

Braving the New World:

*SOVEREIGN WEALTH FUND INVESTMENT
IN THE UNCERTAIN TIMES OF 2010*



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PHOTO BY ROB BROWN



PHOTO BY MICHAEL GWYTHYR-JONES

LONDON AT NIGHT
LA SCALA, MILAN, ITALY

From the Editors

Braving the New World is Monitor's third annual report on the activity of SWFs, and the most recent in our series of regular SWF publications. Since 2008, Monitor has provided high-quality data and analysis on publicly reported direct sovereign wealth fund investments. The foundation of this work is the Monitor-FEEM SWF Transaction Database, which contains nearly 1,400 completed SWF investments made by 24 SWFs based in 14 countries between January 1, 1981 and December 31, 2010. The database also contains information on hundreds of announced investments that never appear to have been completed, and publicly reported divestments since 2009.

**The Monitor-FEEM SWF
Transaction Database
now contains nearly 1,400
completed investments
made since 1981.**

We believe it is important to ensure that the database is an accurate reflection of the SWF ecosystem, so we revise our list of funds each year to ensure that the database contains all funds that conform to our definition (see p. 31). This year we have removed three funds—those from Dubai—as many of the funds have pared down operations or concentrated on investing domestically in the wake of the emirate's debt crisis at the end of 2009.

Braving the New World argues that 2010 marks the beginning of a new pattern of investment for SWFs that equips them to deal with economic realities in the wake of the Global Financial Crisis. General trends revealed by the data include the following:

- After building greater in-house capacity in 2009, in 2010 direct SWF investments appear to be more prevalent. This means that we can track more of their investments and create a more nuanced picture of their investment behavior. Consequently, it is likely that we will continue to see SWFs taking a larger number of smaller stakes. Previously, we were able to track only larger investments which were taken directly.
- Contextualizing our data in the current economic environment suggests that commodities and other alternative assets will become increasingly important for SWFs. Returns on many traditional asset classes are currently depressed and seem likely to remain so, particularly developed market equities and government bonds. With SWFs keen to make good returns for their sovereign government owners, it may well be that they choose to increase their allocation to alternatives as they look to realign their portfolios with new economic realities.
- In this vein, SWFs have turned their eyes toward emerging markets. Asia in particular—and not just China, but also India, Singapore, Indonesia and Malaysia—has received a large influx of SWF investment. Yet, Asia is not the whole story. Latin America, previously a geography in which we saw very little direct SWF investment, has become more popular with funds chasing alpha returns.

2010 marks the beginning of a new pattern of investment for SWFs that equips them to deal with economic realities in the wake of the Global Financial Crisis.

These investment trends suggest that SWFs continue to act, as we have consistently argued, as financial entities, pursuing economically driven strategies. Yet, as the recent “Beijing Communiqué” from the International Forum of Sovereign Wealth Funds makes clear, SWF investment continues to cause some to suspect political motivations.¹ This may be exacerbated by the current social turmoil originating in North Africa and the Middle East, the consequent outbreak of the war in Libya, and the freeze on assets owned by the Libyan authorities, including the Libyan Investment Authority. These events may constrain the activities of Middle Eastern SWFs by causing concern at the international companies in which they have invested. On the whole, however, such concern seems misplaced as most of these funds’ investments are minority stakes, albeit with potential to change the perception of political risk and affect the risk and return properties of investee companies. Such potential misunderstanding could adversely affect capital movements, financial integration and ultimately the global imbalances that SWFs could contribute to absorbing.

This question is explored in greater detail in one of our contributed articles, by Natsuko Waki of Thomson Reuters. We are also pleased to welcome to *Braving the New World* articles by Jonathan Brookfield, Ravi Shankar Chaturvedi, and Patrick Schena, from The Fletcher School at Tufts University, who assess the life-cycle of SWFs as their portfolios progress from a portfolio based on shares in government-linked companies to financial assets, as they privatize their shareholdings—a particularly pertinent subject given the current trajectory of the Malaysian SWF, Khazanah Nasional. Sven Behrendt, Managing Director of Geoeconomica, examines how SWFs can pursue true intergenerationality by ensuring that the proceeds of natural resource sales are not only saved for future generations, but that their investment choices also help enhance “green growth.” Javier Santiso, Director of the ESADE Centre for Global Economy and Geopolitics, looks at how SWFs are investigating opportunities in Latin America, while Monitor, Oxford University and the African Development Bank have cooperated to assess how SWFs can grow their portfolios in sub-Saharan Africa.

¹ International Forum of Sovereign Wealth Funds, *Changes in the IFSWF leadership and steps towards permanent secretariat* (“Beijing Communiqué”), May 12, 2011, <http://www.ifswf.org/pr/pr7.htm> (accessed May 15, 2011)

Over the past two years, Monitor and the Fondazione Eni Enrico Mattei have worked together to establish the Monitor-FEEM SWF Transaction Database, on which our reports are based. With the reputation of our work and data now well-founded, this initial partnership has reached a successful conclusion. Monitor will continue to work with Bernardo Bortolotti, co-founder of the initial project and Professor of Economics at the University of Turin. The coming year promises to be an exciting time for us as we explore potential new forms the project may take.

We also wish to acknowledge and thank those involved in producing this report, especially Veljko Fotak for his work on maintaining the Monitor-FEEM SWF Transaction Database, and Davis Dyer and Bill Miracky at Monitor for their continued support of the project. Alyson Lee of The Studio at Monitor Group designed the report and coordinated its production.

We believe that *Braving the New World* provides a data-rich basis for governments and other investment and academic stakeholders to develop a greater understanding of these increasingly important entities in our global financial system.



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PHOTO BY KATRINA TULIAO

2010 WAS A YEAR OF MIXED OPPORTUNITIES FOR SWFs.

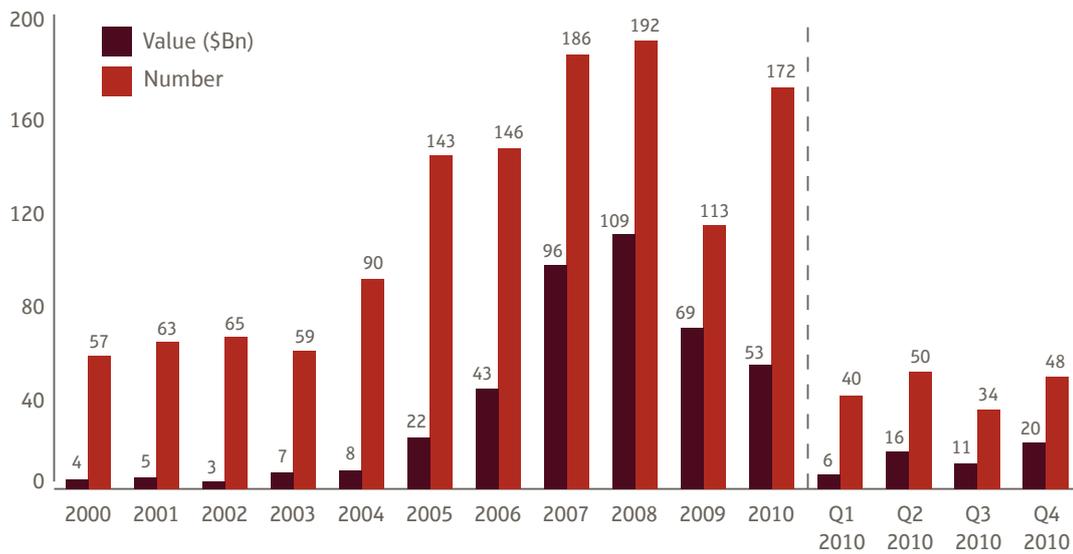
2010 Overview

The global economic environment in 2010, although still uncertain, was better than that of 2009. Although SWF investment activity increased during the year, from the lowest levels of SWF activity in the “modern era” of SWFs,² the activity was skewed by some funds undertaking large domestic investments and banking recapitalizations. In 2010, 21 SWFs in the Monitor-FEEM SWF Transaction Database executed 172 publicly reported investments valued at \$52.7 billion. This represents an increase of more than 50 percent in deal volume from 2009, but a 23 percent decrease in investment value, suggesting that SWFs have continued the trend we identified at the end of 2009—that of making more, but smaller, individual investments and (generally) taking smaller stakes.

² The majority of the funds we track have only been founded in the last decade, so it is not until 2005 that we have a fund universe comparable to the present day

2010 started off cautiously, with SWFs only undertaking 40 publicly reported direct investments, with a total value of \$5.7 billion in the first quarter, as they responded to concerns about sluggish economic growth and the possibility of a double dip recession. There was also a smaller pipeline of investments; during the first half of 2010 we recorded only 18 announced or pending SWF investments—the same amount announced in the third *quarter* of 2009 alone. This suggested that SWFs were unwilling to commit too far in advance or to announce investments before the fact.

Figure 1: SWF Equity Transactions by Number and Volume since 2000



Note: Publicly available data for direct SWF equity & real estate deals, joint ventures and capital injections.
Source: Monitor-FEEM SWF Transaction Database

SWFs more than doubled their direct investment expenditure to \$15.9 billion in Q2. But this upswing did not necessarily reflect a growing confidence in the global economy, with SWFs concentrating over 60 percent of this expenditure (\$9.8 billion) in nine investments of half a billion dollars or more in developed markets, evidently capitalizing on opportunities to gain access to commodities and European distressed assets. Two of these investments, valued at \$1.8 billion were in mining, while the China Investment Corporation’s investment in Apax Partners and the International Petroleum Investment Company’s 4.99 percent stake in Italy’s Unicredit suggested that SWFs still saw potential in

SWFs AND DIRECT INVESTMENT

In 2010, the number of funds we recorded making direct investments increased from 17 in 2008, and 18 in 2009, to 21. This suggests that some funds, which previously invested exclusively through fund managers, have started taking direct stakes. One example is the State Oil Fund of the Republic of Azerbaijan, which made direct investments in 2010 for the first time, and started investing in equities.ⁱ This appears to tally with its 2011 announcements that it is focusing on medium-term investments and wants to start investing in overseas property.ⁱⁱ It may be the case, therefore, that funds that have previously been fairly conservative in their approach are becoming more active in the current economic climate to improve their returns.

This trend may be a further reflection of SWFs' dissatisfaction with the performance of their asset managers during the Global Financial Crisis, which resulted in several major SWFs bringing expertise in-house during 2009.ⁱⁱⁱ

This may not be the only reason behind the change in tactic. Some funds have reportedly been pressured by their governments to improve returns. For example, in June, it was reported that the China Investment

Corporation was being advised to improve its short-term returns.^{iv} Six months later, CIC announced that it had posted “fairly good” returns in 2010,^v while experts believed that the fund was on the cusp of “a major change to its investment practices” and would focus on private equity, real estate and other alternatives^{vi}—the asset classes in which CIC beefed-up its internal capacities in 2009. Indeed, we have seen evidence of this change as CIC has invested extensively in commodities, real estate and private equity in 2010.

Another way that investing directly may help satisfy State demands for better returns is by reducing costs on asset managers' fees. Although developing in-house capabilities may seem expensive, it may actually result in long-term savings.

i Nariman Gizitdinov, “Azeri Oil Fund to Invest in Stock Indexes in ‘Low-Yield’ World”, *Bloomberg*, September 27, 2010.

ii Azerbaijan News Agency, “Azerbaijan’s Oil Fund has switched to focus on medium-term investments”, April 20, 2011; “Azerbaijan looking to invest \$26 billion oil money”, *Overseas Property Professional*, May 4, 2011.

iii *Back on Course: Sovereign Wealth Fund Activity in 2009*, (Monitor Group, Cambridge MA: 2010).

iv Kevin Plumberg and Simon Rabinovitch, “Under pressure, China wealth fund looks short-term—sources”, *Reuters*, June 11, 2010.

v “China’s CIC Seeks Funding After ‘Fairly Good’ Returns in 2010”, *Bloomberg*, January 15, 2011.

vi Z-Ben Advisors Client Note, cited in Thao Hua, “China Investment Corp. looking at big move to PE, real estate”, *Pensions and Investments*, February 13, 2011.

2010 Highlights

1

During 2010, 21 of the 30 funds in the Monitor-FEEM Transaction Database executed 172 publicly reported investments valued at \$52.7 billion. This represents an increase of more than 50 percent in deal volume from 2009, but a 23 percent decrease in investment value, continuing the trend of SWFs making a greater number of smaller investments. It is also the largest number of funds we have witnessed making direct individual investments in any given year, up from 18 in 2009.

2

Having witnessed a sharp break on direct SWF investments in financial services in 2009, we saw them return to the sector with gusto in 2010. Banking, insurance and trading companies received a total of \$20.4 billion in 50 investments — 39 percent of the total annual value. SWFs also invested heavily in commodities — coal, petroleum, natural gas, and metals — (26 investments, \$6.9 billion), and ancillary industries — processing, renewable energy, energy transmission — (10 investments, \$11 billion).

3

For the past two years, Europe had received the largest proportion of SWF direct investment by value. In 2010, this trend came to an abrupt halt as SWFs turned eastwards, with Asia Pacific, accounting not only for the largest number of investments (70 — 41 percent of the annual total), but also the largest proportion of recorded value (\$25.2 billion — nearly half the total).

4

Although emerging markets accounted for a similar proportion of SWFs' annual direct investment value as in previous years (58 percent, \$30.4 billion), the absolute number and proportion of investments made in these markets increased substantially. In 2010, developing economies accounted for 103 investments (60 percent), up from 72 (53 percent) in 2009. This trend was particularly evident in the second half of the year, when SWFs made 56 investments valued at \$24.6 billion in emerging markets.

5

In 2010, a distinct difference in investment patterns emerged between Asian and Middle Eastern SWFs. Asian funds invested half of their total expenditure in Asia-Pacific (\$11.5 billion) and 38 percent (\$8.6 billion) in North America. Conversely, while Middle Eastern funds also invested 48 percent of their total investment in Asia-Pacific (\$13.5 billion), they bet on Europe, investing \$7.5 billion in the region, and largely shunned North America.

6

Singapore's Temasek Holdings was 2010's most active fund, making 38 investments, followed by the China Investment Corporation (23) and the Qatar Investment Authority (22). QIA and CIC were the largest spenders accounting for \$12.3 billion and \$9.8 billion of investments, respectively.

distressed Western banking assets. Once more, however, it was the Qatar Investment Authority that stole the limelight, buying Harrods, the renowned London department store, for \$2.2 billion and the Canada-based operating company of the legendary Raffles Hotel in Singapore for \$847 million (it also bought the property for \$275 million). These purchases garnered so much attention that QIA's acquisition of a five percent share of French utilities giant Veolia for \$868 million was largely overlooked.

These large second-quarter investments, however, masked a wealth of smaller investments in a diverse range of sectors in emerging markets: Indian health-care and electricity transmission, Vietnamese banking, Zambian telecoms, South African platinum mining, and a tourist resort in Jordan all received SWF investments from April 1 to June 30. Indeed, it was these deals, rather than the prestige investments in Europe and North America that set the tone for the rest of the year, as SWFs slowed their direct investments in the OECD.

The traditionally quieter third quarter was dominated by the much-anticipated IPO of the Agricultural Bank of China. On July 14, the Kuwait Investment Authority, QIA, the Chinese National Social Security Fund, and Singapore's Temasek Holdings bought a total of over \$6 billion of Agbank shares—accounting for 60 percent of SWF direct investment for the quarter. This was a situation that many expected to see repeated in the United States, as the government sought to reclaim some of its investment in General Motors by pulling off the biggest IPO in American history in November. Yet, while several Middle Eastern and Asian SWFs were courted as cornerstone investors, not one took a substantial share, although it was rumored that they had participated in the share offering.

This echoed the broader SWF investment pattern; in the second half of the year, 56 of the 82 direct investments we recorded, valued at \$24.6 billion (nearly 80 percent of the total for the half), were in emerging markets, particularly in Asia. European targets accounted for only 11 deals valued at \$1.8 billion in this period, while North America only received 10 investments, although these were valued at \$3.5 billion, primarily as a result of CIC discovering distressed American real estate: the fund invested \$2.3 billion in General Growth Properties, a REIT investing across the United States.



PHOTO BY SJEKSTER

THE SHANGHAI FINANCIAL DISTRICT: FINANCIAL SERVICES WERE ONCE MORE A MAJOR INVESTMENT FOCUS FOR SWFs IN 2010.

Sectors

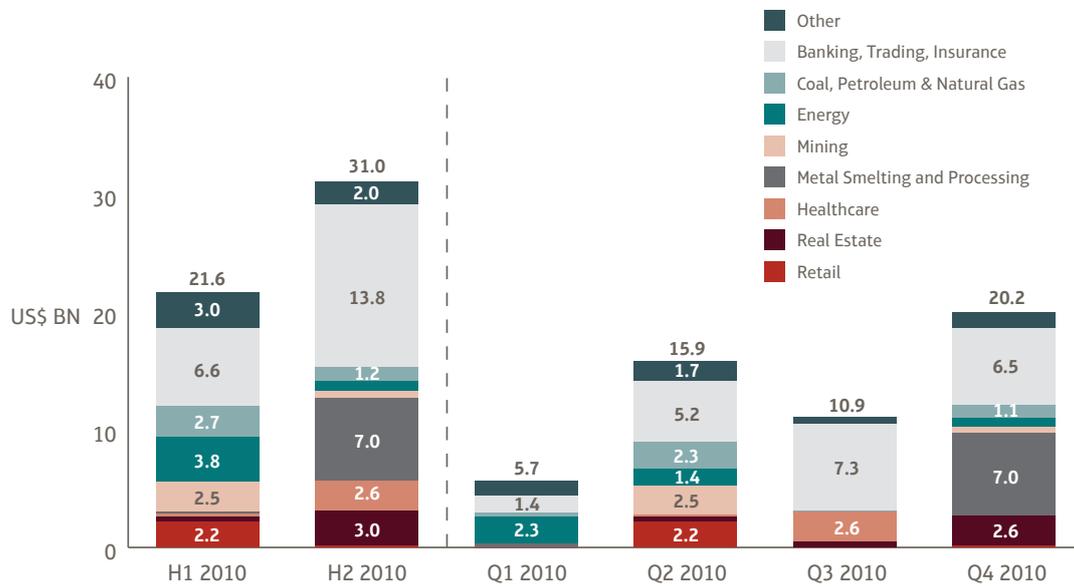
In 2010, SWFs invested in a wide range of sectors, as they continued to diversify their portfolios. However, their publicly reported direct investment activity suggests that SWFs had three main target sectors: financial services, natural resources (coal, petroleum, natural gas, and metals) and their associated industries (processing, renewable energy, energy transmission). Together these accounted for 80 percent of SWFs' publicly reported direct investment (\$41.9 billion), and just over half the deals (88) in 2010.

Away from these sectors, investments were varied. Manufacturing and engineering-based industries (transportation, automobiles, aviation and construction), received 20 direct investments from SWFs with a total reported value of \$2.2 billion.

There was also a strong interest, particularly by Asian funds, in technology companies with strong IP (communications, IT, healthcare, education), which accounted for 21 investments with a total value of nearly \$4 billion, although a large share of the value was accounted for by Khazanah Nasional's controversial purchase of 77 percent of Singapore's Fortis Healthcare for \$2.5 billion.

12 BRAVING THE NEW WORLD
Sectors

Figure 2: Value of SWF Investments by Target Sector

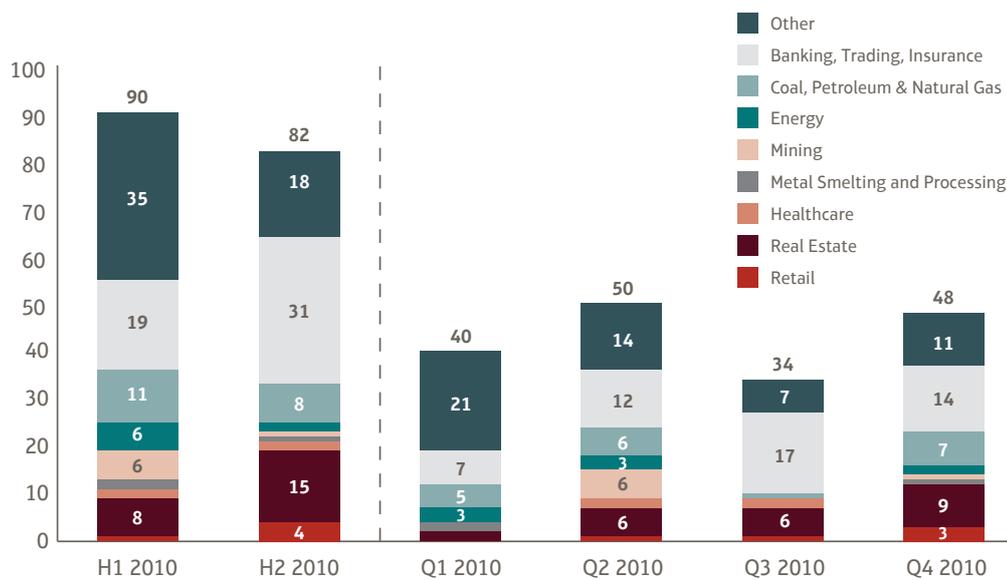


Other: Personal and Business Services; Aircraft, Ships, and Railroad Equipment; Automobiles and Trucks; Business Equipment; Communication; Construction; Consumer Goods; Fabricated Products; Food Products; Personal and Business Services; Printing & Publishing; Recreation; Transportation; and Hotels & Restaurants.

Publicly available data for direct SWF equity & real estate deals, joint ventures and capital injections.

Source: Monitor-FEEM SWF Transaction Database

Figure 3: Number of SWF Investments by Target Sector



Other: Personal and Business Services; Aircraft, ships, and railroad equipment; Automobiles and Trucks; Business Equipment; Communication; Construction; Consumer Goods; Fabricated Products; Food Products; Personal and Business Services; Printing & Publishing; Recreation; Transportation; and Hotels & Restaurants.

Publicly available data for direct SWF equity & real estate deals, joint ventures and capital injections.

Source: Monitor-FEEM SWF Transaction Database

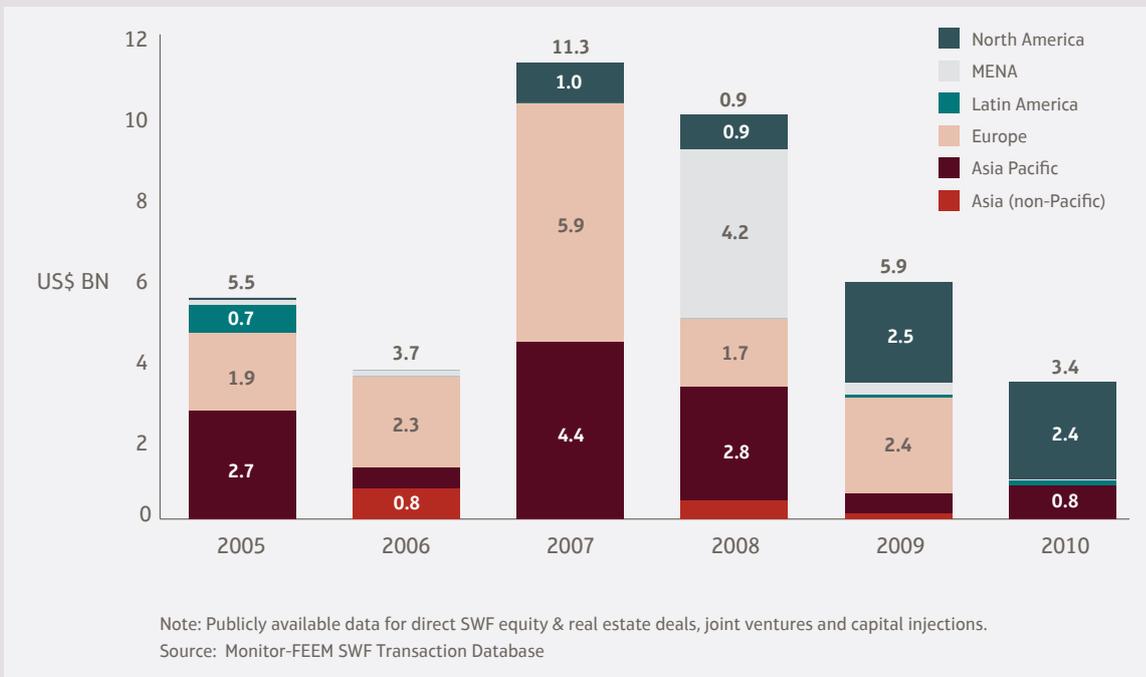
SWFs AND REAL ESTATE

SWFs have long seen real estate as an important part of their portfolios; for example three of the oldest SWFs—the Abu Dhabi Investment Authority, Kuwait Investment Authority, and the Government of Singapore Investment Corporation—have owned dedicated property arms in Britain for more than two decades. Even new SWFs have sought to create vehicles specifically to invest in and develop property, such as Qatari Diar who spent \$1 billion on London’s Chelsea Barracks in the most expensive property investment ever made. At the height of the global property boom in 2007 and 2008,

SWFs from the Middle East were hoovering up large parts of Manhattan and London, displaying the new confidence of their sovereign government owners, and announcing their entry onto the world stage.

In 2007, SWFs spent \$11.3 billion on real estate, representing 12 percent of their total expenditure for the year. By 2010, in the wake of the sub-prime mortgage and global financial crises, SWF spending on real estate had fallen to less than a third of that figure.

Direct SWF Investment in Real Estate Assets 2005-2010, by Region



As the chart overleaf shows, between 2005 and 2008 SWF investment in real estate largely followed the global property markets. Particularly obvious is the \$6 billion invested by SWFs in European (largely British) real estate in 2007, and the Dubai boom in 2008, in which funds invested over \$4 billion. The last two years show a change in the pattern, with SWFs picking up distressed assets in Europe and North America in 2009, and a rush towards American real estate (primarily by the Chinese) in 2010, as the European market recovered.

The decline in property investments by SWFs in 2009 is yet another illustration of the rebalancing of portfolios and risk management strategies undertaken during that year.¹ This is even more apparent if we break SWF real estate investment down into its vehicles.

The chart below illustrates how SWFs have adapted to the new economic climate. Before 2009, the vast majority of their investment were in physical properties — the bricks and mortar of real estate. As the sub-prime and financial crises hit, and global prop-

Direct SWF Investment in Real Estate Assets 2005–2010, by Asset Class



erty prices tanked, SWFs made enormous losses on their property portfolios. While as long-term investors, SWFs (on the whole) can take short-term hits, some funds have had to divest their properties at a loss. Rather than retreat from real estate, which has valuable diversification benefits particularly for oil-based funds,ⁱⁱ SWFs continued to include the asset class in their portfolios, but diversified and rebalanced their portfolio into real estate investment trusts (REITs), as the property market caved in, to optimize the risk and returns of property portfolios. In 2010, 69 percent of their total new exposure

to real estate was in REITs, up from just 14 percent in 2008. This suggests that SWFs have built in-house capabilities for investing in a wider range of property investment products since the Financial Crisis, rather than relying almost exclusively on external asset managers. It might also partially explain the rise in real estate investment in North America, with many REITs based in the United States.

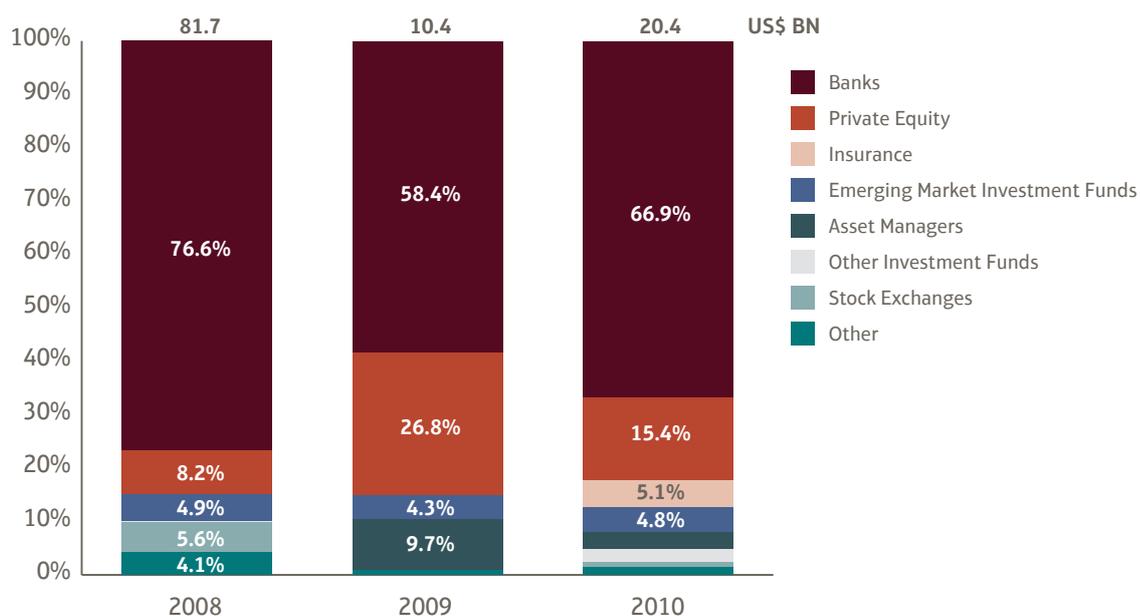
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- i See *Back on Course: Sovereign Wealth Fund Activity in 2009*, (Monitor Group, Cambridge MA: 2010).
 - ii Because private real estate traditionally has a very low correlation with public equities and debt and as a low beta investment it performs well during periods of market change. Academic studies also suggest that real estate adds significantly to overall portfolio outcomes in terms of increasing return and decreasing risk. See for example, Shaun A. Bond and John L. Glascock, *The Performance and Diversification Benefits of European Public Real Estate Securities*, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=896524, (accessed April 6, 2011).
 - iii For the role of REITs in a property portfolio see National Association of Real Estate Investment Trusts, *Optimizing Risk and Return in Pension Fund Real Estate: REITs, Private Equity Real Estate and the Blended Portfolio Advantage*, February 2011, <http://ww1.prweb.com/prfiles/2011/02/05/8116940/Optimizing%20Risk%20and%20Return%20in%20Pension%20Fund%20Real%20Estate.pdf> (accessed April 6, 2011).

Financial Services

Since the bailout of failing American and European financial institutions during the winter of 2007-08 and the rescue of their domestic banking sectors in early 2009, SWFs have generally shied away from financial services. In 2010, however, SWFs seemed to regain their appetite for this sector, making 50 investments valued at \$20.4 billion.

While direct stakes in banks with retail operations were still the largest group of investments (13 deals, \$13.6 billion), as Figure 4 below illustrates, SWF investments in 2010 were more diverse than they had been in 2008 and 2009. Although the proportion of investment capital received by banks once more accounted for the majority of their spend on financial services (partly as a result of the Agbank IPO at \$6 billion), the balance was invested in a range of different businesses within financial services, such as insurance, a wide range of investment companies and asset managers (which all received around \$1 billion), and private equity both at the general partner and limited partner level (\$3.1 billion).

Figure 4: Breakdown by Value of Direct SWF Investments in Financial Services, 2008–2010

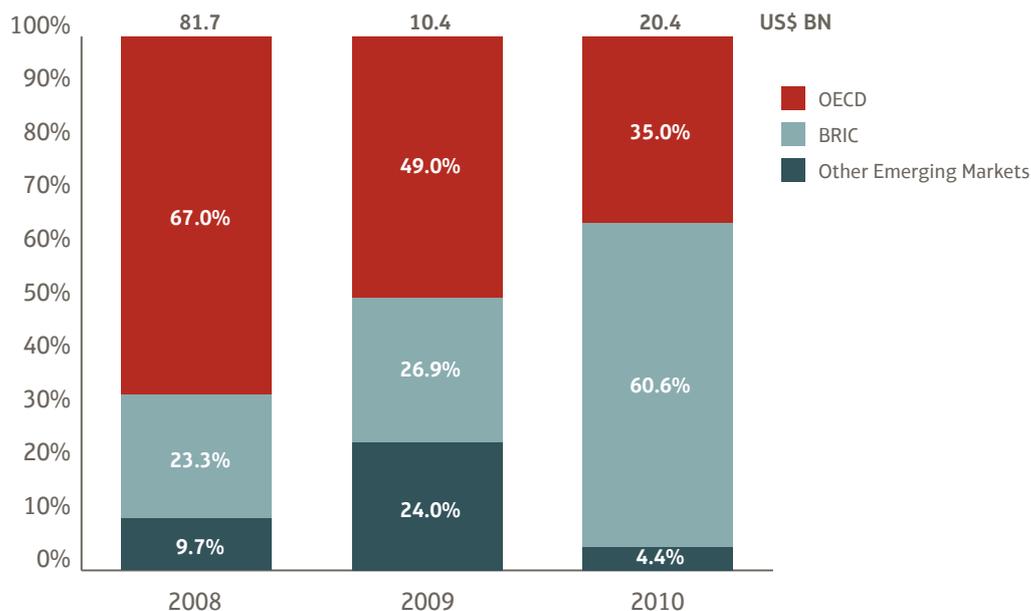


Note: Publicly available data for SWF direct investments, joint ventures and capital injections.
Source: Monitor-FEEM SWF Transaction Database

Both the increase in direct spending on financial services by SWFs (up nearly 50 percent, or \$10 billion) from 2009, and the decline in funds given to asset managers, may suggest that after having been burnt in the financial crisis, SWFs are assuming direct responsibility for more of their investments in the financial sector, with the result that we can see more of these transactions. This aligns with the reorganization of many funds during 2009, which suggested that they were planning on taking a more active role in their investments, to manage costs and risk and to increase the transparency of their portfolios.

A notable characteristic of these investments has been a shift away from the OECD toward emerging markets. BRIC financial services received \$12.4 billion, over 60 percent of all direct investment in this sector (17 transactions) from SWFs in 2010. Even accounting for the fact that half of the value was investments in the Agricultural Bank of China IPO, SWFs appear to be looking to emerging-market financial services to provide better opportunities than their counterparts in the OECD. By contrast, in 2008, two-thirds of the value of SWFs' total investment in financial services was in the OECD.

Figure 5: Breakdown by Geography of Direct SWF Investments in Financial Services, 2008–2010



Note: Publicly available data for direct SWF direct investments, joint ventures and capital injections.

Source: Monitor-FEEM SWF Transaction Database

This move into developing markets was also highlighted by the \$971 million that SWFs invested in investment funds and companies specifically targeted at emerging markets. The Korea Investment Corporation (KIC) and State Oil Fund of the Republic of Azerbaijan (SOFAZ) each invested approximately \$150 million in the International Finance Corporation's new African, Latin American, and Caribbean Fund, which has a mandate to find commercially viable opportunities to finance growth and jobs in the developing world. Invest AD, the private equity company owned by the Abu Dhabi Investment Council, also sought to tap frontier markets, establishing an Iraq fund and a fund to invest in sub-Saharan Africa in partnership with Japan's SBI Holdings. CIC turned its eyes to emerging Asia, establishing a JV with the Import and Export Bank of China, to invest in financial markets in Southeast Asia.

The Commodity Value Chain

The direct investments of SWFs suggest that the funds are developing a clear strategy toward the energy sector, commodities, and associated processing industries. During 2010, SWFs' publicly reported direct investments in commodities amounted to 27 deals, valued at \$6.9 billion—13 percent of their total annual expenditure, and 16 percent of the total annual deal volume.

Driven by the economic needs of sovereign owners, funds from resource-scarce countries in Asia poured money into hydrocarbon exploration. In 2010, CIC directly invested a total of \$1.7 billion on coal, petroleum, and natural gas exploration, particularly in North America. Such purchases have an economic imperative for China's rapidly growing industrial economy, which is hungry for energy. In a new departure, Temasek also turned toward commodity exploration in 2010, investing \$1.1 billion in coal, petroleum and natural gas, while KIC also invested \$346 million in the sector.

But the energy rush isn't all about hydrocarbons. Funds from both Asia and the Middle East invested nearly \$2 billion into non-hydrocarbon energy sources, from the Kuwait Investment Authority's \$793 investment in Areva, the French nuclear energy company, to Temasek's \$47.8 million punt on biofuels to Mubadala's \$360 million investment in the Shams Solar energy plant. While this is still a relatively small target interest in alternative energy, it represents an important change in direction; this is the first year we have seen SWFs invest consistently in this area.

SWFs from both Asia and the Middle East also displayed significant interest in solid mineral exploration with a focus on metals. The seven mining investments made in 2010 were valued at \$3 billion. Again, the Asian funds led the way, showing a new interest in this sector, with Temasek investing in South African miner Platmin and Canada's Inmet Mining Corporation.

The interest in the extraction of energy commodities and solid minerals, however, has been complemented by investing in companies that utilize those commodities and turn them into products that have a direct use for domestic economies. Several SWFs saw attractive opportunities in aluminum production, with Russian company Rusal receiving over \$300 million from the Libyan Investment Authority and GIC. Mubadala also pledged \$7 billion to the development of a major initiative in the aluminum sector based on hydro power in the Sarawak Corridor of Renewable Energy in Malaysia.

Investments in hydrocarbon extraction were complemented by investments in energy generation and transmission, which suggests that the funds are taking an integrated view of investment in energy products, ensuring investment throughout the energy value chain. CIC invested \$1.58 billion in AES Corporation, the power generation and transmission company, while Temasek backed up its commodity investments with \$200 million in India's GMR Energy, a subsidiary of diversified infrastructure major GMR Infrastructure Ltd., which will use the funds to enhance its installed power generation capacity in India from 808MW to over 6,500MW over the next three to four years.

These investments may signal increasing SWFs' interest in the infrastructure sector. However, this is not simply a byproduct of a need for energy or metals for economic development programs. Such investments appeal to long-term investors like SWFs by helping to diversify their portfolios and providing a hedge against inflation and wealth-source changes. SWFs acquired infrastructure assets in diverse ways. Those funds with roots in government-linked companies, like Temasek and Khazanah, invested directly in the construction of new cities in China, Singapore, and Malaysia. While the Abu Dhabi Investment Authority (ADIA) purchased a direct share of London's Gatwick Airport, and the Port of Brisbane, as well as increasing its share in Australian infrastructure management company, Intoll Group, to just below 10 percent.

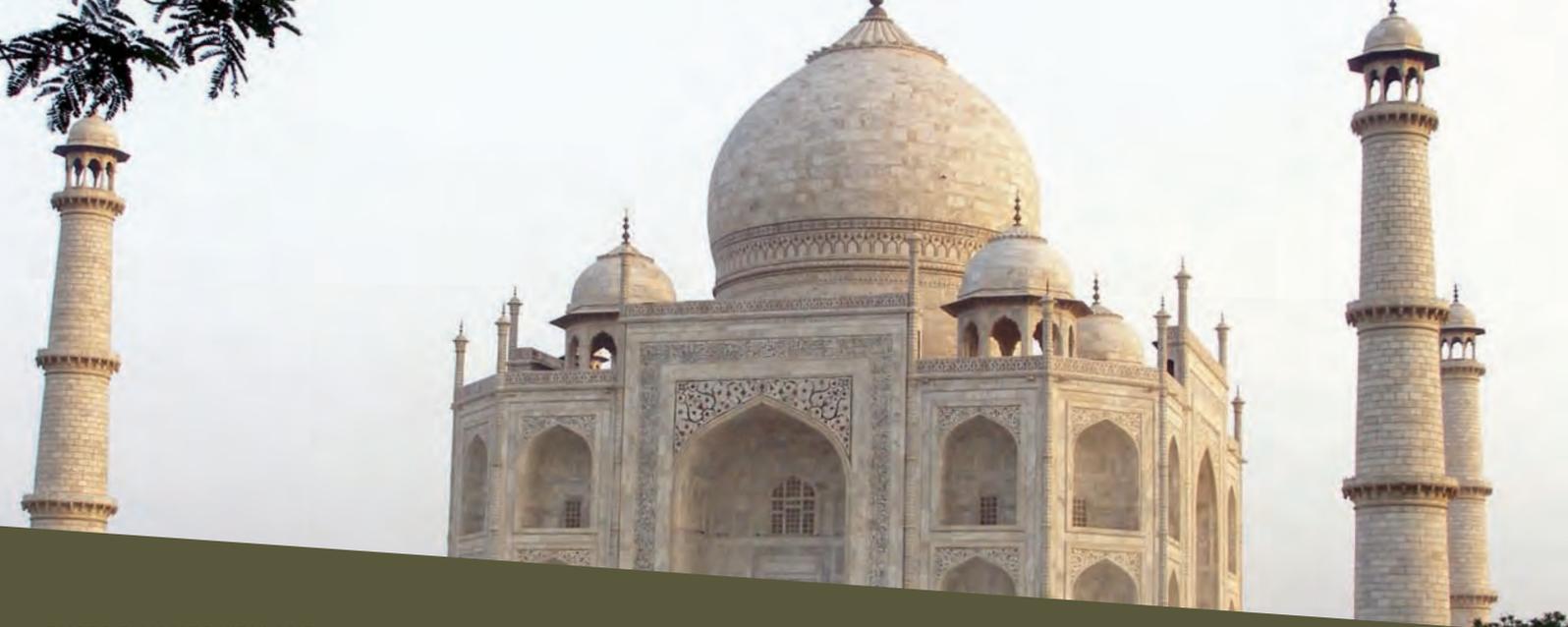


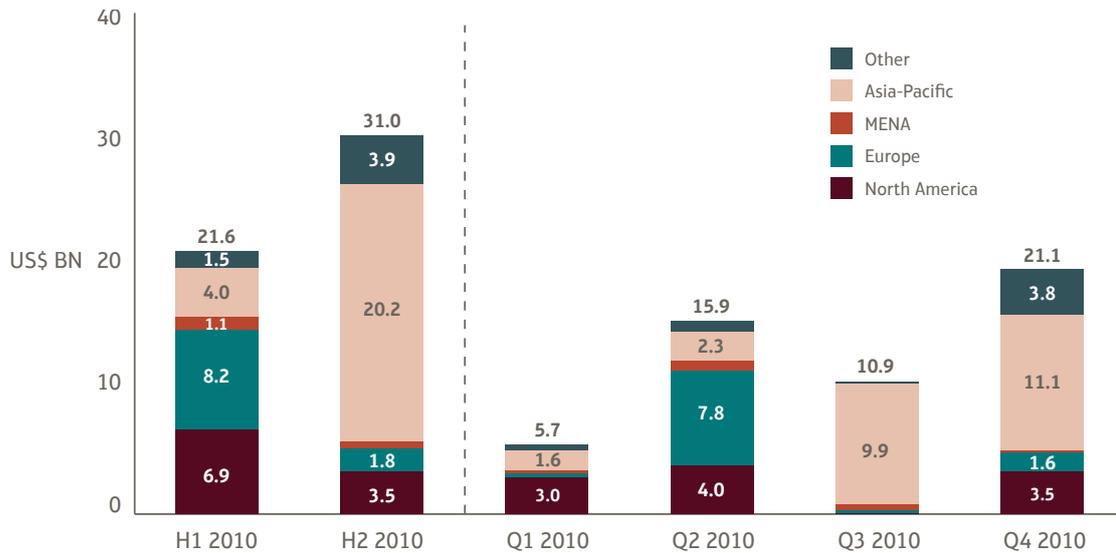
PHOTO BY JAMES KIRKLAND

SUNRISE AT THE TAJ MAHAL: INDIA BECAME AN INCREASINGLY IMPORTANT INVESTMENT DESTINATION FOR SWFs IN 2010.

Geographical Analysis

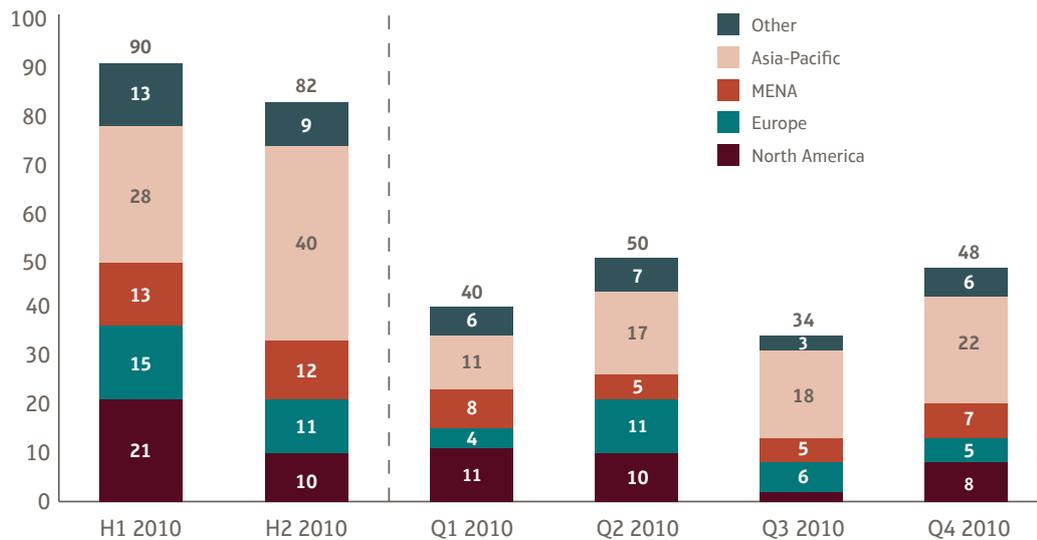
In terms of the location of investments, 2010 divided into two halves with different trends. During the first six months, SWFs' publicly reported direct investments were dominated by large purchases in developed markets: over three-quarters of SWFs' publicly reported expenditure (\$16.3 billion) and nearly half of the deals (47 percent, 43 deals) occurred in the OECD. European assets were particularly attractive to SWFs between January and June, accounting for \$8.2 billion of investment. Most of this came in Q2 with QIA's \$2.2 billion purchase of Harrods, and IPIC's \$2.3 billion investment in the Italian bank Unicredit, and Ireland's National Pension Reserve Fund bailout of the Bank of Ireland. North American markets also appeared to regain their appeal to SWFs, with \$7 billion invested during the first half of the year. However, only three deals were made in companies with substantial operations in the United States and none of these exceeded \$50 million. Half the value of SWFs' investments in North America during H1 involved asset management and investment funds, much of which focused on emerging markets, and energy (\$2.4 billion).

Figure 6: Value of SWF Direct Investments by Target Region, 2010



Other: Latin America, Sub-Saharan Africa, and Asia (Non-Pacific).
Publicly available data for direct SWF equity & real estate deals, joint ventures and capital injections.
Source: Monitor-FEEM SWF Transaction Database

Figure 7: Number of Direct Investments by Target Region, 2010

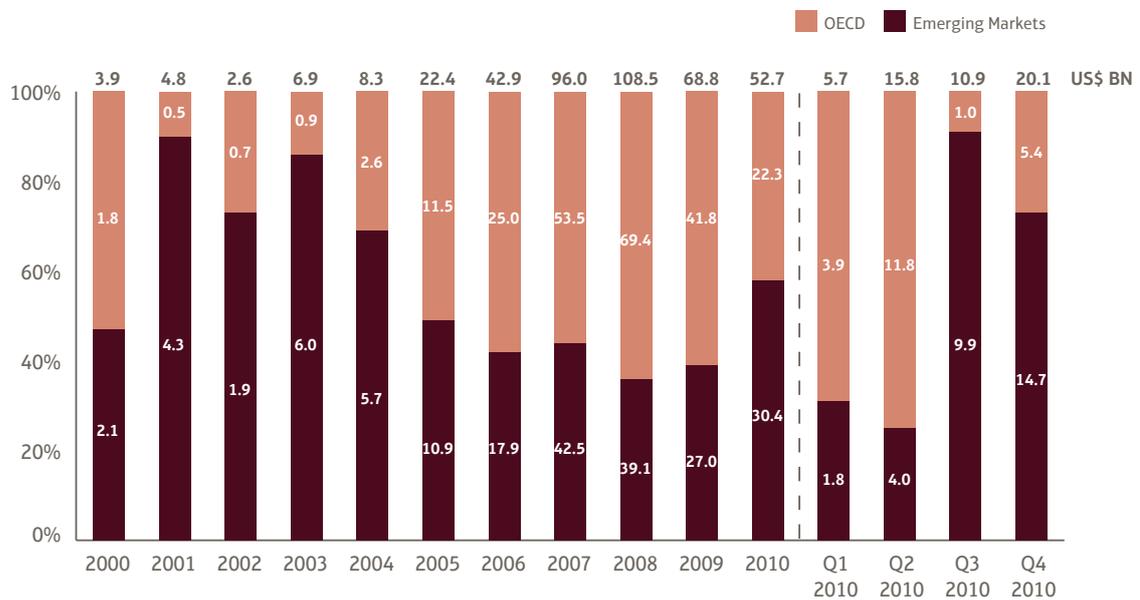


Other: Latin America, Sub-Saharan Africa, and Asia (Non-Pacific).
Publicly available data for direct SWF equity & real estate deals, joint ventures and capital injections.
Source: Monitor-FEEM SWF Transaction Database

The pattern of U.S. investments during H1 2010 was to prefigure SWFs' investment from June, which saw them turn their backs on the developed world and seek investment opportunities in emerging markets. Fifty-six out of 82 publicly reported direct investments by SWFs in H2 2010 took place in emerging markets, and these accounted for \$24.6 billion—79 percent of the second half's total investment. The most favored markets were in Asia Pacific, with China accounting for 20 of the 36 emerging-market deals in this region³ worth \$9.4 billion. That said, several ASEAN countries—Indonesia, Malaysia, Singapore and Vietnam—also received SWF investment in the second part of the year.

On the other hand, however, the Middle East as a region still appears to be suffering from the consequences of the Financial Crisis. MENA was completely shunned by SWFs from outside the region: we did not record a single investment from an Asian fund into the Middle East. Furthermore, all the Middle Eastern deals with a reported value of over \$100 million were domestic investments.

Figure 8: Value of SWF Deals by Location of Target: OECD vs. Emerging Markets



Note: Publicly available data for direct SWF equity & real estate deals, joint ventures and capital injections.
Source: Monitor-FEEM SWF Transaction Database

Another feature of SWFs in emerging markets in 2010 was their expansion into more diverse geographies. Brazil, Russia, and India received more SWF investment than ever before. India was particularly popular with Singaporean funds, with Temasek

³ Emerging Asia-Pacific excludes Japan, South Korea, Australia and New Zealand

and GIC investing a total of \$582 million. Although this is a relatively small sum, this was the first time we had observed SWFs actively scouring the Indian market for investments. Likewise, Russian companies received over \$800 million in investments from our SWFs, while Brazil attracted over \$3 billion of investment, with the majority of the value accounted for by QIA's \$2.7 billion investment in Banco Santander's Brazilian unit. Frontier markets in sub-Saharan Africa also saw a number of direct SWF investments in agricultural land, mobile telecoms, and mining with a total value of just under half a billion dollars.

A WORD ON SWFs AND MANAGEMENT

We have noted several times that SWFs are generally minority shareholders and passive investors, as it is unusual for SWFs to take a majority stake in an investee company, particularly in developed markets, and that, on the whole, they act as "constrained foreign investors" unable to exercise proper monitoring due to pressures not to antagonize local management.ⁱ

In 2010, the trend towards SWFs taking smaller stakes continued; since 2008 the average stake size taken by SWFs in direct acquisitions has decreased from 35 to 25 percent. Where the stake size was reported, SWFs only took 22 stakes of 50 percent or over in 2010 (less than 13 percent of all deals). Thirteen of these were in emerging markets, of which over half were in domestic companies and JVs. With the exception of the Libyan Investment Authority's purchase of telecommunications companies in Chad and Zambia, the remaining large stakes in foreign emerging markets were primarily in real estate. Similarly, large stakes taken by SWFs in the OECD were overwhelmingly in real estate and agricultural land, with the exceptions of QIA

purchasing Miramax Films, and the New Zealand Superannuation Fund buying Shell's downstream business in New Zealand.

However, some SWFs are beginning to become more proactive managers as they seek to ensure that their investments perform. Most notably in 2010, KIC was given "board-observer rights" after it invested nearly \$100 million in Canada's Osum Oil Sands Corporation and agreed that if its stake in the company rose above 10 percent, the fund would also be able to appoint a director to the board. In a similar vein, QIA has become more assertive. With its purchase of a five percent share of Veolia Environnement, it was given a seat on the board, while its purchase of Harrods also saw QIA's interest represented at directorial level. Furthermore, Khalifa Jassim Al-Kuwari, Executive Director at Qatar Holding, was recently nominated to the Volkswagen board, following the fund's \$7 billion investment in the company in 2009.

i Bernardo Bortolotti, Veljko Fotak, William L. Megginson and William Miracky, *Sovereign Wealth Fund Investment Patterns and Performance*, FEEM Working Paper No. 22.2009, March 25, 2010, <http://ssrn.com/abstract=1364926> (accessed May 18, 2011).



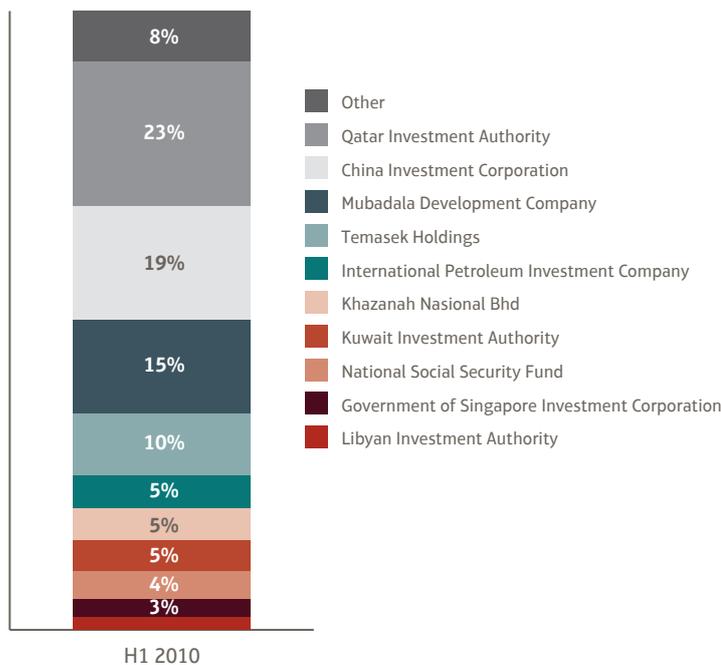
PHOTO BY PREMIER ED STELMACH

PREMIER STELMACH OF ALBERTA SHAKES HANDS WITH LOU JIWEI,
CHAIRMAN OF THE CHINA INVESTMENT CORPORATION,
ONE OF THE MOST ACTIVE FUNDS IN 2010.

Funds

Continuing an established trend, the most active funds during 2010 were Temasek, CIC, and QIA, which together accounted for nearly half the investments made by SWFs during this period. Temasek made 38 publicly reported direct investments valued at \$5.2 billion, continuing its strategy of investing in technology companies with strong IP and establishing its new direction towards natural resources. On the whole, these were small investments concentrated on emerging markets, with the fund investing in countries such as India, Chile, and South Africa, along with its usual Asia-Pacific countries. Unusually for a fund that habitually invests substantially at home, Temasek made only six investments valued at \$326.5 million in Singapore.

Figure 9: Value of Direct Investments by Top 10 SWFs, 2010



Other: Future Fund; National Pension Reserve Fund; Government Pension Fund-Global; Abu Dhabi Investment Authority; Korea Investment Corporation; New Zealand Superannuation Fund; Abu Dhabi Investment Council; State Oil Fund of the Republic of Azerbaijan; State General Reserve Fund; Oman Investment Fund; and Istithmar World PJSC.

Note: Publicly available data for direct SWF equity & real estate deals, joint ventures and capital injections.

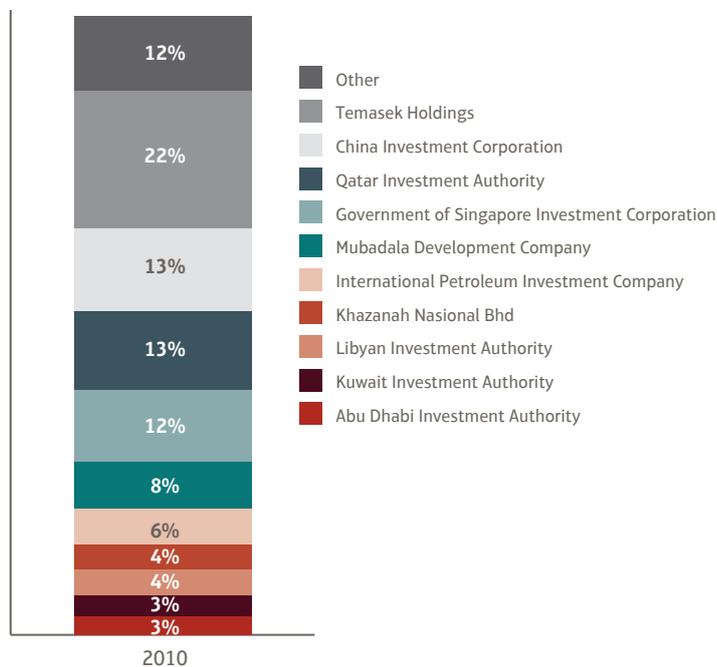
Source: Monitor-FEEM SWF Transaction Database

CIC continued the strategy we saw emerging last year, concentrating on natural resources to satisfy the need for energy and metals for China’s economic growth. It also invested in power generation and construction companies, most notably its investment in AES. During the second half of 2010, CIC began eyeing up opportunities in U.S. real estate. After an abortive attempt to buy the Harvard University endowment’s property portfolio, CIC acquired a 7.4 percent stake in the recapitalization of bankrupt property firm General Growth Properties for \$2.3 billion, and a \$115 million stake in the Howard Hughes Corporation. These appear to have been good bets, with the fund claiming that its U.S. property purchases had a return of 40 percent in 2010.⁴

4 “China’s CIC has earned 40 pct on US real estate—official”, *Reuters*, March 30, 2011, <http://www.reuters.com/article/2011/03/30/cic-usa-realestate-idUSB9E7EN00K20110330> (accessed April 5, 2011)

Since it started investing actively in 2007, QIA has made a habit of buying high-profile assets in Europe, such as Barclays, Credit Suisse, Volkswagen, Vinci, and Cegelec. In 2010, that trend continued, as Qatar Holdings scooped up Harrods and stakes in Veolia and Hochtief. It has also been active, through its subsidiary Hassad Foods, in procuring arable and pastoral farmland in Australia. Although these investments represent less than \$70 million, food security is important for Qatar’s economic development, and it suggests that QIA has a broader mandate in the development of its country, which is supported by its domestic investments. Not only did the fund continue to support the Qatari banking sector in 2010, but hot on the heels of its \$14 billion JV with Deutsche Bahn to develop the emirate’s railroads at the end of 2009, it also entered into a JV with the Saudi Bin Laden Group to establish a construction company and an industrial services company to further the development of Qatar.

Figure 10: Number of Direct Investments by Top 10 SWFs, 2010



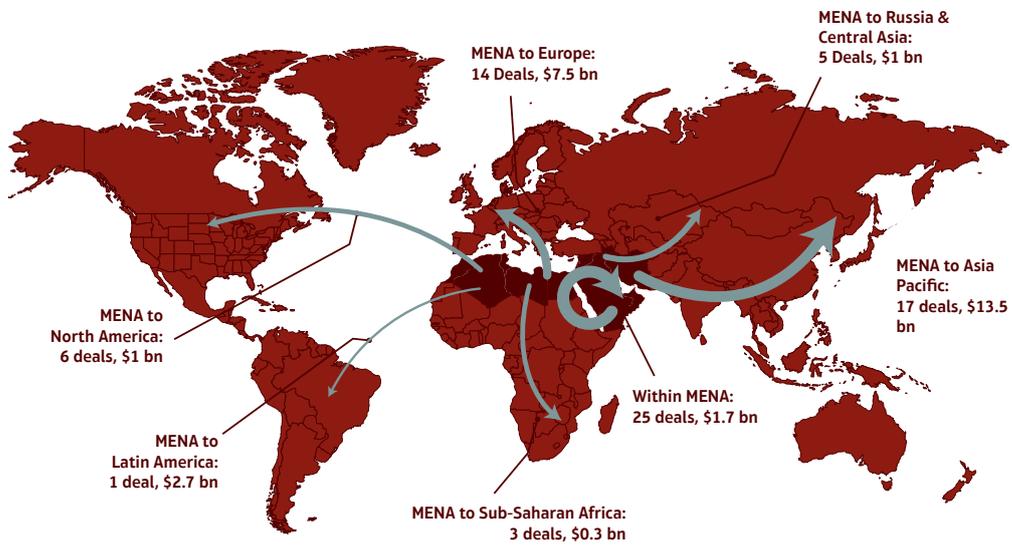
Other: Korea Investment Corporation; Abu Dhabi Investment Authority; Future Fund; Istithmar World PJSC; National Social Security Fund; Government Pension Fund-Global; National Pension Reserve Fund; New Zealand Superannuation Fund; Oman Investment Fund; State General Reserve Fund; and State Oil Fund of the Republic of Azerbaijan.

Note: Publicly available data for direct SWF equity & real estate deals, joint ventures and capital injections.

Source: Monitor-FEEM SWF Transaction Database

For the first time, a real division between Asian and Middle Eastern funds can be seen in their investments in developed markets: Asian funds favored North America; Middle Eastern funds, Europe. What is noticeable is that these patterns reflect those of CIC and QIA; they are so prolific that their investment patterns seem to be largely responsible for these differences.

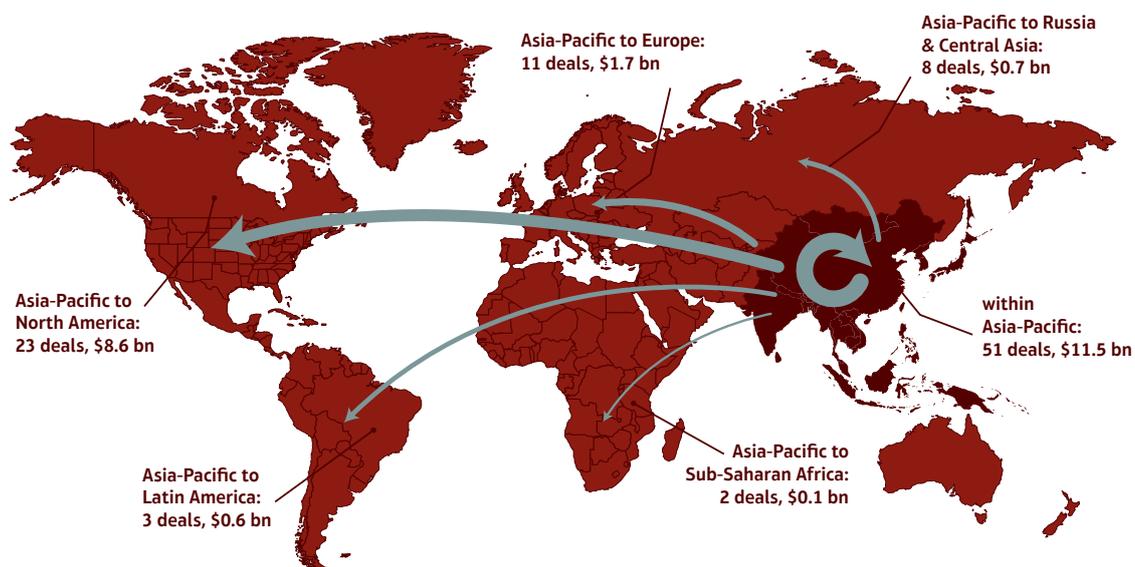
Figure 11: Investment Flows from Middle East & North Africa SWFs 2010



Note: Publicly available data for direct SWF equity, real estate, and joint venture deals.
Source: Monitor-FEEM SWF Transaction Database

We are also unlikely to see the hydrocarbon-rich Middle Eastern SWFs investing in energy resources, like coal, petroleum, and natural gas. Rather, although Middle Eastern funds continue to have a focus on financial services as a way of hedging against their oil and gas wealth, they have a remarkably diverse pattern of investment across 18 different sectors, including manufacturing industries (aerospace, automotive, metal foundries and fabricated products), hotels, retail and real estate.

Figure 12: Investment Flows from Asia-Pacific SWFs 2010



Note: Publicly available data for direct SWF equity, real estate, and joint venture deals.
Source: Monitor-FEEM SWF Transaction Database

10 Largest Direct SWF Investments of 2010

PARENT ENTITY NAME	NATIONAL AFFILIATION	TARGET	COUNTRY OF TARGET HQ	COMPLETED DATE	SIZE OF DEAL (USD MM)	SIZE OF STAKE
Mubadala Development Company	U.A.E.	Aluminium in the Sarawak Corridor of Renewable Energy (SCORE)	Malaysia	08/10/2010	\$7,000.00	Undisclosed
Qatar Investment Authority	Qatar	Agricultural Bank of China	China	14/07/2010	\$2,800.00	Undisclosed
Qatar Investment Authority	Qatar	Banco Santander Brasil	Brazil	19/10/2010	\$2,719.00	5.00%
Khazanah Nasional Bhd.	Malaysia	Parkway Holding Ltd.	Singapore	26/07/2010	\$2,541.00	77.00%
China Investment Corporation	China	General Growth Properties Inc.	U.S.A.	09/11/2010	\$2,300.00	7.40%
International Petroleum Investment Company	U.A.E.	UniCredit SpA	Italy	16/06/2010	\$2,300.00	4.99%
Qatar Investment Authority	Qatar	Harrods	U.K.	07/05/2010	\$2,227.00	100.00%
National Social Security Fund	China	Agricultural Bank of China	China	14/07/2010	\$2,195.00	Undisclosed
China Investment Corporation	China	AES Corporation	U.S.A.	15/03/2010	\$1,580.00	15.82%
Temasek Holdings	Singapore	China Construction Bank	China	11/11/2010	\$1,500.00	0.75%

Note: Publicly available data for SWF equity & real estate deals, joint ventures and capital injections
Source: Monitor-FEEM SWF Transaction Database



LIKE THIS SUNSET IN SAUDI ARABIA,
THE SOVEREIGN FUND LANDSCAPE IS MORE VARIED
THAN COMMONLY APPRECIATED.

The Sovereign Investment Landscape

An abundance of commentary and analysis attempts to illuminate the intentions and uses, structure and governance, impact and performance of SWFs. Yet few commentators have a sophisticated understanding of the variety of special purpose investment funds or arrangements owned by the general government, applying the label “sovereign wealth fund” to all for convenience. But this over-generalization masks important distinctions in purpose, strategy, and asset allocation, and does not aid analysis of their investment behavior.

The International Forum for SWFs, the group of state-owned funds that formulated and have applied the Santiago Principles, defines SWFs as:

“special purpose investment funds or arrangements, owned by the general government. Created by the general government for macroeconomic purposes, SWFs hold manage, or administer assets to achieve financial objectives, and employ a set of investment strategies which include investing in foreign financial assets...”⁵

⁵ International Working Group of *Sovereign Wealth Funds*, *Sovereign Wealth Funds Generally Accepted Principles and Practices* “Santiago Principles”, October 2008, <http://www.iwg-swf.org/pubs/gaplist.htm> (accessed May 10, 2011)

Our definition is much in the same vein, seeking to define SWFs on the basis of essential characteristics that differentiate them from other government-owned investment vehicles. As such, we define a SWF as an investment vehicle that:

1. Is owned directly by a sovereign government;
2. Is managed independently of other state financial institutions;
3. Does not have predominant explicit pension obligations;
4. Invests in a diverse set of financial asset classes in pursuit of commercial returns;
5. Has made a significant proportion of its publicly reported investments internationally.

We made an exception to the first criteria for funds based in the United Arab Emirates because we believe that the emirates within the federation have decision rights comparable to those of a sovereign authority. We do not believe that sub-national governments in North America possess these decision rights, so funds such as those in Alaska and Alberta have been excluded. We consider two U.A.E. funds, the Mubadala Development Company and the RAK Investment Authority, as SWFs because although they primarily invest in the development and diversification of their home economies, in 2010 both had substantial foreign assets.

The rationale for the existence of sovereign investment vehicles is different in each country, so they are immensely diverse. However, as shown below, they can be loosely grouped into six buckets along a spectrum of financial risk from central banks as the most liquid and low-risk, to state-owned enterprises. Each type of vehicle has a specific purpose.

Figure 13: The Sovereign Fund Investment Continuum

Sovereign Funds					
Official Reserves/ Central Bank <ul style="list-style-type: none"> External assets for directly financing international payment imbalances Highly liquid, often OECD government bonds 	Stabilization Funds <ul style="list-style-type: none"> Funds to insulate budget & economy from excess volatility, inflation, Dutch disease, & other macro-economic threats Low-risk, liquid assets: cash, government bonds 	Pension Funds <ul style="list-style-type: none"> Investment vehicles to meet government's future pension obligations Funded and denominated in local currency 	Domestic Sovereign Funds <ul style="list-style-type: none"> Investment vehicles to encourage domestic economic development Funded and denominated in local currency 	Sovereign Wealth Funds <ul style="list-style-type: none"> Investment vehicles by foreign exchange assets Managed separately from official reserves Typically have a higher tolerance for risk 	State-Owned Enterprises <ul style="list-style-type: none"> Companies in which the state has significant control May make investments in foreign assets
EXAMPLES <ul style="list-style-type: none"> Federal Reserve (U.S.) Bank of England (U.K.) SAMA (Saudi Arabia) 	<ul style="list-style-type: none"> Pula Fund (Botswana) Oil Stabilisation Fund (Iran) Economic and Social Stabilization Fund (Chile) 	<ul style="list-style-type: none"> Government Pension Fund–Norway (Norway) California Public Employees' Retirement System (U.S.) 	<ul style="list-style-type: none"> Samruk-Kazyna (Kazakhstan) 1Malaysia Development Fund (Malaysia) 	<ul style="list-style-type: none"> Abu Dhabi Investment Authority, (Abu Dhabi) Government of Singapore Investment Corp. (Singapore) Qatar Investment Authority (Qatar) China Investment Corporation (China) 	<ul style="list-style-type: none"> CNOOC (China) Gazprom (Russia) SABIC (Saudi Arabia)

Investment Risk



- **Central bank and foreign exchange funds** are used for currency stabilization and to control inflation and are thus highly liquid. For example, the Saudi Arabian Monetary Agency (SAMA) has assets of \$472.5 billion, 70 percent of which are foreign exchange reserves held in low-risk foreign securities.⁶
- **Stabilization funds**, like Chile's Economic and Social Stabilization Fund, are established to be drawn on at short notice to stabilize a country's currency at times of severe macroeconomic shock. Like central bank funds, therefore, they must be invested in a manner that gives the government owner "instant access," rather than for maximum return. Consequently, portfolios are liquid and low-risk, consisting of sovereign debt, cash and gold, and potentially high-quality commercial debt, such as that of large diversified banks. Chile's ESSF has an investment policy to hold its portfolio "exclusively as international fixed-income instruments."⁷

6 As of March 31, 2011, Saudi Arabian Monetary Authority, 1st Quarter 2011, Quarterly Statistical Bulletin, Table 8a, http://www.sama.gov.sa/sites/samaen/ReportsStatistics/ReportsStatisticsLib/5600_S_Quarterly_Bulletin_Bo.pdf (accessed May 24, 2011)

7 Economic and Social Stabilization Fund, Third Quarter Report 2009

- **Pension and social security funds** have ongoing liabilities of the pensions of those covered by the fund when they reach retirement age. Their asset allocation must ensure that there is sufficient liquidity to pay current pension liabilities, and that the risk profile is managed to ensure that it can continuously meet its future obligations. Some pension funds, particularly those from Canada, such as the Canada Pension Plan Investment Board, have balanced their liability and risks to enable them to invest in illiquid assets such as infrastructure and private equity.
- **Domestic Development Funds** are prevalent around the world. Some of these funds, like the French Caisse des Dépôts et Consignations or Cassa Depositi e Prestiti in Italy, are old institutions with historic mandates, while others, like 1Malaysia Development Bhd., have been formed to accelerate development in emerging economies. These funds create new government-linked companies and joint ventures at home to facilitate economic development, help domestic companies, and manage government holdings in existing GLCs. Like Temasek Holdings, these funds may eventually transition into SWFs as they exit portfolio companies and invest the proceeds abroad.
- **State-owned enterprises** are wholly, or majority, owned by the state. They invest in assets and undertake operations in specific economic sectors. The highest-profile in recent years have been national oil companies from emerging markets, such as Saudi Aramco, Russia's Gazprom, CNPC of China, Brazil's Petrobras, and Petronas of Malaysia, which have been dubbed the "new seven sisters," and dominate world oil production.⁸

⁸ Carola Hoyos, "The new Seven Sisters: oil and gas giants dwarf Western rivals," *Financial Times*, March 11, 2007

As a result of this distinction of SWFs from other government investment vehicles, we exclude several funds that are commonly included on SWF lists. Most notably, perhaps, we omit SAMA and China's State Administration of Foreign Exchange (SAFE). Although we acknowledge that at times both funds have acted like SWFs⁹ neither has the governance structure, liability, or risk profile that we would expect of a SWF. SAMA is a central bank, while SAFE is an agency tasked with drafting rules and regulations governing foreign exchange market activities.

We routinely revise the list of funds we believe meet our criteria. In 2010, the most notable impact on this list has come from the economic crisis in Dubai, which caused the emirate to suspend its debt repayments in November 2009. The subsequent reorganization of the emirate's investment vehicles and the necessary divesting of assets, as well as a number of corruption probes, forced us to reconsider the character of Dubai's state-owned investors. This year, we believe the three Dubai funds no longer meet our criteria for SWFs. The Investment Corporation of Dubai has become a government holding company exclusively for domestic assets. Although it still holds a 20 percent share of the London Stock Exchange through its subsidiary Borse Dubai, this is its only foreign asset, and thus the fund no longer meets our criteria. DIFC Investments (Company) LLC has been effectively mothballed since Omar bin Sulaiman, the Governor of the Dubai International Finance Centre, was imprisoned for taking \$14 million in illegal bonuses during his tenure.

⁹ See William Miracky, Davis Dyer, Drosten Fisher, Edward Chin, Victoria Barbary, *Sovereign Wealth Fund Investment Behavior: Analysis of Sovereign Wealth Fund Transactions during Q2 2008*, (Monitor Group, Cambridge MA: 2008)

Finally, Istithmar World, always a marginal inclusion on our list, underwent significant change in 2010 after its CEO, David Jackson, resigned in January. It has also suffered substantial divestments, as its portfolio¹⁰ is being sold to pay its debts, and those of its parent Dubai World. Its non-divestment operations in 2010 have largely been confined to supporting existing portfolio companies, such as Loehmanns and the W Hotel in New York.

Many governments announced their intentions to establish new sovereign funds during 2010, but none of these have yet undertaken direct investment activity that would warrant inclusion. Most notably, perhaps, we have not included Brazil's new sovereign fund, which was ostensibly founded to assist Brazilian firms in trade and foreign direct investment. But Brazil's current account deficit of over two percent of GDP and its activities to date give us no reason to dispute the opinion that it is "just a mechanism to shift around imaginary fiscal surpluses... to give the Ministry of Finance a way to interfere in the foreign exchange market without having to go through the Central Bank."¹¹

At present, 30 funds, from 22 nations, meet our criteria. The U.A.E. is represented by six funds, while China, Singapore, and Oman each have two. There are 12 funds from the Middle East and North Africa and 12 from Asia-Pacific. Three are from non-Pacific Asia, two—Norway and Ireland—are European, while only one from sub-Saharan Africa (São Tomé and Príncipe) conforms to our definition.

10 "Istithmar World: the facts behind the perception", in William Miracky, Victoria Barbary, Veljko Fotak, and Bernardo Bortolotti, *Sovereign Wealth Fund Investment Behavior: Analysis of Sovereign Wealth Fund Transactions during Q3 2009*, (Monitor Group, Cambridge MA: 2010)

11 Tony Volpon, Nomura client note, cited in Jonathan Wheatley, "The rising BRL: Brazil's sovereign debt, sorry, wealth fund to the rescue," *FT BeyondBrics*, September 21, 2010, <http://blogs.ft.com/beyond-brics/2010/09/21/the-rising-brl-brazil%E2%80%99s-sovereign-debt-sorry-wealth-fund-to-the-rescue/>, (accessed March 29, 2011)

The value of the assets under management of these 30 funds is estimated at just over \$2.6 trillion. The largest fund is Norway's Government Pension Fund — Global with at \$560.5 billion. Two-thirds of the funds have been established since 2000. The oldest, in Kuwait and what is now Kiribati, were set up in the 1950s.

A full list of the funds that conform to our definition, their assets under management and strategic asset allocations can be found in Appendix 2.



WORLD ECONOMIC FORUM

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Sovereign Wealth Funds and the Privatization of State Assets: Toward a Life-cycle Framework

Jonathan Brookfield, Ravi Shankar Chaturvedi, and Patrick Schena,
The Fletcher School, Tufts University

The behavior, structure, characterization, and even definition, of sovereign wealth funds (SWF) all remain areas of active inquiry. We define sovereign wealth funds broadly as investment funds owned by governments that are distinct from both official reserves and the capital available to state-owned enterprises (SOEs).¹² The latitude in this definition permits us to examine sovereign wealth funds through the lens of a life-cycle framework. This is interesting, not only for the light it sheds on the sovereign wealth fund universe, but also for the implications it may have for thinking about the privatization of state assets.

We focus our analysis on funds engaged in the structural transformation of state assets into viable private sector commercial entities. We refer to these funds as “transformational.”¹³ While all SWFs typically have investment objectives that lie somewhere between wealth preservation and wealth accumulation, there are a few critical characteristics that set transformational funds apart. These include: (1) illiquid holdings, (2) active and engaged investment management, (3) long investment horizons, and (4) the tendency to invest in key areas of national importance. Over time transformational funds often adopt a number of differing roles, including serving as a catalyst for the implementation of value enhancing initiatives in state-owned enterprises and government-linked companies, functioning as a vehicle for divestment, and working as an agent on behalf of home governments to enhance national competitiveness.

We are interested in both the restructuring undertaken by such funds as well as their own transformation from a development mandate to an investment mandate, whether based on public or private assets. Typically distinctions among

12 This definition is subtly different from that used by Monitor in the body of this report. On the whole, however, our definition aligns with the desire to differentiate SWFs from other sovereign investment vehicles

13 These funds equate to Monitor’s “domestic development funds” discussed on p. 33

SWFs have largely been based on an evaluation of fund characteristics at a given moment. A life-cycle framework transcends such comparisons by framing SWFs in a dynamic context that leads to a more robust set of differentiating dimensions. In this respect, we identify liquidity as fundamental to a life-cycle framework and important in two key ways: it is critical to funds seeking to maintain a balance between resources and commitments over time; and it is important for funds seeking to transform their mandate from restructuring and the monetization of state assets to investing.

Liquidity and a Life-Cycle Perspective

Recognition that there needs to be some correspondence between the liquidity of one's assets and the maturity profile of one's liabilities is hardly a new idea in finance. In the case of SWFs, to the degree funds are managed with an eye to improving the lives of a country's citizens over time, changing demographic patterns may provide some clues for thinking about how a SWF may want to structure its portfolio over time. Similarly, as SWF goals often include sustainability and some kind of notion of intergenerational fairness, it also becomes important for them to consider the potential implications of changing demographics on SWF policies related to distributions and reinvestment. In this respect we believe it is important to look beyond simply the funding source and to the liquidity of core assets.

As SWFs are managed with an eye to improving the lives of a country's citizens, the funds may have to adapt their portfolios of changing demographics.

Our framework is built on a basic premise that SWFs are capitalized either with liquid core assets (i.e., cash) or illiquid assets (e.g., a portfolio of operating enterprises). We consider the latter as “transformational” under our definition and include such entities as Temasek Holdings, the Bahrain Mumtalakat Holding Company, Khazanah Nasional Bhd., and to a limited extent the China Investment Corporation (while it continues to manage the assets of Central Huijin Investments). Importantly, not only are these funds established differently, but subsequent steps in their life-cycle are also markedly different. Specifically,

funds capitalized with illiquid assets must necessarily both consider restructuring (an asset turnaround) and implement some kind of divestiture before they can establish a real pool of investable cash. During this time, such funds are likely to display many of the characteristics of private equity, particularly those established for the purpose of taking over undervalued, under-performing assets in order to add value and then sell off at a profit.

Figure 1: Liquidity and a Life-Cycle Perspective for SWFs

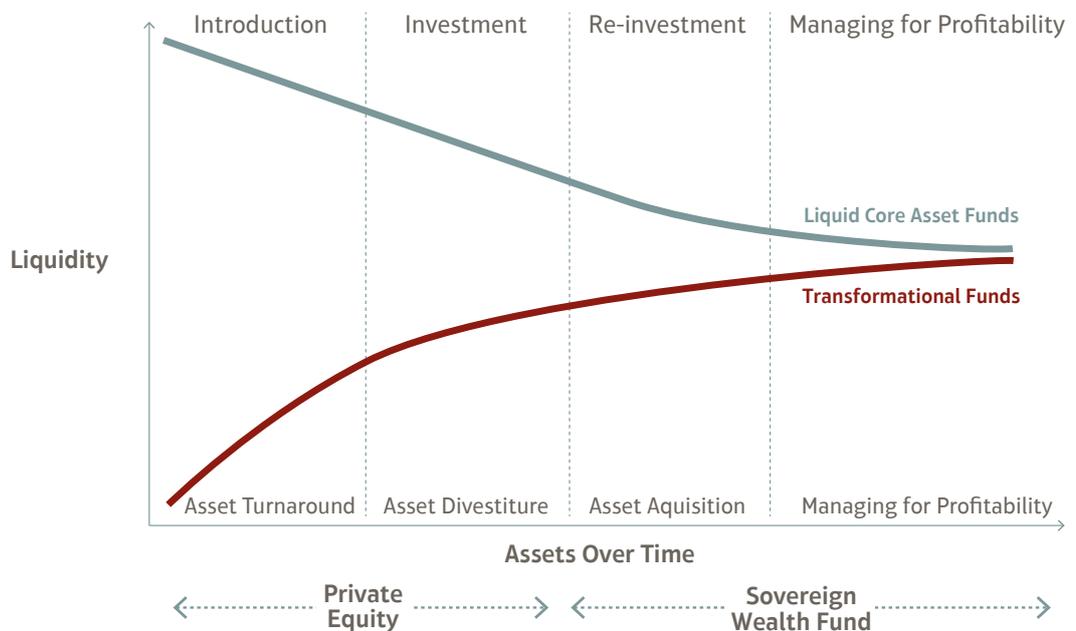


Figure 1 portrays the transformation of funds originally capitalized with illiquid assets to illustrate the relevance of our liquidity based, life-cycle framework. Established in 1974 for the express purpose of “owning and commercially managing investments in companies previously held directly by the Singapore Government,”¹⁴ Singapore’s Temasek offers perhaps the classic example of a transformational fund. Mumtalakat, established in 2006, by the government of Bahrain, provides another example. The fund was created to help improve transparency and achieve operational excellence for the country’s state-owned

14 Temasek Holdings Website, http://www.temasekholdings.com.sg/media_centre_information_factsheet.htm (accessed May 24, 2011)

assets outside of the oil and gas sector. Its stated strategy is to increase the value of its portfolio through the identification and implementation of value enhancing initiatives for its strategic holdings, and through portfolio adjustments to include the partial or complete disposal of select assets, further investments in specific existing assets, and/or new investments.¹⁵ However, for Mumtalakat to pursue a strategy of making additional investments in new or existing assets, it must first reach a state of sufficient liquidity, either by having existing assets generate reasonable profits over time, divesting assets, or raising outside funding, with divestitures depending critically on the success of value enhancing initiatives used and the particular nature of specific initiatives.

SWFs and Privatization

If a Norwegian SWF buys a French SOE, does the sale qualify as privatization? The relationship between SWFs and privatization is interesting, and one of the most interesting issues may well relate to the specific character of transformational funds.

From a certain perspective, the combination of value-enhancing initiatives followed by divestment as practiced by transformational funds is similar to the classic government strategy of restructuring an asset before privatizing it. Are transformational SWFs then simply vehicles for privatization? If so how effective might we expect them to be?

According to William Megginson, governments wishing to privatize tend to be best served when they follow a fairly standard process of first preparing the company for sale, deciding on the optimal method of sale and offering price, and finally, actually selling the firm to private investors. While the question of whether or not a state enterprise should be restructured by a government prior to its sale remains a controversial issue, current thinking holds that restructuring should generally be left to the new private owners.¹⁶

15 Bahrain Mumtalakat Holding Company Website, <http://www.bmhc.bh/en/6/overview.aspx> (accessed May 24, 2011)

16 William L. Megginson, *The Financial Economics of Privatization*, (Oxford University Press, New York: 2005)

While Megginson goes to great lengths to explain privatization and the various pros and cons of different privatization modes, in the literature to date, there seems to be little consideration of the potential role of SWFs within the privatization process. This is unfortunate, because we believe transformational SWFs may provide a useful window for thinking about the subject. To wit, as it is not unreasonable to want to “paint a house before selling,” the institutional interests of transformational funds can and will influence the pace and sequencing of privatization.

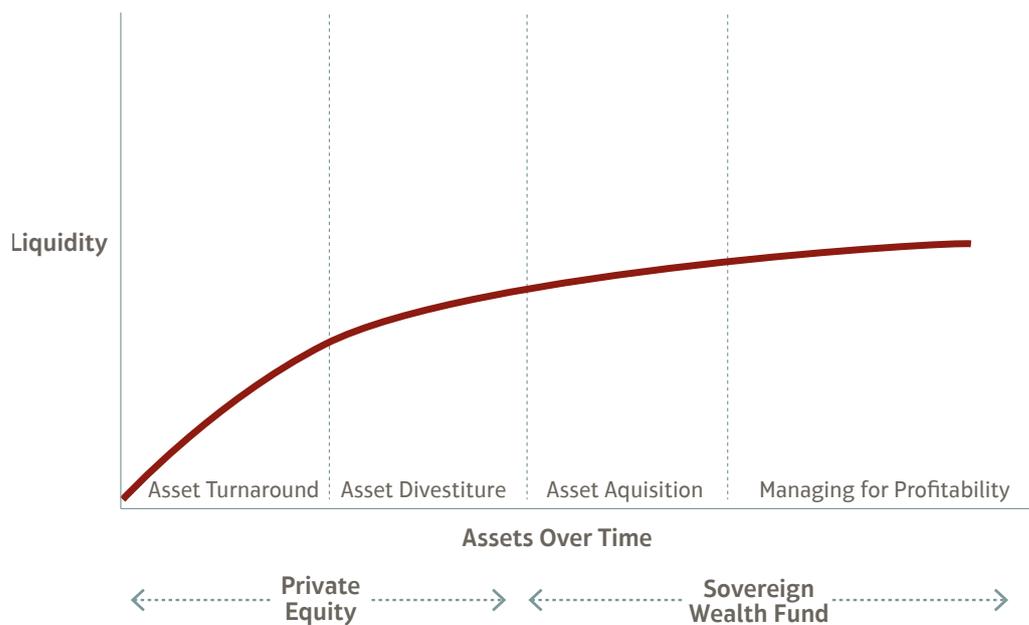
To date there has been limited empirical analysis of SWF performance, and those studies that have come out have generally focused on the investment, rather than the divestment, activities of SWFs. Inferentially, there are indications of weak investment monitoring especially by funds with lesser quality governance structures, as evidenced by deteriorating investee company performance over time post investment.¹⁷ Based on the experiences of SWFs like Temasek, Khazanah, and Mumtalakat, it would appear that transformational SWFs have a keen interest in restructuring firms before divestiture. They also appear to prefer sequenced share issue privatizations over other forms of divestment. Taken as a whole then, it may be that transformational SWFs can be useful in extracting greater value from the privatization process for governments. Any stronger statement on the subject, however, must await the results of a more in-depth analysis comparing the effectiveness of traditional privatization with that of transformational SWFs.

If prior waves of privatization in the United Kingdom and other economies over the last three decades can be classified as “Privatization 1.0,” then perhaps the approach of transformational SWFs such as Temasek and Mumtalakat may be thought of as “Privatization 2.0.” In particular, where the archetypal vision of Privatization 1.0 may have been a clean and comprehensive transfer of state-owned assets into private hands, Privatization 2.0 would seem to be more about

¹⁷ Bernardo Bortolotti, V Fotak, W Megginson, and W Miracky, “Sovereign Wealth Fund Investment Patterns and Performance”, Working Paper, June 30, 2009

the use of tools from business strategy and corporate finance to extract the maximum value from assets for the State over time. As such, in places Privatization 2.0 may potentially be an improvement over earlier approaches. That said, both Privatization 1.0 and Privatization 2.0 contain important lessons for governments thinking about how to structure the boundary between state and private sector activity, and policymakers worldwide would do well to evaluate the strengths and weaknesses of both approaches as they consider the kind of development trajectories they would like to see for their economies.

Figure 2: Privatization 2.0



SWFs and “Green Growth”

Sven Behrendt, Managing Director, Geoeconomica

The recent confluence of global risk events and the secular upwards trends in global commodity prices ask some profound questions about the importance of long-term interdependencies between growth and natural resource availability. But, unlike the long-term scenarios of the early 1970s, such as those presented by the Club of Rome that emphasized the finite nature of natural resources in its path-breaking study on the “Limits to Growth,” these new debates are based on the assumption that the global community has the ability to manage and cope with greater natural resource scarcity.

At the core of this assumption rests the belief that the unsustainable exploitation of the world’s natural resources has become a major risk factor for global growth in itself. Instead, growth today must be “smart,” i.e., sustainable and appreciative of the finite nature of natural resources. “Green growth” with resource efficiency at its core is turning into a more popular investment thesis.

The “green growth” policy impulse poses an important conceptual, if not philosophical challenge for many, not all, SWFs. Many of the world’s SWFs were established to manage their nation’s wealth for the benefit of future generations and in the spirit of insuring transgenerational equity. Whether or not this objective itself will have been accomplished with due respect to the importance of short term annual results, can only be determined in the long run. However, ensuring a sound financial future of their citizens might only be one part of the value proposition and success criteria for intergenerationalist SWFs. For SWFs that have aligned their investment policy with the long-term interest of their nation, it is worth considering the affects of their current investment behavior on the long-term availability of the world’s resources; in other words, the resource base on which the future citizens of their countries, and others, will depend.

In the past, many SWFs have benefited from the world's increased demand for finite natural resources such as oil, gas, iron ore, or copper—and associated public revenues as main sources of funding. Many more are going to do so, as an increasing number of governments consider establishing SWFs funded by strong market fundamentals for commodities and associated surplus revenues. Their growing size, both in terms of sheer numbers and accumulated wealth, turns them into powerful players in the global financial architecture. It would be ironic, if not tragic, to see resource-based SWFs not only benefiting from funding derived from natural resource exploitation, but also investing into the instruments that are used to dig deeper holes into the ground, accelerating natural resource depletion.

Recently, the global community advanced its knowledge about long-term trends of resource depletion. The water-food-energy scarcity nexus has emerged as a particularly grave and chronic impediment for economic growth, social stability and security.¹⁸

Population and raising incomes are going to put tremendous pressure on the availability of water, food, and energy. The result of any one of these resources being in seriously short supply could foment a major humanitarian, political or economic disaster.

The U.S. Energy Information Administration (EIA) suggests that world energy consumption will grow by 49 percent from 2007 to 2035.¹⁹ Biofuels are often touted as one way of meeting this demand, and could provide up to 27 percent of total transport fuel and contribute substantially to reducing carbon dioxide emissions by 2050.²⁰ But this would require the cultivation of around 100 million hectares of agricultural land, which would pose a considerable challenge given competition for land and feedstocks. The Food and Agriculture Organi-

The water-food-energy scarcity nexus has emerged as a particularly grave and chronic impediment for economic growth, social stability and security.

18 World Economic Forum, *Global Risks Report 2011*, (World Economic Forum, Geneva: 2011)

19 US Energy Information Administration, *International Energy Outlook*, (EIA, Washington DC : 2010)

20 International Energy Agency, *Biofuels Roadmap*, (International Energy Agency, Paris: 2011)

Uncertainty about the evolution of climate policies will pose a significant portfolio risk for institutional investors including SWFs.

zation (FAO) calculates that in the same timeframe the world's population will increase by 34 percent to reach 9.1 billion, and will become more urbanized and wealthier as global wages increase with widespread economic development. To feed this population, food production needs to increase by 70 percent, with annual cereal production requiring an increase of 43 percent and annual meat production a rise of over 200 million tons to 470 million tons.²¹ All this will require the substantial increase of input factors, not least water. The Water Resource Group suggests that by 2030, under an average economic growth scenario and if no efficiency gains are assumed, global water requirements will grow from 4,500 billion cubic meters today to 6,900 billion cubic meters—a full 40 percent above current accessible, reliable supply.²²

Additionally, these developments will be exposed to further stress caused by climate change. Without a global shift to a low-carbon, resource-efficient economy, the world is on track for increasing greenhouse gas emissions by 70 percent by 2050 and temperature increases of 4-6°C by the end of the century, far from the target countries recently agreed in Copenhagen of staying within a 2°C increase. Uncertainty about the evolution of climate policies will pose a significant portfolio risk for institutional investors.²³

These are troubling figures. All things remaining equal, future generations will have to cope with a world that is seriously depleted of natural resources and have to pay a considerable price for increasingly scarce commodities and associated risks.

This leaves states whose economies are and will be vitally dependent on their country's access to natural resources abroad with two choices. Governments with constrained access to those natural resources they consider vital for na-

21 Food and Agriculture Organization, *How to Feed the World in 2050*, (FAO, Rome: 2009)

22 2030 Water Resources Group, *Charting Our Water Future*, (2030 Water Resources Group: 2009)

23 Mercer, *Climate Change Scenarios: Implications for Strategic Asset Allocation*, (Mercer: 2009)

tional economic competitiveness, have explored the option to use state-owned investment and investment-promotion agencies to secure access to resources abroad. However, due to the concerns raised by Middle Eastern governments' acquisition of agricultural land in Africa, for example, that strategy might quickly exhaust itself.

Much more could be gained for the sovereign owners of SWFs by taking an active role facilitating serious progress towards much higher levels of resource efficiency. It is increasingly evident that the world cannot achieve sustainable economic growth without significant innovation in both the production and consumption sides of the market.²⁴ "Going green" is increasingly understood not to constitute an obstacle, but a condition for long-term sustainable growth. Growth could be delivered by investing in the markets, technologies, knowledge and business models that improve resource productivity and sustain natural assets.²⁵ What is key is to consider "green" investments not as an element of an "ethical" investment policy, but as an emerging and attractive asset class in its own right.²⁶

A number of SWFs have begun to advance resource scarcity and climate change in their investment agenda more actively. The Norwegian Government Pension Fund—Global has increased the size of its environmental investments to \$4.7 billion.²⁷ The China Investment Corporation has taken an interest in solar and wind energy. Abu Dhabi's Mubadala continues to advance its renewable energy and clean technology initiative, Masdar, most recently demonstrated through its commitment to the Shams solar energy plant. But to make a meaningful impact on climate change, substantial investment in green energy is required: the World Economic Forum estimates that investment in clean energy would have to grow to \$500 billion per year by 2020 for global warming to be

24 United Nations Environment Programme Website, <http://www.unep.org/>

25 Karen Ward, *The World in 2050: Quantifying the shift in the global economy*, (HSBC Global Research, London: 2011)

26 For a reference on ethical investment see David Murray, *SWFs: Myths and Realities, Global Sovereign Wealth Funds Roundtable, Key Note Address, May 5, 2011*, <http://www.ifswf.org/pst/london11.pdf> (accessed May 24, 2011)

27 Government Pension Fund—Global, *Annual Report 2010* (Norges Bank Investment Management Oslo: 2011)

limited to 2°C without compromising economic growth.²⁸ Despite a challenging economic environment, the clean energy sector has made significant progress as investments have increased to just below \$250 billion per annum in 2010. These developments and figures suggest that there is merit in creatively identifying the commercial opportunities that offer themselves in the environmental investment space.

SWFs moves in the “green economy” appear fairly scattered; but the privilege of enjoying long-time investment horizons suggests that SWFs could become more systemically relevant as “green financiers”. Other than more short-term investors, they are in the position to accept lower short- and medium-term returns for strategic gains later. Not only will they benefit from the long-term appreciation of a global trend. One can also assume that the political standing of investors having invested in “green growth” will substantially improve.

Investment in green technology could also help developing economies, many of them owners of SWFs, to facilitate the transfer of technology and know-how needed to build the advanced infrastructure of the twenty-first century, rather than follow unsustainable growth and consumption patterns that on which the infrastructure of the twentieth century was built. Smart grids and smart power systems in the energy sector can have major impacts on improving energy distribution and optimizing energy usage. Smart housing can contribute to major reductions of energy use in hundreds of millions of buildings. Smart transportation systems are a powerful way of organizing traffic more efficiently and reducing carbon dioxide emissions.²⁹

As suggested, many SWFs are in for the long haul. Many (but by no means all), enjoy the privilege of not having to service any immediate liabilities and therefore in the position to assume higher levels of liquidity risks, such as posed by

28 World Economic Forum, *Green Investing*, 2009, 2010, 2011 (World Economic Forum, Geneva); World Economic Forum, *Capturing opportunities in energy efficiency*, (World Economic Forum, Geneva: 2011)

29 Organisation for Economic Cooperation and Development, *Smart Sensor Networks: Technologies and Applications for Green Growth*, (OECD, Paris: December 2009)

investment in infrastructure. Governments, through the very creation of their SWFs, have demonstrated an appreciation for the concerns of future generations and should be particularly aware of their needs, not only in financial terms. They are also in a much better position to formulate investment objectives that enable SWFs to more easily defend short term volatilities in their portfolios and assume higher risks as they move into new territory and innovate. “Green growth” might offer itself as a promising investment theme, driving parts of their strategic asset allocations. In consequence, SWFs might become more active sponsors of the “green growth” paradigm.

SWFs and Latin America in 2010 and 2011

Javier Santiso, Professor of Economics, ESADE Business School, Director of the ESADE Centre for Global Economy and Geopolitics (ESADEgeo)

Epiphany, the last festival in the Christmas calendar marks the arrival of the three kings who came from the Orient. In Latin America there has been perhaps a feeling that Christmas and the kings came last year earlier. In December 2010, Brazil saw nine investors having invested \$1.8 billion in the bank BTG Pactual. This transaction was led by three sovereign wealth funds from China (CIC), Singapore (GIC) and the U.A.E. (ADIC), that is from the Orient. Each invested between \$200 and \$300 million, making it the largest investment transaction of its kind to date in Latin America and confirming the high interest in Brazil in particular.

In the past these sovereign funds have injected more than \$100 billion into OECD financial institutions, in some cases suffering huge losses. These investors are now drastically rethinking their investment strategies, increasingly betting on emerging markets and rebalancing their portfolios. This is where the interest in Latin America, and Brazil in particular, comes in. The above transaction is neither the most striking nor the most far reaching carried out to date: a couple of months earlier Qatar Holding, an other sovereign fund from the region of the three kings, invested more than \$2.7 billion in Banco Santander Brazil, buying five percent of the Brazilian subsidiary of the bank.

In 2010, Southern Cross, a Latin American private equity fund, closed the largest investment vehicle of this type, for nearly on \$1.7 billion, thanks in part to the support of local pension funds but also, and above all to Middle Eastern sovereign wealth funds. The Abu Dhabi Investment Authority (ADIA), one of the largest sovereign wealth funds in the world, based in the U.A.E., now invests in Latin America through companies like Southern Cross. As proof of the Middle Eastern investors' appetite, in 2009, a delegation from Abu Dhabi visited no more than 14 countries in the Western Hemisphere. A little later, in January 2010, the Emir of Qatar, Sheikh Hamad Al-Thani, visited Argentina, Brazil and Venezuela. In all these examples, Brazil is at the very core of the interest of investors looking to diversify their yields and returns on investments. On top

of that, Brazil offers good growth perspectives, ahead of the Olympic Games and World Cup that will take place during the first half of the current decade.

When the Brazilian giant Petrobras made its world record IPO for almost \$70 billion in the second half of 2010, various Middle Eastern and Asian sovereign wealth funds took part. At the same time, in October 2010, another Brazilian multinational, engineering company Odebrecht, received investment of \$400 million from the state investor Temasek Holdings, one of Singapore's sovereign wealth funds. This fund also invested in Mexico for the first time in 2010, with a \$200 million stake in a local real estate company. Such deals reflect the aggressive rebalancing of Temasek's portfolio starting in 2009, pushing to 80 percent of its total assets the exposure to emerging markets and lowering a meager 20 percent the exposure to OECD countries.

Middle Eastern sovereign investors are becoming increasingly interested in Latin American markets.

Within Latin America, Chile, Brazil, Venezuela and Trinidad and Tobago already have their own sovereign funds, all of them very different in their objectives, size, and institutional settings. For their part, Colombia and Peru are looking into creating similar institutions and debates started to take place in Panama and Bolivia. Beyond financial strategy and diversification of risks and assets, in some cases these funds work on the basis of industrial and development objectives—similar to some funds in the Middle East and Asia. For example, Temasek of Singapore, Khazanah of Malaysia or Mubadala of the U.A.E. have all contributed and are contributing to boosting powerful industries, aiming to diversify the export bases of these countries. Perhaps these examples should be a source of inspiration for the Latin American countries in the future, with the proper institutional framework and safeguards. In Brazil, the national development bank, BNDES, already has been playing and is still playing a key role in deploying giants like Petrobras, Vale and Embraer.

In December, Peru's Minister of Finance announced that the country may be considering the establishment of a fund of this type before Alan García leaves office in the middle of 2011. With around \$45 billion in reserves and a tidal

wave of investment in raw materials on its way to the country—more than \$40 billion planned in the raw materials sector from now until the middle of the current decade—the country has a number of models it could consider. One such model is that of neighboring Chile which successfully created stabilization funds

Latin American countries face the challenge of using the proceeds of resource rents for the benefit of their countries.

and a clear institutional benchmark, or further afield, Malaysia, Singapore and the U.A.E. all have strategic funds that also serve to improve productive diversification. Colombia is also facing a commodity windfall and started to think beyond its coffee stabilization fund in terms of creating a sovereign wealth fund that could become also

part of a broader diversification strategy.

All these Andean countries have abundant reserves and face the challenge of managing the raw materials boom. Their investments and exports are still highly concentrated within these low-intensity areas for added value and jobs. Hence their desire to make better use of this abundance to take a leap forward in production and diversify their economies, an issue that remains pending. Sovereign wealth funds may be strategic vehicles to this end, as long as these institutions are nurtured by providing them with first-rate professionals and processes. This is precisely what was masterfully achieved by Chile (another Andean country, enjoying copper windfalls). In the middle of the last decade it created two sovereign wealth funds with stringent rules and top-level human and institutional capital. The outcome is that this Latin country has become a worldwide benchmark, on a par with Norway, in matters of sovereign wealth funds. In the case of Chile, the funds are set in the context of a strict fiscal responsibility law, adopted in 2006, which requires 0.5 percent of the previous year's budget surplus to be allocated to the first fund (pension reserve fund); the next 0.5 percent surplus to capitalize the Central Bank, and whatever surplus is generated above that amount, to the second sovereign wealth fund (Economic and Social Stabilization Fund).

However, the Chilean funds are not strategic funds, i.e., aimed at encouraging business development and diversification. Some emerging countries such as the U.A.E., Singapore, and Malaysia created strategic funds with the clear

aim of contributing to business development and production diversification. One might imagine Chile equipping itself with a (third) sovereign wealth fund for this purpose. The beauty of the Chilean scheme is that it potentially offers the right structure of incentives to do so: the present three successive layers for fiscal surplus allocations could be joined by a fourth for a strategic fund. This would only be activated if the first three items are fulfilled. Therefore it would only be activated above a significant level of fiscal surplus. The strategic fund could then operate as a fund of funds, pushing production diversity towards technology sectors or even mining industry suppliers, for example.

In fact it is remarkable that, although it is the world's leading producer and exporter of copper, Chile has no world-scale multinational supplying that industry with vehicles, diggers, or explosives. They are all foreign: Caterpillar and Joy Global are listed in New York, Komatsu in Tokyo, Atlas Copco and Sandvik in Stockholm, Boart Longyear, Leighton and Orica are Australian, the Weir Group is Scottish and Hatch is Canadian. They are all large-scale creators of high value added jobs. Coldelco, the world's biggest producer of copper, employs just under 20,000 people — a great deal fewer than the Swedish multinationals Sandvik (44,000 employees) and Atlas Copco (30,000 employees). Its income is seven times lower than that of Caterpillar, which also employs almost five times more people than the Chilean multinational.

Whatever the options chosen by Colombia and Peru, both will be forming part of a global trend: there are currently some 50 sovereign wealth funds in the world and around 15 more countries, from India to Israel and Nigeria, are looking into creating more long-term capital institutions to finance their stabilization and development. The three kings came from the Orient and once again they are coming from this direction for Latin America and Brazil, the bright spot of the region. However, it is always a risky strategy to depend on these kings: it is far better when one can make one's own gold. Here also, Brazil showed the way, deploying industrial policies and strategies through what could be labeled as a strategic sovereign wealth fund, the BNDES, one of the largest of its kind in the world.

The New Investment Frontier: SWFs Investment in Africa

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Ashby Monk, Co-Director of the Oxford SWF Project, Research Fellow,
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To date, the subject of sovereign wealth in Africa has largely concerned how African nations can put revenues arising from commodity exports to work for current and future generations. African nations have established stabilization and development funds, or reformed state pension and social security funds to smooth their revenues and achieve macroeconomic stability as well as accumulate savings for future generations. African governments are now asserting themselves in this space like never before, as they seek to use their bountiful natural wealth as a catalyst for growth and development. There are currently at least 15 African SWFs of all types, and this number is growing, with Ghana being the most recent country to join the club. Several other countries, including regional giants Nigeria and South Africa, have had national debates about establishing SWFs, with the former being well on the way to establishing one. Mauritius is also expected to launch a SWF and will be the first African country to do so using non-commodity resources.

The growing popularity of SWFs in Africa mainly reflects the continent's robust economic growth, largely driven by increasing commodity prices. Since 2000, GDP in Africa has increased at a compound annual growth rate of five percent. Although this halved during the Global Financial Crisis, the continent grew by 4.5 percent in 2010, and in 2011 growth rates are expected to match pre-crisis levels.³⁰ Much of this growth is driven by non-government investment, as investors wake up to the potential of finding alpha returns in Africa. Foreign direct investment (FDI) is the most important source of private capital flows to the continent. After declining by 19 percent to \$59 billion in 2009, FDI is expected to mirror GDP growth and recover in 2010, returning to its historical trend. This is unsurprising given that UNCTAD estimates FDI in Africa to have the highest rate of return globally.³¹

30 *African Economic Outlook*, Table 2: Real GDP Growth Rates, 2001-2011, <http://www.africaneconomicoutlook.org/en/data-statistics/table-2-real-gdp-growth-rates-2001-2011/> (accessed May 16, 2011)

31 United Nations Conference on Trade and Development, *World Investment Report 2010: Investing in a Low Carbon Economy*, http://www.unctad.org/en/docs/wir2010_en.pdf (accessed May 16, 2011)

The environment depicted above suggests that the conversation surrounding sovereign funds in Africa should shift from home-grown SWFs to foreign SWFs making the most of the investment opportunities on the continent. However, SWFs seem to shy away from investing in Africa outside of established frontier markets such as South Africa, Kenya, Nigeria, and Mauritius. Yet, there is real value to be captured by SWFs willing to engage more actively on the continent. As happened in Asia two decades ago, investment trailblazers are opening up the markets of Africa today.

The conversation surrounding SWFs in Africa should shift from home-grown SWFs to foreign SWFs capitalizing on investment opportunities on the continent.

Private equity funds are in the vanguard, and could represent attractive vehicles for SWFs as they assume the burden of identifying and managing investment opportunities. Despite small and illiquid stock markets, PE on the continent is booming: sub-Saharan Africa private equity fundraising for the year 2010 closed at \$1.49 billion, signaling 56 percent year-on-year growth—one of the fastest growth rates across emerging markets.³²

With their long-term time horizons and limited liabilities, SWFs are well placed to reap significant commercial and financial profits from an African PE investment program. One substantial long-term investment opportunity for SWFs (and one that aligns with current investment trends) is presented by Africa's huge infrastructure deficit of \$93 billion (approximately 15 percent of the continent's GDP), of which two thirds are needed for new projects.³³ Moreover, as sovereign investors, SWFs have the potential to play an important role in attracting private companies as co-investors, as they may be able to wield more influence to ensure that contracts are upheld. Furthermore, they could potentially help improve legal frameworks, particularly in the public-private partnership space.

Investment professionals suggest that SWFs' lack of engagement in Africa reflect the complexity and opacity of its markets and underlying risk factors: most

32 Emerging Markets Private Equity Association, *EMPEA Industry Statistics H2 2010*, February 2011, <http://www.empea.net/Main-Menu-Category/EMPEA-Research/Industry-Statistics/EMPEA-Industry-Statistics-2H-2010-Archive-Members.aspx?FT=vnd-ms-powerpoint>

33 Vivien Foster and Cecilia Briceño-Garmendia (eds), *Africa's Infrastructure: A Time for Transformation*, (The International Bank for Reconstruction and Development / The World Bank, Washington DC: 2010), http://siteresources.worldbank.org/INTAFRICA/Resources/aicd_overview_english_no-embargo.pdf (accessed May 16, 2011)

SWFs asset allocators simply perceive Africa as being too risky. Likewise, SWFs often lack the capacity to assess and take advantage of investing in Africa. Legal frameworks are often less stringent than in more developed markets and many companies are still relatively young and small, a mismatch with SWFs' large investment tickets. Monitor's experience in Africa suggests that the funds have tried blind-pool investments, but these have often been unsuccessful and had high transaction costs. This has been compounded by losses in the Financial Crisis. Consequently, we have seen SWFs being reticent about returning to or initiating investments in African markets and are reducing commitments, which increases the transaction costs for local PE funds with SWFs as limited partners because the deal range is smaller.

Nevertheless, some SWFs have allocated the time, energy, and resources into investing in Africa. On the whole, they have concentrated on low-hanging fruit such as natural resources, telecoms, and high-end tourism assets, mainly for strategic purposes. However, this is far from the whole story.

China-Africa Development Fund

The China-Africa Development Fund (CADF) is one of eight initiatives announced by the Chinese government at the 2006 Beijing Summit to build a new Sino-African Strategic Partnership. The fund started operations in mid 2007 with \$1 billion from the China Development Bank; in May 2010, it commenced its second-phase of fund raising—\$2 billion over three years—and is expected to reach \$5 billion.³⁴ It invests alongside Chinese ventures seeking to enter African markets, taking minority stakes at any stage of a project allowing it to support both greenfield and brownfield schemes.³⁵ This has been highly successful: Chinese contractors backed by CADF captured over 30 percent of projects tendered by the World Bank and the African Development Bank since its establishment. By 2009, CADF had invested nearly \$700 million in over

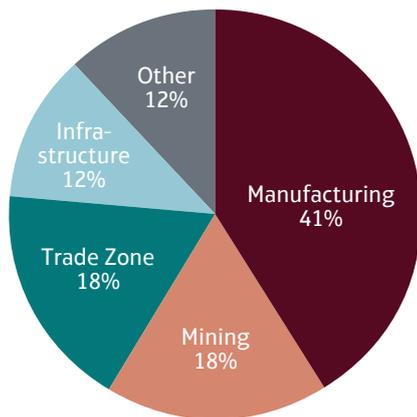
34 Zhou Yan, "CAD Fund to boost footprint in Africa", *China Daily*, May 28, 2010, http://www.chinadaily.com.cn/bizchina/2010-05/28/content_9903203.htm (accessed May 18, 2011)

35 *Emerging public and sovereign fund investors in Africa's infrastructure: Challenges and Perspectives*, (OECD Development Centre, Paris: 2008), <http://www.oecd.org/dataoecd/39/43/41775935.pdf> (accessed May 18, 2011)

30 projects in countries as diverse as the Democratic Republic of the Congo, Malawi, Ghana, and Ethiopia.³⁶

As Figure 1 shows, while large share of these investments benefited extractive industries and sought to secure much needed commodity resources for the Chinese economy, the fund has also invested substantially in sectors such as manufacturing and infrastructure that have a more developmental outcome, including a glass-making facility in Ethiopia and hydroelectric power in Zambia.

Figure 1: Sector distribution of selected CADF investments in Africa



N=17

Source: African Development Bank

Istithmar World

Istithmar has borne a heavy burden of helping sell off the debt of its parent company Dubai World since the end of 2010. Much of its portfolio appears to have been sold to help repay debt incurred by the state-owned enterprise. Before then, however, Istithmar gave Monitor exclusive access to its portfolio, which revealed that the fund had a substantial exposure to Africa. As of the end of 2009, Istithmar had made 18 investments in Africa, with a purchase price

³⁶ Ethiopia alone has received \$61 million in CADF investments “Ethiopia Seeks More Investment”, *Ethiopian Journal*, May 6, 2011

of nearly \$1 billion. The majority of these investments were in high-end real estate, such as the Pearl Valley golf estate and Victoria and Alfred Waterfront development in South Africa's Cape Province. These projects accounted for half of Istithmar's total investment value on the continent. Moreover, these investments seem profitable; for example, it recently sold its share of the Victoria and Alfred development, at a 15.4 percent profit after five years.

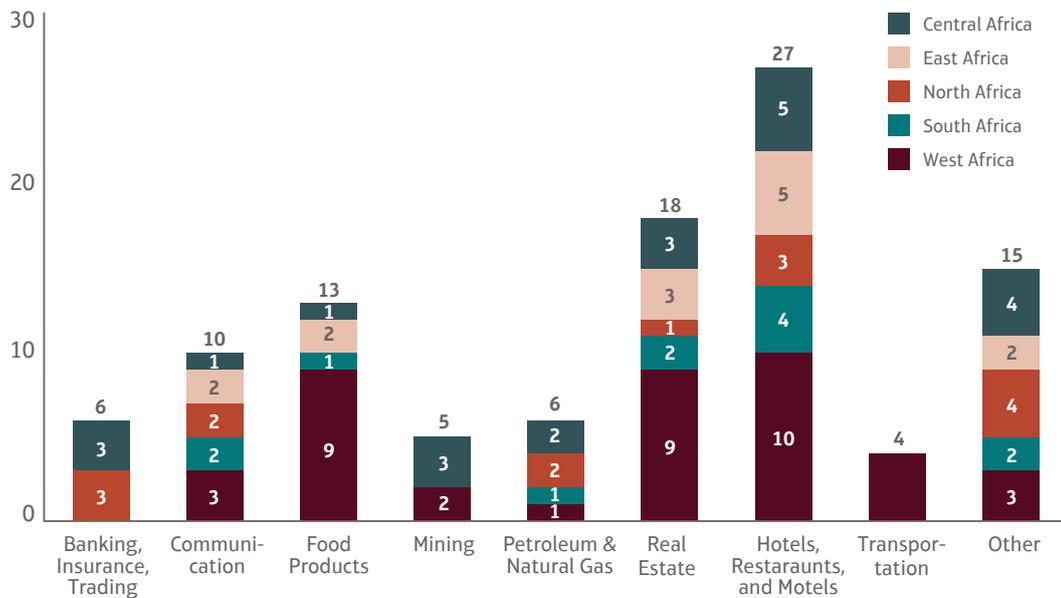
Libyan Investment Authority (LIA)

Recent events in Libya and those concerning the assets of LIA were headline news at the beginning of 2011, with much suspicion surrounding the investment practices of the fund. Nevertheless, data compiled by the African Development Bank with the help of Monitor³⁷ suggests that while there may be questions surrounding LIA's investment motives and distribution of generated returns, its subsidiaries—the Libya-Africa Portfolio and the Libyan Arab African Investment Company—were active in Africa, making 104 publicly reported direct investments, in 37 foreign African countries, 16 sectors over the last decade. These investment patterns broadly reflect the growing sectors of opportunity in Africa.

Like Istithmar, LIA's preferred sectors were high-end real estate and hotels (accounting for 45 investments), but the third most prevalent sector for LIA was food processing, a sector which is considered key to African development as it enables Africans to add value to their agricultural produce before consumption or export. Food processing companies in poor countries like Burkina Faso, Chad, and Mali benefited from LIA's support. It also invested in African telecommunications, as it sought to take advantage of the almost exponential growth in the continent's telecoms markets. Most recently, it paid \$90 million for a 60 percent share in *Sotel Tchad*, and \$257 million for 75 percent of Zambia Telecommunications Company.

37 T Triki and I Faye, "African's Quest for Development: Can Sovereign Wealth Funds Help?," *International Finance Review*, 12 (2011), Forthcoming

Figure 2: Libyan Investment Authority Investments in Africa 2000-2009



Source: African Development Bank, Monitor-FEEM SWF Transaction Database
 Other: Apparel; Beer, Liquor & Beverages; Chemicals; Electrical Equipment; Industrials; Manufacturing; Construction; Tobacco Products; Services; and Retail.

A New Investment Frontier?

Africa offers enormous financial and commercial potential to SWFs; the potential alpha returns on the continent are appealing. The continent may be particularly attractive to those SWFs, like Mubadala, that seek both development and financial returns, or Asian funds that are seeking to secure natural resources either to bolster their country's economic growth or to diversify their portfolios. Other funds that may be able to extract substantial value from African investments are SWFs formed from portfolios of government-linked companies put under independent management, like Temasek and Khazanah, that have substantial business experience and the potential to bring knowledge and expertise to African markets.

Yet, SWFs need to understand that Africa is an immature market and often difficult to navigate. To overcome this barrier they might find a trusted intermediary and advisor with one foot in the SWF world and with on-the-ground expertise that understands the risks and can direct them. As with many emerging markets, trust is a vital element of doing business in Africa, and often SWFs have not invested in creating these networks to access the best deals—a local advisor might be able to achieve this. Such advisors can greatly reduce transaction costs and can reduce the investment risks by finding the right targets and thus open the doors of Africa to SWFs.

Mideast Upheaval Risks Transforming Oil Wealth Management

Natsuko Waki, Thomson Reuters

Popular revolts across the resource-rich Middle East and North Africa during 2011 may transform the management of windfall oil wealth, potentially denting national balance sheets, boosting inflation, and disturbing world markets. The region's state-owned funds, managing almost \$1 trillion of assets—equivalent to nearly two-thirds of the entire hedge fund industry—have been a key driver in financial markets, making wide-ranging investments including stakes in blue-chips such as Italian bank UniCredit and luxury British department store Harrods. But political turmoil is rapidly changing the landscape for oil wealth management, prompting governments to spend more at home to appease angry protestors than invest overseas. Using oil windfall revenues for potentially inflationary pump-priming or wealth redistribution may slow or even halt the accumulation of resource wealth in the long run. This could hit national balance sheets and remove a key support factor for credit ratings. It may also disrupt world financial markets, whose strong recovery since the crisis was partly underpinned by petrodollar demand for risky assets.

In February and March 2011, Saudi Arabia unveiled benefits worth \$130 billion—or a staggering 30 percent of its gross domestic product—in an apparent bid to insulate the world's top oil exporter from an Arab protest wave. Bahrain, Libya, Oman, and Kuwait have also increased domestic spending or handed outright cash to its citizens in packages totaling as much as four percent of gross domestic product.

“In the long term, we will probably see a meaningful shift in the balance between hydrocarbon revenues that are saved and invested overseas and those that are deployed at home,” said Andrew Rozanov, head of sovereign advisory at alternative asset management firm Permal. “Recent events in the region are refocusing people's minds rather urgently on new spending on domestic investment and welfare needs to maintain peace and social cohesion.”

Among the countries that increased domestic spending, Saudi Arabia's benefits package, financed by its foreign exchange reserves, is by far the biggest.

Its spending plan includes pay rises, unemployment benefits, and affordable family housing. It is expected to be more than seven times larger than a 2008 plan implemented to alleviate the impact of inflation on Saudis. “If oil prices stay sufficiently high to finance it, this will simply slow the growth of sovereign portfolios in the future. If, on the other hand, oil prices come down significantly, then certain funds may be required to make some adjustments to accommodate increased spending,” Rozanov said.

Balance Sheet Impact

Vast oil wealth has been a key factor underpinning credit ratings in resource-rich, but politically vulnerable countries that have high youth unemployment. However, recent political turmoil is souring the fiscal health of some of these countries, triggering ratings downgrades to reflect political and economic risks.

Ratings agencies Fitch and Standard & Poor’s downgraded Libya to a junk rating of BB in March as fighting escalated between ruler Muammar Gaddafi’s government and rebel forces. Until recently Gulf countries were all rated A or above, before Fitch cut Bahrain to BBB with a negative outlook in March.

The fiscal position of Bahrain, which already has debt that doubled to 33 percent of GDP last year from 2008, is deteriorating fast as the country increases spending to appease protestors. Bahrain’s king promised to spend \$488 million more over the next two years before protests began, including subsidies for food, low-income families and social allowances. The government also planned to give 1,000 dinars (\$2,650) to each Bahraini family in a package which is estimated overall to cost at least \$700 million, or around 3.6 percent of GDP. The more the government spends however, the less money it saves for the country’s future generations in its sovereign wealth fund. Bahrain saw the worst sectarian clashes between its Shi’ite majority population and the Sunni-ruled security forces since the 1990s after Shi’ite protesters, inspired by uprisings in Tunisia and Egypt, took to the streets in February.

“The credit ratings for some of the hydrocarbon rich sovereigns in the region have long been held down due to concerns about social and political factors like high unemployment or the absence of voice and accountability,” said Purvi Harlalka, director at Fitch. “From a purely balance-sheet point of view, they

look strong. However, now that the social and political risks that were factored into the rating have manifested, they have real and visible economic costs that further impact creditworthiness.” Mumtalakat, one of the few sovereign wealth funds with a credit rating, was also downgraded to BBB.

Patient Capital at Risk

For global capital markets, a sudden change in a country’s wealth management policy or the environment surrounding their investment could trigger a sell-off and volatility. It also potentially damages SWFs’ hard-earned reputation as being long-term investors whose “patient” capital provides a source of liquidity and stability desperately needed in the post-crisis global economy.

Libya offers perhaps the starkest example of how political turmoil is shaking the foundations of oil wealth management and sending shockwaves across global markets. Authorities in the United States, Europe, Japan and even Tunisia and Uganda froze assets of the Libyan Investment Authority, as part of international sanctions against the Gaddafi government. The asset freeze triggered a sell-off in shares of UniCredit, 2.6 percent owned by LIA, and left various companies—part of the fund’s \$1.5 billion investment in publicly listed equities—to frantically find ways to comply with sanctions.

LIA, which had almost \$70 billion in assets, had more than 78 percent in short-term financial instruments abroad—which are thought to be bank deposits. Given this rich liquidity, any new government may turn to the LIA’s cash pile to fund post-conflict reconstruction and future economic development. “If we say it’s economics that drives a lot of the Libyan anger and in the next two to three years there may be a democratic transition, we will see the usage of assets that have been accumulated by the current regime, including LIA,” said Sven Behrendt, an SWF analyst and managing director of Geneva-based consultancy Geoeconomica. “If you have so much money to consume, then it could be that any incoming government which wants to boost popularity might want to tap it. That’s a legitimate and obvious conclusion.”

The redirection of oil wealth to domestic industries may have other downsides. Sovereign wealth funds in resource-rich economies do not exist only to invest for future generations but also to diversify their industries and avoid so-called

“Dutch disease.” Rapid oil sector growth could make other industries less competitive and lead to lower growth than those with fewer natural resources—as seen in the 1960s Dutch economic crisis following the discovery of North Sea natural gas.

Home investment is often seen by some types of sovereign funds as something of a taboo, except in a severe economic downturn, because the domestic recycling of the surplus risks fanning inflation and discouraging competitiveness. For this reason, certain endowment-type SWFs such as Norway and Azerbaijan are not allowed to invest domestically. But Gulf countries have often pumped money at home. After its 2008 invest into domestic bourse, Kuwait Investment Authority is investing \$3.6 billion into the local commercial property market in a portfolio managed by the country’s biggest Islamic lender Kuwait Financial House.

“If we see a boom in local investments for internal needs, you might see a rise in inflation. Many of the decisions will be influenced more by immediate political needs than long-term economic plans,” said Efraim Chalamish, an SWF expert and adjunct Professor at New York University.

Middle East and North Africa Government Spending Plans

SAUDI ARABIA	Spending \$37 billion in a plan that includes pay rises to offset inflation, unemployment benefits and affordable family housing, to help lower and middle-income earners. Pledges additional \$93 billion in handouts that include 250 billion riyals (\$66.7 billion) on 500,000 housing units and 16 billion riyals (\$4.3 billion) on more medical facilities.
UNITED ARAB EMIRATES	Planning to invest \$1.6 billion to expand electricity and water networks in less developed emirates. Supermarkets in the U.A.E., in agreement with the Economy Ministry, cut prices for food and other essential goods by up to 40 percent for one month in March.
LIBYA	Giving out 500 dinars (\$400) per family to help cover increased food costs. Wages for some categories of public sector workers would increase by 150 percent.
KUWAIT	Giving 1,000 dinars (\$3,588) to each of 1.1 million native citizens as part of a package totaling \$4.9 billion, over 4 percent of gross domestic product. Also providing free coupons for food such as rice, eggs and milk for 14 months until March 2012.
BAHRAIN	Spending \$488 million more over the next two year, including subsidies for food, low-income families and social allowances. Also giving 1,000 dinars (\$2,650) to each Bahraini family. Overall, the package is estimated to be at least \$700 million, or around 3.6 percent of GDP.
OMAN	Giving out unemployment benefits of \$390 a month and 50,000 new jobs. Has also raised minimum wages by 43 percent for national workers in the private sector to \$520 per month.

Source: Thomson Reuters



Appendix 1: Methodology

Our research methodology focuses on two main objectives: comprehensiveness of research and accuracy of information.

To ensure comprehensiveness, we survey multiple sources, primarily relying on established business and financial databases but employing also press-releases, published news, fund annual reports and many other data sources.

To ensure accuracy, we follow a strict process for capturing deal information and we establish a clear hierarchy of sources, based on our estimate of reliability:

1. Financial transaction databases: Bloomberg, SDC Platinum, Zephyr and Datamonitor;
2. A financial database for target firm information: DataStream;
3. Fund disclosures, including annual reports, press releases and other information from their websites;

4. Target company and partner organization press releases and other information from their websites;
5. Information aggregators: LexisNexis and Factiva. Those include news reports by newswires (Dow Jones, Reuters, Business Wire, Associated Press etc.) and numerous respected publications, including: *The Wall Street Journal*; *Financial Times*; *Newsweek*; *Forbes*; *Fortune*; *Time*; *The Economist*; *The New York Times*; *The Washington Post*;
6. Other on-line news providers, including Zawya.com, Google Finance, Yahoo! Finance etc.

Most of the deals are amassed and consolidated from the financial transaction databases, while the other sources are mostly used for corroboration where necessary. At least one high-quality source is captured for each data point, and, where possible, multiple sources are identified. News items from information aggregators such as LexisNexis are carefully examined to ascertain the reliability of the original source.

Where possible, we contact the management of the funds to obtain feedback regarding the accuracy of our data. Whenever available, we incorporate such feedback into our database.

Industry Classification

To provide more insight regarding SWF portfolio allocations, we apply a refined classification scheme based on 31 industrial sectors. Our industry classification is based on the 30-sector classification developed by Kenneth French and widely used in both academic and professional publications. Each firm is allocated to a specific sector on the basis of its primary four-digit U.S. SIC code, as described, in detail, on French's website.³⁸ We implement one slight modifica-

38 http://mba.tuck.dartmouth.edu/pages/faculty/ken_french/Data_Library/det_30_ind_port.html

tion: while French's industry classification scheme groups banking, insurance, trading and real estate into one single category, we separate real estate (U.S. SIC Codes 6500-6599) from banking, insurance and trading (U.S. SIC Codes 6000-6411 and 6610-6799).

Of course, while we employ the new industrial sector classification in our exposition, records in the Monitor-FEEM database include both industrial sectors based on the new classification and four-digit primary U.S. SIC codes.

Appendix 2: SWF Asset Allocation

Descriptive Data of the 30 SWFs in the Monitor-FEEM SWF Transaction Database

COUNTRY	FUND NAME	AUM (\$US BN)	INCEPTION YEAR	SOURCE OF FUNDS	ASSET CLASSES	GEOGRAPHIES
Norway	Government Pension Fund—Global ¹	560.5	1990	Commodity (Oil)	Listed Equities (60.6%) Government Bonds (16.5%) Government-related Bonds (4.7%) Inflation-linked Bonds (3.2%) Corporate Bonds (6.3%) Securitized Bonds (9.0%) Real Estate (0.1%)	Europe (53.0%) Americas, Africa & Middle East (35.7%) Asia & Oceania (11.3%)
U.A.E./ Abu Dhabi	Abu Dhabi Investment Authority ²	342	1976	Commodity (Oil)	Developed Market Equities (35–45%) Emerging Markets Equities (10–20%) Small-Cap Equities (1–5%) Government Bonds (10–20%) Credit (5–10%) Alternative Assets (5–10%) Real Estate (5–10%) Private Equity (2–8%) Infrastructure (1–5%) Cash (0–10%)	United States (35–50%) Europe (25–35%) Asia (10–20%) Emerging Markets (15–25%)
China	China Investment Corporation ³	332.4	2007	Trade Surplus	Cash and Bank Deposits (5.6%) Cash Management Products (6.2%) Equities (12.0%) Fixed Income Securities (7.6%) Receivables & Prepayments (0.01%) Held-to-Maturity Investments (4.3%) Long-term Equity Investments (60.6%) Deferred Tax Assets; (0.003%) Other Assets (0.002%)	Domestic (≥50%) Global (equity investments only) (≤50%) United States (43.9%) Asia Pacific (28.4%) Europe (20.5%) Latin America (6.3%) Africa (0.9%)
Singapore	Government of Singapore Investment Corporation ⁴	220	1981	Trade Surplus	Developed Market Public Equity (41%) Developing Markets Public Equity (10%) Nominal Bonds (17%) Inflation-Linked Bonds (3%) Real Estate (9%) Private Equity, VC & Infrastructure (10%) Absolute Return Strategies (3%) Natural Resources (3%) Cash (4%)	Americas (43%) United States (36%) Other North & South America (7%) Europe (30%) United Kingdom (8%) France (5%) Germany (4%) Italy (2%) Others (11%) Asia (24%) Japan (11%) China, Hong Kong, S. Korea & Taiwan (10%) Others (3%) Australasia (3%)

COUNTRY	FUND NAME	AUM (\$US BN)	INCEPTION YEAR	SOURCE OF FUNDS	ASSET CLASSES	GEOGRAPHIES
Kuwait	Kuwait Investment Authority ⁵	202.8	1953	Commodity (Oil)	Equities (55–65%) Bonds (8–12%) Real Estate (8–12%) Alternative Investments (3–7%) Cash (3–7%)	United States & Europe (equal share) (76–86%) Asia & Japan (13–17%) Other Emerging Markets (4–6%)
Singapore	Temasek Holdings ⁶	133	1974	Government-Linked Companies	Liquidity Unlisted Assets (23%) Listed Large Bloc Shares (≥20%) (43%) Liquid & sub-20% Listed Assets (34%) Sector Financial Services (37%) Telecoms, Media & Technology (24%) Transport & Industrials (18%) Life Sciences, Consumer & Real Estate (11%) Energy & Resources (5%) Others (4%)	Asia (excl. Singapore & Japan) (46%) Singapore (32%) OECD (20%) Others (2%)
China	National Social Security Fund ⁷	132	2000	Trade Surplus	Domestic Stocks (30%) Domestic Bonds (63.3%) International Investments (6.7%)	China (93.3%) Other Markets (6.7%)
Russia	National Wealth Fund ⁸	94.3	2008	Commodity (Oil)	No Information Disclosed	No Information Disclosed
Qatar	Qatar Investment Authority	80	2005	Commodity (Oil & Gas)	No Information Disclosed	No Information Disclosed
Australia	Future Fund ⁹	77.2	2006	Non-Commodity	Australian Equities (11.4%) Developed Markets Equity (22.2%) Developing Markets Equity (4.5%) Private Equity (3.3%) Property (6.0%) Infrastructure & Timberland (4.7%) Debt Securities (19.1%) Alternative Assets (15.9%) Cash (10.8%) Telstra Holding (2.2%)	No Information Disclosed
Libya	Libyan Investment Authority ¹⁰	53.3	2006	Commodity (Oil)	Cash (0.8%) Deposits (37.2%) Equity (9.8%) Bonds (6.4%) Alternatives (6.6%) Operating Subsidiaries (7.8%) Other (7.8%)	Equities and Bonds Europe (63.9%) North America (24.8%) Asia (9.3%) Latin America (0.8%) Middle East & North Africa (1.1%)
U.A.E./ Abu Dhabi	International Petroleum Investment Company ¹¹	49.7	1984	Commodity (Oil)	No Information Disclosed	No Information Disclosed
Kazakhstan	Kazakhstan National Fund ¹²	41.9	2000	Commodity (Oil & Gas)	Global Equities (80%) Treasury Bills (20%)	No Information Disclosed

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Appendix 2: SWF Asset Allocation

COUNTRY	FUND NAME	AUM (\$US BN)	INCEPTION YEAR	SOURCE OF FUNDS	ASSET CLASSES	GEOGRAPHIES
Brunei	Brunei Investment Agency	39.3	1983	Commodity (Oil)	No Information Disclosed	No Information Disclosed
Republic of Korea	Korea Investment Corporation ¹³	37.6	2005	Trade Surplus	Public Equities (41.8%) Public Bonds (45.9%) Inflation-Linked Bonds (1.4%) Cash, other (1.7%) Commodities (1.3%) Private Equity (1.8%) Hedge Funds (1.3%) Real Estate (1.1%) Special Investments: (3.7%) (Bank of America, Chesapeake, Laricina, Osum)	North America (47.3%) UK & Europe (27.9%) Developed Asia (17.1%) Emerging Markets (7.6%)
Malaysia	Khazanah Nasional Berhad ¹⁴	36.5	1993	Government-Linked Companies	Financial Services (23.4%) Media & Communications (23.7%) Infrastructure & Construction (18.0%) Utilities (13.0%) Property (10.0%) Transport & Logistics (4.4%) Healthcare (3.7%) Others (2.7%) Automotive (1.1%)	Malaysia (91.8%) Singapore (2.7%) India (2.5%) China (1.5%) Others (1.5%)
Ireland	National Pension Reserve Fund ¹⁵	32.7	2001	Non-Commodity	Directed Portfolio (57.8%) Preference Shares (39.9%) Ordinary Shares (4.4%) Convertible, Non-voting, Ordinary Shares (14.8%) Cash (40.9%) Discretionary Portfolio (42.2%) Large Cap Equity (39.0%) Small Cap Equity (5.0%) Emerging Markets Equity (6.0%) Eurozone Government Bonds (0%) Eurozone Inflation-linked Bonds (0.7%) Eurozone Corporate Bonds (6.1%) Cash (14.6%) Private Equity (9.1%) Property (8.1%) Commodities (4.9%) Forestry (0.3%) Infrastructure (4.3%) Absolute Return Funds (1.9%)	Domestic (57.8%) Rest of the World (42.2%)

COUNTRY	FUND NAME	AUM (\$US BN)	INCEPTION YEAR	SOURCE OF FUNDS	ASSET CLASSES	GEOGRAPHIES
U.A.E./ Abu Dhabi	Mubadala Development Company PJSC ¹⁶	27.6	2002	Commodity (Oil)	Corporate/Acquisitions (30%) Oil & Gas (13%) Real Estate (12%) ICT (12%) Aerospace (11%) Infrastructure (10%) Renewable Energy (8%) Industry (4%) Service Ventures (1%)	United Arab Emirates (33%) Qatar (41%) Others (26%)
Azerbaijan	State Oil Fund of Azerbaijan (SOFAZ) ¹⁷	25.8	1999	Commodity (Oil)	Medium-term Investments: 3–5 years (30.8%) 1–3 years (30.6%) Short-term (0–1 years) Investments (34.8%) Long-term (> 5 years) Investments (3.8%)	Dollar Denominated (55.2%) Euro Denominated (39.9%) Sterling Denominated (5.1%) Manat Denominated (0.002%)
New Zealand	New Zealand Superannuation Fund ¹⁸	14.3	2001	Non-Commodity	New Zealand Equity (5.3%) Private Equity (1.3%) International Fixed Income (11.3%) New Zealand Fixed Income (0.1%) Global Listed Property (4.4%) New Zealand Property (1.4%) Infrastructure (8.1%) Global Equities (61.2%) Timber (6.7%) Other Private Markets (2.4%) Cash, Collateral, FX Hedges (–2.1%)	No Information Disclosed
Bahrain	Bahrain Mumtalakat Holding Company BSC ¹⁹	13.7	2006	Government-Linked Companies	No Information Disclosed	No Information Disclosed
U.A.E.	Emirates Investment Authority	10	2007	Commodity (Oil)	No Information Disclosed	No Information Disclosed
U.A.E./ Abu Dhabi	Abu Dhabi Investment Council	10	2007	Commodity (Oil)	No Information Disclosed	No Information Disclosed
Oman	State General Reserve Fund	8.2	1980	Commodity (Oil & Gas)	No Information Disclosed	No Information Disclosed

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Appendix 2: SWF Asset Allocation

COUNTRY	FUND NAME	AUM (\$US BN)	INCEPTION YEAR	SOURCE OF FUNDS	ASSET CLASSES	GEOGRAPHIES
East Timor	Timor-Leste Petroleum Fund ²⁰	7.8	2005	Commodity (Oil & Gas)	Cash and Cash Equivalents (1.2%) Marketable Debt Securities (94.9%) Global Equities (3.8%) Receivables and Other Assets (0.005%) Less; Pending Purchase of Securities (0.02%)	No Information Disclosed
U.A.E./ Ras Al Khaimah	Ras Al Khaimah (RAK) Investment Authority	2.0	2005	Government-Linked Companies	No Information Disclosed	No Information Disclosed
Vietnam	State Capital Investment Corporation ²¹	0.6	2005	Government-Linked Companies	Manufacturing (39.7%) Consumer Goods (24.7%) Materials (13.1%) Financials (9.3%) IT (4.8%) Healthcare (4.4%) Telecoms (3.6%) Other (0.4%)	Vietnam (100%)
Kiribati	Revenue Equalization Reserve Fund ²²	0.391	1956	Commodity (Phosphates)	No Information Disclosed	No Information Disclosed
São Tomé & Príncipe	National Oil Account ²³	0.009	2004	Commodity (Oil)	No Information Disclosed	No Information Disclosed
Oman	Oman Investment Fund	N/A	2006	Commodity (Oil & Gas)	No Information Disclosed	No Information Disclosed
TOTAL Oil & Gas Related		\$1,553.2				
TOTAL Other		\$1,032.0				
TOTAL		\$2,585.2				

Note: Where no reference is given, AUM is from *The 2011 Preqin Sovereign Wealth Fund Review*

- 1 AUM as of March 31, 2011, Government Pension Fund — First Quarter 2011 http://www.nbim.no/Global/Reports/2011/Q1/Q1_2011_web.pdf
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