and principal; the absence of clear market-making and liquidity provisions; and other constraints.

¹⁰International Monetary Fund

¹¹ Dorothy Sobol, "The SDR in Private International Finance," *Federal Reserve Bank of New York Quarterly Review*, Winter 1981-1982.

¹² Carlos Medeiros and Simon Nocera, "The Potential Role of the SDR in Diversified Portfolios of Central Banks," IMF working paper, 1988.

However, by virtue of their origin, ownership structure, and investment and political objectives, some sovereign wealth funds are uniquely positioned to promote the private use of the SDR. This could in turn facilitate greater public use of the SDR, and in particular the development of an IMF-sponsored “substitution account” in which official holders of dollars could exchange their surplus reserves for SDRs at the IMF. The IMF would manage the reserves.

In the eyes of some, the current global recession has rendered the concept more salient. While China’s central banker Zhou stressed in his March essay that reform of the international monetary system “should be a gradual process that yields win-win results for all,” presumably he would not have raised the issue unless China intended to advance the concept.

There is currently a shortage of credit in many emerging markets and certain sectors in industrial countries. SWFs, among other measures, could advance the private use of SDRs by agreeing to buy bonds and loans in SDRs, encouraging dealers to make markets in SDR instruments, and potentially denominating their financial accounts in SDRs. Furthermore, the topic could be discussed at the recently established International Working Group of Sovereign Wealth Funds.

Evolving International Monetary Regimes

Depending on how one counts, the international monetary regime has changed four times in the 20th century. The inherent tension between national economic interests and global interests posed by using a credit-based sovereign currency as the world’s reserve currency has led some economists since John Maynard Keynes to call for a common global currency.

Keynes himself, whose advocacy of increased public demand to offset private demand shortfalls finds near universal acceptance these days, advocated a global currency, “bancor,” to be backed by a basket of 30 commodities. Keynes also argued that both surplus and deficit countries should bear the burden of adjustment.

In a prescient article from 1984, Harvard economist Richard N. Cooper predicted that 25 years hence — that is in 2009 — the contradictions within and complications of the international monetary arrangements since the Second World War would give way to a one-currency regime. “Some such scheme,” Cooper wrote in an article marking the 40th anniversary of Bretton Woods, “or its functional equivalent, will be necessary to avoid retrogression into greater reliance on barriers to international trade and financial transactions.”¹³

¹³Richard N. Cooper, “A Monetary System for the Future,” *Foreign Affairs*, 1984.

In the same article, Cooper argued that growth in global trade and the interdependencies of global economies would ultimately require “the creation of a common currency for all of the industrial democracies, with a common monetary policy and joint Bank of Issue to determine that monetary policy.” A common currency at the core of the world economy, he said, would provide greater monetary stability of the world financial order and a consistent framework against which countries could fix their exchange rate policies or maintain a managed float.

It is unlikely that the United States will make the same policy mistakes that led to Japan’s “lost decade.” Nor is it likely that the dollar will suffer the fate of the pound sterling. The dollar will remain the world’s principal reserve currency for the foreseeable future. However, it is likely that in the coming months the world will witness an intensified dialogue on international monetary arrangements. And analysts should not forget that, in 1978, the United States issued bonds (albeit non-marketable) denominated in deutsche marks and Swiss francs, the so-called “Carter Bonds.”

Evidence of the changing landscape can be seen in the recently expanded swap facilities (for a total of \$120 billion) under the Chiang Mai initiative, in which China, Japan, and South Korea and the ASEAN countries agree to cooperate on monetary matters as well as to provide swaps. Further evidence can also be seen in China’s select liberalization of the renminbi in trade finance (as well as \$95 billion in swap lines of credit with trading partners as diverse as Argentina, Ecuador, Belarus and Hong Kong). This heightened monetary uncertainty argues for broad currency diversification by investors.

In March 2009, former US Council of Economic Advisors Chairman and Nobel Laureate Joseph Stiglitz chaired the United Nations’ Commission of Experts on Reform of International Finance and Economic Structures. Stiglitz argued that the proposal for a new global reserve currency — the SDR — is a “good idea for many reasons.” He also suggested that replacing the dollar with a new global currency is “very much in the interest in the US.”¹⁴ However, this view is clearly contentious.

¹⁴Nathan Gartels, “Move to Replace Dollar with a New Global Currency Reflects ‘Rise of the Rest’ Powershift,” *New Perspectives Quarterly*, April 20, 2009.

Contours of a New Global Financial Architecture

Severe financial crises frequently cause policymakers and investors to question the robustness of their assumptions and institutions. This re-examination can extend to international monetary arrangements. For example, the US Securities and Exchange Commission was created in 1934 in the aftermath of the crash of 1929. Moreover, several countries abandoned the gold standard in the 1930s.

The political impetus for revised and enhanced global national and financial regulation is growing, as are calls for a review of several aspects of the international monetary system. SWFs are, and will continue to be, part of the discussion.

While the notion of a super-sovereign reserve currency may seem far-fetched, it may be useful to remember that the European Currency Unit (ECU) preceded the euro by 20 years. The ECU served as a unit of account for target European food prices under the Common Agricultural Policy and also served in 1979 as a unit of account for the currency area designated as the European Monetary System. As is the case currently with the SDR, there were at one point both private and public ECUs. By 1992, there were more than \$250 billion in private financial assets denominated in ECUs. Over time the role of the ECU evolved and, eventually, euro notes and coins began to circulate.

SWFs, after the losses they have incurred because of the Great Recession, are estimated to hold between \$2.5 trillion and \$3 trillion in assets, well below global reserve assets. While sovereign wealth funds vary greatly in their objectives and governance, one unique characteristic is their ownership. As entities whose objectives include the diversification of national wealth and return enhancement, they are well positioned to both shape and react to the dialogue on the international financial architecture and the role of SDRs.

Optimization of Total Portfolio Sovereign Wealth

Sustainable, risk-adjusted portfolio growth over the long term is built on the premises of modern portfolio theory. The entire investment effort should consist of a series of well-defined and internally consistent processes. Quantitative techniques can assist in analyzing and managing trade-offs and risks. Sovereign wealth funds (SWFs) increasingly apply such financial tools to maximize returns, manage risk and ensure that their accumulated wealth supports their economies for decades into the future.

SWFs are usually found in national economies with substantial excess savings caused by the cash windfalls that can arise from either the exploitation of commodity wealth or massive trade surpluses. When economic activity becomes overly concentrated in a single sector, other types of investment may suffer. This phenomenon means that national economies can become imbalanced over time and overly exposed to risks associated with a particular sector. No one seems to mind this much when exports are booming or commodity prices are high. But this concentration of wealth can have a massively corrosive effect on national wealth when commodity prices collapse or export growth goes into reverse. This is precisely what has happened to several growing economies over the course of the last two years of financial dislocation.

These imbalances present SWFs with unique challenges. For example, if an SWF is optimized without taking into consideration the volatility associated with the underlying wealth generator (either export trade or exploitation of high-priced commodities), an unfortunate misallocation of assets can result. Many SWFs have encountered precisely this problem over the past year, discovering the hard way that

portfolio risk levels that seemed comfortable amid booming trade and high commodity prices become intolerable in their absence. Indeed, several funds have been forced to undertake difficult adjustments amid illiquid markets, with wealth-destroying consequences.

Total Portfolio Optimization

When building their portfolios, SWFs should take care to include the source of their wealth into their financial planning, bearing in mind that the value of the underlying wealth can fluctuate dramatically with the economic cycle. For example, economies with oil (or other strategically important commodity endowments) may want to interpret sovereign wealth broadly, managing the entirety of their wealth in a holistic manner. This concept means that when it comes to undertaking analysis or optimizing their investments, they would not simply optimize their stand-alone financial portfolios, but also look at their combined national wealth, including their SWF portfolios and their proven commodity reserves.

As an example, a developing country with substantial oil reserves worked with State Street Associates, State Street Global Markets' research partnership with academia and industry experts, to undertake a portfolio reallocation analysis. The goal of this analysis was to help its sovereign wealth fund client identify portfolios that maximize returns while simultaneously balancing risk of absolute loss against risk of loss relative to a benchmark portfolio. In terms of its liability profile, the SWF in this example represented an equity-like claim of the government on the underlying financial assets, as opposed to other types of SWFs, which are

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funded with local currency-denominated, interest-bearing debt. In terms of the expected use of funds, this particular SWF had a mixture of liabilities and was effectively a combination of a stabilization fund and an endowment-like entity.

A total portfolio was defined to include both financial and real assets, such as oil in the ground, and an asset portfolio consisting of financial assets only, e.g., stock and bond holdings. The analysis considered expected returns, variance and correlations among the asset classes in question. First, the stand-alone asset portfolio was analyzed, and it was discovered that the customer's existing asset mix, which included a sizable allocation to bonds, was nearly optimal and lay very close to the efficient surface. (Conventional mean-variance optimization results in an efficient frontier representing the optimal trade-off between expected return and absolute risk. Then an enhanced multi-risk optimization methodology was employed that balances expected return, standard deviation and tracking error to produce a three-dimensional "efficient surface").

Evaluating the embedded currency risk in overseas financial assets and identifying further improvements in the risk-return trade-off that could be achieved through the use of currency hedging came next. This was done by introducing currency forward contracts to the investable universe and including them in a simultaneous optimization procedure. The resulting optimal currency hedges helped materially reduce the absolute risk of the portfolio, while maintaining the same level of expected return.

The next step was to incorporate the country's commodity wealth into the "total portfolio" optimization framework, thus observing how the optimal allocation within the "asset portfolio" would change over time as oil in the ground was extracted, exported and converted into financial assets.

Energy-exporting countries understand that their natural resources are a critical asset that, if managed well, can support national wealth and well-being for generations. Because hydrocarbon resources are finite, many oil-exporting countries have established sovereign wealth funds as long-term, inter-generational investment structures designed to provide national wealth in a future era in which energy resources will have been depleted.

But this wealth varies significantly as markets fluctuate. The national balance sheet's exposure to natural resources can have significant implications for the expected growth trajectory of the SWF, especially when these resources are considered alongside traditional financial assets. To achieve an optimal outcome on a broader national level, SWFs should consider correlations between natural resources and financial assets when identifying optimal allocations.

In this example, the country's oil resources represented the bulk of such non-financial assets. Using historical monthly changes in the price of crude oil (derived from the benchmark NYMEX Spot Price for West Texas Light Crude), the volatility and correlation of oil relative to the financial assets in the client portfolio were measured.

Based on the fund's particular conditions, State Street Associates suggested several optimal asset allocations based on a range of assumptions for the present value of the economy's energy resources relative to the investment portfolio. To achieve this, the project incorporated several innovative enhancements to conventional portfolio theory including:

- Multi-risk optimization to simultaneously address concerns about absolute and relative performance
- Risk estimation for turbulent regimes to stress test alternative reallocations
- Within-horizon risk measurement to evaluate exposure to loss throughout the investment horizon
- Conversion of optimal reallocations into risk budgets

When the mineral wealth in the ground was included in the total portfolio allocation, the existing portfolio was rendered sub-optimal. While the portfolio optimization without the oil wealth called for a rather conservative mix of fixed income and some equity investments, the "total portfolio" optimization called for a nearly 100 percent equity allocation for the SWF's investments.

However, as the relative weight of oil in the ground decreases and that of the financial portfolio increases over time, the optimal allocation within the "asset portfolio" will shift from predominantly equity to a much more balanced mix of equity and bonds. Finally, in keeping with the country's conservative risk preferences (in turn dictated by the fund's important stabilization function), the fund's portfolio will allocate predominantly to bonds once the natural resources have been depleted.

This carefully calibrated system of risk assessment and portfolio allocation, evolving over time, can possibly even out the volatility inherent in a sovereign wealth fund's investments and, by extension, its underlying national economy. Because investment funds do not exist in isolation, an understanding of inherent volatilities and risks associated with the source of a sovereign fund's wealth is essential to ensuring stable, sustainable and balanced growth for the long run.

End Note

The events of the last two years have been tremendously challenging. And it has been a particularly trying time for sovereign wealth funds (SWFs), which have experienced substantial declines in both their investment valuations and in the value of the commodities and exports that account for their wealth. Moreover, it has been a sobering experience for some funds to endure the wrath of their home constituents who may well have previously believed them capable of mastering all capital market conditions.

But as this report has described, there is opportunity in crisis. The shift from Unrivaled Titans to Uncertain Mortals has resulted in a more realistic assessment of the funds' strengths and weaknesses. It has also led to a sense of solidarity with other investors and acknowledgement of interdependencies.

The downturn has helped hasten the creation of an organizational infrastructure for SWFs to discuss common challenges and to encourage the adoption of investment best practices. While issues of shareholder participation, transparency and accountability as they relate to SWFs are far from resolved, the crisis has given them renewed urgency. The creation of the International Working Group of Sovereign Wealth Funds now provides a forum for discussion and the Santiago Principles a framework of best practices.

More importantly, the growing recognition of mutual dependency between SWFs and the broader financial community provides an important incentive for continuing the discussion on corporate governance and shareholder responsibility. Understanding that neither side can dictate to the other or ignore their concerns establishes a stronger basis for future cooperation and communication.

That collaboration will be more important than ever as the world seeks to recover from the most serious financial crisis since the Great Depression. As we have seen, severe financial crises lead policymakers and investors to review their assumptions, policies and institutions. Like other institutional investors, SWFs are already examining how they measure and manage risk, especially in the case of illiquid investments such as real estate and private equity. The substantial drop in commodity prices has compelled some SWFs to reconsider sovereign wealth in relation to other sovereign assets and liabilities, a development that could ultimately affect their strategic asset allocation policies.

More broadly, the crisis has accelerated debate about the suitability of the global financial architecture as a whole. China's comments about the need for a super-sovereign reserve currency is just one of the policy issues currently under scrutiny. SWFs and their sponsors are now in a position to take a more active role in the discussion about the future financial landscape.

While no one knows what the outcome of that debate will be, at a minimum, SWFs are unlikely to revert to the Unknown Shadows they once were. Instead, the sense of shared vulnerability and responsibility born of the crisis is likely to intensify cooperation among SWFs as well as with the rest of the world. The crisis has drawn further attention to SWFs and the role they and their sponsor governments will play in deliberations about the future of global finance. Given the vast pool of assets they represent, SWFs will be important participants in shaping that future.

Appendix I

Generally Accepted Principles and Practices (GAPP) — Santiago Principles

In furtherance of the “Objective and Purpose,” the International Working Group members either have implemented or intend to implement the following principles and practices, on a voluntary basis, each of which is subject to home country laws, regulations, requirements and obligations. This paragraph is an integral part of the GAPP.

GAPP 1. Principle

The legal framework for the SWF should be sound and support its effective operation and the achievement of its stated objective(s).

GAPP 1.1 SUBPRINCIPLE The legal framework for the SWF should ensure the legal soundness of the SWF and its transactions.

GAPP 1.2 SUBPRINCIPLE The key features of the SWF’s legal basis and structure, as well as the legal relationship between the SWF and the other state bodies, should be publicly disclosed.

GAPP 2. Principle

The policy purpose of the SWF should be clearly defined and publicly disclosed.

GAPP 3. Principle

Where the SWF’s activities have significant direct domestic macroeconomic implications, those activities should be closely coordinated with the domestic fiscal and monetary authorities, so as to ensure consistency with the overall macroeconomic policies.

GAPP 4. Principle

There should be clear and publicly disclosed policies, rules, procedures or arrangements in relation to the SWF’s general approach to funding, withdrawal and spending operations.

GAPP 4.1 SUBPRINCIPLE The source of SWF funding should be publicly disclosed.

GAPP 4.2 SUBPRINCIPLE The general approach to withdrawals from the SWF and spending on behalf of the government should be publicly disclosed.

GAPP 5. Principle

The relevant statistical data pertaining to the SWF should be reported on a timely basis to the owner, or as otherwise required, for inclusion where appropriate in macroeconomic data sets.

GAPP 6. Principle

The governance framework for the SWF should be sound and establish a clear and effective division of roles and responsibilities in order to facilitate accountability and operational independence in the management of the SWF to pursue its objectives.

GAPP 7. Principle

The owner should set the objectives of the SWF, appoint the members of its governing body(ies) in accordance with clearly defined procedures, and exercise oversight over the SWF's operations.

GAPP 8. Principle

The governing body(ies) should act in the best interests of the SWF, and have a clear mandate and adequate authority and competency to carry out its functions.

GAPP 9. Principle

The operational management of the SWF should implement the SWF's strategies in an independent manner and in accordance with clearly defined responsibilities.

GAPP 10. Principle

The accountability framework for the SWF's operations should be clearly defined in the relevant legislation, charter, other constitutive documents, or management agreement.

GAPP 11. Principle

An annual report and accompanying financial statements on the SWF's operations and performance should be prepared in a timely fashion and in accordance with recognized international or national accounting standards in a consistent manner.

GAPP 12. Principle

The SWF's operations and financial statements should be audited annually in accordance with recognized international or national auditing standards in a consistent manner.

GAPP 13. Principle

Professional and ethical standards should be clearly defined and made known to the members of the SWF's governing body(ies), management, and staff.

GAPP 14. Principle

Dealing with third parties for the purpose of the SWF's operational management should be based on economic and financial grounds, and follow clear rules and procedures.

GAPP 15. Principle

SWF operations and activities in host countries should be conducted in compliance with all applicable regulatory and disclosure requirements of the countries in which they operate.

GAPP 16. Principle

The governance framework and objectives, as well as the manner in which the SWF's management is operationally independent from the owner, should be publicly disclosed.

GAPP 17. Principle

Relevant financial information regarding the SWF should be publicly disclosed to demonstrate its economic and financial orientation, so as to contribute to stability in international financial markets and enhance trust in recipient countries.

GAPP 18. Principle

The SWF's investment policy should be clear and consistent with its defined objectives, risk tolerance, and investment strategy, as set by the owner or the governing body(ies), and be based on sound portfolio management principles.

GAPP 18.1 SUBPRINCIPLE The investment policy should guide the SWF's financial risk exposures and the possible use of leverage.

GAPP 18.2 SUBPRINCIPLE The investment policy should address the extent to which internal and/or external investment managers are used, the range of their activities and authority, and the process by which they are selected and their performance monitored.

GAPP 18.3 SUBPRINCIPLE A description of the investment policy of the SWF should be publicly disclosed.

GAPP 19. Principle

The SWF's investment decisions should aim to maximize risk-adjusted financial returns in a manner consistent with its investment policy, and based on economic and financial grounds.

GAPP 19.1 SUBPRINCIPLE If investment decisions are subject to other than economic and financial considerations, these should be clearly set out in the investment policy and be publicly disclosed.

GAPP 19.2 SUBPRINCIPLE The management of an SWF's assets should be consistent with what is generally accepted as sound asset management principles.

GAPP 20. Principle

The SWF should not seek or take advantage of privileged information or inappropriate influence by the broader government in competing with private entities.

GAPP 21. Principle

SWFs view shareholder ownership rights as a fundamental element of their equity investments' value. If an SWF chooses to exercise its ownership rights, it should do so in a manner that is consistent with its investment policy and protects the financial value of its investments. The SWF should publicly disclose its general approach to voting securities of listed entities, including the key factors guiding its exercise of ownership rights.

GAPP 22. Principle

The SWF should have a framework that identifies, assesses, and manages the risks of its operations.

GAPP 22.1 SUBPRINCIPLE The risk management framework should include reliable information and timely reporting systems, which should enable the adequate monitoring and management of relevant risks within acceptable parameters and levels, control and incentive mechanisms, codes of conduct, business continuity planning, and an independent audit function.

GAPP 22.2 SUBPRINCIPLE The general approach to the SWF's risk management framework should be publicly disclosed.

GAPP 23. Principle

The assets and investment performance (absolute and relative to benchmarks, if any) of the SWF should be measured and reported to the owner according to clearly defined principles or standards.

GAPP 24. Principle

A process of regular review of the implementation of the GAPP should be engaged in by or on behalf of the SWF.

Appendix II

Analysis of Sovereign Wealth Fund Assets

Fund	Country	Inception	Source	Assets \$Billion*	Comments
Abu Dhabi Investment Authority	UAE (Abu Dhabi)	1976	Oil	\$ 625	September 18, 2008, <i>The Economist</i>
Saudi Arabia Monetary Agency	Saudi Arabia	N/A	Oil	500	January 22, 2009, <i>The Economist</i>
Government Pension Fund of Norway	Norway	1990	Oil	325	March 31, 2009, NBIM
Hong Kong Monetary Authority	Hong Kong	1998	Non commodity	205	May 31, 2009
Kuwait Investment Authority	Kuwait	1953	Oil	202	February 10, 2009, Reuters
China Investment Corporation	China	2007	Non commodity	190	April 23, 2009, <i>The Economist</i>
Government of Singapore Investment Corporation	Singapore	1981	Non commodity	180	Reuters and SSgA estimate
Revenue Regulation Fund	Algeria	2000	Oil	150	SSgA estimate
Temasek Holdings (Private) Ltd	Singapore	1974	Non commodity	84	February 12, 2009, <i>The Economist</i>
National Social Security Fund	China	2000	Non commodity	82	June 22, 2009, FT.com
Libyan Investment Authority	Libya	2006	Oil	70	June 11, 2009, FT.com
Reserve Fund	Russia*	2004	Oil	63	March 16, 2009
Qatar Investment Authority	Qatar	2003	Oil	50	January 22, 2009, <i>The Economist</i>
Australia Government Future Fund	Australia	2004	Non commodity	47	March 31, 2009
Fonds de Reserve pour les Retraites	France	2003	Non commodity	41	May 1, 2009
Kazakhstan National Fund	Kazakhstan	2000	Oil	38	June 1, 2009
Oil Stabilization Fund	Iran	1998	Oil	38	December 31, 2008
National Welfare Fund	Russia*	2008	Oil	34	January 26, 2009
Brunei Investment Authority	Brunei	1983	Oil	30	June 2009, US Department of State

* Source of data is own website unless otherwise stated under "Comments."

Analysis of Sovereign Wealth Fund Assets (continued)

Fund	Country	Inception	Source	Assets \$Billion*	Comments
Korea Investment Corporation	South Korea	2005	Non commodity	25	December 31, 2008
National Pensions Reserve Fund	Ireland	2001	Non commodity	22	March 31, 2009
Khazanah Nasional	Malaysia	1993	Non commodity	20	February 2009, <i>The Economist</i>
National Development Fund of Venezuela	Venezuela	2005	Oil	20	February 2009, <i>The Economist</i>
Excess Crude Oil	Nigeria	2004	Oil	20	March 10, 2009, www.allafrica.com
Economic and Social Stabilization Fund	Chile	2007	Copper	17	May 31, 2009
National Stabilization Fund	Taiwan	2000	Non commodity	16	December 31, 2008
Mubadala Development Company	UAE (Dubai)	2006	Oil	16	March 2009
Mumtalakat Holding Company	Bahrain	2006	Oil	14	SSgA estimate
Government Pension Fund of Thailand	Thailand	2003	Non commodity	11	March 31, 2009
State Oil Fund of Republic of Azerbaijan	Azerbaijan	1999	Oil	11	December 2008, <i>Euromoney</i>
Isithmar	UAE (Dubai)	2003	Oil	10	December 1, 2008
NZSuperannuation Fund	New Zealand	2003	Non commodity	8	May 31, 2009
State General Reserve Fund	Oman	1980	Oil	8	SSgA estimate
Pula Fund	Botswana	1966	Diamonds and minerals	7	December 2008
Sanabil al-Saudia	Saudi Arabia	2008	Oil	5	April 29, 2009, Mena FN
Timor-Lease Petroleum Fund	Timor	2005	Oil and gas	5	March 31, 2009
Heritage and Stabilization Fund	Trinidad and Tobago	2000	Oil	3	December 31, 2008

* Source of data is own website unless otherwise stated under "Comments."