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ARE SOVEREIGN WEALTH FUNDS' INVESTMENTS POLITICALLY BIASED? A COMPARISON WITH MUTUAL FUNDS

by

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PREFACE

This paper belongs to a series of studies on Sovereign Wealth Funds and their role in the new financial architecture. The study is a background paper for the upcoming *Global Development Outlook 2010*.

The resilience of Sovereign Wealth Funds was proven during the recent financial turmoil, confirming their status in today's global financial landscape. Their importance is stressed today, when more countries are considering setting up wealth management institutions. Some emerging economies including Angola, Brazil, Indonesia, Malaysia, Mongolia, Nigeria and Saudi Arabia have recently created or expanded this type of structure for managing their national wealth, while the debate is open in others (Algeria, India).

This research deals with the question of sovereign wealth funds' investments from a comparative perspective. Based on a unique holding-level data for a group of sovereign funds and mutual funds, it shows that the differences in equity investments between SWFs and other institutional investors are less pronounced than suspected. This is illustrated by comparing the geographical/sector allocation and the targeted firms' profile. A new dimension of analysis is introduced: the political regime in the sending and recipient countries. Evidence suggests that SWFs and mutual funds' investments converge when looking at the political profile of targeted countries.

These results point towards some policy implications. First, in line with the OECD viewpoint, double standards for institutional investments should be avoided. Sovereign wealth funds exhibit more similarities than differences to other institutional investors. Second, taking mutual funds as a financial-oriented benchmark, SWFs are investing in countries that are financially rewarding, regardless of the political regime. Third, allocation disclosure is an important step towards transparency, but should not only be a requirement for sovereign wealth managers, but also for other institutional investors, either public or private.

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RÉSUMÉ

L'allocation globale de capitaux et les fluctuations des prix des actifs sont de plus en plus influencées par les activités des fonds souverains. Les *Principes de Santiago* appelaient à davantage de transparence, insistant sur la nécessité pour les fonds souverains de clarifier leurs standards de gouvernance et de renforcer leurs politiques de gestion de portefeuille. Bien que leurs stratégies ne soient pas clairement identifiées, les fonds souverains sont soupçonnés de répondre à des objectifs autres que ceux liés au ratio risque-rendement. Cet article tente de répondre à ces questions. La crainte de voir les fonds souverains guidés par des motivations politiques utiliser leur pouvoir financier pour s'assurer de larges parts dans les compagnies occidentales se révèle infondée. Nous montrons que les décisions d'investissement des fonds souverains ne diffèrent pas fondamentalement de celles d'autres gérants de fonds. Nous proposons d'utiliser les fonds mutuels comme catégorie de référence pour l'étude des allocations d'investissement des fonds souverains. Nous recueillons des données sur l'investissement des fonds souverains et des fonds mutuels sur les marchés d'actions et analysons leurs stratégies géographiques et sectorielles. Nous comparons ensuite les investissements pour ces deux groupes d'investisseurs en regardant le régime politique dans les pays émetteur et destinataire, sous l'hypothèse que cette variable n'est pas déterminante quand ils investissent. Enfin, nous effectuons une étude comparative des fonds souverains et d'autres types de fonds à partir de l'analyse de certains aspects liés à la gouvernance et la politique d'investissement. Nous déconseillons fortement l'instauration d'une régulation fondée sur le principe du« deux poids, deux mesures » et recommandons d'accentuer les efforts en faveur d'une plus grande transparence de la part des investisseurs.

Mots clés: Fonds souverains, allocation d'actifs, régulation, régimes politiques.

Classification JEL: F21, G11, G18, O57.

ABSTRACT

Global allocation of capital and fluctuations in asset prices are increasingly influenced by the activities of Sovereign wealth funds (SWFs). The *Santiago Principles* called for higher transparency, stressing that SWFs should exhibit clearer governance standards and sound portfolio management principles. Although asset allocation strategies for these funds are not known, SWFs are suspected to follow other factors besides risk-return objectives. This paper attempts to shed light on some of these concerns. The fear that sovereigns with political motivations use their financial power to secure large stakes in Western companies is shown to be unfounded. We find that SWF investment decisions do not differ greatly from those of other wealth managers. We propose to use mutual funds' investments as a benchmark for SWF investment allocations. We collect data of SWF and mutual fund equity investment at the firm level and analyse these investments on a geographical and sector basis. Moreover, we compare target investments for these two groups by looking at the political regime in the sending and recipient country, under the hypothesis that this variable is not determinant for SWF investments. Finally, we provide a comparison of SWFs and other public funds based on governance features related to investment. We argue that double standards for regulation should be avoided and efforts to achieve higher transparency should be made by all investing actors.

Keywords: Sovereign Wealth Funds, asset allocation, regulation, political regimes, benchmark.

JEL Classification: F21, G11, G18, O57.

I. INTRODUCTION

It may be referred to as the return of power brokers or as state capitalism. Whatever the label, Sovereign Wealth Funds (SWFs) are key actors in today's global financial landscape. The rise in their investment is impressive, with the number of deals tripling between 2000 and 2008, and jumping from USD 4 billion to nearly USD 130 billion[1].

SWFs have captured the imagination of Western media, bankers and policy makers. They were portrayed as politically-guided institutions, using their financial strength to secure stakes in Western companies. Ironically, after being depicted as the new barbarians at the gate, politics and the media turned them into white knights when the Western financial blue chips collapsed in the midst of the global financial crisis of 2008-2009.

The reality is that SWFs today are dynamic institutional investors in both industrialised and developing countries. The explosion of their investment activity is, above all, testimony to developing countries' wise stewardship of their national wealth[2]. It also generated a wave of scepticism and mistrust, mostly from the OECD side, which saw in these vehicles a potential threat to their financial structures and strategic industries. Cohen (2009) labelled this the "*Great Trade-off*" between the collective interest in sustaining open capital markets, and the legitimate national security concerns raised by host countries[3]. As they diversified their assets, criticism of Sovereign Wealth Funds spread all over OECD countries. With some rich countries fearing the implications of SWFs' entry, their increasing involvement and investment into emerging

1 According to Monitor Group and Fondazione ENI Enrico Mattei (2009). Estimates of SWFs assets under management in 2009 ranged from USD 1,5 trillion to USD 3 trillion. See for a discussion the estimations of Brad Setser and Rachel Ziemba available at http://blogs.cfr.org/setser/category/central-bank-reserves. Most of the SWFs have been heavily hit by the 2008 global financial crisis. For specific and detailed re-estimations of SWFS assets and losses before, during and after the crisis, see for example on Gull countries, Setser and Ziemba (2009) and Kern (2009).

2 See some definitions of the term in Jen (2007a, 2007b and 2008) and Rozanov (2005 and 2007). Later SWFs from emerging countries have developed their own analysis. See reports on CIC by Chen (2008, 2009).

3 Ironically, OECD based SWFs promoted investments abroad incorporating political and ethical considerations in their decisions. In the case of Norway, it resulted in controversial disinvestment decisions from Wal-Mart and companies operating in Myanmar (Burma). See Chesterman (2008).

countries remained off the radar screens[4]. Overall, emerging markets concentrated 70% of the deals and 40% of the value of SWF investments[5].

There is a certain irony in the timing with which allegations that SWFs lacked transparency and governance were interrupted by a major crisis bursting at the core of the OECD financial system. SWFs were (legitimately) "*puzzled that the standards and transparency requirements that others advocate for them go far beyond anything that has been envisaged for the highly leveraged hedge fund and private equity communities in industrial countries*" [6]. Along the same lines, it has been stressed that the need for greater transparency applies to all, including Western based hedge funds and private equity firms[7].

After months of public debate and rising concerns about their investment activities, many SWFs agreed on a number of principles on investment behaviour, reassuring OECD countries and international organisations about the role of public investors in the future. Under the umbrella of the IMF, the *Santiago Principles* called for higher transparency, stressing the fact that these funds should demonstrate the financial orientation of their decisions. SWFs' investment strategy should be based on sound portfolio management principles, and all relevant financial information should be publicly disclosed (GAPP 17 and 18). Moreover, investments should follow an investment strategy set by a governing body. The investment policy should guide financial risk exposure, the extent of internal/external managers, and the range of activities (GAPP 18). In addition, investment decisions should aim to maximise risk-adjusted financial returns in a manner consistent with stated investment policy. Any investment decisions beyond economic and financial considerations should be clearly set out in the investment policy (GAPP 19).

The position of the OECD regarding investments from SWFs has been non-discriminatory, even if the Santiago Principles are fully endorsed by the organisation. Requiring sovereign funds to disclose their investment strategy and portfolio allocation would put them at a disadvantage with respect to other investors. Therefore, SWFs should be regarded in the same way as other institutional investors, and held to comply with the existing OECD Investment Guidelines, which commit their adherents to principles of transparency, non-discrimination, liberalisation and standstill[8].

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4 For some research insisting in the south-south dimension and their contributions to development in other emerging and developing countries, see Santiso (2008). For a special focus on Arab SWFs see Behrendt (2008) and Behrendt and Kodmani (2009).

5 Figures from Monitor Group (2008).

6 See El-Erian, M. (2008), p. 183.

7 See Gieve (2008).

8 In addition to the investment standards that OECD demands from public and private investors, some principles have been highlighted for the case of sovereign funds. The transparency/predictability principle refers to the codification and publication of laws regarding investment, prior notification to interested parties about plans to modify investment strategies, consultation of these strategies with other counterparts and the disclosure of investment policy actions. The regulatory proportionality principle stipulates that restrictions on investment should not be greater than is needed to protect

The injunction that Sovereign Wealth Funds should be treated equally to other institutional investors stresses the importance of a comparative analysis. Still, the comparability of investment practices between public and private investors is not straightforward and instruments for this purpose are needed. In this paper, we propose a benchmark allocation for Sovereign Wealth Funds. By collecting recent data on SWF equity holdings, we analyse two dimensions of their investment: their geographical and industry allocation relative to other institutional investors (*i.e.* mutual funds), and the political bias of their investments.

The rest of the paper is organised as follows: The second section reviews the economic literature on asset allocation for SWFs and recent findings on this issue. The third section discusses the implications for regulation, and the perspective for setting a benchmark for SWFs in terms of investment. The fourth section describes the asset allocation for a group of SWFs and compares it with that of other institutional investors (mutual funds). Finally, the last section discusses the political dimension of the sovereign funds' asset allocation and concludes.

national security. Finally, the accountability principle is an objective for guaranteeing periodic regulatory impact assessments, parliamentary oversight, and other supervision activities. See OECD (2008) for a more detailed description of the policies for Sovereign Wealth Funds and recipient country policies. See also OECD (2008b) for the OECD declaration on Sovereign Wealth Funds, the Freedom of Investment Process and the OECD General Investment Policy Principles.

II. LITERATURE REVIEW AND STYLISED FACTS

The asset allocation of Sovereign Wealth funds has been addressed from economic, legal, and political perspectives. However, the implications for asset allocation of the requirements that SWFs have agreed to respect (through the Santiago Principles and other agreements) are still a matter of study.

The traditional economic approach focuses on the management of reserves (Jeanne and Rancière 2008, Portes *et al.* 2006), models of portfolio choice (Campbell *et al.* 2004) and contingency claims (Alfaro and Kanczuk 2005, Rozanov 2008). More holistic approaches analyse the motives behind the establishment of each type of fund (Reisen 2008). A recent literature on the implications of SWF investments for the international financial system is rapidly growing. Bortolotti *et al.* (2009) assesses the financial impact of SWF investments on stock markets, stressing some similarities between SWFs and other internationally active investment vehicles such as pension funds, buy-out funds and mutual funds[9]. They find a significantly positive mean abnormal return upon SWF acquisitions of equity stakes in publicly traded companies. Sun and Hesse (2009) find that the announcement effect of SWF investments is positive and SWF share purchases are positively associated with abnormal returns. Balding (2008) states that SWFs act as economic driven investors and their impact on international financial markets may be more moderate than expected. Chhaochharia and Laeven (2008) find that SWFs invest to diversify away from industries at home but do so in countries with cultural closeness, suggesting that investment rules are not entirely driven by profit maximising objectives. In fact, long-term performance of firms acquired by SWFs tends to be poorer. More recently (Chhaochharia and Laeven 2009), they show that other institutional investors also invest in countries with common cultural traits.

Berstein *et al.* (2009) examine SWFs' equity investment strategies and their relationship to organisational structure. They find that SWFs where politicians are involved are more likely to invest at home than those where external managers participate. At the same time, SWFs with external managers tend to invest in industries with lower Price-to-Earnings levels[10].

9 See Del Guercio and Hawkins (1999), Woitdke (2002), Aggarwal *et al.* (2005), and Khorana *et al.* (2005).

10 SWFs have been associated in structure and objectives to hedge funds—studied by Klein and Zur (2006) and Ferreira and Matsos (2007), in that SWFs are also stand-alone, unregulated pools of capital, managed by investment professionals, and often take large stakes in publicly traded companies. See Bortolotti *et al.* (2009) for a more complete review of the literature.

Fernandes (2009) focuses on SWF holdings (rather than transactions) for the period 2002-2007, finding that firms with higher SWF ownership have higher valuations and better operating performances. In a companion paper, Fernandes and Bris (2009) find a stabilising effect of SWF investments on corporations. They stress the positive impacts of SWFs, notably through helping companies reduce their cost of capital[11]. These findings are confirmed by other studies on the market impact of SWF investment. Kotter and Lel (2008) suggest that SWFs are profit-oriented passive investors and that markets react positively to SWF investment announcements. All in all, the evidence suggests that SWFs can be a stabilising force in global financial markets.

Defining a benchmark for SWFs

Even if our understanding of SWF investment has improved, little is known about their benchmarks. SWFs enjoy substantial freedom in investing the funds entrusted to them (Weinberger and Golub 2007). In contrast to international reserves, which have traditionally limited their investments to less-risky assets, the asset classes in which SWFs invest are substantially broader, including public and private debt securities, equity, private equity, hedge funds, real estate and the use of derivative instruments. At the same time, their investment horizon is larger, and it is assumed that speculation does not play a role in their investment strategies.

A number of SWFs have benchmarks for their investments, but there is a large heterogeneity in their implementation and use[12]. Some funds have overall portfolio benchmarks (index or total return) while others use separate benchmarks for each asset class. While the majority of benchmark indices are based on market indices, many are customised. Even if some SWFs have the mandate to target higher/riskier returns than central banks, they remain public-sector institutions and are unlikely to act as hedge funds or private equity firms that engage in speculative trading and use extensive leverage[13].

11 Importantly, SWFs tend to be passive rather active investors. The typical position taken by an SWF is not a controlling stake and on average, an SWF takes 0.74% of the shares outstanding in a company. With such a limited controlling stake, SWFs can hardly be viewed as possessing control over companies, at least directly (some SWFs externalised the management of their assets to investment firms – most of them located in OECD countries; this is the case of ADIA who had 70-80% of its assets before the 2008 crisis managed by external asset managers according to JP Morgan). See JP Morgan (2008).

12 See JPMorgan (2008).

13 Idem (2008).

Table 1. **Disclosed Benchmarks for selected Sovereign Wealth Funds - 2008**

Sovereign Wealth Fund	Equities	Fixed income
China Investment Corporation	Return net-of-fees 300 bps above MSCI All country Index for global equities 200 bps above EAFE 300 bps above MSCI EM Asia ex-Japan, benchmark suggested by manager seeking the mandate.	150 bps above the JP Morgan EMBI Global
Kuwait Investment Authority	Outperform MSCI Global Index	
Norway Bank Investment Management	FTSE large and mid-cap equity indices for the countries where it invests.	
Saudi Arabia - SAMA Foreign Holdings	S&P 500, MSCI (Europe and Global), TSE (Japan)	JPM Global Bond Index, 3-month Libor (cash/deposits)
Korea Investment Corporation	MSCI world equity.	Lehman global bond index (now Barclays)
Singapore GIC	MSCI World equity	Lehman global bond indices.
Kazakhstan National Fund	MSCI World Equity	Merryl Lynch 6-month T-bill index, Salomon World Government Bond Index
Alaska Permanent Fund	S&P 500, Russell 1000, Russell 2000, MSCI EAFE, EM	
Alberta's Heritage Fund	Standard & Poor's/ TSX Composite Index (Canada), Standard & Poor's 1500 Index (US), MSCI EAFE	Scotia Capital Universe Bond Index

Note: Benchmarks correspond to April 2008 (before the global crisis).

Source: Ziemba (2008).

Ziemba (2008) provides an overview on disclosed benchmarks and return targets of sovereign wealth funds (see Table 1). Although these benchmarks might have evolved in recent months, they provide a snapshot of the indexes used by some SWFs. Funds like Norway, Kuwait, Singapore, Saudi Arabia, Korea and Kazakhstan disclose some of their benchmarks in their active and passive mandates, even if the holdings are not known to the public. This fact suggests that the benchmarks per-se do not always reflect the investments made by SWFs. With the exception of ADIA, funds relying on portfolio investment and external managers tend to release benchmarking data. Other funds (Alberta, Alaska) disclose detailed benchmarks for some parts of their portfolio (equity or fixed income). The most active funds focused on public and private equity stakes tend to disclose even less, sometimes only an overall return target. Other funds, such as China Investment Corporation, include the benchmarks and targets that it expects external managers to outperform. Overall, most funds use a general index (*e.g.* MSCI All Country Index) as their primary (equity) target, with a range of indices being used as a global bond target (JP Morgan, Barclays, etc.). There is not, however, a unique benchmark describing the investment profile of sovereign institutions.

Towards Better Regulation

If the financial crisis has temporarily mitigated some of the criticisms against Sovereign Funds, there is still no consensus on the regulatory instruments to which SWF investments should be submitted. Governments and policy makers (*i.e.* G8, IMF, OECD) have promoted a code of best practices to govern SWF investments to appease these concerns. On the other hand, advocates against regulation argue that the means for monitoring SWF investments are already in place and that foreign investments in domestic companies are subject to review[14].

The debate on the regulation of SWFs often focuses on the motivation and impact of their investments. Chalamish (2009) distinguishes two fronts when looking at the role of international law in the SWF debate: regulating SWF activity, either in the home or the host state, and regulating protective measures taken by governments to block SWFs' investments or diminish their impact. In addition, he identifies four possible measures for increasing protection: i) National regulation blocking foreign investment in government-owned entities; ii) National regulation blocking investments in strategic sectors; iii) Individual screening mechanisms of proposed acquisitions or investments; and iv) an open market policy to ensure that investments do not serve a foreign entity.

Today, different modalities of national or regional legislation exist to control foreign investment, SWF included. Indeed, initiatives for a stronger regulation of SWF investments are not entirely new and federal laws already exist, notably in the US, against potential national security threats posed by foreign direct investment (Epstein and Rose 2009). Some proposals for regulation seek to allow SWFs to invest only through professional managers, or to limit (or deny) voting rights in the targeted companies. It has been proposed, for instance, that SWFs invest only in global index funds[15].

Although the debate on new regulatory frameworks is far from closed, quantifiable objectives related to the already-agreed Santiago principles are undeniably useful. It is indispensable, therefore, to have a reference to measure the extent to which SWFs follow these principles.

A way to establish a SWF-investment benchmark would be to look at other large institutional investors, such as hedge, mutual or pension funds. Public pension reserve funds, for

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14 Currently, in the United States, the regulatory framework for institutional investors has similarities to the one for private investors. They have to make disclosures pursuant of the Securities Exchange Act of 1934 if they acquire a 5% or greater equity stake in a public company. In addition, a number of US statutory regimes restrict foreign control in certain sensitive industries, like nuclear energy and airlines. In the United States, this is done by the interagency Committee on Foreign Investment (CFIUS). Under this Committee, any transaction that could result in a foreign entity's control of a company engaged in interstate commerce in the U.S. is subject to a review to determine the effects of the transaction on national security. See Epstein and Rose (2009).

15 See Aizenman and Glick (2008) for a proposal for investment in diversified global equities to prevent destabilisation.

example, share some similarities with SWFs[16]. Both are large in terms of assets, autonomous and accountable only to governments or public sector institutions. Like SWFs, public pension reserve funds are increasingly investing abroad and moving into alternative assets. On the other hand, important differences exist in terms of objectives and funding sources[17].

Compared to other institutional investors, such as mutual or hedge funds, most SWFs have long-term investment horizons. Furthermore, whereas mutual or hedge fund investors pursue profit-maximisation objectives for their specific risk profile, SWFs are suspected to follow more strategic objectives[18]. Moreover, some SWFs such as Norway's must comply with specific investment principles, requiring the companies where they invest to fulfil specific standards (environmental, labour, transparency, etc.) which may put them at a disadvantage to purely market-driven actors (Chesterman, 2008).

To contrast the equity allocation of sovereign funds with other investors, we provide a simple analysis of their investments, comparing them with those of a set of private (mutual) funds over a similar period. By looking at their geographical, sector and industry allocation, we analyse whether SWFs diverge from a "benchmark" investor allocation, represented by the set of private (mutual) funds. Some of these funds are *index funds*, maintaining investments that are part of a major stock, and others are *actively* managed funds, attempting to outperform a stock index[19].

16 See Blundell-Wignall *et al*. (2008). For clarifying definitions and differences between public pension funds and SWFs see Monk (2008a).

17 While commodity funds are set up to protect the domestic economy against fluctuations in commodity prices, public pension funds serve as long-term financing vehicle of public pensions.

18 There are also important differences in regulation for each of these participants. Unlike hedge funds, mutual funds are required to register with the Securities Exchange Commission in the United States. Hedge funds are not required to have specific investment strategies, or prohibit specific investments.

19 Although index funds provide a representative allocation strategy, a broader comparison with actively-managed funds is more enriching for the analysis.

III. DATA ANALYSIS

Disclosed information allowing a comparison of the asset allocation of sovereign wealth funds, or for that matter, mutual funds, is scarce. Therefore, we focus on information available on the stock holdings of these two groups. Information on stock holdings is obtained mainly through the FactSet/Lionshares and Thomson Financial databases. They provide detailed information on the portfolio holdings of institutional and private funds during the last decade. They collect data from mandatory filings with national regulatory agencies (*e.g.* 13F filings with the Securities and Exchange Commission or Share Register in the United Kingdom), as well as information from annual reports or other primary sources.

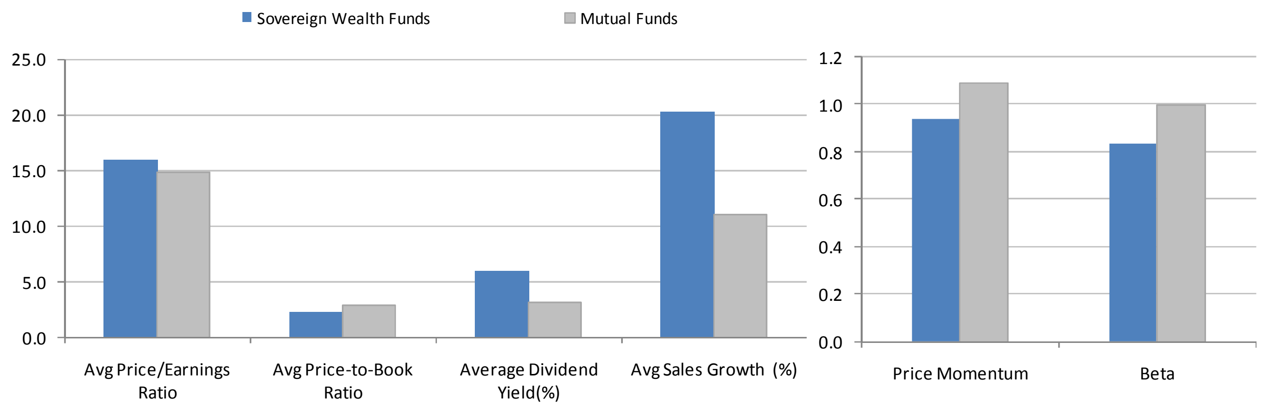
We gather information on these two groups' portfolios as follows: for the SWFs, we select a group of 17 funds, including the most important in terms of assets. The sample includes nearly 14.000 observations (holdings), although some funds were excluded due to data constraints[20]. Most of them are from emerging countries (11) and some from OECD countries, notably New Zealand, Norway and United States. For the mutual fund group, we use the 25 largest mutual funds in the world. Times series were only available for some funds and therefore we restrict our analysis to a specific period, covering the last quarter of 2008, where holdings information is most complete. The total sample of mutual funds' holdings includes 11.600 observations.

Portfolio Characteristics

We begin by reporting some portfolio characteristics of the two groups: holder style, capitalisation group style, turnover, average price-to-earnings ratio, average price-to-book ratio, average dividend yield, average sales growth, price momentum, relative strength and market beta. Annexes 1 and 2 display the funds selected for each group and their portfolio characteristics. A straightforward comparison of portfolio characteristics between the two groups shows some similarities in their investments (see Figure 1).

20 Equity holdings for a number of funds are not available or incomplete in either Lionshares or Thomson One database.

Figure 1. **Average Portfolio Characteristics for SWFs and Mutual Funds - 2008**[21]



Sources: Authors' calculation, based on FactSet and Thomson Financial databases, 2009.

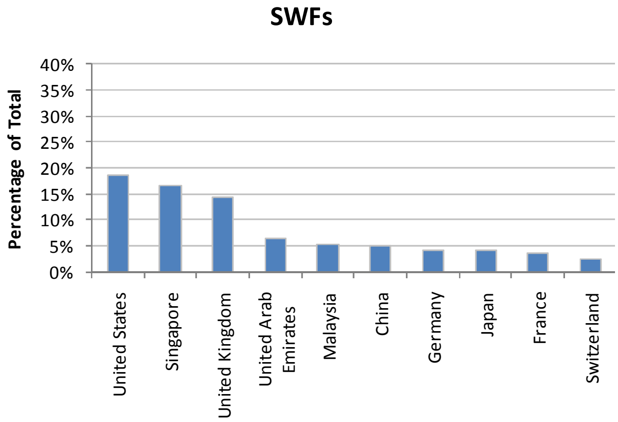
Figure 1 shows that SWFs have a relatively lower beta (0.83 in average) in comparison to mutual funds (1.0 in average). The average P/E ratio is slightly higher for the SWF group. A higher P/E ratio is associated with a higher price for each unit of net income, so the stock is more expensive. In contrast, the average P/B ratio is lower for SWFs. A higher P/B ratio implies that investors expect more value from the asset. The substantially higher average dividend yield for SWFs is puzzling; although a high yield is desirable for some investors, it can also be associated to lower dividends in the future. Finally, the higher average sales growth in the SWF group could be interpreted similarly to the dividend yields. These indicators depict relatively small differences in the investment profile of the firms where SWFs and mutual funds invest.

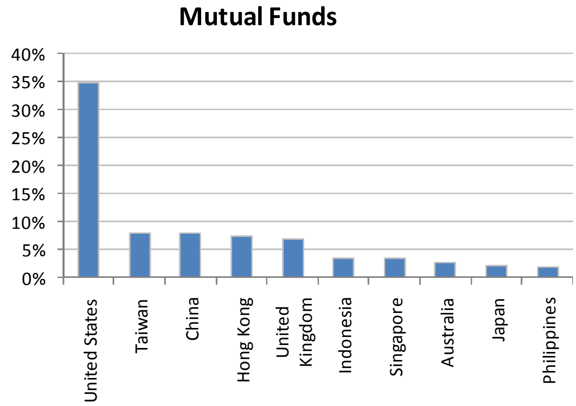
Geographical Distribution

To understand better the distribution of holdings, we calculate country and regional investments. Figures 2 and 3 show the distribution for each group and the main destinations by country (10 largest recipients) and region (worldwide), as a percentage of total holdings.

21 See Annex 2 for a detailed explanation of each financial variable.

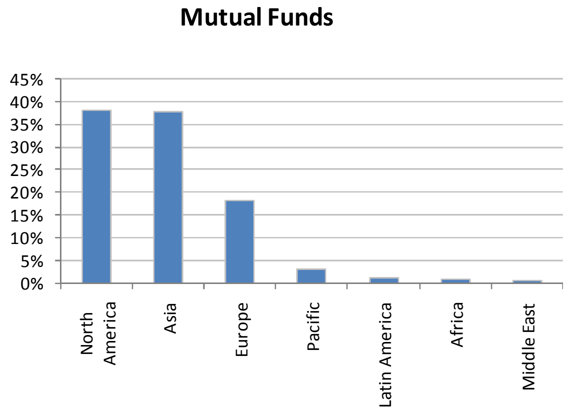
Figure 2. **Distribution of Fund Equity Holdings – Ten Largest Recipient Countries - 2008**





Sources: Authors' calculation, based on FactSet and Thomson Financial databases, 2009.

Figure 3. **Distribution of Fund Equity Holdings – Regions**



Sources: Authors' calculation, based on FactSet and Thomson Financial databases, 2009.

Figures 2 and 3 show an interesting pattern of geographical distribution for each group. In the case of SWFs, where the United States are the main destination for investment, the allocation by country is more diversified than for mutual funds, where the concentration of holdings in this country is much higher[22]. This could be explained by a sample bias, as the largest mutual funds here are all located in the United States. A "home bias" phenomenon might lay behind the fact that the US is by far the top destination of mutual fund investments[23]. In the case of SWFs, the United States also ranks first but the bias is less pronounced.

22 An index of concentration (Herfindahl-Hirschman) by region illustrates this pattern (a value of 0.12 for SWFs and 0.19 for mutual funds). A low HH index (close to zero) indicates a high degree of diversification of investment destinations. A high HH (close to 1) indicates a higher concentration of investments. In the case of sector concentration (0.10 for SWFs vs 0.30 for mutual funds) and industry concentration (0.04 for SWFs vs. 0.33 for mutual funds) the difference is even more important.

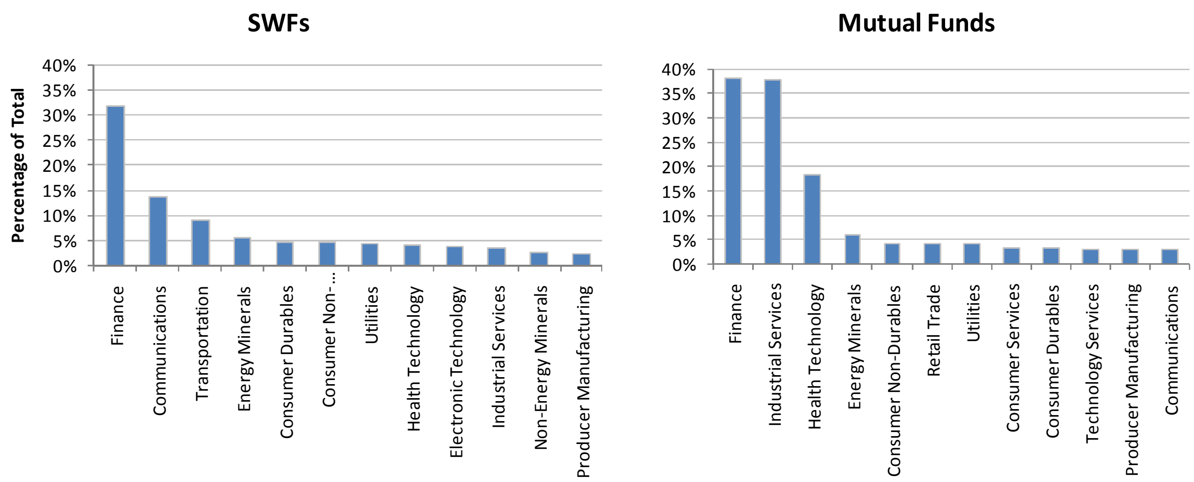
23 See Hau and Rey (2008) and also Bekaert and Wang (2009) for a review.

Regarding regional distribution of holdings, Asia is the main destination of equity investments for SWFs, followed by Europe and North America. Mutual funds, on the other hand, concentrate holdings of similar levels in North America and Asia, whereas Europe receives less of these investments. For both categories, North America, Europe and Asia rank as the top destinations. It is SWFs that show a greater diversification: while mutual funds are mostly concentrated in two regions (North America and Asia), SWFs are invested more uniformly along the three regions. They also show more presence in the Middle East, a region with much less investments from mutual funds.

Sector and Industry Distribution

When looking at the sector and industry distribution of assets (Figures 4 and 5), further differences between sovereign and mutual funds come to the fore[24].

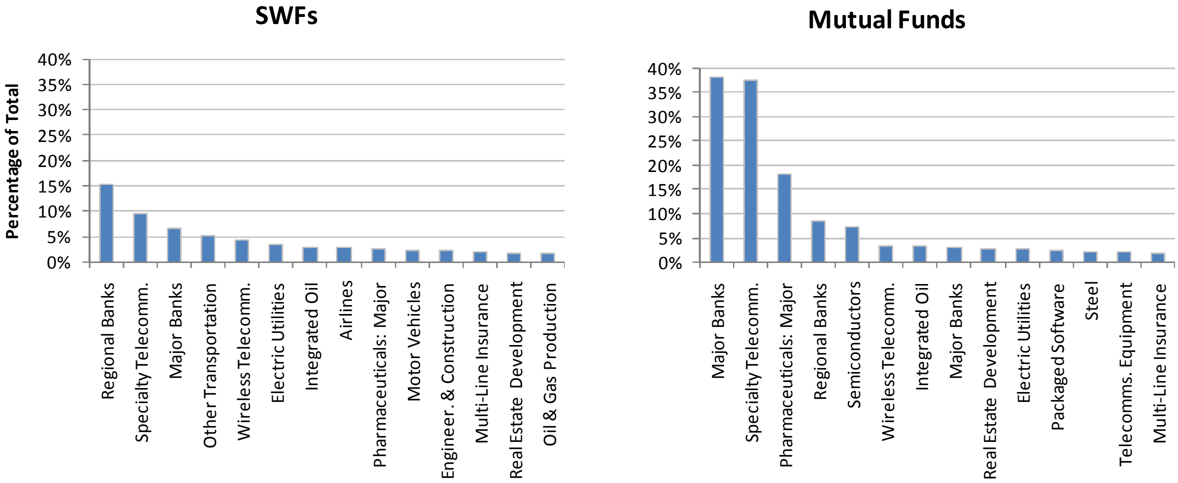
Figure 4. **Distribution of Fund Equity Holdings – Sectors**



Sources: Authors' calculation, based on FactSet and Thomson Financial databases, 2009.

24 Following the Factset classification, we include 23 sectors as follows: finance, communications, transportation, energy minerals, consumer durables, consumer non-durables, consumer non-durables, utilities, health technology, electronic technology, industrial services, non-energy minerals, producer manufacturing, technology services, consumer services, retail trade, process industries, commercial services, distribution services, health services, miscellaneous, government. The industry classification includes around 130 categories. See Annex 3 on sectors and industries.

Figure 5. **Distribution of Fund Equity Holdings – Twelve Largest Industries**



Sources: Authors' calculation, based on FactSet and Thomson Financial databases, 2009.

Whereas both groups invest on average a similar share of their revenues in the finance sector (38% and 32% respectively), SWFs focus on sectors like communication, transportation (14%) and energy materials (6%). Mutual funds are clearly focused on industrial services (38%), health technology (18%) and energy materials (6%). Other sectors, with allocations below 5% each, are consumer durables and non-durables, utilities, technology services, etc.

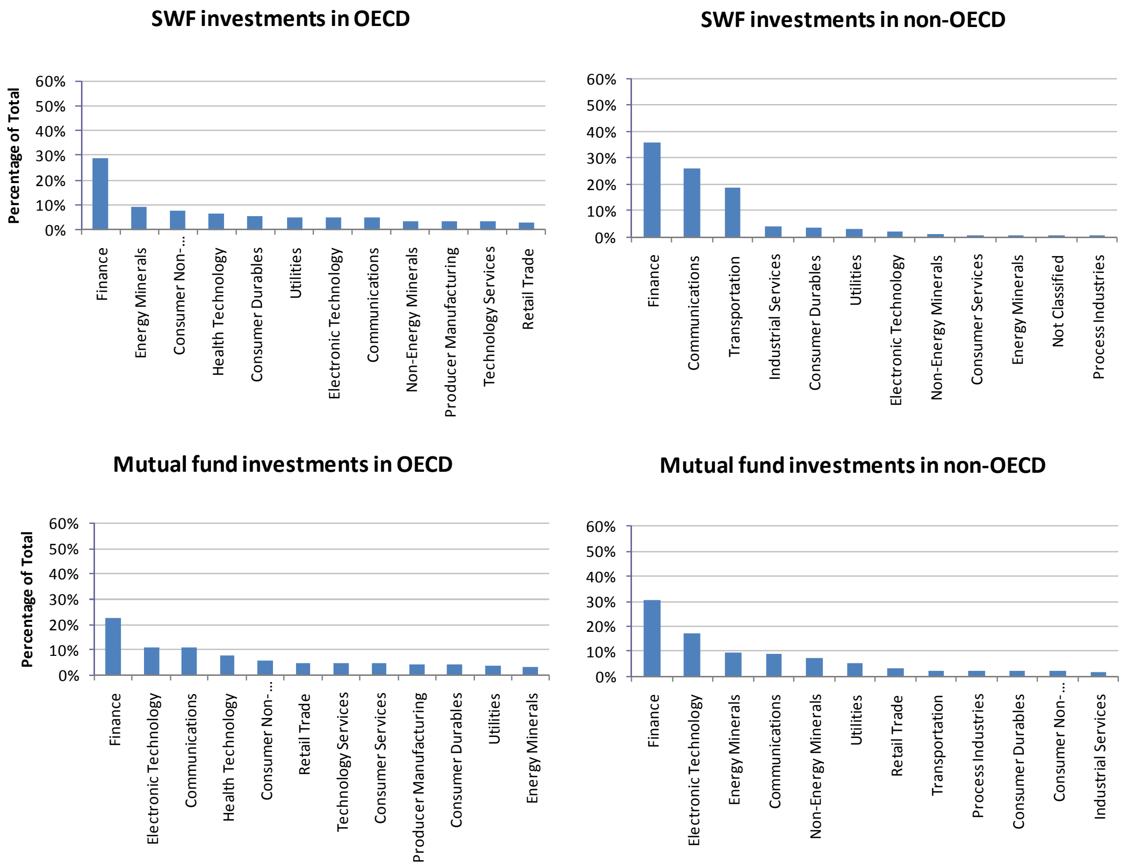
A closer look at the industry level allows the identification of more specific industries in each sector. Sovereign wealth funds privilege the financing sector, with significant investments in regional banks (15%), followed by telecommunications (9%), major banks (7%) and transportation (5%). Mutual funds invest in major banks and speciality telecommunications (about 38% each), followed by pharmaceuticals (18%) and regional banks (6%). As underlined, mutual funds are heavily biased to two major sectors, banks and telecommunications, while SWFs have a more diversified industrial portfolio.

These descriptive figures illustrate some differences between sovereign wealth funds and mutual funds in terms of portfolio distribution. Sovereign funds show a higher level of diversification by country and region, and the same applies for sectors and industries. There are also differences in the industries of interest. The finance and specialty telecommunications industries are very present in the mutual fund group, where their shares are much lower for the case of sovereign wealth funds.

Investment in OECD and non-OECD countries

Figure 6 brings up some noteworthy differences in sector allocation within and outside the OECD, suggesting that SWFs and mutual funds tend to invest in slightly different sectors. Regarding SWF presence in OECD countries, about 27% of investments go to finance, whereas this figure is higher (35%) in non-OECD destinations (which includes emerging and developing countries). While investments in OECD countries are also focused on sectors like energy, consumer non-durables and health technology, in the case of non-OECD countries they concentrate on infrastructure and ICT related industries, such as communications and transportation.

Figure 6. **SWF and Mutual Fund Equity Investments in OECD and non-OECD – Sectors**



Sources: Authors' calculation, based on FactSet and Thomson Financial databases, 2009.

Regarding mutual funds, a slightly different landscape emerges. Mutual funds invest in finance in OECD and non-OECD countries in similar levels (21% and 30%), followed by electronic technology (10% and 17%). Mutual funds also show some similarity in their sector investment profile between OECD and non-OECD regions[25].

These observations could suggest that SWFs (which include mostly non-OECD countries in our sample) may have different investments profiles in OECD and non-OECD countries. The benchmark investor, mutual funds in this case, shows a more homogenous sector distribution among the two country groups.

25 The Herfindahl-Hirschman concentration index for SWF investments are 0.08 (in OECD) and 0.19 (non-OECD), and for Mutual funds 0.05 (in OECD) and 0.1 (in non-OECD). These results suggest a higher concentration of investment sectors for SWFs in OECD countries.

IV. SWF INVESTMENTS: THE POLITICAL DIMENSION

So far, our study of asset allocation has not taken political factors into account. Leaving aside issues of political economy surrounding the rise of SWFs, we focus on analysing the relationship between asset allocation and political regimes. We assess whether asset allocation for SWFs is independent or not from political regime, particularly in the recipient country.

The relationship between investment and democratic regimes has been studied in the past, particularly in the context of multinationals. From the seminal contribution of Barro (1996) on democracy and economic growth, the effects of political regimes on growth enhancers, such as investment, have been studied. Busse (2003), for example, examines the relationship between democratic regimes and FDI, suggesting that investments by multinationals are significantly higher in democratic countries. Jensen (2006, 2009) shows that US multinationals tend to restrict the size of their investments in authoritarian regimes relative to democratic regimes. Li and Resnick (2003) study the effect of democratic institutions on FDI inflows; whereas democracy hinders FDI by limiting oligopolistic or monopolistic behaviours of multinationals, it encourages FDI inflows by promoting credible property rights protection, reducing risks and costs to investors. The net effect of democracy on FDI inflows is contingent on these two forces. Regarding aid portfolios in developing countries, Frot and Santiso (2008, 2009) found that official aid donors (OECD donor countries) do not reward transitions toward democracies and official aid donors invest indifferently in democratic and autocratic countries.

However, little research has been devoted to the impact of political regime on institutional investors' behaviour, and none to our knowledge on the relation between SWF asset allocation and political regimes of sending/recipient countries. To address some of these issues, we provide a series of indicators on governance (for SWFs and pension funds) and political regimes in sending and recipient countries (for SWFs and mutual funds).

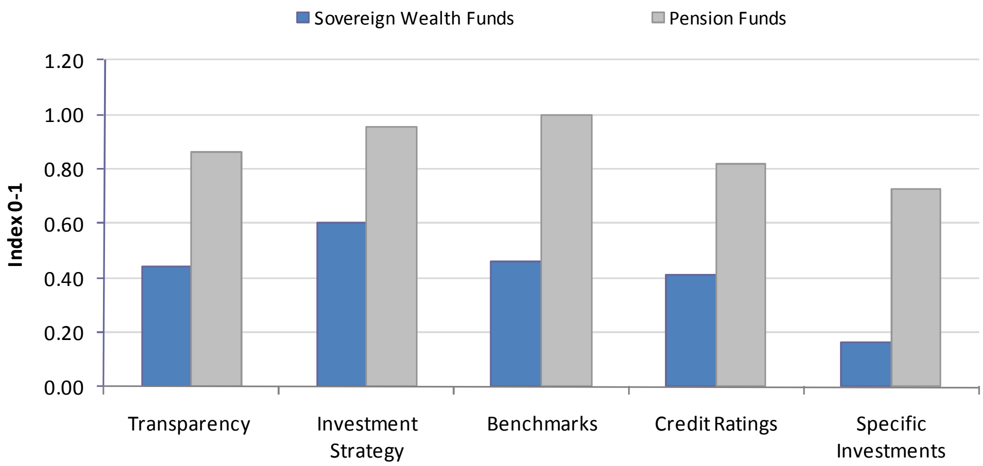
Internal Governance and Investment Strategy

We start by comparing SWFs with another institutional investor, specifically pension funds, using well-known data from Truman (2008) on governance and functioning for the two groups. More detailed analysis would be needed to analyse the political economy behind the emergence of SWFs. Fascinating work has been devoted to the cases of the Singapore Government Investment Corporation (Clark and Monk, 2009) and the institutional context behind the emergence of SWFs[26]. Using a survey of SWF and pension fund managers, Truman

26 In another piece Clark (2009) focuses on the governance of sovereign wealth funds from the perspective of competing political interests A detailed analysis is devoted to the Future Fund (from Australia).

(2008) collects valuable data regarding these funds' investment strategy, transparency, fiscal treatment and management, among others. We focus on those variables most relevant to asset allocation strategies: transparency level, existence of an investment strategy, use of a benchmark, a policy of specific investments and credit ratings[27]. Figure 7 provides a simple comparison for these variables, taking the average of each group, SWFs and Pension Funds[28].

Figure 7. **Investment Criteria in Sovereign Wealth Funds and Pension Funds - 2008**



Note: All scores standardised to values between 0 and 1.

Source: Truman (2008).

Figure 7 suggests that pension funds surpass sovereign wealth funds in all measured criteria: they show higher transparency levels, the investment strategy is communicated more clearly, the use of benchmarks is more frequent, investments are more constrained by credit rating minimums, and their policy towards specific investments is more defined. Clearly, the heterogeneity of SWFs is not reflected on these indicators, but nevertheless suggests the existence of a gap in the investment policies between the two groups. When comparing OECD and non-OECD sovereign wealth funds (see Annex 5), the differences in their investment strategies are stressed[29]. Moreover, regarding commodity and non-commodity funds (Annex 6), a clear

27 Specifically, we focus on the following questions from the Truman survey: 1) Is the overall investment strategy clearly communicated? 2) Does the strategy use benchmarks? 3) Do regular reports on the investments by the SWF include information on the specific investments? 4) Does the strategy limit investments based on credit ratings?

28 See Annex 7 for a description of funds included in each sample.

29 In the case of OECD/non-OECD funds, T-test for the sample reveals significant differences at 5% for transparency, investment strategy and credit ratings. For commodity/non-commodity funds, differences are significant at 5% for investment strategy, benchmarks and credit ratings.

disparity exists between the two groups, with non-commodity funds having higher levels of transparency, investment strategy, investment benchmarks and credit ratings constraints[30].

Political Regimes

Considering the issue of political regimes and investments, we take into account two dimensions:

a) The political regime for the (investment) *sending* country. For this, we use data from *Polity IV* and Truman's fund sample, to compare political characteristics between SWFs and Pension Funds[31].

b) More importantly, the political regime for the (investment) *recipient* country. For this, we use our database of holdings for SWFs and mutual funds, and look at the political characteristics of each destination (again using data from *Polity IV* regime characteristics and transitions). We test the hypothesis that SWFs and mutual funds do not discriminate their investments by the recipient country's regime[32]. We control the results with a second database, the Bertelsmann Transformation Index (BTI) which provides two political indexes: first, the *Status Index* that ranks countries according to their state of democracy and market economy (as of Spring 2007); second, the *Management Index* ranks them according to their leadership's management performance between 2005 and 2007. Whereas the first indicator is static, the second provides a dynamic indicator of performance[33].

30 Remarkably, OECD-based and non-commodity funds show, in average, similar levels to those of Pension funds.

31 Polity IV is a comprehensive database examining concomitant qualities of democratic and autocratic authority in governing institutions. The Polity IV dataset covers all major, independent states (*i.e.*, states with total population of 500,000 or more in the most recent year; currently 163 countries) over the period 1800-2008. The Polity IV Project constantly monitors regime changes in all major countries and provides annual assessments of regime authority characteristics and regime changes, for purposes of comparative, quantitative analysis. The project has become one of the most widely used resources for monitoring regime change and studying the effects of regime authority. For more information see http://www.systemicpeace.org/polity/polity4.htm.

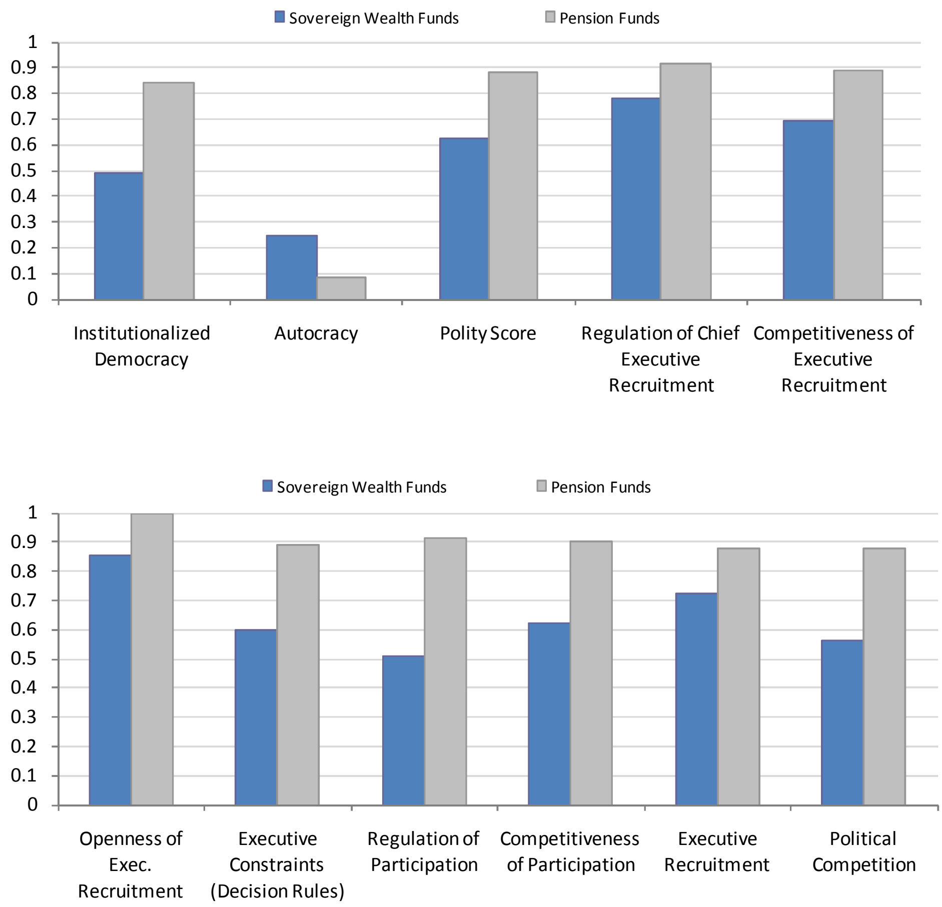
32 For each equity holding in our database (14435 for the SWFs and 11600 for mutual funds) we identify a destination country. For each destination, we determine the Polity IV scores for political regime, in order to calculate averages.

33 The Status Index explores the state of development achieved by countries on their way to democracy under the rule of law and a market economy flanked by sociopolitical safeguards, as of spring 2007. Status Index scores result from the combined scores given for the status of political and economic transformation. The Management Index evaluates the quality of governance among decision makers from 2005 to 2007. See for more details the last BTI report and indexes available at:

http://www.bertelsmann-transformation-index.de/fileadmin/pdf/Anlagen_BTI_2008/BTI_2008_Brochure_EN.pdf.

Figure 8 details differences in political regime between the home country of SWFs and pension funds, using the Truman database[34]. Note that in this case we only compare country average values. Not surprisingly, the level of autocracy is higher in the case of SWFs, whereas the polity score and various measures of political competition are higher in the pension group. More often than not, Sovereign Wealth Funds' investors belong to autocratic regimes rather than democratic ones.

Figure 8. **Political Regime in SWFs and Pension funds Country of Origin - 2008**

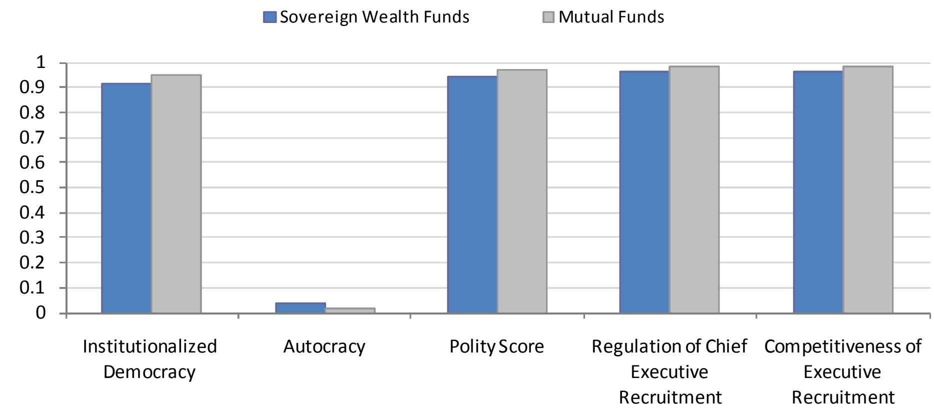


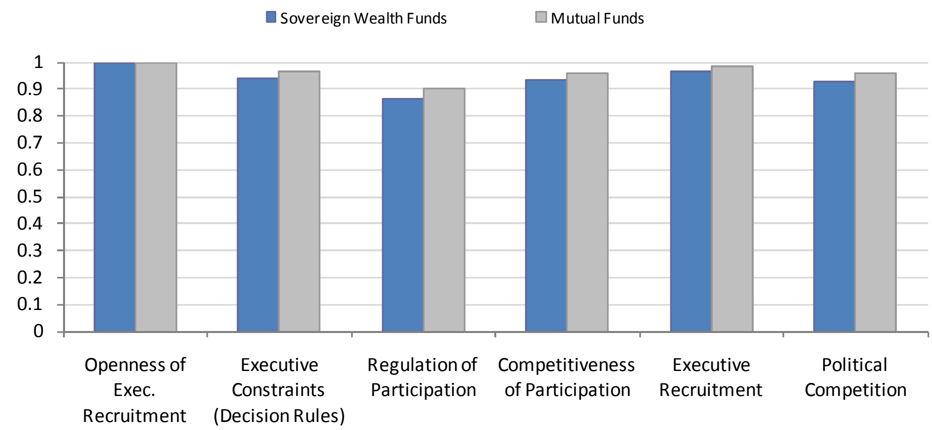
Source: Authors' calculation, based on LionShares, Thomson Financial and Polity IV Project, 2009.

Most interesting is the political regime of the recipient countries targeted by SWFs and mutual funds. This allows us to exploit our database at the holding-level. Figure 9 provides a comparison of political characteristics between countries attracting SWF investments and mutual fund investments. The definition for each of the political variables may be found in Annex 4.

34 Although ideally the comparison should be done between sovereign and mutual funds, we use data on pension funds, since all the mutual funds in our sample (the 25 largest funds) were based in the US.

Figure 9. **Political Regime Characteristics in SWF and Mutual fund Country Target- 2008**





Source: Authors' calculation, based on LionShares, Thomson Financial and Polity IV Project, 2009.

Revealingly, there are more similarities than differences when looking at the political regime and corporate governance of firms targeted by SWFs and mutual funds[35]. The indicator of institutionalised democracy, which reflects the competitiveness of political participation, is very similar for both types of investors. The regulation levels of Chief Executive recruitment, referring to the procedures for transferring executive power, are nearly equal. The same occurs for the indicators of competitiveness of executive recruitment, which refers to the extent that subordinates have equal opportunities to become superordinates, or political competition. In sum, when considering the targeted countries of SWFs and mutual funds in their investments, there is no significant gap in the political regime or corporate governance characteristics between the two groups.

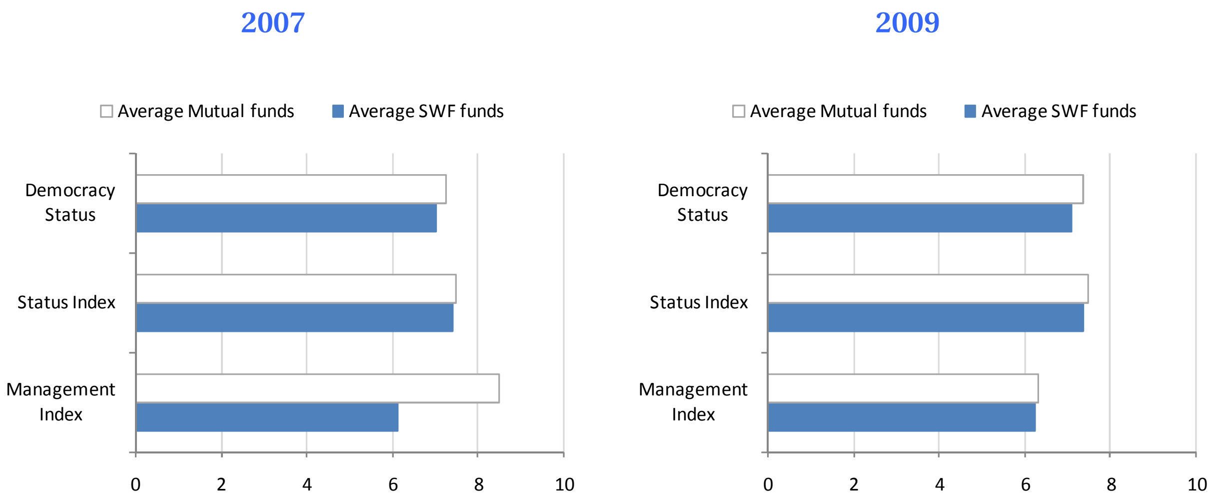
This reinforces the hypothesis that sovereign wealth funds are in fact more oriented towards risk-return and profit-maximisation objectives than often thought. Although there are some exceptions (notably some GCC funds who invest more in autocratic regimes), we see very

35 T-tests show no significant differences (at 5%) for some, if not all, of the variables in Figures 9. Tests for differences in means using very small thresholds illustrate a minor gap between both groups.

little difference between the political profiles of SWFs and mutual funds' investment destinations. Both invest in democratic and non-democratic regimes, and are in fact indifferent to this political dimension.

These results are confirmed by Bortolotti *et al.* (2009) in their analysis of target countries for SWF investments. They find that the United States, the largest OECD democracy, is the most targeted country with 22% of SWF deals' value. Just behind is China, the largest autocratic emerging country, explained by the concentration of the China Investment Corporation (CIC) into domestic firms. Other than that, popular target countries are indifferently democratic and autocratic regimes: India, the largest emerging market democracy, but also the United Kingdom and Australia, Malaysia, and Singapore have been among the other major recipients of SWF investments along less democratic regimes like Saudi Arabia, Vietnam, Libya or Tunisia[36].

Figure 10. Bertelsmann Index for SWF and Mutual fund holdings – 2007 vs. 2009



Source: Authors' calculation, based on LionShares, Thomson Financial and Bertelsmann Transformation Index, 2009.

The Bertelsmann indicators complement those explored with Polity IV, by introducing a static/dynamic dimension to the analysis. We thus calculate the average Bertelsmann *Democracy*, *Status* and *Management* indexes for both SWFs and mutual funds, looking at individual holdings in the recipient countries. Results are summarised in Figure 10. While some differences between group means for the key indexes exist, they are equivalent for others[37]. However, the gap

36 By mid 2009, India and Gulf countries increased their ties creating an Indo-Oman Joint Investment Fund with some seed capital of USD 100 million that will increase to USD 1.5 billion in the next two years. Also, Korean SWF KIC signed cooperation agreements with two foreign public funds–Malaysia's Khazanah Nasional Berhad and Australia's QIC–to "expand co-operation".

37 T-tests indicate that differences between means for Democratic status and Management index are different from zero (1% of significance) and zero for the Status index in 2007. For 2009, the Management index is statistically equal for both samples (1% significance). Other indicators (*i.e.* macrostability, property rights, economic performance) are statistically equal for both samples.

between the two groups does not seem to be pronounced. The management index is particularly revealing, as it indicates the dynamic improvement on the quality of governance; the score difference between SWFs and mutual funds for 2007 could indicate a "democratic premium" of private investors towards countries showing improvement in this direction. For 2009, the indicator attains similar levels for both groups.

V. CONCLUSION

The recent debate on the regulation of sovereign wealth funds culminated with the promulgation of the Santiago Principles on fund transparency, investment orientation and accountability. The implementation of these principles supposes that sovereign wealth funds should be considered on the same basis as other institutional investors. They should follow investment practices similar to those of, say, public pension, mutual or hedge funds. With that objective in mind, we compare different dimensions of investment between two institutional investors, SWFs and mutual funds. Although differences exist in the allocation of SWFs and other funds, they do not suggest that their investment motives are radically different.

We also introduced a new dimension in analysing SWF investments: the political regime in the sending and recipient countries. While it is unsurprising that differences in the political regime of investing countries exist (with SWF regimes tending to be less democratic), we find that SWF investments are not different from mutual fund investments in terms of political regime characteristics in the targeted countries. This evidence suggests that they do not discriminate by this criterion in their asset allocation. Both invest in democratic and autocratic regimes. More often than not, their asset allocation strategies converge, these being driven, by a financial and not a political bias.

Some policy implications can be drawn from the paper. First, in a world of post-2008-financial-collapse, applying double standards is and will be more difficult to legitimise than in the past. Emerging countries, starting with China or Singapore, have little time to be lectured by rich countries that set up a major global financial crisis. OECD countries, in sum, do not have the monopoly on best practices. Some emerging countries have proven that they can also generate best practices and be more virtuous in applying sound policies.

This has a practical consequence, as shown by the joint efforts of Western based institutions and SWFs to generate shared principles: double standards should be avoided. What could be requested from some (disclosure and more transparency to SWFs for example) should also be asked from others (public pension funds or central banks[38]). More importantly, the definition of such principles should be done jointly and shared; in this regard the inclusive process of the IMF led International Working Group of Sovereign Wealth Funds (IWG) is a

38 As stressed by the BIS, very few central banks in the world have full disclosure of their holdings in terms of asset or currency allocation, notable exceptions including the Bank of Canada, the European Central Bank or the Bank of England. See BIS (2008).

promising one to replicate. The rise of SWFs offers in the end an excellent opportunity to invent more inclusive global structures and processes[39].

Second, SWFs, like mutual funds, are investing in countries because it is financially rewarding, regardless of political regime. They should resist requests calling to make investments without a good financial rationale to do so. Taking into consideration non-financial objectives, even if they are ethically rewarding, can be a double-edge sword.

Finally, if SWFs wish to avoid future criticism, they should, like their Norwegian or Chilean peers, increase disclosure levels in a balanced way. Disclosure and transparency levels are much higher today than in the past, as in the case of Temasek or Mubadala[40]. It is important for them to follow sound corporate governance policies that generate confidence in countries of origin as well as in recipient countries. Other strategies to achieve higher standards could lead to the creation of international advisory boards, as was done in 2009 by the China Investment Corporation (CIC)[41].

This paper leaves open other questions related to the political rationale of SWF investment. One dimension that requires further analysis is the domestic political economy dimension of capital exporters. Do SWFs contribute not only to the wealth but also to the welfare of their own citizens[42]? Another direction would be to focus on the emergence of new SWFs, the political tradeoffs through which they rise and their relations with stakeholders and local governments. Lastly, on the recent increase of domestic investments by SWFs after the 2008 crisis, it would be revealing to know whether such rebalancing was based on commercial conditions (*e.g.* currency risks arbitrage, information asymmetries, low-priced assets, etc.) or on political criteria (bolstering domestic corporations, preserving jobs, protecting heavily debt companies, etc.)[43].

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39 For a discussion on the emergent international regime related to SWF see Drezner (2008), Helleiner (2009), Arreaza *et al.* (2009) and Ochoa and Keenan (2009).

40 For Temasek, see the report at

http://www.temasekholdings.com.sg/temasekreview/2008/index.html. For Mubadala, see See http://www.mubadala.ae/media-files/2009/04/23/20090423_FINAL.pdf. See Elson (2008) on the high degree of transparency of Temasek. By mid 2009, Singapore Temasek SWF was leading with Emirates based Mubadala, The Linaburg-Maduell Transparency Index developed by the Sovereign Wealth Fund Institute, ahead the ones of Ireland, Alaska (USA) and Norway. See http://www.swfinstitute.org/research/transparencyindex.php.

41 CIC organized the first meeting of its advisory board by mid 2009, bringing together a former President of the Central Bank of Brazil, a former Minister (Foreign Affairs, International Trade and Industry) of Canada, a former President of Goldman Sachs, another former President of the World Bank, etc. The list included also Asian scholars, Nicholas Stern or Knut Kjaer, the former CEO and founder of the Norwegian SWF. See: http://www.china-inv.cn/cicen/resources/resources_news10.html.

42 For a good introduction to this approach one could refer to Kennan (2009).

43 Many Gulf SWFs in 2008 and 2009 injected capital into local banks hit by the global financial crisis. Early 2009, KIA from Kuwait or Bahrain's SWF — Mumtalakat Holding Company —both decided to continue focusing their investments in Kuwait and Bahrain respectively instead of overseas. Such behaviour has been followed by OECD SWFs too.

ANNEXES

Annex 1. **Portfolio Characteristics for Selected Sovereign Wealth Funds**

Fund	Holder Style	Manager Style	Cap Group Style	Turnover	Avg P/E Ratio	Avg P/B Ratio	Avg Div Yld (%)	Avg Sales Growth (%)	Price Momentum	Relative Strength	Beta
New Mexico	GARP	Specialty		N/A	0	0	0	0	0	0	0
Alabama Retirement System	Yield	GARP	Large Cap	N/A	11.41	2.59	5.48	17.12	0.96	1	0.83
Alaska Retirement Management Board	Yield	Generalist	Multi Cap	Medium	36.69	1.85	8.88	7.28	0.77	14	1.5
Dubai World Group	Yield		Mid Cap	N/A	1.29	0.13	4.29	21.51	0.61	0.69	0.76
Emirates Investment Services Ltd.	Yield		Small Cap	N/A	4.92	3.09	7.55	3.65	1.88	1.88	1.56
Abu Dhabi Investment Authority (Investment Management)	Yield		Mid Cap	N/A	7.98	2.2	8.08	63.67	0.84	0.92	0.56
Temasek Holdings Pte Ltd. (Investment Management)	Yield		Large Cap	Very Low	12.25	2.28	5.77	15.05	0.97	1.14	1.01
Government of Singapore Investment Corp. Pte Ltd. (Invt Mgmt)	Yield		Large Cap	N/A	12.08	2.42	5.26	22.79	0.96	1.08	1.04
Saudi Arabian Monetary Agency	Yield		Mid Cap	N/A	19.66	2.87	5.86	14.31	0.98	1.1	0.48
Qatar Investment Authority (Investment Management)	Yield	Specialty	Large Cap	N/A	13.73	1.07	6.97	-6.86	1.04	1.03	1.32
Oman Arab Bank Investmet Management Group	Yield		Large Cap	N/A	8.63	2.06	6.51	40.28	0.88	1.1	0.57
Norges Bank Investment Management	Yield	Core Value	Large Cap	Medium	14.42	2.21	4.25	11.91	0.94	4.43	0.91
Guardians of New Zealand Superannuation	Yield		Multi Cap	N/A	15.26	2.07	4.7	11.37	0.95	5.03	0.88
Kuwait Investment Co.	Yield		Small Cap	N/A	9.48	1.28	11.06	45.15	0.53	0.58	0.47
Khazanah Nasional Bhd. (Investment Management)	Yield	Growth	Mid Cap	N/A	45.36	1.49	3.77	15.5	0.98	1.13	0.24
Alberta Investment Management Corp.	GARP	Generalist		N/A	0	0	0	0	0	0	0
Brunei Investment Agency (Investment Management)	GARP		Small Cap	N/A	26.53	6.32	1.28	22.28	0.77	0.96	0.4

Sources: Authors' calculation, based on FactSet and Thomson Financial databases, 2009.

Note: Dubai World group and Dubai International Capital assigned to UAE - Investment Corporation of Dubai. Emirates Investment Services assigned to Emirates Investment Authority. Abu Dhabi Investment Co. and Abu Dhabi Fund for Development assigned to Abu Dhabi Investment Authority. Temasek Ho Chi Min included in Temasek holdings (code 39). Data Malaysian Timber Council not included. Data from Kuwait Investment Office and Kuwait Investment Co included in Kuwait Investment Authority. No fund from Korea included (SWF not identified). Botswana fund not included (SWF not identified). For Oman fund we use data from December 2008 holdings (only for total SWF). Data for Dubai from Dubai World Group. Data for Abu Dhabi from Abu Dhabi Investment Authority. Data for Kuwait from Kuwait Investment Co. For mutual funds, large funds not included: Vanguard Emerging Markets Stock Index Fund, American Funds American Mutual and Dodge & Cox Balanced Fund. Historic data on their holdings not available.

Annex 2. Portfolio Characteristics for Selected Mutual Funds

Name	Holder Style	Cap Group Style	Turnover	Avg P/E Ratio	Avg P/B Ratio	Avg Div Yld (%)	Avg Sales Growth (%)	Price Momentum	Relative Strength	Beta
PIMCO Convertible Fund	Value	Multi Cap	Medium	7.78	1.78	0.8	23.86	1.7	39.23	0.86
American Funds AmCap Fund	Value	Large Cap	Medium	17.3	2.67	1.97	13.5	1.2	2.28	1.5
Vanguard Total International Stock Index Fund	Index	Large Cap	N/A	14.31	2	4.74	12.46	0.94	1.78	0.94
Fidelity Low Priced Stock Fund	Deep Value	Small Cap	High	12.3	2.8	1.7	8.36	1	15.54	1
Fidelity Magellan Fund	Value	Large Cap	Very Low	16.86	2.72	1.5	1.91	1.6	24.57	1.1
iShares MSCI Emerging Markets Index Fund	Index	Large Cap	Very Low	14.65	2.7	2.54	15.69	1.7	14.28	1.5
Fidelity Growth Company Fund	GARP	Large Cap	Very Low	24.3	4.55	1.39	28.15	1.6	24.19	0.89
Dodge & Cox International Stock Fund	Yield	Large Cap	Medium	15.71	1.6	4.29	6.22	0.96	5.5	1.7
Fidelity Advisor Aggressive Growth Fund	Growth	Mid Cap	High	21.85	4.18	0.58	21.9	1.1	28.29	0.87
Fidelity Diversified International Fund	Yield	Large Cap	Low	14.49	2.63	3.56	13.46	0.97	7.41	0.95
Dodge & Cox Stock Fund	Deep Value	Large Cap	Low	13.31	1.71	2.84	4.74	0.95	22.9	1.1
American Funds Fundamental Investors	GARP	Large Cap	Medium	15.9	3	2.77	12.4	1.1	16.82	0.96
American Funds New Perspective	Yield	Large Cap	Medium	14.1	2.74	3.23	11.62	1	8.88	0.94
Vanguard Wellington Fund	Yield	Large Cap	Low	12.62	2.82	3.46	8.45	0.98	16.44	0.88
Franklin Income Fund	Yield	Large Cap	Medium	12.22	1.48	5.46	4.63	0.91	9.13	0.76
American Funds American Balanced	Yield	Large Cap	Low	13.27	2.96	3.9	8.2	0.95	13.55	0.93
Vanguard Institutional Index Fund	Index	Large Cap	Very Low	13.86	3.5	2.95	1.31	0.97	18.28	0.93
Fidelity Contrafund	GARP	Large Cap	Low	19.5	4.8	1.55	17.8	1	18.5	0.74
American Funds Investment Company of America	Yield	Large Cap	Low	12.91	3.18	3.77	9.87	0.97	13.22	0.92
American Funds Income Fund of America	Yield	Large Cap	Medium	13.75	2.83	5.53	1.95	0.91	6.46	0.86
American Funds Capital World Growth & Income	Yield	Large Cap	Low	12.6	2.57	5.6	12.41	0.95	4.28	0.93
American Funds EuroPacific Growth	Yield	Large Cap	Medium	14.73	2.41	3.89	11.71	0.98	4.6	0.93
Vanguard 500 Index Fund	Index	Large Cap	Very Low	13.86	3.5	2.95	1.3	0.97	18.28	0.93
American Funds Capital Income Builder	Yield	Large Cap	Medium	12.92	2.63	5.87	12.8	0.91	2.98	0.88
Vanguard Total Stock Market Index Fund	Index	Large Cap	Very Low	14.85	2.98	2.71	11.71	0.97	19.45	0.93

Sources: Authors' calculation, based on FactSet and Thomson Financial databases.2009.

Note: For the sake of argument, we include some financial definitions for indicators on Figure 1 and Annex 2. The Price-Earnings ratio is the valuation of a company's current share price compared to its per-share earnings, and is calculated as the ratio between the market value per share and the earnings per share; in general, a high P/E ratio indicates that investors are expecting higher earnings growth in the future. This ratio is usually compared to other companies in the same industry, or the market in general. The Price-to-Book ratio is used to compare a stock's market value to its book value. It is calculated by dividing the current closing price of the stock by the latest quarter's book value per share. The Dividend Yield shows how much a company pays out in dividends each year relative to its share price. The dividend yield is calculated as the ratio between the annual dividends per share and the price per share. The Average Sales Growth indicates the percentage change in sales over a certain period. The Price Momentum, highly regarded by investors, indicates the rate of acceleration of a stock's price. The Relative Strength is a measure of price trend that indicates how a stock is performing relative to other stocks in its industry and it is calculated dividing the price performance of a stock by the price performance of an appropriate index for the same time period. The financial beta is a measure of the volatility, or systematic risk, of a security or a portfolio in comparison to the market as a whole.

Annex 3. Sector and Industry Classification

Sectors	Industries		
Finance	Major Banks	Department Stores	Office Equipment/Supplies
Industrial Services	Specialty Telecommunications	Electronics/Appliances	Advertising/Marketing Services
Health Technology	Pharmaceuticals: Major	Homebuilding	Industrial Specialties
Energy Minerals	Regional Banks	Household/Personal Care	Food Distributors
Consumer Non-Durables	Semiconductors	Tobacco	Pharmaceuticals: Other
Retail Trade	Wireless Telecommunications	Apparel/Footwear	Pharmaceuticals: Generic
Utilities	Integrated Oil	Home Improvement Chains	Data Processing Services
Consumer Services	Major Banks	Trucks/Construction/Farm Machinery	Chemicals: Major Diversified
Consumer Durables	Real Estate Development	Broadcasting	Industrial Conglomerates
Technology Services	Electric Utilities	Publishing: Newspapers	Auto Parts: OEM
Producer Manufacturing	Packaged Software	Other Metals/Minerals	Hospital/Nursing Management
Communications	Steel	Internet Software/Services	Trucking
Transportation	Telecommunications Equipment	Computer Peripherals	Savings Banks
Process Industries	Multi-Line Insurance	Wholesale Distributors	Recreational Products
Commercial Services	Electrical Products	Apparel/Footwear Retail	Personnel Services
Miscellaneous	Real Estate Investment Trusts	Aerospace & Defense	Water Utilities
Electronic Technology	Electronic Production Equipment	Life/Health Insurance	Computer Communications
Distribution Services	Gas Distributors	Beverages: Non-Alcoholic	Containers/Packaging
Health Services	Electronics/Appliance Stores	Biotechnology	Medical/Nursing Services
Non-Energy Minerals	Motor Vehicles	Other Transportation	Environmental Services
Government	Oil & Gas Production	Electronic Equipment/Instruments	Forest Products
	Cable/Satellite TV	Insurance Brokers/Services	Miscellaneous Manufacturing
	Investment Trusts/Mutual Funds	Restaurants	Commercial Printing/Forms
	Medical Specialties	Home Furnishings	Medical Distributors
	Precious Metals	Industrial Machinery	Aluminum
	Engineering & Construction	Financial Conglomerates	Casinos/Gaming
	Investment Managers	Food: Meat/Fish/Dairy	Financial Publishing/Services
	Investment Banks/Brokers	Electronic Components	Metal Fabrication
	Contract Drilling	Food Retail	Electronics Distributors
	Finance/Rental/Leasing	Other Consumer Services	Automotive Aftermarket
	Computer Processing Hardware	Railroads	Publishing: Books/Magazines
	Coal	Marine Shipping	Other Consumer Specialties
	Miscellaneous Commercial Services	Drugstore Chains	Catalog/Specialty Distribution
	Chemicals: Specialty	Managed Health Care	Building Products
	Airlines	Media Conglomerates	Specialty Insurance
	Food: Specialty/Candy	Agricultural Commodities/Milling	Movies/Entertainment
	Construction Materials	Information Technology Services	Textiles
	Beverages: Alcoholic	Oilfield Services/Equipment	Consumer Sundries
	Oil Refining/Marketing	Hotels/Resorts/Cruiselines	Discount Stores
	Specialty Stores	Food: Major Diversified	Alternative Power Generation
		Pulp & Paper	Oil & Gas Pipelines
		Air Freight/Couriers	General Government
		Tools & Hardware	Miscellaneous
		Property/Casualty Insurance	Internet Retail
		Chemicals: Agricultural	Services to the Health Industry

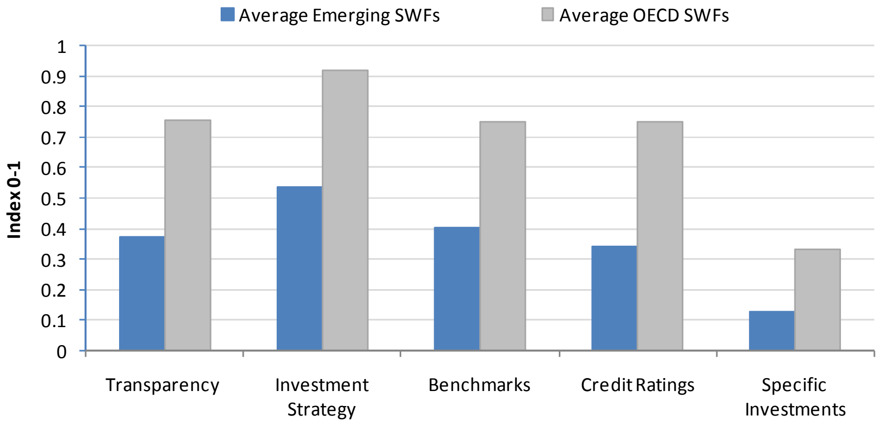
Sources: Avendaño and Santiso (2009), based on FactSet database and Thomson Financial, 2009.

Annex 4. **Political Regimes and Fund Investments – Definition of Political Variables**

Variable	Description
Polity Fragmentation	This variable codes the operational existence of a separate polity, or polities, comprising substantial territory and population within the recognized borders of the state and over which the coded polity exercises no effective authority (effective authority may be participatory or coercive).
Institutionalized Democracy (0-10)	Additive eleven-point scale (0-10). The operational indicator of democracy is derived from codings of the competitiveness of political participation.
Autocracy	Defined in terms of the presence of a distinctive set of political characteristics. constructed additively. The operational indicator of autocracy is derived from codings of the competitiveness of political participation, the regulation of participation, the openness and competitiveness of executive recruitment.
Polity Score	Defined as the difference between the Institutionalised Democracy and the Autocracy score.
Regulation of Chief Executive Recruitment	Regulation refers to the extent to which a polity has institutionalized procedures for transferring executive power.
Competitiveness of Executive Recruitment	Competitiveness refers to the extent that prevailing modes of advancement give subordinates equal opportunities to become superordinates
Openness of Executive Recruitment:	Openness of Executive Recruitment: Recruitment of the chief executive is "open" to the extent that all the politically active population has an opportunity, in principle, to attain the position through a regularized process.
Executive Constraints (Decision Rules)	Operationally, this variable refers to the extent of institutionalized constraints on the decisionmaking powers of chief executives, whether individuals or collectivities.
Regulation of Participation	Existence of binding rules on when, whether, and how political preferences are expressed.
The Competitiveness of Participation	The competitiveness of participation refers to the extent to which alternative preferences for policy and leadership can be pursued in the political arena.
Executive Recruitment	Combined information of the following components: Regulation of Chief Executive Recruitment, Competitiveness of Executive Recruitment and Openness of Executive Recruitment.
Political Competition	Indicator of authority patterns.

Source: Avendaño and Santiso, based on LionShares, Thomson Financial and Polity IV Project (2009).

Annex 5. **Truman Investment Indicators for OECD and non-OECD Sovereign Wealth Funds**



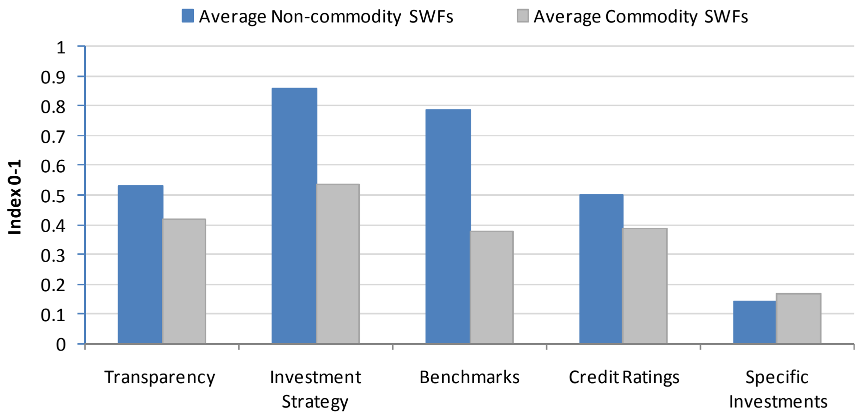
Source: Truman (2008).

Notes:

a) All scores standardised to values between 0 and 1.

b) SWF included in the survey are the following: Non-Pension Funds: Algeria Revenue Regulation Fund, Azerbaijan State Oil Fund of the Republic, Botswana Pula Fund, Brunei Darussalam Brunei Investment Agency, Canada (Alberta) Alberta Heritage Savings Trust Fund, Chile Economic and Social Stabilization Fund, China Investment Corporation, Hong Kong Exchange Fund, Iran Oil Stabilization Fund, Kazakhstan National Fund for the Republic of Kazakh, Kiribati Revenue Equalization Reserve Fund, Korea Investment Corporation, Kuwait Investment Authority, Malaysia Khazanah Nasional, Mexico Oil Income Stabilization Fund, Nigeria Excess Crude Account, Norway Government Pension Fund – Global, Oman State General Reserve Fund, Qatar Investment Authority, Russia Reserve Fund and National Wealth Fund, São Tomé and Príncipe National Oil Account, Singapore Government of Singapore Investment Corporation, Singapore Temasek Holdings, Sudan Oil Revenue Stabilization Account, Timor-Leste Petroleum Fund for Timor-Leste, Trinidad and Tobago Heritage and Stabilization Fund, United Arab Emirates (Abu Dhabi) Abu Dhabi Investment, United Arab Emirates (Abu Dhabi) Mubadala Development, United Arab Emirates (Dubai) Istithmar World, Alaska Permanent Fund, New Mexico Severance Tax Permanent, Wyoming Permanent Mineral Trust Fund, Venezuela Macroeconomic Stabilization Fund , Venezuela National Development Fund. Pension Funds: Australia Future Fund, Canada Pension Plan, Canada (Québec) Caisse de dépôt et placement du Québec, Chile Pension Reserve Fund, China National Social Security Fund, Fonds de réserve pour les retraites (France), Ireland National Pensions Reserve Fund, Japan Government Pension Investment Fund, Netherlands Stichting Pensioenfonds ABP, New Zealand Superannuation Fund, Thailand Government Pension Fund, California Public Employees Retirement System.

Annex 6. Truman Investment Indicators for Commodity and Non-Commodity Sovereign Wealth Funds



Note: All scores standardised to values between 0 and 1.

Source: Truman (2008).

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