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Sovereign Investment Lab

Università Commerciale Luigi Bocconi

Bocconi

The Great Reallocation

Sovereign Wealth Fund
Annual Report 2013

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From the Editor

Some call it the rise of the fiduciary state. From a long-term perspective, the boundaries between states and markets have changed considerably in the past decades. After the massive wave of nationalizations and public investments of the post-war period, governments of all stripes experienced the poor quality of products and services provided and the abysmal financial and operating performance of state-owned enterprises. With their reputation as managers severely dented, governments launched a global wave of state sell-offs, and privatization became a legitimate tool of statecraft around the world. But while the rollback of the economic activity of the state continued apace particularly in developed economies, an opposing trend started to surface, and gained momentum with the turn of the century: the massive accumulation of assets by sovereign wealth funds (SWFs) and other state-sponsored vehicles, growing in size to exceed the $4 trillion mark in 2013.

The key innovation that explains the apparent contradiction between resurging state capitalism and privatization is that the recent government acquisitions of equity have been conducted mostly by state entities acting as investors rather than owners, buying non-controlling stakes primarily in foreign companies in order to generate long-term financial return rather than to manage these businesses. Under this new regime, sovereign investors are typically minority shareholders, with limited power to exert political interference in the target companies. Furthermore, by investing abroad, they deliberately locate financial interest beyond the scope of their sovereign authority or supervisory power.

But can governments ever act as objective, commercially driven long-term global investors, managing their nation's wealth as investment fiduciaries? Only time will tell, but for the time being we observe that SWFs are gaining ground, growing faster than any other type of asset owners, and graduating as highly respected players of the global financial industry.

Against this background, we are glad to present our annual report on SWF investment in 2013. The reader will find here the usual high quality data which made the

Sovereign Investment Lab a rather unique source for independent, reliable information on global SWF transactions. Additionally, this issue boasts contributions from international experts such as Paul Rose, Michael Papaioannou, Bayasgalan Rentsendorj, and Massimiliano Castelli covering the corporate governance challenges of SWFs, their strategic asset allocation, and the role they can play in boosting infrastructure investment.

Emerging markets have enjoyed breath-taking growth over the past two decades by closing the productivity gap with the more developed economies. But, as the gap narrowed, growth rates have declined – and the slowdown of China and India has led to lower commodity prices. At the same time, the shale revolution in North American energy markets has put downward pressure – and future uncertainty – on the oil and natural gas prices that have underpinned much of SWF growth. This is why in 2013 not only have we observed SWF lower aggregate investments, but allocations have changed. The same slowdown that led to declining fund accumulations in developing countries has also led to the same markets being less appealing investment targets. We call this process the Great Reallocation, with implications across geographies and sectors. The biggest beneficiaries of this reallocation have been developed economies, primarily Europe, the United States, and Australia. Within this region, SWF selectively slowed down investment in manufacturers indirectly exposed to emerging market growth, and focused on real estate especially commercial properties in Europe, and safe assets as infrastructure. SWFs are quite unpredictable but we tend to foresee this trend consolidating in 2014.

2013 has been a crucial year for SWFs. The main facts can be summarized as follows.

- ***Investment slowing down.*** *In 2013, we observed 19 SWFs completing 175 deals with a total publicly reported value of $50.1 billion, a 35 percent decrease in the number of transactions, and a 15 percent decrease in total deal value relative to 2012.*
- ***Banks vs real estate too close to call.*** *By deals, financial services still received more publicly reported investments from SWFs than any other sector: 47 deals worth $11 billion. But their share by value continues declining in favour of real estate and hotels tourism facilities, reporting 22 deals worth $10 billion and 16 deals worth $6 billion, respectively.*
- ***Crawling down the energy value chain.*** *SWF displayed strong interest in the energy sector, the associated processing industries, including infrastructure. During 2013, the combined expenditure in those sectors was $5.2 billion.*
- ***Developed markets targets of choice.*** *The share of SWF investment in OECD targets is steadily increasing, reaching a share of 65 percent by value, the highest since the outbreak of the financial crisis. Europe attracts most activity of value (33 deals accounting for $18.4 billion), North America resumes in earnest from last year low with 29 deals worth $8.2 billion). For the first time in the SWF history, France surpasses the United Kingdom by deal value with $7.7 billion of investment.*
- ***BRICs rebalancing.*** *BRICs share of investments shrunk to 21 percent ($10.7 billion), with China being the biggest loser. In 2013, foreign SWF investment in China is down to $620 million from the $4.6 billion raised the previous year. Russia and India were the main beneficiaries of the reallocation, with $5.4 and $2.8 billion, respectively. Indirect exposure to emerging market growth via established multinational firms as targets is also toning down.*
- ***The rise of co-investment alliances.*** *Cooperation amongst like-minded investors is increasing and taking the form of joint-ventures and co-investments among SWFs, but also partnerships involving private investors. 53 SWF deals worth $16.9 billion involved investment alliances, and 84 percent by value with private partners.*

Bernardo Bortolotti
Director, SIL

The Sovereign Investment Landscape

There is no consensus, in either the academic or practitioner literature, on exactly what constitutes a sovereign wealth fund (SWF). While SWFs are a heterogeneous group, most of the larger and more established SWFs evolved from funds set up by governments whose revenue streams were dependent on the value of one underlying commodity and thus wished to diversify investments with the goal of stabilizing revenues. Accordingly, most SWFs have been established in countries that are rich in natural resources, with oil-related SWFs being the most common and most important. These include the funds sponsored by Arab Gulf countries, Russia and the ex-Soviet republics, Malaysia, Brunei and Norway. A newer set of funds has recently been established in response to discovery of major new resource endowments – particularly natural gas, but also oil, coal, diamonds, copper, and other minerals. The other important group of SWFs includes those that have been financed out of accumulated foreign currency reserves resulting from persistent and large net exports, especially

> SWFs are just one type of state-sponsored investment vehicle and several countries are launching new funds

The SIL definition of SWF

According to our definition, SWFs have an independent corporate identity (they are not managed by a central bank or finance ministry) and invest for commercial return over the long term. Unlike central-bank, stabilisation, or public pension funds, SWFs have no explicit liabilities—i.e., their assets are not routinely called on for stabilisation or pension contributions—so they can have a greater tolerance for risk and illiquid assets to generate superior returns. As such, these funds have a strategic asset allocation that incorporates a wide range of assets that can include any of the following: equities, bonds, private equity, real estate, hedge funds, exchange-traded funds, futures contracts, commodities, etc. These investments may be made through asset managers or directly, in domestic assets or international markets.[1]

A "Sovereign Wealth Fund" is an investment vehicle that is:

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

[1] All SWFs with equity portfolios, and many with only fixed-income portfolios, employ asset managers. However, the funds that invest a significant proportion of their portfolios directly often do so through a series of wholly owned subsidiaries that often are registered in low-tax environments such as Mauritius or the Cayman Islands.

Table 1: Sovereign Wealth Funds, Assets Under Management, 2013

Country	Fund Name	Inception Year	Source of Funds	AUM (US$BN)
Norway	Government Pension Fund – Global[£]	1990	Commodity (Oil & Gas)	840.80
China	China Investment Corporation[**]	2007	Trade Surplus	575.20
UAE-Abu Dhabi	Abu Dhabi Investment Authority[†]	1976	Commodity (Oil & Gas)	773.00
Kuwait	Kuwait Investment Authority[†]	1953	Commodity (Oil & Gas)	410.00
Singapore	Government of Singapore Investment Corporation[†]	1981	Trade Surplus	285.00
Russia	National Wealth Fund and Reserve Fund[ϭ]	2006	Commodity (Oil & Gas)	174.60
Singapore	Temasek Holdings[§]	1974	Trade Surplus	173.30
China	National Social Security Fund[**]	2000	Trade Surplus	141.40
Qatar	Qatar Investment Authority[†]	2005	Commodity (Oil & Gas)	115.00
Australia	Australian Future Fund[µ]	2006	Non-Commodity	87.60
UAE - Dubai	Investment Corporation of Dubai[†]	2006	Commodity (Oil & Gas)	70.00
Libya	Libyan Investment Authority[†]	2006	Commodity (Oil & Gas)	60.00
UAE-Dubai	International Petroleum Investment Company[Ɛ]	1984	Commodity (Oil & Gas)	63.46
UAE-Abu Dhabi	Mubadala Development Company PJSC[¥]	2002	Commodity (Oil & Gas)	55.50
Kazakhstan	Kazakhstan National Fund[†]	2000	Commodity (Oil & Gas)	68.90
Republic of Korea	Korea Investment Corporation[**]	2005	Government-Linked Firms	56.62
Malaysia	Khazanah Nasional Berhard[ϭ]	1993	Government-Linked Firms	31.70
Brunei	Brunei Investment Agency[†]	1983	Commodity (Oil & Gas)	40.00
Azerbaijan	State Oil Fund of Azerbaijan[ϭ]	1999	Commodity (Oil & Gas)	35.89
Ireland	National Pension Reserve Fund[µ]	2001	Non-Commodity	19.90
New Zealand	New Zealand Superannuation Fund[ϭ]	2001	Non-Commodity	20.20
East Timor	Timor-Leste Petroleum Fund[¥]	2005	Commodity (Oil & Gas)	14.56
UAE - Dubai	Istithmar World[*]	2003	Government-Linked Firms	11.50
Bahrain	Mumtalakat Holding Company[**]	2006	Government-Linked Firms	10.90
UAE	Emirates Investment Authority[*]	2007	Commodity (Oil & Gas)	10.00
UAE-Abu Dhabi	Abu Dhabi Investment Council[*]	2007	Commodity (Oil & Gas)	10.00
Oman	State General Reserve Fund[*]	1980	Commodity (Oil & Gas)	8.20
UAE-Ras Al Khaimah	Ras Al Khaimah Investment Authority[*]	2005	Commodity (Oil)	2.00
Vietnam	State Capital Investment Corporation[*]	2005	Government-Linked Firms	0.60
Kiribati	Revenue Equalization Reserve Fund[*]	1956	Commodity (Phosphates)	0.50
São Tomé & Principe	National Oil Account[*]	2004	Commodity (Oil & Gas)	< 0.01
Oman	Oman Investment Fund	2006	Commodity (Oil & Gas)	Unknown
UAE - Dubai	Dubai International Financial Center	2002	Government-Linked Firms	Unknown
			Total OIL & GAS	2,751.91
			TOTAL TRADE SURPLUS	1,174.90
			TOTAL OTHER	239.52
			TOTAL AUM	**4,166.33**

£ AUM as of December 22, 2013
** AUM as of the end of 2012
ϭ AUM as of January 2014
§ AUM as of March 2013
µ AUM as of the end of 2013
† Estimate by SWF Institute as of March 17, 2014
Ɛ AUM as of June 2013
¥ AUM as of September 2013
* Sovereign Investment Lab estimate of assets under management (AUM).

SWFs website, SWF Institute Website and Sovereign Investment Lab estimates

Table 2: New Sovereign Investment Funds Launched or Proposed Since January 2008

Country	Date fund proposed officially	Rationale for Fund, funding source, and discussion	Status, as of April 3, 2014
Angola	October 2012	The Fundo Soberano de Angola (FSDEA) was launched with $5 billion of seed capital from Angola's oil revenues to stabilize impact of commodity price volatility, invest in domestic infrastructure, and invest internationally.	Became operational October 2012 with $5 bn initial capital. In July 2013, the president's son named the fund's first head.
Brazil	June 2008	Brazil announced plans to establish a new Fundo Soberano do Brasil (FSB) soon after Petrobras proved massive new offshore "pre-salt" oil reserves. Purpose to reduce inflationary impact of government spending, minimize real appreciation, and support Brazilian firms' foreign investment. Ultimately hope to achieve funding of $200-300 bn from oil revenues.	Fund launched July 2008 with $6.1 bn initial capital. Now has $11.6 bn.
Chile	April 2008	Government announced plans to invest up to $5.9 bn from Chile's two existing stabilization and wealth funds in publicly listed international stocks and bonds. Modeled after Norway's SWF, purpose was to diversify Chilean state assets globally.	Apparently established, but little news reported on actual investments.
France	October 2008	President Sarkozy proposed setting up a new Strategic Investment Fund to protect French companies from acquisition by foreign "predators". New fund to be operated and 51% owned by Caisse des Dépôts et Consignations and authorized to make loans and direct equity investments in French companies threatened by foreign competition or acquisition, which it has done.	Launched in October 2008, with €6 bn initial capital; currently has about €20 bn in total capital.
Ghana	January 2010	Finance Minister proposed setting up a SWF to channel surplus oil revenues expected to begin accruing in 2011. Parliament passed the law in March 2011 formally establishing two funds: the Ghana Heritage Fund and the Ghana Stabilization Fund with a minimum of 30% of state's projected oil revenues to be allocated.	First Fund board meeting held March 2012. Initial funding of $69.2 mn, but no investments announced yet. First report in May 2012 noted areas of concern.
Greenland	2008	After a US Geological Survey in 2008 estimated that 31 bn barrels of oil lies off Greenland's coast, Greenland's parliament approved creation of a SWF, based on Norway's model, to be funded by oil revenues. To date, no commercial quantities of oil have been produced.	Fund established but thus far unfunded.
India	April 2008	A government-appointed panel of experts recommended setting up a SWF to earn a higher return on India's $300 bn foreign reserves. India's central bank long opposed this, since country has a very low savings rate and large fiscal deficit, but pressure continued to build. In April 2012 government officially proposed setting up a new SWF, with $10 bn initial capital to be provided from disinvestment proceeds, to help acquire overseas energy assets and raw materials.	Fund still pending and apparently not yet formally approved by Parliament.
Iran	2010	A new National Development Fund was set up by the Ahmadinejad government in 2010 to help break country's economic isolation and to benefit future generations. Mandated to invest at least 20% internationally, the rest locally.	Currently has reported value of about $35 bn, but no major investments announced yet.

Israel	January 2012	After two enormous natural gas fields were proven off Israel's coastline, the government proposes a new SWF to be funded from the state's future gas revenues. The fund will invest in education and health and will help develop Israel's high-tech export industries. Though initial capitalization to be $10 bn, plans call for the fund to reach $80 bn by 2040.	SWF bill proposed by government in October 2012; Parliament approved bill and SWF survived court challenge in 2013. No actual revenues or investments yet.
Italy	July 2011	Italy launched the Fondo Strategico Italiano with a seed investment of €1 bn from state entities Cassa Depositi e Prestiti and Fintecna. Fund's purpose to acquire minority interests in promising Italian companies, and plans are to achieve €4 bn in total funding.	First investments in May 2012 of €200 mn for 46% stake in Reti TLC-Metroweb and of €150 mn for 90% stake in Kedrion.
Japan	April 2008	A panel set up by ruling Liberal Democratic Party proposed legislation to set up SWF. In September 2011, ruling Democratic Party of Japan again proposed setting up a $5 bn SWF using some of Japan's huge foreign exchange reserves in order to weaken the yen, earn higher returns on forex reserves, and cushion fiscal impact of country's aging population.	Still under consideration but no official legislation submitted to Diet.
Lebanon	August 2010	Lebanon's Parliament approved a long-delayed Energy law establishing procedures for developing large offshore natural gas deposits and authorizing a new SWF if and when state revenues begin to accrue.	No gas proceeds have been realized and so fund remains embryonic.
Liberia	September 2012	A new SWF was proposed by country's finance minister after African Petroleum Corporation announced it had found significant offshore oil reserves.	Still in planning stage.
Maldives	November 2008	The newly-elected president, Mohamed Nasheed, proposed that Maldives divert a portion of its tourist revenues to set up a SWF as insurance against climate change and rising seas. President later claimed that the fund was established.	Unclear whether SWF ever actually set up; no investments have been made.
Mongolia	April 2012	Government announced plans to use proceeds from mining vast newly-discovered mineral deposits to set up SWF with an initial $600 mn capitalization.	Apparently still in planning stage.
Nigeria	November 2011	Newly-appointed finance minister Ngozi Okonjo-Iweala announced plans to set up SWF to better manage part of country's large — but historically mismanaged — oil revenues. Fund actually established in September 2012 with $1 bn initial capitalization and $100 mn per month revenue inflow. Fund unsuccessfully challenged in court by nation's powerful state governors.	First Fund board meeting held in September 2012, and first investment ($200 mn) made in September 2013. Issued $1 bn Eurobond in 2013 and committed $550 mn to boosting electricity supply in February 2014.
Panama	June 2012	Cabinet Council approved a plan for the Savings Fund of Panama, a sovereign wealth and stabilization fund, to be funded through Panama Canal revenues in excess of 3.5% of GDP. Bill submitted to Congress calling for fund to begin in 2015, and eventually reach $6 bn funding.	Pending.
Papua New Guinea	February 2012	Prime Minister Peter O'Neill announced that one new liquefied natural gas (LNG) project would ultimately contribute over $30 bn (ten times the country's GNP) to a new SWF. The SWF bill was quickly approved unanimously by PNG's Parliament in February 2012. The LNG project should begin its first exports, and contributions to SWF in 2014.	Fund set up, awaiting initial capital injection planned for 2014.
Russia	September 2012	Russian finance minister Anton Siluanov announced plans for the new Federal Financial Agency (FFA) to begin operating in 2013. The new SWF will invest excess oil revenues broadly in international and domestic assets, including equities for the first time. The $150 bn of assets in the two existing funds will be transferred to the FFA.	Two SWFs (the Russia Reserve Fund and National Welfare Fund) are already operating. FFA to begin 2013.
Saudi Arabia	January 2008	The vice governor of Saudi Arabian Monetary Authority (SAMA) announced that Saudi Arabia's Finance Ministry was considering launching a SWF, with about $6 bn initial capitalization, that would mostly make equity investments. The fund was apparently established in March 2009.	Apparently established, but no major investments yet announced.
Scotland	November 2012	Setting up a Scottish SWF on the lines of Norway's model has long been a proposal of the Scottish National Party (SNP), using oil revenues from the UK sector of North Sea fields. Listed as an objective if SNP wins election to make Scotland independent from UK.	Proposed, but actual establishment would only occur if SNP wins the independence election in September 2014.
Sierra Leone	April 2012	The Finance Minister, Samura Kamara, announced plans to set up a SWF financed through "windfall mining revenues" and proceeds from oil sales that could flow by 2015.	Planned but not yet established or funded.
Slovenia	July 2012	Government submitted to Parliament draft legislation to set up a SWF as a "bad bank" to take over €10 bn worth of bad loans from the nation's banks. The opposition successfully forced a referendum on the bad bank/SWF plan, which is pending.	Planned but not yet approved.
South Africa	November 2010	The government proposed setting up a SWF to help manage forex reserves, reduce the value of the rand, and promote economic development. The proposal was not adopted, but in February 2012 a report commissioned by the ruling African National Congress called for a SWF to be set up and funded with a new tax on the mining industry that could raise $5.3 bn per year.	Under consideration, but no formal plans for a SWF have been submitted by the government.
Tanzania	September 2012	Government proposed setting up a SWF to manage revenues from large, newly discovered offshore natural gas deposits.	Planned but not yet formally approved or funded.
Zimbabwe	November 2013	In a 15,000 word document, government proposed setting up a SWF to be funded through various fiscal savings and new bond issues. Legislation officially tabled by government in January 2014.	Planned but not yet approved.

Source: Megginson, W.L., and V. Fotak, "The rise of the fiduciary state: a survey of SWF research", SIL Working Paper, 2014.

the funds based in Singapore, Korea, China, and other East-Asian exporters.

Because definitions vary and because few funds have disclosed key organizational details, heterogeneous funds are often grouped into the SWF category, even though there are significant differences between funds with respect to organizational structure, investment objectives, and degree of transparency. Against this background of complexity, the Sovereign Investment Lab uses the definition of SWF described in the box to identify precisely the funds addressed in the body of this report and listed in *Table 1* above.

The landscape of sovereign investment has changed, as we report in *Table 2*, in the last years as many countries have launched or proposed new funds. Even if none of these organizations meets today all the criteria for inclusion in the SIL list of SWFs, we think that it is interesting to follow these developments, as some of these new born sovereign investment funds (SIF) may graduate in the future as fully-fledged SWFs, and enter in our radar screens.

SWF Investment in 2013

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Activity

In 2013, we observed 19 SWFs completing 175 equity investments with a total publicly reported value of $50.1 billion. This represents a 35 percent decrease in the number of transactions we reported in 2012 and a 14 percent decrease in investment value. This sharp decline in activity can be easily explained by two main factors: increasing future uncertainty and a slowdown in the accumulation of funds in SWF portfolios.

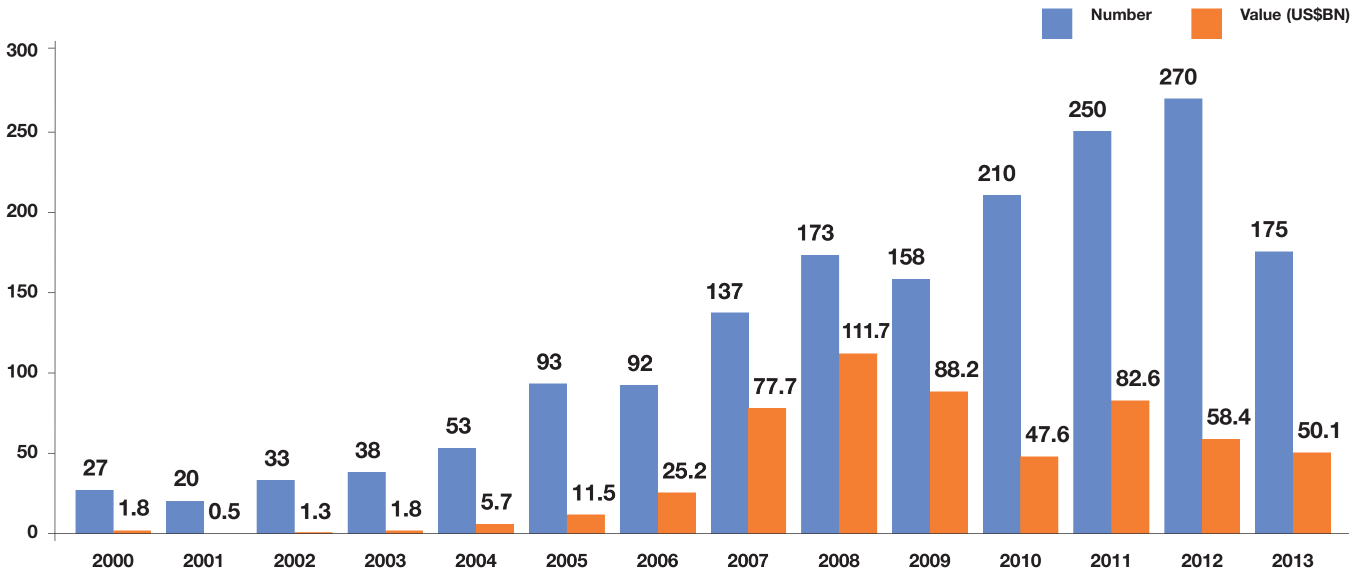
In May, investors awoke to the realization that Fed's extraordinary monetary stimulus through "quantitative easing" could not last forever, and repercussions were felt worldwide. The expectation of tapering, which finally materialized in December 2013, caused a sharp jump in yields and a surge in volatility in bond markets, provoking substantial anxiety and fear, at least for the short-term, across asset classes and sectors. While markets were overall volatile, equities performed well: with the US in recovery mode and the widespread corporate share buy-backs, which in the US in 2013 totalled the stellar amount of $458 billion, the S&P500 more than doubled since 2009. After this strong run, equities in major markets started to look expensive, discouraging investments from emerging markets. This trend was compounded by an obvious desire, following the past turbulent years, to provide increased portfolio diversification away from a policy of heavy investments in US dollars and markets.

While these trends may have affected global investors of all stripes, two important factors had deeper implications for the SWF industry. First, the shale gas and tight oil revolution in the US has started to produce real effects, turning the country into a net exporter of gas and, according to some estimates, virtually self-sufficient in energy by 2030. As recently discussed in an open letter by Saudi billionaire Prince Alwaleed bin Talal, North American shale gas production is an inevitable threat to oil-exporting countries, affecting the accumulation of financial sovereign wealth. Second, global growth has shrunk considerably due to a process that The Economist deemed "The Great Deceleration," meaning that booming emerging economies are no longer making up for weakness in rich countries. Take China as an example, a country still accounting for one third of global growth, but whose low-cost manufacturing advantage is weakening due to higher wages and currency appreciation. This process took its tolls on Chinese exports, which slowed down considerably in 2013. A more competitive supply of energy and lower growth in emerging markets have a direct implication on SWF investments, as lower commodity revenues or trade surplus flows into central bank coffers in the form of foreign reserves translate into slower fund accumulation in SWF portfolios.

In 2013, investments slowed down due to lower growth in emerging markets and the shale gas revolution

Relative to 2012, we report a sizable uptick in the average deal value, reaching $286.1 billion this year. However, taken from a long-term perspective,

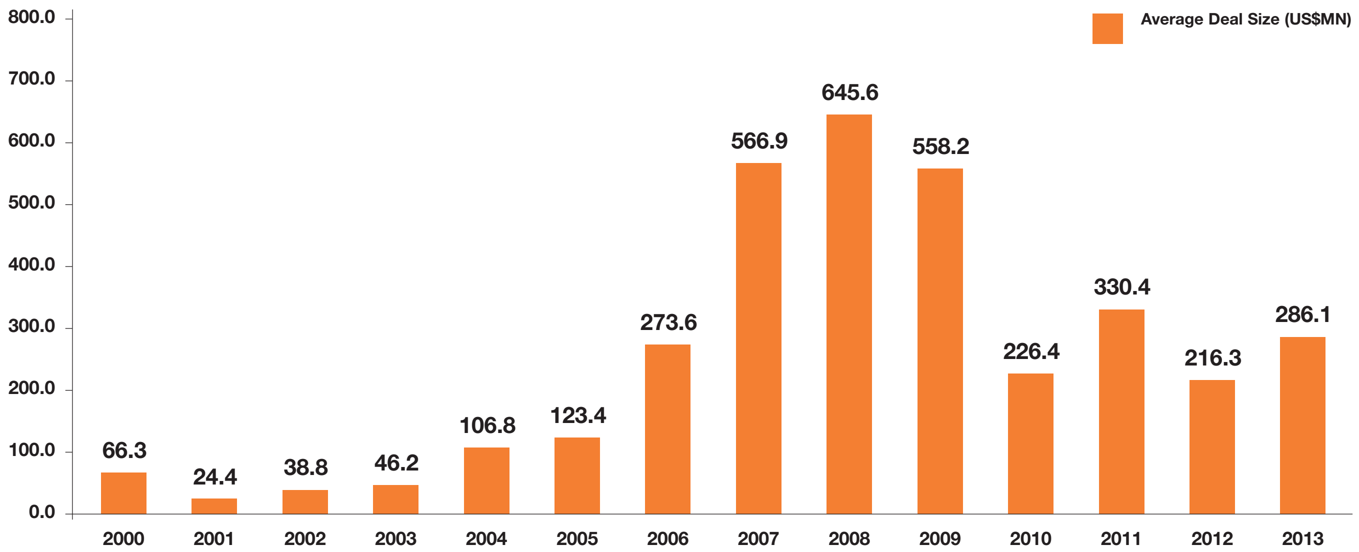
Figure 1: Direct SWF Investments since 2000



Publicly available data for direct SWF equity & real estate deals, joint ventures and capital injections. Source: Sovereign Investment Lab, Università Bocconi

the general trend confirms a decline in deal value reflecting deep organizational changes in the industry. An increasing number of SWFs is rethinking the traditional model based on external for-profit asset managers and questioning the value proposition it offers against agency costs and management fees. As a result, these organizations are becoming more active in the direct management of their portfolios through the creation of internal teams. In this direction, several SWFs have also recently opened satellite offices in international financial centres as a strategy to acquire highly specialized skills from established pools of human capital and to activate local network effects enabling deal flows. Enhanced internal capacity enabled the direct execution of a larger number of operations, and more deals of smaller size appear on our radar screen. However, structural and organizational changes take time. Consider that SWF are very large organizations by assets with very limited staff. The combined personnel of the three largest funds (Norges Bank Investment Management, which manages the wealth of the Norwegian Government Pension Fund Global, China Investment Corporation, and Abu Dhabi Investment Authority) is about 3,000 people with total assets under management exceeding $2 trillion, as compared to the 20,000 staff of an institutional investor such as Fidelity, managing $1.5 trillion. The internal capabilities for internal execution will increase, but still the legacy of SWF as relatively understaffed organization will matter for these developments. We thus expect that deal size will tend to decrease on average, but will remain significantly higher than typical private sector transactions in the foreseeable future. Indeed,

Figure 2: Direct SWF Investment: Average Deal Size since 2000



Publicly available data for direct SWF equity & real estate deals, joint ventures and capital injections. Source: Sovereign Investment Lab, Università Bocconi

diversification will continue being a driving force, but sectors and geographies where these organizations tend to have a competitive advantage as investors will skew operations in favour of larger deals and high price tags.

Sectors

In 2013, as usual, financial services received more publicly reported investments from SWFs than any other sector: 47 deals worth $11.0 billion, 22 percent of total investment. At the peak of the financial crisis, the financial sector attracted the lion's share of sovereign investments and stellar amounts in the form of capital injections in distressed banks in both developed and emerging economies. More recently, SWFs have diversified their portfolios better by reducing overall exposure to banks in their new investments.

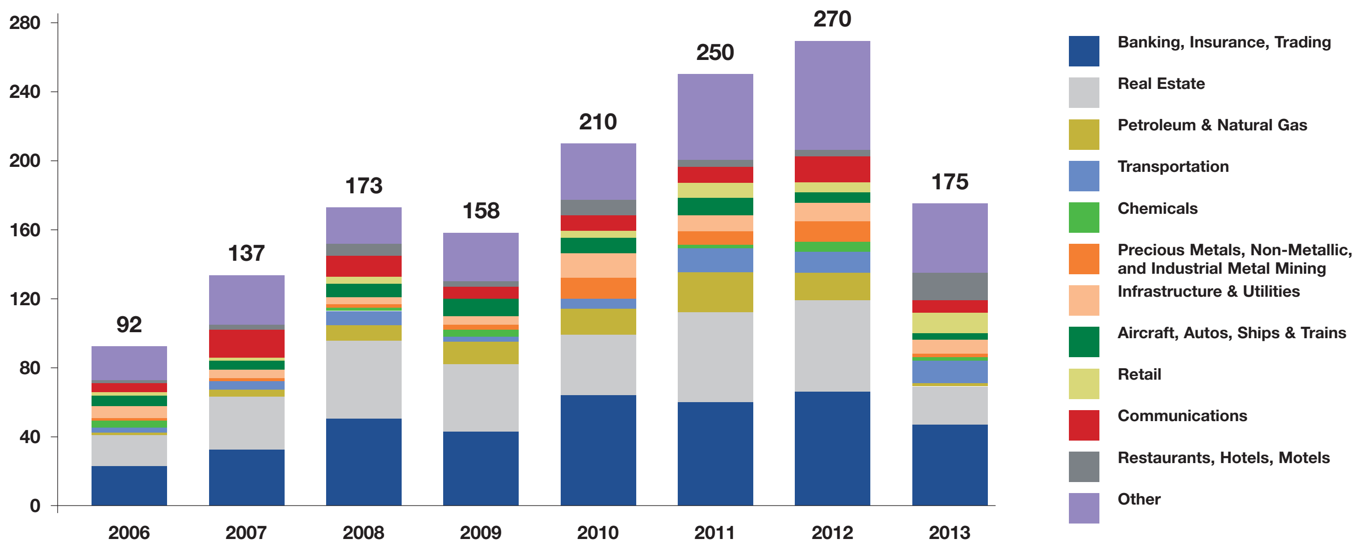
Also, we should note that, while SWF investments in the financial industry in the 2008-2011 years were focused on domestic rescues and recapitalizations of struggling Western financial institutions, in 2013 SWFs allocated their investments abroad primarily to banks in emerging economies. In other words, while SWFs are still in part aiding with domestic recovery, about half of their financial-sector investments are aimed at gaining exposure to the sector's recovery – and are thus more likely to be cross-border investments.

At any rate, SWFs' appetite for big international banks did not vanish completely in 2013. Indeed, one of the most significant deals of the year is the $1 billion investment in Bank of America by the Qatar Investment Authority (QIA), an example of the fund's strategy to acquire minority stakes in major global companies. The position, while significant in absolute size, represents a stake below 1 percent and did thus not require regulatory disclosure. Accordingly, while QIA disclosed the investment in the fall of 2013, shares were likely accumulated over the previous two years on the open market. The rationale of the investment appears to be a desire to profit from the US recovery. Yet, we know little about QIA's stakes in US firms and it is possible that the SWF is holding other, undisclosed, investments below the five percent reporting threshold. In the past, QIA has gained exposure to Western financial institutions through a stake in Credit Suisse, acquired in 2008, and three capital injections into Barclays in the same year. QIA currently holds also interests in the financial sector in Greece, after investments in the now merged Alpha Bank and Eurobank.

With this notable exception, in 2013 SWFs shied away from the financial industry of developed economies, focusing instead on emerging markets. Probably one of the most interesting deals of the year is the joint acquisition of Russia's second-largest bank VTB by a consortium of sovereign wealth funds, including Qatar Holding, Azerbaijan's state oil fund SOFAZ, and Norges Bank Investment Management, each investing about $500m. This $3.3 billion secondary offering – a privatization diluting the Russian Government's ownership stake from 75.5 percent to 60.93 percent - has strengthened considerably VTB Bank's capital ratio, being also a direct result of the Russian Government's stated policy of seeking to privatize a number of key state entities over the next several years. Interestingly, this deal represents a case of sovereign involvement on the two sides of the market, as seller and buyer, an outcome that we will be observing frequently in future privatization waves. Amongst cross-border deals in the financial sector, we should also note the acquisition by the Government of Singapore Investment Corporation (GIC) of 5.6 percent of the Bank of Philippines Island marking the enduring relevance of the fund as a key regional player in South Asia.

Reporting on China Investment Corporation (CIC) activism in the domestic banking industry in 2012, we concluded that with slowing GDP growth and shrinking bank profits due to bad loans, the most recent round of capital infusions was not going to be the last. Indeed, our prediction was correct. In 2013, CIC has relied heavily on its domestic arm, Central Huijin, to strengthen all "Big Four" state-owned banks also as a strategy to prop up the domestic equity markets for "A shares". The fund invested $439 million in nine capital injections involving the Industrial and Commercial Bank of China (ICBC), the Bank of China, the Agricultural Bank of China, and the China Construction Bank (CCB). Temasek, the second largest fund from Singapore, followed in this wake by buying a minority stake in ICBC in two tranches worth $273 million. Temasek, by amassing stakes worth almost $18 billion in Big Four, is the biggest foreign investor in Chinese banks, and is continuing to build on the portfolio rather than shrinking it. Such an overexposure to the Chinese banks may be risky: if growth in China continues to slow down, the financial sector will be the first affected, and this might seriously dent the portfolio. It must be noted, however, that Chinese banks, facing deteriorating conditions at home, are accelerat-

Figure 3: Number of Direct SWF Investments by Target Sector, 2006 - 2013

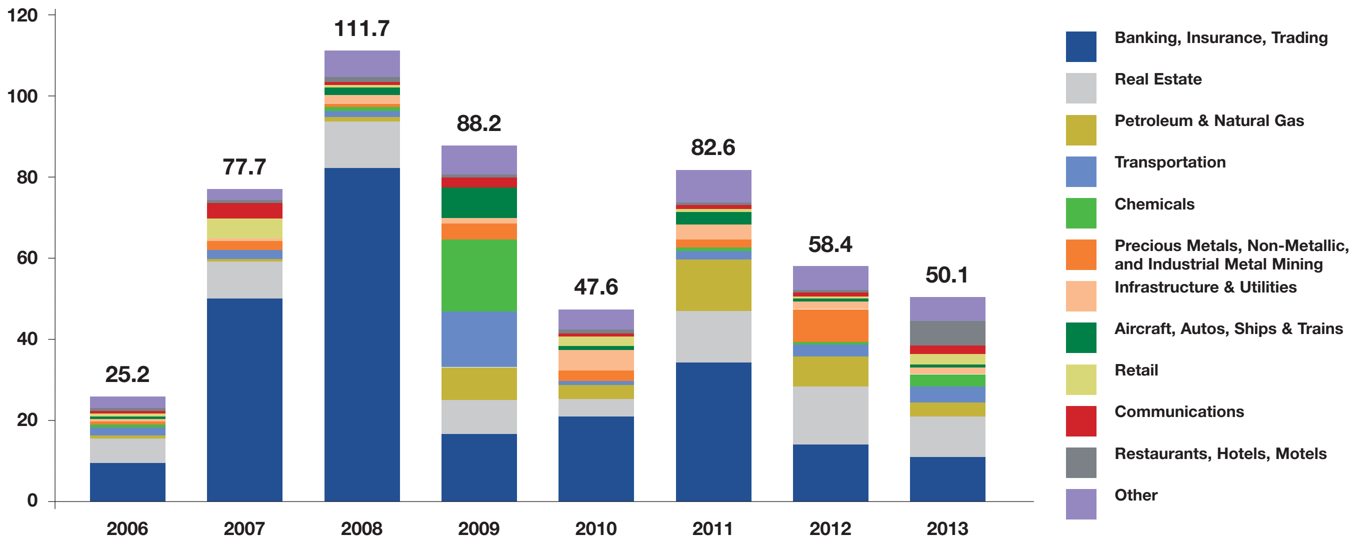


Publicly available data for direct SWF equity & real estate deals, joint ventures and capital injections. Source: Sovereign Investment Lab, Università Bocconi

ing global expansion as demand for offshore financial services surges along with the growing presence of Chinese companies in overseas markets. In 2013, CCB, has acquired 72 percent of capital of Banco Industrial e Comercial, a primary commercial bank in Brasil, and also participated with a $100 million ticket to the consortium involving SWFs for above mentioned privatization of the Russian VTB. Construction Bank, which added operations in countries including Dubai and Japan this year, now has 17 subsidiaries with assets of about $120 billion in 15 nations. Geographical diversification of activities by Chinese banks has become an important trend to follow and could have strong consequences for the SWFs who have invested in them.

Since the financial crisis, real estate had an increasing role on SWF investment portfolios. During 2012, SWFs went on a spending binge and so reporting a scaling back in 2013 is hardly surprising. With 22 publicly reported deals worth $10 billion, real estate still represents 20 per cent of total investment value, quite in line with the total amount raised in the financial industry – and those numbers do not include the substantial investments in hotels that we analyse and discuss separately. Indeed, over the last decade, appetite for brick-and-mortar assets has increased, and nowadays together with alternative investments and private equity real estate represents a significant and increasing share of SWF portfolios. Several explanations can be set forth to understand this trend, such as the demand for safe, "inflation-free" assets, but also the cheap prices that can still be fetched in the housing markets of developed economies.

Figure 4: Value of Direct SWF Investments by Target Sector, 2006 - 2013



Publicly available data for direct SWF equity & real estate deals, joint ventures and capital injections. Source: Sovereign Investment Lab, Università Bocconi

While in line with these broad trends shaping portfolio reallocation, we highlight a few noteworthy features in 2013 activity in real estate: a high concentration of very large deals in the United Kingdom and US and the absence of development projects in emerging economies. The BRICs (Brazil, Russia, India, and China) are slowing down in both absolute and relative terms: according to IMF estimates, they accounted for two-thirds of world GDP growth in 2008, for half of it in 2011, and for about 40% in 2013. Naturally, this translates into lower investment flows towards development and infrastructure projects in the developing world.

Interestingly, sovereign investment in real estate last year is dominated by four SWFs. GIC alone spent $3.58 billion in the sector and executed one of the biggest European property deals since the financial crisis, the $2.8 billion acquisition of Broadgate Estates, a large office and retail complex at the heart of the City of London, purchased from US private equity firm Blackstone. In partnership with ADIA, the Singaporean fund also contributed $400 million to a $1.3 billion purchase of Time Warner's headquarters in the Time Warner Center. Indeed, ADIA has been very active in the French property market last year, by completing the acquisition of Docks Lyonnais portfolio – which includes 6-8 Boulevard Haussmann in Paris, Le Capitole in Nanterre and Antony Parc in the south of Paris - from UBS Wealth Management fund, for $916 million, and the acquisition of a large property in 90 Boulevard Pasteur.

The Norwegian Government Pension Fund Global (GPFG) is not immune to this trend. Its portfolio has been traditionally focused on equities and bonds,

but more recently its allocation has changed to include a 5 percent of assets in real estate. In 2013, the fund landed in the US after tapping European property markets, and started to add on its global portfolios properties worth $1.7 billion, including the entire block of the iconic Time Square Tower from Boston Properties, the assets of a joint venture with the US pension fund TIAA-CREF, and a portfolio of 11 UK distribution properties from the real estate firm LondonMetric through a joint venture with Prologis (U.S. Logistic Venture – USLV)

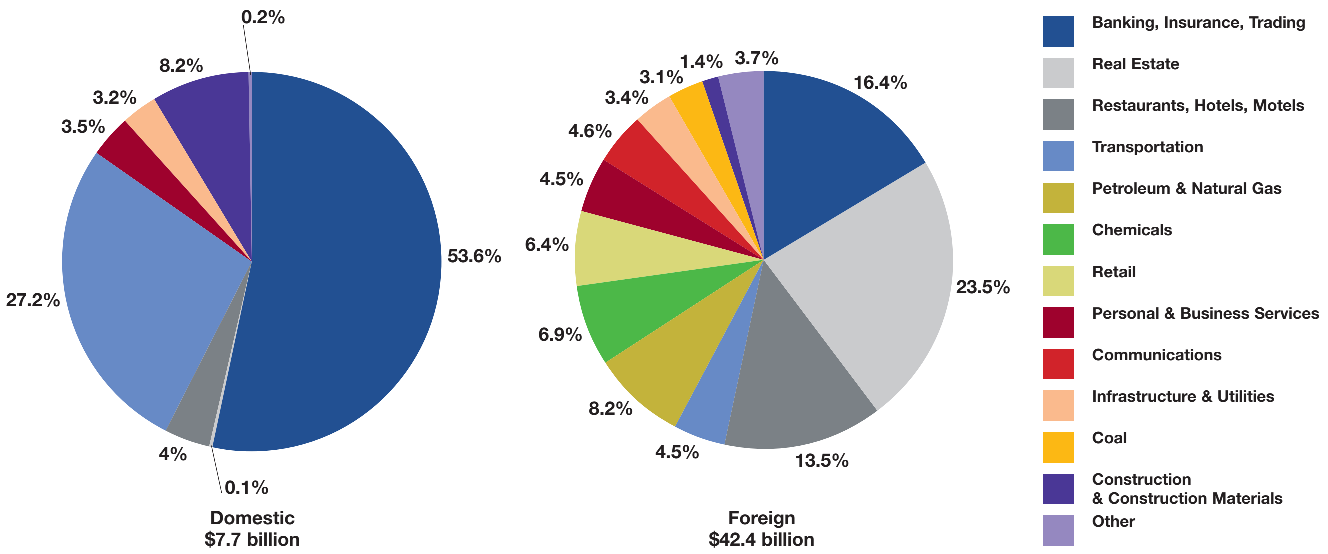
Finally, the Kuwait Investment Authority (KIA) surpassed the $1 billion mark of property investment in London and New York. KIA completed its acquisition of Bank of America's European headquarters from the private equity group Evans Randall. The sale of London's 5 Canada Square marks one of the most valuable office transactions in London since the start of the global financial downturn and highlights the increasing interest from Middle Eastern sovereign wealth funds in prime office space in London. In U.S., the Atlanta-based subsidiary of KIA acquired Washington's 1200 19th St. NW for about $294 million, or roughly $871 per square foot, one of the highest prices for an investment sale in downtown D.C. Finally, KIA joined also forces with real estate developer Related Companies and Oxford properties to invest in the $15 billion Hudson Yards project in Manhattan.

In 2013, deal flow in hotels and tourism facilities has been particularly impressive, yielding $6 billion in 16 acquisitions, following a very similar pattern of real estate deals. SWFs displayed a strong preference for assets of established brands in developed markets, and the usual handful of funds was involved. QIA confirmed its appetite for trophy-assets and luxury brands by acquiring via its specialized subsidiary Constellations Hotels Holding nothing less than the InterContinental flagship hotels in London and New York, l'Hotel du Louvre in Paris, and the Four Seasons Hotel in Florence. In a separate £100m deal it also acquired the freehold from the Crown Estate, the property company that controls the assets of the Crown in the United Kingdom. Indeed, QIA is building a global top-end hotel portfolio, and this year's $2.4 billion purchases mark another landmark in the process.

The boom in real estate continues a pace with a shift from development projects to existing brick-and-mortar assets

However, the single largest deal of the year in the hotel sector was completed by GIC, acquiring three luxury resorts managed by the Waldorf Astoria Hotels & Resorts brand of Hilton Worldwide, among which the Grand Wailea Resort in Maui, Hawaii for $1.5 billion. After winning a tough bidding with other investors including other SWFs, Abu Dhabi Investment Authority (ADIA) bought for $991 million 42 Marriott-branded hotels from Britain's Royal Bank of Scotland featuring landmark hotels in the United Kingdom's capital, including the County Hall hotel and the renowned London Regent's Park. Finally, the acquisition of the historical Hotel Eden in Rome by the Dorchester Group, the luxury hotel

Figure 5: Direct SWF Investments by Sectors in Domestic and Foreign Markets, 2013



Publicly available data for direct SWF equity & real estate deals, joint ventures and capital injections. Source: Sovereign Investment Lab, Università Bocconi

operator of Brunei Investment Authority, is certainly worth mentioning.

Infrastructure assets look attractive to SWFs because of their strong correlation with economic growth, inflation protection and relative high levels of earnings certainty. This is the reason why funds continue to seek opportunities to increase exposure to high quality infrastructure around the world. In the last decade, however, deal flow in the sector was not particularly impressive, which is a reflection of a scarcity of available projects. In the aftermath of the crisis, funding for projects increasingly dried up, and countries started to suffer from infrastructure bottlenecks undermining their potential to grow. In 2013, global SWFs entered the scene, investing a total of $4 billion of direct equity investment on infrastructure projects with a high exposure to a country's exporting capabilities: airports and ports. Australia, due to its impressive resilience throughout the crisis, was one of the main beneficiaries of this stream of investments. As to domestic deals, the Australian Future Fund acquired the assets of the country's largest listed infrastructure fund (AIX) for $2.1 billion, including stakes in airports in Perth, Melbourne and Queensland. As to international deals, ADIA took part in the consortium including Australian superannuation funds winning the 99-year lease contract from the New South Wales government for the operation of Sydney's Port Botany and the Illawarra's Port Kembla with a consideration of $1 billion. Once again, we are observing SWFs taking part in privatizations, and this deal will certainly not be the last. Outside Australia, but in a similar vein, Mubadala from Abu Dhabi acquired joint control with Dutch energy firm Trafigura Beheer of the port and iron ore

terminal MMX Porto Sudeste, an iron ore port owned by (former) billionaire Eike Batista. The deal represented the latest effort to stave off the collapse of his once high-flying Grupo EBX conglomerate, thanks to a $996 million cash infusion that takes debt off his hands and secures new investment for the completion of the port.

Recent SWF investment in energy consolidates the "crawling down the value chain" effect that we reported last year. After having invested significantly in the last years in the primary provision of commodities, in 2013 SWFs focused on integrated oil and gas and energy infrastructure with total investments of $5.2 billion. This progressive strategy of downstream expansion along the value chain can have multiple purposes. At a more general level, energy is a good proxy for the needs of transforming economies and growing middle-class population, typical investment themes by SWFs. For resource rich countries, however, it is also a result of the desire to acquire increasing control over the entire value chain of the supply of energy, allowing higher profit margins through integration.

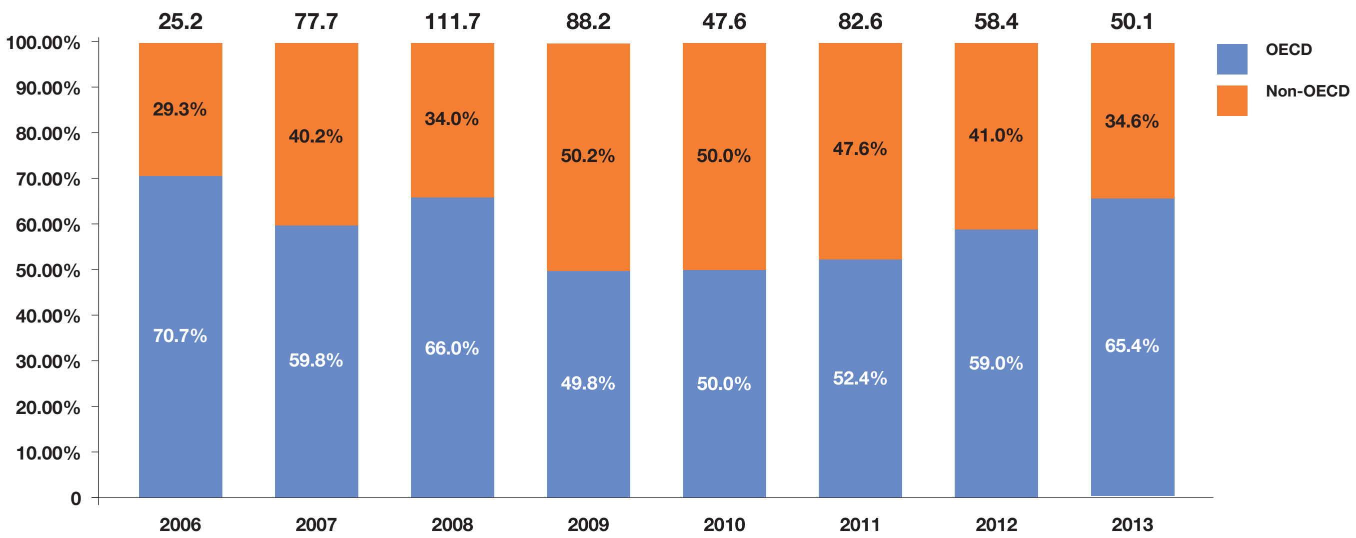
This argument validly applies to the most recent deals by QIA in the sector. The fund raised its stake in Total, the French oil and gas operator, to 4.8 per cent thanks to the acquisition of an additional stake worth $2.1 billion. QIA further teamed up with other local players such as Qatar Electricity and Water Co. and Qatar Petroleum International to create Nebras Power, a $1 billion multi-utility that will invest in power generation, water desalination, and cooling and heating projects in countries with as much as 8 percent growth in electricity demand a

Luxury hotels and tourism facilities in Western markets are targets of choice

year, mainly in the Middle East and East Asia. While being classified as a domestic investment, the project is strongly exposed to external drivers of growth.

The rest of energy investment in 2013 came from Singapore. Temasek doubled the size of its portfolio in energy by purchasing a $1.3 billion share in Repsol, the Spanish oil and gas operator, raising its stake to 6.3 per cent, and by completing the acquisition of Sembcorp Utilities, the Dutch-based global energy and global operator. The other SWF from Singapore, GIC, formed a consortium with Snam, the Italian gas transport and storage operator, and EDF, the French electricity giant, for the acquisition of Transport et Infrastructures Gaz France (TIGF), Total's gas transport and storage business in the South-West of France, a strategic platform for the interconnection of the European gas markets. This deal, the largest of the year in the utilities sector, follows in the wake of a process of unbundling and vertical de-integration by oil and gas companies, which is taking place in Europe with the aim to streamline activities and strengthen financial positions. Finally, GIC invested a sizable amount in Aegea Saneamento e Participações, managing a wide portfolio of water and sewage concessions in Brazil. This acquisition could be the first of many Brazilian deals to come for GIC, which has just opened an office in São Paulo to ramp up its investment in Latin America, which remains an attractive

Figure 6: SWF Investments in OECD and Non-OECD Markets, 2006 - 2013



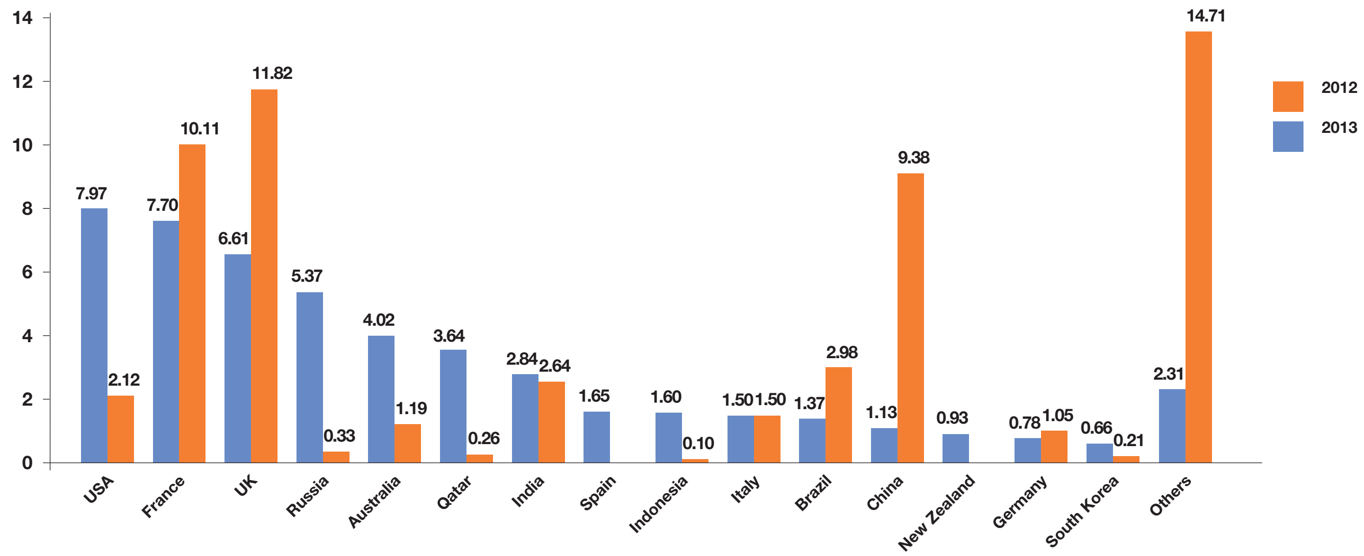
Publicly available data for direct SWF equity & real estate deals, joint ventures and capital injections. Source: Sovereign Investment Lab, Università Bocconi

region despite macroeconomic turbulence and bleak growth prospect, at least in the short run.

Companies in the chemical sector did not enter the radar screen of SWFs since the large-scale acquisitions reported in 2009. 2013 marks a definite upward trend of investment in the sector, primarily thanks to the acquisition of the world largest potash producer, the Russian Uralkali, by CIC. This $2.1 billion deal, the third largest by value in 2013, involved the exchange into equity of bonds issued by a special purpose vehicle owned by Russian oligarch Suleiman Kerimov. The move paves the way for Mr. Kerimov's exit as shareholder to quell an ugly dispute with Belarus that has landed Uralkali's chief executive in a Belarusian prison and prompted Belarus to issue a warrant for Mr. Kerimov's arrest. The arrest of the CEO on abuse of power charges followed Uralkali's departure from a trading partnership with Belarus' state-run potash miner that effectively ended an informal global pricing cartel and threw the market for the fertilizer additive into turmoil. Chinese investors should contribute to stabilize company and markets. At a more general level, as economic development and urbanization continues, China's demand for agricultural products (including fertilizers) will keep on growing. Agriculture is a relatively stable investment, but more importantly, it provides China with resources that it needs in the long term.

Finally, QIA confirmed its interest in "trophy assets", as its investment in luxury brands and retailers continues unabated. QIA's subsidiary Qatar Holding took full control of French department store Printemps. Qatar Holding bought a controlling stake from the real estate investment division of Deutsche Bank's Asset Management division via its specialized Luxemburg-based operating arm Divine Investment, outbidding the French competitor Galeries Lafayette. QIA also increased its stake in Tiffany & Co. to 11.3 percent, with the acquisition of an additional 3.2 million shares of the retailer. After Harrods, LVMH, Porsche, and some of Europe's leading luxury hotels, the extent of Qatar's Investment Authority involvement in the luxury industry this year has become even more impressive, perhaps not surprising given that Qatar is, by some metrics, the richest country in the world.

Figure 7: Direct SWF Investments by Target Country in 2012 and 2013



Publicly available data for direct SWF equity & real estate deals, joint ventures and capital injections. Source: Sovereign Investment Lab, Università Bocconi

Geography

If one takes a broad view on SWF investment flows over the last years by target regions, the strong preference given to developed markets sticks out. On average, OECD economies account for the majority of deal values. Interestingly, this share has been steadily increasing since 2010, reaching 65 percent of total investment in 2013 ($32.7 billion), the highest value since the financial crisis. The share of BRICS, conversely, shrunk to 21 percent ($10.7 billion), while frontier markets (i.e. economies with thin capitalization and illiquid markets but endowed with a potential to graduate as fully fledged emerging economies) lagged behind. One could interpret this decline of interest by SWFs in emerging markets as an initial effect of the so called Great Deceleration, whereby the investment in BRICs does not look any longer impressive as compared to the prospect and stability of mature economies and to the low prices that can fetched in these markets. Indeed, with the Eurozone stabilizing thanks to ECB

Teaming up: the rise of alliances among like-minded investors

Over the past year, SWFs have displayed an increasing desire and ability to team up and find opportunities for co-investments with other SWFs or other financial investors and through joint-ventures. This trend is related to SWFs moving away from expensive – and not always effective – external fund management and towards more internal portfolio management. As SWFs attempt to manage a larger portion of their funds in-house, collaboration is a way to leverage limited human-resources, to learn from their investment partners, and to spread risks. The rationale is very simple: sharing information, generating economies of scale, leverage up control power while maintaining portfolio diversification.

Alliances amongst SWF have typically taken the form of direct equity co-investments in the same target, epitomized by high mark acquisition of Total and Xstrata by the pooled resources of QIA, CIC, and GIC. Another high-profile co-investment is the acquisition in 2013 by GIC, ADIA, KIA, and the GPFG of an undisclosed share of Royal Mail, the renowned postal operator of the United Kingdom, with a combined deal value of $340 million. In particular, GIC emerged as the second biggest private investor in Royal Mail with a 4.1 percent stake in the newly privatised delivery company. SWF co-investment in privatizations included also the acquisition of Russia's second-largest bank VTB by a consortium including Qatar Holding, Azerbaijan's state oil fund SOFAZ, and Norges Bank Investment Management, each investing approximately $500m.

A trend surfacing in 2012 and consolidating in 2013 is the emergence of private equity funds as joint-ventures amongst SWFs and other sovereign investors. Last year we reported the launch of the IQ Made in Italy joint-venture between Fondo Strategico Italiano, the private equity investment arm of Italian Cassa Depositi e Prestiti, and Qatar Holding, the subsidiary of QIA. This model has been institutionalized by the Russian Development Investment Fund (RDIF). By statute, in every transaction it enters into, RDIF is mandated to co-invest with an international investor qualified by size. In 2013, RDIF successfully established bilateral investment platforms with SWFs such as Mubadala from Abu Dhabi, the Korea Investment Corporation, CIC, and the Fondo Strategico Italiano, and deals started to flow. The Russia-China venture invested in the Russian Forest Products Group and in the Moscow Exchange. In a similar vein, this year also witnessed the investments in Indian operators National Commodity and Derivative Exchange and the Bangalore based ING Vysya Bank by the Oman India Joint Investment Fund. This special purpose vehicle between Oman's SWF and the State Bank of India was launched in 2011with an initial corpus of $100 million for promoting joint investment in projects in India but the investment partnership between India and Oman is reflected through operation of hundreds of joint ventures which are valued at $7.5 billion.

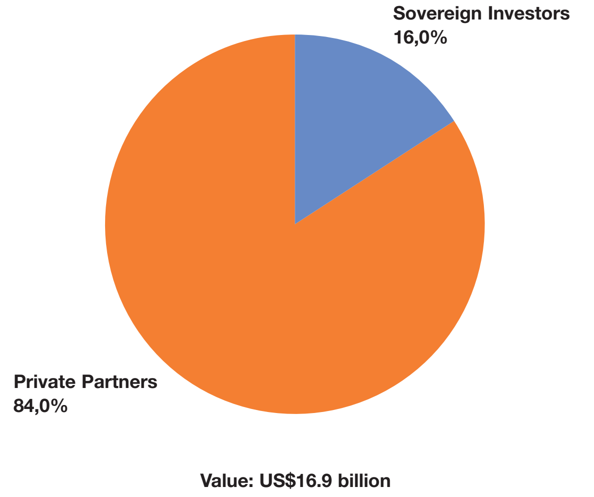
In context of rising alliances, a very interesting trend to follow is the increased cooperation between SWFs and other private, like-minded investors in deal making. In a rather bold move, the Qatar Investment Authority has invested $3 billion in the launch of Doha Global Investment Company, a new business half-owned by the country's sovereign wealth fund and half by the private sector, giving Qatari institutions and individuals the chance to invest around the world alongside the state. The vehicle was slated for listing on the Qatar Exchange, which seeks to rival Dubai as a financial hub, but the IPO has been postponed officially due to lacking regulatory approvals. Indeed, the public listing of the company might require the disclosure of information about sponsoring entities, and the Qatar Investment Authority – a rather conservative organization – might be reluctant to fully open its books. However, the QIA move is a step further: the SWF not only acts as a co-investor and partner, but is here the largest investor and catalyst for a large number of private-sector co-investors.

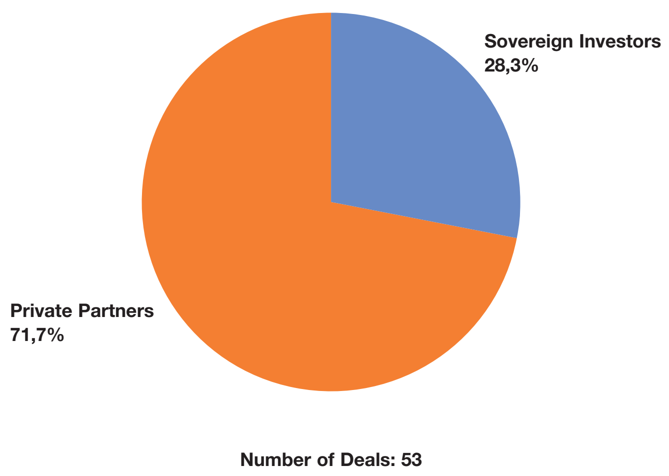
Recent joint ventures involving SWFs

Joint Venture Name	Year of Inception	Description
Astrea I (Partnership of Temasek)	2006	Temasek sponsored Astrea I in 2006 with a diversified and balanced portfolio of selected Temasek interests in high quality private equity funds. Astrea I was intended as the first of a series of private equity co-investment platforms.
Oman Brunei Investment Company	2009	Oman Brunei Investment Co. is a private equity fund jointly capitalised by Ministry of Finance, Government of Oman (@ 50%) and the Brunei Investment Agency (@ 50%) with a capital of US$ 100 million. The fund company has been created to promote social, financial and economic benefits to Oman, GCC and Brunei. The fund shall undertake investments in Infrastructure, Utilities, Metals, Education, Service, Healthcare, Manufacturing and add value to its investee companies over the investment horizon.
Oman India Joint Investment Fund (OIJIF)	2011	Oman India Joint Investment Fund is a private equity fund sponsored by Oman's sovereign wealth fund State General Reserve Fund and India's largest lender State Bank of India. It was created with an initial corpus of US$100 million.
Russia-China Investment Fund (RCIF)	2012	The Russia-China Investment Fund (RCIF) is a $2-4 billion private equity fund, established jointly by the Russian Direct Investment Fund (RDIF) and China Investment Corp (CIC), aims to generate strong returns from equity investments in projects that take advantage of the increasingly robust economic relationship between Russia and China.
Russian-Korean Investment Platform	2013	The Russian Direct Investment Fund and the Korea Investment Corporation agreed to form the Russian-Korean Investment Platform. The investment platform will focus on cross-border investments which fulfill Russian- Korean strategic interests.
RDIF-Mubadala Co-Investment Fund	2013	RDIF-Mubadala Co-Investment Fund is a $2 billion co-investment fund to pursue opportunities in Russia. The fund will predominantly focus on long-term investment opportunities across a range of industry sectors, acting as a catalyst for direct investment in Russia. The announcement is aligned with Mubadala's plans to establish a strong presence in key international markets. Mubadala and RDIF are each committing $1 billion. The majority of Mubadala's commitment will be deployed in opportunities that will be evaluated on a deal-by-deal basis while some of the capital will be invested as an automatic co-investment into RDIF deals.
Unnamed Assets Fund (Partnership of GIC)	2013	A unnamed dedicated assets fund created by a Consortium constituted by Snam, the Italian gas transport and storage operator (45%), GIC, the Singaporean sovereign fund (35%) and EDF (20%, through its dedicated assets for the dismantling of nuclear plants)
NSW Ports (Partnership of ADIA)	2013	Led by Industry Funds Management, the consortium includes AustralianSuper, Cbus, HESTA, HOSTPLUS and Tawreed Investments Limited, a wholly owned subsidiary of the Abu Dhabi Investment Authority. NSW Ports is committed to the long term sustainable development of the ports for the benefit of the shareholders.
JV Norwegian Government Pension Fund Global and Boston Properties	2013	Real Estate Joint Venture

JV Norwegian Government Pension Fund Global and TIAA-CREF	2013	In February 2013, TIAA-CREF and Norwegian Government Pension Fund Global announce $1.2 Billion Real Estate Joint Venture. TIAA-CREF, a leading financial services provider, enters into a joint venture with Norges Bank Investment Management (NBIM), manager of the Norwegian Government Pension Fund Global, to invest in high-quality office properties in Boston, New York and Washington. TIAA-CREF owns a 50.1 percent share and will manage the joint venture. NBIM holds the remaining 49.9 percent share. The joint venture is invested in several prime office properties measuring 1.9 million square feet and valued at $1.2 billion (approximately 6.6 billion kroner). TIAA-CREF and NBIM plan to co-invest in additional high-quality office properties in Boston, New York and Washington.
Astrea II (Partnership of Temasek)	2014	Astrea II is a co-investment vehicle with broadly diversified holdings in 36 private equity funds. Temasek is the single largest investor in Astrea II at 38%. Astrea II is the latest of Temasek's continuing efforts to develop co-investment platforms where diversified portfolios of assets can be made available to a broader base of investors, including retail investors in the long term.

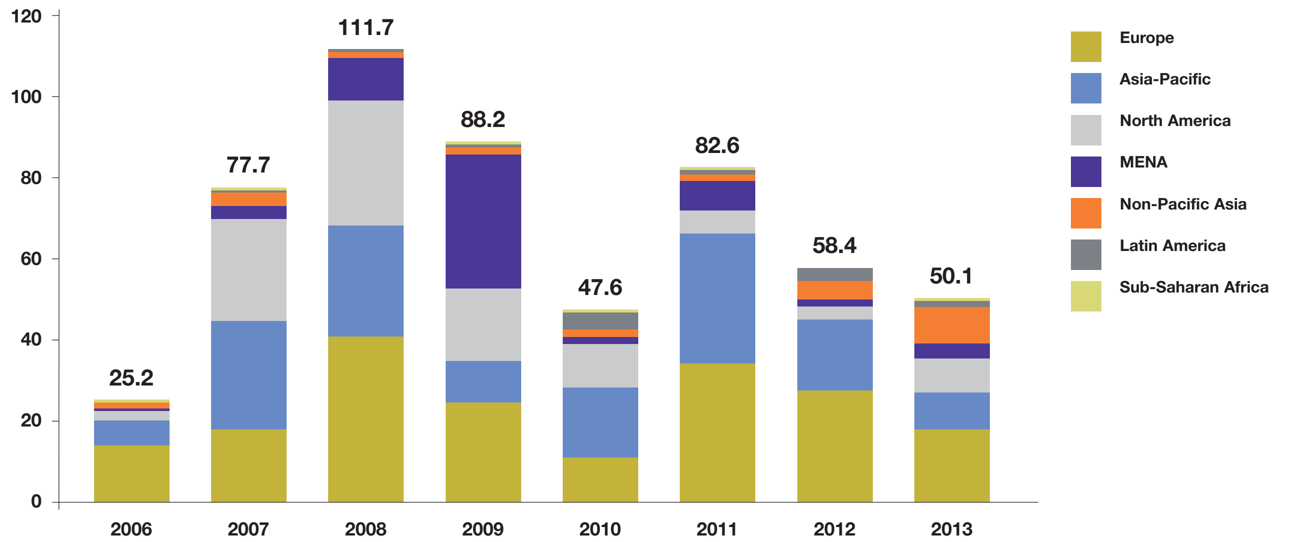
Direct SWF Co-investments by Type of Partnership, 2013





Publicly available data for direct SWF equity & real estate deals, joint ventures and capital injections. Source: Sovereign Investment Lab, Università Bocconi

Figure 8: Value of Direct SWF Investments by Target Region, 2006 - 2013



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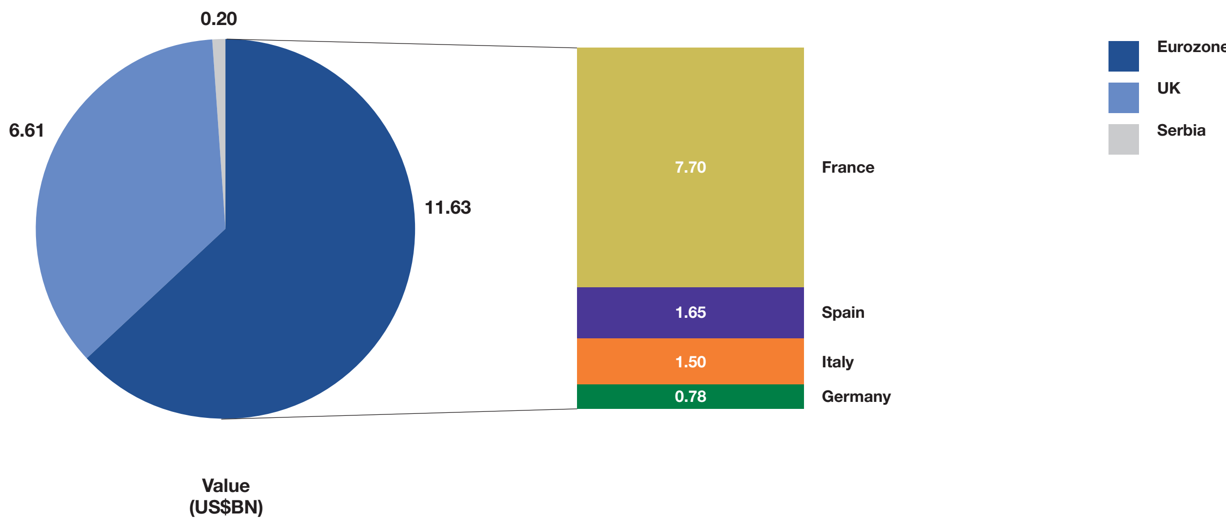
announcements and the US in sustained recovery mode, in 2013 SWFs pushed heavily investments in Western markets, where they found suitable targets by size and well-functioning institutions to protect their returns.

At a closer look, the regional breakdown reveals some new interesting trends. While European targets still attract most SWF activity (33 deals accounting for $18.4 billion, 37 percent of total value), the Asian-Pacific region is down to 18 percent ($9.1 billion), half of what it raised in 2012. Investments in the United States resumed in earnest, up from the tiny 5 percent of deal value reported last year to 16 percent ($8.3 billion). But the real surprise of 2013 is the Non Pacific Asia, boasting 18 percent of total investment ($8.9 billion) thanks to revamping interest in Russia, India and Turkey. The analysis by target region thus allows us to qualify more precisely the effects of the macroeconomic adjustments reported before: within BRICs, China was the country mainly affected by the reallocation.

Lumping global SWF activity by region misses a qualifying feature in the geography of sovereign investment such as its international profile captured by the distinction between domestic and foreign deals, which in turn hinges upon their investment strategy and ultimately their mission. Some funds (such as Mubadala, Temasek, etc.) have a strong domestic focus and a broad mandate to support the national economy. Other funds (such as QIA, KIA, etc.), due to the limited absorption capacity of their national economies, invest internationally a larger share of surplus, seeking better returns and diversification opportunities.

Figure 9: Foreign SWF Investments in Europe, 2013



Publicly available data for direct SWF equity & real estate deals, joint ventures and capital injections. Source: Sovereign Investment Lab, Università Bocconi

The SIL definition of a "sovereign wealth fund" hinges upon a significant share of investment to be carried out abroad by the funds, even if all our funds (with the notable exception of Norway's GPFG) are free to invest at home especially if the national economy requires support, as it often happened throughout this prolonged crisis. That the overwhelming majority of direct equity investments by our funds took place abroad is thus hardly surprising. Nevertheless, the stability of this share in the last years is quite striking: in 2013, the share of foreign deals by value is 85 percent, remaining virtually unchanged relative to previous year. As long as some pro-cyclicality can be traced in the international patterns of SWF activity, this recent trend can be interpreted as an additional sign of stabilization and recovery of the investing countries.

As usual, the largest share of cross-border investment landed in Europe, with a twist. For the first time since the inception of our series, the United Kingdom does not lead the ranking by annual deal value. In 2013, the prize is carried off to France, in the context of an overall rebalancing in favour of the Eurozone. True, London still attracts the largest deal flow by operations, but the total price tag for French targets acquired by SWF is one billion larger than the British, with a total of $11.6 billion raised in the Eurozone. Furthermore, in 2013 SWFs started to worry about the growth prospect of emerging economies and therefore limited the indirect exposure to those markets via investment in European manufacturers with a large market shares abroad. This rebalancing is clearly visible in the sector allocation of SWF investment in 2013: the combined value invested in European non tradable sectors

Western companies have been targets of choice while investments in BRICs slowed down especially in China

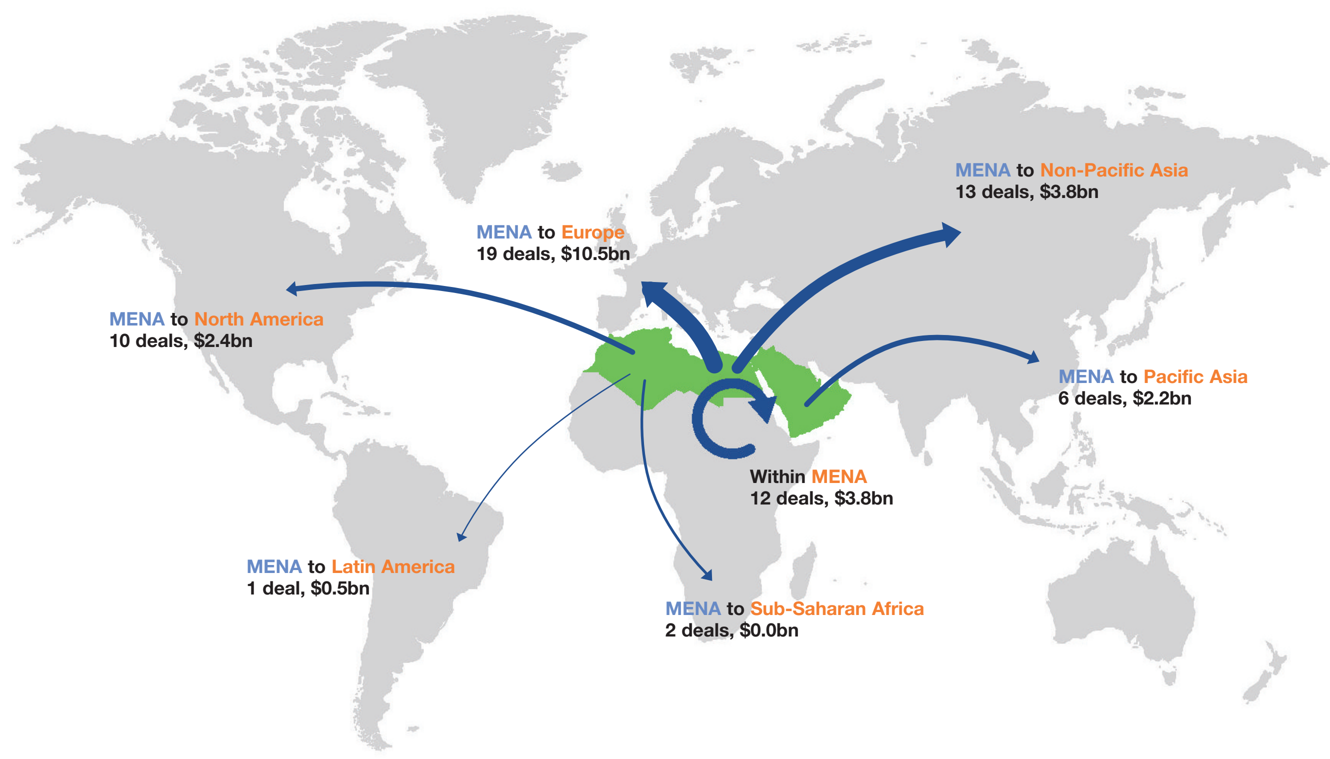
(primarily real estate) is $10 billion, 55 percent of the total European investments, against the 36 percent reported last year.

France jumped in top position thanks to the trophy brick-and-mortar assets purchases by ADIA and QIA along with stakes acquired in top energy players by GIC and again QIA. London, the usual magnet of SWF investments in real estate, completed five large scale operations (including a real estate development project involving the Norway's GPFG) worth in total $5.4 billion, 81 percent of total SWF inflow in the country.

Singapore's SWFs Temasek and GIC account for the rest, acquiring a stake of around 10 percent in Markit, the fast-growing UK financial data company, and Rothesay Life, a large pension insurer. Spain implemented some structural reforms aimed at increasing competitiveness, and in terms of attraction of foreign capital, those are starting to pay out. SWF investment in Spanish companies increased significantly in 2013, thanks to two large investments: the 5 percent stake acquired by Temasek in the oil group Repsol makes the Singapore investor the company's fourth-largest shareholder; and the investment in the railroad construction company Construcciones y Auxiliar de Ferrocarriles by the Norwegian GPFG. For Spain, a confidence vote by highly respected SWFs is certainly a valuable political dividend. Italy, a country finally on the radar screen of foreign institutional investors, gained the attention of SWFs, as they invested $1.5 billion in five sizable deals. Those included the Qatar Investment Authority acquiring a 40% stake in the Milan financial district Porta Nuova and thus boosting one of the most ambitious real estate development projects in the country, and the bail-out of Piaggio Aero by Abu Dhabi Mubadala, an acquisition recently cleared by Italian government enjoying a "golden share" in the company.

In 2013, the other most attractive regions in terms of cross-border investment flows have been Non-Pacific Asia and North America, each reporting a total deal value more than $8 billion, 17 percent of the total foreign investment. The leap forward of Non Pacific Asia has been quite spectacular thanks primarily to the keen interest on Russian targets, which raised alone $5.4 billion. SWF investment in Russia in 2013 has some key features: heavily skewed in favor of the financial and chemical sectors, typically executed in partnership with the local sovereign investor or with other SWFs, and strongly affected by Chinese acquisitions. Indeed, CIC, primarily via its subsidiary Chengdong Investment Corporation, was the key player investor in all major deals. India sticks out as the other country of choice in the region, with 17 operations worth $2.8 billion. The Oman Investment Fund via its JV with the State Bank of India and Temasek have been the most active funds and broadly diversified investments across sectors, aiming to mitigate risks of a country growing recently at a slower pace.

Figure 10: Investment Flows from Middle East & North Africa SWFs 2013

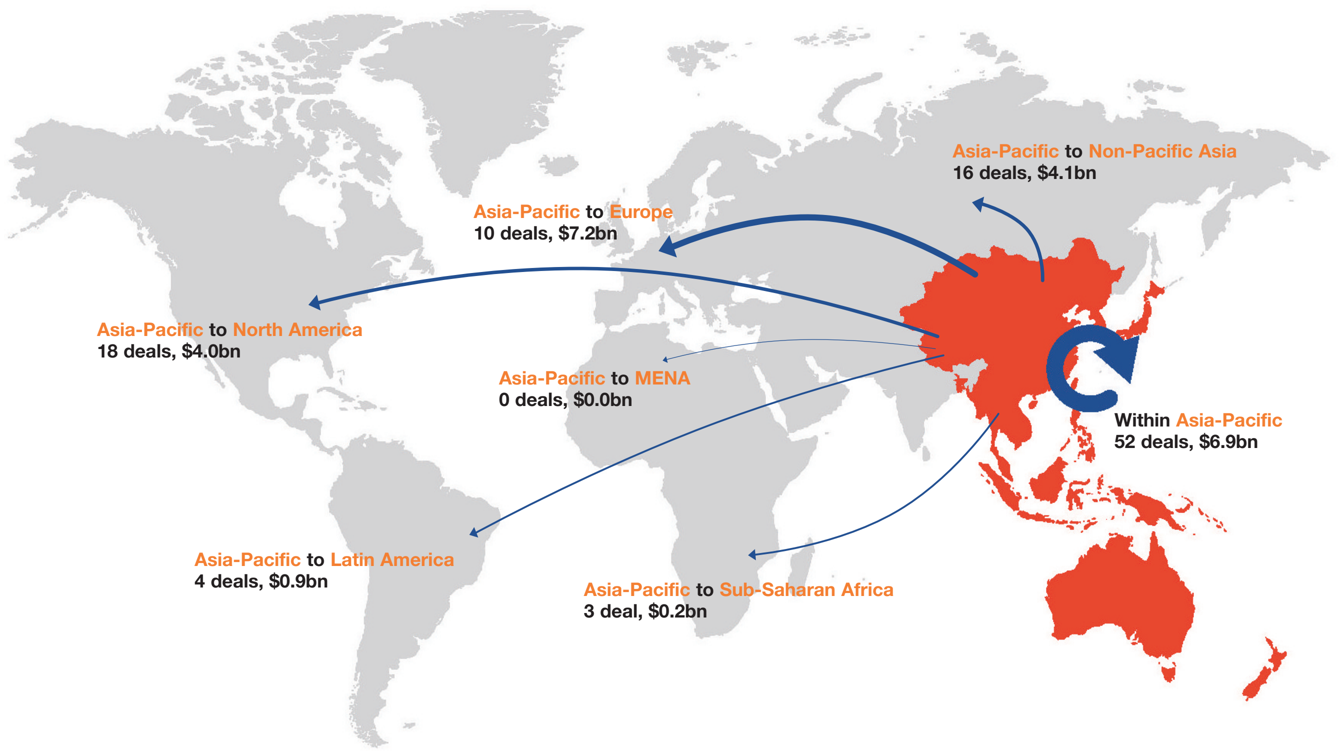


Publicly available data for direct SWF equity & real estate deals, joint ventures and capital injections. Source: Sovereign Investment Lab, Università Bocconi

In the last years, SWFs shied away from the United States, with their fingers burnt from the big bailout of Wall Street banks. However, in 2013 they came back strong, investing $8.2 billion in 29 US targets. At a closer look, with the only exception of QIA investment on Bank of America, SWF shied away from finance and invested with a vengeance in one sector, real estate. Indeed, 2013 was the record year for American brick-and-mortar, with 14 deals worth $4.8 billion executed mainly by Norway's GPFG and GIC. With the sole exception of IT company BMC Software acquired by GIC, in 2013 global SWFs did not execute a single significant deal with US manufacturers as targets.

As we noticed above, the geographical reallocation within BRICs primarily affected China. Indeed, within the Asia Pacific Region, 2013 witnessed a significant shift of market shares from China in favor of another developed country such as Australia and amongst emerging economies such as Indonesia. Chinese data are particularly impressive. Foreign

Figure 11: Investment Flows from Asia-Pacific SWFs 2013



Publicly available data for direct SWF equity & real estate deals, joint ventures and capital injections. Source: Sovereign Investment Lab, Università Bocconi

SWF investment in the country primarily from Singapore totaled $620 million, a figure dwarfed by the 4.6 billion raised in 2012. Conversely, Australia was the most successful economy of the region in attracting SWFs and the country of choice of ADIA, pouring $1.9 billion in tourist and infrastructure assets. Finally, activity in Indonesia is also noteworthy, where CIC invested heavily in coal industries, in quest of cheap energy for its manufacturers.

At a more aggregate level, an important dimension of the geography of cross-border investment by SWFs is the share of activity in neighbouring countries and region, within a logic of South-South trade and financial integration between emerging countries, as opposed to the share occurring at great distance across hemispheres. In 2013, South-South foreign SWF investment flows (i.e. within MENA, Africa, Asia-Pacific and Latin America) accounted for a total value of $6.9 billion in 47 transactions, while South-North for $31.9 billion in 86 deals. These values represent respectively the 16 per cent and the 75 per cent of the SWF foreign investments in 2013. In 2012, South-South foreign

SWF investment flows accounted for 26 per cent while South-North for 66 per cent.

Foreign investments represent a qualifying, and for some alarming, feature of SWFs activity. Nonetheless, sovereign investment is also deployed within the national borders to support long-term economic development or the domestic economy when the outlook deteriorates. We already noticed that 2013 the share domestic investments remained in the same range of the previous year, with SWFs purchasing domestic assets worth $7.7 billion in 33 deals. The bigger spender was QIA, due to the sizable investment in the Doha Investment Corporation, followed by Australian Future Fund and New Zealand Superannuation Fund, heavily engaged in upgrading infrastructure. The most active organization by number of deals is the usual suspect, CIC's Central Huijin, propping up with 12 equity investments in local big banks and financial institutions.

Funds

After the spectacular records of last year, one could hardly figure out that QIA's could gain further prominence as direct equity investor amongst SWF. Yet in 2013 QIA not only leads the ranking by deal value, but it has also increased its share of total investment from 26 percent to 30 percent, thanks to 26 acquisitions worth $14.9 billion.

Momentum changes occurred in Qatar in 2013. In July, the Emir Hamad Al Thani left the throne to his and Sheikha Moza's 33-year-old son Sheikh Tamim. Ahmad Al-Sayed, who headed Qatar Holding LLC, was promoted QIA chief executive officer, replacing Sheikh Hamad bin Jassim al-Thani (HBJ), who set the style and tone of Qatar's investment drive the former emir's 18-year reign. Commentators worried that HBJ's departure could mean a slowdown in the pace of external investment. However, deals continued to flow regularly also in the third and fourth quarter, with the usual penchant for trophy assets – often, real estate icons – and established brands across sectors. For the time being, we conclude that the changeover in power meant more continuity than disruption. Furthermore, by clarifying the lines between political leaders and the state's sovereign wealth fund, recent changes could modernize the fund and arm's length management might be beneficial to its image as a more professional institution.

Singaporean funds have been extremely active investors in 2013. As in 2012, Temasek and GIC lead the ranking by number of deals with 60 acquisitions, one third of total volume. GIC, the largest fund by assets, confirms its role of top spender with a total direct equity investment of $9.4 billion. The geographical and sector diversification of both funds is impressive, and confirming their reputation of truly global investors with distinctive missions: Temasek a strategic investor with larger stakes, GIC a fund aiming at global portfolio diversification.

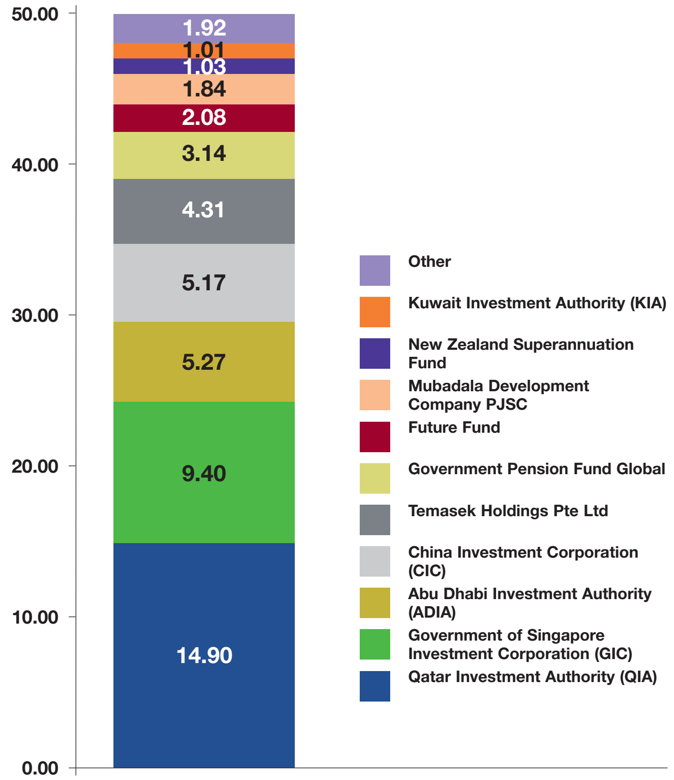
ADIA and CIC are the other big spenders in 2013, each reporting direct equity investment above the $5 billion, 10 percent of the total. ADIA displayed its usual appetite for safe assets, primarily real estate and infrastructure, in developed economies,

Table 3: Direct SWF Investments of over $1 billion, 2013

Fund	Target Name	Target Country	Sector	Deal Size Country (Value US$ Billion)
Qatar Investment Authority (QIA)	Doha Global Investment	Qatar	Banking, Insurance, Trading	3.00
Government of Singapore Investment Corporation (GIC)	Broadgate Estates Ltd	UK	Real Estate	2.78
China Investment Corporation (CIC)	OAO Uralkaliy	Russia	Chemicals	2.14
Qatar Investment Authority (QIA)	Total SA	France	Petroleum & Natural Gas	2.14
Future Fund	Australian Infrastructure Fund (AIX) - Australian Infrastructure Assets	Australia	Transportation	2.08
Qatar Investment Authority (QIA)	France Printemps SA	France	Retail	2.08
Government of Singapore Investment Corporation (GIC)	BMC Software Inc	USA	Personal & Business Services	1.68
Government of Singapore Investment Corporation (GIC)	Grand Wailea Resort Hotel	USA	Restaurants, Hotels, Motels	1.50
Temasek Holdings Pte Ltd	Repsol SA	Spain	Petroleum & Natural Gas	1.35
China Investment Corporation (CIC)	Bumi Resources Tbk	Indonesia	Coal	1.30
Qatar Investment Authority (QIA)	Bharti Airtel Ltd	India	Communications	1.26
Qatar Investment Authority (QIA)	Louvre Hotels	France	Restaurants, Hotels, Motels	1.10
Government of Singapore Investment Corporation (GIC)	TIGF	France	Infrastructure & Utilities	1.09
Qatar Investment Authority (QIA)	Porta Nuova Srl	Italy	Real Estate	1.05
Qatar Investment Authority (QIA)	Bank of America Corporation	USA	Banking, Insurance, Trading	1.00
Mubadala Development Company PJSC	RDIF-Mubadala Co-Investment Fund	Russia	Banking, Insurance, Trading	1.00

Publicly available data for direct SWF equity & real estate deals, joint ventures and capital injections. Source: Sovereign Investment Lab, Università Bocconi

Figure 12: Value of Direct Investments by Top Spending SWFs, 2013



Publicly available data for direct SWF equity & real estate deals, joint ventures and capital injections. Source: Sovereign Investment Lab, Università Bocconi

while CIC, under tighter budget constraint, pulled back investments even further, focusing on the domestic financial sector and foreign targets producing commodities to fuel cheaply its decelerating economy.

Interestingly, in 2013 a new entry in the top ten list by number of deals is the Oman Investment Fund, which balanced investments at home with sizable

QIA is the usual top spender and Singaporean funds are the most active

deals in India in order to strengthen commercial ties with the neighbouring country. By keeping the value of its assets strictly undisclosed, uncertainty remains over the effective firepower of this organization.

Finally, we report interesting news from down under. Australia's Future Fund and the New Zealand Superannuation Fund have entered our top ten list by deal value, with a respectable $3 billion of domestic direct equity investment primarily in infrastructure to strengthen their potential to grow.

The Great Reallocation

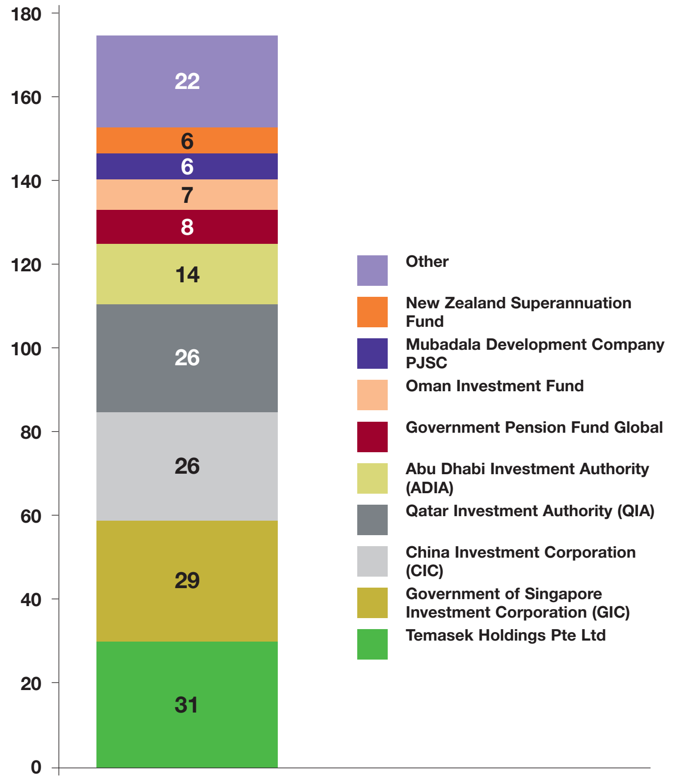
Emerging markets have enjoyed breath-taking growth over the past two decades by closing the productivity gap with the more developed economies. But, as the gap has narrowed, growth rates have declined – and the slowdown of China and India has led to lower commodity prices. At the same time, the shale revolution in North American energy markets has put downward pressure – and future uncertainty – on the oil and natural gas prices that have underpinned much of SWF growth.

This is why in 2013 not only have we observed SWF lower aggregate investments, but allocations have changed. The same slowdown that led to declining fund accumulations in developing countries has also led to the same markets being less appealing investment targets. We call this process the Great Reallocation, with implications across geographies and sectors.

The biggest beneficiaries of this reallocation have been developed economies, primarily Europe, and the United States, and Australia. Within this region, SWF selectively slowed down investment in manufactures indirectly exposed to emerging market growth, and focused on real estate especially commercial properties in Europe, and safe assets as infrastructure. But the real surprise is a new emphasis on lodging, with, first and foremost, Qatar, but also Brunei, Abu Dhabi and Singapore acquiring hotel chains and trophy properties. Amongst BRICs, Russia remained on the radar screen only thanks to the strong capital injections from Chinese funds.

The easiest trend to forecast is that, despite the slowdown in the accumulation of central bank and SWF reserves we have discussed, SWFs are likely to keep growing, even if at a somehow slower pace than over the recent past. In a world of increasing economic uncertainty and market volatility, all else is difficult to forecast, but, as SWFs continue internalizing wealth management, the recent trend of co-investments and partnerships is likely to expand. QIA's leading role within the Doha Global Investment Company heralds a new evolution in this trend – that of a SWF being not just a partner of other, private-sector, investors, but a leader and catalyst. We expect SWFs in the future to increasingly leverage their investment power by creating such investment partnerships and we wonder how long will it be before SWFs, just like their private-sector counterparties, start doing so the old-fashioned way, by large-scale debt issues. The trend has already begun – Singapore's Temasek has issued bonds to institutional investors since 2005 and Malaysia and Abu Dhabi have experimented with bond issues linked to their SWFs – but, in a world facing challengingly low yields, we suspect this trend might intensify.

Figure 13: Number of Direct Investments by Top Spending SWFs, 2013



Publicly available data for direct SWF equity & real estate deals, joint ventures and capital injections. Source: Sovereign Investment Lab, Università Bocconi

The growing share of funds that is internally managed is also leading to increased control and SWFs are more frequently taking an assertive role in the firms in which they invest. In many ways, internal management, increased assertiveness, and better diversification are all manifestation of the same process of evolution of these funds. To a large extent, prior to the 2008 financial crisis, SWFs were happy to outsource fund management and to concentrate their direct investments into Western financial companies. Their passive stance – along with their love for the North American financial sector – are both casualties of the 2008-2009 crisis. SWFs are maturing in both capabilities and expectations – yet, for active investments to become a reality, their staffing levels will have to increase.

SWFs will keep seeking diversification, away from government bonds – especially away from US Treasuries – and into private markets and alternative asset classes. Over the recent years, we have seen private equity funds increasing their allocations to the syndicated loans market and we suspect that SWFs might follow suit, filling the gap that Western banks, hobbled by increasingly stringent capital requirements, are leaving and that is increasingly being filled by non-traditional lenders.

Whether SWF investments in Europe will continue in the future to retain the lion's share of SWF asset allocations depends, largely, on the performance of European economies – and there is a large degree of uncertainty in that. Our bet is that safe assets in developed economies will remain the targets of choice in 2014.

The landscape of sovereign investment is changing rapidly. We are seeing several developing countries, primarily from Africa, launching organizations which could graduate soon into fully-fledge SWFs. Whether they will grow up in size and respect, it is too soon to tell. Sure, we will keep track.

Sovereign Shareholder Activism: How SWFs Can Engage in Corporate Governance

Paul Rose
Ohio State University

Introduction

As the number of, and assets controlled by, sovereign wealth funds (SWFs) has increased dramatically in recent years, so too has scrutiny about how SWFs are making use of these assets. With respect to equity investments in publicly traded firms, one facet of this concern is that SWFs will become "activist" shareholders. Notwithstanding genuine concerns about how governments exercise political power through economic entities, two threshold issues must be addressed before one can develop and evaluate proper policy responses to sovereign shareholder activism.

First, SWFs are often viewed through a single paradigm when, in reality, SWFs differ along many dimensions, including the way in which they are organized, their legal status, and their stated policies.[1] Even if one sets aside differences in internal governance and legal status, each SWF operates in unique political environments, and geopolitical realities affect their use and the ways in which they are viewed by other countries. For instance, Australia may view an investment by China's CIC as very different from an investment by Norway's GPF-G, even if the investment is for an identical 3% interest in an Australian company. Likewise, Italy may view an investment from the Alberta Heritage Fund as qualitatively different from an investment by the Russian National Wealth Fund, even though the same Italian regulatory framework may be used to analyze each investment. That SWFs are quite different and that they operate in very different political contexts is well known to asset managers, most SWF researchers, and of course, SWF officials, but these important distinctions are often lost when SWF activity is reported in the press and even in some academic literature.

The second problem, which has received less attention, is one of equivocation on important terms in corporate governance, and particularly equivocation on the term "activism". Understanding the different forms of shareholder activism that occur today gives insight into how sovereign investors can engage in corporate governance while minimizing the risk of adverse regulation by host countries.

Types of Activism

Activism is linked to the increasing importance of corporate governance, a phrase that itself "only came into vogue in the 1970s in a single country—the United States—[and] became within 25 years the subject of debate worldwide by academics, regulators, executives and investors".[2] Even as

[1] Capapé, Javier and Guerrero Blanco, Tomas, "More Layers than an Onion: Looking for a Definition of Sovereign Wealth Funds" (June 1, 2013). SovereigNET Research Papers; ESADE Business School Research Paper No. 21. Available at SSRN: http://ssrn.com/abstract=2391165 or http://dx.doi.org/10.2139/ssrn.2391165.

SWF may shift from passive to active shareholders to protect long-term returns by monitoring governance

recently as the 1990s, institutional investors spent relatively little time on corporate governance matters, and the most prominent activist investors were "gadfly" individual investors that took stakes in companies in order to agitate for governance—and frequently, social—changes at publicly traded companies. Corporate governance has taken on increased importance for institutional investors for a variety of reasons, including enhanced focus on governance issues by regulators, as well as the rise of the corporate governance industry and proxy advisory services such as Institutional Shareholder Services. More recently, hedge funds have become important activist investors by pushing for governance and tactical changes at companies around the world.

The types of activism engaged in by hedge funds and most other institutional investors, such as public pension funds, differ in important ways. These differences are important to highlight when considering how sovereigns could (and perhaps should) engage in corporate governance. As Cheffins and Armour have recently noted, hedge funds tend to engage in what they term "offensive" shareholder activism. Offensive activism is typically event-driven: the offensive activist agitates for change at the company, seeking to squeeze out value that, in the view of the activist, may be locked up in a subsidiary or in cash reserves. Under what has become a traditional strategy, the activist may seek to force the company to (among other things) spin off a subsidiary or pay a special dividend.

An important feature of successful offensive activist campaigns has been the ability of the hedge fund to convince other shareholders, including relatively more passive shareholders such as mutual funds, pension funds and other large institutional investors, to support the hedge fund. Often, the hedge fund will seek approval of the strategy by proxy advisors, who can help influence large institutions. Supporting hedge funds does not make the other investors "activists"—they were not the ones instigating the change, after all—but simply means that the offensive activists' value-creation story was convincing to other shareholders.

In contrast to the offensive activism of hedge funds, some large institutional investors are engaged in "defensive" activism. The defensive activist monitors the firm not to seek ways to force value-creating changes, but to prevent losses from mismanagement. In other words, whereas offensive activism is designed to produce wealth in the short to medium term, defensive activism is designed to protect wealth in the long term. It is this type of defensive, "accountability" activism that is most commonly associated with large public pension funds and even some sovereign wealth funds. Norway's NBIM, which manages the Government Pension Fund – Global, provides perhaps the best example of this sort of activism among SWFs. In 2013, for example, NBIM submitted three shareholder proposals requesting access to the corporate proxy, which would enable a shareholder that has held 1% of the company's outstanding common stock for one year to nominate one director for the company's board of directors.

Moving Beyond the Passivity Paradigm

In contrast to these two types of activist shareholders, most shareholders are largely passive. They may choose not to exercise their shareholder rights at all, or simply to follow any management proposal. Many SWFs fit in this category. This passivity is attributable to the fact that SWFs tend to be what Bortolotti et al. have termed "Constrained Foreign State Investors" that "will refrain from taking an active corporate governance role in target companies in order not to generate political opposition or a regulatory backlash."[3] Even efforts to influence (as opposed to control) companies may result in dramatic regulatory consequences. For example, a SWF that pressures a poorly-performing CEO to step down could subject its investment in the company to review and even divestment under U.S. law.

And yet, a consensus appears to be developing that large institutional investors, including SWFs, should be aware of corporate governance issues at their portfolio companies, even if they choose not to actively attempt to influence management. Because they are long-term investors and often under political and regulatory scrutiny that makes them less likely to sell, SWF capital tends to be captive capital. Thus, protecting long-term returns by monitoring governance is a priority for many sovereign investors.[4] The difficulty for most SWFs, then, is how to hold mangers accountable without selling or directly engaging in ways that would concern regulators.

Fortunately for SWFs, the market for corporate influence in many countries has become sufficiently robust that portfolio companies with poor governance tend to be targeted early by activist investors; in other words, SWFs typically need not worry about initiating governance engagement, at least with firms that have significant institutional investor ownership. Hedge funds and, not infrequently, pension funds may be already pressuring a poorly-performing corporate management. Because SWFs are often large but passive blockholders, they can exert significant influence simply through the exercise of their voting rights.

While this kind of corporate governance engagement may seem like governance free-riding, it is

[2] Cheffins, Brian R., "The History of Corporate Governance" (December 1, 2011). OXFORD HANDBOOK OF CORPORATE GOVERNANCE, Mike Wright, Donald Siegel, Kevin Keasey and Igor Filatotchev, eds., Oxford University Press, 2013; University of Cambridge Faculty of Law Research Paper No. 54/2011; ECGI - Law Working Paper No. 184/2012. Available at SSRN: http://ssrn.com/abstract=1975404 or http://dx.doi.org/10.2139/ssrn.1975404.

[3] Bortolotti, Fotak, Megginson and Miracky, "Quiet Leviathans: Sovereign Wealth Fund Investment, Passivity, and the Value of the Firm", FEEM Note di Lavoro 22.2009. Available at http://www.baffi.unibocconi.it/wps/allegatiCTP/SWF-paper-RFS-Final-oct25_2010.pdf.

[4] I note, however, that there is mixed evidence that active influence by institutional investors results in stronger performance, and no evidence that influence by public investors results in stronger performance. However, I am not advocating influence through defensive activism, but merely engagement through normal governance mechanisms, including shareholder voting.

more accurate to think of it as riding on a reduced fare; the SWF will incur some costs in developing robust policies and procedures for the exercise of voting rights. The effort is essential, however, because if SWFs fail to exercise their rights as shareholders they risk creating a monitoring deficit that has the perverse effect of entrenching poor managers.[5] This risk is increasingly relevant as SWFs take larger minority positions.

SWF should be as transparent as possible about how they intend to use corporate governance rights. For example, a SWF may believe, as NBIM does, that companies should apply the principle of one share, one vote, so that a shareholder's voting rights and dividend payments reflect the size of his or her shareholding.[6] Publishing such governance and voting policies, on the Internet and in annual reports, provides an important signaling effect to companies and other shareholders. It also provides a strong signal to the sponsor sovereign and its citizens of the quality of governance at the SWF itself. Moreover, so long as the SWF merely exercises its voting rights and does not directly try to influence the company, it is unlikely to run afoul of host country regulations. As the Santiago Principles make clear in GAPP 21, transparency with respect to the exercise of corporate governance rights helps to "dispel concerns about potential noneconomic or nonfinancial objectives."

Many SWFs will not choose to engage portfolio companies as Norway has (and indeed, the political reality is that many SWFs would invite unwelcome regulatory scrutiny if they did so). But all SWFs can and should develop a stated policy on corporate governance issues, even if the SWF believes that it, like most mutual fund companies, will generally support management.

[5] This hypothesis finds support in Bortolotti, Bernardo, Fotak, Veljko and Megginson, William L., "The Sovereign Wealth Fund Discount: Evidence from Public Equity Investments" (September 17, 2013). Baffi Center Research Paper No. 2013-140; FEEM Working Paper No. 22.2009. Available at SSRN: http://ssrn.com/abstract=2322745 or http://dx.doi.org/10.2139/ssrn.2322745.

[6] Norges Bank Investment Management, Equal Treatment of Shareholders (accessed May 2014). Available at http://www.nbim.no/en/responsibility/responisble-investments/equal-treatment-of-shareholders/.

Sovereign Wealth Fund Investment Performance: Some Stylized Strategic Asset Allocation Results[1]

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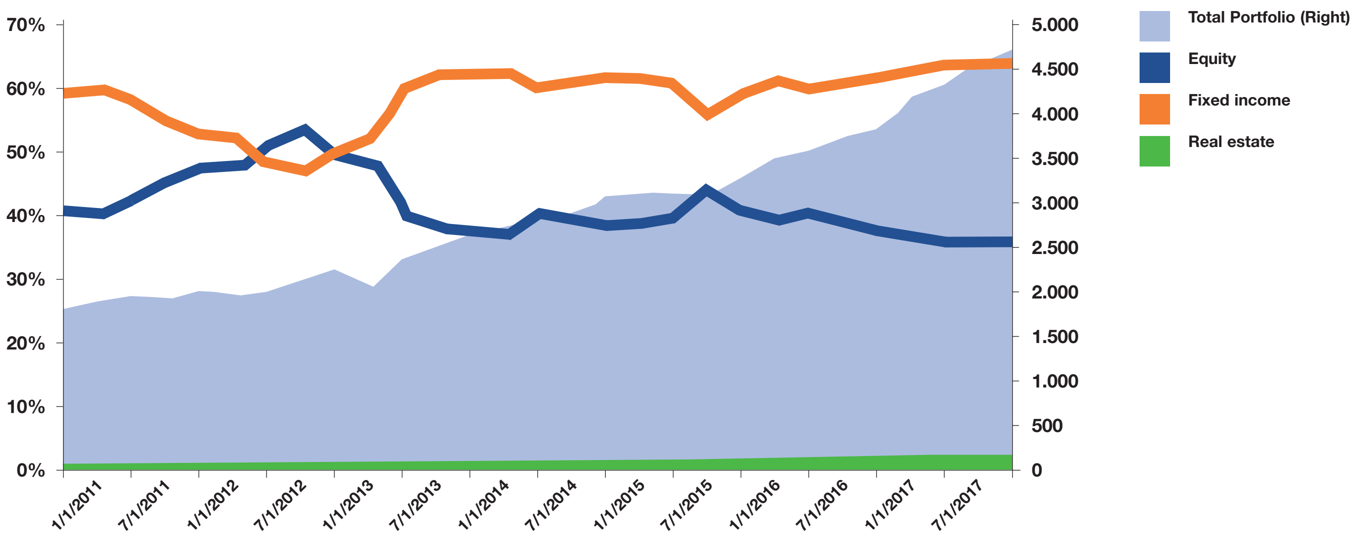
Introduction. The Markowitz portfolio theory has been used during the past six decades by various institutional investors, including sovereign wealth funds (SWFs), to determine their asset allocations. Our analysis of the strategic asset allocation of the world's largest sovereign wealth fund –The Norway Government Pension Fund Global (GPFG), demonstrates that it is broadly consistent with that generated by a simple one-period Markowitz model. This investment performance critically depends on the fund's permissible asset classes, risk tolerance, and strategies in attaining the set portfolio objectives, such as stability of returns over an assumed time horizon. Further, appropriate asset weight rebalancing allows for higher returns and achievement of long-term investment objectives. The obtained results for the GPFG need to be contrasted with that of other sovereign wealth funds to establish whether there is a broader conformity with investment allocations proposed by the Markowitz model.

Asset management often faces challenges with regards to the risk-return characteristics of asset classes. This is particularly important for SWFs that are owned by governments and are mandated to a certain performance, based on set benchmarks. This challenge has been more pronounced during the last few years, especially after the recent global financial crisis and current low-return environment. In this connection, our investigation shows that the GPFG successfully rode out the recent financial crisis and grew stronger through successive portfolio rebalancing actions. For example, the GPFG had progressively taken advantage of investment opportunities of mispriced equity assets, realizing that active management does not contradict the modern efficient market hypothesis. This helped achieve historic returns of 25.6% in 2009, with the equities portion having been increased to 62.4% in the total portfolio from less than 41% in 2006 (GPFG Annual Report, 2009). This countercyclical investment behavior, which led to the increase of volatile (yet high potential-return) assets when other long-term institutional investors tried to contain the equity risk, required strong independent institutional and governance frameworks, which the GPFG had been able to establish before the financial crisis. This behavior also helped avoid pro-cyclical investment SWF "herding" phenomena, where asset allocations move in tandem with market fluctuations, as was the case for many institutional investors that increased their fixed-income share rather than the equity share in their portfolios during 2008 and 2009 (Papaioannou, et al., 2013).

[1] The views expressed in this note are those of the authors and should not be attributed to the IMF, its Executive Board, or its Management. Authors' e-mail addresses: mpapaioannou@imf.org, brentsendorj@imf.org

Figure 1: Total Assets and Asset Allocation of GPFG (% of Total Portfolio)



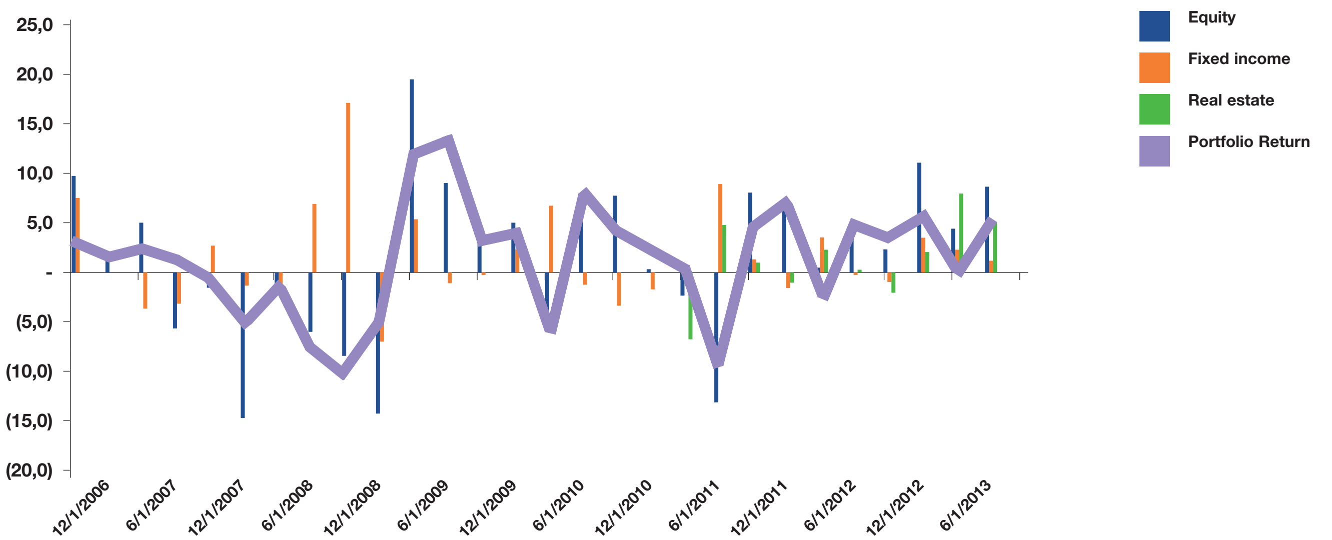
Source: Annual and Quarterly Reports, GPFG, Norges Bank Investment Management

Asset allocation decisions require in depth macro-financial analysis. As a long-term investor, the GPFG's focus on systematic risk, while allowing flexibility for a given market opportunity with substantial adjustment room, improved its overall risk-adjusted return. An example of this approach was the GPFG's decision to enter the global real estate market in 2011, right before the international real estate surge in 2012. Since 2009, asset allocations of many SWFs manifest a significantly increased share in equities over time, while their fixed-income share is steadily reduced (Bodie and Briere, 2013). This has taken place against the background of the current prolonged low-return financial environment. In particular, the GPFG's long-term portfolio composition has been rebalanced, with its risk appetite being increased. The share of fixed-income in the composition of the GPFG's portfolio has gradually been reduced to 37% of the total portfolio in 2014, from 59% in 2006, while the global equity share was substantially increased to more than 62% of the total portfolio in 2014, from 41% in 2006. The increase in the equity share in its portfolio, with an increased mean variance for the overall portfolio, did not alter the theoretical return and position on the efficient frontier. As countries' contributions to global GDP evolve over time, the GPFG's portfolio adapted to this trend and increased its emerging markets' share, with careful consideration on its historically high level of risk. The extent of correlation and possible causality in the GPFG's portfolio investments, in response to increasing market volatility, needs to be examined further.

A stylized efficient frontier

The efficient frontier, the set of optimal portfolio

Figure 2: Portfolio and Individual Asset Class Returns of GPFG (%)

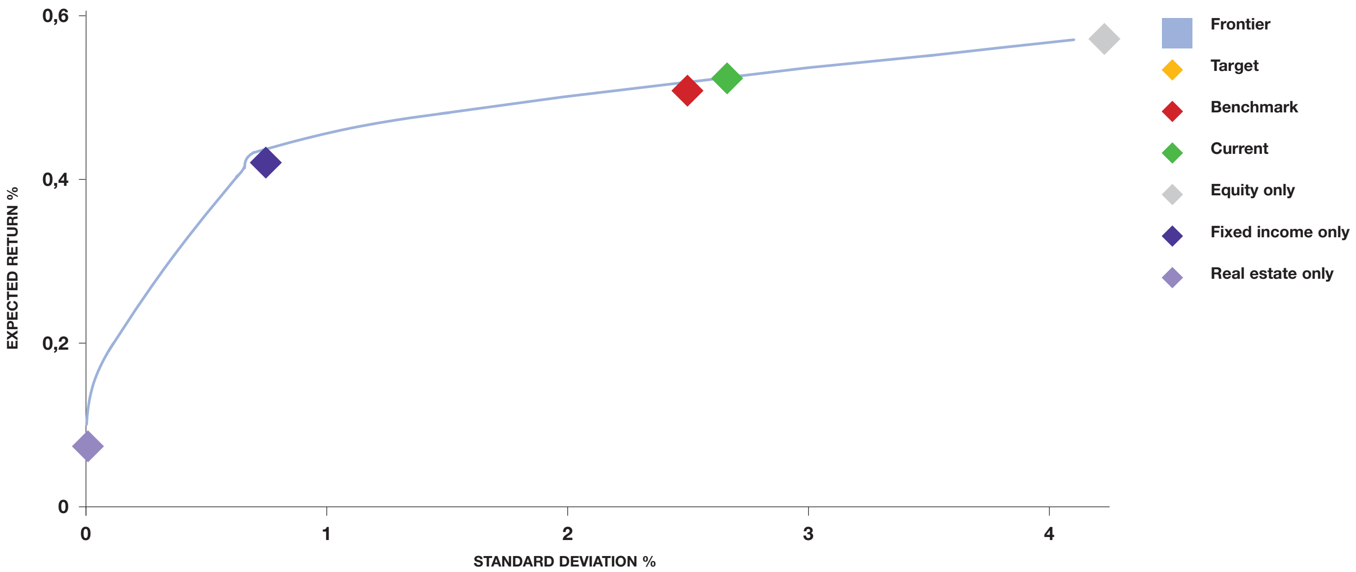


Source: Annual and Quarterly Reports, GPFG, Norges Bank Investment Management

compositions with highest perceived return and lowest risk level, of long-term investors may be tested by market volatility. For the GPFG, the dynamics of global economic integration and various market shocks have challenged its optimal asset allocation, especially with regards to investing in line with the efficient frontier allocations of other long-term institutional investors. Despite these challenges, the GPFG's efficient frontier has demonstrated a broad conformity with asset allocations being generated by a simple one-period Markowitz model. Further, the flexibility in the GPFG's asset allocation allows higher yield results and generates optimal outcomes (see *Figure 3*). The GPFG's case has illustrated that countercyclical portfolio rebalancing has played an important role in accomplishing the set portfolio objectives, e.g., stability of risk-adjusted return over time. Examples of countercyclical asset allocation, e.g., increased share of high-volatility assets with consequent reduced share of less volatile fixed-income assets during periods of market crisis have been observed over time (see *Figure 1*). Illustrative calculations indicate that, given a return level, risk can be reduced by 0.3% if the equity share is reduced by 5.9%, while the fixed-income share is increased by 2.0% and the real estate portion is reduced to almost zero in the overall portfolio. These results, of course, depend on the used sample period (1998-2013).

The GPFG's actual investment portfolio, which is broadly consistent with the one-period Markowitz-generated efficient frontier, takes into account social, ethical, and environmental considerations. The investment universe and permissible asset classes are scrutinized by Norway's parliament. The fund is the signatory of the United Nation's Principles of

Figure 3: Efficient frontier of Norway Government Pension Fund Global



Publicly available data for direct SWF equity & real estate deals, joint ventures and capital injections. Source: Sovereign Investment Lab, Università Bocconi

Responsible Investment (PRI), which advocate more relevance on environmental, social and corporate governance issues than on pure returns in investment practices. Accordingly, the GPFG has a very strong Council of Ethics that frequently reviews the fund's global investments with respect to an adopted ethical guideline framework, without regards to yield implications. In particular, it reviews whether companies in GPFG's investment portfolio are within the framework of socially responsible, humanitarian, ethical, and environmentally friendly standards. Thus, the total number of companies excluded from the allowed investment portfolio reached 48 in 2009, 51 in 2010, and 55 in 2011 (GPFG Council on Ethics Report, 2011). The rationale for responsible investments is based on the premise that: "… organizations that manage environmental, social and governance (ESG) factors effectively are more likely to endure and create more value over the long-term than those which do not" (GPFG Strategy Council Report, 2013). Examples of companies that are excluded from the GPFG's investment portfolio are: all tobacco producers, due to human health concerns, Barrick Gold Corp. and Rio Tinto, due to alleged environment damages, and Boeing Co. and Northrom Grummanm Corp., due to their production of arms. While the GPFG has been consistently adhering to its ethical and transparent investment principles, its investment activities have not precluded it from generating long-term returns well within its set objectives (Clark and Monk, 2010).

Challenges in a SAA Optimization

There are several challenges in carrying out an SAA optimization, including the decision on admissible asset classes, selection of benchmarks, determination of risk tolerance levels on different asset classes, performance measurements, application of accounting standards, accepted rating(s) for investment instruments, and related market predictions. In the case of the GPFG, the Ministry of Finance ultimately sets the benchmark indexes for investment portfolio compositions and global mandates, considering market weights (GDP weights). The GPFG benchmark indexes are quite open to changes, so as to support an active asset management framework that ensures higher returns over time.

The adoption of a comprehensive framework for timely portfolio rebalancing is another challenge in managing a diversified global portfolio. The GPFG's performance illustrates the possibility of enhancing overall returns with a lower risk level, through rebalancing of asset classes that is in line with market trends. This adjustment involves dynamic asset allocations that allow funds to rebalance in line with their strategic policy/benchmark target compositions. The timing and frequency of asset weight changes, especially in response to intense market volatility, require a strong institutional development and risk management framework, along with close monitoring of market developments. For the GPFG, the changes in asset allocation to increase the equity composition over time paid off significantly in recent years, yielding higher returns. In particular, in 2013, the investment portfolio provided an exceptional performance of 15.9 %, following actions that deviated from the benchmark index, mostly driven by the equity investments in North America and European equities (GPFG Annual Report, 2013).

> The strategic allocation of GPFG is broadly consistent with that generated by theoretical models

Despite its long-term investment horizon, the GPFG appears to be resilient to market volatility, based on a VaR analysis (GPFG Report to the Storting, 2014). As the recent global financial crisis has showed, it is not possible to fully assess ex ante the market risk from emerging external shocks, which can then become a major challenge in the investment rebalancing process. In this regard, the GPFG's broad diversification approach (i.e., global GDP-weighted diversification) is justified, especially in view of the size of the fund. Although our analysis indicates that the GPFG's current asset allocation is broadly consistent with that of the Markowitz approach, it also highlights that there is room to reduce risk by curtailing the equities share, even though past experience has shown that the GPFG is able to effectively absorb market risk.

Sovereign wealth funds' asset allocations need to be frequently reassessed. Especially a low-return environment may significantly affect a fund's portfolio composition and return on assets. The GPFG's portfolio composition indicates continuous adaptations in the dynamics of its strategic asset allocation, while its efficient frontier illustrates the constraints in its effective portfolio diversification from low returns of employed fixed-income assets. Also, it should be noted that restrictions in the investment mandate to allocate a certain portion of the portfolio to specific assets, e.g., public investments, services, or energy and infrastructure projects, may impose a significant constraint to the efficient frontier. In turn, the risk tolerance level, risk-adjusted returns and portfolio rebalancing may need to be appropriately modified, while frequent stress testing should be used to improve the optimal strategic asset allocation. In general, funds should rebalance their portfolios as needed, especially following changes in the global macroeconomic and market conditions, and assess their performance regularly.

Concluding remarks

Our study shows that (i) the strategic asset allocation of GPFG broadly conforms with a Markowitz efficient frontier, (ii) a countercyclical active asset management framework or flexibility of benchmark deviations works perfectly in case of a large SWF that aims to enhance long-term returns over time, and (iii) socially responsible investments have not apparently distorted the asset allocation returns and efficient frontier over time. It should also be pointed out that the GPFG's long-term strategy has been supported by transparent governance and operational management that advocates long-term investment behavior, even during periods of global financial crisis.

Similar analyses of the investment portfolios of other SWFs could be undertaken to examine whether there are commonalities in their investment behavior with that of the GPFG. If such pattern could be established, we could argue for a broader conformity of SWFs' investment allocations with those proposed by the Markowitz theory.

References

Bodie Zvi and Marie Briere, 2013, Sovereign Wealth and Risk Management: A Framework for Optimal Asset Allocation of Sovereign Wealth Optimal Asset Allocation for Sovereign Wealth Funds, available via: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1460692.

Clark, L. Gordon and Ashby H. B. Monk, 2010, The Norwegian government pension fund: Ethics over efficiency, Rotman International Journal of Pension Management, 3(1): 14-19.

Norway Government Pension Fund Global, 2006-2013, Annual Reports, Norges Bank Investment Management, Available via: www.nbim.no.

Norway Government Pension Fund Global, 2011, Council on Ethics for the Government Pension Fund Global, Annual Report, available via: http://www.regjeringen.no/pages/1957930/Annual_Report_2011.pdf.

Norway Government Pension Fund Global, 2013, Responsible Investment and the Norwegian Government Pension Fund Global, Main Report by Strategy Council, available via: http://www.regjeringen.no/pages/38525979/sc_mainrreport.pdf.

Norway Government Pension Fund Global, 2014, Recommendations of the Ministry of Finance of April 4, 2014, approved by the Council of State, The Management of the Government Pension Fund in 2013, Report No. 19 to the Storting (white paper), 2013-2014.

Papaioannou, Michael, Joonkyu Park, Jukka Pihlman, and Han van der Hoorn, 2013, Procyclical Behavior of Institutional Investors During the Recent Financial Crisis:Causes, Impacts, and Challenges, IMF Working Paper, 13/193.

Long Term For Real: SWF's Growing Investments in Infrastructure

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Historically the key provider of long-term financing has been the banking sector. Debt financing has historically accounted for 70 to 90 per cent of initial project funding, with the equity component being provided by either the public or the private sector. According to data provided by the World Economic Forum,[1] from 1999 to 2009 commercial banks provided an estimated 90 per cent of all private debt with large banks in developed economies acting as a major source of financing to emerging markets as well.

Due to both cyclical factors (in particular the ongoing deleveraging in Europe) and structural factors (capital charges making long-term capital commitment by financial institutions more expensive), the banking sector has substantially reduced the amount of project finance it provides for long-term investing. Globally, project finance loans fell by between 10 and 30 per cent in 2012 alone and the reduced availability of debt has also reduced the equity provided by private investors or governments.

The reduced lending by the banking sector has widened the long-term investment gap, which is now estimated at about USD 1.5 trillion globally.[2] Who could realistically fill this funding gap over the next decades?

Institutional investors, including pension funds, insurance funds and sovereign wealth funds, appear to be the ideal candidates to fill the gap. Their asset base is growing at a good pace, their investment horizon is typically long-term driven by the long-term nature of their liability structure and over the last few years there has been a significant shift in their investments towards alternative asset classes to capture the liquidity premium and boost returns.

Indeed, according to estimates from the World Economic Forum, in 2012 institutional investors provided about 20 per cent of all project finance lending with insurers accounting for 7 per cent and pension funds for 3 per cent. However, several factors make it very unlikely that insurance funds and pension funds can substantially raise their allocations to long-term investing. Insurance funds are being impacted by new regulations such as Solvency II capital charges in Europe which discourage long-term investing. For instance, according to these regulations, a 25 year A-rated bond (very common in infrastructure investing) would be charged at 18 per cent; a 5 year A-rated bond would be charged at 7 per cent. It is not surprising that, given the ongoing regulatory changes, the G20

[1] World Economic Forum, Infrastructure Investment Policy Blueprint, February 2014.

[2] Swiss Re, Institute of International Finance, Infrastructure Investing. It Matters, 2014.

SWFs and public pension funds are ideally placed to fill the gap in infrastructure investment

has recently asked the Financial Stability Board to assess the impact of new capital standards on the supply of long-term capital.

Within the pension fund sector, the shift from defined benefit schemes to defined contribution schemes is discouraging long-term investing as the latter are often restricted from illiquid investments such as infrastructure lending. Furthermore, the demographics in a number of advanced economies are pushing many defined benefit schemes to lock in the recent gains in equity prices by aggressively shifting their asset allocation towards fixed income assets such as government and corporate bonds.

Within the institutional investor universe, Sovereign Wealth Funds and public pension funds appear to be the ideal candidates to contribute to filling the gap in long-term investing.

While diverse in terms of their investment mandate and organizational set up, sovereign institutions share two important features: first, directly or indirectly they are government funded entities and as such their mandate often goes beyond returns to include strategic objectives such as enhancing investments and promoting growth. Secondly, by being mandated to preserve the wealth of the nation they generally have a relatively conservative asset allocation with a large exposure to government bonds of advanced economies.

Indeed, in the aftermath of the financial crisis we have already witnessed an evolution of these institutions in this direction. For instance, most of the recently established Sovereign Wealth Funds, in addition to having the traditional macroeconomic and long-term saving mandates, are often also tasked with enhancing domestic development through the funding of long-term investments often in cooperation with other investors.

This trend is particularly visible in the African continent where the infrastructure funding gap is estimated at about USD 50 billion per year and the enhancement of basic infrastructure is a must to maintain recent strong economic growth of these economies. Some of the recently established Sovereign Wealth Funds have an explicit mandate to increase the flow of investment to the infrastructure sector by either providing funding or by acting as a catalyst for other investors.

Some of the most established SWFs, with sufficiently strong in-house capabilities to deal with complex investments such as infrastructure, have also been very active. For instance, last year the Kuwait Investment Authority announced that it is seeking to invest up to USD 5 billion in infrastructure assets mostly in the UK, echoing a similar move by the Sovereign Wealth Fund from Qatar.[3]

And SWFs are not afraid of investing in infrastructure in emerging markets. Singapore's GIC, another leading SWF, has recently announced that it will invest in the Brazilian sewage sector by injecting equity into a local utility company.[4]

What is remarkable about this Brazilian deal, and many other similar deals, is that SWFs often co-invest together with Multilateral Development Banks, leveraging the sector expertise and knowledge of the recipient countries of these institutions. For instance, the Japan Government Pension Investment Fund has recently formed a partnership with Development Bank of Japan and the Ontario Municipal Employees Retirement System to jointly invest up to USD 3 billion (about 0.2 per cent of its asset base) into infrastructure projects.[5] And this month the African Development Bank announced the setting up of a USD 3 billion infrastructure fund with funds raised from regional and non-African pension funds, insurance companies and Sovereign Wealth Funds.[6]

All these initiatives can make a difference by increasing the fire power of the multilateral development funds in a time when governments do not appear to have the appetite for providing them with additional funding.

Another fundamental driver of the rising interest from Sovereign Wealth Funds in investing more in the infrastructure sector is the ongoing shift in their asset allocation towards so-called real assets. Despite the increasing diversification across asset classes, SWFs (in particular so-called stabilization funds) have a large allocation to fixed income assets, in particular government bonds denominated in currencies of advanced economies. As a result of the ultra-loose monetary policies in these economies, these assets currently provide a very low yield in nominal terms and zero or even negative returns in real terms. Furthermore, given the long-term fiscal challenges faced by most Western economies, these reserves are exposed to an increasing sovereign risk should any Western economies default on their public debt or debase their currency in the years to come.

Over the last few years, the shift towards real assets has been very visible in the real estate sector where the flow of investments by SWFs has been very large, reflecting the fact that this asset class is very accessible and very bankable. However, similar to real estate, infrastructure assets are also a very good fixed income diversifier as they provide steady higher cash flows thus making them attractive for more income-oriented investors. Furthermore, infrastructure assets often provide a good hedge against inflation over the medium-to long-term.

Are Western economies taking advantage of Sovereign Wealth Funds' growing demand for infrastructure assets? While we are witnessing the previously mentioned growing flow of sovereign assets in this space, there is no doubt that, given the existing long-term investment gap, the potential is certainly larger.

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[3] Infrastructure: Asset class gains more appeal, Financial Times, July 7, 2013.

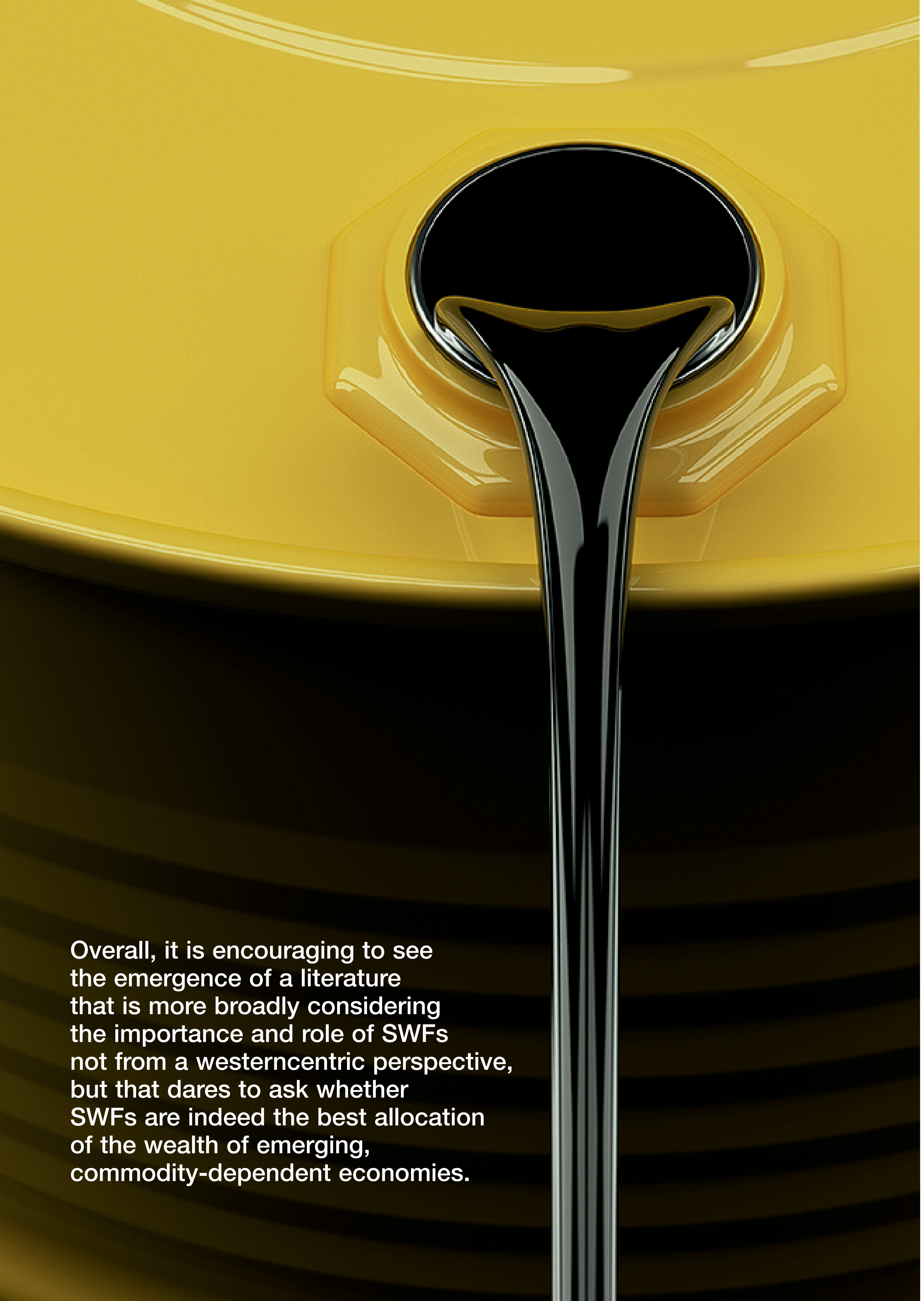
[4] Singapore SWF invest in Brazilian sewage, Financial Times, October 2, 2013.

[5] GPIF joins DBJ, OMERS to invest up to USD 2.7bn in infrastructure, Asian Venture Capital Journal, March 3 2014.

[6] Africa set to gain USD 3bn in infrastructure fund, Financial Times, May 1, 2014

The good news is that long-term investing is now high on the agenda of the G20, and a number of institutions including the OECD, the European Commission, the World Bank and the IMF have started consultations with stakeholders to promote long-term investing. In Europe, the European Commission and the European Investment Bank have launched the "2020 Project Bond Initiative" with the goal of creating a more harmonized project bond market across Europe. At international level, the G20 and OECD have recently finalized their "High Level Principles of Long-Term Investing". Last but not least, emerging markets have also launched new initiatives with the most prominent one being the BRICs led Development Bank.

As the competition to attract funds from Sovereign Wealth Funds and other long-term investors will intensify in the future, individual countries should be encouraged to take two policy actions: enhance the regulatory framework surrounding infrastructure projects and better communicate their existing bankable projects to attract the interest of SWFs and other institutional investors.



Overall, it is encouraging to see the emergence of a literature that is more broadly considering the importance and role of SWFs not from a westerncentric perspective, but that dares to ask whether SWFs are indeed the best allocation of the wealth of emerging, commodity-dependent economies.

Spotlights on research

In this section, we attempt to present the most interesting studies pertaining SWFs that have been published (or that have made public) in 2013. Our selection is by design limited, with the goal of identifying a roadmap to the most debated topics and the most influential works.

Much of the research about SWFs published this year pertains the allocation of funds and investment selection, which is a herculean task given the insufficient data and heterogeneity of the funds. Bernstein et al. (2013) find that political interference leads to more short-term investment at the expense of return maximization, but the opposite view if championed by Ghahraman (2013), who, in his careful analysis of fund allocations, finds no evidence of geopolitical priorities affecting investment decisions. Johan et al. (2013) examine how the allocate funds between public and private equity and find that SWFs prefer private equity when investor protection law is low and where the bilateral political relations are weak.

A second topic that has attracted considerable attention is whether SWFs are an optimal vehicle for the allocation of financial resources. Wei and Han (2013) present a complex quantitative model for the optimal allocation of wealth to foreign currency reserves and SWFs accounting for governments with different investment horizons and liquidity needs. Van der Ploeg et al. (2013) discuss how the optimal allocation of wealth to a commodity-based SWF should take into account not just the oil being extracted, but below-ground reserves as well. Rashid (2013) tackles directly the question whether a SWF should be established in Iraq, while Kalter and Schena (2013) more broadly address the same question for a range of emerging economies.

The impact of SWFs on investment targets, which has received so much interest in the previous years, is being examined by Fernades (2013), who concludes that SWF ownership leads to positive changes in corporate market values and operating performance of investment targets.

The historical evolution of SWFs is the subject of a paper by Braunstein (2013), who takes a broad view contrasting 17th century financial mercantilism with the 20th century monetary mercantilism to explain the recent role of SWFs in the global economy. Fei et al. (2013) more narrowly focus on the recent financial crisis and on how the related market turmoil changed the investment strategies of SWFs. Finally, two recent papers focus on the regulatory framework: Ghahramani (2013) writes about how SWFs are leading to new challenges in transnational law and institutions, while Jog and Mintz (2013) more narrowly discuss how sovereign exemptions creates tax advantages for SWFs in Canada – and advocate for changes.

Asset Allocation and Investment Selection

Bernstein, Shai, Josh Lerner, and Antoinette Schoar. 2013. "The Investment Strategies of Sovereign Wealth Funds." Journal of Economic Perspectives, 27(2): 219-238.
Sovereign wealth funds have emerged as major investors in corporate and real resources worldwide. After an overview of their magnitude, we consider the institutional arrangements under which many of the sovereign wealth funds operate. We focus on a specific set of agency problems that is of first-order importance for these funds: that is, the direct involvement of political leaders in the management process. We show that sovereign wealth funds with greater involvement of political leaders in fund management are associated with investment strategies that seem to favor short-term economic policy goals in their respective countries at the expense of longer-term maximization of returns. Sovereign wealth funds face several other issues, like how best to cope with demands for transparency, which can allow others to copy their investment strategies, and how to address the problems that arise with sheer size, like the difficulties of scaling up investment strategies that only work with a smaller value of assets under investment. In the conclusion, we discuss how various approaches cultivated by effective institutional investors worldwide—from investing in the best people to pioneering new asset classes to compartmentalizing investment activities—may provide clues as to how sovereign wealth funds might address these issues.

Bodie, Zvie and Marie Briere. 2013. "Optimal Asset allocation for sovereign Wealth Fund: Theory and Practice." Bankers, Markets & Investors, 128: 49-54.
This paper addresses management of sovereign wealth from the perspective of the theory of contingent claims. Starting with the sovereign's balance sheet, we frame sovereign fund management as an asset-liability management (ALM) problem, covering all public entities and taking explicit account of all sources of risks affecting government resources and expenditures. Real-life SWFs asset allocations differ strongly from theoretical ones. Financial management of the sovereign balance sheet is hampered by a lack of aggregate data, which compromises the coordination of sovereign wealth management with fiscal policy, monetary policy and public debt management. In this framework, we suggest institutional arrangements that could overcome this obstacle and enable efficient coordination.

Johan, Sophia, April Knill, and Nathan Mauck. 2013. "Determinants of sovereign wealth fund investment in private equity versus public equity." Journal of International Business Studies, 44: 155-172.
This paper examines the investments of 19 sovereign wealth funds (SWFs) in 424 firms (both public and private) around the world from 1991 through 2010. The data indicate that SWFs, similar to other institutional investors, are less likely to invest in private equity than in public equity internationally. However, the economic significance of this impact is surprisingly low. Unlike other institutional investors, SWFs are more likely to invest in private equity compared with public equity in target nations where investor protection is low, and where the bilateral political relations between the SWF and the target nation are weak. Surprisingly, cultural differences play a marginally positive role in the choice to invest in private equity investment outside an SWF's own sovereign nation. Comprehensively, we find that SWFs act distinctively from other traditional institutional investors when investing in private equity.

Resources Management and Optimal Strategy

Wei, Xiaoyun and Liyan Han. 2013. "Optimal Allocation between International Reserves and Sovereign Wealth Funds for Different Horizons." International Journal of Applied Mathematics and Statistics, 39(9).
We present a dynamic model to allocate international reserves and sovereign wealth funds for different horizons. Particular attention is paid to dynamic rebalancing cases. The numerical method was used to obtain optimal allocation ratio of two assets. The results show that, in both buy-and-hold and rebalancing cases, there are strong horizon effects. Government with a longer horizon chooses significantly more reserves than someone with short horizon in buy-and-hold case. The reason is long-horizon governments have an intrinsically larger need for reserves to quell possible M2 flight and repay short term external debt for stability purpose. In rebalancing case, however, when the horizon is lengthened, the government should hold less liquid reserves, for high yield of SWFs makes the demand for liquid assets decrease when government extends its horizons in rebalancing case. We also conclude that, for horizon presented here, the governments who optimally rebalance their portfolio at regular intervals would hold significantly less reserves than ones implementing buy-and-hold policy. A possible reason is they could receive updated information at the end of each period and rebalance portfolio based on existing information.

Van der Ploeg, Rick, Samuel Wills, and Ton van den Bremer. 2013. "The Elephant in the Ground: Managing Oil and Sovereign Wealth." OxCarre Research Paper 129.
Many oil exporters accumulate large sovereign wealth funds, though their portfolio allocation does not take into account below-ground assets, like oil. Similarly, the above-ground portfolio does not affect the decision to extract oil. This paper shows that subsoil oil wealth should change a country's above-ground asset allocation in two ways. First, the holding of all risky assets is leveraged because there is additional wealth outside the fund. Second, more (less) is invested in financial assets that are negatively (positively) correlated with oil to hedge against the riskiness of subsoil exposure. Furthermore, if marginal oil rents move pro-cyclically with the value of the financial assets in the fund, then oil will be extracted slower than predicted by the standard Hotelling rule. This leaves a buffer of oil to be extracted when both oil prices and asset returns are high. Finally, any unhedged residual volatility must be managed through additional precautionary saving.

Rashid, Samee Omer. 2013. "Sovereign Wealth Funds and the Possibilities of Establishing Them in Iraq." University of Wisconsin Legal Studies Research Paper.
This research discusses the Sovereign Wealth Funds phenomena in Iraq as well as their types and sources. It first explains the concept of Sovereign Wealth Funds and some main characteristics of them. In addition, it attempts to answer the question of whether Iraq has Sovereign Wealth Funds, and whether the Development Fund for Iraq is considered to being a Sovereign Wealth Fund. Then it discusses corporate governance of SWFs by explaining their organizational and legal structure and investment strategy by giving two different examples, Abu Dhabi Investment Authority (ADIA) and Government Pension Fund Global (GPF-G) of Norway that may have an impact on governance structure of the potential Iraqi Sovereign Wealth Funds. Moreover, this research identifies benefits that SWFs offer to Iraq as well as challenges that need to be addressed in order to develop SWFs role in supporting Iraq's economy. Overall, this research encourages the Iraqi government to consider building a well-diversified investment portfolio that would create a sustainable source of revenue, reduce the economy's dependence on oil and act as a savings fund for the future. This would also help in realizing the future strategic plan of the government of Iraq to develop non-oil dependent economy in the next decade.

Kalter, Eliot and Patrick Schena. 2013. "Into the Institutional Void: Managing the Sovereign Wealth of Emerging Economies." In Investing in Emerging and Frontier Markets, Euromoney Books, London.
The number of sovereign wealth funds has expanded dramatically since 2000. Most of these new funds have been established in emerging economies. This paper analyzes the evolution and role of SWFs in emerging markets in the context of economic institutional-building.

Corporate Value and SWFs

Fernandes, Nuno. 2013. "The Impact of Sovereign Wealth Funds on Corporate Value and Performance." Journal of Applied Corporate Finance, 26(1):76-84.
The last few years have seen a remarkable increase in the participation of sovereign wealth funds (SWFs) in global capital markets. In this article, the author draws on a unique dataset of SWF international holdings—one that dates back to the year 2002 and includes individual SWF holdings in more than 8,000 companies in 58 countries—to provide evidence of the impact of SWFs on corporate values and operating performance. Contrary to claims that SWFs expropriate minority investors and pursue political agendas, the main finding of the author's study is that SWF ownership is associated with positive changes in both corporate market values and operating returns. In support of these findings, the author also identifies three important ways that SWFs work to increase the performance and value of the companies they invest in: (1) as long-term holders that provide a stable source of financing; (2) as representatives of deep pools of international capital in search of global diversification opportunities that are likely to provide companies with a lower-cost (as well as more "patient") source of equity capital; and (3) as politically well-connected strategic investors that enable their companies to leverage important connections when accessing new product markets.

Historical Perspectives

Braunstein, Jürgen. 2013. "The Novelty of Sovereign Wealth Funds: The Emperor's New Clothes?" Global Policy, Forthcoming.
This article broadens the empirical and conceptual perspective on sovereign wealth funds (SWFs). This is first done through providing a definition of contemporary SWFs. Using recent literature it suggests that SWFs can be differentiated into discrete categories in terms of their funding, governance and investment structures. Using this definition, the subsequent history section identifies earlier instances of SWFs in the context of 17th century financial mercantilism and 1930s monetary mercantilism. This leads directly to a number of investment deals in the 2000s where some countries with SWFs were subject to intense media and government scrutiny. In the aftermath, commentators warned of protectionism and a resurgence in financial and monetary mercantilism by pointing to emerging economies, most notably China. Though contemporary SWFs are not the same as earlier state-related pools of capital, there are important similarities concerning policy-relevant variables, highlighted by the SWF literature. A historical interpretative approach provides a bridge between historical instances and a reconceptualised notion of SWFs, linking historical evidence directly to functional claims about the purposes of contemporary SWFs.

Fei, Yiwen, Xichi Xu, and Rong Ding. 2013. "Sovereign wealth fund and financial crisis – a shifting paradigm." China Finance Review International, 3(1): 42-60.
Purpose – The purpose of this research is to empirically analyze the influence of the financial crisis on the investment behavior of sovereign wealth funds (SWFs).
Design/methodology/approach – Using 615 deals from 20 SWFs, a series of research are designed and conducted to compare the SWFs' governance, external environment, investment strategy and financial markets' feedback around the crisis.
Findings – The paper finds that the recent financial crisis did not only bring SWFs heavy losses and the pressure to improve its image and governance structure, but also a precious opportunity of a better external environment by easing the nerves of the recipient country's government. Their investment strategies will be more positive, diversified and complementary to their own real economy. The event studies illustrate that financial markets turn to be more effective after the crisis. The market reaction to SWF's investment tends to mitigate speculative trading to a larger extent, which is shown by the lower cumulative abnormal return and turnover volatility.
Originality/value – This paper tries to test the change of SWFs' behavior pro- and post-crisis. It reveals that SWFs have changed their effects on SWF's home country, SWF's host country, the financial market and the real economy after the financial

crisis, which is helpful for government and institutions to maintain the stability of the national economy and security market.

Transparency, Legal and Political Issues

Ghahramani, Salar. 2013. "Sovereign Wealth Funds, Transnational Law, and The New Paradigms of International Financial Relations." Yale Journal of International Affairs, 8(2): 52-64.
International financial relations have largely been defined by cross-border trade, foreign direct investments, and global banking relations. This paper demonstrates that another activity, sovereign investments by special vehicles known as sovereign wealth funds, is rapidly redefining the traditional paradigms, providing both opportunities for further integration of the financial markets as well as posing particular challenges for policy makers.

Jog, Vijay and Jack Mintz. 2013. "Sovereign Wealth and Pension Funds Controlling Canadian Businesses: Tax-Policy Implications." School of Public Policy Research Paper 6(5).
In a world without taxes, investors that take over companies would do so because they expect to be able to operate the business efficiently and at a high rate of return. But in Canada today, some acquirers enjoy tax advantages over others. And that could mean that certain buyers, who may not be best suited to owning a particular company, are able to outbid those who are better positioned to run that company at optimal efficiency. That is a problem not just for investors who end up outbid, due to Canada's uneven tax policy, but for the Canadian economy, which suffers from the resulting economic inefficiency. With respect to registered pension plans, the so-called 30-per-cent rule puts a cap on the amount of voting equity in a company that they are permitted to own. Meanwhile, however, sovereign wealth funds — whether controlled by China or Australia — face no such limit when purchasing stakes in Canadian firms. The number and size of sovereign wealth funds, globally, is only growing — and rapidly. But as Canada increasingly attracts foreign capital, with foreign-controlled government-affiliated funds seeking out Canadian takeover targets, much of the discussion around public policy has focused primarily on the Investment Canada Act and the "net benefit test" for foreign direct investment. Another component in ensuring that Canadian interests are preserved, however, is the question of whether Canadian institutional investors can operate on a level playing field with foreign sovereign wealth funds. With the 30-per-cent rule limiting equity purchases for one but not the other, it would appear that they are not. The most appealing remedy to this imbalance is a tax solution: limiting the corporate deductions on interest, fees, royalties, rents, and the like, that so often factor in to the takeover calculation, as part of a tax-minimization strategy. This would not only put pension funds and sovereign wealth funds on equal footing, but it could also be applied to investors operating from low- or zero-tax jurisdictions, as well. This approach is not without disadvantages. But overall, the neutrality it could achieve among different types of institutional investors, and the potential it has to enable those investors best able to maximize management excellence and synergies, make it the preferable policy direction for ensuring the greatest level of efficiency in the Canadian economy.

Appendix

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 (we have also used Datamonitor and Dealogic in the past).
2. Database for target firm information: DataStream.
3. Sovereign Fund disclosures, including annual reports, press releases and other information contained on their websites.
4. Target and vendor company disclosures: press releases and other information contained on their websites.
5. Regulatory disclosures: stock exchange filings for publicly listed companies; Regulators; SEC 13D and 13G Filings; Land Registries; Competition Commissions, and Bond/IPO prospectuses etc.
6. Service provider disclosures: such as lawyers, investment banks, and project financers working with the SWFs.
7. Information aggregators: LexisNexis and Factiva. Those include news reported by newswires (Dow Jones, Reuters, Business Wire, Associated Press and others) and national news agencies (KUNA, Xinhua, WAM etc.) numerous well-regarded selected newspapers (e.g. *The Wall Street Journal*, *Financial Times*, *New York Times*), and their regional equivalents (e.g. *Economic Times*, *China Daily*, *The National*), and the local trade press.
8. Other websites, including Zawya.com, Google Finance, Yahoo! Finance, AME Info, BBC News and others. 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.

Notes

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Sovereign Investment Lab

The Sovereign Investment Lab is a group of researchers brought together in the Baffi Center on International Markets, Money and Regulation at Università Commerciale Luigi Bocconi. The Lab tracks the trends of sovereign fund investment activity worldwide and conducts path-breaking research on the rise of the State as an investor in the global economy. Research output aims to meet the highest scientific standards, but also to be accessible for a variety of stakeholders also outside academia: institutional investors, policymakers, diplomats, regulators, and the media.

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