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Thesis

Sovereign Wealth Funds

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Abbreviations and Acronyms

SWF Sovereign Wealth Funds

IWG International Working Group of Sovereign Wealth Funds

IMF International Monetary Fund

GAPP Generally accepted principles and practices

KIA Kuwait Investment Authority

AUM Asset Under-Management

IFSWF International Forum of Sovereign Wealth Funds

OECD Organisation for Economic Co-operation and Development

FOI Freedom of Investment process

GIC Government of Singapore Investment Corporation

EBITDA Earnings before interests, tax, depreciation and amortization

FSI Fonds Stratégique d'Investissment

FDI Foreign Direct Investment

CAR Cumulative Abnormal Return

1. Introduction

1.1. Defining Sovereign Wealth Funds

What is a sovereign wealth fund? In my opinion this is a key question when approaching this topic. The high variety of SWFs available in terms of governance and objectives sometimes makes it difficult to clearly identify them. They are largely defined as government-owned investment funds with investments in foreign financial assets. I decided to use the IWG definition for SWFs[1] which was developed during the writing of the "Santiago principles" in 2008, principles which will be discussed later. This definition excludes foreign currency reserve assets held by monetary authorities for the traditional balance of payments or monetary policy purposes, operations of state-owned enterprises in the traditional sense, government-employee pension funds and assets managed for the benefit of individuals.

It also establishes three key criteria in order to facilitate the identification of SWFs. First, regarding the ownership it states that "SWFs are owned by the general government, both central and subnational governments". Secondly, the investment strategies should include foreign financial assets, excluding those funds that merely invest locally. Finally the last criterion concerns the purposes and objectives of the fund, which should be defined by the general government and for macroeconomic purposes. This criterion allows for a certain flexibility concerning the investment strategies and time horizon, however it insists in the fact that they cannot be created only for the traditional balance of payments.

Due to the large heterogeneity of the different funds, the IMF categorizes SWFs according to their main objective into five types[2] (see Table 1).

Some funds can have multiple objectives or can change them over time, this is why this classification should be used in a flexible way. It is important to identify and clearly define a SWF's objective to be able to determine the best time horizon and risk-return profile of the investment strategy.

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[1] SWFs are defined "as special purpose investment funds or arrangements, owned by the general government. Created by the general government for macroeconomic purposes, SWFs hold, manage, or administer assets to achieve financial objectives, and employ a set of investment strategies which include investing in foreign financial assets." (IWG, 2008, "Santiago Principles", Appendices and references). A list of the most important SWFs is available in Appendix A

[2] For more details see, IWG 2008, "Santiago Principles", Objective and Purpose, and GAPP 2, Explanation and commentary

Table 1. Sovereign wealth funds classification according to the IMF

Type of fund	Main objective
Stabilization funds	Insulate the budget and the economy against commodity price volatility
Savings funds for future generations	Convert non-renewable assets into a more diversified portfolio of assets and mitigate the Dutch disease[3] effects
Reserve investment corporations	Increase the return on reserves (can be counted as reserve assets)
Development funds	Contribute to raise a country's potential output growth
Pension reserve funds without explicit pension liabilities	For contingent unspecified pension liabilities on the government's balance sheet

1.2. The emergence of Sovereign Wealth Funds

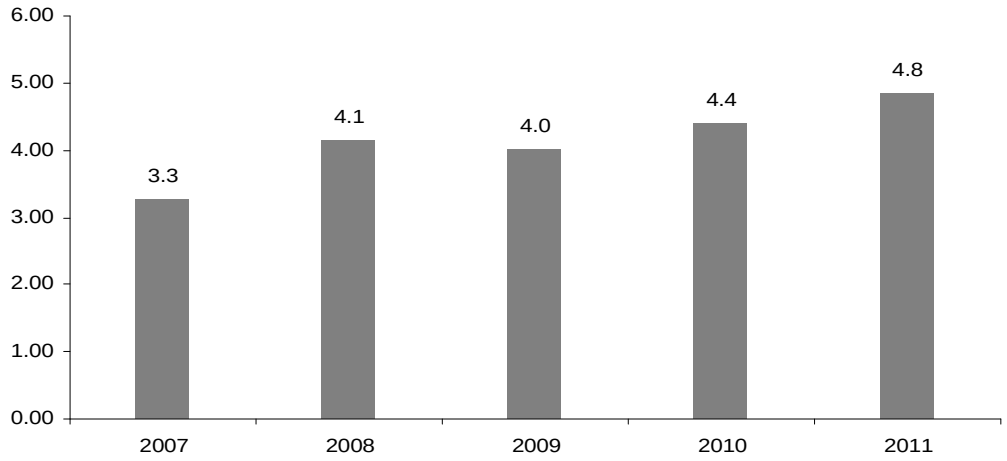
Sovereign Wealth Funds have existed for decades now. The first one was created in 1953, the Kuwait Investment Board which became afterwards the Kuwait Investment Authority (KIA), was established 8 years before Kuwait's independence to invest the proceeds from oil for the future generations. The sudden interest in this kind of investors comes from their fast growth in number and AUM these last years. Before 2000 there existed around two dozens SWFs investing state-owned profits coming from different sources, like fiscal surpluses and commodities such as oil and copper. Now-a-days we have more than 50 investing proceeds from very different sources and established in a high variety of countries. This growth accelerated in 2002 due to the rising prices of commodities, especially crude oil, and the current account surpluses of fast growing Asian countries.

The main concerns regarding this kind of investors include their potential influence on the global financial markets and their possible political motivations. This kind of investors remains powerful despite the financial crisis, +45% since 2007 (see Figure 1).

[3] Dutch disease refers to the situation where a boom in a commodity sector of the economy could lead to a loss of competitiveness for other sectors in this economy contributing to a loss of jobs. This is generally caused by an increase of the local currency real exchange rate

Figure 1. Sovereign Wealth Fund market size

Total financial assets in $ trillion



SOURCE: SWF Institute

Their weight in the financial landscape, even if it is still relatively small, is also increasing and as we can see is geographically diversified (see Table 2).

Table 2. Financial wealth by region and by investor type

Financial assets owned by residents, 2010 $ trillion

	United States	Western Europe	Japan	China	Other developed[1]	Other Asia[2]	Latin America	MENA	Rest of the world	Total
Institutional investors										
Pensions[3]	15.0	5.3	3.3	0.5	2.4	0.6	0.7	0.4	0.1	28.3
Insurance	6.6	9.6	3.5	0.6	0.7	1.0	0.3	0.1	0.3	22.7
Endowments & foundations	1.1	0.2	0.0	--	0.1	--	0.0	0.0	--	1.4
Corporations										
Banks	4.0	11.9	6.7	3.9	1.4	0.9	0.9	0.5	0.5	30.7
Nonfinancial corporations	2.0	1.7	1.2	3.8	0.3	1.3	0.3	0.2	0.2	11.0
Governments										
Central banks	2.3	1.7	1.0	2.5	0.2	1.9	0.5	0.4	1.5	12.0
Sovereign Wealth Funds	**0.1**	**0.6**	**--**	**0.7**	**0.1**	**0.9**	**0.1**	**1.7**	**0.2**	**4.4**
Other government	--	--	--	1.1	--	0.4	0.5	0.3	0.1	2.4
Total	31.1	31.0	15.7	13.1	5.2	7.0	3.3	3.6	2.9	112.9

[1] Includes Australia, Canada, and New Zealand

[2] Includes both developed countries and emerging markets

[3] Includes defined-contribution plans and individual retirement accounts (IRAs)

SOURCE: National sources; McKinsey Global Institute "The emerging equity gap: Growth and stability in the new investor landscape"

Despite the concerns of the recipient countries of SWFs' investments, policy toward SWFs has not resulted in protectionist stances in most countries. Moreover, they have been relatively solicited during the financial crisis for their capital. Their capacity to initiate a

dialogue with recipient countries through the "Santiago principles" and the OECD efforts to provide guidelines for good policy responses have also helped to construct a stable environment.

1.3. The Santiago principles and the new regulating environment

It was in the interest of both recipient countries and SWFs to develop a framework in order to integrate the operations of the SWFs within the macroeconomic policy framework of their home countries and within the structures for multilateral monitoring. The IWG was formed in May 2008 and comprises 26 IMF member countries with SWFs[4]. The objective was to develop a set of principles in order to properly reflect the investment objectives and practices of SWFs. The IWG recognized both the beneficial and critical aspect of SWFs' investments to international markets. The generally accepted principles and practices (GAPP) tried to highlight the following guiding objectives for this kind of investors:

i. To help maintain a stable global financial system and free flow of capital and investment
ii. To comply with all applicable regulatory and disclosure requirements in the countries in which they invest
iii. To invest on the basis of economic and financial risk and return related considerations
iv. To have in place a transparent and sound governance structure that provides for adequate operational controls, risk management, and accountability

The idea was to cover the main concerns regarding SWFs' activity[5]. First, the way they fit within the policy framework and the policy coordination in their home countries. The establishment of a SWF can be a critical issue for the domestic economy[6], Yinqiu Lu, Christian Mulder and Michael Papaioannou tried to identify the ideal conditions that justify the creation of this kind of funds. They highlighted the fact that even if they have benefits in terms of portfolio diversification and that during the recent financial crisis they have played a crucial role in their home economies, an assessment of their impact on the economic policy objectives and potential sovereign balance sheet risks is necessary. Secondly, their operations

[4] IWG member countries are Australia, Azerbaijan, Bahrain, Botswana, Canada, Chile, China, Equatorial Guinea, Islamic Republic of Iran, Ireland, Korea, Kuwait, Libya, Mexico, New Zealand, Norway, Qatar, Russia, Singapore, Timor-Leste, Trinidad and Tobago, the United Arab Emirates, and the United States. Permanent observers of the IWG are Oman, Saudi Arabia, Vietnam, the OECD, and the World Bank

[5] For a more detailed discussion, see "Economics of Sovereign Wealth Funds, Issues for Policymakers" by the IMF, Chapter 5

[6] For a more detailed discussion, see "Economics of Sovereign Wealth Funds, Issues for Policymakers" by the IMF, Chapter 2

may affect the global financial markets' flows and prices. SWFs are long-term investors that are usually not leveraged. These characteristics provide them with the capacity to contribute to financial markets stabilization in case of distress. However, in certain cases it can also increase the price volatility when for example there are rumours surrounding a certain transaction. For example, the Qatar Investment Authority's failed takeover in February 2007 on J. Sainsbury badly impacted the stock price. Third, a good corporate governance of SWFs is also a critical issue. There have been a number of works with the aim to rank the level of transparency of these funds, especially relevant is the blueprint for SWF best practices developed by Edwin M. Truman[7]. Fourth, one of the main issues concerns SWFs' investment objectives and practices. I will develop more in detail this topic later by analyzing two empirical studies.

In line with this logic the GAPP are structured in the following way. A first section is oriented on the legal framework, the objectives and coordination with macroeconomic policies. Followed with a section on the institutional framework and governance structure, and concludes with some guidelines on the investment and risk management framework. Globally the GAPP insist in the need for a strong institutional framework and governance structure, combined with clear investment strategies in accordance with the fund's main objective. This work should be supported by a reliable risk management framework for accountability purposes.

The fact that the initiative came from SWFs countries and their ability to reach a consensus in such a short time demonstrate their strong commitment for a greater transparency and cooperation with the recipient countries of their investments. However there is still a lot of work to be done and as the merger and acquisitions activity is increasing again, and through it SWF visibility, this seems a priority. In this sense the establishment of the International Forum of Sovereign Wealth Funds (IFSWF) as a successor of the IWG is another step in the right direction. The objective of this entity is to gather some feedback regarding the implementation of good practices.

The OECD also contributed to the whole process providing the IWG with its expertise and developing a guideline for recipient countries' policies in order to avoid any kind of

[7] For a more detailed discussion, see, Edwin M. Truman, 2008, "A blueprint for Sovereign Wealth Fund Best Practices", Peterson Institute

protectionism. The OECD already had a number of investment policy principles[8] that should be applied to the treatment of all foreign investors, including SWFs (April 2008)[9]:

- *Non discrimination*, between domestic and foreign investors
- *Transparency*, any restriction towards foreign investor should be clear and accessible
- *Progressive liberalisation*
- *Standstill*, avoid including new restrictions
- *Unilateral liberalisation*, avoidance of reciprocity

The report also includes some guidelines that directly address the national security issue. A number of countries use this aspect in order to introduce restrictions to foreign investments. Kathryn Gordon[10] noticed that the tendency over several decades has been to expand the number of risks covered by national security plans. From preserving national boundaries and integrity of the state against foreign attacks, to the extent of covering all major sources of threat to the security of a nation. As with the IFSW, the existence of the Freedom of Investment (FOI) process roundtables help to monitor the countries' adherence to these principles and provide a forum for experience sharing and for exerting peer pressure.

[8] The OECD general investment policy principles are established in the OECD Code of Liberalisation of Capital Movements, adopted by the OECD country governments in 1961, and the OECD Declaration on International Investment and Multinational Enterprises of 1976 as revised in 2000, adopted by forty-one OECD and non-OECD country governments.

[9] OECD (Organisation for Economic Co-operation and Development), 2008, *"Sovereign Wealth Funds and recipient countries - Working together to maintain and expand freedom of investment"*

[10] For a more detailed discussion, see "Economics of Sovereign Wealth Funds, Issues for Policymakers" by the IMF, Chapter 9

2. A review of empirical research on SWFs' investment strategy

As we have seen there are a number of issues surrounding SWFs' activity, especially regarding their transparency, investment strategies and the possible presence of political objectives. A number of papers tried to find out if these concerns are justified, the idea was to compare their investment behaviour to those of other institutional investors. I decided to focus the review on these three aspects as they seem to be the most important ones for the recipient countries of SWFs' investments and consequently a critical point in the SWFs' capacity to invest abroad.

The foreign ownership of these funds combined with a lack of transparency regarding their structure and activities difficult their work. I experienced how difficult it was to find information regarding their investments or strategy when constructing my database.

In most of the empirical studies they try to find parallelisms between SWFs' activities and the impact of their investments, and those of other institutional investors (e.g. J. Kotter, U. Lel, 2011).

The review is structured in the following way. First, the impact of SWFs' investments on the target companies is analyzed. Secondly, identify what are the target companies' characteristics. Third, quantify the impact of SWFs' transparency on the companies' valuation. Finally, analyse if the political relation between the SWF domestic country and the recipient country may influence the investments decisions.

2.1. SWFs' impact on target firms

The impact of SWFs on target firms can be studied in the context of the literature on large shareholders as generally they invest large amounts in the target companies (e.g., Holderness, 2003; Lins, 2003; Claessens, Djankov, Fan, and Lang, 2002). As a starting point in their paper, Kotter and Lel[11] (2011) do a review of all the possible outcomes associated with large shareholders. In this context SWFs can be associated with favourable outcomes for the shareholders of target firms through active monitoring and certification of the quality of the target firm (e.g., Shleifer and Vishny, 1986; Ferreira and Matos, 2008; Li, Moshirian Pham, and Zein, 2006). As we have seen during the recent financial crisis SWFs' access to cash can certify the long-term viability of the target firm. Other studies however point out the fact that SWFs could expropriate wealth from minority shareholders by transferring assets out

[11] For a more detailed discussion, see Jason Kotter, Ugur Lel, "Friends or foes? Target selection decisions of sovereign wealth funds and their consequences", Journal of Financial Economics 101 (2011) 360-381

of the country for example (e.g., Shleifer and Vishny, 1997; Johnson, La Porta, Lopez-de-Silanes, and Shleifer, 2000). This kind of situations could help to trigger protectionism measures in behalf of the national security. Another source of problems is the government ownership, because SWFs are government-owned, their target firms are indirectly partially government-owned as well. Shleifer and Vishny (1994) examine the role of political influence on firms and note that "public enterprises are highly inefficient and that their inefficiency is the result of political pressures from the politicians who control them" (page 995). The high level of corruption in some countries holding a SWF supports the idea that their objectives may not be driven by a risk-return profile.

De Palma, Leruth, and Mazarei[12] examine the possibility of reducing the concerns about the possible political motivations behind SWFs' investment decision using fund managers located in the recipient countries. Through the agency theory they arrive to the conclusion that this is not a solution and that this could lead to further protectionism from recipient countries. They cover a large range of assumptions, including other objectives than the profit maximisation, like learning by investing. They suggest that a possible solution is the one adopted by the Temasek fund in Singapore, which created a new division including third party investors like the general public.

Short-term impact

Among others, it seems that transparency and accountability are key factors in evaluating a SWF investment's impact on the target firm. In the empirical study realized by J. Kotter and U. Lel (2011) they decide to focus on these two aspects. They were able to identify 827 investments made by SWFs between 1980 and 2009. From this initial sample, after withdrawing IPO and firms without publicly traded equity, they had a final sample consisting of 417 investment events in 326 unique firms. SWFs have invested in 45 different countries in their sample, showing a high level of geographic diversification. Concerning their database the main problem was that almost one third of the investments were made by Temasek Holdings, however they checked the robustness of their results to the exclusion of this fund. Most of the announcements were after 2004, this shows the recent increasing activity of SWFs. Finally, most of the investments (75%) were cross-border, highlighting the fact that most SWFs' investments are made outside their domestic country.

[12] For a more detailed discussion, see "Economics of Sovereign Wealth Funds, Issues for Policymakers" by the IMF, Chapter 8

Their study is particularly interesting to see the SWF's investment impact in the short-term. To evaluate the impact on target firms they calculate abnormal returns[13] and then average them across firms to form the average abnormal return. They also used other methods to calculate the abnormal returns reaching similar conclusions. They find a positive and statistically significant market reaction consistent with studies on institutional investors in similar conditions (e.g., Brav, Jiang, Partnoy, and Thomas, 2008).

They use event windows of (0, +1), (-1, +1), and (-2, +2) days around the announcement date, in my opinion this is the most critical point of their study. Usually SWFs do not communicate their investments and it is very hard to find any information about the deals. I used the same methodology to construct my database consisting in identifying the transactions by searching in the news articles using Factiva. For the same deal there are a lot of articles and it is difficult to identify the first one, whose date we can consider as the announcement date. For such a small time window it is hard to know when the different market participants integrate the news in the target firm's stock price.

In the paper of Somnath Das, Kyonghee Kim and Sukesh Patro about the Anomalous stock price response to management earnings forecasts[14], they found that in the post-announcement period, there is a significant upward price drift for both good news forecasts and bad news forecasts. This is due, according to them, to the correction of the stock price because there is an over reaction to bad news and an under reaction to good news before the announcement. We could wonder if analyzing the investment impact of SWFs in such a small window could be affected by this kind of effects. All the rumours surrounding the investments of these funds may affect the stock price in the same way as speculation regarding the future earnings before the announcement. The positive reaction would be explained by this kind of phenomenon. This is just an hypothesis that should be checked by further empirical analysis, however through it I try to highlight the fact that in my opinion it is very difficult to extract conclusions when the time window is very small as there can be a lot of "parasite" effects.

It is true that Kotter and Lel examine in their research paper other possible explanations to the positive effect of SWFs' investments. They study three other possibilities: liquidity effects by block purchases of SWFs, SWF-related shareholder activism and

[13] They estimate a market model for each firm using local currency daily returns, and the US dollar-denominated MSCI ACWI as a proxy for the market return. They calculate the model coefficients using the ordinary least squares method for a 160 days window between day -180 and -21 relative to the announcement date. This coefficients are used to calculate abnormal returns from day -10 to day +20

[14] For a more detailed discussion, see Somnath Das, Kyonghee Kim and Sukesh Patro, 2011, *"On the Anomalous Stock Price Response to Management Earnings Forecasts"*, Social Science Research Network

information effects resulting from the stock selection abilities of SWFs. Concerning the liquidity they use three different methods[15] arriving to the same conclusion for all of them, the results on the short-term impact are not driven by a liquidity effect. Overall the methods seem appropriate, my only worry resides in the fact that in one of them they assume that because the positive impact on the stock price continues 20 days after the announcement there is no block purchase effect[16]. However they do not study the depth or resiliency of the markets involved in order to asses the magnitude of the block purchase impact. Concerning the shareholder activism a number of variables used and discussed later show that SWFs play a limited role in shareholder activism. Finally, the last possibility that they explore is that the positive impact may be explained by the fact that investors see SWFs as information producers. However, Kotter and Lel find only partial evidence for this possibility. It would have been interesting to see the role of speculation. The fact that sometimes SWFs invest in countries where the financial markets are not regulated enough allows for the possibility for insider trading issues, leading to an increase in the stock price surrounding the investment. For example, there were rumours of insider trading issues in the purchase of a 49.6% stake by Temasek Holdings of the Shin Corporation in March 2006.

In Kotter and Lel's study they make a very interesting analysis by examining the market reaction for investments made by a fund that has increased its "level of transparency" at a certain moment. This is the case with the Government of Singapore Investment Corporation (GIC) that decided to start to disclose its investment results in July 2006. They find that firms previously targeted by GIC experienced a statistically significant increase in their share price on the day of the announcement. Overall, empirical studies suggest that SWFs' investments induce positive information about the target firms to market participants.

Long-term impact

It is more interesting in my opinion to see SWFs' investments impact on target firms in the long-term. In this case the empirical study of April M. Knill, Bong Soo Lee and Nathan Mauck is particularly interesting[17]. The most interesting aspect of their work is that they analyse the target firms' performance taking into account the level of risk. It is essential to

[15] For a more detailed discussion, see Jason Kotter, Ugur Lel, 2011, "Friends or foes? Target selection decisions of sovereign wealth funds and their consequences", Journal of Financial Economics 101, 376

[16] Block purchases of a firm's shares can increase stock prices due to buying pressure

[17] For a more detailed discussion, see April M. Knill, Bong Soo Lee, Nathan Mauck, 2012, "Sovereign wealth fund investment and the return-to-risk performance of target firms", Journal of Financial Intermediation 21, 315-340

evaluate the level of the returns with respect to the risk, even with abnormal returns. They found that target firms raw returns decline following the SWF investment, also the risk declines. However, SWFs' investments are associated with a reduction in the compensation of risk over the 5 years following the acquisition.

The results obtained are consistent with the predictions from the government ownership literature which predicts a negative impact on the target returns when SWFs invest abroad. Concerning the investments of SWFs in their domestic countries the results are mixed. The risk is higher for foreign investments and relies essentially on the relationship between the two nations (this point will be discussed later). Overall these effects induce a reduction in the return-to-risk performance.

From the institutional investor literature we could expect an increase in returns. This increase according to empirical research comes in part from the monitoring benefits of blockholders (e.g., Shleifer and Vishny, 1986; McConnell and Servaes, 1990). In the case of SWFs is not clear as a lot of them do not acquire control rights via voting share or board seats, sometimes for policy reasons or in order to avoid any conflicts with the recipient country. In other cases, they cannot acquire any voting rights, like for example in the acquisition of a 5% stake of Areva by the Kuwait Investment Authority in December 2010. In Dewenter et al. (2010) empirical study they also discuss the fact that the size of the investment block can play a role in the impact of monitoring. They found that there are gains of monitoring for blockholders owning less than 40% of the target firm, and decreasing positive returns (due to tunnelling) for blockholders above this limit. Concerning the risk the literature shows that there is a positive relationship between the block size and the idiosyncratic volatility (e.g., Heflin and Shaw, 2000; Brockman and Yan, 2009). The agreed explanation is that this is due to the information produced by blockholders.

In conclusion, the deterioration in the risk-return profile is consistent with both the government firm ownership and institutional investor literature for stakes above 40%. However, the large variety of investment styles that I could observe when constructing the database makes me think that we should be cautious considering these results. Some SWFs were very aggressive, trying to acquire in all their investments majority stakes, while others used to take small stakes.

To measure the return-to-risk performance A.M. Knill et al. (2012) used both the Sharpe ratio and the Appraisal ratio. The first one allows them to focus on the total risk, while the second one focuses on the compensation of idiosyncratic risk. They use a benchmark

procedure[18], they check the correctness of their benchmarks by comparing their risk-return profile, standard deviation of returns and idiosyncratic risk with those of the target firms.

The final conclusion of their work is that target firm's performance is closer to the performance of government-owned firms. Even if in terms of investment strategies, procedures and objectives SWFs try to behave the same way as institutional investors, the target return-to-risk performance after the acquisition is not the same. For A.M. Knill et al. the main issue is that there is a lack of compensated risk borne by the existing shareholders of the target firm. This point may be the most relevant for policy makers. To check that their results were not specific to their sample they examined the impact for smaller time windows. Their results are consistent with the research of J. Kotter and U. Lel. (2011). Finally, they conclude that there is no evidence that SWF investments influence firms' financial or operational performance in the long run, suggesting too that shareholder activism is not common among SWF.

In conclusion, we can find in the literature evidence that in the short-term SWFs investments have a positive impact on target firms. The level of transparency is a key element in determining the level of this impact. However, in this case the level of risk is not taken into account and in my opinion it is hard to find the source of this improvement in such a short time window. In the long-term the effect seems to be negative or insignificant. In this sense the study of A.M. Knill et al. (2012) is very interesting as they have taken into account the level of risk. They arrive to the conclusion that there is deterioration in the target firm's return-to-risk performance and a lack of compensated risk borne by existing shareholders.

2.2. Target firms' profile

An important point in trying to identify if SWFs behave as other institutional investors concerns the target firms' profile. In their empirical study J. Kotter and U. Lel (2011) consider several firms' characteristics in order to determine the characteristics of the target firms. For the firm performance they use the annual stock returns, ROA[19] and sales growth. They analyse the level of leverage through a ratio defined as total debt divided by the market value of equity. In my opinion this measure is not the best one as there can be a lot of speculation surrounding the market value of equity, especially when there have been rumours of a takeover bid, net debt to EBITA may be more appropriate.

[18] They compare the return and risk of target firms to those of similar firms. They match them using three criteria: country, industry and size. For the industry they use the Datastream's Global Industry classification

[19] Net income divided by assets

To evaluate the level of financial constraint they use the ratio of cash assets to total assets and the KZ Index[20]. They also control the level of know-how and uniqueness of the firm with the ratio of intangible assets to assets. To control the level of managerial agency conflicts they check the percentage of shares held by inside shareholders. They use the natural logarithm of the market value of equity to check the degree of informational asymmetry, according to them smaller firms tend to be more opaque. This criterion may not be totally accurate, we have some examples of big corporations that are also completely opaque. It is true that in general big firms are covered by a higher number of analysts that allows reducing the level of asymmetry. The number of press releases may be more precise but would be difficult to extract. In their research they also control the level of internationalization through the ratio of foreign sales to total sales, I find this point very interesting as it can be a critical point for SWFs. I think it would be interesting to use the foreign offices' coverage too, as this variable may be representative of the firm's willingness to expand.

They also explore the possibility that SWFs try to diversify by investing in companies with sensitivities different from theirs. This is why they calculate the sensitivity of targets' stock prices to changes in oil prices, foreign exchange rates and global stock market indices[21]. Three time-varying country-specific variables are used to evaluate if there is a momentum in SWFs' investments. The ratio of stock market capitalization to gross domestic product is used for the level of financial market development of the target country. This is a question I would like to explore in order to find out if SWFs invest abroad only for diversification purposes or because the local market is not able to absorb the huge amount of capital. In other words, would they invest so much abroad if their local market was developed enough? There are some clues in answering this question in the fact that SWFs in countries were the local market is more developed tend to invest a lower portion abroad. For example, the SWFs of Singapore, Temasek Holdings and the Government of Singapore Investment Corporation, invest around 15% of their funds in the local market in my sample, this is higher than for funds located in countries with less developed financial markets.

They use a dummy variable that equals one if the country experiences a financial crisis[22] and they also control the legal environment of the target country[23]. This last variable

[20] Based on Kaplan and Zingales (1997) and Lamont, Polk, and Saa-Requejo (2001)

[21] Using regressions on the WTI Oil Index for oil, for exchange rates the percent change in the nominal major currencies dollar index and for the global stock market index the value-weighted DataStream world market return index. A minimum of 60 days is required in estimating the sensitivities

[22] Obtained from Laeven and Valencia (2008)

[23] Country's rule of law is obtained from Kaufmann, Kraay, and Mastruzzi (2009)

may not be really interesting as I believe that the legal aspect is more determined by the bilateral relationship of the domestic country and the target country than by the legal environment. The strength of investor protection laws in target countries can change rapidly and especially in countries where they are relatively weak. I will explore the political aspect in the investment decision in another section.

The results of J. Kotter and U. Lel (2011) suggest that SWFs invest in firms with poor prior financial performance. This is consistent with the public pension literature (e.g., Del Guercio and Hawkins, 1999) and other empirical studies on institutional investors (e.g., Wahal, 1996; Carleton, Nelson, and Weisbach, 1998). It would be interesting to understand why they do that, it would be logical if the objective of these funds was to monitor these firms in order to improve the performance. However, empirical research suggests the opposite (e.g., J. Kotter, U. Lel, 2011) as the variables related with the degree of managerial agency conflicts are not statistically significant showing that SWFs are not related with a monitoring role.

They also prefer large firms, again in accordance with the public pension funds (e.g., Karpoff, Malatesta, and Walkling, 1996; Gompers and Metrick, 2001) and institutional (e.g., Ferreira and Matos, 2008) literature. Maybe they have liquidity considerations in order to be able to exit from the investment. They also target financially distressed and cash-constrained firms. In this case they probably look for the best entry point for their investments, firms facing these kind of problems generally have an important stock price discount. They prefer multinational firms, in developed countries and during crisis periods. In my opinion, the fact that they invest in multinational firms does not mean anything, now-a-days the proportion of large companies internationally diversified is very high. I think that the results of Chhaochharia and Laeven (2009) are more interesting in this aspect, showing that SWFs tend to invest in countries with similar cultures to their own. For them the reason for such a pattern is an effort to limit the information asymmetry inherent in international investment. When constructing my database I noticed that Asian funds tend to invest in Asia while Middle East funds in UK and the US. For gulf countries the main reason may be the strong Anglo-Saxon influence. The fact that they invest in developed countries is in my opinion biased in the study. Kotter and Lel (2011) used only listed companies for their research, only developed countries have financial markets sufficiently mature in order to receive SWFs' investments in terms of liquidity and size. The crisis period conclusion can also be biased. The increasing activity of SWFs these last years, most of the announcements are from 2004 onward, and the important financial crisis that the world suffers since 2007 can have an impact on the results. The target firms' characteristics, financially distressed and cash-constrained are also linked to

this “crisis bias”. Especially because SWFs were among the only ones during the crisis to have an access to cash, they were relatively solicited to inject cash in a wide range of companies and especially financial institutions.

They found that the preference for target firms facing financial difficulties is more pronounced in more transparent SWFs associating them with a potential certification effect. More opaque SWFs prefer firms with a higher market beta located in countries with weak protection of investor rights.

As we can see J. Kotter and U. Lel (2011) arrive to the conclusion that SWFs are similar to institutional investors in their preference for assets characteristics, in line with the conclusions of April M. Knill, Bong Soo Lee and Nathan Mauck (2012).

2.3. The role of SWFs’ transparency

One of the main concerns regarding SWFs is their lack of transparency regarding their operations and investment strategies. A lot of them do not disclose any information and even do not have an official website. In this sense investigating the impact of their level of transparency on the target firms is interesting in order to asses the need for more regulation in this area.

Kotter and Lel (2011) arrive to the conclusion that target firms experience higher abnormal returns when a greater amount of information is available to market participants about SWFs’ activities. One of the criteria used is the media exposure, defined as the number of news articles published about a SWF in a given year. They find that firms targeted by SWFs with a greater media exposure (one standard deviation above the mean for this variable) experience about 5.1% percentage point higher abnormal returns when compared with firms with an average value of the media coverage variable. The market reaction is higher for firms experiencing financial difficulties, for Kotter and Lel (2011) this is due probably to the fact that investors expect SWFs to recapitalize the firm in case of higher future distress. In my opinion this can be explained too by an under valuation of this kind of firms before the investment. They also analyse the impact of higher media coverage for the target firm. They find that there is a negative relation between the media coverage of the target firm and the market reaction. In other words, if the target firm is more opaque, the market reaction is higher. It is hard to believe that this effect can be explained by the monitoring role of SWFs, as other results suggest that they play a limited role in this sense. Sometimes the investment decisions are taken at a political level, involving the government of both the recipient country of the target firm and the domestic country of the SWF. I could

observe that this is particularly true for more opaque firms when constructing my database. I think that the higher market reaction for this kind of firms can be explained by the fact that the market participants believe that the SWF has access to additional information.

Another measure of transparency used by Kotter and Lel (2011) is web registry[24], they arrive to a similar conclusion than for media coverage. They also use Truman indices as a measure of transparency. In terms of results the most important Truman index is the SWF transparency and accountability index.

In their robustness check they use alternative measures of transparency, like the number of private industry directors on SWFs' boards, they believe that these managers would probably be less influenced by political reasons. However, the study of De Palma, Leruth, and Mazarei[25] suggests that the use of external fund managers do not reduce the political motivation issue. We could consider private industry directors as a kind of external fund manager, even if they are not located in the target firm's country, as suggested by the study. In general, the alternative measures do not change the results previously obtained.

It would be interesting to perform an analysis using the publication of results as a transparency criterion. Kotter and Lel (2011) made a similar experiment with the Government of Singapore Investment Corporation (GIC) when they analysed the possible sources of the higher abnormal returns. It would be interesting to extend this experiment to all the SWFs and study a bit more this aspect.

In conclusion, the stock price impact is higher for target firms in a difficult financial situation and when there is more information available on the acquiring SWF.

The Truman index[26]

The concerns regarding the transparency of SWFs have contributed to the development of a number of indices with the objective to classify these funds depending on their level of transparency. The work that is more often mentioned is the one made by Edwin M. Truman. In his study he tried to design a blueprint for SWFs in order to be able to classify them.

For Truman, *"the growth of SWFs reflects a dramatic redistribution of international wealth from traditional industrial countries like the United States to countries that*

[24] The presence of a dedicated website. Because this does not guarantee that there is more information available they also create an interaction variable with the transparency index of Truman (2008) arriving to similar results

[25] For a more detailed discussion, see "Economics of Sovereign Wealth Funds, Issues for Policymakers" by the IMF, Chapter 8

[26] For a more detailed discussion, see, Edwin M. Truman, "A blueprint for Sovereign Wealth Fund Best Practices", Peterson Institute

historically have not been major players in international finance and have a little or no role in shaping the practices, norms, and conventions governing the international financial system". This sentence reflects for me much more than the actual issue surrounding SWFs. It illustrates the complexity of the future international relations in a context of globalized economy. Truman points the fact that one issue of the actual situation is that governments own or control a substantial share of the new international wealth. This transfer from private to public hand has to be addressed as it constitutes a challenge for the actual private-sector, market-oriented framework.

In my opinion the strongest point of the Truman index is that it is designed with the idea of incorporating only practices that at least one SWF already do. He also scores pension funds that are government owned or government controlled as he considers that in the context of best practices those ones are also concerned. His scoreboard contains 33 elements, constructed as questions and organised in four categories. The first one is the structure of the fund, including its objectives, fiscal treatment, and indicating if it is separated from the country's international reserves. The second one concerns the governance of the fund, the roles of the government and the managers, and if the fund follows guidelines for corporate responsibility and ethical investment behaviour. This last point may be a bit excessive as even a lot of institutional investors do not follow this kind of guidelines. The fourth category focuses on the accountability and transparency of the fund in its investment strategy, investment activities, reporting, and audits. Kotter and Lel (2011) found that this one was the most important in determining a SWF's transparency, at least for the market participants. The last category concerns the behaviour of the fund in managing its portfolio and the use of leverage and derivatives. In his approach Truman also tries to cover the main principles that at that time (April 2008) have been enunciated by the G-7, US and EU officials.

The scoring system is very simple using yes and no questions. The accountability and transparency component of the scoreboard contains 14 elements divided in four subcategories, investment strategy implementation, investment activities, reports and audit. In the investment activities section it is interesting to note that only 78% disclose their size. For Truman the most plausible reason for nondisclosure is that the citizens of the country, knowing how large the assets of the SWF are, will mobilize politically to obtain immediate access to them. However, for Truman whatever the reason they have not to disclose the size as a strategy to deal with these pressures can only exacerbate these issues in the long-term. Annual reports are published by 53% of non pension funds and quarterly reports only by 38%. Concerning the audit section Truman differentiates "three levels" of audit. First, he checks if they are audited,

it is surprising to see that only 62% of the non pension funds are. Then he checks if the audit is published, only 32% of non pension funds. Finally, he checks if the audit is performed by an independent auditor, this is the case for 57%. This last criterion is very important in order to certificate the quality of the accountability.

According to Truman's classification, the most transparent funds are the Alaska Permanent Fund and the Norwegian Government Pension Fund-Global[27], scoring 94% and 92% respectively, of the total possible points within the four categories. In terms of accountability and transparency both scored 100% in this category. The least transparent are the Qatar Investment Authority and the Abu Dhabi Investment Authority with only 9% of the total possible points. Regarding the accountability and transparency they score 2% and 4% respectively, in this sense the information available regarding these funds is almost inexistent.

It is important to note that his work was published before the creation of the IWG and the adoption of the "Santiago principles". Even that it is true that most of the ideas reflected in previous discussion between US and EU officials were similar to those adopted by the IWG. The scores of the different funds are a good starting point in evaluating SWFs' transparency. However, since 2008 SWFs have worked in order to increase their level of transparency and reduce the concerns of the recipient countries of their investments. In this sense it would be interesting to recalculate the scores and analyse if there has been a real improvement. Other indices concerning the SWFs transparency are available like the Linaburg-Maduell Transparency Index which was developed at the Sovereign Wealth Fund Institute by Carl Linaburg and Michael Maduell. This index is similar to the Truman one and works like a scoreboard. However, it is simpler and only includes 10 principles, this is why I will not enter in more details regarding it.

2.4. The role of political relations in SWFs investments

One of the main concerns surrounding SWFs is the possibility that they may invest following other objectives than the risk-return optimisation. As SWFs are government owned, in the centre of this concern we find the bilateral political relation aspect. It seems logic to wonder if politics play a role in the investment decision and if it is the case to try to identify how. We have already seen in the past some political issues surrounding SWFs, even from those considered as examples in terms of transparency. This is what happened, for example, with the Singaporean fund Temasek Holdings' takeover of the Thai telecom company Shin

[27] Which is not a pension fund

Corp in March 2006. The company was owned by the Thai Prime Minister Thaksin Shinawatra and his family. A lot of issues surrounded the deal like suspicions of insider trading and strong protest coming from opposition groups which launched a campaign against Shin products. The deal finally took place but contributed to fuel an important political crisis in Bangkok, some people say that this issue was one of the main reasons that led to a military coup against the Prime Minister Thaksin. Another example is the takeover of the ports and ferries operator P&O group by Dubai Ports World, a subsidiary of the Investment Corporation of Dubai, in 2006. This deal led to a wave of opposition from many countries and especially the US, who did not appreciate the idea of a Dubai based firm controlling 6 ports in the US. Finally, Dubai Ports World was forced to sell its assets in the US.

As we can see, the political dimension is often present in SWFs' investments. The paper of April Knill, Bong-Soo Lee and Nathan Mauck[28] (2012) tries to explain the impact of political bilateral relations on the investment decisions. It is interesting because they also see the impact in the other sense, by examining the consequences of SWFs' investments on bilateral relations. In their approach they also analyse the investment in two steps, where to invest and how much, and see the impact on each one. Then they compare their results in the context of the Foreign Direct Investment (FDI) literature.

Concerning the methodology, they are able to use data involving privately held firms allowing them to expand their sample and work on a bigger one compared to other studies. Their proxy for political relations is based on United Nations voting records as previously did Gupta and Yu (2009). This approach limits the coverage of nations to those with voting records. The rationale behind this proxy is that countries with more closely related votes are expected to have stronger political relations. With this data they obtain a measure of the degree of political proximity ranging from -1, if all votes are different, to +1 if all votes are the same. In my opinion the problem with this measure is that even if two countries vote in the same direction this does not mean that they have strong bilateral political relations. This could mean that one of the countries is exerting some pressures on the other, or maybe one of them is suffering a group effect. For robustness Knill, Lee and Mauck used other measures of bilateral political relations arriving to results that are qualitatively identical.

The results are mixed concerning the existence of a relation between SWFs' investment decisions and bilateral political relations. As pointed out by Chhaochharia and

[28] For a more detailed discussion, see April Knill, Bong Soo Lee, Nathan Mauck, 2012,"*Bilateral political relations and sovereign wealth fund investment"*, Journal of Corporate Finance 18, 108-123

Laeven (2009) SWFs tend to invest in countries with similar cultures to their own in order to limit the problems linked to information asymmetry and note that this variable is more pronounced in the case of SWFs than with other institutional investors. For them this is clearly a clue that SWFs may serve other interests than only profit maximisation. For Bernstein et al. (2010) there also seem to be political considerations in SWFs' decisions. For them this issue is higher when a greater number of politicians are involved in the management of the fund.

In other papers, however, they do not find any evidence of such behaviour. This is the case for example of Karolyi and Liao (2010), who conclude that there is no evidence of *"resource misallocation due to political bargaining"*.

As previously mentioned, it is interesting to try to understand the impact of bilateral political relations on SWFs' investment decisions in the context of the literature concerning FDI. For Li and Vashchilko (2010) political relations are likely related to perceived political risk. Greater political risk is associated with greater investment costs and fewer inflows of funds. For them government policies relating to FDI are linked to political relations, and changes in the political relations are perceived as political risk. In this sense SWFs need to take into account this factor in order to be able to maximise the risk-to-return profile. As stronger political relations seem to have a positive impact on the investments we could expect a significant impact of political relations on SWFs' investments.

In their study A. Knill et al. decide to divide the investment process in two stages[29], first where to invest and second how much. In other words they start with the following hypotheses:

1. SWF investment decisions are positively related to political relations in both stages.

They point out the need to analyze this hypothesis in a dynamic framework:

2. An improvement (deterioration) in political relations will lead to an increase (decrease) in SWF investment.

The problem here is that it is not clear from the literature if the direction of this impact will be positive or negative. This is why A. Knill et al. focus on the following hypothesis:

3. SWF investment Granger-causes political relations.

Following this hypothesis they focus on the work of Martin et al. (2008) that find that closed countries reduce their probability of war by increasing trade, thus political relations. However, once they become more open they may face a higher probability of war with an

[29] Following Blanton (2000), Reed (2000), and Biglaiser and DeRouen (2007)

individual partner as they are not so reliant on an individual partner anymore. This conclusion brings them to the following hypothesis:

4. In bilateral pairs including closed (open) nations, an increase in SWF investment will lead to a net improvement (deterioration) in political relations.

This is, in my opinion, the most interesting point of their work, they do not only focus in determining if political relations have a role in SWFs' investment decisions, but they also try to find if the investment decisions affect political relations.

Concerning their results, the following things are interesting. They use a number of control variables in their cross-sectional analysis. One of them is the correlation between the SWF and target nation market returns over the sample period 1990-2009. According to the portfolio theory this correlation should be negative if SWFs invest internationally for diversification benefits. However, they find a positive relation, suggesting that they do not invest for diversification purposes, reinforcing their hypothesis of a positive relation between the political relations and their investments. In this case, I am not completely convinced about their explanation. SWFs tend to invest in big financial markets and usually their domestic market is quite small. In general big markets tend to drive other smaller markets, and this is even more the case when there is a financial crisis and the correlations among markets tend to increase. This is one of the main issues with diversification, as when its role becomes the most relevant, in case of a financial crisis, it turns useless as the level of correlation increases.

They are particularly surprised to find that there is a negative relation between SWF investments and bilateral political relations. Suggesting that when deciding where to invest they tend to prefer countries with which they have weaker political relations. This result is against their first hypothesis. They argue that this could be explained by the fact that sometimes the need for international diversification could lead to irrational choices. However, as previously mentioned, the correlation between the domestic markets of SWFs and their targets' market is positive and invalidate this explanation. They conclude therefore that SWFs consider more than just financial considerations in their investment decision-making process. This result is robust when controlling for SWFs and target country specific characteristics.

When analyzing if political relations Granger-causes SWF investment their results are consistent with the previous findings in the static framework, suggesting a negative relation between SWF investments and political relations. However they recommend a case by case approach as they find evidence that it really depends on the country pair involved.

In the case of SWF investment Granger-causing political relations, they find some evidence, but its relevance is very small when compared to the previous causality relation.

Concerning the impact of SWFs' investments on political relations depending on the level of openness of both SWFs and target countries they find results consistent with their initial hypothesis. SWFs' investments lead to deterioration in political relations for open countries. The sign of the relation between SWFs' investments and political relations for closed nations is positive but not significant.

To summarize, A. Knill et al. (2012) find evidence for a number of characteristics surrounding bilateral political relations and SWFs investments. Contrary to the FDI literature SWFs tend to invest in countries with which they have relatively weaker political relations. Political relations are an important factor in determining where to invest but matter less when determining how much to invest. Moreover, there is a negative relation between the bilateral political relations and the amount they invest. These facts suggest that SWFs do not behave as rational investors meaning that there is something else behind their investment decisions. Concerning the impact of their investment on political relations they find that it is positive for relatively closed countries and negative for more open countries. However, in my opinion, an important conclusion they reach is that the heterogeneity present in SWF investment profiles suggest that each case should be treated independently in terms of policy making.

3. Empirical study

3.1. Data and descriptive statistics

I used a similar methodology than J. Kotter and U. Lel (2011) to construct the database. The sample consists of SWF investment announcements that are hand-collected by searching Factiva using key words such “invest” or “stake” combined with the SWF name and its well-known subsidiaries. I used the list of SWFs available in the SWF Institute website (see Appendix A). The research was performed only on part of the list because I found more interesting to focus on the biggest SWFs in terms of AUM.

In order to increase the size of the sample and to verify the data gathered through Factiva, I also collected events by searching SDC Platinum for transactions involving the different SWFs I found using Factiva. Sometimes the information was also completed using the SWF’s official website.

The search results in a total of 586 events on which I was able to find at least the stake purchased and the announcement date. Concerning the announcement date it was not always the official one. Most of the SWFs do not even communicate officially about an acquisition, because of this it was not easy to identify the official date as sometimes a SWF’s intention to acquire a stake in a company was rumoured months before the acquisition was made. In this sense I decided to use as the announcement date the first appearance in a news article about a particular deal. On these 586 deals 251 are investments in firms without publicly traded equity. Of the remaining 335 the sample is further limited to cases were the information needed for the empirical test is available, as a consequence the size of the sample differs in the following sections. Only the publicly traded firms are used for the empirical study.

A summary of the events can be found in Panel A and B of Table 3. We can observe in Panel B that Singaporean SWFs are the most represented in the sample in terms of the number of investments, this is the case in most of the empirical studies on SWFs. Panel A displays the distribution of target firms countries for publicly traded firms only. The sample comprises investments in 34 different countries, with the United Kingdom and the United States attracting most of them. Most of the announcements are from 2004 to 2012, around 78% of the total sample.

Table 3. Descriptive statistics for the entire database

The following tables provide a distribution of the announcements of sovereign wealth fund investments by country membership of target firms and by acquirer SWFs. Panel A provides information on the distribution of SWFs' investments of the country of the target firms for the publicly traded companies. Panel B displays the number of investments for each SWF present in the sample. In both cases a distinction is made between acquisitions involving private companies and publicly traded ones. The percentage each country or SWF represents in the total sample is also given

Panel A: Number of investments by target country

Target country	# of investments	% of total	**Target country**	# of investments	% of total
Australia	13	3.88	Malaysia	20	5.97
Austria	5	1.49	Netherlands	1	0.30
Bahrain	1	0.30	New Zealand	5	1.49
Brazil	2	0.60	Pakistan	6	1.79
Canada	7	2.09	Qatar	8	2.39
China	16	4.78	Russia	2	0.60
Czech Republic	2	0.60	Singapore	28	8.36
France	10	2.99	Spain	8	2.39
Germany	11	3.28	Sweden	1	0.30
Hong Kong	18	5.37	Switzerland	5	1.49
India	28	8.36	Taiwan	4	1.19
Indonesia	10	2.99	Thailand	5	1.49
Italy	12	3.58	Turkey	3	0.90
Japan	2	0.60	United Arab Emirates	3	0.90
Jordan	3	0.90	United Kingdom	47	14.03
Korea; Republic (S. Korea)	3	0.90	United States of America	43	12.84
Kuwait	2	0.60	Vietnam	1	0.30
Total				335	100.00

Panel B: Number of investments by SWF

Fund name	**Country**	Private companies		Publicly traded companies	
		# of investments	% of total	# of investments	% of total
Abu Dhabi Investment Authority	UAE – Abu Dhabi	12	4.78	17	5.07
Government Pension Fund – Global	Norway	1	0.40	2	0.60
SAFE Investment Company	China	2	0.80	18	5.37
China Investment Corporation	China	7	2.79	11	3.28
Government of Singapore Investment Corporation	Singapore	28	11.16	34	10.15
Temasek Holdings	Singapore	102	40.64	105	31.34
National Social Security Fund	China	3	1.20	7	2.09
Qatar Investment Authority	Qatar	8	3.19	41	12.24
New Zealand Superannuation Fund	New Zealand	2	0.80	5	1.49
Investment Corporation of Dubai	UAE – Dubai	18	7.17	16	4.78
Brunei Investment Agency	Brunei	4	1.59	4	1.19
Khazanah Nasional	Malaysia	25	9.96	32	9.55
Mubadala Development Company	UAE – Abu Dhabi	8	3.19	5	1.49
Libyan Investment Authority	Libya	6	2.39	12	3.58
Kuwait Investment Authority	Kuwait	14	5.58	8	2.39
International Petroleum Investment Company	UAE – Abu Dhabi	10	3.98	16	4.78
Korea Investment Corporation	South Korea	1	0.40	2	0.60
Total		251	100.00	335	100.00

Table 4. Data characteristics for section 3.3. and 3.4.

This table provides summary statistics for acquisition target firms 12 months before to 12 months after the announcement date. The sample is composed by 230 events in 197 firms. The target (benchmark) return is the monthly return of the target (Benchmark) of the SWF. The target (benchmark) volatility is the standard deviation of the daily excess returns over month t of the target (benchmark) firm. The Sharpe ratio uses the target excess return as the numerator and the standard deviation of the daily excess return as the denominator. The target size is equal to the natural log of the target market capitalisation one month prior to the event. Cross-border is an indicator variable equal to one if the SWF domestic country and target domestic country are the same and zero otherwise. Investment stake is the percentage stake acquired by the SWF in the target company, its value is zero in the months before the event. The NetDebt/EBITDA ratio is equal to the net debt divided by the EBITDA for a given year. The Cash/TotalAssets ratio is equal to the cash & cash equivalents divided by the total assets for a given year. Transparency, Structure and Governance are the scores obtained by the SWF involved in the event for each of these Truman indices. Experience is the number of years of existence of the SWF. Democracy is an indicator variable equal to one if the domestic country of the SWF is a democracy and zero otherwise. N is the number of observations used in my analysis.

Variables	**N**	**Mean**	**Median**	**Std. dev.**	**Min**	**Max.**
Panel A: Summary statistics						
Target return	5980	0.010	0.000	0.147	-0.716	1.400
Firm volatility	5980	0.027	0.021	0.026	0.000	0.685
Target Sharpe	5980	0.320	0.000	4.570	-21.835	29.288
Benchmark return	5980	0.012	0.003	0.136	-1.000	1.451
Benchmark volatility	5980	0.025	0.020	0.025	0.000	0.943
Benchmark Sharpe	5980	0.541	0.047	4.636	-16.488	35.537
Panel B: Additional variables for the panel regression						
Investment-specific variables						
Target size	5100	21.418	21.398	2.505	9.356	26.335
Cross-border	5100	0.828	1.000	0.377	0.000	1.000
Investment stake	5100	0.075	0.006	0.159	0.000	1.000
NetDebt/EBITDA	5100	2.706	1.707	10.953	-50.756	42.060
Cash/TotalAssets	5100	0.046	0.021	0.066	0.000	0.339
SWFs-specific variables						
Transparency	5100	36.534	39.000	27.168	2.000	100.000
Structure	5100	48.520	50.000	14.053	25.000	100.000
Governance	5100	36.422	50.000	22.241	0.000	100.000
Experience	5100	22.848	19.000	13.296	5.000	59.000
Democracy	5100	0.515	1.000	0.500	0.000	1.000

In Table 5 we find summary statistics for all the variables employed in Section 3.3. and 3.4. The data displayed concerns only the 12 month window. In Panel A we have the data employed in section 3.3. In Panel B we have the additional data for the panel regression made in Section 3.4. (see Appendix E for a detailed definition of the variables and sources).

3.2. The market reaction to announcements of SWF investments

Similarly to the method employed by J. Kotter and U. Lel (2011) in this section I examine the short-term impact of SWFs' investments on target firm's value. Even if it is not easy to clearly identify the announcement date, I found it interesting to perform this analysis. It also allowed me to check the consistency of my sample, in order to be sure that the analysis performed later will not be biased by specific characteristics linked to my database.

I did an event study analysis to measure changes in share value around the announcement of an SWF investment. To measure abnormal returns value-weighted national stock market indices are used, extracted from Datastream (see Appendix C for a full list of the indices used). These indices were the most commonly used as benchmarks in their respective countries. Abnormal returns are calculated for each stock from day -5 to day +20 surrounding the announcement date and then averaged across firms to form the average abnormal return. The abnormal returns are winsorised at the 0.20% level in order to reduce the impact of the outliers.

J. Kotter and U. Lel (2011) have employed an estimated market model in their study, to check the robustness they have also used stock market indices obtaining similar results for both methods. Table 4 presents the results for the different time windows.

Panel A reports the results for the entire sample of 283 deals on 238 different target firms. The average cumulative return is 1.82% (t=1.93), 2.28% (t=2.13) and 2.89% (t=2.86) for the windows (0,+1), (-1,+1) and (-2,+2) around the announcement date respectively. The positive market reaction is consistent with the literature on institutional investors. The returns are slightly higher for the entire sample than the results obtained by J. Kotter and U. Lel (2011).

Other Panels of Table 4 display the CARs for different subsamples. Panel B for cross-border investments, the average CARs are 1.83% (t=1.64), 2.01% (t=1.80) and 2.71% (t=2.31) for the (0,+1), (-1,+1) and (-2,+2) windows respectively. For this subsample I was expecting lower returns because SWFs have less control on the economic environment when investing abroad compared to investments in their domestic countries. The results for this subsample are all statistically significant. In Panel C we have the average CAR for the investments made between 1986 and 2005, they are very low compared to the results of J. Kotter and U. Lel (2011) and not statistically significant. In Panel D we have the results for the period between 2006 and 2012, the CAR for the three windows is positive and statistically significant, it is also higher than for the entire sample for the three time windows, with +2.53% (t=1.81) for the (0,+1) window. In Panel E and F we have the average CARs for the

2006-2009 and 2009-2012 periods. The objective of these two subsamples was to help me to understand where the difference in my results comes from when compared to the empirical study of J. Kotter and U. Lel (2011). For the period between 2006 and 2009 my results are higher, the CAR is 4.15% (t=1.74) and 4.89% (t=2.02) for the (-1,+1) and (-2,+2) windows respectively, both results are statistically significant. Compared to the other study the results are between 2% and 3% higher for this subsample and time windows. For the last subsample presented in Panel F the CARs are 1.32% (t=2.07), 1.25% (t=1.90) and 2.48% (t=2.51) for the (0,+1), (-1,+1) and (-2,+2) windows respectively. This last subsample represents around 25% of the total sample and all the results are statistically significant.

I found a positive CAR for all the time windows and subsamples, in most of the cases the results are statistically significant. These results suggest that SWFs have a positive impact on the target firms in the days surrounding the announcement date. We can also observe in Figure 2 that most of the positive impact occurs in the fours days surrounding the announcement. This is in line with what J. Kotter and U. Lel (2011) found in their study. However, I found slightly higher CARs for the whole sample and there are important differences when analysing specific periods. For example, for the period between 1986 and 2005 my results are completely different and not statistically significant. This period represents around 30% of my entire sample, similar to the other empirical study. I also find differences for the period between 2006 and 2009, concretely higher CARs for the (-1+1) and (-2,+2) windows. I tried to understand where these differences come from. There were in my opinion three possible explanations. The first one was that the difference was coming from the fact that I used national stock indices instead of estimating market models, J. Kotter and U. Lel (2011) found similar results for both methods, however they did not publish the results, making impossible for me to identify if this was the cause of the difference. Secondly, I thought that maybe the difference was coming from the year distribution of my sample. For this purpose I constructed the table available in Appendix D in order to evaluate this possibility. According to the information available in their empirical study, it seems that the sample I used is similar to theirs in terms of year distribution. Finally the last explanation was that my sample was fundamentally different to the one employed by them. The particularity of the sample used here is that it includes deals between 2009 and 2012, around 30% of the total, but the CARs I found for the entire sample are similar to those found by J. Kotter and U. Lel (2011) so this fact can not explain the differences in the other subsamples.

In sum, it is interesting to see the market reaction to announcement of SWFs investments, however as I mentioned before, it is difficult to clearly identify the moment

Table 5. Stock market reaction to announcements of SWF investments

This table provides information about the initial stock market reaction to the announcement of SWF investments. Daily abnormal returns are calculated using the national stock indices as benchmarks. The sample in panel A covers all 283 announcements during the period between 1986 and May 2012. Panel B restricts the analysis to cross-border SWF investments. Panel C reports the results for the period between 1986 and 2005, Panel D between 2006 and 2012, Panel E between 2006 and February 2009, and Panel F between March 2009 and 2012
*** indicates significance at the 1% level, ** indicates significance at the 5% level, and * indicates significance at the 10% level

Event window	CAR (percent)	Test statistic	Percent positive
Panel A: Entire sample, 283 events from 238 firms			
(0, +1)	1.82*	1.93	57
(-1, +1)	2.28**	2.13	53
(-2, +2)	2.89***	2.86	53
Panel B: Cross-border investments, 238 events from 198 firms			
(0, +1)	1.83*	1.64	55
(-1, +1)	2.01*	1.80	53
(-2, +2)	2.71**	2.31	52
Panel C: Investments between 1986 and 2005, 87 events from 78 firms			
(0, +1)	0.50	1.09	52
(-1, +1)	0.40	0.73	47
(-2, +2)	1.11	1.48	48
Panel D: Investments between 2006 and 2012, 196 events from 166 firms			
(0, +1)	2.53*	1.81	59
(-1, +1)	2.86**	2.05	56
(-2, +2)	3.79***	2.61	55
Panel E: Investments between 2006 and February 2009, 116 events from 98 firms			
(0, +1)	3.56	1.48	63
(-1, +1)	4.15*	1.74	60
(-2, +2)	4.89**	2.02	58
Panel F: Investments between March 2009 and 2012, 79 events from 70 firms			
(0, +1)	1.32**	2.07	52
(-1, +1)	1.25*	1.90	49
(-2, +2)	2.48**	2.51	49

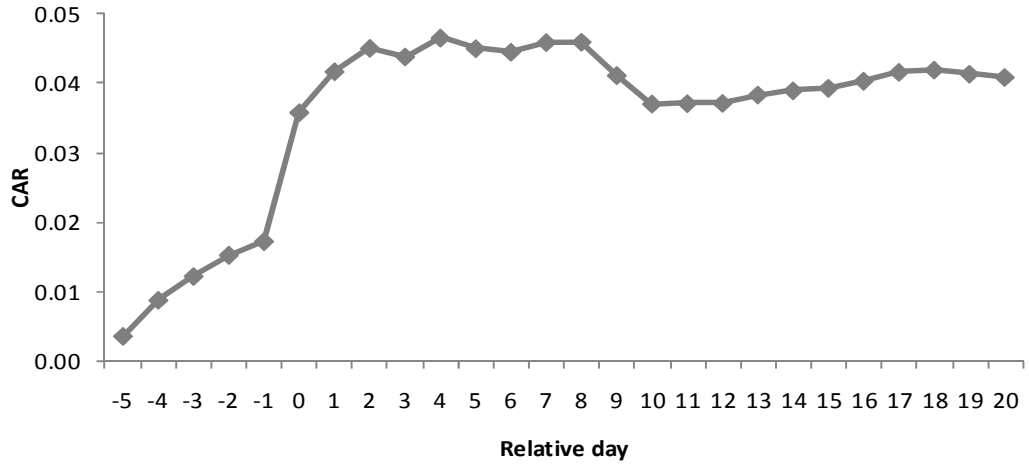


Figure 2. Cumulative abnormal returns

CAR for the entire sample from day -5 before to day +20 after the announcement of an investment by a SWF. The daily returns are benchmark adjusted for each firm (see Appendix C for the full list of benchmark indices), averaged across firms and cumulated

when the market integrates the information in the stock price. Maybe the differences in my results come from this fact, it would be necessary to have an access to their database in order to clearly identify the cause of these differences and see if they are statistically significant.

3.3. Difference in means test

In this section I examine the impact of SWFs' investments on the return, the standard deviation and the Sharpe ratio of their target firms. I compare these variables before and after the investment in a similar way as A.M. Knill et al. (2012). The idea is to see the impact on the return-to-risk performance of the target firms, in the previous section I analyse the return for a very short period of time and without taking into account the level of risk. Instead of using time windows of 1 year, 3 years and 5 years like A.M. Knill et al. (2012) did, I found more interesting to use smaller time windows. Concretely I used 6 months, 12 months and 18 months. In my opinion in the long-term it becomes more difficult to establish a clear link between the SWF's investment and the target performance. It is also difficult to identify the moment when the SWF exits from its investments and using a 5 year time window reduces considerably the size of the sample used.

The fundamental idea behind the Sharpe ratio is that risk and return are positively related (Sharpe, 1964). Its value is calculated using the following formula:

$\text{Sharpe}_{i,t} = \frac{\text{Return}_{i,t} - R_{f,t}}{\text{Standard Deviation}_{i,t}}$, where $\text{Return}_{i,t}$ is the monthly return of the firm i for the month t, $R_{f,t}$ is the risk free rate for the month t[30] and $\text{Standard Deviation}_{i,t}$ is the monthly standard deviation of daily excess returns (see Appendix E for more details concerning the variables).

The monthly value of each of these variables is calculated for the target firms for the 6 months, 12 months and 18 months before and after the announcement of the investment. It is averaged across firms for each of these time windows after and before and then the difference is calculated. To ensure the consistency, all the data used is in US dollars.

The benchmark adjusted results gives the difference between the value obtained for the target firms and the results for the benchmark firms. I used the same matched pair benchmarking procedure as A.M. Knill et al. (2012). The companies are matched based on three criteria: country, industry and size. For the industry I used the Datastream's Global Industry Classification. For a certain target I find all the firms within its industry for a specific country, then I select the company with the closest size in terms of market capitalisation at the

[30] The risk free rate used is the US 1-month T-bill rate, when its value was not available it was calculated using the US 3-months T-bill

end of the month prior to the announcement. In general the methodology employed seems good when analysing the statistics available in Table 5. For the 12 month window we have 5980 observations, the mean return for the target firms is 0.010 compared to the return of the benchmark which is 0.012. Concerning the volatility we also have similar values with an average of 0.027 for target firms and 0.025 for the benchmark ones. A t-statistic comparing these values is available in Appendix F confirming the previous results.

Table 6 displays the results of the difference in means test. The difference on the target raw returns is negative and statistically significant for all the time windows. For the benchmark adjusted it is also negative but only statistically significant for the 18 month window. These results are in line with those obtained by A.M. Knill et al. (2012) except concerning the magnitude of the difference. It is interesting to note that A.M. Knill et al. (2012) results for the 5 year time window are not statistically significant reinforcing my idea that studying the impact in a window of this size may no be very relevant.

We can observe a change in the risk profile of the target company. For the 6 month window this difference is positive and statistically significant, this is not surprising and comes probably from the higher volatility caused by the speculation surrounding the SWF's investment. This difference becomes negative for the 12 month and 18 month windows but is statistically significant only for the last one. This shows that the SWF's investment reduces the volatility of the stock in the middle-term, A.M. Knill et al. (2012) find similar results. This reduction comes probably from the ability of the SWF to act as a guarantor of the future viability of the firms. We have seen that SWFs target cash constrained firms, these firms are often associated with a higher volatility, however the ability of the SWF to provide cash probably attenuates this issue reducing the risk. All the results are negative for the benchmark adjusted values but only statistically significant for the 18 month window, suggesting that there is a real reduction in target firm volatility when compared to its benchmark.

In sum, there is a decrease in raw returns combined with a decrease in the volatility. It is necessary to analyse the Sharpe ratio in order to determine if these combined effects have a positive or a negative impact on the return-to-risk profile of the target companies. I found a negative and statistically significant impact for all the time windows, implying that SWFs tend to deteriorate the return-to-risk performance of the target firms. The values of benchmark adjusted Sharpe ratio are also negative but only statistically significant for the 18 month window. In sum we see a reduction in the level of compensated risk. These results are again in line with what A.M. Knill et al. (2012) found in their study.

In conclusion, we can say that SWFs are associated with a deterioration in the return-to-risk profile of the target companies. Figure 3 plots the benchmark adjusted value of the Sharpe ratio 18 months, 12 months and 6 months before and after the announcement date. These are only the average values for these specific months. We can observe that there is an improvement only in the months surrounding the event date. This improvement comes probably from the positive abnormal returns experienced around the event, as we could see in Section 3.2. This increase in the Sharpe ratio occurs even if the volatility increases during this period of time. In Figure 4 we have the CAR for the period comprising 18 months before and after the announcement date for both the target firms and the benchmark ones. We can see that the target slightly outperform the benchmark in the months before the event but tend to start to underperform 6 months after. Again we can observe an important improvement in the months surrounding the announcement.

Table 6. Difference in means tests

The variables used are defined in Table 5. The reported results test the difference in means for the variable of interest in the noted period of time before and after SWF investment (e.g., After – Before). There are 244, 230 and 223 acquisitions for the 6 month, 12 month and 18 month windows respectively. Figures are in percentages. The benchmark adjusted results use the difference between target and benchmark firms. The p-value is provided for the Sharpe ratio

*** indicates significance at the 1% level, ** indicates significance at the 5% level, and * indicates significance at the 10% level

	Target			Benchmark adjusted		
	6 months	12 months	18 months	6 months	12 months	18 months
Raw return	-1.77***	-1.28***	-1.22***	-0.22	-0.38	-0.88***
Standard deviation	0.17**	-0.02	-0.09*	-0.03	-0.10	-0.17***
Sharpe ratio	-33.34**	-29.35***	-25.76***	-0.13	-0.12	-0.23**
p-value	0.03	0.01	0.01	0.42	0.29	0.02

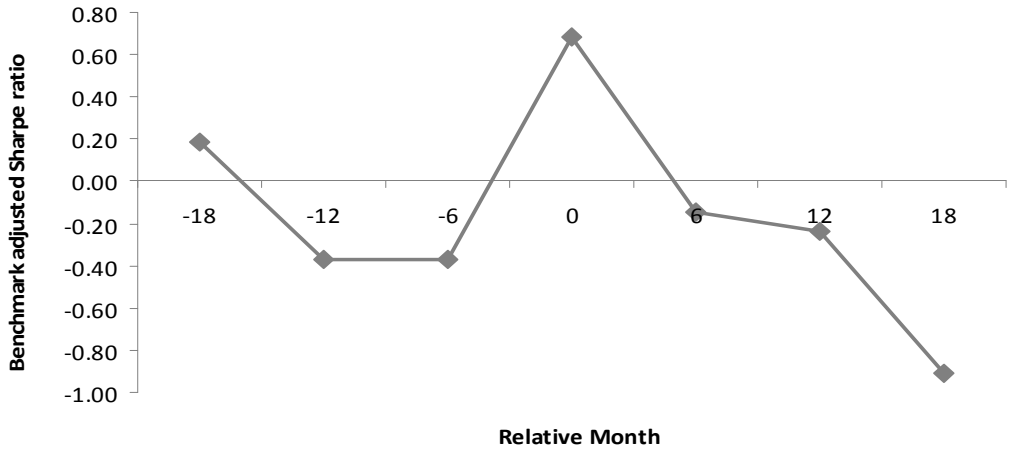


Figure 3. Benchmark adjusted Sharpe ratio

Monthly Sharpe ratio every 6 months surrounding the announcement date starting 18 months before and finishing 18 months after

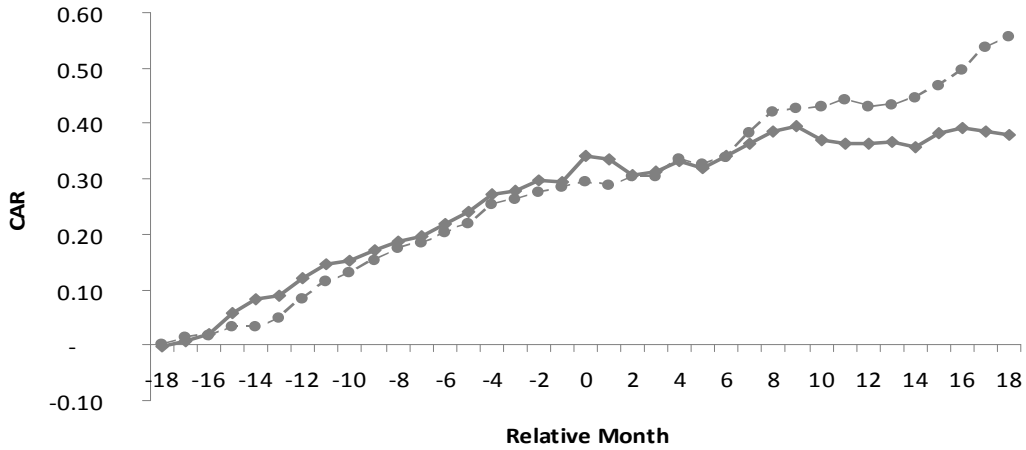


Figure 4. Cumulative abnormal return surrounding the announcement date

The monthly return is calculated for each firm, averaged across firms and cumulated for 18 months surrounding the announcement date. The solid line represents the CAR of the target firms of SWF investments; the dash line represents the CAR of the benchmark firms

3.4. Panel regressions

In this section I try to identify the factors that influence the Sharpe ratio of the target firms. I use a similar regression approach than the one used by A.M. Knill et al. (2012) and like them, since it exists a serial correlation of the Sharpe ratio, I include a lag for the dependent variable in the model employing an autoregressive (panel) model:

$$\text{Sharpe}^{T}_{i,t} = \theta_0 + \theta_1 \text{Sharpe}^{T}_{i,t-1} + \theta_2 V^{T}_{i,t} + \theta_3 \text{SWFI}_{i,t} + \theta_4 \text{SIZE}_{i,t} + \theta_5 F^{T}_{i,t} + \theta_6 \text{Sharpe}^{B}_{j,t} + \mu_t$$

Equation 1. Autoregressive (Panel) model

where the Sharpe ratio is calculated using, $\text{Sharpe}_{i,t} = \frac{\text{Return}_{i,t} - R_{f,t}}{\text{Standard Deviation}_{i,t}}$ and represents the relationship between monthly excess returns and total risk for the target firm i at time t. $V^{T}_{i,t}$, is the total volatility, calculated as the monthly standard deviation of daily excess returns over month t. $SWFI_{i,t}$ is an indicator variable equal to zero in the months before the SWF's investment and equal to one in the months after. $SIZE_{i,t}$ is defined as the natural log of the market capitalisation of the target firm one month before the event (in $'s). $F^{T}_{i,t}$ is a set of investment-specific information. Concerning the deal characteristics, it includes the stake purchased by the SWF because of the existing relationship between it and the volatility (e.g., Brockman and Yan, 2009). A cross-border[31] indicator variable which is equal to one if it is the case and zero otherwise, to control for the particular characteristics involving this kind of investments when compared to domestic ones. The Net debt divided by the EBITDA ratio is also included to control for the level of debt of the target firm because of its impact on the volatility. The Cash divided by the Total assets ratio is included because of the appetite of SWFs for this kind of firms (e.g., J. Kotter and U. Lel, 2011) and to control for the impact of cash constraints on the volatility.

A number of SWF-specific information is also included in $F^{T}_{i,t}$, specifically the level of transparency, structure and governance obtained from the Truman work. J. Kotter and U. Lel (2011) found that transparency played a critical role in the market reaction to SWFs announcements, the objective is to see if this is also the case on the return-to-risk profile. The number of years of existence of the SWF is also included to control if the experience plays a role in the impact on the target firms. Finally, an indicator variable equal to one if the

[31] An investment is consider as cross-border when the domestic country of the SWF and the target firm country are different

domestic country of the SWF is a democracy and zero otherwise is included to see if the political environment of the SWF nation impacts the performance of the target firms. $\text{Sharpe}^{B}_{j,t}$ is the Sharpe ratio of the benchmark firm j at time t and is included to control for factors linked to the country, the industry and the period of time (see Appendix E for more details on all the variables). A random effect procedure is used for the estimation.

Given the previous results, I was expecting a negative value for θ_3 because of the apparent negative impact of SWFs on target firm's return-to-risk performance. A positive value for θ_6 as the existence of a similar behaviour for firms in the same industry and country is highly probable.

The results of the panel regressions are available in Table 7. The objective is to check after controlling for factors directly linked to the return-to-risk profile if there is a decrease in the risk compensation after a SWF investment. It also allows us to identify if this decrease comes from specific characteristics linked to the target company or to the SWF.

We can observe that the effect of the SWF on the Sharpe ratio is negative for all the time windows, although only statistically significant for the 18 month one. This is in line with what I found in Section 3.3. and shows that after a SWF investment the level of risk compensation decrease. These results are coherent with the values obtained by A.M. Knill et al. (2012) for other time windows. The pseudo R2 is almost in all the cases.

The positive value for the lagged target Sharpe ratio is not surprising, even if statistically significant only for the 18 month window. Both the target volatility and the benchmark Sharpe coefficients are positive and statistically significant. For the first one, as it used for the calculation of the Sharpe ratio, it is normal to find a direct relation, however I would expect it to be negative. For the second one it shows that the Sharpe ratio is strongly influenced by the country and industry context and also that the benchmarking procedure is appropriate. I found a negative, except for the 18 month window, and not statistically significant value for the coefficients of the target size. A.M. Knill et al. (2012) found positive and statistically significant coefficients. I think that the difference may come from the way the size is calculated. In their study they use the natural log of the average value of the market capitalisation in the month before the month t (see Equation 1). In my case I use only the natural log of the market capitalisation one month before the month t. Their methodology is more accurate as it reduces the impact of factors linked to the specific date used, especially given the context of high volatility that we could observe these last years.

Table 7. Panel regressions analysis

The return-to-risk ratio regression is specified in Equation 1. A detailed description of all the variables and their sources is available in Appendix E. Data statistics are available in Table 4. Standard errors are in brackets.

*** indicates significance at the 1% level, ** indicates significance at the 5% level, and * indicates significance at the 10% level

	Sharpe ratio		
	6 months	12 months	18 months
SWFI	-0.204 [0.175]	-0.167 [0.126]	-0.249** [0.102]
Previous Target Sharpe	0.002 [0.017]	0.013 [0.012]	0.035*** [0.009]
Benchmark Sharpe	0.519*** [0.017]	0.503*** [0.012]	0.483*** [0.010]
Target volatility	11.753*** [3.308]	6.764*** [2.200]	5.996*** [1.816]
Target size	-0.020 [0.036]	-0.009 [0.026]	0.007 [0.020]
Cross-border	-0.494** [0.225]	-0.243 [0.161]	-0.123 [0.130]
Investment stake	0.420 [0.566]	0.490 [0.413]	0.465 [0.336]
NetDebt/EBITDA	-0.002 [0.284]	0.006 [0.005]	0.005 [0.004]
Cash/TotalAssets	3.751*** [1.150]	1.330 [0.856]	0.970 [0.712]
Transparency	0.011** [0.005]	0.012*** [0.003]	0.010*** [0.003]
Structure	-0.013 [0.009]	-0.011* [0.006]	-0.012** [0.005]
Governance	0.008 [0.006]	0.010 [0.004]	0.004 [0.003]
Experience	-0.015* [0.009]	-0.131** [0.006]	-0.012** [0.005]
Democracy	0.021 [0.284]	-0.022 [0.204]	0.060 [0.166]
Constant	0.665 [0.882]	0.507 [0.625]	0.181 [0.503]
Observations	2652	5100	7548
# of SWFs	17	17	17
# of Targets	192	192	192
Pseudo R2	0.287	0.267	0.256

The coefficients for the cross-border variable are also negative, in line with what I was expecting. In the case of the investment stake it is positive and not statistically significant.

The next two variables, the NetDebt/EBITDA ratio and the Cash/TotalAssets ratio are used to control for firm specific characteristics and because J. Kotter and U. Lel (2011) found in their empirical study that SWFs tend to target financially distressed and cash constrained firms. For the first one I was expecting a negative value, because a higher level of indebtedness is generally associated with a higher level of risk and consequently of volatility, resulting in a lower Sharpe ratio. This is the case for the 6 month window although the value is not statistically significant. For the Cash/TotalAssets I was expecting a positive value, since contrary to the level of debt a stronger cash position reduces the level of risk and volatility, improving the Sharpe ratio. The value is positive for all the time windows and statistically significant for the 6 month one.

The following five variables control for SWF-specifics. I found that the transparency coefficients are positive and statistically significant for all the time windows. This is in line with J. Kotter and U. Lel (2011) who found that transparency plays a key role in determining the market reaction to a SWF investment announcement. It is interesting to note that this impact is not only true in the short-term and also affects the return-to-risk profile of the target firm. The negative and statistically significant value for the coefficients of the structure variable is a bit confusing, this variable allows us to see if the SWF has a clear and defined investment strategy, is well integrated in the fiscal system of its home country, in sum if it is well organised. I would have expected a positive value, further research should be done in this sense to understand why this is the case. It is also surprising to see that the coefficients of the experience variable are negative and statistically significant, meaning that recently created funds have a better impact on the target firms. Maybe this is the case because recently created funds tend to be more professional and better designed based on the experience of other funds. Finally, the democracy variable is positive but not statistically significant.

4. Interviews

4.1. FSI – Fonds Stratégique d'Investissment[32]

The FSI was created in 2008 by the "Caisse des Dépots" and the French state in order to provide equity financing to companies with strong competitive positions whose expertise and technology are keys to France's competitiveness. It is a long-term investor, taking minority stakes but actively involved in corporate governance. The FSI's two shareholders are the "Caisse des Dépots", with 51%, and the French state, with 49%, the fund had a total AUM of €21.8 billion in 2010.

Serge Bedrossian - Investment Director at the FSI

Serge was my contact at the FSI. He has more than 10 years of experience in the corporate banking and private equity industry. Before arriving to the FSI in 2009 he has worked for institutions like Merril Lynch, Morgan Stanley and 3i between Paris and London. He has graduated from HEC and Assas Law School.

Questions[33]

The FSI invests actually only in France, do you think that one day it will invest abroad?

I do not think so in the middle-term because our approach is different from that of other SWFs. The first reason is because our resources are not so important compared to other funds, even if they are consequent. Secondly, for most SWFs the objective is to manage the proceeds from non renewable resources for future generations. These funds try to diversify the country's portfolio and also try to develop new activities in their domestic countries, like in the case of Mubadala[34].

The case of France is a bit different, unfortunately we do not have natural resources like oil or gas. In this sense the FSI was not created in order to diversify France's patrimony, which is already well diversified in terms of industries and geographic areas. The objective for the fund's creation was to provide a source of financing to the economy. Its creation was already contemplated before 2008 and it is not a coincidence if it was formalised that year. During that period the financings coming from the banks and the investment funds became scarce for several reasons. This is why we were created with a strong financing objective and compared

[32] Source: Fonds Stratégique d'Investissement as of May 2012

[33] The views expressed here do not necessarily reflect those of the FSI

[34] Mubadala Development Company PJSC is a sovergeign fund owned by Abu Dhabi

to other SWFs, formalizing this aim through a higher focus on capital increases than on equity purchases.

How do you see the relation of the FSI with other SWFs?

I think that we see it in a pragmatic way. In a lot of developed economies there was a need for a source of financing. In France more than in other countries like Germany, the actual benchmark, companies used to finance their operations through debt. They do not appeal very often to "patient capital", long-term capital. Today there is a new trend, this is one of the main reasons for the creation of the FSI, which is the use of long-term capital. This type of capital is more adapted to industrial cycles. The "Caisse des Dépots" has been working on this topic for some time now, it has created for example a club of long-term investors that includes a lot of SWFs.

So there is a pragmatic aspect in this sense, French companies need to develop their activities and they need capital to do so. Debt has been for a long time the solution, today there is a need for long-term capital. This source of financing can be provided by the "Caisse des Dépots" or the FSI, but also from other SWFs which have the advantage to be long-term investors with a lot of resources available. It is true that during some time there was the sentiment that they were buying everything, however today people tend to believe that there can be some advantages in working with them. There can be mutual benefits, we have something they are interested in, companies where to invest, they have something we need, long-term capital to fund the growth of our companies and to help them invest.

Since there is a need for cooperation, it is better to organise it. This is why we signed an agreement with Mubadala to co-invest in some projects. The "Caisse des Dépots" has also created two funds to promote bilateral investments between France and China. Globally, it is important to have an open dialogue and work to increase cooperation. Today the idea is to collaborate with SWFs on specific projects, where we can share our expertises, not to include them in the FSI capital. It is also not easy to find deals that fit with both funds' objectives, this is why we have not done any deal yet with Mubadala, for example.

In your opinion what are the future prospects in the coming years for SWFs?

I think, and this is the general feeling around me, that SWFs will continue to grow and confirm their presence as settled investors in the long-term. Like Descartes used to say, it is better to change your desires rather than the order of the world when the order of the world

cannot be changed[35]*, in this sense I do not have any concerns regarding SWFs, moreover I see opportunities. A number of them have a resource, long-term patient capital, which can be of use to companies.*

4.2. OECD – Organisation for Economic Co-operation and Development[36]

The OECD is an international economic organisation of 34 countries founded in 1961. Its mission is to promote policies that will improve the economic and social well-being of people around the world. It is a forum of countries that provides a platform to compare policy experiences, seek answers to common problems, identify good practices, and co-ordinate the domestic and the international policies of its members.

Raúl Sáez - Chile: Ambassador and Permanent Representative

Mr. Raúl Sáez was my contact at the OECD. He has more than 25 years of experience in a wide range of international organisations, like the World Bank and the Inter-American Development Bank, and Chilean ministries. Mr. Raúl Sáez took up his duties as Permanent Representative of Chile to the OECD on 25 January 2011. He graduated with a degree in Biology from Boston University, a Masters in Economics from the University of Chile and he received a Masters in Economics and a Doctorate in Economics from Boston University.

Questions[37]

What is your opinion about the world's economic situation in the coming months?

I think that the main characteristic will be the uncertainty. We have reached a certain point in which, in my opinion, there are only two possible scenarios. On one side a catastrophic one with Greece going out of the Euro and the Spanish bank issue worsening. These two concerns, if not addressed correctly, will have a terrible impact on the EU economic growth capacity and a propagation effect on the world economy. On the other side if the European Union is able to avoid the exit of Greece from the Euro zone and solve the Spanish issue we could see an improvement in the global situation.

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[35] René Descartes, "My third maxim was to endeavor always to conquer myself rather than fortune, and change my desires rather than the order of the world…", Discourse on the Method, Part III

[36] Source: OECD as of June 2012

[37] The views expressed here do not necessarily reflect those of the OECD

However some people think that an orderly exit of Greece from the Euro is possible, do you think so?

No, in my opinion this is impossible. First, this would have a terrible impact in terms of image and devastating consequences on Portugal and Spain. This would make investors believe that any country can exit the Euro and they would start to withdraw their capital from those countries they consider the weakest. This has already happened with Spain for example, with the capital flight of the recent months amounting around 100 billion euro. Secondly, the situation of Greece after that would be catastrophic, with no access to any financing, no currency, remembering the Argentinean crisis in 1991.

What do you think of the recent help package to Spain?

I think it was necessary, in part because of the previously mentioned capital flight. Moreover, the challenges concerning Spain affect the Euro zone as a whole, and in case of deterioration could even affect the strongest countries like France.

Do you see other issues in the short-term?

Special attention should be paid to the United States, with an important deadline coming in the next months. In January, if the politicians are not able to reach an agreement concerning the fiscal deficit the expenses will be automatically cut down. This was one of the conditions negotiated when they agreed to increase the threshold of the debt last year. This reduction in the expenses would have a negative impact on the US economic growth, and consequences for the global economy.

In Europe Cyprus may need help in the coming months also, however because of its small size it should not have strong consequences.

What is your opinion concerning sovereign wealth funds in terms of management of the national wealth? Do you think there would be a better way to spend the resources?

I think these kind of funds are an excellent economic measure, both in macroeconomic terms and economic growth. In macroeconomic terms they provide flexibility, allowing for countercyclical measures in case of a crisis. Concerning the economic growth, they allow saving part of the income from non renewable resources for future generations. It is difficult to say if these resources would be better employed investing them directly in the domestic economy. I do not think so, because there would be some negative consequences like the

Dutch disease. Moreover using this type of funds allows for flexibility in their use, for example in Chile part of the resources is saved to guarantee future pension liabilities.

5. Conclusion

The increasing recent visibility of SWFs and the important role they may play in the global financial markets in the coming years contributed to the development of a number of measures and to position them in the centre of the debate and several empirical studies.

There was a need to start a debate concerning this kind of investors. The work of the IWG through the "Santiago principles" and the recommendations made by the OECD helped to attenuate the appearance of increasing tensions because of SWFs investments fueled in a context of financial crisis.

Then it was also important to answer an important question, how do SWFs impact target firms? Because they usually invest in big corporations of critical importance in their home countries it was important to know if their impact was in line with other institutional investors. In this sense, it seems that the market reaction to the announcement of a SWF investment is positive, this is the conclusion to which several empirical studies reached and also mine. Transparency plays a key role in determining the level of this impact, replacing this aspect in the middle of the debate as this is probably the most conflictual point regarding this type of investors.

What about the impact in the long-term? In this case, however, SWFs tend to have a negative impact on the target firms, this is the conclusion of most of the empirical studies. For the long-term it becomes interesting to see the impact on the risk-to-return profile, based on the A.M. Knill et al. (2012) study I also found that the impact is negative. There is a decrease in the returns not compensated by a decrease in the total risk. I only see a small improvement surrounding the announcement date. Again transparency plays a key role on the impact on the performance.

Where do they invest? J. Kotter and U. Lel (2011) tried to answer this question, they found that they target financially distressed, cash-constrained, and large multinational firms with poor performance. Overall they have the same appetite than other institutional investors, targeting firms with similar characteristics. Even if for A.M. Knill et al. (2012) this is just in appearance as for them their investment strategies are in fact distinct.

And what about politics? We cannot start a discussion on SWFs without taking the political dimension into account. This is another of the key issues surrounding SWFs, do they have other motivations than only the profit maximisation? This question is legitimate when we are talking about investors government owned. For A. Knill et al. (2012) political relations are an important factor in determining where to invest but matter less when determining how much. However, the most critical point for them is that there is a negative relation between the bilateral political relations and the amount they invest. This is contrary to rational investor's behaviour, as generally good political relations are associated with a reduction in risk. For them SWF do not behave as rational investors, there is something else behind their investment decisions.

In my opinion, there is something beyond all of this, like Truman did it is important to have a view on the whole context, the world is changing. Like he said *"the growth of SWFs reflects a dramatic redistribution of international wealth from traditional industrial countries like the United States to countries that historically have not been major player in international finance"*. This is completely true, SWFs only represent an additional evidence that we are facing a dramatic change in the international balance of power. Now-a-days a strong international position evidences more than ever through economic power. Developed countries are having as interlocutors countries with whom they would have never had this kind of relationship before. The financial crisis has even accentuated this effect, would European countries have ever thought ten years ago that one day they would ask for help China? Moreover, the actual context makes developed countries behave, in my opinion, in a "schizophrenic" way. From one side they welcome any capital when they need it, however when it is not the case they can show a strong opposition. This situation is even more ironic as they were the people who designed the actual system, market-oriented, they are suffering from their own rules.

I am also wondering if the establishment of this kind of funds is the best decision for the concerned countries. Maybe there is a better way to use these resources, I am worried about the fact that maybe they look for the easier way to invest their funds, the capital markets, instead of investing in the real economy. We only need to see what has happened recently to realise that this may not be the best solution.

To conclude, I think that it will be important to continue to work in order to increase the level of acceptance of SWFs to avoid uncomfortable situations. The world will need some time to get used to this new context but I believe that something positive can result from an increasing level of cooperation.

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Appendix

Appendix A. The 30 biggest SWFs in terms of assets under management

Appendix B. Truman's sovereign wealth fund scoreboard

Appendix C. List of national stock market indices employed in section 3.2

Appendix D. Additional statistics for the samples employed in section 3.2

Appendix E. Variable definitions and sources for section 3.3. and 3.4

Appendix F. Target and benchmark mean comparison for section 3.3. and 3.4

Appendix A. The 30 biggest SWFs in terms of assets under management

Table 8. The 30 biggest SWFs in terms of AUM

Source: SWF Institute as of May 2012

All figures quoted are from official sources, or, where the institutions concerned do not issue statistics of their assets, from other publicly available sources. Some of these figures are best estimates as market values change day to day

Country	Fund Name	Assets $Billion	Inception	Origin	Transparency[1]
UAE – Abu Dhabi	Abu Dhabi Investment Authority	$627	1976	Oil	5
Norway	Government Pension Fund – Global	$611	1990	Oil	10
China	SAFE Investment Company	$567.9**	1997	Non-Commodity	4
Saudi Arabia	SAMA Foreign Holdings	$532.8	n/a	Oil	4
China	China Investment Corporation	$439.6	2007	Non-Commodity	7
Kuwait	Kuwait Investment Authority	$296	1953	Oil	6
China – Hong Kong	Hong Kong Monetary Authority Investment Portfolio	$293.3	1993	Non-Commodity	8
Singapore	Government of Singapore Investment Corporation	$247.5	1981	Non-Commodity	6
Singapore	Temasek Holdings	$157.2	1974	Non-Commodity	10
Russia	National Welfare Fund	$149.7*	2008	Oil	5
China	National Social Security Fund	$134.5	2000	Non-Commodity	5
Qatar	Qatar Investment Authority	$100	2005	Oil	5
Australia	Australian Future Fund	$73	2006	Non-Commodity	10
UAE – Dubai	Investment Corporation of Dubai	$70	2006	Oil	4
Libya	Libyan Investment Authority	$65	2006	Oil	1
UAE – Abu Dhabi	International Petroleum Investment Company	$58	1984	Oil	9
Algeria	Revenue Regulation Fund	$56.7	2000	Oil	1
UAE – Abu Dhabi	Mubadala Development Company	$48.2	2002	Oil	10
South Korea	Korea Investment Corporation	$43	2005	Non-Commodity	9
US – Alaska	Alaska Permanent Fund	$40.3	1976	Oil	10
Kazakhstan	Kazakhstan National Fund	$38.6	2000	Oil	8
Malaysia	Khazanah Nasional	$36.8	1993	Non-Commodity	5
Azerbaijan	State Oil Fund	$30.2	1999	Oil	10
Ireland	National Pensions Reserve Fund	$30	2001	Non-Commodity	10
Brunei	Brunei Investment Agency	$30	1983	Oil	1
France	Strategic Investment Fund	$28	2008	Non-Commodity	n/a
US – Texas	Texas Permanent School Fund	$24.4	1854	Oil & Other	n/a
Iran	Oil Stabilisation Fund	$23	1999	Oil	1
Chile	Social and Economic Stabilization Fund	$21.8	1985	Copper	10
Canada	Alberta's Heritage Fund	$15.1	1976	Oil	9

[1] Based on the Linaburg-Maduell index, developed at the Sovereign Wealth Fund Institute by Carl Linaburg and Michael Maduell

* This includes the oil stabilization fund of Russia

** This number is a best guess estimation

Appendix B. Truman's sovereign wealth fund scoreboard

Table 9. Summary sovereign wealth fund scoreboard

Source: Edwin M. Truman, "A blueprint for Sovereign Wealth Fund Best Practices", Peterson Institute as of April 2008

Results shown below only concern non pension funds. Percent of maximum possible points

Country	Fund	Structure	Governance	Accountability & transparency	Behaviour	Total
United States	Alaska Permanent Fund	100	80	100	83	94
Norway	Government Pension Fund–Global	94	100	100	67	92
United States	Permanent Mineral Trust Fund	100	90	82	100	91
United States	Severance Tax Permanent Fund	100	50	86	100	86
Timor-Leste	Petroleum Fund for Timor-Leste	100	40	96	50	80
Azerbaijan	State Oil Fund of the Republic of Azerbaijan	88	60	89	50	77
Canada	Alberta Heritage Savings Trust Fund	94	60	79	50	74
Chile	Economic and Social Stabilization Fund	94	60	82	17	70
Hong Kong	Exchange Fund	88	40	79	33	67
Kazakhstan	National Fund for the Republic of Kazakhstan	88	60	64	33	64
Botswana	Pula Fund	69	60	54	33	55
Trinidad and Tobago	Heritage and Stabilization Fund	100	60	46	0	53
Korea	Korea Investment Corporation	75	60	45	25	51
Russia	Reserve and National Welfare Fund	72	40	50	33	51
São Tomé & Príncipe	National Oil Account	100	60	29	17	48
Kuwait	Kuwait Investment Authority	75	80	41	0	48
Mexico	Oil Income Stabilization Fund	69	20	43	50	47
Singapore	Temasek Holdings	50	50	61	0	45
Singapore	Government of Singapore Investment Corporation	63	40	39	17	41
Malaysia	Khazanah Nasional	44	50	46	0	38
China	China Investment Corporation	50	50	14	17	29
Kiribati	Revenue Equalization Reserve Fund	69	60	7	0	29
Algeria	Revenue Regulation Fund	56	40	11	17	27
Nigeria	Excess Crude Account	50	30	14	17	26
Iran	Oil Stabilization Fund	50	20	18	0	23
Venezuela	Macroeconomic Stabilization Fund	50	0	18	17	23
Venezuela	National Development Fund	38	0	27	0	20
Oman	State General Reserve Fund	50	0	18	0	20
Sudan	Oil Revenue Stabilization Account	56	0	14	0	20
Brunei	Darussalam Brunei Investment Ag.	31	0	25	0	18
UAE (Abu Dhabi)	Mubadala Development Company	44	10	7	0	15
UAE (Dubai)	Istithmar World	38	10	7	0	14
Qatar	Qatar Investment Authority	34	0	2	0	9
UAE (Abu Dhabi)	Abu Dhabi Investment Authority	25	0	4	8	9
Total		**68**	**41**	**44**	**25**	**46**

Appendix C. List of national stock market indices employed in section 3.2

Table 10. List of national stock market indices

Most commonly used indices as benchmarks in their respective countries

Country	Fund
USA	S&P 500 Composite – Price Index
Australia	S&P/ASX 200
Austria	ATX - Austrian Traded Index
Bahrain	Bahrain All Share
Brasil	Brazil Bovespa
Canada	S&P/TSX Composite Index
China	Shanghai SE Composite – Price Index
Czech Republic	Prague SE PX – Price Index
France	France CAC 40 – Price Index
Germany	DAX 30 Performance – Price Index
Hong Kong	Hang Seng – Price Index
India	India BSE (100) National – Price Index
Indonesia	IDX Composite – Price Index
Italy	FTSE MIB Index – Price Index
Japan	NIKKEI 225 Stock Average – Price Index
Jordan	Ammanse General – Price Index
South Korea	Korea SE KOSPI 200 – Price Index
Kuwait	Kuwait KIC General – Price Index
Malaysia	FTSE Bursa Malaysia KLCI – Price Index
Netherlands	AEX Index (AEX) – Price Index
New Zealand	NZX ALL – Price Index
Pakistan	Karachi SE 100 – Price Index
Qatar	Qatar SE Index – Price Index
Russia	Russia RTS Index – Price Index
Singapore	Straits Times Index L – Price Index
Spain	IBEX 35 – Price Index
Sweden	OMX Stockholm 30 (OMXS30) – Price Index
Switzerland	SWISS Market – Price Index
Taiwan	Taiwan SE Weighted – Price Index
Thailand	Bangkok S.E.T. – Price Index
Turkey	Istanbul SE National 100 – Price Index
UAE	FTSE Nasdaq Dubai UAE 20 – Price Index
United Kingdom	FTSE 100 – Price Index

Appendix D. Additional statistics for the samples employed in section 3.2

Table 11. Year distribution of the entire sample employed in section 3.2

The first announcement date is the 3 November 1986 and the last one is the 13 May 2012

Year	# of investments	% of total	Year	# of investments	% of total
1986	1	0.35	2000	6	2.12
1987	1	0.35	2001	4	1.41
1988	2	0.71	2002	5	1.77
1989	0	0.00	2003	8	2.83
1990	0	0.00	2004	12	4.24
1991	3	1.06	2005	22	7.77
1992	1	0.35	2006	21	7.42
1993	3	1.06	2007	38	13.43
1994	7	2.47	2008	55	19.43
1995	1	0.35	2009	23	8.13
1996	2	0.71	2010	32	11.31
1997	3	1.06	2011	16	5.65
1998	1	0.35	2012	11	3.89
1999	5	1.77			
Total				283	100.00

Appendix E. Variable definitions and sources for section 3.3. and 3.4

Table 12. Variable definitions and sources

Variable	Variable definition	Source
Target (Benchmark) return	Target (Benchmark) firm monthly return	Datastream
Firm (Benchmark) volatility	The standard deviation of daily excess returns over the month t for the target (benchmark) firm	Datastream
Target (Benchmark) Sharpe	Monthly ratio that use the excess returns of the target (benchmark) firm as the numerator and the standard deviation as the denominator	Datastream
Investment	The percent stake acquired by the SWF	SDC Platinum Factiva
Cross-border	An indicator variable equal to one if the domestic country of the SWF and the target firm are different	Reuters
Transparency	The score obtained by the SWF in the Truman transparency index, when this score was not available the Linaburg-Maduell transparency index was used	Truman SWF Institute
Structure	The score obtained by the SWF in the Truman structure index, when this score was not available the score of another SWF from the same country was used	Truman
Governance	The score obtained by the SWF in the Truman governance index, when this score was not available the score of another SWF from the same country was used	Truman
Experience	Number of years since the fund inception	SWF Institute
Democracy	An indicator variable equal to one if the domestic country of the SWF is a democracy	CIA factbook
Net debt	The net debt value in US dollars for a given year, when this value was not available the benchmark net debt was used	Datastream
EBITDA	The EBITDA in US dollars for a given year, when this value was not available the benchmark EBITDA was used	Datastream
Cash	The cash and cash equivalents in US dollars for a given year, when this value was not available the benchmark cash and cash equivalents was used	Datastream
Total assets	The total assets in US dollars for a given year, when this value was not available the benchmark total assets equivalents was used	Datastream

Appendix F. Target and benchmark mean comparison for section 3.3. and 3.4

Table 13. Target and benchmark comparison

The target (benchmark) return is the monthly return of the target (benchmark) of the SWF. The target (benchmark) volatility is the standard deviation of the daily excess returns over month t of the target (benchmark) firm. The Sharpe ratio uses the target excess return as the numerator and the standard deviation of the daily excess return as the denominator. N is the number of observations used in the analysis.

Variables	N	Target mean	Benchmark mean	t-stat
Return	223	-0.003	0.000	-0.204
Volatility	223	0.031	0.029	1.365
Sharpe	223	0.343	0.159	0.547