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SOVEREIGN WEALTH FUND ACTIVITY IN 2009

SWF Annual Report 2009

MONITOR

FONDAZIONE ENI ENRICO MATTEI

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THE PUBLIC GARDEN, BOSTON, MASSACHUSETTS
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From the Editors

On behalf of our colleagues at Monitor Group and Fondazione Eni Enrico Mattei (FEEM), we are pleased to issue our annual report on sovereign wealth fund (SWF) transactions in 2009.

A year ago, Monitor and FEEM established a partnership to develop a database of SWF transactions based on publicly available information that would be as complete and comprehensive as possible. As of December 31, 2009, the Monitor-FEEM SWF Transaction Database contains 1,181 deals completed by 22 funds based in 14 countries since January 1, 1981. New funds added to our database during the year included Abu Dhabi's International Petroleum Investment Company and the Oman Investment Fund. We are also adding three new funds to track from 2010: China's National Social Security Fund; Ireland's National Pensions Reserve Fund; and the New Zealand Superannuation Fund.

The Monitor-FEEM SWF Transaction Database now contains 1,181 deals made since 1981.

During 2009, 18 funds completed 113 investments worth $68.8 billion. As this report elaborates, the year witnessed two distinctly different phases. The first

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half of the year extended a period of retrenchment and caution during the global financial crisis, continuing the theme expressed in the title of last year's report, *Weathering the Storm*. In the second half of 2009, the funds returned to the market as more active investors — resuming course. Where this course will lead will not be clear for some time, although certain patterns bear noting:

2009 witnessed two distinct phases: an extended period of retrenchment, and a return to the market during the second half of the year.

- Funds based in Asia and in the Middle East and North Africa (MENA) continue to be the most active, although the sectors and geographies in which they invested in 2009 differ from those in recent years.

- The funds were less active in the troubled financial services and real estate sectors in 2009, although there were significant transactions in each sector. The funds showed a growing preference for energy, natural resources, and engineering- or technology-based sectors, interests often reflecting the desire to benefit domestic and regional economies in which the funds are based.

- The funds actively invested in foreign equities, especially in Europe and North America, which together accounted for more than half of the value of all deals during the year.

- Emerging markets accounted for more than half of the number of all transactions, with the Asia-Pacific region the most popular destination by number of deals and the MENA region by value of deals. Several funds ranged farther afield, investing in Latin America, sub-Saharan Africa, and non-Pacific Asia.

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- The most active funds were China Investment Corporation and the Government of Singapore Investment Corporation, with the biggest single deal being Qatar Investment Authority's participation in a joint venture involving a massive infrastructure project in the home country. Several funds that had been quite active during 2007 and 2008 — most notably Dubai's Istithmar, but also Singapore's Temasek — largely withdrew from the market to reassess their strategies in the aftermath of the global financial crisis.

These and other significant trends and highlights of 2009 are spelled out below. This report also includes sections introduced last year that we expect to be standards in the annual reports going forward. These include separate highlights of SWF activity in the fourth quarter, a timeline of significant news and events of the year, a table of the year's biggest deals, and an overview of recent noteworthy articles and publications about SWFs.

We are again pleased to welcome contributed articles from leading SWF commentators. This report includes important articles by Ashby H. B. Monk, co-director of the Oxford SWF Project, who analyzes the potential for SWFs to redirect and re-allocate vast sums of money globally toward longer-term, relatively risky investments; Vanessa Rossi of Chatham House assesses the future role of SWFs in the global economy; Steffen Kern from Deutsche Bank looks at how SWFs have reacted to the changing political environment of recent years; Victoria Barbary of Monitor Group, assesses the asset allocation of SWFs and suggests that seeking increasingly sophisticated strategies to preserve and increase the value of their portfolios; and Rachel Ziemba of Roubini Global Economics examines the trend among certain SWFs to enter partnerships with co-investors.

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Our partnership continues to yield a strong academic dividend. The revised version of a joint academic paper by Monitor-FEEM researchers (downloadable at http://ssrn.com/abstract=1364926) and currently under review for a leading finance journal) provides new evidence about SWF's' investment patterns and performance. We show that SWFs are sizable minority shareholders, but keep a very low profile in the corporate governance of target firms as they seldom seat in boards. Furthermore, SWFs acquisitions are good news at the time of announcements, but are associated with strong under-performance in the long run. This combined evidence seems consistent with the view of SWFs as a constrained foreign investors—large shareholders, but reluctant to play an active role in monitoring. More research and insight is needed to provide more definite conclusions. At any rate, an interesting question we beg is if and when SWFs will become active for the sake of their own economic interest. Monitor and FEEM will follow these exciting developments closely.

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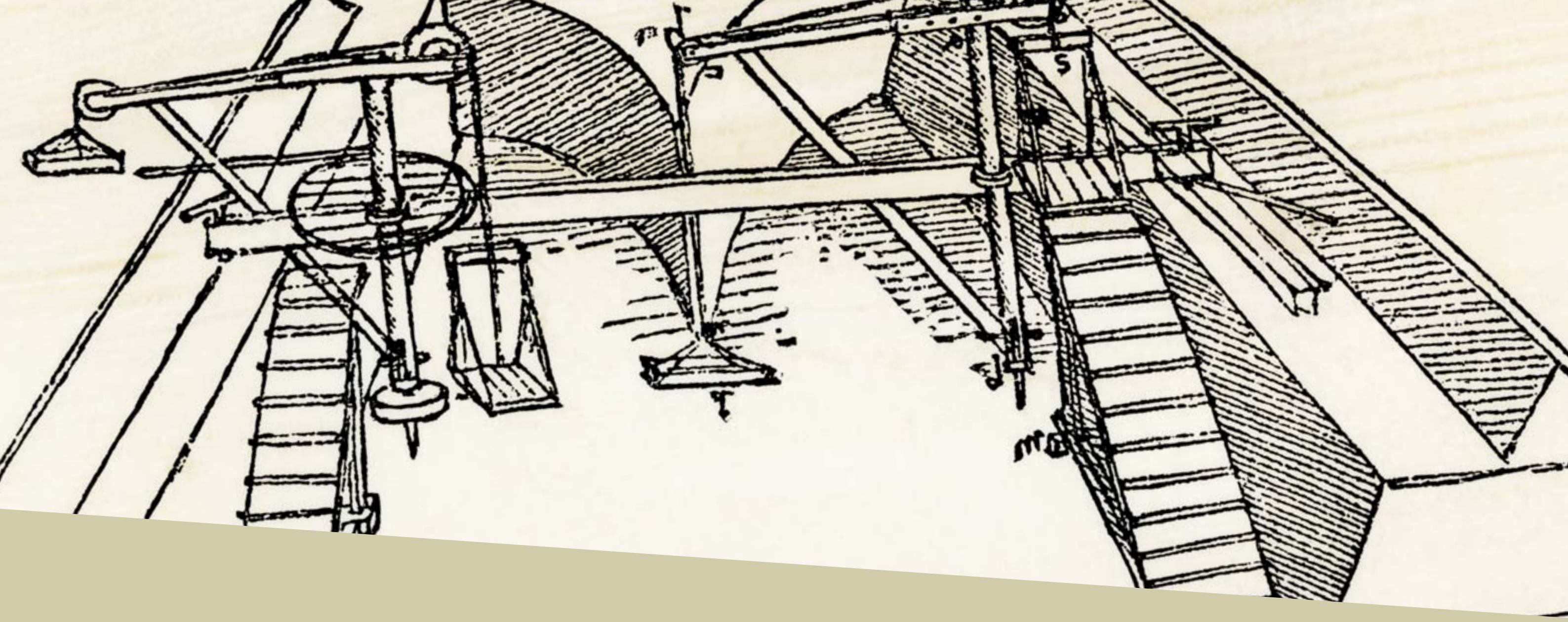

DEVICE, LEONARDO DA VINCI

Monitor-FEEM SWF Definition

Despite the abundance of commentary and analysis on sovereign wealth funds, their intentions and uses, structure and governance, impact and performance, there is still no clear and generally accepted definition of a sovereign wealth fund.

In 2008, Monitor Group and FEEM formulated a definition around which to structure discussion and research. We define a SWF on the basis of the essential characteristics that differentiate them from other government-owned investment vehicles *(see next page)*.

We made an exception to the first criteria for funds based in Abu Dhabi, Dubai and Ras Al Khaimah because we believe that the emirates within the U.A.E. federation possess decision rights comparable to those of a sovereign authority. We do not believe that sub-sovereign governments in North America possess these decision rights. We have also included two U.A.E. funds — the Mubadala Development Company and the RAK Investment Authority — that appear to contravene the fifth criteria because they are stated to primarily invest in the development and diversification of their home economies, but both funds have been active abroad.

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A SOVEREIGN WEALTH FUND IS AN INVESTMENT FUND THAT MEETS FIVE CRITERIA:

1. It is owned directly by a sovereign government
2. It is managed independently of other state financial institutions
3. It does not have predominant explicit pension obligations
4. It invests in a diverse set of financial asset classes in pursuit of commercial returns
5. It has made a significant proportion of its publicly-reported investments internationally

Our criteria exclude several funds that are commonly included on lists of sovereign wealth funds. Most notably, perhaps, we exclude the Saudi Arabian Monetary Authority's (SAMA) fund and that of China's State Administration of Foreign Exchange (SAFE) from our list. Both these are foreign exchange funds that are not managed independently: SAMA's fund is managed by the central bank and SAFE's from the agency tasked with drafting rules and regulations governing foreign exchange market activities. Although we acknowledge that at times both these funds have acted like SWFs[1] they cannot be considered as such under our definition as they violate criteria two and (on the whole) four. We also exclude Chile's Economic and Social Stabilization Fund, because under its current investment policy "its assets are held exclusively as international fixed-income instruments," which violates criteria four.[2]

Funds used solely for currency stabilization, economic development or charitable purposes that have non-commercial objectives have also been excluded as by nature, these tended to violate criteria four or five in our definition.

We routinely revise our list of funds that we believe to meet our criteria. During 2009 we have added two new funds—the International Petroleum Investment Company (IPIC) from Abu Dhabi and the Oman Investment Fund, both of

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1 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 M.A.: 2008).

2 Economic and Social Stabilization Fund, Third Quarter Report 2009.

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which have acted like SWFs during 2009. We are also adding three new funds to track from 2010: China's National Social Security Fund (NSSF); Ireland's National Pensions Reserve Fund (NPRF); and the New Zealand Superannuation Fund. Despite the names of these funds, none of them are yet directly contributing to pensions for their citizens, and conform to the rest of our criteria.

We have also excised three funds from our list (Angola, Equatorial Guinea, and Gabon) as further research found them either to be moribund or to have been wound up.

At present, 33 funds, from 22 nations, meet our criteria. The U.A.E. has nine funds represented in this list, while China, Singapore and Oman each have two.

By region, 45 percent (15) of these funds are based in the Middle East and North Africa. Funds from the Asia-Pacific and Australasia make up about a third of the set (12). Three funds are based in non-Pacific Asia, two — Norway and Ireland — are European, while only one from sub-Saharan Africa, that of São Tomé and Príncipe conforms to our definition.

The value of the assets under management of these 33 funds is estimated at \$2.4 trillion. The largest fund is Norway's Government Pension Fund-Global with at \$465 billion. Two thirds of the funds have been established since 2000. The oldest, in Kuwait and what is now Kiribati, were established in the 1950s.

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Table 1: List of Funds that Satisfy the Monitor-FEEM SWF Definition

COUNTRY/ SUB-NATIONAL AFFILIATION	FUND NAME	ASSETS UNDER MANAGEMENT (US$ BN)	FOUNDING DATE
Australia	Future Fund	62.0	2006
Azerbaijan	State Oil Fund of Azerbaijan (SOFAZ)	16.2	1999
Bahrain	Mumtalakat Holding Company	13	2006
Brunei	Brunei Investment Agency	30	1983
China	China Investment Corporation (CIC)	297.5	2007
China	National Social Security Fund (NSSF)	130	2000
Ireland	National Pensions Reserve Fund (NPRF)	33.1	2001
Kazakhstan	Kazakhstan National Fund	26.5	2000
Kiribati	Revenue Equalization Reserve Fund	0.4	1956
Kuwait	Kuwait Investment Authority (KIA)	295	1953
Libya	Libyan Investment Authority (LIA)	64	2006
Malaysia	Khazanah Nasional Bhd	25	1993
New Zealand	New Zealand Superannuation Fund	21.2	2001
Norway	Government Pension Fund–Global	464.7	1990
Oman	State General Reserve Fund	8.2	1980
Oman	Oman Investment Fund (OIF)	Unknown	2006
Qatar	Qatar Investment Authority (QIA)	70	2005
Republic of Korea	Korea Investment Corporation (KIC)	17.8	2006
Russia	National Wealth Fund	34.0	2008
São Tomé and Príncipe	National Oil Account	0.009	2004
Singapore	Government of Singapore Investment Corporation (GIC)	179	1981
Singapore	Temasek Holdings	86	1974
Timor-Leste	Petroleum Fund	5.3	2005
U.A.E.	Emirates Investment Authority	Unknown	2007
U.A.E./ Abu Dhabi	Abu Dhabi Investment Authority (ADIA)	395	1976
U.A.E./ Abu Dhabi	Abu Dhabi Investment Council	Unknown	2006
U.A.E./ Abu Dhabi	International Petroleum Investment Company (IPIC)	14	1984
U.A.E./ Abu Dhabi	Mubadala Development Company	24.1	2002
U.A.E./ Dubai	DIFC Investments (Company) LLC	Unknown	2004
U.A.E./ Dubai	Investment Corporation of Dubai (ICD)	19.6	2006
U.A.E./ Dubai	Istithmar World	11.6	2003
U.A.E./ Ras Al Khaimah	RAK Investment Authority (RAKIA)	1.2	2005
Vietnam	State Capital Investment Corporation	0.5	2006

Source: Monitor/FEEM Research

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THE DRAGON RISING: THE CHINA INVESTMENT CORPORATION WAS ONE OF THE MOST ACTIVE AND HIGH-PROFILE FUNDS IN 2009

Trends

Overview of 2009

2009 opened to the most challenging economic and financial climate since the Great Depression. With slowing income from plummeting oil prices and contracting global trade in 2008, the volatile investment climate made sovereign wealth funds (SWFs) more risk averse. The beginning of the year saw the lowest levels of publicly reported SWF investment for half a decade as they continued to be cautious actors in the global economy, scaling back their acquisitions to reflect their perception of increased market risk. This was exacerbated by SWFs suffering mark-to-market losses of an estimated $67 billion on their investments in publicly-listed companies by the end of Q1 2009,[3] and some SWFs — notably the Qatar Investment Authority (QIA) and the Kuwait Investment Authority (KIA) — stepping in to bail out their countries' faltering financial service sectors.

3 Veljko Fotak, Bill Megginson, Hui Li, "Sovereign Wealth Fund Losses in Listed Firm Stock Investments" in *Weathering the Storm Sovereign Wealth Funds in the Global Economic Crisis of 2008*, ed. William Miracky, Bernardo Bortolotti (Monitor Group, Cambridge M.A.: 2009).

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2009 Highlights

1. During 2009, funds in the Monitor-FEEM SWF Transaction Database executed 113 investments worth $68.8 billion. This represented a sharp break on the trend of increasing SWF activity, with both the number and value of investments about 40 percent below totals in 2008.

2. SWFs invested considerably less in financial services in 2009 than in 2008, dropping from 49 publicly reported investments valued at $81.7 billion to just 28 deals with a reported value of only $10.2 billion. They were also more cautious in real estate acquisitions, with activity dropping by more than half. Instead, they looked to invest in a wider range of industries, most notably in energy, natural resources and engineering- or technology-based sectors. This bears greater similarity to the patterns characterizing SWF behavior before 2005, although the sectors of interest reflect current economic realities.

3. Continuing the trend from 2008, Europe remained the largest market for SWF investment in terms of recorded value, despite the financial crisis. European targets accounted for 42.5 percent by value of 2009's publicly reported SWF investment ($29.2 billion), about a third of the reported value from 2008. SWFs also invested more widely in 2009, with investment in Latin America, sub-Saharan Africa and Non-Pacific Asia doubling in real terms to $3 billion.

4. Once more, Asia Pacific accounted for the largest number of investments (32) in 2009. Europe was the second most popular region for SWFs (29) transactions. The Middle East overtook North America in terms of investment volume, with 21 deals against North America's 19, most of which took place in the final quarter of the year.

5. The most active funds were the China Investment Corporation and the Government of Singapore Investment Corporation, making 17 and 18 publicly reported investments, respectively. However, the largest spending fund was the Qatar Investment Authority, which undertook 14 publicly reported investments valued at over $32 billion.

6. The inhospitable global economy at the end of 2008 manifested itself in our data in Q1 and Q2 2009 — both quarters were the lowest investment volumes since 2005 and 2003, respectively. SWF activity picked up during the second half of the year, with Q3 and Q4 accounting for 85 percent of publicly reported expenditure and two-thirds of the total number of deals.

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Some of these bailouts spilled over into the New Year, but despite the temptation to retreat, SWFs appeared willing to make opportunistic investments abroad. Retreat cannot be a viable long-term strategy for SWFs given their mandate to invest their national wealth to produce superior returns, and the environment offered some prospect for patient investors with cash to identify under-valued assets. In the first part of the year, this was particularly heeded by funds from Abu Dhabi, which looked to invest strategically to further the emirate's long term economic objectives, clustering around the sectors and objectives designated as priorities under the Emirate's Vision 2030. The Mubadala Development Company focused on building an aerospace hub and providing public services in healthcare and education. The International Petroleum Investment Company (IPIC) also invested in this vein, acquiring 70 percent of MAN Ferrostaal to give Abu Dhabi access to the company's leading-edge capabilities in the fields of petrochemicals, solar power and project construction and management, which are vital to the Emirate's development. Additionally, its investment in Daimler provided access to high-end engineering technology.

Retreat cannot be a viable long-term strategy for SWFs given their mandate to invest their national wealth to produce superior returns.

Although SWF investment continued at a lower level (both in terms of volume and value) in the first half of 2009, transactions were diverse by sector and geography in a trend that was to continue throughout the year. Funds made investments in a wide range of sectors from automotives to IT, financial services to consumer goods, particularly in companies with strong IP, innovative market-leading products, and strong brands. They also invested in a wider spread of regions, with Latin America and non-Pacific Asia becoming more prominent, although Europe remained the region in which most SWF money was invested.

The second quarter of 2009 was a record investment low: SWFs only made 11 investments with a total value of $3.5 billion, the lowest expenditure of any quarter since the last of 2003, when only five funds were active. But this was rather a consequence of a period of near hibernation at the end of 2008 and beginning of 2009 rather than a continuing retreat from global markets.

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Transaction data for the quarter showed that while SWFs continued to exercise caution in their investments, markets and activity were beginning to pick up. In addition to the completed transactions, another 14 were either announced or pending completion, heralding an upswing in activity.

Although the first half of 2009 was quiet in terms of completed SWF transactions, the funds were hardly idle: it was a period of reflection, reorganization and realignment. The economic environment of 2009 was fundamentally different from 2007 or 2008, and, for investors, underlying assumptions about risk had to be reconsidered. In this respect, SWFs were no different from other institutional investors; they had not been immune from the ravages of the recession and, consequently, needed to rethink their approach to risk, whether by restructuring their organizational architecture, by changing their investment focus, asset allocation, or rebalancing their portfolio.

The China Investment Corporation (CIC) undertook the highest-profile reorganization of the SWFs. At the end of February, the fund started recruiting professionals in commodities and natural resources, real estate, private equity and fixed income assets. This suggested to analysts that CIC was pooling talent and paving the way for a new phase of investment, targeting assets backed by the real economy. The rationale for its new hires was revealed in April, when it unveiled plans to restructure into four divisions along investment motive lines, rather than asset class: Public Markets Investments; Tactical Investments; Private Markets Investments; and Special Investments.

After a period of caution and self-reflection, CIC began to diversify its portfolio. During 2009, CIC looked to alternative approaches such as directly investing in companies that produce/supply commodities and natural resources, as well as indirectly investing through hedge funds. It also appeared to be an opportunity for CIC to maximize returns by taking advantage of the opportunity to purchase undervalued or distressed assets and debt, which it could sell at a profit in the future — a position it is well-placed to take given its long-term investment horizon.

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CIC was not the only SWF that rethought the way it was investing. SWFs around the world—Norway's Pension Fund-Global, the Government of Singapore Investment Corporation (GIC), Temasek Holdings—also had changes at the top. Most notably, there was a major restructuring of the U.A.E.'s sovereign wealth, largely due to the impact of the financial crisis on Dubai. During the first quarter of the year Dubai restructured its sovereign wealth investment vehicles, bringing them under closer government scrutiny through the Advisory Council of the Government of Dubai, and seeking to reallocate the debt burden across the "Dubai Inc." network in a move that heralded the debt crisis that was to engulf the emirate at the end of November.

In a trend that is discussed more fully in Rachel Ziemba's article in this report, 2009 also saw a trend toward SWFs hedging or spreading risk by joining together to make investments. Throughout 2009, a number of funds, particularly those from Asia, joined together in partnerships or consortia to invest in riskier assets that have a potentially favorable upside.

At the beginning of June, Lee Kwan Yew, the Chairman of GIC, announced that the fund would be conservative in the coming months. This has resulted in an apparent change in the fund's strategy: it has increasingly looked to collaborate with other SWFs to invest in financial services. In February, GIC purchased a share of private equity firm Apax Partners with Australia's Future Fund. It was also a member of a SWF consortium (with CIC and KIA) that contributed a combined $2.8 billion to BlackRock's $6.6 billion purchase of Barclays Global Investors (BGI), the bank's fund management unit, in June. This was the first time that SWFs had actively bonded together to support an investment—rather than making individual deals with the same company—on such a large scale. With the support of other SWFs, each fund could afford to be more courageous, and dip its toes in possibly lucrative waters, without shouldering all the risk.

GIC is not the only SWF working in this manner. In June, the Korean Investment Corporation (KIC) signed cooperation agreements with two for-

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eign public funds—Malaysia's Khazanah Nasional Bhd and Australia's QIC (formerly the Queensland Investment Corporation)—to "expand cooperation," and later signed a deal with KIA "to seek increased mutual investment."

In a vote of confidence for the global economic markets, there was a dramatic uptick in SWF activity in the second half of the year. The funds made almost double the number of investments in the final six months of the year as they did in the first (74 to 39), spending nearly six times as much ($58.1 billion versus $10.6 billion). Although the volume substantially increased, the funds' investment patterns suggest a continued rebalancing of their investments away from taking large equity stakes in financial services companies, as they had done in 2007 and 2008. Instead, they appear to be investing in a wider spread of sectors, with smaller investments both in terms of dollar value and shareholding. In many respects, this bears greater similarity to the patterns that characterized SWF behavior before 2005, although the sectors of interest reflect current economic realities. We are now seeing a greater allocation of assets to natural resources and engineering-based sectors, including alternative energy, which SWFs believe they can leverage to further their national economic development. Moreover, where funds are investing in riskier assets such as financial services or real estate, they appear to be doing so in ways that reduces investment risk, such as investing in consortia or partnerships, or in hedge or property investment funds.

There was a dramatic uptick in SWF activity in the second half of 2009.

Year in Review 2009

The Monitor-FEEM SWF Transaction Database reveals that in 2009, SWFs made 113 publicly recorded investments with a reported value of $68.8 billion (see Figure 1). This is only about two thirds of the completed transaction volume of 2008, and just over half of the reported dollar value of those investments. This marks a sharp break with the trend of increasing expenditure by SWFs that was evident between 2003 and 2008.

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SWF PORTFOLIO DEVELOPMENT: PROACTIVE OR REACTIVE?

Although our reports primarily focus on SWF investments, in the turbulent economic conditions of 2009 during which SWFs have looked to reassess their investment strategies and asset management it has been interesting to observe how SWFs are managing their portfolios and what they are selling as well as what they are buying.

Divestments were largely associated with the period of reorganization and realignment that many SWFs underwent in the first half of the year. The vast majority of divestments we captured in 2009 were undertaken during the first two quarters of the year, particularly Q2—the point at which SWF investment activity was at its lowest. During this period funds sought to rebalance portfolios that had too greater exposure to OECD financial services equity as a result of their rescue of the U.S. and European banking system during the winter of 2007-2008.

Consequently, the second quarter of the year saw a flush of SWFs selling their British and American banking equity stocks. The most eye-catching of these were the sales of shares in British bank Barclays by the Qatar Investment Authority, IPIC and Temasek Holdings, with varying degrees of success. Qatar trimmed its stake in the bank to 5.8 percent from 6.4 percent as part of a "volatility-driven portfolio management strategy, which it applies to a small part of its aggregate holding" making a £19.25 million ($28.4 million) loss, but a further sale of Barclays stock in October netted the fund a £610 million profit.[i] In June, both IPIC and Temasek announced sales of Barclays' stock. IPIC made $2.5 billion on its investment, which it sold to "reflect the focus of IPIC's long-term investment strategy on hydrocarbon-related opportunities."[ii] Temasek, however, was reported to have made a loss of about £500 million ($814 million) when it sold its stock in January. Neither did Temasek have any better luck with its decision to offload its 3 percent stake in Bank of America, which it had acquired when BoA rescued the indebted investment bank, Merrill Lynch, of which Temasek owned 12 percent. When it sold its stock during the first quarter it made an estimated $4.6 billion loss.[iii]

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i "UPDATE 1-Qatar Holdings cuts Barclays stake to 5.8 pct," Reuters, 22 April 2009; Dania Saadi, "Kuwait Investment Authority Sells $4.1 Billion Citi Stake," *Wall Street Journal*, 7 December, 2009.

ii H.E. Khadem Al Qubaisi, Managing Director, IPIC, "Sale of Barclays shares by IPIC," Barclays statement, 1 June 2009.

iii Costas Paris and Sara Schaefer Muñoz, "Temasek Loses Big on Stake in Barclays," *Wall Street Journal*, 4 June 2009.

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However, some SWF's divestments appear to be purely commercially driven. QIA sold half of the preference shares it held in Volkswagen and for $2.4 billion after the preferred shares increased 88 percent in 2009, and before VW sought to sell as many as 135 million preferred shares to help pay for a stake in Porsche Automobil Holding SE. While some analysts indicated that QIA appeared to be raising funds to keep refocusing its portfolio toward real estate (between August and November 2009 observers thought it was planning to increase investments in British property), it is likely that given the fund's plans to increase its holdings in VW's common shares to 17 percent, it was simply seeking to cash in on a valuable opportunity. Like other institutional investors, SWFs seek to make returns for their shareholders.

However, not all divestments appear to have been made for purely commercial reasons. Some funds appear to have bowed to domestic pressure to sell stakes in Western companies. The Kuwait Investment Authority, for example, sold its entire share in Citigroup in December for $4.1 billion, having bought the stock in January 2008 for $3 billion — the $1.1 billion profit represented a 36.7 percent return on investment. This did appear to serve some rebalancing purpose for the portfolio: KIA's managing director, Bader al-Saad, has pointed to KIA looking at countries with 8-10 percent growth, primarily in Asia and Latin America, while overall the fund has reduced its equity exposure, shifting assets to cash funds.[iv] However, it is also likely that KIA was anxious to close a profitable deal, given that it had drawn criticism from the Kuwaiti parliament for its strategy during the financial crisis, especially its purchase of stock in both Citi and Merrill Lynch, after the shareholder value shrank. Such concerns were particularly pressing for Kuwait, as its economy was hit hard by the financial crisis, resulting in the KIA having to invest at home substantially, for the first time in its history.

iv "UPDATE 1-Kuwait's KIA invested $750 mln in US firm BlackRock-TV," Reuters, 31 January 2010.

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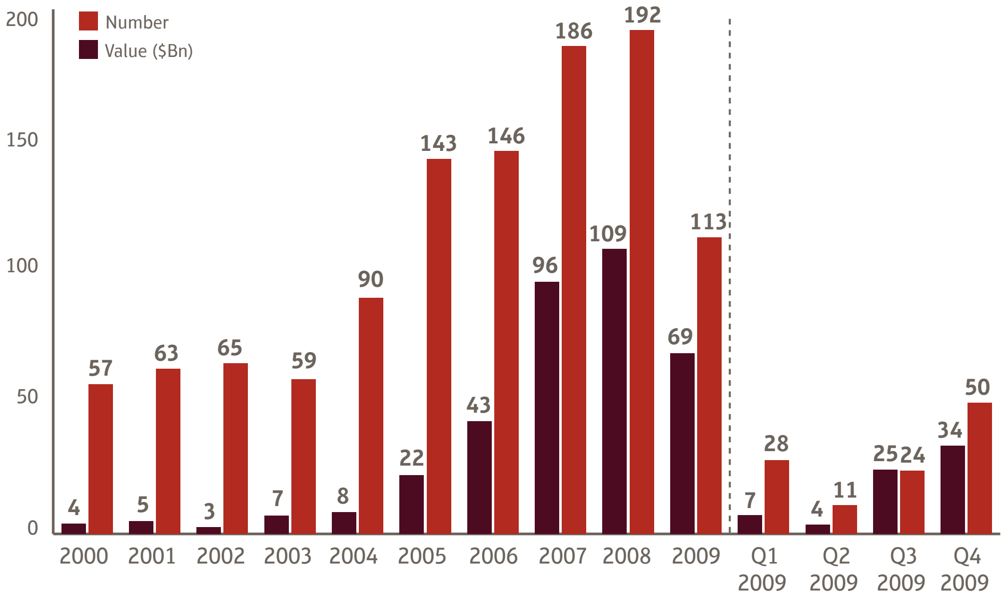
Figure 1: SWF Equity Transactions by Number and Volume Since 2000



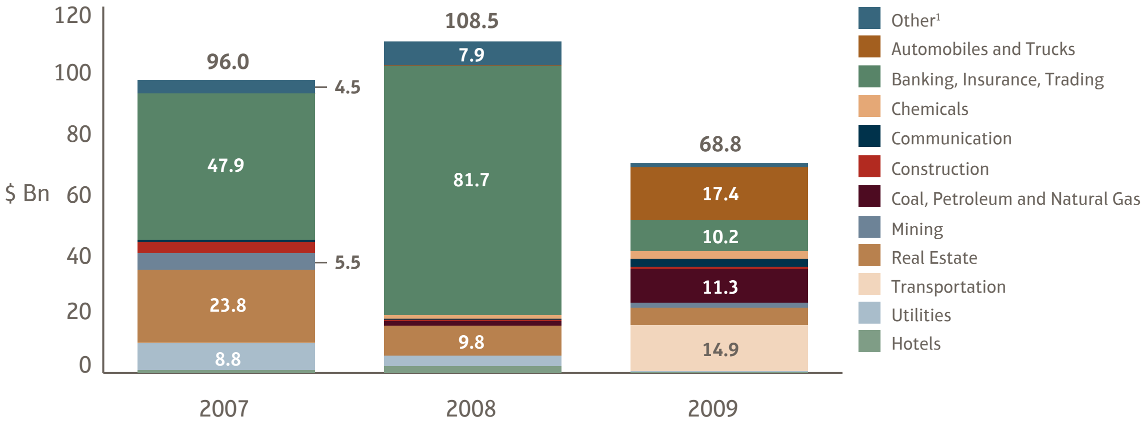
Note: Publicly available data for SWF equity & real estate deals, joint ventures and capital injections
Source: Monitor-FEEM SWF Transaction Database

Sectors

The sectoral distribution of SWFs investments in 2009 marked a change in their investment patterns, moving away from higher-risk sectors such as financial services and real estate, which had been primary targets for SWF investment in 2007 and 2008, into a wider range of sectors, primarily related to natural resources, engineering and technology (Figure 2).

Whereas in 2008 financial services had accounted for over two thirds of the value of SWF investments ($81.7 billion) and 25 percent of publicly reported SWF investments, in 2009 the sector accounted for only 15 percent of the total value ($10.2 billion) and 25 percent of the deals—hardly surprising given the global financial crisis. While SWFs continued to want exposure to financial services, they were no longer prepared to take the multi-billion-dollar equity stakes that had characterized their investments in the sector in 2008. For apparently similar reasons, publicly reported SWF investments in real estate declined in real terms from 52 investments valued at $9.8 billion in 2008 to 23 deals valued at $5.9 billion.

Figure 2: Value of SWF Investments by Target Sector



[1] "Other" includes Beer and Liquor; Business Supplies and Shipping Containers; Food Products; Healthcare; Medical Equipment; Pharmaceutical Products; Personal and Business Services; Recreation, Restaurants, and Wholesale.

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

Source: Monitor-FEEM SWF Transaction Database

Instead, in 2009 SWF investment focused on a wider range of sectors. Engineering sectors were particularly targeted; for example, SWF investment in motor vehicle manufacturing jumped from two deals valued at $65 million in 2008 to six deals with a value of $17.4 billion in 2009. Likewise, investment in energy resources such as coal, oil and natural gas rose from 12 deals valued at $1.3 billion in 2008 to 14 deals worth $11.2 billion in 2009. The dramatic rise in expenditure in this sector, despite the overall year-on-year decline in investment volume, is indicative of the shift of the funds' investment toward natural resources, and has primarily been driven by CIC. Likewise Technology and communications investments have also become a more important sector for SWFs as they look to diversify their portfolios — the value of SWF investments in this sector increased fourfold between 2008 and 2009.

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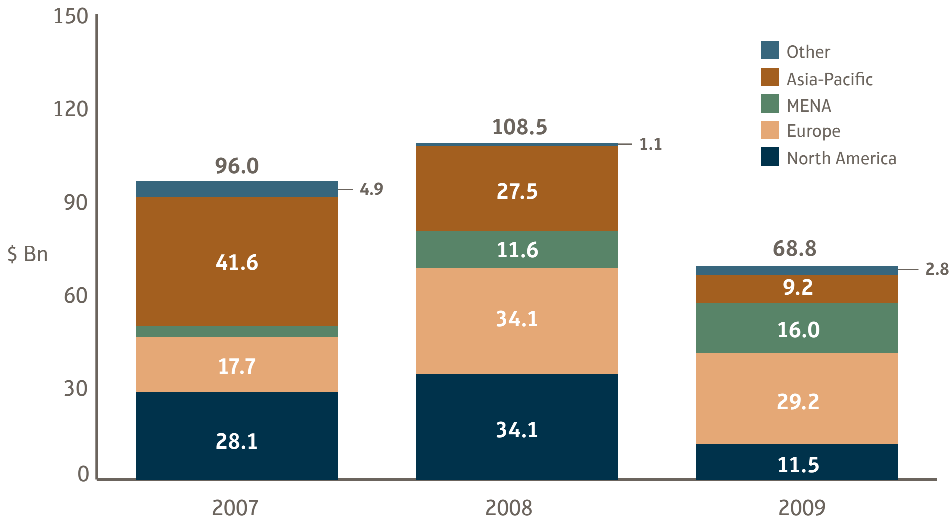
Geographical Spread

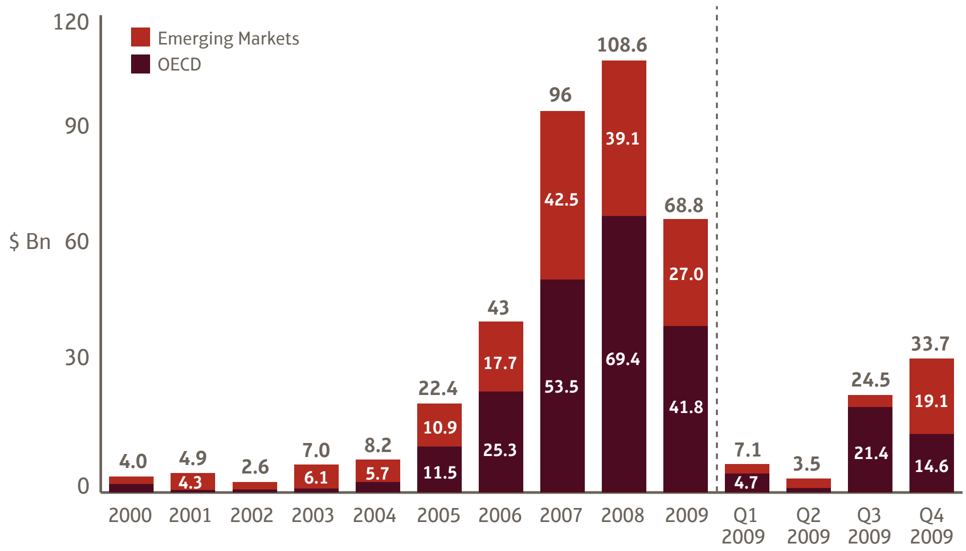
Despite the financial crisis, SWFs continued to invest in European and North American markets during 2009: 42 percent of SWF investments (48), representing over half of their publicly reported investment value ($40.7 billion) was targeted at European and North American companies. Although this represents a real and proportional drop in investment value in these regions, in comparison to emerging markets, it is not a plunge—overall investment value dropped 36.6 percent between 2008 and 2009, while the value of OECD investments fell by 39.8 percent from $69.4 billion to $41.8 billion. This is perhaps surprising given the funds' focus on OECD financial services in the early part of 2008, and suggests that, despite the difficult economic conditions of 2009, SWFs looked to developed economies to find undervalued assets.

Figure 3: Value of SWF Investments by Target Region



Note: Publicly available data for SWF equity & real estate deals, joint ventures and capital injections
Other includes Latin America, sub-Saharan Africa, and non-Pacific Asia.
Source: Monitor-FEEM SWF Transaction Database

Figure 4: Value of SWF Investments by Target Region



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

That said, emerging markets were major investment targets for SWFs. Sixty out of the 113 publicly reported SWF investments completed in 2009 were in emerging markets and accounted for $27 billion—about a quarter of the total expenditure for the year. These investments in emerging markets were split relatively easily between domestic and foreign markets (28 to 33). However, due to a $13.2 billion investment by QIA in Qatari railways in a joint venture with Deutsche Bahn in Q4 (see sidebar), domestic investments appear to be more significant targets accounting for 65 percent of the total emerging market expenditure.

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THE QATAR INVESTMENT AUTHORITY AS A DEVELOPMENT VEHICLE

The Qatar Investment Authority is best known for taking large, high-profile stakes in European companies, such as Barclays, Volkswagen, and Credit Suisse, as well as its holdings of prime London real estate. However, through its real estate development arm, Qatari Diar, it has another role: developing its home economy. Its flagship project is the new city of Lusail, considered to be a key element of Qatar's development strategy.

It is in this vein that Qatari Diar announced it had signed a $26 billion deal with Germany's national railway operator, Deutsche Bahn AG (DB), to build a railroad network over 15 years, in November 2009. Under the agreement, the partners will establish a joint venture, the Qatar Railways Development Company, in which Qatar will hold a 51 percent stake and DB will supply two of the four managing directors, including the CEO for the first four years.

The JV will coordinate the a four-line metro system for Doha, Lusail light rail, and West Bay automated people movers, as well as a high-speed line linking Doha to Bahrain via the causeway, and a high-speed line linking the emirate to neighboring Saudi Arabia, as well as 325 km of railroad for freight services. By increasing Qatar's links to regional markets and improving export routes this project is central to the diversification of the emirate's economy, which is largely reliant on gas and oil exports. The cooperation will also include DB providing vocational training in the rail sector for young Qataris, helping the transfer valuable expertise to the local population. Moreover, the development is expected to raise Qatar's position on the world stage, with the new rail system supporting Qatar's bids for the 2020 Olympic Games, and the 2022 FIFA World Cup. As such Qatari Diar's CEO Ghanim bin Saad believes it will play an important role in "advancing Qatar's forward-thinking goals of becoming a first-class state that provides a high standard of living for all its residents and as an international destination for industry and tourism".

The JV also has significant short- and long-term strategic advantages for DB. In the short term, it will help safeguard jobs in Germany in the current challenging economic climate. However, it also provides the company with a long-term advantage: investments valued at hundreds of millions of dollars are planned for developing rail infrastructure in the Arabian Peninsula over the next twenty years and with experience of working in the region, DB will be best placed to play a significant role in these projects.

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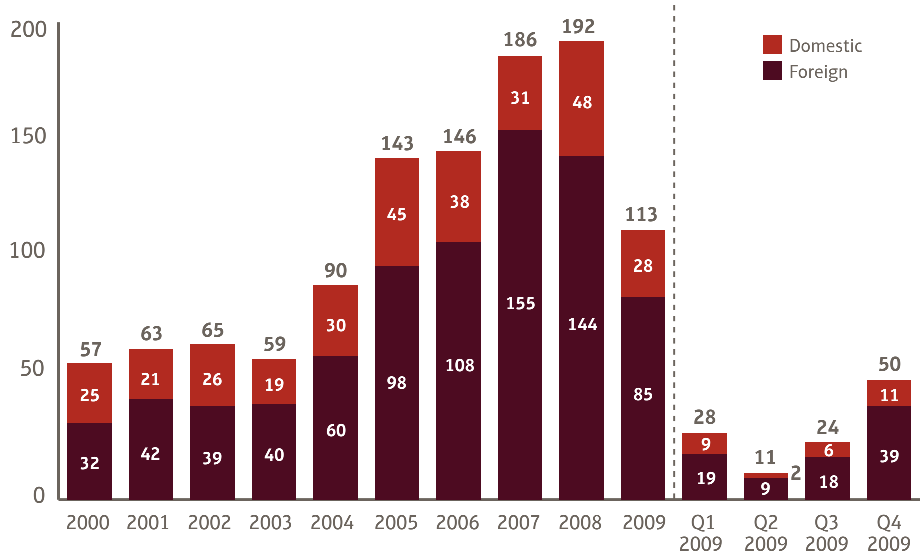
Figure 5: Number of SWF Investments by Target Location: Domestic vs. Foreign



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

Emerging markets in Asia Pacific were more attractive to SWF investors than other developing regions, accounting for 25 transactions, with a reported value of $8 billion. The Middle East and North Africa accounted for slightly fewer investments (21), but a higher value ($16.0 billion) primarily due to the Qatari railways investment.

Controlling Stakes

In 2009, SWFs continued their trend of taking controlling stakes in companies primarily in emerging markets, and outside of "sensitive sectors" in developed economies. Only 18 publicly reported SWF investments in 2009 resulted in a SWF owning 50 percent or more of any company. Less than half of these were in OECD markets, with IPIC's controlling stakes in MAN Ferrostaal and

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NOVA Chemicals being the most notable. Of the 10 controlling stakes taken in emerging markets, half of these were in the funds' home markets, but these were relatively small investments with the exception of QIA's Deutsche Bahn JV and Mubadala further developing Abu Dhabi's aerospace industry by building a new composites plant and undertaking a JV with Boeing.

In a reversal from 2008, Middle Eastern funds were more likely to take controlling stakes than Asian funds. This is primarily due to a significant decline in activity by Khazanah and Temasek Holdings, which have historically been more likely to take controlling stakes in domestic companies.

Funds

In 2009, 17 out of our 33 funds completed direct equity or real estate transactions or established joint ventures. We continually seek to update our list of funds to keep it in line with the realities of the SWF environment. Therefore, this year we have included two new funds. The first is Abu Dhabi's IPIC, which we have included as a SWF as the nature of its investments has altered since its March 2008 majority purchase of Aabar Investments to meet our criteria of a SWF. IPIC claims to preside over a portfolio worth $14 billion (although it is likely to be substantially more — Aabar alone has a portfolio of $10 billion),[4] making it a substantial player in sovereign wealth investment. We have also included the Oman Investment Fund (OIF). Although founded in 2006, the OIF has recently become more active, making a number of equity and real estate investments globally. A more detailed study of its activity and management suggests that it meets our criteria of a SWF.

4 "Assets of Aabar Investments hit $10bn," Reuters, March 24, 2010.

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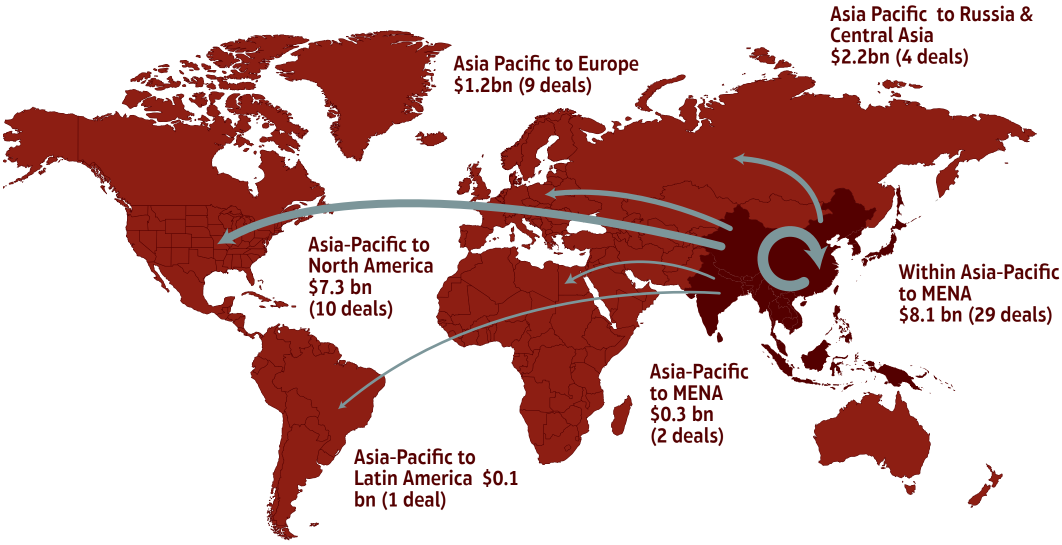
In 2009, the funds from Asia Pacific and MENA were equally active. Asian SWFs undertook 55 deals, and Middle Eastern funds, 58. However, the Middle Eastern funds made larger deals, with their investments topping $50 billion — nearly three quarters of the year's total SWF investment — while Asian funds made deals valued at $19.1 billion. This continues a trend from last year, which saw the MENA fund investment activity overtake that of the Asian funds.

Figure 6: Investment Flows from Asia Pacific SWFs, 2009



However, although Middle Eastern funds were, on the whole, more active, the two funds that made the largest number of deals were CIC and GIC, which made 17 and 18 investments (worth $10.8 billion and $2.4 billion, respectively) in 2009. However, the two biggest spending funds were both from the Middle East: QIA invested $32.1 billion (14 deals), and IPIC invested $12 billion (15 deals). These four funds dominated the SWF landscape in 2009, accounting for 57 percent of the deals and 83 percent of the total expenditure.

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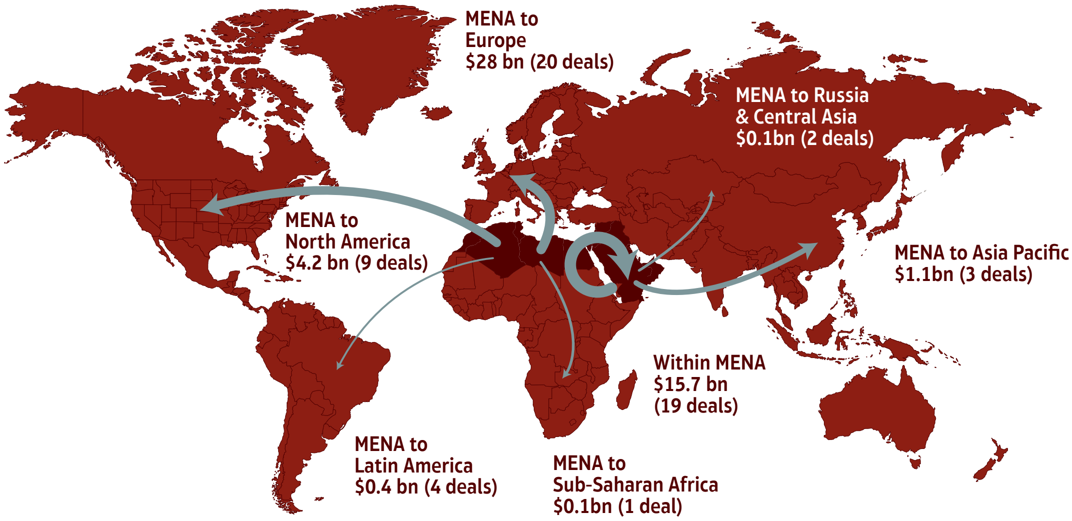
Figure 7: Investment Flows from MENA-based SWFs, 2009



Middle Eastern funds were more active in the OECD than their Asian counterparts, particularly in European markets. MENA funds undertook almost half their deals (26 out of 58) in Europe and North America, worth nearly two-thirds of their total expenditure ($32.1 billion). In fact, Middle Eastern funds undertook two thirds of the deals in Europe, worth 96 percent of the total SWF investment in that region.

Conversely Asian funds tended to concentrate on their regional markets, undertaking just over half of their publicly reported investments in Asia Pacific worth $8.1 billion (42 percent of their total expenditure). For example, CIC — which garnered most interest in 2009 — made 35 percent of its investments (6) in Asia Pacific worth 28 percent of their total annual publicly reported expenditure ($3.1 billion).

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THE FAILURE OF SELF-REGULATION

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Following negative reporting in the western media and concerns by regulators and politicians, two dozen countries hosting SWFs organized into a working group coordinated by the International Monetary Fund. Their goal was to develop a set of guidelines for state-controlled investment funds, aimed at easing concerns over their motives and focusing on the need for increased transparency and disclosure. Ultimately, the working group hoped to pre-empt a hostile foreign regulatory response. In October 2008, this effort led to a set of 'Generally Accepted Principles and Practices' — the Santiago Principles, named after the city in which they were signed — which were designed to be the foundation of a code of self-regulation for SWFs.

In response to this call for increased transparency, a record number of SWFs issued annual reports in 2009. Yet, the increased communication is hardly translating into greater transparency. An objective assessment of the impact of the Santiago Principles is offered by a recent report finding that "One year after the introduction and adoption of the Santiago Principles, while a few funds have achieved a comparatively high level of disclosure, the public disclosure levels of a number of SWFs have not yet met the Principles' standards. A few SWFs under study do not seem to have adopted any initiatives to improve their compliance with the Santiago Principles following its introduction."[i] Two funds that released annual reports for the first time are the Abu Dhabi Investment Authority and the China Investment Corporation. For both funds, this is a significant step toward increased disclosure, but both annual reports have been criticized for providing little detail: the ADIA annual report, for example, does not list its total assets under management, the value of which has long been debated by analysts.

A combination of factors has led to the self-determined GAPP having a weak impact on disclosure and transparency. First, the principles do not impose penalties on funds that fall short of GAPP. Neither do they impose strict minimum requirements in the first place — the glaring omission of total assets from the ADIA annual report is actually consistent with GAPP, which does not require disclosure of this fundamental piece of information.

i IRRCi Institute and RiskMetrics Group, *An Analysis of Proxy Voting and Engagement Policies and Practices of the Sovereign Wealth Funds*, October 2009.

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Second, the hostile environment SWFs faced in foreign countries before the crisis has quickly turned welcoming, as they have largely been perceived as saviors of troubled Western institutions, especially in the financial field. Suddenly, the need to appease foreign media and politicians seems less pressing, as SWFs are increasingly being courted by Western economies, removing the main rationale for self-regulation.

Third, while reports of dramatic losses in foreign markets started surfacing in the domestic media, SWFs' home economies faced their own difficulties. Increasingly, SWFs are being criticized at home for investing abroad, often with poor results, rather than supporting domestic economies through the crisis. In this climate, many funds are finding disclosure of portfolio allocations and performance to be embarrassing on the home front.

This combination of factors has led to self-regulation having a weak impact, at least in terms of transparency and disclosure. Yet, there is still hope. As the global economy exits the crisis and growth resumes in the West, developed economies are likely to resume questioning the motives and impact of SWFs, providing a renewed rationale for self-imposed disclosure. Moreover, it has become clear that domestic retreat is not a viable long-term strategy for SWFs — hence the need to maintain good relationships with foreign constituencies will regain importance over time. Finally, the strongest push toward effective self-regulation is likely to come from other SWFs, leading to peer-monitoring. After all, SWFs from diverse countries have discovered that they have a common reputation and that the actions of foreign, unrelated entities can have serious consequences for all sovereign funds. The strongest hope is still that they will rein in rogue operators through a more meaningful self-regulatory code, to avoid a foreign regulatory response that could prove damaging to all SWFs.

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Q4 Highlights

1. SWFs completed 50 publicly reported acquisitions valued at $33.7 billion. This is nearly twice the number of deals executed during the previous quarter, and a 25 percent increase in expenditure.

2. The trend for SWFs to invest abroad continued. SWFs made only 11 publicly reported domestic investments, 20 percent of the total. However, largely due to a single $13 billion domestic investment by the Qatar Investment Authority, these represented just over half of the total reported value, $14.7 billion.

3. Emerging markets were attractive to SWFs — a reversal from the previous quarter. Over half the publicly reported deals (26), worth over half the total reported value ($19 billion), were in non-OECD countries.

4. Financial services, real estate and energy were once more the preferred sectors for SWF investment. This contrasts to the previous quarter, which had seen the funds diversify their investments. Financial services accounted for 13 investments valued at $4.9 billion, 12 real estate deals were valued at $4.0 billion, and seven coal, petroleum and natural gas deals were worth $4.0 billion.

5. The China Investment Corporation was once more the most active fund in Q4 2009, making 13 investments valued at $7.2 billion. The Government of Singapore Investment Corporation and the Qatar Investment Authority were the next most active funds, each making eight investments valued at $1.9 billion and $20.0 billion, respectively.

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Q4 Overview

According to our data, SWFs completed 53 transactions in the final quarter of 2009, with a reported value of $33.7 billion. This accounts for about half of SWF investment activity for the year. Although the number of investments doubled on the level of the previous quarter, there was only a 25 percent increase in the value of the investments completed, suggesting that SWFs are looking to make a larger number of smaller investments, rather than undertaking multi-billion-dollar deals. In Q4 2009 the average investment size was $673 million, only about two-thirds of the previous quarter's average deal size of $1 billion.

SWF investment activity also appeared buoyant, with a further 21 investments being announced in this quarter. This suggests that SWFs are continuing their return to the market, which started in Q3 after a sharp decline in their investment activity at the beginning of the year.

In this quarter, SWFs continued to invest with a geographically broader spread than we have seen in the past. For the first time, all the BRIC countries saw SWF inflows in Q4 2009, although the investments generally remain small in these new markets.

Of the 33 funds tracked by the Monitor-FEEM Transaction Database, 15 made publicly reported investments in Q4 2009 — the largest number of SWFs to invest in one quarter that we have on record.

Sectoral Analysis

While SWFs appeared to be diversifying their portfolios into a wider array of sectors in Q3, in Q4 this trend was reversed slightly with the funds settling down into their habitual sectors — financial services, real estate, and energy — investments in which accounted for two thirds of the investments made in this quarter (34) and 40 percent of the total expenditure.

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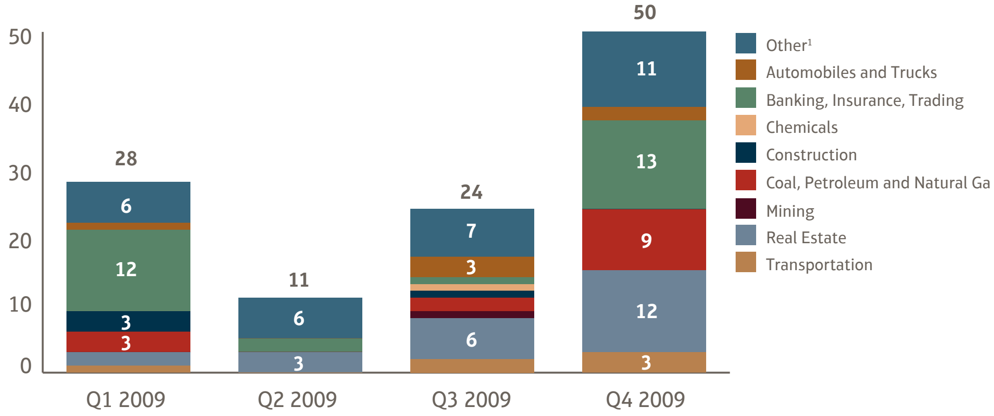
Figure 8: Number of SWF Investments by Target Sector 2009

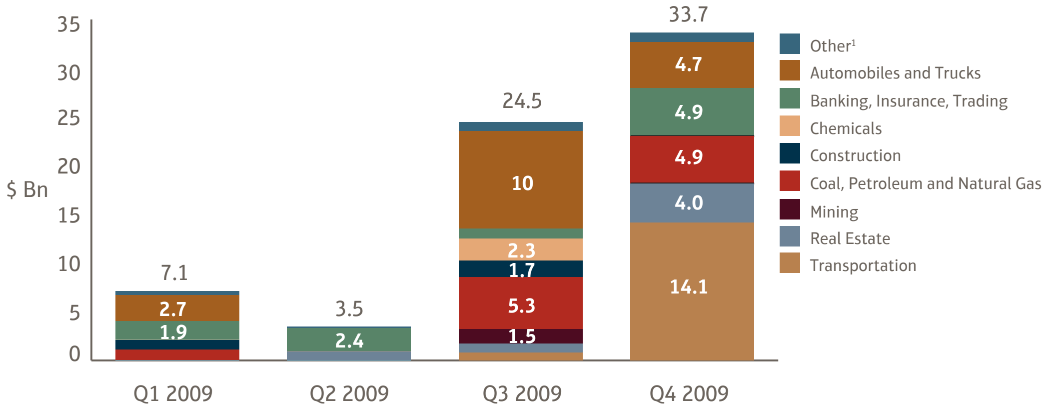


[1] "Other" includes Aircraft; ships, and railroad equipment; Communication; Food Products; Recreation; Restaurants; Hotels; Motels; and Utilities.

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

Source: Monitor-FEEM SWF Transaction Database

Figure 9: Value of SWF Investments by Target Sector 2009



[1] "Other" includes Aircraft; ships, and railroad equipment; Communication; Food Products; Recreation; Restaurants; Hotels; Motels; and Utilities.

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

Source: Monitor-FEEM SWF Transaction Database

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However, the way in which the funds are investing in the riskier of these sectors (financial services and real estate) has changed. Increasingly, financial services investments by SWFs are in alternative financial assets or in developing new sectors, rather than straight equity stakes in banks. For example, the China Investment Corporation (CIC), the Government of Singapore Investment Corporation (GIC) and the Kuwait Investment Authority (KIA) contributed a total of $2.8 billion toward the purchase of Barclays Global Investors, a deal announced in June but completed in the final quarter. Similarly, the Oman State General Reserve Fund bought the U.K.-based Pensions First Group, which provides analytical services and capital markets solutions for the defined benefits pensions industry, while the Brunei Investment Authority, Khazanah Nasional and the Abu Dhabi Investment Council each invested $150 million in Fajr Capital an Islamic investment firm focusing on financial services and complementary opportunities in key Muslim markets.

Likewise, real estate investments in Q4 were undertaken by investing in a fund or as part of a consortium or with another fund. GIC and Temasek Holdings paired up to invest in the IPO of Chongqing-based property developer Longfor Properties Co., while CIC and the Qatar Investment Authority (QIA) partnered to buy 40 percent of Songbird Estates, which owns much of the Canary Wharf financial district of London, for $885 million in a combination of preference and common stock.

Of the remaining sectors, these were divided into two broad categories: engineering sectors such as automotive manufacture, transportation, and aircraft manufacture (7 deals, $19.2 billion — primarily accounted for by QIA's $13.2 billion JV with Deutsche Bahn to develop the Emirate's railroads and purchase of 10.1 percent of German automotive company Volkswagen for $4.7 billion); or technology-based companies such as semiconductor manufacturers, IT service providers, and therapeutic technology developers (6 deals, $273 million).

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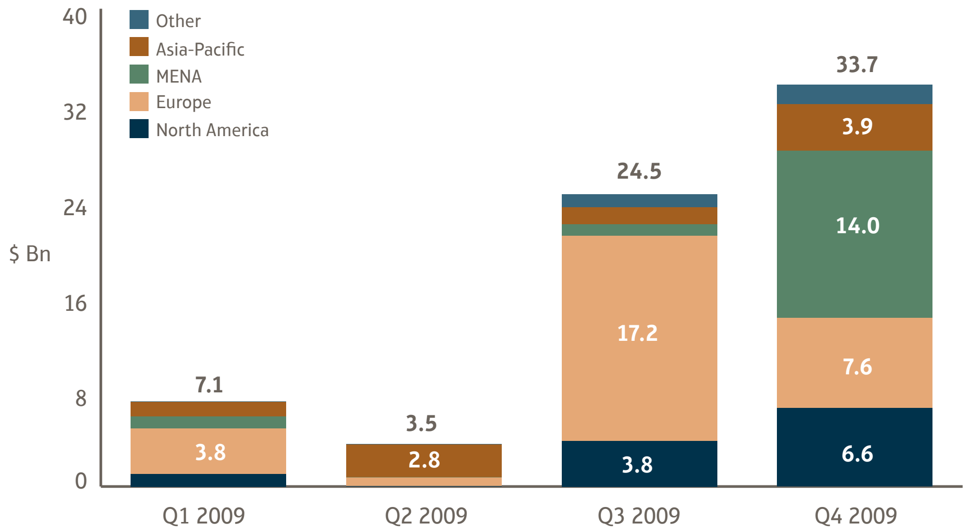
Geographical Analysis

Emerging markets were the primary target for SWFs in Q4. Of the 50 transactions, 27 were in emerging markets, accounting for $18.9 billion—more than half of the total expenditure for the quarter. The funds' domestic markets appeared to receive a much larger proportion of the investment ($14.7 billion), but this is due to QIA's JV with Deutsche Bahn.

Figure 10: Value of SWF Investments by Target Region 2009



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

What is interesting to note, however, is that in Q4 SWFs started to look further afield to invest. Whereas SWFs have usually invested in East Asian or South-East Asian markets and the Middle East and North Africa, in this quarter they sought out investment opportunities in all the BRIC markets, rather than just China. The four investments in Brazil, Russia and India were only small—a total of $630 million—but represented an interesting departure from previous years, in which SWFs had largely ignored these markets.

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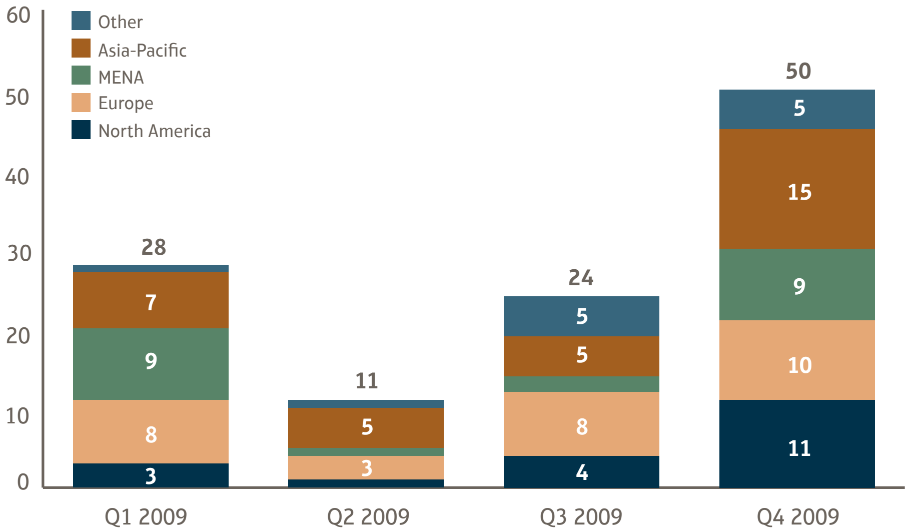
Figure 11: Number of SWF Investment by Target Region 2009



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

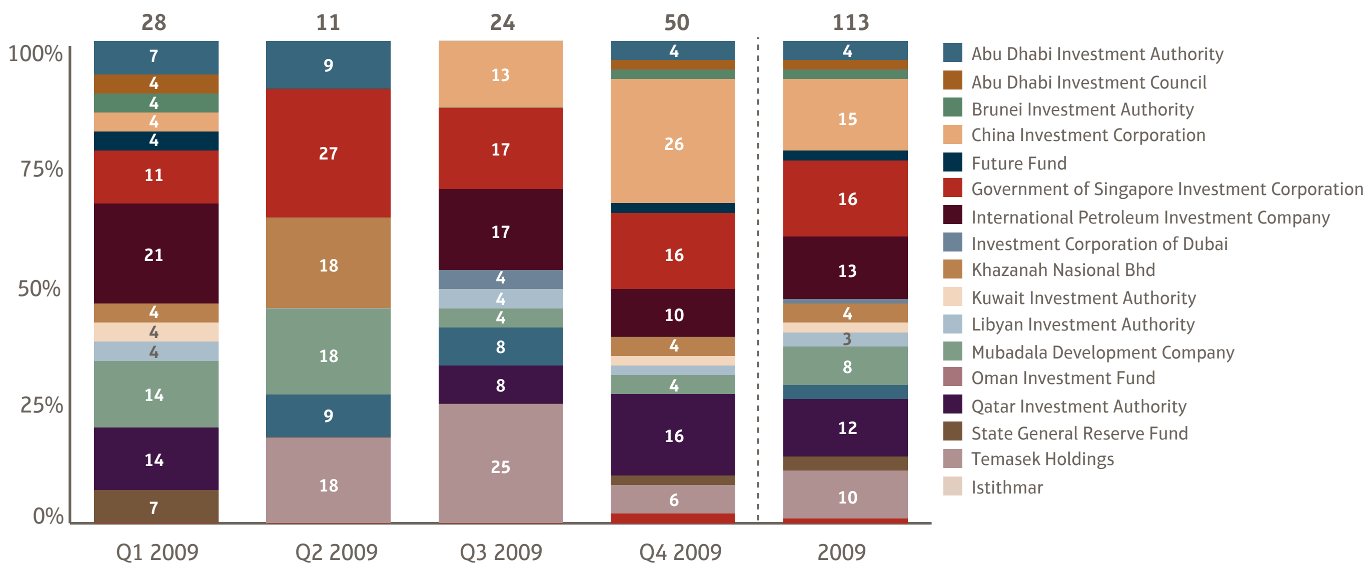
SWFs invested in three main markets in the OECD: the United Kingdom (8 deals, $2.85 billion); the United States (6 deals, $3.25 billion); and Canada (5 deals, $3.31 billion). This suggests that North American markets, having been largely shunned by SWFs for much of 2008 and 2009, are beginning to become more attractive. However, it is interesting to note that SWF investment largely took place in American or Canadian-listed firms that concentrate on foreign markets: CIC purchased a 25 percent share of Toronto-listed coal producer SouthGobi Energy Resources Limited for $500 million, while CIC, GIC and the Australian Future Fund each invested a total of $2.5 billion in Brookfield Properties' Global Real Estate Investor Consortium that will target distressed real estate debt and troubled property groups.

Funds

Activity was broadly divided among SWFs, with those from Asia Pacific undertaking 28 deals and those from the Middle East making 22 investments. However, Middle Eastern funds outspent their Asian counterparts by more than two to one, investing $23.0 billion in contrast to Asian funds' $10.7 billion.

This pattern is can be illustrated by examining the activities of two funds: CIC and QIA. CIC was once more the most active fund in Q4 2009, making 13 publicly reported investments valued at $7.2 billion. These investments took place in just three sectors—energy resources, real estate and financial services—with the lion's share of the investment value ($4.5 billion) being put into energy.

Figure 12: Number of SWF Investments by Fund



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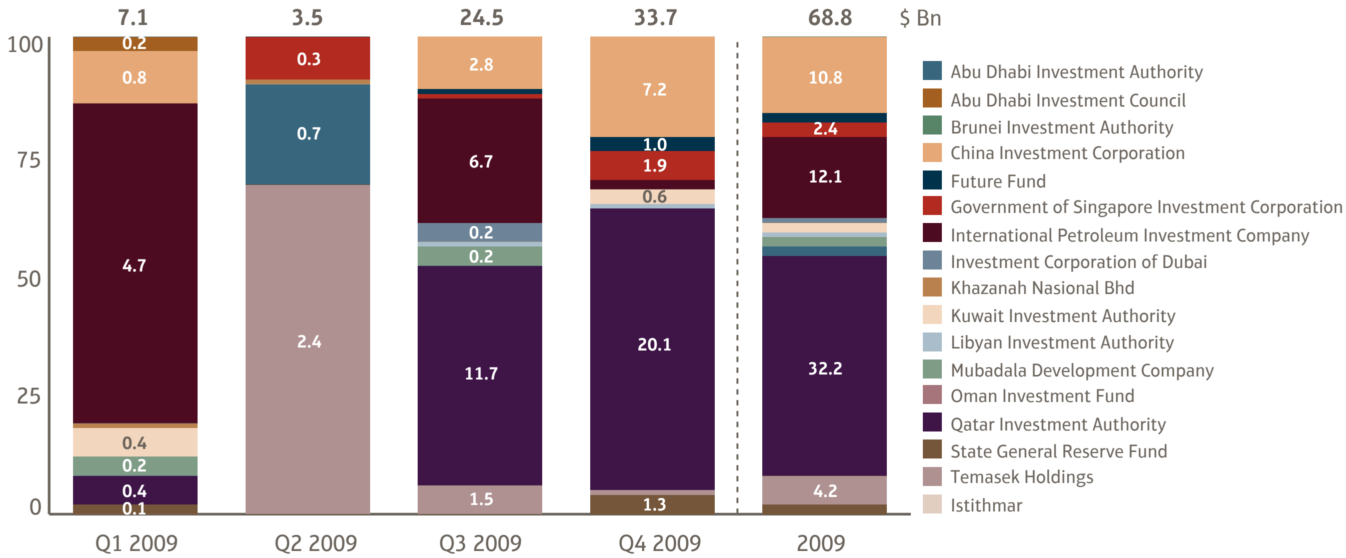
QIA completed only eight publicly reported deals, but spent $20.0 billion in the final quarter alone. This was substantially due to their large railroad investment, but it also completed its $4.6 billion deal with Volkswagen, the German car manufacturer in this quarter, $1.2 billion in British bank Barclays, and $530 million in London's Songbird estates. However, this type of investing dominated by large billion-dollar investments is becoming increasingly atypical for SWFs; QIA's average deal size in Q4 was $2.5 billion, nearly four times the average deal size for the quarter as a whole.

Figure 13: Value of SWF Investments by Fund



Selected News and Events of 2009

JANUARY	
20	Barack Obama becomes the 44th President of the United States.
29	Legg Mason, one of the largest asset management firms in the world, sees its assets under management decrease 30% to $698 billion after a "partial redemption by a sovereign wealth fund with operating needs".
30	World Economic Forum in Davos takes place to discuss the scenarios for the future of the global financial system. Banks, private equity, hedge funds and SWFs come under particular scrutiny.
FEBRUARY	
16	Norway's Pension Fund-Global announces shopping spree for landmark British and American properties for $18 billion.
23	GIC and Australia's Future Fund partner to purchase a 7.7% share of British private equity firm Apax Partners
MARCH	
5	Abu Dhabi's International Petroleum Investment Company completes the purchase of a five year $1.68 billion exchangeable bond issued by the Government of Papua New Guinea. Upon conversion of the bond, IPIC will acquire PNG's 17.6% equity stake in Oil Search Ltd.
25	IPIC becomes the new majority owner of MAN Ferrostaal, purchasing 70% of its shares; MAN remains a shareholder maintaining 30%.
26	Daimler sells 9.1% stake to IPIC subsidiary, Aabar Investments, for $2.66 billion.
27	Norway's Pension Fund-Global publishes its 2008 Annual Report. It lost a record $90.5 billion with a return of -23.3%, the weakest result in the fund's history.
APRIL	
2	The second G-20 summit, involving state leaders rather than the usual finance ministers, meets in London. Its main focus is an ongoing global financial crisis.
5-6	The IMF's International Working Group of SWFs announces the "Kuwait Declaration" establishing the International Forum of Sovereign Wealth Funds (IFSWF). The IFSWF is a voluntary group of SWFs which will meet to exchange views on issues of common interest, and facilitate an understanding of the Santiago Principles and SWF activities.
24	Mubadala Development Company releases its 2008 annual report—the first MENA SWF to do so. Its total assets grew 40% in 2008, and its revenues increased by a dramatic 370%.
MAY	
15	Temasek Holdings announces it had sold its 3% stake in Bank of America in the first quarter, suffering an estimated $4.6 billion loss, as it refocuses on emerging markets. Temasek had paid about $5.9 billion for a 14% stake in Merrill Lynch, which had been converted to BoA stock after it rescued the investment bank.
18	The Malaysian state of Terengganu announces it was establishing a sovereign wealth fund of $3 billion which will manage the long-term oil revenue of the state, located on the east coast of peninsular Malaysia.

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JUNE	
3	Temasek announces that it had sold its Barclays shareholding, making an estimated $850 million loss. By contrast, the day before IPIC generated a healthy profit from divesting its Barclays holdings making a 40 percent profit on the $5.7 billion investment in seven months.
12	CIC, GIC and KIA join together to contribute $2.8 billion to BlackRock's bid to purchase Barclays' asset management arm, Barclays Global Investors, for $13.5 billion. The deal is finalized on 1 December. This is a notable case of cooperation by SWFs.
JULY	
3	CIC starts a campaign of purchases in natural resources companies around the world by buying a 17% stake of Teck Resources Ltd, Canada's biggest diversified mining company, for $1.5 billion. By the end of the year, CIC spent $6.9 billion in this sector
6	IPIC acquires an additional 37.5% stake in Spanish oil company Cepsa. The $4.4 billion investment gives IPIC a 47% stake, making it the company's second largest shareholder after France's Total.
22	A shock exit for former BHP Billiton boss, Chip Goodyear, as CEO of Temasek, before he had formally taken the reins from Ho Ching who had planned to step down. Goodyear cites "differences regarding certain strategic issues" as his reasons for leaving.
29	Temasek announces its portfolio slid by at least $27 billion in the year to March 2008, but it says it will stick with banks and sees opportunities in food and energy.
30	IPIC agrees to buy 100% of Nova Chemicals Corp., Canada's largest chemical maker. The total deal, including debt, is valued at $2.3 billion.
AUGUST	
20	The Australian Future Fund reduces its portfolio's holding in Telstra from 16.4% of the company to 10.9% (gross proceeds $2.37 billion). The sell-down is in line with the stated plan to reduce the portfolio's holding in Telstra and to build a portfolio consistent with its long term mandate and strategy.
SEPTEMBER	
2	QIA closes the second biggest deal of 2009 acquiring a 10% stake in the automotive company Porsche. The investment is valued almost $10 billion.
25	At the G-20 Pittsburgh summit, world leaders announce that the G-20 will assume greater leverage over the world economy, replacing the role of the G-8, in an effort to prevent another financial crisis like that in 2008.
OCTOBER	
5	GIC announces that its investments fell more than 20% in the year that ended in March, but recovered more than half that loss during the rally on financial markets.
8-9	The IFSWF convenes its inaugural meeting in Baku, Azerbaijan on October 8-9, 2009, hosted by the State Oil Fund of the Republic Azerbaijan and the Azerbaijan Government. The resulting "Baku Statement" reaffirms the group's commitment to continue to contribute to a stable global financial system and maintain free flow of capital and investment.
20	QIA sells 379 million of its Barclays shares, making $1 billion profit after the lender's shares doubled in value.
22	Mubadala announces that it aims to grow its assets threefold over the next five years.

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NOVEMBER	
8	CIC announces a $1.58 billion in U.S. power group AES Corporation. CIC will acquire 125.5 million shares of AES stock, representing approximately 15% equity interest in the company. According to the investment agreement, CIC will nominate one director to the AES board.
23	QIA subsidiary Qatari Diar and German state-owned rail operator Deutsche Bahn AG form Qatar Railways Development Co., a 51/49 joint venture, to build the network in three phases by 2026. This represents the biggest deal of 2009 with an estimated value of $13.26 billion.
27	Dubai announces a debt repayment freeze in the wake of the catastrophic impact of the financial crisis on its speculative real estate market. The announcement causes global stock markets to drop.
DECEMBER	
7	KIA make a profit of $1.1 billion after selling its 5% stake in Citigroup for $4.1 billion less than two years after acquiring preference shares in the largest US bank during the global financial crisis.

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2009 SAW A GREATER ACCEPTANCE AND UNDERSTANDING OF SWFS AS INVESTORS, WHILE THE FUNDS STARTED TO PARTNER TO MAKE RISKIER INVESTMENTS.

Articles

The Rise of Sovereign Wealth Funds: Rewriting the Global Map of Asset Management

Ashby H B Monk, Co-Director of the Oxford SWF Project,
University of Oxford[5]

The rapid growth of sovereign wealth funds (SWFs) has been nothing short of remarkable (Cohen 2009 and Monk 2009a). Roughly $1 trillion in 2000, SWFs' assets under management have grown to $4 trillion today, and expectations are that this will reach $6 trillion in the next two years (see Figure 1). While this pales in comparison to mutual funds, pension funds and insurance funds[6], SWFs have already passed private equity and hedge funds in terms of total assets (see Figure 2). Interestingly, the total number of SWFs is also on the rise: 28 of the 48 SWFs listed by the U.S. Government Accountability Office as of 2008 were set up in 2000 or later (GAO, 2008). In addition, despite the economic and financial turmoil of the past few years, 11 new SWFs were at various stages of creation and development in 2009 and four new funds have already been announced in 2010 (see Figure 3).

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5 I am grateful to the Leverhulme Trust and Pensions & Investments for supporting and facilitating the survey. I am also grateful to Gordon L. Clark, who is the Co-Director of the Oxford SWF Project.

6 Editor's Note: Dr Monk is using a wider definition of a SWF than we use in our own analysis. Consequently, his estimation of the size of SWFs' assets under management are higher than ours.

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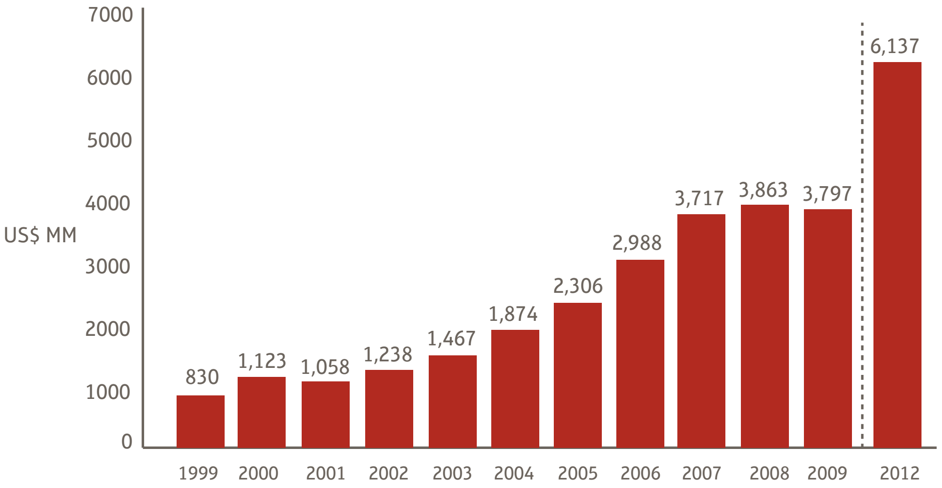
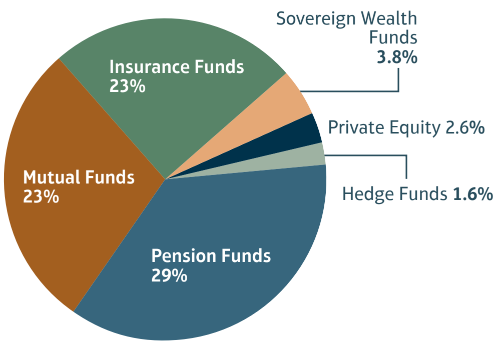
Figure 1: Projected Growth of SWF Assets under Management



Source: IFSL estimates

Figure 2: Comparison of SWF assets under management to other institutional investors



Source: IFSL (2010)

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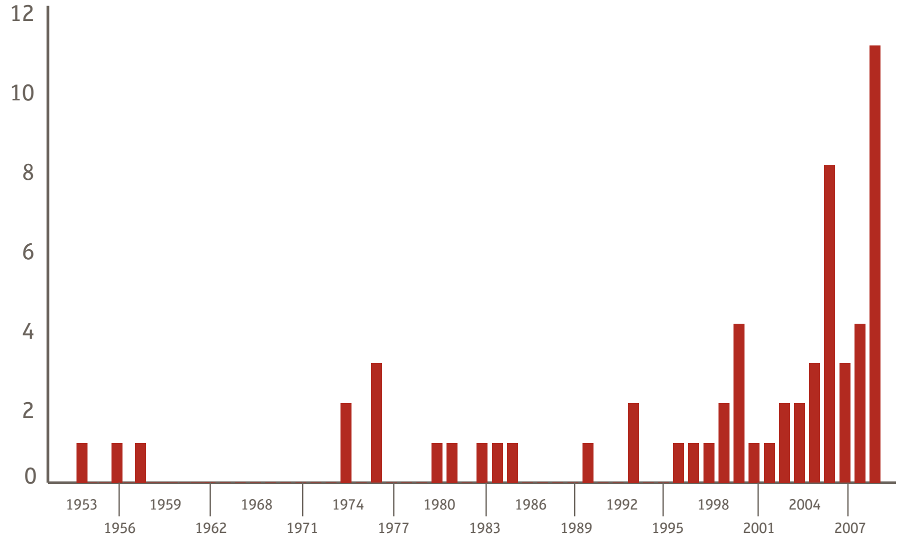
Figure 3: Number of New SWFs established since 1985



Source: Oxford SWF Project and Money Supply, Financial Times

The question then is what the rising popularity of SWFs means for the geography of finance, or global financial pools and flows. By definition, SWFs imply a reallocation of sovereign assets away from conservative investments, such as those made by central banks, toward more aggressive investments, like those made by private sector investors. However, these government-owned, special purpose vehicles have different objectives than those of traditional, private sector institutional investors, such as pensions or mutual funds. For example, SWFs have no explicit liabilities; this means that they can make investments over inter-generational time horizons. In contrast, private sector investors lack this luxury and are generally forced into a short-term mindset. It follows then that as SWFs grow — both in terms of assets and numbers — they will redirect and re-allocate financial capital throughout the world. Expectations would dictate that managers with long-term and risky strategies might be more likely to increase their mandates in the era of SWFs.

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This then raises two more interesting questions: How will SWFs affect the structure and strategies of today's asset management industry, and who will be the winners and losers as these funds grow in relative importance? Unfortunately, very little research examines these issues. Instead, most academic research focuses on the effects of SWFs on firms (see Bortolotti et al. 2010). An important exception is the research by Beck and Fidora (2008), who analyzed SWFs' broader impact on global financial markets. However, while Beck and Fidora's logic is sound, these authors acknowledge that they only managed "back-of-the-envelope" calculations due to severe data limitations. Indeed, a lack of transparency among SWFs has severely limited the scope of research and, accordingly, our understanding of these funds and their effects on the geography of finance.

While some degree of confidentiality is understandable, a gap exists between what we would like to know about SWFs and what most SWFs are willing to tell us. As Beck and Fidora (2008, p. 5) note, "There is indeed a lack of transparency in the majority of SWFs. In fact, the seven least transparent SWFs are estimated to account for almost half of all SWFs' holdings." While some gains have been made since the release of the Santiago Principles, the internal operations and strategies of many SWFs remain guarded secrets. As a result, no research, to my knowledge, has explored how SWFs are changing the global asset management industry.

In this short article, I fill this gap through a unique and creative survey, and highlight some of the asset managers that have become winners and losers as a result of the SWF boom.[7]

7 There are many aspects of the asset management industry that SWFs will affect. In this paper, I focus in on "winners and losers" due to space constraints. For more details on what the rise of SWFs may mean for asset managers, see Clark and Monk 2009.

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Survey Basics

In 2009 my colleague, Gordon L. Clark, and I conducted an expert opinion survey of the asset managers of SWFs to answer some of the more elusive questions.[8] The idea was to learn by asking SWFs' own managers for details on their operations in an absolutely confidential setting. In particular, our goal was to understand better the transformative role SWFs are playing in the asset management industry, a topic that our "experts" were uniquely situated to answer.[9] By virtue of their education, profession, and experience, the SWF experts surveyed arguably had special knowledge. Our sample was comprised of 146 asset managers with routine professional contact with SWFs (for more details on the sampling, see Clark and Monk, 2009).[10]

Findings

We wanted to determine first whether or not the asset managers themselves perceived SWFs to be of sufficient size and scope to affect the asset management industry. Anecdotally, we had seen various asset managers over the past few years set up or expand dedicated SWF groups, suggesting that SWFs were altering managers' behavior. Therefore we asked respondents whether they felt SWFs could be a "long term boon" for their industry. The response was overwhelmingly positive (see Figure 4).

8 While expert opinion surveys don't offer "evidence," they can offer useful insights for data-starved researchers. According to Castles and Mair (1984), in situations where reliable and objective data is missing, 'expert' opinion or judgments can act as a substitute. Accordingly, this technique has been widely adopted to help map out changing economic spaces and places (see Welch, 2008; Clark and Monk, 2008; Monk 2009b, 2009c; and Fernandez, 2009).

9 The reliability of expert opinion surveys depends on the characteristics of the respondents; surveys of highly educated individuals will typically be more reliable than surveys of the mass public for a given domain (Alwin and Krosnick, 1999; and Weber, et al., 2002). This implies that being an expert on a subject makes one's responses on this subject more reliable (Huber and Inglehart, 1995). So, as Dorn and Huberman (2005) suggest, experts' responses can be proxies for actual evidence when they are surveyed in the specific domains for which they are highly knowledgeable.

10 There are some limitations associated with this data. For example, asset managers are themselves a diverse group, so the domain of expertise of each individual may be restricted to different aspects of SWFs. Also, questions may be raised about some findings that would seem to benefit the status of the asset management community. Nonetheless, it was our expectation that the collective expertise of the entire sample outweighed any single cases that might inject bias or uninformed choices into our data.

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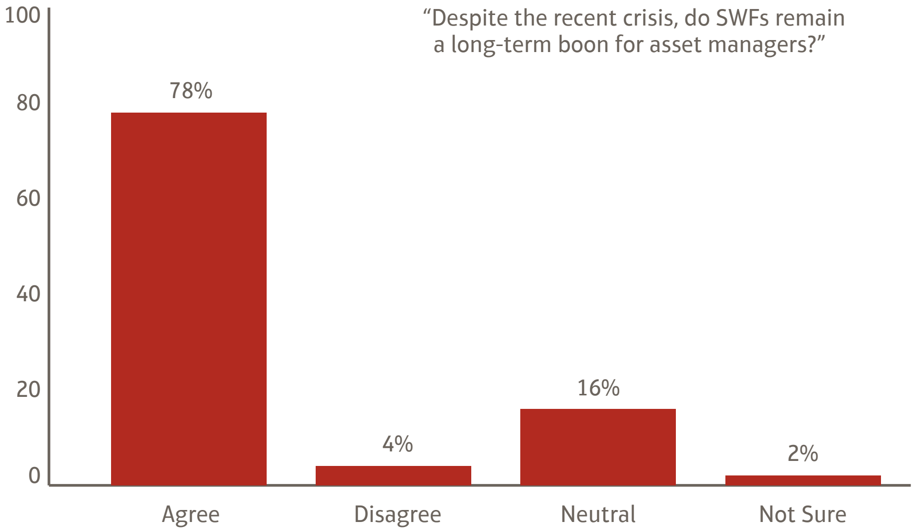
Figure 4: SWFs remain a long-term boon for asset managers



Source: Clark and Monk (2009)

Moreover, the recent financial crisis has done little to dampen the view that SWFs represent an important new market. In fact, our respondents considered SWFs primed for growth. Just as foreign exchange reserves shot up around the world after the financial crisis in the 1990s, most respondents agreed that SWFs would also grow coming out of this crisis (see Figure 5). Indeed, this result fits with what we are seeing today in practice.

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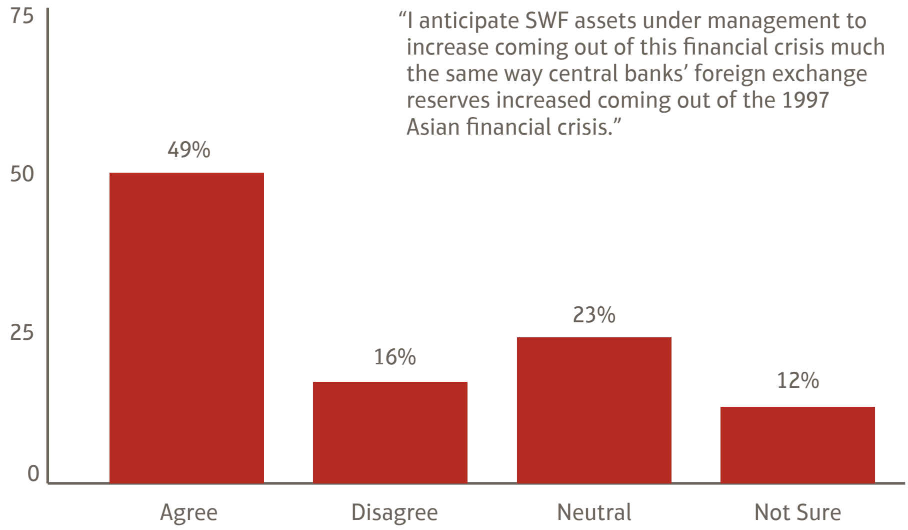
Figure 5: Survey Respondents Expect SWFs to Grow out of the Financial Crisis



Source: Clark and Monk (2009)

More importantly, our respondents thought that a large portion of the new SWF assets would end up in their hands, as SWFs increasingly outsource a large portion of their assets to third party money managers (see Figure 6). Also, a majority believed that SWFs would rely on recognized asset managers when making private equity or infrastructure investments (see Figure 7). Evidently, SWF asset managers see the rise of SWFs as an important business opportunity.

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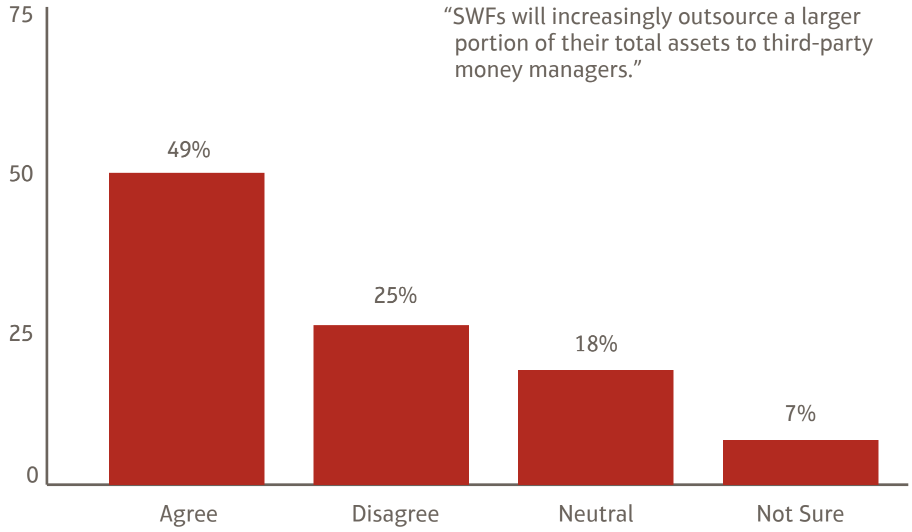
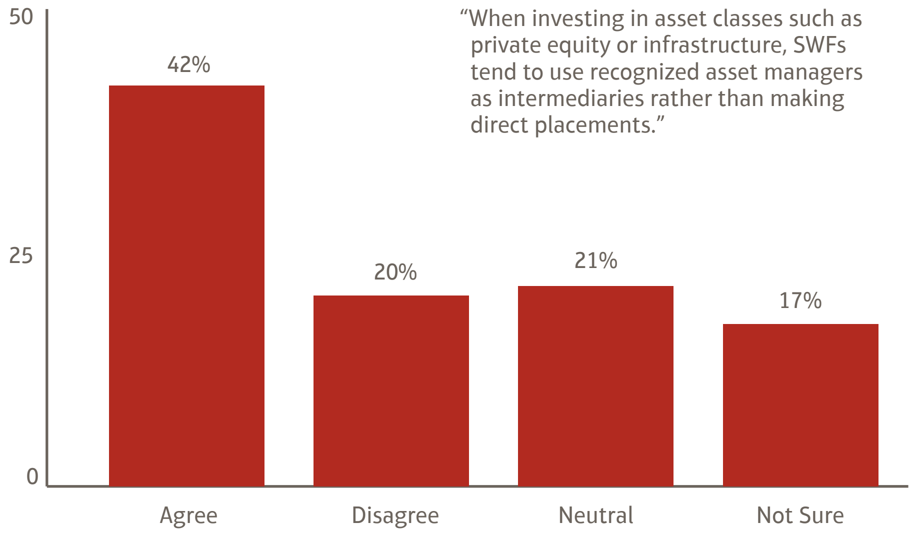
Figure 6: Survey Respondents believed SWFs would outsource asset management



Source: Clark and Monk (2009)

Figure 7: Survey Respondents believed SWFs would use recognized asset managers



Source: Clark and Monk (2009)

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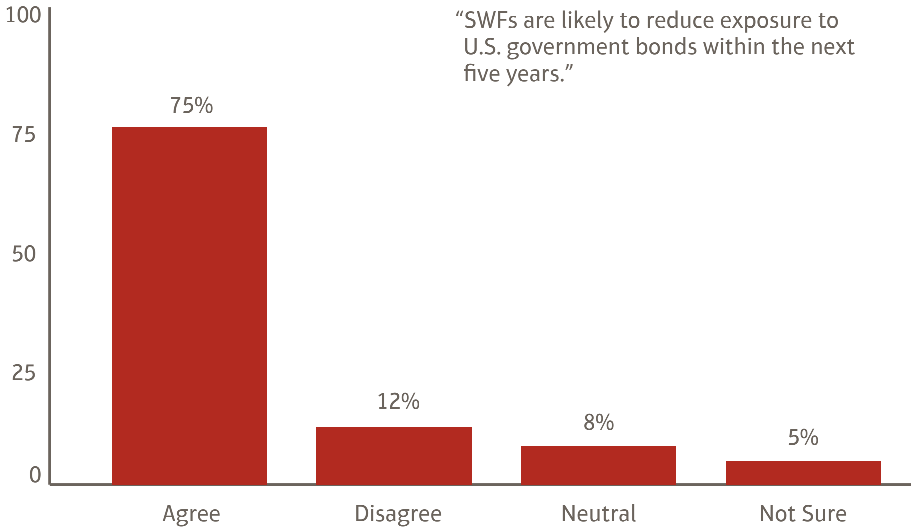
The survey went further to evaluate whether the increasing popularity of these funds would indeed result in a redistribution of financial capital as predicted above. To do so, we asked whether or not SWFs were likely to reduce their exposure to U.S. government bonds over the next five years. The response was overwhelming: 75 percent of respondents agreed that they would (see Figure 8). This is not surprising, as the initial impetus behind many SWFs' creation was a desire to diversify foreign exchange reserves out of government bonds (specifically U.S. Treasuries) into riskier, higher yielding securities.

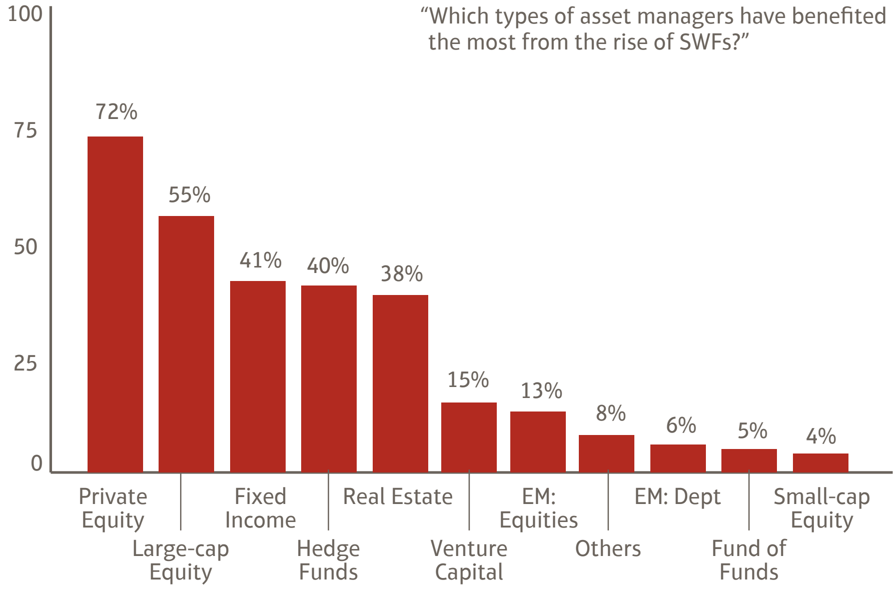
Figure 8: Survey Respondents believed SWFs would reduce their exposure to U.S. Government Bonds



Source: Clark and Monk (2009)

To recap, our survey showed that SWFs are having an appreciable effect on the geography of finance and, accordingly, on the asset management industry. Indeed, the rise of SWFs is leading to a redistribution of capital across asset classes, from conservative to aggressive and short- to long-term investment strategies. Logically, this implies that SWFs will create winners and losers among asset managers. Our final portion of the survey was designed to find out which managers fell into which category.

Figure 9: Survey Respondents believed that Private Equity Mangers have benefitted most from SWFs



Source: Clark and Monk (2009)

Interestingly, it appears that those asset managers that have most benefited from SWFs are private equity managers (see Figure 9). Other "winners" include large-cap equity managers followed by fixed income, hedge funds, and real estate. However, when looking out five years, on average equities, real estate and private equity seem to be the long-term favorites for SWFs (see Figure 10). On the other side of the spectrum, the responses showed that fixed income and hedge fund managers would lose out on SWF money over the long term (see Figure 11).

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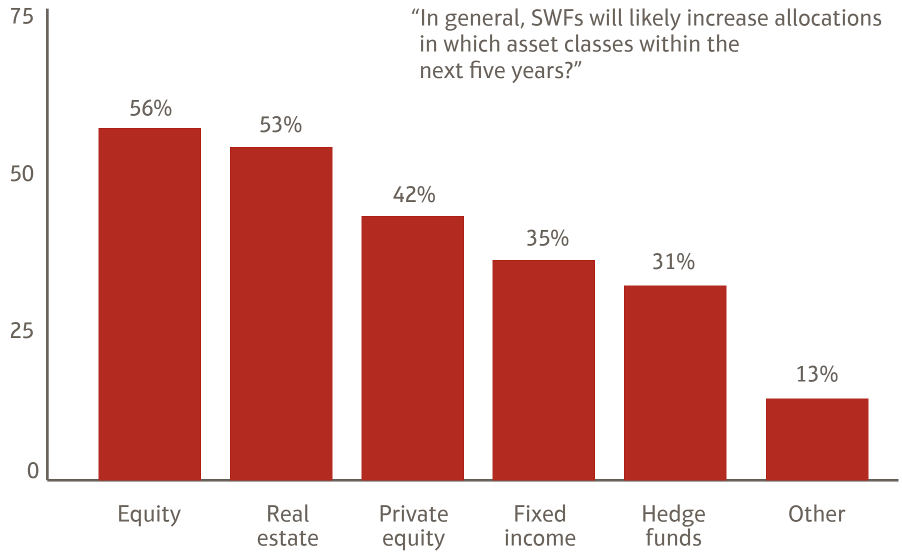
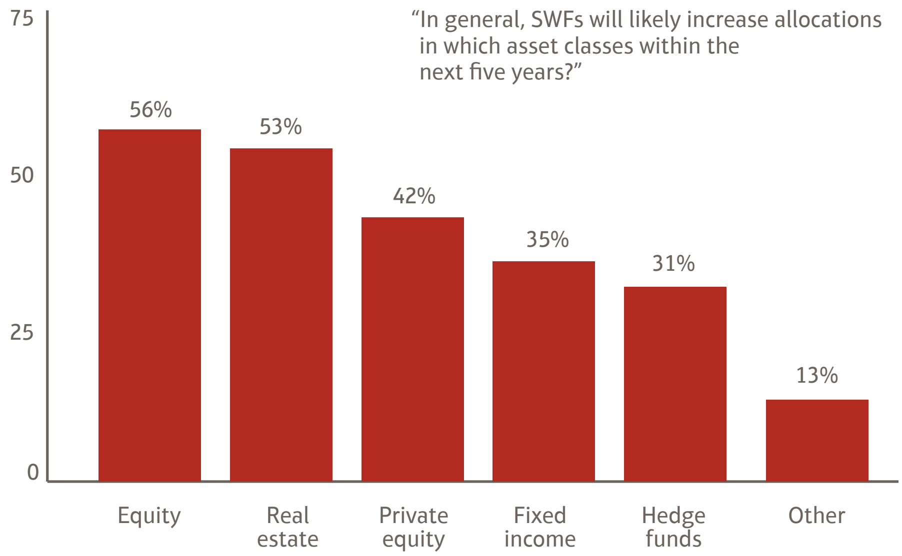
Figure 10: Survey Respondents believed SWFs would increase asset allocations to equity and real estate



Source: Clark and Monk (2009)

Figure 11: Survey Respondents believed SWFs would reduce their allocations to fixed income assets and hedge funds



Source: Clark and Monk (2009)

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Final Thoughts

SWFs are on the rise; both in terms of assets under management and sheer number of funds. Given that SWFs are idiosyncratic investors, diversifying and redistributing sovereign wealth, their increasing popularity among governments is bound to alter the geography of finance. Specifically, the rise of SWFs is creating winners and losers within the asset management industry. Unfortunately, due to data limitations it has been difficult to assess the effects that SWFs are having and will have in the future.

Using unique survey data, this short article shows that private equity, real estate, and equity managers are considered the overall "winners" from the rise of SWFs. This confirms what we expected to learn about SWFs: they are long-term investors looking to diversify out of conservative investments into more aggressive and risky strategies and assets. In sum, SWFs will affect where the world's financial capital is flowing and pooling, and they will be an important source of change for the map of global asset management.

References

Alwin, D. F. and J. A. Krosnick (1991). "The Reliability of Survey Attitude Measurement - the Influence of Question and Respondent Attributes." *Sociological Methods & Research* 20(1): 139-181.

Beck, R. and M. Fidora (2008). The Impact of Sovereign Wealth Funds on Global Financial Markets. European Central Bank Occasional Paper Series No 91.

Bortolotti, B., V. Fotak, W. Megginson, and W. Miracky (2010). "Sovereign Wealth Fund Investment Patterns and Performance (June 2009). FEEM Working Paper No. 22 2009. Available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1364926.

Castles, F. G. and P. Mair (1984). "Left Right Political Scales - Some Expert Judgments." *European Journal of Political Research* 12(1): 73-88.

© MONITOR COMPANY GROUP, L.P. AND FEEM 2010

Clark, G.L. and Monk, A.H.B. (2008). "Conceptualizing the Defined Benefit Pension Promise: Implications From a Survey of Expert Opinion." *Benefits Quarterly*, First Quarter: 7-31.

Clark, G. L. and A. Monk (2009). "The Oxford Survey of Sovereign Wealth Funds' Asset Managers." (July 1). Available at SSRN: http://ssrn.com/abstract=1432078.

Cohen, B. J. (2009). "Sovereign Wealth Funds and National Security: The Great Tradeoff." International Affairs. 85(4): 713-731

Dorn, D. and G. Huberman (2005). "Talk and Action: What Individual Investors Say and What They Do." *Review of Finance* 9: 437-481.

Fernandez, P. (2009). "Market Risk Premium Used in 2008 by Professors: A Survey with 1,400 Answers" (April 16). Available at SSRN: http://ssrn.com/abstract=1344209.

Government Accountability Office (2008). Sovereign Wealth Funds: Publicly Available Data on Sizes and Investments for Some Funds Are Limited, United States Government Accountability Office: GAO-08-946.

Huber, J. and R. Inglehart (1995). "Expert Interpretations of Party Space and Party Locations in 42 Societies." *Party Politics* 1(1): 73-111.

IFSL (2010). "IFSL Research: Sovereign Wealth Funds 2010". International Financial Services London. Available online: http://www.ifsl.org.uk/output/ReportItem.aspx?NewsID=20.

Megginson et al. (2008). "The Financial Impact of Sovereign Wealth Funds Investments In Listed Companies." EFA 2009 Bergen Meetings Paper. Available at SSRN: http://ssrn.com/abstract=1108585.

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Monk, A. H. B. (2009a). "Recasting the Sovereign Wealth Fund Debate: Trust, Legitimacy, and Governance". New Political Economy. 14: 14-30.

Monk, A. H. B. (2009b). "The Financial Thesis: Reconceptualizing Globalisation's Effect on Firms and Institutions." *Competition & Change*, 13(1): 51-74.

Monk, A. H. B. (2009c). "The geography of pension liabilities and fund governance in the United States." *Environment and Planning*, A, 41: 859-878.

Weber, E. U., A. R. Blais, et al. (2002). "A domain-specific risk-attitude scale: Measuring risk perceptions and risk behaviors." *Journal of Behavioral Decision Making* 15(4): 263–290.

Welch, I. (2008). "The Consensus Estimate for the Equity Premium by Academic Financial Economists in December 2007" (January 18). Available at SSRN: http://ssrn.com/abstract=1084918.

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Learning to live with SWFs

Vanessa Rossi, Senior Research Fellow, International Economics Programme, Chatham House

Has the global crisis helped resolve the SWF enigma? The rapid escalation in these state-controlled funds over the five years prior to the 2008 created alarm largely because their motivations and role in the global financial system were obscure while their presence looked set to loom ever larger. This uncertainty led to some quite remarkable twists and turns in popular perceptions of SWFs over the last few years. From being viewed a risk to the stability of the international financial system and a potential threat to market capitalism, they were suddenly seen as potential white knights as the U.S. banking sector began to crumble in late 2007. Both views proved inaccurate. Firstly, SWFs lost some of their mystique as well as their money during to the crisis: like many investors, SWFs suffered significant financial losses due to the collapse of stock markets and the bankruptcy of several banking and financial institutions in which they were heavily involved. Secondly, as their domestic markets were hit by the effects of the global recession, SWFs inevitably became more active at home in providing financial support—patriotism proved far more important than presence in foreign markets. These factors, coupled with considerable uncertainty about the outlook for financial institutions, including possible nationalizations and antagonism toward foreign investors, undoubtedly limited any new investment by SWFs in the international markets at the peak of the financial crisis in 2008 and early 2009. Ironically, those countries which had worried most about the rise of SWFs bumped up against a more important threat. And in spite of a few very specific deals, the white knights prospect never took off—and the fuss over SWFs died down in 2009. If they can be regarded as having a purpose other than fund management, this was revealed during the crisis as a number of SWFs, at least temporarily, appeared in the mantle of local development banks.

In view of recent economic developments, including the upturn in oil prices and revenues, and forecasts for a global economic recovery, what role could increasingly cash-rich SWFs play now? Might they have a significant part in the

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final resolution of the global crisis given the need for further capital increases in the international banking sector and continued stimulus for the global economy — or is this yet another fantasy?

From contraction to recovery in funds under management

From late 2008 to early 2009, the value of SWFs contracted significantly. The financial crisis and recession affected both the value of the asset base (chiefly driven by stock market gyrations) and inflows of new funds, which derive from surplus national savings.

For most SWF countries, national savings depend heavily on the stream of surplus revenues from oil and gas trade, which in turn is driven mainly by volatile oil prices. In 2008, average oil prices of $100 a barrel resulted in approximately $300 billion of net national savings for OPEC and an additional $100 billion for Russia, which provided inflows to their SWFs. Although oil prices picked up to $60-80 from mid-2009, after a crisis-driven plunge to $30-40 early in the year, energy producers still saw a considerable drop in national savings and thus potential flows into SWFs compared to 2008. For example, the average price of oil was around $50 for the first half of 2009, suggesting very low savings in this period and virtually no inflows to SWFs. However, this situation subsequently improved as oil prices picked up to $70-80, a range that most forecasters expect to be maintained, or bettered, in 2010.

Prospects for inflows of funds into SWFs will continue to depend on the scale of national savings as well as the financial demands of their own domestic economies and governments. Both these factors in turn depend on the strength of the prospective economic recovery, providing support for energy markets and also scope for regeneration of growth in non-energy sectors.

For the oil producing countries, the forecast rise in energy prices and export revenues implies a potential revival in annual SWF inflows to around $300-400 billion. In addition, China has signaled its intent to move more of its still growing pool of FX reserves into fund management, suggesting that global inflows

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into SWFs could climb to $500-700 billion in 2010 and stay around this level for some time to come.

However, the total size and growth of SWFs is also affected by the stock market's performance and changes in asset prices in general, impacting on the value of holdings. During the worst phase of the crisis, equity prices were down by as much as 50 percent from peak, causing severe damage to the spot valuation of SWFs. Although figures are not known for certain, there was considerable criticism of SWFs on the basis of losses widely believed at the time to be anywhere from 0.5 to 1.5 trillion dollars. For example, revising down previously bullish views, Stephen Jen estimated that the value of SWFs' assets fell by an average of 25 percent during 2008, from $3 trillion at the beginning of the year to $2.3 trillion at the end, with growth further reduced by the loss in savings inflows[11]. The strong stock market recovery seen during 2009 probably eliminated much of this loss and sentiment certainly became more optimistic for renewed growth in SWFs by late 2009. While long-term forecasts remain more cautious than the bullish extrapolations seen at the high point for oil markets in early 2008, based on the potential for annual inflows of new funds of $500-700 billion (as indicated above) and an assumed average investment return of 10 percent per annum, the total value of SWFs may well reach $10-11 trillion by 2015.

Opportunities to come?

By definition, SWFs are long-term investment vehicles with the goal of maximizing returns for future generations. However, in response to the global crisis, many turned to supporting their domestic markets and troubled domestic institutions, mainly in the banking sector. This shows where their ultimate loyalty lies and also that the potential for SWFs to act as providers of liquidity in the global financial system is quite limited, especially in view of the poor performance of the funds in 2007-2008.

11 Jen, Stephen and Andreopoulos, Spyros, 2008, 'SWFs: Growth Tempered – US$10 Trillion by 2015', Global Economic Forum, Morgan Stanley, 10 November. Jen also revised down his estimate for the value of SWFs in 2015 versus the prediction of $12 trillion published in 2007.

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Nevertheless, despite recent setbacks and the shift in investment strategy toward regional and local markets during the crisis, SWFs do continue to invest in Western markets. Low equity prices in early 2009 encouraged those SWFs with positive cash flow to take advantage of the opportunities on offer, albeit with greater conservatism than in the past. More balanced portfolios may suggest accumulation of a broader range of assets outside of the financial sector, for example in new technologies and resources. However, some investment in financial institutions took place and, notably, there was considerable publicity over the profit made by Gulf investors from short-term investments in Barclays Bank during the depths of the U.K.'s banking crisis.

In addition SWFs are likely to gradually increase their exposure to equities in coming years as current estimates suggest that they are significantly underweight in equities compared with typical pension funds and other long-term institutional investors.

This means that SWFs could yet play a role, albeit fairly low key, in the final resolution of the global crisis. Many Western financial institutions remain under capitalized in view of the tougher requirements being imposed by regulators while, at the same time, it is essential to get global capital working again to regenerate world growth and provide the platform for the next generation of investment in new technologies, resources etc. Cash-rich SWFs have the opportunity to take part in such investment not as threats or white knights but as portfolio managers: their new inflows of $500–700 billion per annum will need to be invested mainly abroad and this could provide a significant contribution to the global investment recovery.

Need we worry about a new surge in SWFs? Recent behavior has clearly shown that, contrary to previous speculation, their key motivation beyond simply seeking financial returns is not control of Western companies but support for their own countries. Thus the crisis has provided an important, if unfortunate, opportunity to gain more insight into SWFs behavior, serving to damp down international concern over their power and motives.

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SWFs after the crisis — operating in a sensitive political environment

By Steffen Kern, Deutsche Bank AG[12]

SWFs have had a rough political ride in the past decade. Having operated in quiet niches of global financial markets for a long time, they became subject of considerable political controversy in recent years. In that context, the public discourse in many countries metamorphosed from unawareness, to reservations — and in a few cases to outright rejection. When financial markets slipped into turmoil, these concerns gave way to a busy courting for their capital, driven by the hope they would come in as saviors to America's and Europe's ailing banks and other enterprises in need.

In the end, neither political concerns nor wishful expectations materialized. SWFs have largely refrained from politically assailable investments. At the same time, notions of SWFs as investors with deep pockets altruistically rescuing crisis-ridden companies have been disproved as their inflows receded, portfolio values declined, and parent governments took recourse to the funds to finance domestic stimulus packages during the crisis.

Nevertheless, the political conditions for SWF investments and operations have changed perceivably around the world. In many recipient countries, investments policies were adjusted, reflecting the concerns over politically motivated investments. Among the SWFs, a list of self-regulatory governance principles aims at creating greater trust among the recipients of their investments. Both developments deserve a closer look, as they will condition SWF behavior in the years to come.

12 The views expressed in this article are those of the author and do not necessarily represent the views of the company or any of its affiliates.

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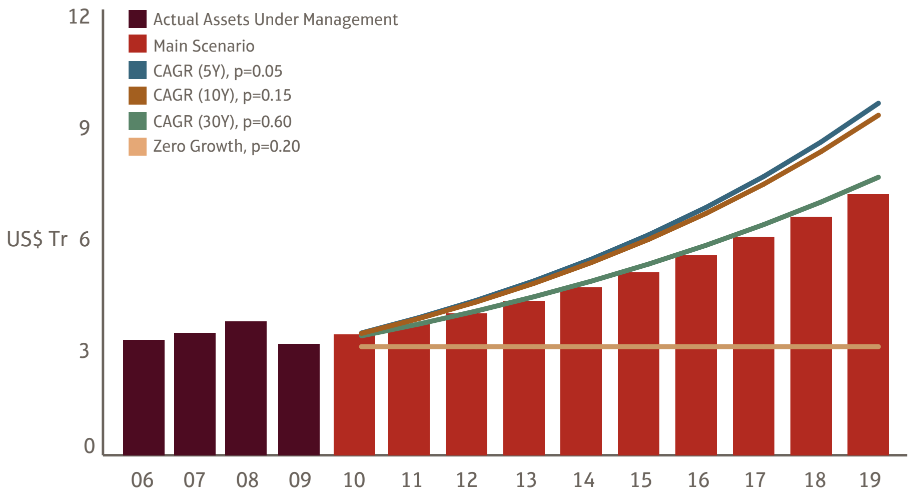
Chart 1: SWF asset growth



Note: Scenarios for the development of assets managed by SWFs, based on past foreign exchange reserves growth, actual figures 2006–2009, projections 2010–2019.

Source: DB Research

Investment rules — more sophisticated policy tools

Before the financial and economic crisis, substantial concerns over the motivations behind sovereign investments had mounted in a number of countries. These included questions regarding the potential impact of sovereign investments on financial market stability, competition, corporate governance rules, and, most prominently, worries regarding potential political motivations behind SWF investments.[13]

Governments in many countries[14] were quick to review their domestic rules governing incoming investments. Since 2008, the OECD has observed policy measures in 44 countries that will or may affect international investment.[15] The majority of these actions, however, were not related to SWF investments,

13 For a review of associated issues see Backer, 2008. Also Gilson, 2008, and Monk, 2008.
14 Extensive comparative accounts can be found in GAO, 2008, and Kern, 2008.
15 OECD, 2009. Not all of the measures observed may have been taken with a view to SWFs.

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but emergency measures related to the crisis that could influence international capital flows. Measures related to investment policies were observed in only 14 economies, and were primarily intended to improve the clarity of existing policies.

In the end, legislative or regulatory initiatives related to public security considerations and leading to concrete changes in market entry conditions for SWFs have occurred only in four major economies over the past years, namely the U.S., Australia, Russia, and Germany. In the United States, the existing CFIUS process[16] was sharpened by extending the range of applicable transactions, broadening the review criterion of national security, lower the trigger value, and tighter reporting requirements.[17] In Australia,[18] the government issued additional principles applicable to foreign state investors, including the SWF's operational independence from government, commercial objectives, and the economic impact on Australian business. Russia further complemented existing investment restrictions,[19] establishing a process of approval of foreign investments in 42 strategic sectors in which foreign investments are outlawed or can be prohibited by government. Germany's response to foreign state investments[20] was the establishment of a review process for non-EFTA foreign investments, resembling a lightweight version of America's CFIUS routine. In terms of tightness, the measures in these countries vary considerably, ranging from the closely protected regime in Russia to the review mechanism in Germany, which, with its high trigger value and a generally lean review process, is one of the least restrictive in an international comparison.[21]

The U.S., Australia, Russia and Germany are the only countries in which legislative initiatives related to public security considerations have led to concrete changes in market entry conditions for SWFs.

16 Committee on Foreign Investments in the United States (CFIUS). For details see e.g. Jackson, 2008. A detailed account of the economic and political arguments in the U.S. has been provided by Truman, 2008.

17 For details see United States Government Accountability Office, 2008.

18 Foreign Investment Review Board (FIRB), based on the 1975 Foreign Acquisitions and Takeovers Act.

19 Federal Law on Procedures for Making Foreign Investments in Russian Commercial Entities Having Strategic Importance for State Security and Defence, No. 455348-4.

20 Dreizehntes Gesetz zur Änderung des Außenwirtschaftsgesetzes und der Außenwirtschaftsverordnung, Drucksache 16/10730.

21 For details see Deutsche Bank, 2009.

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Despite these new restrictions, the policy backlash that originated from the political debates over the past years has not been as dramatic as many feared. Much of the regulatory discipline that eventually prevailed can be traced back to the commitments the major economies[22] have made as part of the OECD Freedom of Investment Initiative to ensure national treatment of foreign investors, good conduct of multinational enterprises, and international cooperation in case of conflicts over investments. In addition, the OECD issued a Declaration on Sovereign Wealth Funds and Recipient Country Policies,[23] calling for no protectionist barriers to foreign investment in recipient countries, no discrimination among investors in like circumstances, and investment restrictions only to address legitimate national security concerns.[24]

The guidance by the OECD is a useful yardstick for national investment policies, and can unfold important incentives for governments inside and outside these agreements to refrain from prohibitive investment rules. To what extent this will eventually lead to success in terms of more open and harmonized investment regimes is a vital question which critically hinges on the willingness of governments to apply these rules in their national laws, and the extent to which non-subscribers — currently the vast majority of countries worldwide — can be convinced to participate.

SWF standards — a joint agenda for greater transparency and acceptance

The second crucial political development in response to the rise of SWFs has been the call for rules for the good conduct of these funds.[25] In October 2008, the International Working Group of Sovereign Wealth Funds (IWG) issued the results of this process, presenting a set of 24 Generally Accepted Principles and Practices (GAPP), better known as the Santiago Principles.[26] The GAPP

22 OECD, 2009 up-date. The subscribing countries include the 30 OECD members plus Argentina, Brazil, Chile, Egypt, Estonia, Israel, Latvia, Lithuania, Morocco, Peru, Romania, Slovenia.
23 OECD, 2008.
24 OECD, May 25, 2009. Also OECD, March 26, 2008.
25 IMF, February 2008.
26 IWG, October 2008.

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are designed as a voluntary, non-binding framework providing guidance for appropriate governance and accountability arrangements,[27] as well as the conduct of appropriate investment practices on the part of SWFs. The principles cover transparency on investment and shareholder strategies, risk management, and the use of financial leverage as well as governance rules on clarity of organizational structures and processes, most importantly featuring a commitment to a separation of fund management and government.[28]

Although some funds have started to become more transparent, their annual reports often fall short of the documentation standards required for private listed enterprises.

First evidence suggests that a number of SWFs are taking action on the Principles. Thus, various funds have commenced publishing regular reports, documenting the organizational set-up and procedures governing the fund as well as the objectives and investment strategies pursued by their management. Although they constitute an improvement over the *status quo ante*, these reports still fall short of the documentation standards required for private listed enterprises.

Nonetheless, many of them provide useful insights into the rationale of what previously were opaque market participants. In addition, a number of funds have enhanced their ad-hoc reporting on individual transactions or fund-related developments which complement the improved state of transparency. In light of these initial advances, the long-term success of the GAPP depends on whether the enhanced transparency is considered sufficient by market participants and policymakers, and to what extent the first steps taken by the avant-garde of the funds will be followed-up by the remaining institutions.

SWF in global perspective

The political environment for SWFs has changed substantially in recent years. For the funds this means that they have arrived at a new state of normalcy which

27 For first evidence on institutional and operational practices of SWFs see IWG, September 2008.
28 For details see Kern, 2008.

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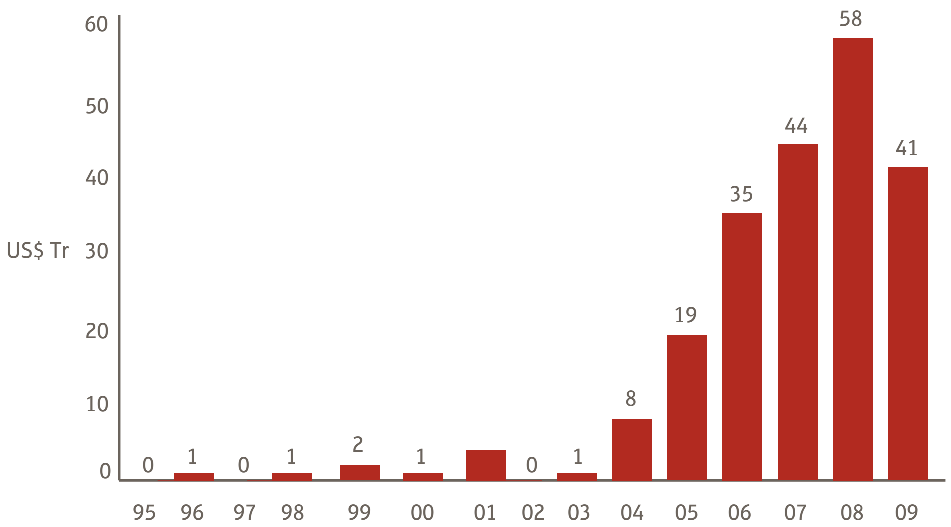
is set to condition their investments and operations for the foreseeable future. So far, investment rules especially in recipient countries in America and Europe provide open and calculable investment for state investment vehicles. On the part of the SWFs, joint principles for transparency and governance, in turn, have improved the chances for greater acceptability in recipient economies.

Chart 2: SWF investment volumes over time[29]



Note: Completed equity investment transactions by state-sponsored investment vehicles, total annual volumes.
Source: DB Research; Dealogic

These are positive developments, but it would be premature to lay these regulatory issues to rest. For one thing there are notable exceptions, where foreign investments are—often drastically—limited by law in recipient countries. Promoting free capital flows in these economies remains an important objective of market participants. In addition, the current situation represents a delicate equilibrium for which SWFs and recipient countries have compromised by, on the one hand, offering greater transparency and calculability, and, on the other hand, maintaining open investment conditions. This benign political en-

29 Editor's Note: Dr Kern is using different data from that of our own analysis. Consequently, his estimation of the size of SWF investment volumes are different from ours.

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vironment may change again, however. It remains one of the key concerns that policymakers could take recourse to restricting capital flows in the post-crisis environment. Adherence to the self-regulatory standards set by SWFs and recipient economies alike, and their consistent application, are important conditions for this equilibrium to hold.

Finally, the role of SWFs as political actors is evolving. Their economic weight is set to grow further as assets (Figure 1) and equity investments (Figure 2) can be expected to accumulate. This growth by itself is only a reflection of the growing economic and political weight of their parent governments and, in a number of prominent cases, the shift of influence from the traditional industrialized economies to the emerging markets. The recent Baku Statement[30] of the IFSWF, calling on recipient countries to make "their investment regimes more transparent and non-discriminatory, avoid protectionism, and foster a constructive and mutually beneficial investment environment," is symbolic of the more assertive position that the funds are taking.

If SWFs can be regarded as harbingers of the growing international involvement of emerging markets in global economics and finance, their case illustrates that an intensification of the dialogue increases the chances of achieving mutually acceptable policy outcomes. Ultimately, there will be a need for stronger participation of the emerging markets in international economic and financial policymaking and diplomacy. Their participation will be an important element for reaching joint rules in globalised capital markets.

References

Das, Udaibir S., et al., *Setting up a Sovereign Wealth Fund: Some Policy and Operational Considerations*, IMF Working Paper, WP/09/179, August 2009.

Fidora, Michael, et al., *The impact of sovereign wealth funds on global financial markets*, European Central Bank, Occasional Paper Series, No. 91, July 2008.

30 IFSWF, September 10, 2009.

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Hammer, Cornelia, et al., *Sovereign Wealth Funds: Current Institutional and Operational Practices*, IMF Working Paper, WP/08/254, November 2008.

International Forum of Sovereign Wealth Funds, Sovereign Wealth Funds Issue *"Baku Statement" Reaffirming the Need for Maintaining Open Investment Environment*, IFSWF, September 10, 2009.

International Working Group of *Sovereign Wealth Funds, Sovereign Wealth Funds — Current Institutional and Operational Practices*, September 2008.

International Working Group of *Sovereign Wealth Funds, Sovereign Wealth Funds — Generally Accepted Principles and Practices*, Washington, October 11, 2008.

Jackson, James K., *Foreign Investment and National Security: Economic Considerations*, CRS Report for Congress, Congressional Research Service, Washington, March 15, 2006.

Kern, Steffen, *Sovereign wealth funds — state investments during the financial crisis*, Deutsche Bank Research, July 2009.

Kern, Steffen, *Sovereign wealth funds — state investments on the rise*, Deutsche Bank Research, Current Issues, September 2007.

Kern, Steffen, *SWFs and foreign investment policies — an update*, Deutsche Bank Research, Current Issues, October 2008.

Monk, Ashby H. B., *Recasting the sovereign wealth fund debate: Organisational legitimacy, institutional governance and geopolitics*, mimeo, Centre for Employment, Work and Finance, Oxford University Centre for the Environment, May 2008.

OECD, *Declaration and Decisions on International Investment and Multinational Enterprises*, Paris, 2009 up-date.

© MONITOR COMPANY GROUP, L.P. AND FEEM 2010

OECD, *Freedom of Investment Process — Inventory of Investment Measures taken between 15 November 2008 and 31 August 2009*, Paris, October 7, 2009.

OECD, Freedom of Investment, National Security and 'Strategic' Industries, Progress Report by the OECD Investment Committee, Paris, March 26, 2008.

OECD, OECD declaration on sovereign wealth funds and recipient country policies, Paris, 2008.

Truman, Edwin M., *The rise of sovereign wealth funds: Impact on US Foreign Policy and Economic Interests*, Testimony before the Committee on Foreign Affairs, US House of Representatives, Washington, May 21, 2008.

United States Government Accountability Office, *Foreign investment*, Report to the Honourable Richard Shelby, Ranking Member, Committee on Banking, Housing, and Urban Affairs, US Senate, Report GAO-08-320, February 2008.

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The Asset Allocation of Sovereign Wealth Funds

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Since sovereign wealth funds (SWFs) came to international attention in 2006 analysts have tried to understand where and how they invest and the motivation for their investment strategies. Hostile attitudes to state-sponsored investment had been sparked in popular debate by the efforts of China National Offshore Oil Corporation to buy Unocal, a Californian oil company in June 2005, and more explosively, by the Dubai Ports World controversy in March 2006. However, between November 2007 and January 2008, SWFs invested about $45 billion to prop up faltering American and European banks, prompting both the European Union and the United States to seek assurances from SWFs that their investment decisions in Europe and the U.S. would be based solely on commercial grounds and that they would improve disclosure.[31]

A number of developments have improved the funds' image within the world economy since the global financial crisis began. In October 2008, 23 SWFs from around the world signed the "Santiago Principles," a voluntary code of conduct, and subsequently the signatories formed the International Forum of SWFs to facilitate an understanding of the Santiago Principles and SWF activities.[32] Several SWFs have indeed improved transparency, with several publishing annual reports and others disclosing their assets under management. Perhaps more importantly, SWFs continued to invest globally, despite the financial crisis, rescuing Western finance and oiling the wheels of the global economy. For all the imagined fears of SWFs abusing their power, no examples came to light. Conversely, SWFs were relatively passive investors, rarely taking majority stakes or a seat on the board. However, they have not been immune from the effects of the recession. Most SWF portfolios lost between 15 and 30 percent in the wake of the Lehman Brothers collapse, and this was reflected in their invest-

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31 William Schomberg and David Lawsky, 'EU to consider sovereign wealth fund voluntary code', Reuters, 23 February 2008; 'Treasury Reaches Agreement on Principles for Sovereign Wealth Fund Investment with Singapore and Abu Dhabi', Press Release, US Treasury, 20 March 2008, http://www.treas.gov/press/releases/hp881.htm.

32 See the International Forum of SWFs webpage for more details: http://www.ifswf.org/members-info.htm.

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ment activity. Monitor and FEEM's research reveals that at the end of 2008, SWFs had to attend to their own faltering economies, while early 2009 saw a collapse in SWF investment activity, although it picked up in the second half.

This article describes the investment strategies and allocations of the SWFs tracked by the Monitor-FEEM SWF Transaction Database, where possible. The first part briefly outlines the axes of SWF investment. The center-piece is a table describing the fund names, countries, foundation dates, their most recent total assets under management, their most recently stated (where possible) current asset allocations, and geographic distribution. This is accompanied by a commentary highlighting the most important takeaways from the data presented.

The Axes of SWF investment

SWFs invest to increase the long-term value of national reserves. Our research has identified three factors that influence a sovereign fund's investment strategy: their source of funds; their objectives and mandate; and their style of investment. We discuss each of these in turn below.

1. Source of Funds

SWFs have one of three primary sources of revenue: surpluses from the sale of natural resources or commodities, most commonly hydrocarbons; government proceeds from trade surpluses; and state holdings in government-linked companies (GLCs). Whether this surplus is renewable (trade or holdings in GLCs) or non-renewable (commodities) has a fundamental impact on the objectives and mandate of a SWF.

2. Objectives and Mandate

The SWFs tracked by the Monitor-FEEM SWF Transaction Database have been formed for one or more of three purposes. First, and primarily in the case of commodity funds, is *intergenerational savings*. Where governments receive large incomes from a finite resource, they often choose to

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invest it to provide for future generations at a time when their income stream has dried up.

The second purpose for a SWF is to *diversify national reserves*. As surpluses build up, they create inflationary and exchange rate pressures, which may have major implications for economic development in emerging economies. Diversifying national reserves not only reduces reliance on major currencies and their economies, but gives superior long-term returns than traditional low-risk liquid assets such as cash and government bonds for funds that have no immediate liabilities, such as pension funds or stabilization funds.

SWF investment is influenced by three factors: source of funds; objectives and mandate; and style of investment.

The third purpose for a SWF—*economic development*—has traditionally been confined to those formed from GLC portfolios. Temasek Holdings from Singapore and Khazanah Nasional from Malaysia have long been involved in investing in their domestic economies, but increasingly other countries are looking to achieve this aim. The funds from Abu Dhabi are the most obvious example of this trend, but increasingly more traditional funds have apparently been looking to invest abroad to achieve economic diversification at home.

3. Style of investment

Traditionally, SWFs have invested in a similar manner to a university *endowment*, with diversified, relatively low-risk portfolios consisting of passive investments. Many funds still follow this example, but many of the funds formed after 2000 have taken their queue from *private equity* funds and have taken a higher-risk approach to investing sovereign wealth, with the majority of their assets in equities and real estate, with few, if any, liquid assets. A third class of SWFs are active investors, seeking to further *economic development* in their economies through their investments. These are characterized by undertaking joint ventures with foreign companies to bring expertise and capital (both financial and human) investment into

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their own economy or taking large or controlling stakes, particularly in regional or domestic companies that they feel have a significant development benefit to their countries.

SWF Asset Allocation

The table appending this article presents a range of information concerning the investment strategies of the SWFs in the Monitor-FEEM SWF Transaction Database. The information presented shows that despite an apparent drive for SWFs to become more transparent, few funds provide any substantial level of financial reporting. Only 11 of the 33 funds that conform to the Monitor-FEEM definition of a SWF[33] publish any form of asset allocation breakdown, another seven report an accurate value of their assets under management on their websites: about half the funds on our list. The Abu Dhabi Investment Authority (ADIA) and Kuwait Investment Authority (KIA) have given ball-park asset allocations in interviews, but both these were before the financial crisis. We also have access to data from Istithmar World from an ongoing collaborative arrangement. Of those that do publish some form of asset allocation, it is difficult to compare the data. Each fund presents its asset allocation as suits the type of assets it holds and its investment style, so any analysis can be as problematic as comparing apples and oranges.

It is difficult to compare asset allocation data published by SWFs, as each fund presents the information as suits the type of assets it holds and its investment style.

That said, those that do report include some of the largest and most high-profile SWFs (Norway, China, and Singapore's Temasek) and account for about half the $2.4 trillion represented in this table. On the whole, however, funds from the Middle East and North Africa (MENA) are less inclined toward transparency than others. The big players from the region — ADIA, KIA, the Qatar Investment Authority and Libyan Investment Authority — do not disclose any information about their portfolios. Of the 14 MENA funds only two — the Mubadala Development Company and the Mumtalakat Holding Company — publicly report their financials, presenting full accounts.

33 See "Monitor-FEEM SWF Definition," p. 6.

For "endowment" style funds for which we have asset allocations from before the financial crisis (Norway, China, Government of Singapore Investment Corporation (GIC), the Australian Future Fund and Korea), the most notable trend is their low risk profile. These funds hold from about 30 percent (China and GIC) in bonds, cash and other liquid assets to as much as 60 percent for Australia and Korea. The exceptions to these rules are two new funds on our list, the Irish National Pension Reserve Fund (NPRF) and the New Zealand Superannuation Fund, which both have higher risk portfolios with only 13.4 percent and 17 percent in liquid assets respectively. Real estate, which garnered so much attention as a SWF target investment, is also an unusual investment, with only GIC having a notable investment in this asset class.

Their portfolios are also dominated by developed markets — GIC has 80 percent of its investments in the United States, Europe, Japan and Australasia, as does the NPRF. Norway's reporting is unclear, but suggests that over 60 percent of its investments are in the developed world. Although the Future Fund's portfolio is mostly liquid assets, 30 percent of the portfolio is in Australian and developed markets equity.

Comparing these to the reported asset allocations we have for ADIA and KIA from before mid-2008 reveals a striking contrast. The two big Gulf funds then had only about 20 percent of their portfolios in liquid assets, and each fund was growing its emerging market portfolio.[34] In interviews, both ADIA and KIA suggested that in 2007 and 2008 they were expanding their allocation to emerging-market equity, a trend that they have both decided to continue as developing economies have emerged from the recession more quickly than the rich world.[35]

Moreover, both funds were also diversifying their portfolios into alternatives such as private equity funds, hedge funds, real estate and infrastructure. Interestingly, in the post-crisis allocations these classes of investment continue to

34 ADIA has not changed its asset allocation during the financial crisis, as it uses "active beta" — using research and analysis to develop a 10-15 year market vision — to position the fund appropriately to take advantage of the identified structural trends. Michael Backfisch, „Deutschland verfügt über Weltklasse-Unternehmen," *Handlesblatt*, January 11, 2010.

35 Henny Sender, "How a Gulf Petro-State Invests Its Oil Riches," *Wall Street Journal*, 24 August 2007; Emily Thornton and Stanley Reed, "Inside the Abu Dhabi Investment Authority," *BusinessWeek*, June 6, 2008; Michael Backfisch, „Deutschland verfügt über Weltklasse-Unternehmen," *Handlesblatt*, January 11, 2010, "Kuwait's KIA eyes emerging markets in 2010," Reuters, 31 January 2010.

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be important components — GIC for example has 11 percent in private equity, venture capital and infrastructure, while Korea has 16.7 percent of its portfolio in asset-backed securities. Additionally, since the publication of its 2008 annual report, China has been notable for its investments in hedge funds. These asset allocations suggest that these funds have increased their proportions of liquid assets, but not at the expense of alternative assets. Indeed, GIC's annual report reveals that it increased its allocation to alternatives in 2008-09 from 23 percent to 30 percent.

For other types of funds, particularly those structured for economic development and those created from GLCs — Mubadala, Mumtalakat, Temasek, Khazanah, the Investment Corporation of Dubai and Vietnam's fund — accounting is more complex as they tend to be structured as conglomerates. The reporting is thus less extensive. In the case of Mubadala, despite extensive disclosure a coherent understanding is hindered by the complex underlying arrangements, and because the company is a combination of diverse. However, the balance sheet reveals that at end-2008 Mubadala held about $300 million in real estate (although this does not include the value of land that they are given by the Abu Dhabi government, which is recognized at nil value in the accounts); $820 million in cash, primarily for covering operating costs; and $2.3 billion in equities, which are quoted at "fair value" rather than at market value. There are some assets described as "bonds" but these consist almost entirely of the debt component of a convertible bond — part of a derivative forward contract to acquire shares, with the remainder being loans to JVs. The net of everything else relates to the assets and liabilities of the group's subsidiary companies and investments in shares in other companies (in both cases held at historic cost rather than fair value).

Mumtalakat's reporting is more superficial, with the most recent figures available being those for 2007. This balance sheet reveals that at the end of December 2007, the company held $340 million in real estate, $42 million in cash and $1.3 million in equities.

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Of these funds, Temasek is the only other to produce an annual report. Their figures suggest that they have reduced their large bloc holdings (primarily in domestic companies) considerably from 52 percent in 2007 to 38 percent in 2009. This is reflected in their geographical spread: their exposure to Singapore and South East Asia has reduced, while their exposure to China and the OECD has increased since 2007 from 24 percent to 27 percent, and 20 percent to 22 percent, respectively. This suggests that Temasek is looking to diversify its holdings, and take advantage of the growth of the Chinese economy and the security of the OECD to strengthen their portfolio.[36] Similarly, although Mubadala primarily holds assets in the U.A.E. and Qatar, a quarter of its portfolio is held in other countries, which are primarily in the OECD, suggesting that the security of developed economies remains attractive to SWFs.

Temasek has reduced its exposure to domestic companies, while increasing investment in China and the OECD.

Conclusion

Despite improving transparency, public reporting of SWF accounts is still not the norm. How asset allocations are reported is also diverse, making it very difficult to compare different funds. Moreover, more disclosure, such as that by Mubadala, does not necessarily mean more transparency, as full accounts can be complex. That said, most major SWFs (with the exception of MENA funds), whose assets account for over half of those in the table below, produce some form of public accounts or annual report. The published asset allocations suggest that SWF portfolios are relatively low-risk and have become more so since 2008, which is unsurprising given the losses many funds sustained in late 2008 and early 2009. What is perhaps more surprising is that the use of alternative assets, such as private equity and hedge funds, appears to be increasingly widespread as SWFs look to diversify their portfolios and hedge against risk. The conclusion that can be drawn is that SWFs are integrated into the global economy and are seeking increasingly sophisticated strategies to preserve and increase the value of their portfolios and the impact of their investments.

36 Temasek Review 2008; Temasek Review 2009.

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Descriptive Data and Investment Strategies of the 33 SWFs in the Monitor-FEEM SWF Transaction Database

COUNTRY	FUND NAME	TOTAL ASSETS US$BN	LAUNCH YEAR	SOURCE OF FUNDS	ASSET CLASSES	GEOGRAPHIES
Norway	Government Pension Fund – Global[1]	464.7	1990	Commodity (Oil)	Equities and units (62.6%); Bonds and other fixed income (37.4%)	Europe (52%); Americas, Middle East & Africa (36.5%); Asia/Oceania (11.5%)
UAE/ Abu Dhabi	Abu Dhabi Investment Authority[2]	395	1976	Commodity (Oil)	Developed Market Stocks (45-55%); Small-Cap Stocks (12-18%); Corporate & Other Bonds (5-10%); Alternative Investments (5-10%); Government Bonds (4-8%); Real Estate (2-8%); Emerging Markets Stocks (1-4%); Private Equity (0-4%)	United States (35-50%); Europe (25-35%); Asia (10-20%); Emerging Markets (15-25%)
China	China Investment Corporation[3]	297.5	2007	Trade Surplus	Long-term equity investments (57.5%); Cash and bank deposits (16.5%); Money market funds (11.4%); Held-to-maturity investments (5.1%); Short-term notes (4.7%); Other assets (4.6%)	Domestic (≥50%); Global (≥50%)
Kuwait	Kuwait Investment Authority[4]	295	1953	Commodity (Oil)	Equities (55-65%); Bonds (8-12%); Real Estate (8-12%); Alternative Investments (3-7%); Cash (3-7%)	United States & Europe [equal shares] (76-86%); Asia & Japan (13-17%); Emerging Markets (4-6%)
Singapore	Government of Singapore Investment Corporation[5]	179	1981	Trade Surplus	Developed Market equities (28%); Nominal Bonds (19%); Real Estate (12%); Private Equity, VC & Infrastructure (11%); Developing market equity (10%); Cash (8%); Inflation-Linked Bonds (5%); Natural Resources (4%); Absolute Return Strategies (3%);	United States (38%); Other North & South America (7%); United Kingdom (6%); France (5%); Germany (4%); Other Europe (14%); Japan (11%); China, Hong Kong, S. Korea & Taiwan (10%); Other Asia (3%); Australasia (2%)

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COUNTRY	FUND NAME	TOTAL ASSETS US$BN	LAUNCH YEAR	SOURCE OF FUNDS	ASSET CLASSES	GEOGRAPHIES
China	National Social Security Fund[6]	130	2000	Trade Surplus	No information disclosed	China (93.3%); Other Markets (6.7%)
Singapore	Temasek Holdings[7]	86	1974	Government-Linked Companies	Unlisted Assets (28%); Listed Large bloc shares [≥20%] (38%); Other listed and liquid assets (34%)	Domestic (31%); North Asia (27%); ASEAN [Excl. Singapore] (9%); South Asia (7%); OECD (22%); Latin America & Others (4%)
Qatar	Qatar Investment Authority[8]	70	2005	Commodity (Oil & Gas)	No information disclosed	No information disclosed
Libya	Libyan Investment Authority[9]	64	2006	Commodity (Oil)	No information disclosed	No information disclosed
Australia	Australian Future Fund[10]	61.99	2006	Commodity (Various)	Cash (36.5%); Debt securities (20.5%); Telstra holding (11.3%); Developed markets equity (11.9%); Australian equities (7.4%); Developing markets equity (2.8%); Private equity (2.0%); Property (1.2%); Infrastructure (1.9%); Alternative assets (4.4%);	No information disclosed
Russia	National Wealth Fund[11]	33.99	2008	Commodity (Oil)	No information disclosed	No information disclosed
Ireland	National Pension Reserve Fund[12]	33.13	2001	Non-Commodity	Large Cap Equity (41.4%); Small Cap Equity (3.4%); Emerging Markets Equity (3.4%); Private Equity (2.4%); Real Estate (2.0%); Commodities (0.4%); Bonds (5.8%); Currency and Asset Allocation Funds (0.8%); Cash (6.8%)	Europe (~55%); North America (~25%); Asia (incl. Japan) (~5%) Other (~15%)
Brunei	Brunei Investment Agency	30	1983	Commodity (Oil)	No information disclosed	No information disclosed

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COUNTRY	FUND NAME	TOTAL ASSETS US$BN	LAUNCH YEAR	SOURCE OF FUNDS	ASSET CLASSES	GEOGRAPHIES
Kazakh-stan	Kazakhstan National Fund[13]	26.5	2000	Commodity (Oil)	No information disclosed	No information disclosed
Malaysia	Khazanah Nasional Berhard[14]	25	1993	Government-Linked Companies	No information disclosed	No information disclosed
UAE/ Abu Dhabi	Mubadala Development Company PJSC[15]	24.09	2002	Commodity (Oil)	Insufficient information disclosed	UAE[17] (33%); Qatar (41%); Others (26%)
New Zealand	New Zealand Superannua-tion Fund[16]	21.2	2001	Non-Commodity	Total Equity (48.0%): Global Large Cap (32.0%); Global Small Cap (5.5%); Emerging Market (3.0%); New Zealand (7.5%) Real Estate (10.0%) Total Private Markets (20.0-26.0%): Private Equity (5.0-5.5%); Infrastructure (5.0-5.75%); Other Private Markets (5.0-5.5%); Timber (5.0-5.5%) Commodities: (5.0%) Fixed Interest: (17.0%)	No information disclosed
UAE/ Dubai	Investment Corporation of Dubai[17]	19.6	2006	Government-Linked Companies	Transportation companies (~40%); Financial companies (~20%); Industrial Com-panies(~20%); Real Estate Companies (~15%); Others (~5%)	Dubai (100%)
Republic of Korea	Korea Investment Corporation[18]	17.8	2005	Trade Surplus	Government Bonds (34.1%); Stocks (28.3%); ABS (16.7%); Corporate Bonds (12.9%); Agency Bonds (7.4%); Cash & derivatives (3.4%)	No information disclosed
Azerbai-jan	State Oil Fund of Azerbaijan (SOFAZ)[19]	16.2	1999	Commodity (Oil)	No information disclosed	No information disclosed

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COUNTRY	FUND NAME	TOTAL ASSETS US$BN	LAUNCH YEAR	SOURCE OF FUNDS	ASSET CLASSES	GEOGRAPHIES
UAE/ Abu Dhabi	International Petroleum Investment Company[20]	14	1984	Commodity (Oil)	Insufficient information disclosed	No information disclosed
Bahrain	Mumtalakat Holding Company [21]	12.95	2006	Government-Linked Companies	Insufficient information disclosed	No information disclosed
UAE/ Dubai	Istithmar World	11.6	2003	Government-Linked Companies	Real Estate (60%); Equity & Venture Capital (40%)	North America (40%); Europe (20%); Middle East (25%); Asia Pacific (5%); Sub-Saharan Africa (5%); Latin America (5%)
Oman	State General Reserve Fund[22]	8.2	1980	Commodity (Oil & Gas)	No information disclosed	No information disclosed
East Timor	Timor-Leste Petroleum Fund[23]	5.3	2005	Commodity (Oil & Gas)	Cash and Cash Equivalents (0.1%); Fixed Interest Investments (98.6%); Accrued Interest (1.3%)	No information disclosed
UAE/ Ras Al Khaimah	Ras Al Khaimah (RAK) Investment Authority	1.2	2005	Commodity (Oil)	No information disclosed	No information disclosed
Vietnam	State Capital Investment Corporation[24]	0.473	2005	Trade Surplus	Strategic Investments (17.3%); Flexible Investment (56.2%); Divestments (holdings in privatized companies) (25.5%)	Vietnam (100%)
Kiribati	Revenue Equalization Reserve Fund[25]	0.391	1956	Commodity (Phosphates)	No information disclosed	No information disclosed
São Tomé & Príncipe	National Oil Account[26]	0.009	2004	Commodity (Oil)	Insufficient information disclosed	No information disclosed
Oman	Oman Investment Fund	N/A	2006	Commodity (Oil & Gas)	No information disclosed	No information disclosed

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COUNTRY	FUND NAME	TOTAL ASSETS US$BN	LAUNCH YEAR	SOURCE OF FUNDS	ASSET CLASSES	GEOGRAPHIES
UAE	Emirates Investment Authority	N/A	2007	Commodity (Oil)	No information disclosed	No information disclosed
UAE/ Dubai	DIFC Investments (Company) LLC	N/A	2004	Government-Linked Companies	No information disclosed	No information disclosed
UAE/ Abu Dhabi	Abu Dhabi Investment Council	N/A	2007	Commodity (Oil)	No information disclosed	No information disclosed
TOTAL Oil & Gas		$1,448.2				
TOTAL Other		$896.7				
GRAND TOTAL		$2,344.9				

1 AUM as of 31 March 2010, *Government Pension Fund Global First Quarter 2010*

2 AUM as of September 2009. Estimate by International Institute of Finance, GCC Regional Overview, September 28, 2009; asset allocation as of June 2008. Emily Thornton and Stanley Reed, "Inside the Abu Dhabi Investment Authority," http://www.businessweek.com/globalbiz/content/jun2008/gb2008065_742165.htm?campaign_id=rss_daily BusinessWeek, June 6, 2008; geographical allocation, Michael Backfisch, „Deutschland verfügt über Weltklasse-Unternehmen," Handlesblatt, January 11, 2010.

3 AUM as of 31 December 2008. CIC Annual Report.

4 AUM as of September 2009. Estimate by Institute of International Finance, GCC Regional Overview, September 28, 2009; "Kuwait wealth fund invests most in US, Europe-paper," Reuters, April 21, 2008

5 AUM as of June 2009. Estimate by Rachel Ziemba and Brad Setser, "How Much Do the Major Sovereign Wealth Funds Manage?," RGE Economonitor, August 3 2009; asset allocation as of 31 March 2009, GIC Annual Report.

6 AUM as of 11 April 2010, "Social security fund to expand to $300B in 2015," Xinhua News Agency, http://www.chinadaily.com.cn/china/2010bfa/2010-04/11/content_9712947.htm; Asset allocation end 2009, Jamil Anderlini, "Chinese fund eyes expansion in west," *Financial Times*, 30 March 2010

7 AUM as of 31 March 2009. Temasek Review 2009.

8 AUM as of June 2009. Estimate by Institute of International Finance.

9 AUM as of 31 December 2009. "$64 billion assets of the Libyan Investment Authority", Oya, 19 January 2010, (Arabic) http://www.oealibya.com/front-page/economy/13892-64.

10 AUM as of 31 March 2010; Asset Allocation 30 June 2009, Future Fund Portfolio update at 30 June 2009.

11 AUM as of 26 January 2010, http://www1.minfin.ru/en/nationalwealthfund/statistics/balances/2009/index.php?id4=7067.

12 AUM as of 31 March 2010; Asset allocation as of 30 September 2009 http://www.nprf.ie/Performance/performance3Qtr09.htm. Geographies calculated from NPRF Annual Report 2008

13 AUM as 1 September 2009 http://www.nationalfund.kz/index.php?uin=1231731724&chapter=1252038864&lang=eng.

14 AUM as of 30 June, 2009.

15 AUM as of 31 December 2009 Mubadala Development Company PJSC, Annual Report 2009.

16 AUM as of 30 June 2009, New Zealand Superannuation Fund Annual Report 2009; Asset Allocation as laid out in "Strategic Asset Allocation," http://www.nzsuperfund.co.nz/index.asp%3FPageID%3D2145876522

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17 AUM as of 27 October 2009, CL Jose, "ICD portfolios value rises to Dh72bn," Emirates Business 24/7, November 5, 2009. ICD asset allocation calculated from publicly reported holdings and valuations.

18 AUM as of 31 December 2008. KIC Annual Report.

19 AUM as of April 1, 2010 http://www.oilfund.az/en/account/84

20 Taken from fund website, http://www.ipic.ae.

21 AUM as of 31 December 2008, Financial Results for the 12 months to 31 December 2008, http://www.bmhc.bh/investor/pdf/finance-ad-eng-2008.pdf

22 AUM as of September 2009. Estimate Institute of International Finance.

23 AUM as of 30 September 2009, Petroleum Fund of Timor-Leste Quarterly Report, September 2009, http://www.bancocentral.tl/Download/Publications/Quarterly_report17_en.pdf

24 AUM as of 30 June 2009, Portfolio Overview: http://www.scic.vn/english/index.php?option=com_content&view=category&layout=blog&id=16%3Adanhmuc-dautu&Itemid=8

25 AUM as of 31 December 2008, Financial Results for the 12 months to 31 December 2008, http://www.bmhc.bh/investor/pdf/finance-ad-eng-2008.pdf

26 AUM is IMF Estimate for 2009, "IMF Executive Board Approves US$3.8 Million PRGF Arrangement for São Tomé and Príncipe", 3 March 2009.

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Sovereign Partnerships: Wave of the Future?

Rachel Ziemba, Senior Research Analyst, Roubini Global Economics

One evolving trend among sovereign investors is the quest for joint ventures with target companies as well as other sovereign funds at home and abroad. These investments, which might include providing capital for joint developments overseas or in the sponsor country, have been increasing in recent years as sovereign funds seek out higher financial returns and sponsor governments hope to further domestic economic development and use their foreign investments to move up the value chain in key sectors of interest. Sovereign funds in the GCC and Asia have been most prevalent in this area.

> It is striking that these partnerships are being conducted not only with corporate investment targets, but also at a time when coordination with other domestic government-owned investors is on the rise.

It is striking that these partnerships are being conducted not only with corporate investment targets, but also at a time when coordination with other domestic government-owned investors, and even with the sovereign investors of other countries, is also on the rise. While it is too soon to say whether this trend will develop further, it bears watching as sovereign investors try to learn from each other and foreign recipients (governments and companies) and assess the added value of investment from foreign sovereign investment. The more concentrated stakes and joint ventures pose additional challenges to regulators, given that many are likely to include technology transfer opportunities and the desire from sponsoring governments to develop their home economies.

In short, even though many sovereign funds, particularly the mostly passive investors, still shun domestic investment, a new class of funds has emerged that targets domestically focused foreign investments, whereby investments are made in global companies, often blue-chip or regionally dominant companies in sectors which the SWFs sponsor government would like to attract to domestic markets.

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While the trend of taking concentrated stakes is not new, and state holding companies with investments both at home and abroad have been active for some time (Singapore's Temasek is a key model), the number of entrants has been growing of late and many countries either have a designated direct investor (Abu Dhabi has several) or appear to have allocated a section for direct investment within their existing funds (Qatar).

Several factors can explain the increasing attraction of joint ventures, including the build-up of savings to levels greater than those needed for liquidity and budget support purposes, the desire for greater returns, aims to develop domestic economies and to diversify within and from hydrocarbons, as well as the domestic pressure to invest more at home. Earlier in the 2000s, many sovereign funds moved heavily into alternative investment funds, entrusting funds to asset managers and in many cases co-investing along side them, in some cases scaled up with leverage. The leveraging of these projects was consistent with industry standards, but implies that sovereign funds have also faced higher borrowing costs in some cases. Taking more concentrated stakes also provided the chance to take advantage of better valuations in private markets, especially in some emerging and frontier markets where investment options in public markets are more restricted. But it also reflects a desire for better financial returns (by working with target companies to improve corporate governance) as well as to increase market share, provide the means to deepen the supply chain and move to higher-value-added products.

The desire for joint ventures became more significant in 2009, when oil-based funds received less new capital. Funds with a domestic focus received a larger share of a smaller pie as oil production and output fell from its 2008 heights. For oil-fuelled funds, the reduction in oil production and price reduced surpluses, meaning that investment consistent with economic development and diversification goals became more attractive. In 2008-09, many funds were called on to invest at home, in some cases on a temporary basis, to support economies badly hit by the financial crisis. However, the pressure to invest domestically, and the growing domestic absorptive capacity in some oil exporting economies suggests that this trend could continue for some time.

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While sovereign funds still comprise a relatively small amount of market turnover on both a stock and flow basis, their effect on a few sectors, including the energy, and automotive/aerospace sectors, has been more significant. With the European industrial base in need of capital, sovereign investment from the GCC and beyond could be more attractive to European companies, particularly if these funds provide finance and open new markets. It is worth noting the testing grounds of Abu Dhabi and China. Both have a wide range of government-owned investment vehicles investing abroad for both financial returns and market strategy. These investors are guided by general guidelines for foreign investment issued by governments, including a go global mandate for Chinese overseas resource purchases.

Sovereign investors, especially sovereign development companies, are seeking not only financial returns but also commercial spillovers and the opportunity to bring operations back to their domestic markets. The desire for reciprocal investment and training is not new. Singapore, for one, used seed capital from GIC and the central provident funds to lure foreign asset managers, along with the deregulation of capital markets and tax incentives. Training for local investors has long been written into contracts, but recently the sectors of operation have increased.

The market correction of 2008 gave a variety of lessons to sovereign funds. In some cases, sovereign investors have recognized the need to take on more direct management of their concentrated stakes, lest their joint venture partners be the only ones to make investment decisions. Abdicating voting rights might limit both the ability to influence corporate governance in ways that would protect the assets. Moreover, eschewing voting rights has not necessarily helped in dealing with regulatory issues. As a result, we have seen several funds like the Qatar Investment Authority becoming more willing to take on voting shares, as they did with Porsche. In other cases, the wariness of private capital has made it easier for sovereign funds, as well as other large institutional investors like pension funds, to push for lower fees and better services.

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For most countries with surpluses to invest, particularly those in the GCC, this push towards more concentrated stakes and partnerships entailed the creation of new investment vehicles or the repurposing of old investment vehicles, including the spinoffs from national oil companies or other state-owned enterprises, as these institutions sought to expand into new markets. In other cases, such as Abu Dhabi, the government seems to have seeded different institutions and encouraged them to make investments that would make financial returns as well as increasing the market share of Abu Dhabi Inc. For example, Abu Dhabi's International Petroleum Investment Company (IPIC), which invests primarily in hydrocarbon and petrochemical assets abroad, has a majority stake in publicly traded Aabar, which invests in a range of sectors mostly outside of Abu Dhabi. Several of Aabar's purchases have a partnership element, including a planned engineering joint venture with German company Daimler. Government-owned Mubadala's partnership with GE capital also plans a joint training center. Such moves are in line with Abu Dhabi's 2030 plan which targets development in these sectors and human capital in general.

For most countries, the push towards more concentrated stakes and partnerships entailed the creation of new investment vehicles.

Many of these direct investors are diversifying their source of capital. State holding companies or development countries are more likely than traditional portfolio funds to seek capital through international bond markets (Temasek, Mubadala and others have issued bonds), to be listed on domestic stock exchanges, as well as to access finance from the export development agencies of target countries. These moves with their more concentrated stakes imply that their portfolios are more open to observers.

Such domestic competition could make all actors better performers, as they seek out efficiencies; alternatively, it could drive up the prices for all involved, as Chinese officials have worried publicly concerning overseas oil acquisitions. Chinese sovereign investors including the China Investment Corporation and the China Development Bank have all boosted exposure to commodity producers, in line with commodity importing country's economic needs.

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Coordination with the sovereign investors of other countries has also picked up. SWFs have long co-invested in given funds or with common asset managers, partly because their investment goals and targets coincided. For example, several GCC funds concurrently took pre-IPO stakes in several Chinese banks. Attracting more capital could contribute to economies of scale. Similarly, funds like the Kuwait Investment Authority partnered with local governments in target nations to establish investment companies to invest in countries like Egypt, Algeria and Jordan. However, the economic returns of these investments are uncertain, and the size of investment was relatively small in aggregate.

However, from 2008 onward, there have been more public co-investments between funds. Some sovereign funds have directly sought out MOUs to explore joint investments with other sovereign investors. There are several reasons why this might be attractive; such coordination might provide a means to share political cover, gain access to good local investment opportunities and, in some cases, cut through red tape. However different investment targets, as well as varied mandated levels of transparency and disclosure could cause issues in these partnerships. It remains to be seen how many of these MOUs will develop into real investment opportunities.

In part, this coordination with sovereign investors could be an outgrowth of the International Working Group of sovereign funds that created the voluntary Santiago Principles. The group has also pooled information on risk management and increased coordination among funds, which has contributed to a reassessment of their investment strategies during 2009. Moreover, there has been some — if varied — increase in transparency following the release of the Santiago Principles. This transparency is highly correlated to democratic institutional depth in sponsor countries, but even some of the most media-shy funds are finding it in their interest to appear to disclose more information about their linkages with sponsor governments and with companies they own.

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The net result of these partnerships will be a topic to watch for years to come, but with greater pressure to bring both financial and economic returns and to create diversified hedged portfolios, joint ventures seem likely to continue. From the foreign regulatory perspective these developments point to the need for overarching regulatory frameworks to assess each investment on its merits.

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Appendix

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Monitor-FEEM SWF Transaction Database

The Monitor-FEEM SWF Transaction Database comprises all publicly reported M&A deals, joint ventures, real estate investments and capital injections undertaken by the 33 SWFs that conform to our definition (see above page 9). The data we publish only includes completed investments, but announced, rumored, and withdrawn deals are captured when available, but are not included in the aggregate statistics. In 2009, we started recording divestments, however, because we have only recently started to gather these, our data is not an accurate reflection of a fund's current holdings.

SWFs are discreet institutions, and much of their activity is private and unreported. Most estimates put the total funds controlled by SWFs as between $2 trillion and $3 trillion — the total assets under management for the 33 funds that conform to our definition is approximately $2.4 trillion. We can capture about 10 percent of their investments, which are publicly reported; while this is a relatively small percentage, we can only comment on what we see.

In some cases, this lack of transparency is due to investments in low-risk liquid assets, such as U.S. Treasury bonds, falling under the radar of our data collection. In other cases, a transaction is not visible because the SWF invests through third-party asset managers. While the total investment in a financial broker may be known, the individual equity purchases cannot be attributed to the SWF.

The Monitor-FEEM SWF Transaction Database contains 1,181 deals with a reported value of $371.9 billion between 1 January 1981 and 31 December 2009. Asia-Pacific-based funds comprise the majority of this data by number (65 percent) and value (55 percent). The leading SWFs in number of transactions are Temasek (comprising 36 percent of the database), GIC (16 percent), and Istithmar (10 percent). CIC has the largest publicly-reported expenditure

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of $69 billion, but has carried out only 26 deals. Following CIC, GIC has a reported value of $62 billion and Temasek has $61 billion. Among the MENA-based funds, QIA, Mubadala, and ADIA are the leading investors by number and value.

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

2. A financial database for target firm information: DataStream

3. Fund disclosures, including annual reports, press releases and other information contained on their websites

4. Target company press releases and other information contained on their websites

5. Information aggregators: LexisNexis and Factiva. Those include news reported by newswires (Dow Jones, Reuters, Business Wire, Associated Press and others) and numerous selected publications: *The Wall Street Journal, Financial Times, Newsweek, Forbes, Fortune, Time, The Economist, The New York Times, The Washington Post*

6. Other websites, including Zawya.com, Sovereign Wealth Fund Institute, Google Finance, Yahoo! Finance and others.

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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 have adopted a new industry classification scheme in our data analysis. While we previously employed five broad industry categories (Financials, Industrials, Energy and Utilities, Real Estate, Other), we now apply a more refined classification scheme based on 31 industrial sectors. Our new industry classification is based on the 30-sector classification developed by Prof. 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 Prof. French's website.[37] We implement one slight modification: while Prof. 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.

A mapping of the new industrial sectors onto the previously employed industrial groups is available in the following table:

37 http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/Data_Library/det_30_ind_port.html

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The New Industry Classification Scheme used in the Monitor-FEEM SWF Transaction Database

	NEW INDUSTRIAL SECTOR	PREVIOUS INDUSTRY GROUP
1	Food Products	Other
2	Beer & Liquor	Other
3	Tobacco Products	Other
4	Recreation	Other
5	Printing and Publishing	Other
6	Consumer Goods	Other
7	Apparel	Other
8	Healthcare, Medical Equipment, Pharmaceutical Products	Other
9	Chemicals	Industrials
10	Textiles	Industrials
11	Construction and Construction Materials	Industrials
12	Steel Works	Industrials
13	Fabricated Products and Machinery	Industrials
14	Electrical Equipment	Industrials
15	Automobiles and Trucks	Industrials
16	Aircrafts, Ships and Railroad Equipment	Industrials
17	Precious Metals, Non-Metallic, and Industrial Metal Mining	Other
18	Coal	Energy and Utility
19	Petroleum and Natural Gas	Energy and Utility
20	Utilities	Energy and Utility
21	Communication	Other
22	Personal and Business Services	Other
23	Business Equipment	Other
24	Business Supplies and Shipping Containers	Other
25	Transportation	Other
26	Wholesale	Other
27	Retail	Other
28	Restaurants, Hotels, Motels	Real Estate
29	Banking, Insurance, Trading	Financials
30	Real Estate	Real Estate
31	Other	Other

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TRACKING NORWAY'S SOVEREIGN WEALTH FUND

Since the Norwegian Government Pension Fund Global (GPFG) tends to acquire small stakes in listed companies through open market share purchases, its investments are rarsely reported by the press or included in the databases we currently use for data collection. The SWF's investments are, however, managed by Norges Bank Investment Management (NBIM), which files form 13F with the Security and Exchange Commission. Form 13F is a quarterly disclosure of holdings and related stakes, mandatory for all institutional managers with $100 million or more in assets under management investing in companies listed in the United States. We made use of this filing to construct a sample of GPFG transactions.

We access form 13F filings by NBIM through the Thomson Reuters Institutional Holdings database (previously known as CDA/Spectrum), on a quarterly basis, starting with the fourth quarter of 2006—the earliest NBIM filing available in the database—and ending with the fourth quarter of 2008—the latest filing available in the database at the time of writing. Form 13F only requires reporting of holdings in securities listed on United States-based exchanges; accordingly, we generate a list of GPFG investments in U.S.-listed companies by tracking changes in reported holdings. We restrict our analysis to holdings of at least $1 million. As is common in empirical corporate finance literature, we take the filing date—the day when NBIM files a Form 13F with the SEC, detailing its shareholdings in a listed firm—as the 'announcement date' for the transaction, since this is the date on which the stock ownership information is first disclosed. While the filing does not contain an exact date on which the investment is made, it does identify the end-day of the quarter during which the transaction took place. We use this end-date as our 'completion date' for the transaction.

We find 160 initial and 243 follow-on investments by NBIM from the fourth quarter of 2006 through the end of 2009. The cumulative value of those transactions is $4.76 billion, while the average value of the transactions is only $11.9 million. The average stake acquired is 0.33 percent, with the largest being 4.74 percent. In 384 transactions, the target firm is incorporated in the United States; in 13 transactions, the target firm is Canadian, while the remaining target firms are from Luxembourg (2 transactions), India (2 transactions), Bermuda (1 transaction) and China (1 transaction). No single industrial sector appears to dominate the sample: 54 transactions for

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a combined value of $554.47 million are in energy and related sectors, while 37 transactions worth $965.73 million are in the financial sector.

Similarly, we also obtained 66 partial divestments, with a combined value of $1.04 billion, but no full divestments are recorded in the sample.

Although this sample is an informative snapshot of the investments of a fund whose activity is difficult to track on a quarterly basis, the U.S.-centric nature of the sample means that we have not included it in our main database to avoid skewing the overall composition of the data. Rather we store this information separately, but use it to supplement our analysis.

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Ten Largest Deals of 2009

PARENT ENTITY NAME	NATIONAL AFFILIATION	TARGET	COUNTRY OF TARGET HQ	COMPLETED DATE	SIZE OF DEAL (US$ MM)	SIZE OF STAKE	SIZE OF STAKE OWNED AFTER TRANS-ACTION
Qatar Investment Authority (QIA)	Qatar	Qatar Railways Development Company	Qatar	23/11/2009	$13,260.00	51.00%	.
Qatar Investment Authority (QIA)	Qatar	Porsche Automobil Holding SE	Germany	02/09/2009	$9,983.40	10.00%	10.00%
Qatar Investment Authority (QIA)	Qatar	Volkswagen AG	Germany	19/12/2009	$4,654.40	10.10%	.
International Pe-troleum Investment Company (IPIC)	U.A.E./Abu Dhabi	Compania Espanola de Petroleos, S.A. (Cepsa)	Spain	30/07/2009	$4,371.70	37.50%	47.04%
International Pe-troleum Investment Company (IPIC)	U.A.E./Abu Dhabi	Daimler AG	Germany	26/03/2009	$2,663.84	9.09%	9.09%
Temasek Holdings	Singapore	China Construction Bank	China	12/05/2009	$2,433.33	0.50%	6.50%
International Pe-troleum Investment Company (IPIC)	U.A.E./Abu Dhabi	NOVA Chemicals Corporation	Canada	06/07/2009	$2,300.00	100.00%	100.00%
China Investment Corporation (CIC)	China	PT Bumi Resources Tbk	Indonesia	05/11/2009	$1,900.00	.	.
Qatar Investment Authority (QIA)	Qatar	Vinci SA	France	01/09/2009	$1,690.00	6.50%	.
China Investment Corporation (CIC)	China	Teck Resource Ltd	Canada	03/07/2009	$1,500.00	17.20%	17.20%

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

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Spotlight on New Research on Sovereign Wealth Funds, 2009

During 2009 and early 2010, attention to SWFs has continued to grow among scholars and informed observers. New empirical studies have emerged, and the number of topically-focused or single-country analyses has continued to increase. This report briefly summarizes the major SWF-related topics as discussed by the press, academics, politicians, institutions and other analysts. These include the SWFs' investment choices; the question of whether funds should make domestic or international investments; the impact of SWF investment on target firms and their performance; governance, transparency and geopolitical effects of SWF investment; and, finally, case studies of individual or regional funds. This section highlights the most important contributions over the past year which should help the reader understand the evolution of the debate on SWFs.

The first section below provides some general considerations and discusses investment patterns of SWFs. No consensus has yet been reached as to whether the category of SWFs should include pension funds, stabilization funds and risk-management funds or only funds whose main objective is generating commercial returns. Meanwhile, estimates of total assets under control of SWFs also vary greatly according to the accepted definition. Estimates of total assets under management range between $2 and almost $4 trillion; nevertheless, there is general agreement on the fact that SWFs are destined to grow in the future and that, despite the losses suffered, they will continue to invest abroad. Despite the ongoing discussion, SWF portfolio allocations, and their rationale, remain largely unclear. SWFs invest in virtually all countries in the developed world as well as in emerging economies, but differ significantly in their asset allocation and risk management strategies. Evidence gathered by Bernstein, Lerner and Schoar indicates that SWFs are mostly trend chasers; Kotter and Lel indicate that SWFs prefer large and poorly performing firms facing financial difficulties. Conversely, Chhaochharia and Laeven show that SWFs tend to invest in countries with common cultural traits.

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To understand why the cultural bias of SWF investment is particularly evident, we dedicate the second section to whether SWFs should invest at home. Changing trends in global imbalances will continue to shape SWF development and their investments, although in the near term alternative investment strategies predominate, and SWFs are paying greater attention to domestic and regional economic issues. Many empirical studies suggest that the importance of cultural affinity in stock picking decisions is more pronounced for SWFs than it is for other institutional investors.

From an international perspective, SWFs help stabilize global financial markets and from a domestic point of view coordinate macroeconomic policy. The latter probably remains the dominant driver of their own choices focusing on the stabilization the national balance sheet, the diversification of central bank reserves, smoothening inter-generational patterns of national revenue realizations, prevention of national socio-economic crisis and assistance of the government's overall development strategy, as shown by Chen and Xie (2009).

The third section — probably the most relevant for economists — examines the financial impact and wealth effects of SWF investments in recipient companies around the world. The major competing empirical studies can be broken into groups using two different approaches: those employing event study methodology to examine the short- and long-term valuation impacts of SWF investments, and those using other methodologies to assess the impact of SWF investments on invested firm value — such as examining evolutions in Tobin's Q or changes in accounting variables over time. Most of these studies show — with the exception of Fernandes (2009) — that SWF investments in publicly traded companies yield significantly positive announcement period abnormal returns, followed by negative long-run returns over one, two, and three-year holding periods. The most common conclusion is that SWFs do not create value for investee firms in the long term but, clearly, more research is needed to see whether SWF investment is or is not beneficial for target companies.

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A literature review related to SWFs must include a discussion of transparency and geopolitical issues. Although SWFs have been recognized as institutional investors like any others by markets and policymakers, they continue to be perceived as a growing threat to Western economic primacy and the national security of the recipient countries. Because SWFs are government-controlled, critics have always been concerned that their investment strategies may be politically motivated. On the other side, some SWF supporters argue that these funds are benign, long-term investors.

The issue of SWF transparency follows from this point. 2009 has seen further steps toward increased reporting and, in general, slightly greater transparency. A record number of annual reports by SWFs themselves have been issued with many first-time publishers. Yet, many of those reports have given little new information about asset allocation, size and accounting. It is likely that this move toward transparency is a response to the "Santiago Principles" (issued by the IMF's International Working Group of SWFs in October 2008) but self-regulation does not seem to be leading to transparency. That said, as Epstein and Rose (2009) point out, imposing any additional restrictions on investments by SWFs at the current time, would not be the best solution and a policy of watchful waiting is now preferable.

The fifth section consists of case studies of individual or regional funds. We describe only a few of these, but stress that this type of research is very informative, as the heterogeneous nature of SWFs makes such *ad-hoc* analysis necessary. As stated earlier, there is no a common definition of SWF, and there is also no universal performance model applicable to all types of SWFs. There are too many differences between them regarding constraints, economic and non-economic objectives, and varying degrees of transparency governance and risk management. Nonetheless, one key question needs to be asked and answered: how will SWFs adapt their investment strategies after the financial crisis? How will the SWFs manage the recovery?

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Selection of Literature Abstracts

Investment Choices

Kotter, J. and Lel, U., "Friends or Foes? Target Selection Decisions of Sovereign Wealth Funds and Their Consequences," March 2010.
http://ssrn.com/abstract=1292407

Abstract: This paper examines investment strategies of Sovereign Wealth Funds (SWFs), their effect on target firm valuation, and how both of these are related to SWF transparency. We find that SWFs prefer large and poorly performing firms facing financial difficulties. Their investments have a positive effect on target firms' stock prices around the announcement date but no substantial effect on firm performance and governance in the long-run. We also find that transparent SWFs are more likely to invest in financially constrained firms and have a greater impact on target firm value than opaque SWFs. Overall, SWFs are similar to passive institutional investors in their preference for target characteristics and in their effect on target performance, and SWF transparency influences SWFs' investment activities and their impact on target firm value.

Scherer, B., "A Note on Portfolio Choice for Sovereign Wealth Funds," Financial Markets and Portfolio Management, Volume 23, Number 3 (September, 2009).
http://www.springerlink.com/content/w624331422060533

Abstract: The current vast account surpluses of commodity-rich nations, combined with record account deficits in developed markets (the United States, Britain) have created a new type of investor. Sovereign wealth funds (SWF) are instrumental in deciding how these surpluses will be invested. We need to better understand the investment problem for an SWF in order to project future investment flows. Extending Gintschel and Scherer (J. Asset Manag. 9(3):215–238, 2008), we apply the portfolio choice problem for a sovereign wealth fund in a Campbell and Viceira (Strategic Asset Allocation, 2002) strategic asset alloca-

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tion framework. Changing the analysis from a one to a multi-period framework allows us to establish a three-fund separation. We split the optimal portfolio for an SWF into speculative demand as well as hedge demand against oil price shocks and shocks to the short-term risk-free rate. In addition, all terms now depend on the investor's time horizon. We show that oil-rich countries should hold bonds and that the optimal investment policy for an SWF as a long-term investor is determined by long-run covariance matrices that differ from the correlation inputs that one-period (myopic) investors use.

Chhaochharia, V. and Laeven, L.A., "The Investment Allocation of Sovereign Wealth Funds," July 2009.
http://ssrn.com/abstract=1262383

Abstract: Sovereign wealth funds have emerged as an important investor in global equity, attracting growing attention. Despite frequently voiced concerns that sovereign wealth funds serve political objectives, little is known about their investment allocation. We collect new data on close to 30,000 equity investments by sovereign wealth funds and using both a country-level and firm-level analysis find that they tend to invest in countries with common cultural traits. This cultural bias indicates that sovereign wealth funds prefer to invest in the familiar. While other global investors show similar aptitude to investing in the familiar, the cultural bias of sovereign wealth fund investment is particularly pronounced.

Bernstein, S., Lerner, J., and Schoar, A., "The Investment Strategies of Sovereign Wealth Funds," April 2009.
http://www.nber.org/papers/w14861

Abstract: This paper examines the direct private equity investment strategies across sovereign wealth funds and their relationship to the funds' organizational structures. SWFs seem to engage in a form of trend chasing, since they are more likely to invest at home when domestic equity prices are higher, and invest abroad when foreign prices are higher. Funds see the industry P/E ratios

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of their home investments drop in the year after the investment, while they have a positive change in the year after their investments abroad. SWFs where politicians are involved have a much greater likelihood of investing at home than those where external managers are involved. At the same time, SWFs with external managers tend to invest in lower P/E industries, which see an increase in the P/E ratios in the year after the investment. By way of contrast, funds with politicians involved invest in higher P/E industries, which have a negative valuation change in the year after the investment.

The Domestic versus Foreign Investment Question

Das, U.S., Lu, Y., Mulder, C., and Sy, A., "Setting up a Sovereign Wealth Fund: Some Policy and Operational Considerations," IMF Working Paper 179, August 2009.
www.imf.org/external/pubs/ft/wp/2009/wp09179.pdf

Abstract: This paper offers a policy and operational "roadmap" to policymakers considering setting up an SWF. It should also be of interest to policymakers in countries where SWFs are already in place, to review their existing policies and operations. Finally, it offers an opportunity to identify areas where research in macroeconomics and finance should give further answers as to the adequacy of existing practice related to the setting up and management of SWFs, an area where practical considerations often lead theoretical research. For instance, policymakers should optimally consider both their sovereign assets and liabilities together with their macroeconomic objectives, when setting up an SWF.

Chen, C., and Xie, P., "Sovereign Wealth Funds, Macroeconomic Policy Alignment and Financial Stability," June 2009.
http://ssrn.com/abstract=1420614

Abstract: This paper firstly discusses alignment of SWFs with macroeconomic policy. We believe that SWFs can become an effective tool for fiscal policy; SWF investments should be made in alignment with the monetary authority, and help

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stabilize the exchange rate. SWFs also contribute to stability of the national balance sheet. Asset allocation of SWFs has significant impacts on the current and capital accounts of both domestic and international balance sheets. Secondly, this paper explores the impacts of SWFs on the global financial market and its stability, including those on asset bubbles, equity risk premium and financial market stability. We argue that the potential negative impact of SWFs on the global financial market is very limited, and that they are important stabilizing forces in the global financial market. We believe that SWFs contribute to the coordination of macroeconomic policy from a domestic point of view and to the stability of global financial market from an international point of view.

Chen, C., and Xie, P., "The Theoretical Logic of Sovereign Wealth Funds," June 2009.
http://ssrn.com/abstract=1420618

Abstract: Sovereign wealth funds (SWFs) form a new class of institutional investors with significant influence on the global financial market. Assets under management (AUM) of global SWFs totaled around US$3.0 trillion at the end of 2007, and are still rising. Three developments are behind the current cause of SWFs: First, reform of international monetary system is the core reason for the rise in SWFs; Secondly, the phenomenal raise of energy price is an important reason contributing in the expansion of SWFs; finally, the economic globalization facilitates SWFs' operation. According to the "National Economic Man" model, the foreign reserve of a nation will increase sharply and gradually this nation will invest surplus wealth during the economic stage of early expansion or fast-growing stage. Whereas, with the decreasing of the production factors, accumulated wealth of a nation will gradually attain to peak. When the economy enters into wealth-oriented stage or the stage of sustainable low growth, the nation will increasingly rely on wealth accumulated by consumption, and incline to invest in risk-free assets. At present, the aims of SWFs are mainly focused on the following five aspects, including stabilization the national balance sheet for different periods, diversification of the central bank's reserves, smoothening inter-generation revenue of country, prevention of national socio-economic crisis and assistance of the government's overall development strategy.

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AlMehaiza, M., "The Impact of the Growth of Sovereign Wealth Funds," May 2009.
The secretariat for the Arab Financial Forum (AFF) is provided by MEC (www.meconsult.co.uk). Fuller details can be found on the AFF website www.arabfinancialforum.org

Abstract: The Arab Financial Forum brings together senior figures from the public and private sector concerned with the development of Arab capital markets. Such development is essential to the growth of Arab economies. Sovereign wealth funds (SWFs) will play an important role in the coming years as the world seeks to recover from the financial tsunami. The AFF is therefore pleased to offer this analysis for a better understanding of SWFs and what they mean — not just in Arab financial markets but globally. SWFs come in different shapes and sizes. This study identifies the new beasts in the financial jungle. The various contributors under the editorship of Myrna AlMehaiza offer clues to how they are evolving. AFF will be undertaking a number of tightly-focused roundtables to consider these changes over the coming year starting with a review of the impact on Arab pension funds. We look forward to receiving additional comments that can feed into this process."

Fox, I. M., DelVecchio, P., Khayum, O., Gatenio, C., Blackburn, J. and Wolfson, D., "Do Sovereign Wealth Funds Best Serve the Interest of Their Citizens?," revised April 2009.
http://ssrn.com/abstract=1309285

Sovereign Wealth Funds (SWFs) have been the subject of extensive media coverage in recent months. Their increasing prevalence and size coupled with a series of substantial investments in high-profile companies and, in many instances, the opacity of their operations have all fueled intense debate regarding their intentions, their governance, and their place in global financial markets. As their relative size increases, and they play a larger role in financial markets across the globe, these funds will become an important topic in economics.

Much of the popular rhetoric has argued the issue through the lens of investment recipients. In this paper we aim to take a different perspective — the perspective

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of the citizens of the countries controlling the SWFs. Specifically, we attempt to determine whether SWFs best serve the interests of those citizens. In order to answer that question we identify and evaluate potential benefits SWFs can offer their citizens and then weigh them against possible alternative uses of the funds. The potential benefits that we identified are the ability of SWFs to earn higher risk-adjusted returns than other investments and the additional political leverage that a government can wield on behalf of its citizens with the clout that a SWF gives it. The alternatives to SWFs that we'll be examining are lowering taxes and making more investments in infrastructure.

We begin our analysis by first providing a definition and an overview of SWFs and discussing the sources of their assets as well as their investment styles. Next, we explore each of the benefits of and alternatives to SWFs in general but also recognize that the applicability of the benefits and the attractiveness of the alternatives depend heavily upon the political and economic context in which the SWF operates. Therefore, following a general discussion of each of those considerations, we analyze how they apply to each of the six largest SWFs in terms of assets under management: Abu Dhabi Investment Authority (UAE), Government Pension Fund—Global (Norway), GIC and Temasek Holdings (Singapore), Kuwait Investment Authority (Kuwait), CIC (China), and Stabilization Fund (Russia). We then introduce and apply a framework to aggregate the analysis and produce a recommendation for retaining or discontinuing each SWF. In the event of the latter recommendation, we also discuss several options governments have for executing a drawdown of the fund to achieve predictable and desirable behaviors by its citizens.

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Impact And Performance

Bortolotti B., Fotak V., Megginson W.L., and Miracky W., "Sovereign Wealth Fund Investment Patterns and Performance," March 2010.
http://ssrn.com/abstract=1364926

Abstract: We examine 802 investments by 33 Sovereign Wealth Funds (SWFs) in publicly traded companies between May 1985 and November 2009, and find that SWFs tend to invest in large, levered, profitable growth firms, usually headquartered in an OECD country. Announcements of SWF investments yield significantly positive abnormal stock price returns, averaging 1.25% (2.91% excluding the 403 purchases of U.S.-listed stocks by Norway's fund) over a three-day (-1, 1) event window, but most investments lead to deteriorating firm performance over the following two years, with significantly negative mean abnormal returns of up to -6.25% (median of up to -14.71%) over 2-year holding periods. Our results are robust to the use of different benchmarks and event study methodologies. We examine whether sovereign funds acquire representation on the boards of directors of 355 target firms in the years after initial investment; funds acquire seats in only 53 companies, or in only 14.9% of all cases, though this percentage rises to 26.8% when the 157 targets of Norway's fund are excluded. Poor long-term stock performance is linked to the degree of involvement of the SWF: abnormal performance worsens the larger the stake acquired, if the investment is direct, rather than through subsidiaries or investment vehicles, and if the SWF takes a seat on the board of directors. Underperformance is also worse for investments in foreign firms. Analysis of post-investment performance using accounting variables validates the event-study findings of poor long-term performance. These findings support our Constrained Foreign Investor Hypothesis, which predicts that foreign investors, especially large, state-owned ones such as SWFs, will be unable to exercise proper monitoring due to pressures not to antagonize local management.

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Dewenter, Kathryn L., Han, Xi and Malatesta, Paul H., "Firm Values and Sovereign Wealth Fund Investments," December 2009, forthcoming in the Journal of Financial Economics 2010.
http://ssrn.com/abstract=1354252

Abstract: Sovereign Wealth Funds (SWFs) manage investment portfolios on behalf of governments that own the portfolios. We analyze the impact of SWF investments on the values of the companies in which they invest and provide evidence consistent with the tradeoff between the monitoring and lobbying benefits versus tunneling and expropriation costs of SWFs as block holders. The data show significant positive (negative) returns to announcements of SWF investments (divestments). The returns are non-monotonic, first rising (falling) and then falling (rising) with the share sought (sold) for investments (divestments). Moreover, we find that SWFs are often active investors. Slightly more than half of the target firms experience one or more events indicative of SWF monitoring activity or influence.

Karolyi, A.G., and Liao, R.C., "What is Different About Government-Controlled Acquirers in Cross-Border Deals?," September 2009.
http://ssrn.com/abstract=1571560

Abstract: We examine the motives for and consequences of 5,317 failed and completed cross-border acquisitions constituting $619 billion of total activity that were led by government-controlled acquirers over the period from 1990 to 2008. We benchmark this activity at the aggregate country level and also at the deal level with cross-border acquisitions involving corporate acquirers over the same period. We find that government-led deal activity is relatively more intense for geographically-closer countries, but also relatively less sensitive to differences in the level of economic development of the acquirer's and target's home countries, in the quality of their legal institutions and accounting standards, and to how stringent are restrictions on FDI flows in their countries. Government-led acquirers are more likely to pursue larger targets with greater growth opportunities and more financial constraints. But, the share-price re-

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actions to the announcements of such acquisitions are not different. Among those deals involving government-controlled acquirers, we do find important differences involving sovereign wealth funds (SWFs). SWF-led acquisitions are less likely to fail, they are more likely to pursue acquirers that are larger in total assets and with fewer financial constraints, and the market reactions to SWF-led acquisitions, while positive, are statistically and economically much smaller. We discuss policy implications in terms of recent regulatory changes in the U.S. and other countries that seek to restrict foreign acquisitions by government-controlled entities.

Fernandes, Nuno G., "Sovereign Wealth Funds: Investment Choices and Implications around the World," August 2009.
http://ssrn.com/abstract=1341692

Abstract: This study focuses on a major global issue: the rise of sovereign wealth funds (SWFs). Using the largest data set of their holdings to date, we document a large SWF premium of more than 15% of firm value. Using data from 2002 through 2007 that includes SWF holdings in 8,000 firms in 58 countries, we find that firms with higher ownership by SWFs have higher firm valuations and better operating performance. In terms of determinants of their holdings, we find that SWFs prefer large and profitable firms that enjoy significant external visibility. Additionally, they tend to not invest heavily in firms in high-tech industries or those operating in areas involving intensive research and development.

Knill, A., Lee, B., and Mauck, N., "Sleeping with the Enemy' or 'An Ounce of Prevention': Sovereign Wealth Fund Investments and Market Instability," January 2009.
http://ssrn.com/abstract=1328045

Abstract: We investigate whether accusations by the popular press regarding the potential destabilizing force of sovereign wealth fund (SWF) investment have merit. We find uncompensated risk at both the firm- and market-level.

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Firm volatility decomposition suggests that total risk, systematic risk, and idiosyncratic risk are not compensated at the same level following SWF investment as they were preceding it. Overall, we find a decrease in return without a corresponding decrease in risk as a result of SWF investments. In a limited Granger causality analysis, we find that SWF investment Granger-causes the firm level return/risk relation to deteriorate for some firms. Analysis falls short of demonstrating that the media Granger-causes the poor performance. These findings suggest that SWF investment could indeed be potentially destabilizing.

Transparency and Geopolitical Issues

Avendaño, R., and Santiso, J., "Are Sovereign Wealth Fund Investments Politically Biased? Comparing Mutual and Sovereign Funds," Working Paper No. 283 OECD Development Centre, December 2009.
http://www.oecd.org/dataoecd/43/0/44301172.pdf

Abstract: Are sovereign wealth funds substantially different in their investment choices from other types of institutional investor? Comparing the holdings of two groups of sovereign and mutual funds, we find few differences. Our study also introduces a new dimension: the political regime in sending and recipient countries. Again, evidence suggests that both sovereign and mutual funds' investments do not differ when looking at the political profile of targeted countries.

Chalamish, E., "Protectionism and Sovereign Investment Post Global recession," December 2009.
http://ssrn.com/abstract=1554618

Abstract: Sovereign Wealth Funds ("SWFs") have attracted significant attention over the past few years, as a result of their increasing role in global economy and their controversial minority investments in distressed financial and infrastructure companies in Western economies. Although SWFs provide important benefits to home, host, and global markets, they have been perceived

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by the Western mind as a growing threat to economic supremacy and national security. These mixed feelings, frequently driven by national protectionism, have prompted various Western attempts to block SWF cross-border investments through legislative reforms or ad-hoc protectionism of the executive branch. These governmental policies frequently violate international commitments in the international economic law arena and call for a closer look at the nature of such commitments and their respective implementation in the SWF environment. The paper will look at recent practices in Western countries that aim to block SWF investments in the context of the recent global recession and growing protectionism in trade and investment activity. It will propose ways to confront this protectionism by joint efforts of the funds, governments, the media, and the legal community.

Knill, A., Lee, B., and Mauck, N., "Bilateral Political Relations and the Impact of Sovereign Wealth Fund Investment: A Study of Causality," November 2009
http://ssrn.com/abstract=1498518

Abstract: We test the role of bilateral political relations in sovereign wealth fund (SWF) investment decisions. Our empirical results suggest that political relations do play a role in SWF decision making. We find, counter to predictions based on the trade and political relations literature, that SWFs prefer to invest in nations with which they have relative weaker political relations. This indicates that SWFs behave differently than other economic agents. Despite this observed difference, we find that, consistent with the trade and political relations literature, SWF investment has a positive (negative) impact for relatively closed (open) countries. Our results indicate SWFs use, at least partially, non-financial motives in investment decisions.

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Clark, G.L., and Monk, A.H.B., "The Oxford Survey of Sovereign Wealth Funds' Asset Managers," July 2009.
http://ssrn.com/abstract=1432078

Abstract: Sovereign wealth funds' (SWF) operations and strategies remain, in many cases, guarded secrets. While some confidentiality is understandable, a gap exists between what we'd like to know about SWFs and what most SWFs are willing to tell us. This report fills this information gap through proxy, by illustrating the results of a survey that canvassed experts about their experience working with SWFs and their opinions on SWF operations. Specifically, this report documents what SWF's own asset managers think about their operations and behaviour. Until such a time that we have reliable, first-hand data, this information may help better understand these important financial institutions.

Epstein, R.A., and Rose, A.M., "The Regulation of Sovereign Wealth Funds: The Virtues of Going Slow," June 2009.
http://ssrn.com/abstract=1394370

Abstract: Any symposium on private-equity firms and the going private phenomenon would be incomplete without discussion of Sovereign Wealth Funds (SWFs). These government owned investment vehicles have and will continue to play an important role in the going private phenomenon. SWFs have not only helped fuel that phenomenon through their participation as limited partners in private-equity funds and hedge funds, but their massive capital infusions into ailing financial institutions and private-equity firms in the wake of the subprime mortgage crisis may, in a very real sense, save it. It is not hyperbolic to suggest that the future of private equity - including the going private phenomenon - and the future of SWFs are inescapably intertwined. Misguided regulation of the latter will, quite foreseeably, operate to the detriment of the former. And the scope of potential mischief is broad.

SWFs have existed for decades, but today they face heightened scrutiny due to their recent rapid growth and a concomitant shift in their investment strat-

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egy from primarily conservative debt instruments to higher risk/reward equity investments. This shift in strategy has stoked fears in the United States and Europe that these funds - which find home primarily in the Middle East and Asia—will use their economic clout to pursue political goals. This type of rhetoric has led some to call for increased regulation of SWFs.

In this Article we argue against imposing any additional burdens on investments by SWFs in the United States, at least at present. In our view, at this point a policy of watchful waiting is preferable to any immediate effort to impose special restrictions on SWFs. On the one hand, the nightmare scenarios painted by SWF critics often involve activities that would be caught by existing laws, either as they relate to national security or to various forms of business regulation under the securities and antitrust laws. On the other hand, we do not possess perfect foresight and cannot say that every possible permutation of SWF investment should escape a regulatory response in the future. What we do know, however, says that the burden of proof lies on those who think that further prophylactic regulation is in order at this juncture. To date, SWFs have acted as model investors, and the risk that they may act strategically in the future is significantly mitigated by existing safeguards. A far greater danger to America's economy and security inheres in taking unnecessary action that would encourage SWFs to redirect their investments elsewhere, or to harbor resentment toward the United States that could express itself in a wide range of hostile actions.

Balding, C., "Framing Sovereign Wealth Funds: What We Know and Need to Know," January 2009.
http://ssrn.com/abstract=1335556

Abstract: Sovereign wealth funds are poorly understood by policy makers and scholars. Research has provided valuable insights into their behavior and impact on financial markets. To further our understanding of sovereign wealth funds, it is important that we gain a better understanding of the economics and politi-

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cal landscape. Sovereign wealth funds target specific issues faced by commodity dependent economies and represent challenges to investment target countries. The rhetorical impulses of critics obscures the issue of equal treatment, the cornerstone of the international economic system. Policy makers must work to deal with sovereign wealth funds within the principle of equal treatment and scholars must make appropriate comparisons of investment behavior rather than theoretical unreliable assertions about profit motives.

Guy, G., "Monitoring Study: Middle Eastern Sovereign Wealth Funds in the British Media," November 2008.
http://www.arabmediawatch.com

Abstract: Sovereign wealth funds have recently become far more prominent than ever before. Although the oldest fund was established in Kuwait in 1953, the term itself is far newer, and had never been mentioned in the mainstream national British press prior to 16 June 2007. By 1 November 2008, the total number of mentions had reached 1,250.

Rather than being based on past performance, suspicion about SWFs is often conveyed in the language used to report them, which frequently is ominous or uncomplimentary. Karl West in the Daily Mail, reporting a potential investment, refers to one SWF as a "Middle Eastern stalker" of a Western institution (29 July 2007). Ambrose Evans-Pritchard in the Daily Telegraph reports a German law designed to stop Russian, Chinese and Middle Eastern "giant locust funds" from "launching takeover raids" (23 August 2008). There is also some geographical uncertainty regarding SWFs, with some in the media believing them to be a particularly Middle Eastern and oil-funded phenomenon. SWFs are "mainly from the Middle East," suggests Graham Hiscott in the Daily Mirror (3 September 2008). However, these views are formulated on partial and distorted information, and do not represent reality. The problem is that a lack of facts and accuracy in reporting creates a hole that is often filled by hyperbole and overstatement. James Ashton in the Mail (21 September 2007) provides this example: "Gushing from the Gulf states, a glut of petro-dollars is washing

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over British assets...As the oil price has soared, cash has been mounting up from Doha to Dubai."

The reality is that "a glut of petro-dollars" is not "washing over British assets," nor is investment "gushing from the Gulf states," and in the globalised context of the financial markets and the wide distribution of SWFs, the 230 miles "from Doha to Dubai" is not likely to have particular significance over other areas. Fact-checking would have substituted the sensationalism for sense in this statement. The overall concern, as highlighted by the Guardian (21 December 2007), in responding to questions arising from SWFs is "avoiding knee-jerk jingoism." Unfortunately, in practice, the absence of balance and facts tends toward such jingoism.

OECD, "Sovereign Wealth Funds and Recipient Country Policies," 2009.
http://www.oecd.org/dataoecd/34/9/40408735.pdf

Abstract: The report is the result of the work of the thirty OECD countries, fourteen non-member countries participating in the project and the European Commission, and benefited from consultations with SWFs and the business and social partners. I believe that this process is already helping to create a much better understanding of the issues involved for recipient countries, and I have no doubt that it will also help facilitate the work underway in the IMF for best practices by SWFs.

Our findings show that these funds bring benefits to home and host countries and that existing OECD investment instruments are well suited to develop guidance for countries receiving investments from SWFs. These instruments call for fair treatment of investors. They commit adhering governments to the principles of transparency, non-discrimination, liberalisation and standstill, and to build this fair treatment into their investment policies. They provide for "peer review" of adhering countries' observance of these commitments.

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The OECD investment instruments also recognise the right of countries to take actions to protect national security. Investments by SWFs can raise concerns as to whether their objectives are commercial or driven by political, defence or foreign policy considerations. In our report, the participants in the Freedom of Investment project agree that recipient countries should apply the national security clause of the OECD investment instruments with restraint. They have agreed on a number of key principles--transparency and predictability, proportionality and accountability--that should guide governments when they design and implement investment measures to address national security concerns. These principles should also apply when dealing with investments from SWFs.

Observance of high standards by SWFs and their provision of adequate and timely information will facilitate recipient countries' efforts to implement their OECD commitments and its recommendations for preserving open markets while safeguarding national security.

ADIA Review 2009 - Prudent Global Growth, Abu Dhabi Investment Authority, 2009.
http://www.adia.ae/En/News/media_review.aspx

Abstract: With a long tradition of prudent investing, ADIA's decisions are based solely on its economic objectives of delivering sustained long-term financial returns. ADIA does not seek active management of the companies in which it invests. ADIA manages a substantial global investment portfolio, which is highly diversified across more than two-dozen asset classes and sub-categories, including quoted equities, fixed income, real estate, private equity, alternatives and infrastructure. Approximately 80% of ADIA's assets are managed by carefully-selected external fund managers whose activities are monitored daily. Approximately 60% of ADIA's assets are invested in index-replicating strategies. In U.S. dollar terms, the 20-year and 30-year annualised rates of return for the ADIA portfolio were 6.5% and 8.0% respectively, as of 31 December 2009. Performance is measured based on underlying audited financial data and calculated on a time-weighted return basis.

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China Investment Corporation Annual Report 2008, published in 2009.
http://www.china-inv.cn/cicen/resources/resources.html

Abstract: Aug. 7, 2009: CIC launched its Annual Report 2008 today, which was approved by its Board of Directors on July 22, 2009. This is CIC's inaugural annual report after its first complete accounting year since inception. The Annual Report describes CIC's background, culture and core values, corporate governance, investment strategy and management, risk management, human resources and 2008 financials. The Annual Report was prepared in accordance with requirements of the China Accounting Standards for Business Enterprises issued by the Ministry of Finance in 2006, which converges with International Financial Reporting Standards. Financial statements disclosed in the Annual Report include consolidated Income Statement of the year ended December 31, 2008, and consolidated Balance Sheet as of December 31, 2008, audited by its independent auditors with an unqualified opinion reported thereon.

Case Studies

Lhaopadchan, S., "The Politics of Sovereign Wealth Fund Investment: The Case of Temasek and Shin Corp.," Journal of Financial Regulation and Compliance, Emerald Group Publishing Limited, 2010 Volume 18 Issue 1, pages 15-22.
http://www.emeraldinsight.com

Abstract:

- Purpose—The purpose of this paper is to highlight some of the political aspects of sovereign wealth fund investment.
- Design/methodology/approach—The paper employs a case study approach, bringing together various news articles and reports from around the world to build a picture of the key events surrounding the Temasek acquisition of Shin Corp.

- Findings—The paper finds that the deal between Temasek and Shin Corp. was complex as foreign ownership is limited in Thailand. To add further controversy to the deal, the ultimate owner of Shin Corp. was former Thai Prime Minister Thaksin Shinawatra. Consequently, the controversy surrounding the deal and sensitive nature of the sale caused significant political turmoil in Thailand, and in some measure contributed to the military coup that finally ousted Thaksin Shinawatra.

- Research limitations/implications—The paper is a case study and as such is illustrative.

- Practical implications—The case highlights the potential fallout from sovereign wealth fund investment as a result of acquiring strategic assets.

Ang, A., Goetzmann, W.N., and Schaefer, S.M., "Evaluation of Active Management of the Norwegian Government Pension Fund—Global," December 2009.
http://www.regjeringen.no/upload/FIN/Statens%20pensjonsfond/rapporter/AGS%20 Report.pdf

Abstract: The mandate and the approach of this article.

- Evaluation of NBIM's historical track record:

  » Prepare a quantitatively based evaluation of the performance of NBIM's active management. The analysis should distinguish between the two asset classes (fixed income and equities) and, within the limits of available data, include a breakdown of performance by main active strategies that were used by NBIM in the evaluation period. The analysis should also cover the internally versus externally managed funds dimension. Methodologies for evaluating return, risk and risk adjusted return may be adapted to the particular area under scrutiny.

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- Prepare a qualitatively based evaluation of NBIM's active management. This part of the report should include assessments of the strategic plans for active management, the risk budgeting process, internal and external reporting of active management risks and return, and whether or to what extent the specific strategies that have been used in NBIM's active management have been based on exploiting the characteristics of the Fund (cf. third bullet in iii)

- Empirical studies of active management/tests of the efficient market hypothesis (EMH):
  - Describe briefly the efficient market hypothesis from a theoretical perspective.
  - Present a survey of high-quality empirical studies of tests of the EMH in general with particular emphasis on tests of relevance to evaluations of active management performance, and discuss to what extent the relevance of the EMH varies across different markets and assets.
  - Evaluate the relevance of empirical evidence for the evaluation of active management of the Fund.
- Exploitation of the Fund's characteristics
  - Assess whether or to what extent a large long term investor like the Fund has comparative advantages and capabilities which justify utilizing significant resources on active management.
  - Assess whether or to what extent such comparative advantages can be implemented successfully in all asset classes included in the Fund's investments, and discuss to what extent such comparative advantages and capabilities will affect the Fund's capability to enter into new asset classes.

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» Describe and evaluate strategies that utilize possibly comparative advantages. How can the risk/return-profile of each strategy be described in terms of a probability distribution of outcomes, and what is the verification horizon of each strategy? Address challenges in designing a proper (short term) incentive system for the active manager. In the case of strategies with long verification horizons, would it be better to include such strategies in the strategic benchmark (possibly by using a dynamic asset allocation approach)?

Caner, M., and Grennes, T., "Sovereign Wealth Funds: The Norwegian Experience," November 2008.
http://ssrn.com/abstract=1295364

Abstract: Sovereign wealth funds have rapidly become significant international institutions. The performance of funds varies substantially across countries, but comprehensive and systematic analyses of funds have been hampered by the lack of transparency of most funds. The relative transparency of the Norway Fund allows us to do an econometric analysis of the Fund's performance. The record resembles that of a mutual fund that has taken on greater risk over time. There is no evidence that the Fund has disrupted foreign financial markets more than mutual funds do. There remains a question as to whether the Fund and its Finance Ministry have been effective agents for the Norwegian citizens whose assets they are managing.

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