The State of Sovereign Wealth Funds

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1. Introduction

We outline the increasing importance of Sovereign Wealth Funds (SWFs), and highlight the ways in which they differ from other institutional investors. Though they are still considerably smaller than pension funds, SWFs have more assets under management than private equity or hedge funds. SWFs have given rise to some, in part, knee-jerk protectionism, which they have taken steps to alleviate through initiatives at transparency and clearer governance arrangements. But there are still important controversies about the appropriate institutional architecture for SWFs. For example, some commentators have pushed for "greater transparency", but it is not clear what the relevant comparator group should be. Hedge funds, for instance, are not more transparent than SWFs. Only if the distinctive features of SWFs are understood, can we hope to determine whether or not SWF-specific regulatory steps are required.

Some of these controversies extend to SWFs themselves and views on what their goals should be – for instance whether or not their ends should be purely commercial or include, for instance, ethical (or broader national interest) considerations. One's view on this fundamental matter necessarily implies different optimal regulatory arrangements and informs the way in which one benchmarks and measures the fund performance.

We begin by considering some of the definitional issues in the literature. SWFs differ in terms of their *funding sources* as well as their *function* (and policy objectives). These differences should have implications for the *organizational form* of the fund. SWFs also share some family resemblance to other institutional investors which have a long-term return horizon, such as certain pension funds and endowments. We then introduce some background industry statistics, such as assets under management and geographic distribution, before presenting brief descriptions of some SWFs to get a sense of what they look like and how they vary. Finally we look into the burgeoning empirical literature on investment characteristics of SWFs and their performance.

This survey draws on Mezzacapo (2009). There are also useful surveys of the area by Monitor Group-Fondazione Eni Enrico Mattei (2009), and Riskmetrics (2009). The Oxford SWF

Project[1] provides information on ongoing developments in the field.

2. Definitions and overview

Mezzacapo (2009) surveys various definitions of SWFs. They have been defined as a foreign exchange reserve funded government investment vehicles tasked with managing these assets separately from official reserves.[2] Alternatively, they have been defined as government created or owned special investment funds designed "to hold foreign assets for long-term purposes" (IMF, Global Financial Stability Report 2007: 45). Or, as noted by the OECD (November 2007), SWFs are simply government-owned investment vehicles funded by foreign exchange assets.

None of these definitions, however, is entirely satisfactory. They exclude certain funds typically identified as SWFs. SWFs can also be defined by what they are not. For instance, State Street defines SWFs as "Sovereign asset pools, which are neither traditional public pension funds nor traditional reserve assets supporting national currencies."[3] Furthermore, sovereigns can revise legislation to change the nature of near-SWFs. Thus, any potential SWF-specific regulatory regime – were such a regime appropriate - needs to take into consideration the possibility for regulatory arbitrage.

Monk (2010) places SWFs into three different categories and attempts to explain their institutional origins. He concludes that SWFs "offer states an opportunity to reassert sovereignty and authority over financial markets in the context of a world seemingly at the mercy of globalization." In particular, the first SWF type he identifies, "Reserve Investment Corporations," are associated with the push for self-insurance following the East Asian crisis and are instruments for avoiding "IMF conditionality and . . . loss of sovereignty" (ibid., 4). This type of fund can mitigate exchange rate volatility and its negative impacts, including slower growth. Sovereign wealth funds may also be important mechanism for attaining higher returns through the active management of reserves.[4]

Commodity funds are the second type of SWF identified by Monk. There are three components to their goals. First, is the management of price shocks to revenue generating commodities. Such shocks can undermine domestic macroeconomic stability. The second objective is to prevent currency overvaluation from resource booms which can harm secondary

1 http://oxfordswfproject.com/

2 The United States Treasury has a definition of sovereign wealth funds as "government investment funds, funded by foreign currency reserves, but managed separately from official currency reserves"

3 State Street, "Sovereign Wealth Funds, Assessing the Impact", Vision, Vol. III, Issue 2, pp. 3-6

4 The value of holding reserves is the difference between the return on assets held, and the costs of sterilizing the assets (given by the interest rate paid on domestic assets issued).

exports such as manufacturing (`Dutch Disease'). We consider this motive in more detail later. The third goal identified by Monk is pension reserve funds. These are an instrument for intergenerational equity and prefunds future pension liabilities (anticipated from demographic factors, such as an aging population).

2.1 Legal and Organizational Form

Mezzacapo (2009) reports that SWFs have diverse legal forms. Some are managed separately from the central bank or state. They either emerge from a specific constitutive law, or can be organized as a private corporation under a country's company law. When a SWF is not a separate legal personality, it tends be under the control of a Finance Ministry, managed by a central bank, or directed by some other statutory agency (Mezzacapo 2009: 11).

As reported by IFSL (2010: 5), external managers have had an increased role in SWF management: "45% of SWF assets . . . [are] managed by external managers". Indications suggest, however, that this may decline as SWFs' managerial capacity increases following their acquisition of talent after the financial crisis.

Yet SWFs exhibit a wide variety of management forms and diverse connections to other state bodies and external managers. Following Mezzacapo (2009), it is natural to focus however, on two dimensions - "source of wealth" and "policy objectives".

2.2 Funding

SWFs are also distinguished by their sources of funds. Typically they are generated either by commodity exports, or by manufacturing exports. We call the former, commodity funds, and the latter, non-commodity funds. Commodity funds are typically used for fiscal revenue stabilization, to prevent foreign exchange (forex) funds from stoking inflation, and for intergenerational wealth transfer. Non-commodity funds are more commonly used to make standalone investments.

SWFs can be distinguished from international reserve management, public pension funds, and state-owned enterprises. SWFs are directed towards riskier investments, while public pension funds concentrate on lower exposure assets. An additional difference is that sovereign wealth funds "are not beneficial institutions with an intended recipient" (Clark 2008).[5]

2.3 Policy Objectives

According to Mezzacapo (2009) and IFSL (2010), SWFs can be categorized as Stabilization

[5] "Q&A with Gordon L Clark, Professor at Oxford University", Oxford SWF project, 1 August 2008, http://oxfordswfproject.com/2008/08/01/qa-with-gordon-l-clark-professor-at-oxford-university/

Funds (to protect the budget from commodity price volatility); Savings Funds (intergenerational wealth transfer, mitigation of "Dutch disease"); Reserve Investment Corporations (reduce cost of carrying reserves); Development Funds (funds with say an infrastructure focus); and Pension Reserve Funds.

Das et al (2009) provides a "roadmap" for the establishment of an SWF. They recommend that when thinking about SWF design, that policymakers should consider both their sovereign assets and liabilities, and their macroeconomic objectives. They define SWFs as "a special purpose investment fund or arrangement, owned by the general government". The types of SWFs distinguished are "(i) reserve investment corporations that aim to enhance returns on reserves (ii) pension-reserve funds; (iii) fiscal stabilization funds; (iv) fiscal savings funds; and (v) development funds that use returns to invest for development purposes" (ibid., 9).

When central banks focus on return maximization through asset diversification of its reserve portfolio, their differences from SWFs begin to blur. For example, the Saudi Arabian Monetary Agency and the Hong Kong Monetary Agency both have a "backing portfolio" and an "Investment Portfolio" (Braunstein 2009: 64). China's State Administration of Foreign Exchange (SAFE) also displays similar ambiguities with its foreign equity exposure.

As Mezzacapo notes, moreover, it is possible to identify distinct types of SWFs by their liabilities. Such a classification would yield: Contingent liability funds (aimed at stabilization, the relevant contingency is budgetary shortfall from, for example, a commodity price drop); Fixed liability funds (aimed at say meeting the future pension liability); Mixed liability funds and open-end liability funds.

It is clear that the funds' different policy objectives may have implications for benchmarking (see section two below). But the source of funds may be important in terms of benchmarking as well. For instance, should oil- and gas-based commodity funds hedge their oil price exposure?

2.4 Pension Funds, Endowments and SWFs

Like SWFs, public pension funds can also have long-term horizons. In the view of David Denison, "long-term" investing requires the following preconditions be met: "an appropriate business model, a tolerance for volatility, rigour around portfolio construction, an enabling governance model, [and] the design of the investment process" (2010: 5). Such criteria have implications for governance, which include a focus on long-horizon valuation, tenure periods for directors and trustees that are of sufficient duration, and the use of long-horizon factor models (Denison 2010). In other words a long-term investor should be resistant to short-term market pressures. While some SWFs, pension funds, and foundations meet these criteria, most fund management operates on horizons of between 0-24 months. As a result, redemption notices greet mutual fund managers; there are fire sales for the highly leveraged; funds face capital calls; and banks require funding to meet capital requirements.

The modern university (Yale) endowment model is outlined in Swensen (2000). It includes an equity orientation, diversification into five or six different asset classes, and holding fewer liquid assets through more exposure to alternative investments. As noted in the Innovest and WWF (2008) study, there has been some tendency for public pension funds also to explore the alternative investments, with greater investment into real estate, private equity and hedge funds. Tellus (2010) criticises university endowments by arguing that they were guilty of poor liquidity management and too much leverage, and in fact did not have a sufficiently long-term horizon. Such a horizon would include recognition of their role as (potentially) countercyclical long-term investors, as well as the university's role in the broader community. There is some analogy here with SWFs who have a stake in the economy from which they originate.

There are further similarities between SWFs and other institutional investors. As noted by Steil (2008), concerns about politically motivated SWFs can equally be applied to some public pension funds. Unlike SWFs, however, most public pension funds are funded from direct fiscal transfers or pension contributions by residents. This can imply a more restricted investment space and a greater need for transparency to ensure domestic political legitimacy.

3. Background

Due to strong commodity (particularly oil) prices and large balance of payment surpluses, recent years have witnessed a rapid growth in the size of assets managed by SWFs. For a discussion of some of the potential reasons for these surpluses (and matching developed country deficits) see the discussion in section 6 of this report (Managing Risk during Macroeconomic Uncertainty).

Anthony Elson (2008) derives recent SWF growth from two changes in the international economic system (as well as reflecting the broader effect of increased financial market and economic globalization). He notes, in particular, the increased economic power of emerging markets (reflected among other things by enormous foreign reserve holdings) and diminished confidence in the International Monetary Fund and its role in economic affairs.

3.1 Assets under Management

The total assets under management (AUM) of SWFs is approximately $3-4 trillion (depending on how exactly SWFs are defined; all amounts are in U.S. dollars). This is roughly twice that of hedge funds assets under management (AUM), but half of total forex reserves and only 1/8th of pension fund assets (Mezzacapo 2009, chart 6). However, this amount is growing. According to the 2008 IMF World Economic Outlook, “the share of SWFs in global wealth is almost four times higher, growing from around 2.5% of global financial assets to over 9%" (cited by Mezzacapo 2009: 16). This growth has been somewhat curtailed by the effects of the 2008 global financial crisis.

IFSL (2010) estimates SWF assets under management at $3.8 trillion in 2009[6], of which 66% was in commodity funds. IFSL forecasts AUM to rise to $5.5 trillion by the end of 2012. Jen and Andreupoloulos (2008) re-estimate the projected size of SWFs in light of financial market turmoil. They estimate that due to "the paper losses that SWFs may have suffered. . . lower oil prices. . . the need to replenish official reserves. . . (and) risks of SWFs being called upon to finance extraordinary fiscal operations" that a realistic approximation of total assets under management by 2015 will be $9.7 trillion.[7] Such figures are always tentative; various factors make the measurement of SWFs' size difficult (Grennes 2009).

3.2 Regional Distribution

In the Middle East the largest funds are in the United Arab Emirates (UAE), Kuwait, and Qatar. In South and Eastern Asia, the largest players are in Singapore and China. In this region the source of funds is primarily export revenue. Other important players include the Norwegian Pension Fund Global and the Russian Stabilization Fund, both of which are oil and gas funded.

3.3 Examples

Abu Dhabi uses an increasing number of vehicles to manage its surplus. The largest and oldest of these funds is the Abu Dhabi Investment Authority (ADIA). Its function is the more traditional stabilisation/savings role to promote intergenerational equity. While ADIA follows a portfolio investor strategy, the Mubadala Investment Company's (Mubadala) role is more active. There is also Aabar Investments (Aabar), a unit of the government controlled International Petroleum Investment Company. Aabar's investments include Daimler (Aabar is Daimler's largest shareholder at 9.1%),[8] Tesla, AIG private banking and Virgin Galactica. Mubadala has exposure to Carlyle, General Electric and AMD.[9] According to the New York Times, its range of investments include "aerospace, health care, gas and aluminium production, water purification, computer chips and, with G.E., commercial finance." Also, unlike the ADIA, Mubadala uses 60/40 equity/debt mix.[10]

The Saudi Arabian Monetary Authority (SAMA) invests conservatively in foreign assets,

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[6] IFSL (2010) note that pension fund assets were at $ 29.5trillion, mutual funds at $ 23trillion, insurance funds at $ 20 trillion, private equity at $ 2.6 trillion, and hedge funds $ 1.6 trillion.
[7] http://www.morganstanley.com/views/gef/archive/2008/20081110-Mon.html#anchor7146
[8] Reiter, C. "Daimler Sells Aabar a 9.1% Stake for $2.7 Billion (Update3)" Bloomberg, 22 March 2009. Aabar's stake at 91% of Daimler, exceeds that of Kuwait at 6.9%.
[9] Thomas, L. "The Suave Public Face of Abu Dhabi's Billions", New York Times, 31 October 2008.
[10] Thomas, L. "The Suave Public Face of Abu Dhabi's Billions", New York Times, 31 October 2008.

focusing on government bonds and dollar-denominated assets. To some extent, this shielded it from losses during the recent crisis.

China has three different investment vehicles (SAFE, China Investment Corporation, and National Social Security Fund). Each appears to have a different function and governing legal framework.[11] SAFE sits within the central bank of China and manages foreign reserves. When it was created in 1997, however, its precise mandate was to invest in equities on account of the low return of traditional safe investments.

The China Investment Corporation (CIC) is incorporated independently, and is overseen by the State Council with, reportedly, a bigger role for the finance ministry. The largest investment of the CIC was an $120 billion investment in Central Huijin, which manages central government investments in the domestic banking system. However, there have been some indications that this stake will be divested. Aside from some significant investments in US financial institutions, the CIC has also some considerable stakes in “finance, energy and resource sectors vital for future Chinese economic development”. (Clark and Monk, 2010b: 19). As noted by Zheng Bingwen, “the CIC’s biggest weakness is that it is confronting considerable pressure to achieve high rates of return. Because the government bonds used to finance the CIC get more than 5% per year-not to mention the expectation of an RMB revaluation-the CIC is likely facing a hurdle rate of nearly 10% per year. This requirement and the pressure to achieve high returns is the CIC’s biggest weakness.”[12]

The National Social Security Fund (NSSF) is the Chinese pension reserve fund and its administrator, the National Council of Social Security Fund is overseen by the State Council. In recent years the fund has pursued a slightly more aggressive strategy.

Singapore has two different funds for stabilization/savings, as opposed to development fund purposes. GIC is tasked with the former responsibility and the much smaller Temasek with the latter (unlike GIC, Temasek has ownership of the funds it manages).

Norway Government Pension fund Global (GPFG) has an estimated $450 billion assets under management. The GPFG sits inside the Norges Bank. The asset manager is Norges Bank Investment Management (NBIM), and it employs Norges Bank employees. Its investment guidelines are ultimately determined by the Ministry of Finance and its reports periodically to the Norwegian parliament. Norway’s ethical commitments are varied – including soft law instruments such as the non-binding UN Global Compact Norms, and domestic commitments to

[11] Oxford Sovereign Wealth Fund project, interview with Yu-Wei Hu, 21 October 2008, http://oxfordswfproject.com/2008/10/21/qa-with-yu-wei-hu-consultant-on-chinese-pensions-at-the-oecd/

[12] Oxford Sovereign Wealth Fund project, interview with Yu-Wei Hu, 23 October 2008, http://oxfordswfproject.com/2008/10/23/qa-with-zheng-bingwen-senior-research-fellow-at-the-chinese-academy-of-social-sciences

avoid being "complicit" in unethical behavior. Gelpern describes it as "a complex product of international law, domestic and international politics, and global market socialization" (2010: 39).

Russia Reserve Fund (a revenue stabilization instrument primarily invested in sovereign bonds) and Wealth Fund (a higher yield focus designed to assist pension reform) have been drawn on to offset revenue shortfalls in the current crisis.[13] They have been used to provide fiscal stimulus, to meet pension liability shortfalls, and to recapitalize key banks. The crisis has delayed the creation of a standalone ADIA-style agency to manage some of the reserves.

Brazil's sovereign wealth fund is primarily invested domestically. New rules were announced in December 2009 outlining the conditions for the purchase of assets abroad. Investments are restricted to investment grade securities and there are restrictions on yield.

4. Investment Characteristics and Empirical Findings on SWFs

Mezzacapo (2009) outlines various benefits from the presence of SWF investors. As he notes, they are large, diversified, long-term investors with low leverage. They are highly liquid, have a relatively high risk tolerance, and are less sensitive to market conditions than private funds. In addition their liabilities are not explicit. Such characteristics make SWFs a "possible stabilising [force] in the global financial market" (ibid., 22). We need to think about this along various dimensions: sectoral shares; geographic focus; type of asset (riskiness), and strategic dimensions.

Bernstein, Lerner, and Schoar (2009) survey SWF *investment strategies*. In particular they look at "direct private equity investment strategies across sovereign wealth funds and their relationship to the funds' organizational structures" (ibid., 1). They provide evidence of home bias in SWF investments. The home bias appears, moreover, to be characterized by trend chasing. SWFs are more likely to invest at home when equity prices are higher and invest abroad when foreign prices are higher. Furthermore, the home bias is more pronounced when politicians, as opposed to external managers, are involved with SWFs.

Avendano and Santiso (2009) compare *investment behavior of sovereign wealth funds and mutual funds*. Both exhibit broadly similar portfolio characteristics, though "sovereign wealth

[13] The explicit aim of the Stabilization Fund (divided into the Reserve Fund and the Wealth Fund) of the Russian Federation was "to balance the federal budget at the time of when oil price falls below a cut-off price, currently set up at $27 per barrel." It furthermore, was to be a "tool for absorbing excessive liquidity, reducing inflationary pressure and insulating the economy from volatility of raw material export earnings." Ministry of Finance of the Russian Federation, http://www1.minfin.ru/en/stabfund/about/ . For an overview see Jen, S and O. Weeks, "Celebrating the Birth of Russia's SWF", Morgan Stanley, 1 February 2008.

fund portfolios do however show slightly lower beta, higher P/E ratio, higher sales growth and dividend yield, and lower price-to-book ratio."[14] Geographically destination locations are similar, though there are some sector differences between OECD and non-OECD funds.

A good source on *recent activity* by SWFs is the annual report on SWFs produced by Monitor-FEEM. They draw on their transactions database which contains deals completed between 1981 and 2008. They find "convergence" in investment strategies in 2008. The financial crisis has lead to a much larger share of investments being directed domestically, and a far greater emerging market focus more generally (though QIA and GIC have continued to invest internationally).

It may also be that *political considerations can affect performance*. Drawing on the SWF Monitor-FEEM database, Fotak and Megginson (2009) find losses for SWF investments at $57.2 billion of a total of $125.7 billion invested. Of the total amount lost, $41.3 billion was related to investments in Western banks. They speculate that "unfortunate stock-picking could be a consequence of political pressures which led SWFs to invest in distressed industries in order to minimize target-country regulatory and political opposition" (ibid., 56).

Chhaochharia and Laeven (2009) find that SWFs have a *cultural bias* in foreign investment. SWFs do not appear to be entirely focused on profit-maximizing investment rules. Chhaochharia and Laeven (2009) also find a home geographic bias, and some support for the view that SWFs favor financially constrained companies. They note, however, that their findings should be interpreted with caution, since their equity investment database is incomplete.

Fernandes (2009) examines cross-country data of SWF holdings from 2002 to 2007 and finds an SWF premium in excess of 15% of firm value. Higher SWF ownership is associated with "higher firm valuations and better operating performance" (ibid., 1). This may reflect SWFs preference for "large and profitable firms that enjoy significant external visibility" (ibid., 1). These findings are also "consistent with the evidence of improved performance of firms in which SWFs invest" (ibid., 2). He also finds evidence that SWF prefer investing in countries with good governance and efficient institutions. They do not appear to fund firm-level R&D activity, which "contradicts the political argument that one of their motives might be to import innovation to their home countries through the 'backdoor'" (ibid., 3).

Bortolotti et. al. examine a set of 802 investments made in publicly traded companies by SWFs between 1985 and 2009. They find that SWFs typically invest in "large, levered, profitable growth firms, usually headquartered in. . . (an) OECD country" (2009: 5). Furthermore, SWF investment announcements are associated with "significantly positive abnormal stock price returns. . . but most investments lead to deteriorating firm performance over the following two

[14] http://www.voxeu.org/index.php?q=node/4549

years" (ibid., 1). In only 14.9% of cases do SWFs gain board of director representation, though the number is 26.8% when Norwegian targets are excluded. They also provide evidence that underperformance is associated with the inability of SWFs to exert proper monitoring – what they call the "Constrained Foreign Investor Hypothesis." Performance is worse the larger the acquired stake, the more direct the investment (rather than subsidiary stakes), when foreign firm investments are involved, and if the SWF is represented on the board.

4.1 Trends

IFSL (2010) identifies a trend since 2003 of "a gradual shift from passive to active investment strategies" The Monitor-FEEM report documents potential long-term trends for SWFs. Some of the important points include:

- Greater knowledge transfer;
- More renewable energy exposure such as the recent steps taken by Abu Dhabi to diversify its exposure to energy by investing in renewable energy (i.e. the Masdar Energy City Project);
- A change in focus towards Asia where there exists greater potential for fiscal stimulus;
- A potentially larger role in domestic markets as liquidity providers;
- SWFs taking on a larger developmental responsibility;
- An increased number of joint ventures as a mechanism for the transfer of knowledge (e.g. recent Libyan investment in a hedge fund in London);
- Following the uncertainty generated by the financial crisis a larger allocation towards liquid asset classes;
- Greater transparency;
- And a more activist role (this will come with an increased domestic focus), and potentially a greater interest in corporate governance.

5. Questions for panellists

i. What is a SWF?
ii. In what ways are the definitional questions important?
iii. Should the source of funding for the SWF affect its asset allocation?
iv. How should the policy objectives be reflected in the organizational design and in terms of its operational independence?
v. What are the main macroeconomic challenges facing SWFs?
vi. What are the most noticeable asset allocation trends currently in the SWF space?
vii. What are the most important recent trends in the internal governance of SWFs?

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