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# Sovereign wealth funds : governance, performance and durability

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Master Thesis

## Sovereign Wealth Funds: Governance, Performance and Durability

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Organization: IAE Grenoble  
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Master 2 Recherche  
Program Advances in Finance and Accounting (AFA)  
2016 - 2017





Preface:

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AL AYOUBI KHALIL

DATE, SIGNATURE

14/06/2017



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## INTRODUCTION

Market capitalism was and is still the main economic model adapted in many countries, especially in Western and emerging countries. However, the world has witnessed for the last decade the rise of an institutional investors that could be linked with state capitalism: we are talking about Sovereign Wealth Funds (SWF). The first SWF was created more than half a century ago, in 1953 in Kuwait. Since then, other countries decided to create their own funds as a respond to specific macro and microeconomics issues. However, they were relatively discreet and unknown from the public for many years. We have to wait the financial crises of 2008 to see them rise from the shadow, and invest massively huge amount in Europe and the USA, especially in the financial sector. For example, the Norwegian fund invested 3.3 billion dollars in HSBC, the Chinese fund invested more than 5 billion in Morgan Stanley and the Emirati fund “Mubadala” concluded with General Electric a joint-venture estimated to 8 billion dollars. The total amount of assets managed by SWF is estimated to 7400 billion dollars in 2017<sup>1</sup>. Those are just some example that illustrate the importance of their investments.

But what is exactly a sovereign wealth fund? Actually, there exists no unique definition. We can consider them as an investment vehicle created by states to manage and invest their excess of resources. They invest in several assets and in different countries and sectors. All sovereign wealth funds do not have the same investment objectives and policies. Therefore, we observe five types of funds, each one having different objectives and structures. The size of sovereign funds has increased during time, especially in the last decade. They manage a total amount of 7400 billion dollars, and estimation affirms that this number will growth in the future years. The growth of SWF, as well as their investment, caused the emergence of concerns in Western countries. In fact, authorities as well as the public have expressed several times their anxiety regarding SWF investment objectives. Their main fear is that these funds may have strategic goals, rather than financial goals. By strategic, we mean acquiring firms in strategic sectors (as military, medias and financial sectors), but also to invest in companies in order to influence their governance. The objective of this thesis is to bring more light to SWF case to know if the concerns mentioned before are founded. To do so, we will examine and analyze SWG governance, their investment’s policies and performance, as well as their durability and longevity.

This research will be divided into 3 main parts. The first part will be a descriptive review of sovereign wealth funds, covering the diverse types of SWF, the assets they invest in, their governance and existing regulations. In the second part, we will analyze the existing literature about

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<sup>1</sup> SWF Institute



this topic, and propose four research themes: the first one will discuss about governance models and activism of SWF. The second research topic will be regarding the funds' performance. The third and fourth research subject will focus on the durability of SWF, that is their longevity and their implication in socially responsible investment. Finally, in the last part, we will elaborate a plan for database construction and explain the methodology we will use in order to reach strong results and conclusions.

**PART 1:**

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**DESCRIPTIVE REVIEW OF SOVEREIGN WEALTH FUNDS**

## CHAPITRE 1 – DEFINITION AND TYPOLOGY

### I. A DIVERSITY OF DEFINITION

The first appearance of a sovereign wealth fund date from 1953, by the establishment of the Kuwait Investment Authority. A little mediatize, SWF were for a long time hidden and unknown from the public. However, SWF began to proliferate all around the world in the 1980's and became a renowned and notorious in 2008 when the "subprime crises" hit the financial sector. Although SWF are not a recent phenomenon, it is only in 2005 that the terms of "sovereign wealth fund" were used in the academic literature. It was mentioned by the Russian economist Andrew Rozanov (2005) in an article entitled "Who holds the wealth of nations<sup>2</sup> ?". Since then, this term was commonly accepted and adopted among scholars, researchers and authorities. Nevertheless, a literature issue arises: the heterogeneity of sovereign funds. In fact, SWF differs from one to another, regarding the sources of their funds, their objectives, their home countries, the strategies adopted, the size of their assets... This diversity led to the emergence of a debate among researcher about the true definition of those funds. Therefore, today, in the literature, many descriptions exist. In the following, we will review the main definitions that have been adopted worldwide.

#### Clay Lowery's definition:

Former American Undersecretary of the Treasury for International Affairs, Clay Lowery during his work for Morgan Stanley, defined SWF in a conference as following:" *A SWF is a government investment vehicle funded by foreign exchange assets, managed separately from official state reserve<sup>3</sup>*". For him, SWF are characterized by 5 major features:

- They are independent from other governmental institutions
- They have a high exposure in foreign currency
- They do not have explicit liabilities
- They have a long-term investment horizon
- They can afford to have a risky behavior

#### International Monetary Fund's definition:

After the crises of 2008 and the rise of sovereign funds, several countries asked the IMF to establish a synthesis document that could be used as a framework to better understand and regulate SWF. This resulted to a new definition: "*SWFs are special purpose investment funds that are owned*

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<sup>2</sup> Central Banking Journal, Volume 15, Number 4, May 2005

<sup>3</sup> Harvard Business School, « Sovereign wealth funds: For Profits or for Politics », 9 May 2008

by the general government. Created for macroeconomics purposes, SWFs hold, manage, or administer assets to achieve financial objectives, and employ a set of investment strategies that include investing in foreign financial assets. SWFs have diverse legal, institutional, and governance structures. They are heterogeneous group, comprising fiscal stabilization funds, saving funds, reserve investment corporations, development funds, and pension reserve funds without explicit pension liabilities<sup>4</sup>”. This new definition, more precise, was adopted by many scholars, but also by governments that were host of SWF investments in order to create regulations to better manage the inflow of capital. However, a common definition accepted by all still does not exist till today, which creates sometimes confusion, especially when it comes to classify a fund as being a SWF or not.

In the following, we will consider a SWF as an institution created by a state in order to manage any excess of funds, whether it comes from natural resources or fiscal and foreign reserves, in order to invest this capital in local or foreign assets to achieve specific investment’s objectives, according to their types. They generally have long-term objectives, and are characterized by having no explicit liabilities, even though they are financed by local authority and have a responsibility toward national citizen.

## II. DIFFERENT TYPOLOGIES FOR A UNIQUE TERM

### A. Typology of SWF regarding the origin of their funds

It is obvious from the previous part that a unique definition for SWF doesn’t exists, even though we can find similarities between them. However, those funds could be classified into categories according to the source of their funds. After a review of SWF characteristics, we could classify them in two main categories as following:

- Raw materials funds
- Reserves funds

Sovereign funds that are financed through raw materials were the first to be created. The term raw materials regroup here many types of natural resources, as oil, gas, copper, minerals, diamonds, phosphates and other. In fact, oil exploitation had increased through years, and its price also. Many countries, and more specifically Gulf countries, but also Norway and Russia, have profited from this phenomenon and witnessed an important increase of their budget. However, this important wave of capital was quite problematic, since some of these countries began to suffer from corruption and excessive expenses. To solve this problem, authorities decided to transfer their resources excess to

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<sup>4</sup> Sovereign Wealth Funds – A Work Agenda, International Monetary Fund

sovereign funds that were mandated to manage them. Today, sovereign funds financed through natural resources represent most of funds in terms of number and capital.

With the explosion of international trade, we have witnessed the first reserves funds. These funds emerged mainly in Southeast Asia in the 1970s. At the time, many Asian countries such as Taiwan, Singapore and South Korea benefited from very strong economic growth, which help them to develop at the technological and industrial level. These sectors, that benefited in these countries from a labor cost lower than the one of developed countries, saw their competitiveness increase and strengthen on a global scale. Other countries followed this development process in the late 1980s, such as China, Indonesia and Malaysia.

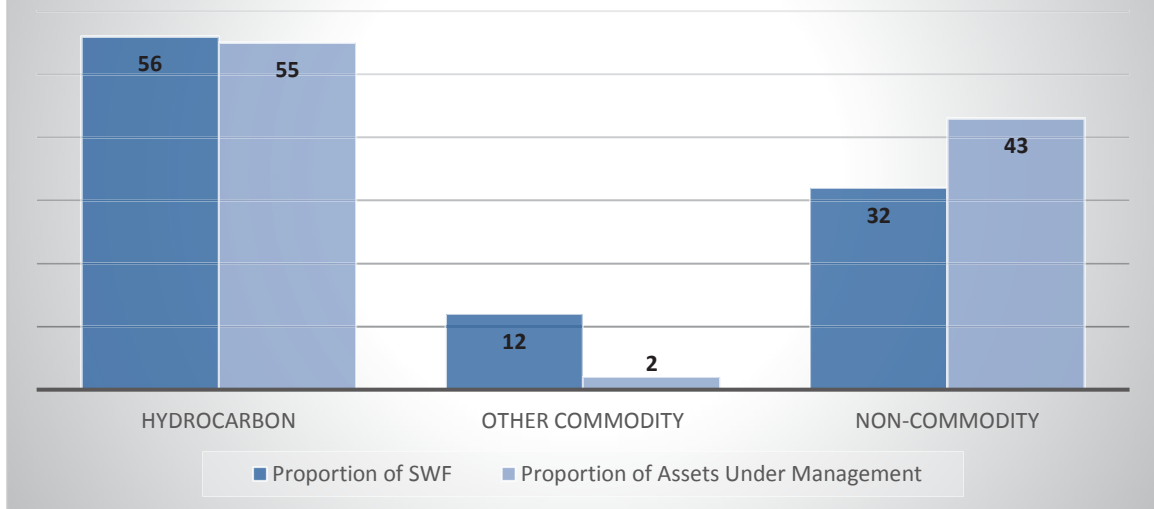
The key factor of success or the competitive advantage that facilitated this economic development is the fact that these countries have benefited from a skilled and cheap labor force. This benefit is called the "wage rent". This rent enabled these states to benefit from trade surpluses, and subsequently from budgetary surpluses. These surpluses were then transferred to sovereign wealth funds.

Another type of reserves is related to foreign exchange. In order to better understand the accumulation of foreign exchange reserves, let us take this simplified example. Consider a country oriented towards exportation. This country will be settled and remunerated by the importer in foreign currency, mainly in dollars. It will then have to convert the foreign currency received in local currency, in order to cover and pay its costs and expenses. The higher the exports, the more it will increase the demand for domestic and foreign currencies. Many countries like China are oriented toward exportation, and fear speculation on their domestic currency. By accumulating foreign exchange reserves, the national currency can then resist speculative attacks.

The accumulation of foreign exchange reserves is therefore a very effective strategy. However, it has one major default: the opportunity cost. In order to be able to interfere quickly, the central bank invest foreign exchange reserves in liquid securities, mainly treasury bills. However, treasury bills are not very profitable, and in the case of important reserves surplus, this represents a significant opportunity cost. The creation of a sovereign wealth fund is therefore a tool that allows to improve the valuation of foreign exchange reserves and to ensure a superior return.

The following figure illustrate the proportion (in number and total assets) of existing funds according to the source of their capital, whether its commodity or non-commodity.

**Figure 1: Breakdown of Sovereign Wealth Funds by Source of Capital**



Source: 2015 Preqin Sovereign Wealth Fund Review

**B. Typology of SWF regarding their objectives**

The excess of resources had encouraged governments to create sovereign wealth funds. This decision was taken for several reasons. In fact, each sovereign fund was created to respond for a certain need, depending on the nature of the resources and the aim of the authorities. Each fund has a certain objective, and it is primordial to better understand those objectives, since it gives us a better image of the fund and how it operates.

The IMF (2007) have defined five types of SWF:

- Stabilization funds: financed by natural resources and aims to protect against volatility
- Saving funds: share wealth across generations
- Reserve investment corporations: reduce the negative cost-of-carry of reserve holding
- Development funds: to fund new technologies and patent
- Pension reserve funds

**Stabilization funds**

The first type is the stabilization fund. Generally, this category regroups funds financed by natural resources surplus. In fact, countries that are rich with natural raw materials as oil are generally vulnerable to any fluctuation of prices. A negative fluctuation could have a dramatic impact on these countries, especially if the exploitation of natural resources is the pillar of their economy, as it is the case for some Arabic countries. Any decrease in prices could be reflected on the state budget, due to a disequilibrium between national expenses that were fixed for several years and the earnings that

have decreased (Kunzel, 2001). The best way of protection is to create a stabilization fund that would have for objective to prevent against the volatility of natural resources prices and to stabilize revenues provided by their exploitation.

The process works as following: when there is a surplus of revenues, they are transferred to the fund, in order to be protected and even invested in equity or bonds to generate additional earnings. Those additional funds will be used to compensate a price decline. On the other hand, when earnings tend to decline and provoke a deficit in the state budget, the SWF will withdraw an amount of capital and transfer it to the concerned authorities. In this way, the sovereign fund will determine a reference price according to the market long term tendency's. For Cohen (2007)<sup>5</sup>, this reference price is based on a moving average for the previous prices on a five-year period. This method allows the fund to have a non-fixed price on which it can count to better adapt and absorb prices fluctuations.

#### Saving funds

The second type is the saving fund. Most of saving funds come from countries that have rich natural resources. The main objective of this kind of fund is to share wealth across generations. The fund will constitute a saving, in order to transform non-renewable resources into a portfolio of assets to provide for the future generations.

This could also prevent against the Dutch Disease. In the beginning of the 1970's, large gas fields were discovered near the Netherlands coasts. The exploitation of hydrocarbon generated important revenues to the Dutch authorities which boosted the national economy. However, a decade after, the country suffered from unemployment and an appreciation of the national currency, the Dutch guilder. In fact, the hydrocarbon exploitation improved the commercial balance, which caused the appreciation of the guilder against the Deutsch mark. The result was a decrease of the Netherlands industries' competitiveness. The creation of a sovereign fund could help to prevent this problem. In fact, the authorities could transfer the foreign currencies receives in exchange of natural resources trade into the fund assets. Afterward, the fund will invest it in long term foreign assets, which will stabilize the national currency demands and prevent any appreciation or depreciation.

#### Reserve investment corporations

Another type of SWF is the reserve investment corporation, which is characteristic to countries that hold a surplus of reserves. This surplus has two possible sources: a fiscal surplus or a foreign exchange surplus. The first one refers to the situation when government income exceeds expenses, while the second one refers to reserve assets held by a central bank in foreign currencies. Usually,

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<sup>5</sup> Cohen.D, Fally.T et Villemot.S, « Pour un fonds de stabilisation des revenus des pays exportateurs de matières premières », Ecole Normal Supérieur et Centre de développement de l'OCDE, Repères n°50, mai 2007, pp.1

reserve investment corporation are located in the South-West of Asia, in countries like Singapore, Taiwan, South Korea or China. Those countries profited of an important economic growth thanks to a qualified and cheap manpower. Their competitiveness increased, and they profited from fiscal or foreign exchange surplus that were partially transferred to SWF.

This kind of fund have generally two goals:

- To minimize the negative cost-of-carry due to the holding of large reserves
- Or to follow investment policies that could generate higher returns.

Actually, both objectives are quite similar since they have an essential point in common: make higher returns. The negative cost-of-carry could be associated to an opportunity cost when it comes to reserves surplus. In fact, when a country had an excess in foreign exchange reserves for example, it will be managed by the central bank. However, this last face an inconvenient. In order to intervene rapidly and effectively, the central bank will convert exchange reserves into liquid assets, mainly Treasury bonds. The main issue with Treasury bonds is that they generate low revenues, which represent an important opportunity cost for large reserves amount. Therefore, it would be interesting to transfer a part of this reserves to sovereign wealth fund in order to invest in less liquid assets on a longer horizon to benefit from higher earnings.

#### Development funds

This kind of fund is created by countries to promote socio-economic development. Development funds are characteristic to developing countries, or countries that want to develop a technological or strategical sector. The fund will be financed by the state to invest in socio-economic projects and to promote industrial policies to stimulate the economic growth.

To do so, SWF will take the form of holdings to act on behalf of their home country abroad. They will take important participation in their target firms capital. By this mean, they are able to influence the board decision in their favor, in order to attract affiliates to their home countries. They could also tie partnership with specific companies to facilitate access to technological know-how and others competitive advantages. Development funds usually target infrastructures sector, strategical industries as military or telecommunication.

#### Pension reserve funds

Pension reserve funds are a type of fund created by the authorities as contingency fund which objective will be to face an eventual deficit in the pension budget in the in the future. It may look similar to normal pension funds. However, the main difference is that the population don't have legal ownership of the capital of pension reserve funds. The legal ownership is the concerning authorities.



This type of fund invests in all kind of assets, as bonds and equity, in order to obtain some profits to increase its capital. But it tries to limit its exposure to risk.

#### Sovereign patent funds

The patent funds are more recent than the previous ones. Actually, it is not recognized as a type of fund yet. They were created to respond to a specific need: intellectual property right and patent. The beginning of the 2000's witnessed an important growing of patents, especially in the sector of technology, information, communication and electronics. Therefore, some countries decided to create sovereign fund so that they could have a better control on the patent market. These funds are described as sovereign investment vehicles intended to protect national property rights by acquiring patents resources that are considered to be strategic and important for the national economy (Clarke, 2016). They pursue four main strategies:

- Defensive strategies, to protect domestic companies
- Offensive strategies, to pursue competitor firms in foreign jurisdictions
- Provision of intellectual property services, and providing consulting to national firms
- Protection of national intellectual property

The patent funds have lower capitalization than traditional funds, due to the fact that they are concerned with patent only. Another difference with SWF is that patent funds can be financed by public and private capital, where traditional funds are only financed by public fund. Some of these funds are: South Korea's Intellectual Discovery, France Brevets, Japan's Intellectual Property Bridge.

## **CHAPITRE 2 – SOVEREIGN WEALTH FUNDS’ INVESTMENTS**

### **I. HISTORY OF MAIN SOVEREIGN WEALTH FUNDS**

#### **A. Government Pension Fund Global of Norway**

The Norwegian government created his sovereign fund in 1990, under the name of Government Petroleum Fund. Norway began the exploitation of hydrocarbon the 1970’s, which generated important revenues. However, the country was victim of the Dutch disease. The fund was created in the first place to avoid this problem. It is a typical saving fund that aims to invest its assets on financial market to make profits, so futures generations could benefit from those resources. The fund general objective is the following: *“The Government Pension Fund Global is saving for future generations in Norway. One day the oil will run out, but the return on the fund will continue to benefit the Norwegian population<sup>6</sup>”*. The Norwegian fund is under the direct supervision of the authorities via the parliament, and is renowned as one of the most transparent fund in the world. Its transparency index is 10 according to the Linaburg-Maduell Transparency Index. This index was created by Carl Linaburg and Michael Maduell to rate SWF regarding their level of transparency. The value of the fund at the end of 2016 was of 922.11 Billion (USD)<sup>7</sup>, and has increased over time as we can see it in the following table:

Table 1:

“Government Pension Fund Global” Assets at Beginning of Year and Projection (in Billions of Kroner)			
January 2001	386.6	January 2011	3080.9
January 2002	619.3	January 2012	3307.9
January 2003	604.6	January 2013	3824.5
January 2004	847.1	January 2014	5032.4
January 2005	1011.5	January 2015	6430.6
January 2006	1390.1	January 2016	7460.8
January 2007	1782.8	January 2017	7509.9
January 2008	2018.5	January 2019	8131.1
January 2009	2279.6	January 2022	9217.3
January 2010	2642.0	January 2025	9630.9

Source: <https://www.nbim.no/en> (Kroner was stable compared to euros during the last decade)

<sup>6</sup> <https://www.nbim.no/en/the-fund/>

<sup>7</sup> <http://www.swfinstitute.org/swfs/norway-government-pension-fund-global/>

### B. China Investment Corporation

China is the home for several SWF. The main fund, China investment corporation, was established in 2007, with an initial capital of 200 billion dollars. It was created to manage a part of the important foreign exchange reserves held by the central bank of China. In fact, China has witnessed an important economic growth since the 1980's, thanks to exportations, which increased the amount of reserves to 1546.36 billion dollars in 2007, and reached a record total of 3900 billion dollars in 2014. This explains the concerns of Chinese authorities and their initiative to create a sovereign fund, which role is to improve the profitability of the reserves and decrease the cost of opportunity.

The fund mission is to *“operate with a clear mandate to diversify China’s foreign exchange investments and to seek maximum returns for its shareholder within acceptable risk tolerance<sup>8</sup>”*. Since it is a sovereign fund, the shareholder designated are not private investors, but refers more to Chinese institutions as the central bank of China and the ministry of finance. The fund score on the Linaburg-Maduell Transparency Index is 8, which is the minimum score needed to be considered as transparent. Despite this, many controversies exist in developed countries regarding China Investment Corporation. In fact, it’s investments target strategical sectors, as the financial one, and more recently, the energetical and electronical sectors in Europe and North America.

### C. Abu Dhabi Investment Authority

The United Arab Emirates is one of the most prosperous countries of the Middle East. The country has created more than one sovereign fund. The main fund is the Abu Dhabi Investment Authority (ADIA). The fund was inaugurated in 1976, as a stabilization fund. ADIA manage a part of the revenues generated by the national company of oil exportation, Abu Dhabi National Oil Company. The fund has for main goal to stabilize government’s revenues and to provide protection against any price fluctuation. Nevertheless, since the 1990's, the fund adopted an additional policy that aims to develop the national economy. ADIA state that its goals are financial and non-strategic. A part of the revenues generated by investing in different classes of assets is transferred to local authorities to promote domestic development, according to ADIA.

The fund insists on the fact that its investments are undertaken on a strictly financial basis, which is to maximize revenues. To prevent any suspicion and reassure foreign authorities about its financial motivation, the board of direction of ADIA announced that the fund is not interested into taking part in the governance of targeted firms, and that the fund will not demand to participate in the board of firms they invest in. Also, an important share of the fund assets is managed by independent and

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<sup>8</sup> <http://www.china-inv.cn>

external firms, mainly by private investment funds, and 60% of its assets are duplicating stock exchange indices.

#### D. Qatar Investment Authority

The Qatari fund was created in 2005, to manage earnings generated by the petrol exploitation in order to create long-term value for the future generations. However, the fund isn't just a regular stabilization fund. The second main objective of the fund is to support the development of the country, as well as the competitiveness of Qatari economy. The fund administration doesn't deny that some of its investments have strategic motivations, and considers the fund to be also a strategic investor with a long-term horizon, aiming to diversify and strengthen the national economy. The score of the fund on the Linaburg-Maduell transparency index is 5, which means that the fund cannot claim to be transparent.

Qatar investment authority (QIA) does not disclose precise information concerning its portfolio structure. Nevertheless, a study done by Preqin estimates that the Qatari portfolio fund is composed as follow: 60% in equity, less than 20% in bonds and more than 20% in other alternative assets<sup>9</sup> (as Private equity, real estates...). Allocating an important part in equity illustrate the fund motivation of having strategic objectives. On the fund website, it is sate that "If a company in our investment portfolio has positive synergies with Qatar, this is a positive factor". Therefore, QIA does not hesitate to ask a membership in general assemblies of firms they take a participation in, in order to have an influence on the corporate governance of the firms. This way, it is possible for the fund to obtain advantages, as for example to create affiliates of the foreign targeted firms in the home country Qatar, which will ameliorate the industrial and technological sectors of the country, and diversify the local economy.

## II. NATURE OF SOVEREIGN WEALTH FUND INVESTMENTS

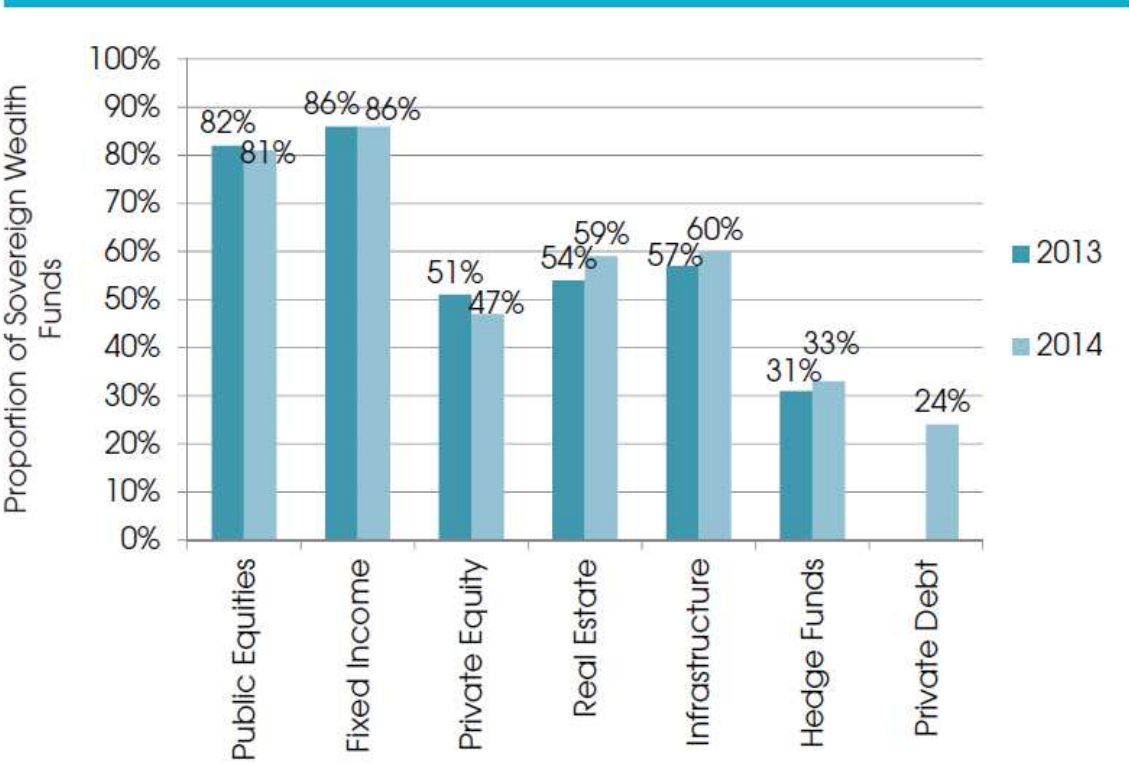
Even though SWF could be classified into several categories and follow different strategies, they all have in common one point: to guarantee the value of their capital. To do so, they should invest their funds in assets that generates earnings sufficient to assure the survival of the fund. According to their objectives (whether the objective is to guarantee today's revenues to futures generations, to assure the stabilization and the growth of reserves or to promote development), they invest into more or less risky assets. Of course, the concern of diversification is common to all, so SWF generally invest in diverse types of assets to have a diversified portfolio and minimize the level of risk taken. Let's not forget that sovereign funds do not manage their capital to the behalf of private investors,

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<sup>9</sup> Sovereign Wealth Fund Review, Preqin, 2012

but to their home country authorities and therefore have a public responsibility. In the following, we will illustrate the main assets that SWF invest in, and their motivations behind it. The following graph gives us a general idea about funds preferences regarding the class of assets.

**Figure 2:** Proportion of Sovereign Wealth Funds Investing in each Asset Class, 2013 vs. 2014



Source: 2015 Preqin Sovereign Wealth Fund Review

**A. Debt obligations and bonds**

Bonds are debt bills, that can be issue by public authorities or private firms. They generally generate a constant revenue to its holder, paid each month, trimester, semester or annually according to the specification of the obligation. The main characteristic of a bond is that the revenue it generates depend on the level of risk of its issuer. This revenue, called a coupon, is calculated by multiplying the face value of the debt obligation by an interest rate, called coupon rate. This rate depends on many variables, mainly the level of risk endured by the issuer, but also the time to maturity, the economic context, the inflation rate, the firm’s financial situation (in case of private debt obligations), the score of rating agencies attributed to the issuer.

Private and public bonds are similar on paper, but they present various aspects for investors. Private bonds are issued by private firms. The problem is that one firm differs from another one, regarding its size, its performance, its financial statement robustness, etc... This mean that investing in some firms (small firms for example) represent a higher level of risk for investors than other firms

(multinational enterprises for example). In fact, the bigger a firm is and the higher its capitalization and performance are, the lower is its default risk. This explains the fact that bonds issued by small companies are better remunerated than obligations issued by large companies, to compensate the level of risk taken by the investors.

On the other hand, public debt obligations offer a lower compensation. In fact, these obligations are issued by governments, federal states and even municipalities (municipal bonds in the U.S.A.). These institutions are generally financially strong, and could benefit from the help of central banks for any financing. Therefore, public bonds have a default risk that is almost null (especially in developed countries). Add to this, they are backed by government, which provides them a high level of liquidity, so they can be traded on financial markets rapidly, easily, and without suffering from a significant loss of value. All those characteristics contributed to the success of public debt obligations and their appreciation by institutional investors. However, since the level of risk of these obligations is low, their remuneration is also low.

Bonds, and more specifically public bonds, are appreciated by sovereign wealth funds. All of them invest in this class of assets, since it offers many advantages. But if we look closely, we notice that the proportion invested in bonds differs from one fund to another. This difference is mainly due to the objectives pursued by the fund. If we take the case of stabilization funds, we notice that they have an incentive to invest more in debt obligations and to allocate it a more important part in their portfolios than other funds. A stabilization fund's main objective is to prevent against the volatility of natural resources prices and to stabilize state revenues. The main risk that this kind of fund could suffer from is a decrease of natural resources price and therefore a possible deficit in the government budget. To face this problem, the fund is asked to sell a part of its assets and transfer it to the government or concerned authority. By holding an important amount of public debt obligations in its portfolio, the fund will be able to liquidate them quickly on secondary markets without suffering from a loss-value, and therefore to stabilize the government budget.

Other funds react differently toward bonds. For example, reserve investment corporations' funds are interesting in valorizing and fructifying their foreign exchange reserves. Bonds present a low risk, but they also offer a low return compared to other assets. Therefore, reserves funds will invest less in debt obligations and more in other assets that offer a better return. We observe a similar reaction from saving funds. Its main objective is to share wealth across generations and assure to future generations a profit from today's revenues. This means that the fund capital should generate enough return to assure the growth of the capital. Saving funds have a tendency to invest less in bonds than stabilization funds, but they need to respect a level of risk due to their public responsibility.

### B. Equity and stocks

A stock is a security that provides to its holder an ownership in the company issuing the stock and represents a claim on the company's assets and earnings. The initial price of the stock can change with time and result in a plus/minus value to its holder. Add to this, a stock can offer a dividend, calculated with a dividend rate. However, dividend payment is not fixed: they may not occur depending on the firm dividend policy. Some stocks are listed on a market, while others are not. In general, institutional investors prefer listed stocks. Stock could be divided into two categories: common and preferred. Common stock allows its holder the right to vote at shareholders' meetings, and to receive dividends. The main difference of preferred stock is that it does not offer its holder a voting right, but in counterparty give a priority to its owner over common stock holders regarding dividend payments. This point is very important when it comes to sovereign wealth fund, as we will explain it after.

A stock differs from a bond since the corporation issuing a stock don't have to reimburse back the initial value: a stock, in contrary of a bond, doesn't have a maturity. But the difference between these two assets that interest investors is that stocks offer higher returns than bonds. On a period of 80 years (from 1928 to 2008), the average return of stocks listed on S&P index was 5.9% per annum, while the average return of US treasury bonds was 2.1% per annum<sup>10</sup>. This better rentability attracts institutional investor, and more especially sovereign wealth funds, since they do all invest in stocks. However, as it was the case for bonds, the proportion invested in stock differs from a fund to another, according to its objectives. Reserves investment corporation funds and saving funds will have a higher incentive to invest in stock than stabilization funds, since it provides a higher return. Stocks represent a better opportunity, but have a higher risk too.

Risk management may differ from one fund to another, whether they are similar or not. This difference leads to several investment choices regarding if stocks are listed or not. Listed stocks are generally less risky than non-listed stocks, since they are issued by larger firms, and that those firms must publish information about their situation (financial statement), which not always the case for non-listed firms. In general, SWF will prefer to invest in listed firms.

Another issue concerning stock is related to the fact that if a stock is a common stock or are preferred stock. Generally, reserves investment, saving and stabilization funds official mission is not to take an active participation in the governance of companies they invest in. The nature of the stock shouldn't matter to them. However, this is not true. Some funds are interested in taking a participation in firms they invest in so they can influence board decision, so they target common

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<sup>10</sup> Global Finance Date, Us Federal Reserve, Shiller

stock. In general, sovereign wealth with a lower level of transparency may have not only rentability objectives, but also strategical objectives and will prefer to invest in common stock. This situation increases the concern of authorities and public opinion of countries where sovereign wealth funds invest, due to the influence that SWF may have on national firms. To resolve this issue, some state may be motivated to restrict SWF investment only to preferred stock.

### C. Private Equity

Private equity (also called capital investment) is an investment of capital in non-listed corporations. It is when an investor contributes to the capital of non-listed firms, especially small firms, start-up firms, or company suffering from a lack of capital. Many types of capital investments exist depending on the various stages in a company's life cycle:

- Seed financing
- Start-up financing
- Expansion/Development financing
- Transfer/Succession financing

Seed financing refers to the process that take place before the firm creation: it is about developing the initial concept of a future firm. Usually, private investors that have a prior experience in managing firms are interested by this kind of private equity, which is rarely the case for institutional investors. Stat-up financing consist to contribute in the capital of a company that was just created and preparing to launch its first product or service. Capital well be needed to develop the product or the service, especially if the firm is specialized in new technologies, electronics... These kind of financing, as well as the previous one, represent a high risk to the investor, due to the high uncertainty of the project. The third type, expansion or development financing, is less risky than the two previous one. It refers to the situation where a firm already exists and have a regular activity, but need capital to expend or developed its activity, as increasing its production, developing new products or accessing new markets. Generally, institutional investors prefer to invest in this kind of financing, since it represents a lower risk and could offer a good rentability if the firm could have a fast growth. Finally, a transfer or succession financing consist to implement a leverage operation in the case of an acquisition or a selling of a firm. Generally, this concern firms that have a strong activity, and therefore institutional investors are more implied in this process than private investors, since it requires an important fund's contribution.

Private equity, all types included, represent a risk non-negligible, since most of the firms asking for capital investment are not large and listed company, rarely publish financial statement or



information related to their activities. However, this investment offers a very good remuneration to compensate the risk taken: 11.5% in 2011<sup>11</sup>.

Sovereign wealth funds have been investing in private equity for more than a decade. Of course, this does apply more for reserves and saving funds, as well as development funds and patent funds. Reserves and saving funds are interested in investing into private equity to benefit from the high revenues that it may offers. Of course, proportions differ according to the risk exposure level. Development funds have an interest toward private equity. One of their main objective is to promote domestic economic development, by investing in industrial or technological sectors. However, when it comes to invest in foreign large enterprises, development funds may face restrictions and protectionism from foreign authorities that want to protect their own economy.

The main advantage of private equity is that it concerns new firms, or small and medium companies, and often operating in technological sector. It is easier for development funds to finance and invest in small firms, since they are less mediatized. And even though they bear a higher risk than large firms, it is easier for a fund to manage them, as well as they can growth and become an important firm. SWF can invest in private equity through several methods:

- They can invest directly in the capital of a specialized investor, a private equity fund
- They can invest in a sub-fund that would be managed by the private equity fund on the behalf of the sovereign wealth fund
- They can finance directly the targeted firm's capital

#### *D. Infrastructures*

Infrastructures represent all the basic physical structures of a country, as water and electric systems, or transportation. They took the form of projects undertaken by states or private firms. Usually, these projects need large amount of capital to be undertaken, so the main parties involved are authorities and institutional investors. Sovereign wealth funds are interested by investing in infrastructures for several reasons:

- Infrastructures are tangible assets that inspire confidence for institutional investors, and more especially SWF
- Financing infrastructures generates regular revenues which are usually protected against inflation thank to an indexation
- Infrastructure take often the form of a project with a monopoly at national level. This eliminate all competition which allows a fixed and a higher profitability.

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<sup>11</sup> The Preqin 2011 Sovereign Wealth Fund Review

Sovereign funds are showing more interest toward infrastructures. The proportion of this asset in SWF portfolio was between 2 and 3% before 2007, and increase to approximately 6% in 2012. There exist several methods to invest in this asset. First, SWF could directly buy debt obligations issued by the company managing the project. It will generate a “rent” paid regularly. Another way to take part in an infrastructure project is by entering the capital and take a participation in the company managing the project.

### *E. Real Estate*

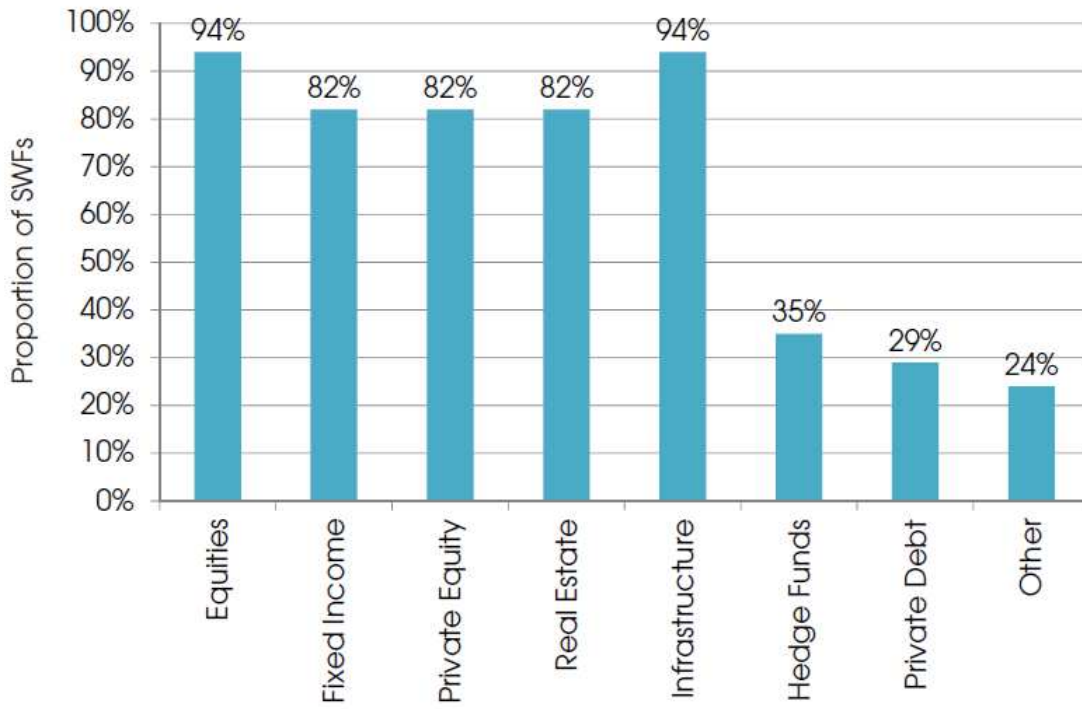
Investing in real estate can include any participation or acquisition in residential or commercial real estates as lands, buildings, trade centers, hotels, offices buildings... Sovereign wealth funds can invest in real estates by buying directly, or by acquiring shares in real estate investment trusts or mortgage-backed securities.

Real estate offers many advantage for institutional investors. First of all, unlike bonds and stocks, real estate is characterized by its tangibility. This important level of tangibility brings more confidence to the buyer, but also to third parties that may have business relation with the buyer. Another advantage is the revenue generated by income-producing real estate. This kind of asset is generally not accessible for small investors due to its expensive price, but is appreciated by big investors SWF, since it generates important income through monthly rents. Finally, real estate, as many other assets, see its price vary through time, and its holder could benefit from a plus-value as he can suffer from a minus-value. But generally over time, real estate has a higher likelihood to see its value increases and therefore it is interesting for long term investor to hold such an asset.

Sovereign funds motivation and interest of investing in real estate is quite recent, and began to increase in 2008 after the financial crises. In fact, the deterioration of subprime value provoked an important decrease of real estate prices, which led to many acquisitions by SWF, mainly in Europe and USA. For example, Qatar Investment Authority was very active on the real estate market, since it acquires the central business district of Canary Wharf in London, as well as the hotel chain Royal Savoye, based in Lausanne. Other funds invested in real estate companies, as it is the case of the Government Pension Fund-Global of Norway, which took participation in Generali Real Estate.

In the following figures, we can have an idea of the funds preferences of asset according to their geographical area.

Figure3: Proportion of Middle Eastern Sovereign Wealth Fund Investing in Each Asset Class



Source: 2015 Preqin Sovereign Wealth Fund Review

Figure 4: Proportion of Asia Sovereign Wealth Fund Investing in Each Asset Class

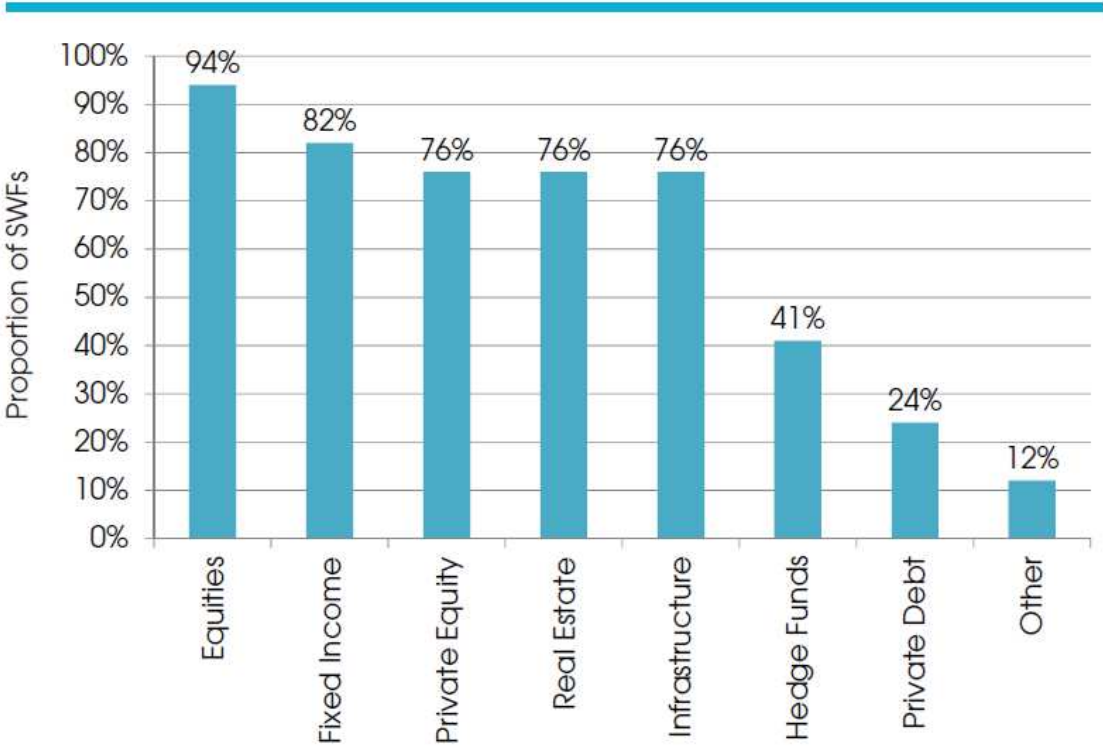
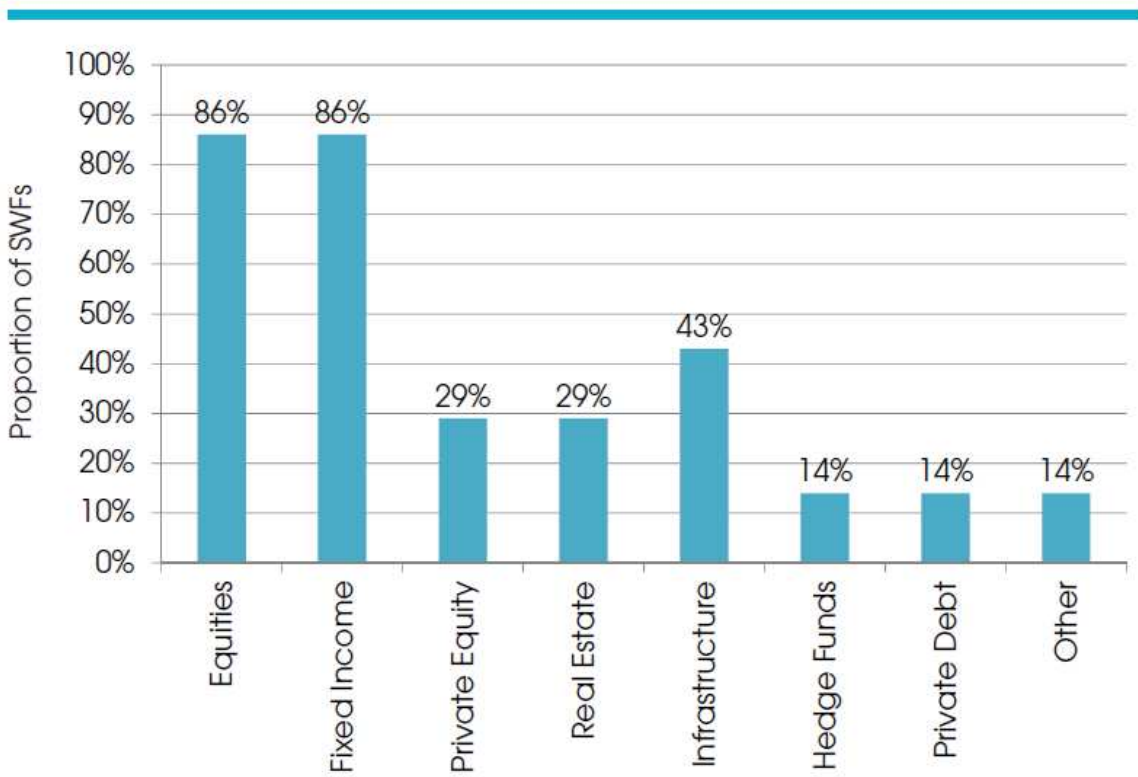


Figure 5: Proportion of European Sovereign Wealth Fund Investing in Each Asset Class



Source (For fig. 3 and 4): 2015 Preqin Sovereign Wealth Fund Review

## **CHAPITRE 3 – GOVERNANCE AND LEGAL ENVIRONMENT**

### **I. SOVEREIGN WEALTH FUNDS' GOVERNANCE**

#### *A. Governance models*

SWF have important amount of asset to manage. In order to achieve their goals, they should have a good governance to better operate. There exist two main models used as an institutional framework for SWF governance: the manager model and the investment company model (Al-Hassan et al, 2013).

In the first model, the manager model, the funder of the sovereign wealth fund, generally the ministry of finance, will mandate an asset manager to operate investment operations. This model could take many forms, we distinguish 3 main categories:

- The ministry of finance gives an investment mandate to the central bank, which will be responsible to manage the fund assets, as it is the case of the Norwegian Government Pension Fund Global or the Chilean fund. Generally, the central bank will mandate another party, an external and private investment entity, to manage all or a part of the assets.
- The government may own a fund management institution, and the ministry of finance will mandate this institution to manage the pool of assets, as it is the case of the Government Investment Corporation of Singapore.
- The concerned authority, generally the ministry of finance, could mandate directly external and private parties, as private fund managers, to invest their capital. This practice presents some disadvantage, since the authorities may face difficulties to evaluate and control investment policies of private funds. Yet, this practice is also the only solution for countries with no qualified human capital.

The second model is the investment company model. In this model, the initial owner of resources, the government, will create an investment company, and will transfer its resources to this new company. The investment company become the new owner of the capital, but is still owns indirectly by the government. Generally, this kind of model is used by countries that have more active investments policies and want to take part in the governance of the targeted firms, or by countries that aim local development policies and sometimes strategic objectives, such as Temasek, one of Singapore sovereign fund, or Mubadala, a, Emirati sovereign fund.

## B. Organizational structure of SWF

If we look closer into the organizational structure of sovereign funds, we notice that it is generally separated in two: a governing body and a supervisory body. The governing body includes all parties implicated in the delegation of asset management and that hold a responsibility in it. The different parties are organized in pyramid, where upper grade entity have more authority and control power than the lower ones. In general, the upper entities as the parliament and the ministry of finance are considered as external bodies, since they don't participate directly in the operational governance of the fund. The lower entities, as the executive board, CEO and managers are qualified as internal bodies. Each entities of the governance structure are controlled by a supervisory body, which objective is to supervise if the different governing bodies are acting in accordance with the rules and guidelines set by the governing entity directly above it in the governance structure.

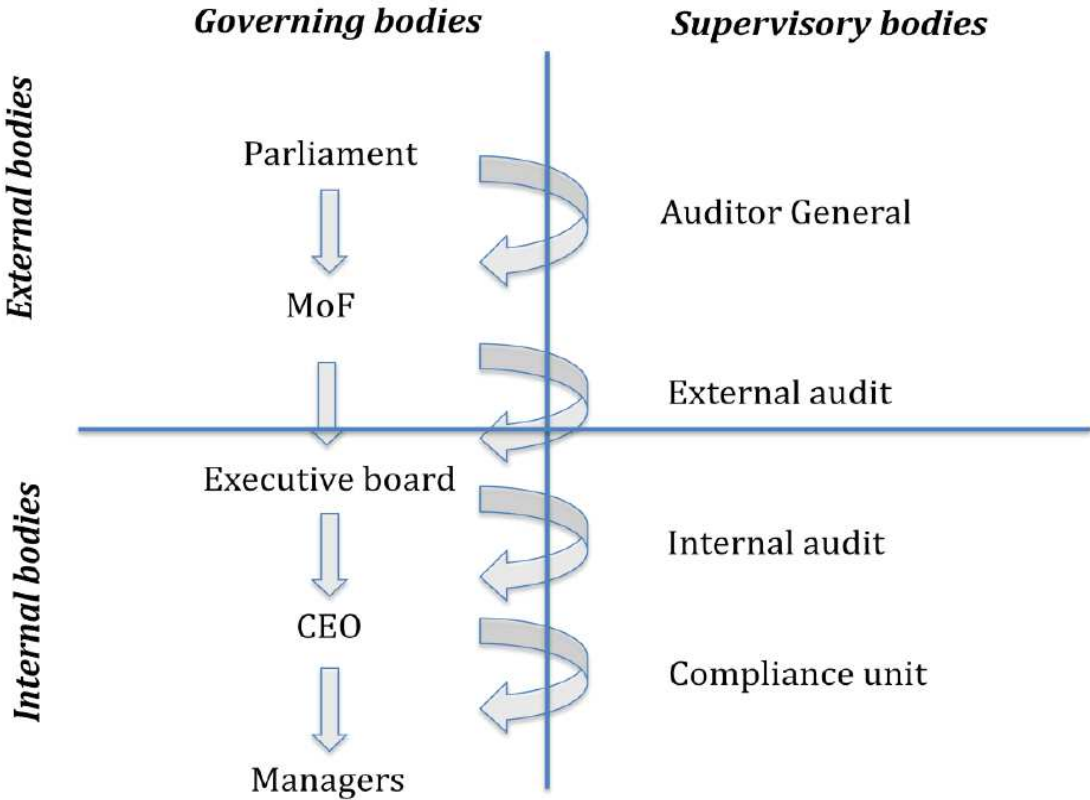
There exist many units in the governing and supervisory bodies. The parliament represents the government (in some countries characterized by a low level of democracy, this may not be the case, since all powers are concentrated in one governing authority) and therefore the owner of the sovereign fund. The role of the parliament is to vote the laws that will defined the legal structure of the fund including its operational policies. The ministry of finance (or the corresponding authority) will apply those laws on behalf of the parliament in the SWF structure, and determine the investment policies and the risk aversion that the fund should follows.

Regarding the internal legal structure of the fund, the executive board is the highest authority. Its main objective is to establish internal regulations and guidelines, by respecting the rules established by higher governing bodies as the parliament. Add to this, the executive is responsible for assigning the chief executive officer (CEO) of the fund. The CEO is the administrative chief of the fund. His role consists in establishing, regulating and controlling the daily operations in compliance with the executive board's regulations. Finally, at the bottom of the governing structure, managers are appointed. The role of manager is to manage and control his staff, to implement the daily operations in order to achieve the general objectives. There exists a hierarchy among managers, where some of them have higher investment mandates as the chief investment officer (CIO), and others are just responsible for some task at the individual manager level.

Even though the different hierarchic entities control each other, it is necessary to appoint supervisory bodies to verify if all entities respect their mandates. In top of the hierarchy, we found the auditor general which is designated by the parliament to control if the ministry of finance respects the regulations and guidelines established by the parliament, as well as the quality of their reports regarding the fund's situation. In his turn, the ministry of finance will appoint an external

auditor to control and audit the executive board. The external auditor will verify the executive board and therefore the sovereign wealth fund in general, to see if it is applying the laws dictated by the ministry of finance, as the investment policy. The executive board will appoint an internal auditor. The role of the internal auditor is to control if the internal regulations set up by the executive board are well applied and respected in the internal structure of the sovereign fund. The internal auditor may also advise the board regarding its management system and its implementation. Finally, at the lowest level of the hierarchy, a compliance unit is set up by the CEO to audit the managers and the rest of the staff. The compliance unit report directly to the CEO, and verify if the fund regulations are respected.

Figure 6: Governance structure of SWF



Source: OECD Development Centre, 2009

II. LEGAL ENVIRONMENT AND REGULATIONS

The rises of sovereign wealth fund this last decade is quite remarkable, and had positive impact during the financial crises since SWF injected important amount of liquidities in a time when liquidity was rare. However, this emerging also increased the concerns of authority and public opinion, especially in European and North American countries that were targeted by SWF investments. This is due to the fact that SWF investment are categorize as being a tool for state capitalism, which is

opposed to the traditional market capitalism that characterized western countries (Gilson and Mailhaupt, 2007). Therefore, it is important to establish laws and principals to better regulate SWF investments.

Santiago principles are a set of principles and practices that many countries and sovereign funds accepted to follow. Santiago principles have been established under the supervision of the International Monetary Fund (IMF) in order to facilitate cooperation between SWF and countries that host SWF investments. The IMF admitted the positive role of SWF during the financial crises, when they injected important amount of capital in distressed firms, and contributed in the recapitalization of big financial firms in the USA and Europe. However, the IMF have expressed his understanding for the concerns of some countries that worries about the true motivation of SWF.

This why, in October 2008, the IMF published the Santiago principles, also called the “Generally Accepted Principles and Practices”. There is a total of 24 principles regarding governance, transparency, investment practices and accountability of SWF. Those principles were established to serve four main objectives:

- Contribute to the preservation of the stability of the international financial system and the free movement of capital and investment.
- Respect and comply with all laws, obligations and regulations regarding the disclosure of accounting and financial information applicable in the host country.
- The investments made must take into account the possible economic and financial risk and should be motivated by profitability issue.
- Sovereign wealth funds must be fully transparent, both in terms of governance and in terms of investments and accountability.

However, Santiago principles are just recommendation, and therefore there is no really obligations for funds to respect it. This is why some countries decided to establish specifics law to better regulate and control SWF' investments. Some countries, as France and Germany, do not allow SWF to invest in sectors and firms they consider strategic, as military and defense sectors, telecommunications and nuclear. In Italy, any acquisition of a fund that exceed 10% of the capital of a listed firm need an authorization from a special commission. However, more efforts should be done regarding regulations.



## PART 2

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### SOVEREIGN WEALTH FUNDS: ANALYSIS AND PROBLEMATIC

## **CHAPITRE 4 – SOVEREIGN WEALTH FUNDS: GOVERNANCE ISSUES**

### **I. SOVEREIGN WEALTH FUNDS GOVERNANCE**

Sovereign wealth funds have become important investors worldwide. They have managed to increase their size, and developed skills in portfolio's management. One of the factor of this success is their governance. However, we observe heterogeneity regarding their governance structure. In fact, SWF come from different countries with different political regimes and unlike cultural characteristics. A critical issue is to know whether SWF governance may have an impact on their performance. Aizenman and al (2009) have studied governance of funds, and their determinants. One of their main finding was that SWF located in countries with weak democratic institutions could have an effective and well-managed governance structure. Monk (2009) focus on the potential relation between governance and public trust. He noticed that funds with a high degree of transparency and a clear institutional governance are more likely to gain public trust than the funds with a low level of transparency.

**There doesn't** exists a unique governance structure for SWF. Therefore, it will be interesting to see if we could apply a governance model for sovereign funds. This model will have to be in harmony with the fund's policies and objectives. The main problem is that those objectives and policies differs between one fund and another. Therefore, we will propose to consider five models for SWF according to their classification: saving funds, stabilization funds, reserve investment corporation, pension reserves fund and development fund, to better take in consideration their characteristics.

### **II. SOVEREIGN WEALTH FUNDS: ACTIVE OR PASSIVE INVESTORS?**

An important criterion that may reveal sovereign wealth funds incentives is whether they behave as active or passive investors. Activism could be defined as *"the use of power by an investor either to influence the processes or outcomes of a given portfolio firm or to evoke large-scale change in processes or outcomes across multiple firms through the symbolic targeting of one or more portfolio firms."* (Ryan and Schneider, 2002). It could be resumed as the fact that an investor (SWF in our case) try to influence or modify a firm's decisions and its corporate governance. A passive investor will have the opposite behavior. Ghahramani (2013) tried to determine the role and influence of SWF on corporate governance, and if they show activism tendencies, using the Ryan-Schneider model. This model was conceived to forecast institutional activism (Ryan and Schneider, 2002) and defined a list of variables that may identify institutional activism. Ghahramani include three categories of factors in his study: inherent variables, environment-dependent variables and fund-specific variables. Regarding the first category of variables, he found that SWF may have a natural tendency toward

activism, since there are large investors with a long-term investment horizon. For the environment-dependent variables, sovereign funds activism depends largely on the legal and political context. The result for the last category of variables were that SWF investing heavily in equity have a higher likelihood to be active investors and that the less a fund externalizes its asset management, the higher will be its activism. Slawotsky (2015) focus on the existing law in the United States that regulate SWF to prevent any activism. He analyzed some funds investment's behavior and noticed that not all of them are active investors. He proposed to establish new and more flexible regulations in the USA for sovereign funds. In fact, strict regulations may prevent SWF activism, but they will also decrease SWF's motivations to invest in the USA.

**Our objective** then is to try to determine whether SWF are active investors or not. To do so, we will also consider the five different types of funds, to see which ones have more incentives to behave as active investors.

## **CHAPITRE 5 – SOVEREIGN WEALTH FUNDS’ PERFORMANCE**

### **I. BETWEEN FINANCIAL AND STRATEGIC INVESTMENTS**

The literature treating sovereign wealth funds have raised with the financial crises of 2008, even though SWF exist since the 1950’s. In fact, SWF investments have increased during this period, due to the fact that many companies were facing financial problems, and governments were facing difficulties to inject enough capital on the market. But SWF had enough liquidity and funds to come to the rescue. For example, the Qatar investment fund bought a participation of 6.7% in the capital of Barclays, 9.9% in the Credit Suisse and 20% in the capital of British Airports Authority, which is responsible for managing Heathrow airport. The Norwegian fund bought 5.2 billion of Shell ‘capital and 3.3 billion of the capital of HSBC. China investment corporation entered the capital of Morgan Stanley, for an amount of 5 billion. The total amount spent by SWF was very important.

This huge wave of investment arises a new debate in the public of countries that were targeted. This debate consisted of knowing if SWF investments had purely financial objectives, or were undertaken for strategical purposes. In fact, if the investments are only for financial purposes, which mean to invest in assets to benefit from revenues, it would not cause problems. But the problem occurs if investments are done for strategic objectives. Strategic objectives could be interpreted differently. It could imply that:

- SWF take participations in firms to have a voting right as a shareholder
- SWF could try to influence firm’s decision, and therefore to change the corporate governance of the companies they invest in
- SWF may take participation in firms to have access to strategic information as the know-how and innovative technologies, so they could import it back to their native countries
- SWF may have in their own decision board political members whom may take corrupted decisions to their own favor

Having strategical objectives is not appreciated in foreign countries were sovereign funds invest, especially in developed countries, for the reasons mentioned above. However, it is difficult to determine the real incentives behind SWF investments. Scholars have tried to determine their investment motivations, but results differ among researchers. One of the first to have studied the subject was Truman (2007). First, he distinguished between stabilization funds and other types of funds. Stabilization funds main objective is to assure a protection against the volatility of natural resources and stabilize government resources. To do so, they invest in liquid assets, mainly bonds, and therefore have low risk investments. They cannot have strategic intentions, which is not sure for the other types of sovereign funds. Truman considers that to better understand a fund equity

management and its strategy, we should look at the fund governance. He developed a score for transparency, property management and accountability for SWF. This score shows that there is a heterogeneity of SWF's score. He found out that some sovereign funds may affect the performance of firms they invest in, and they may also exercise a pressure for modification in improving corporate governance.

While Truman focuses on the funds governance, others highlighted the investments undertaken by SWF. Balding (2008) for instance analyzes SWF behavior through a study of portfolio investments of funds. To do so, he chooses a portfolio of fixed income, equity and commercial real estate. Through direct and indirect statistics, he shows that SWF diversify their investments by geographic region and assets types as a rational investor. For him, there is no proof to state that sovereign funds act differently than rational investors, and therefore there shouldn't be any concerns regarding SWF motivations. However, Balding results may be misleading. In fact, he chooses a sample of funds to perform his study. Add to this, the data he uses concern investments that were made before 2008, which mean before the financial crises. Yet, SWF arise and began to invest massively with the subprime crises. One year later, Bortolotti, Megginson and Fotak (2009) made a similar research. They analyze more than 1200 investments made by 35 sovereign funds between 1986 and September 2008. According to their data, the average investment of a fund over that period was 441 million dollars, and more than the half of the total amount invested (54.6%) was targeting financial firms.

Bernstein et al (2013) defined a fund as strategic if the fund investment objectives were to manage its government's assets for strategic purposes, as the purchase of strategic assets in specified industries, or to contribute to the domestic development. On the other hand, a fund is qualified as non-strategic if its objectives were purely economic, to invest resources in order to generate revenues. One of the main fact that could an impact of SWF decisions and strategic orientation is the presence of political leaders on the board of direction. For Bernstein, the presence and exercise of political pressures may provoke economic distortions due to sovereign funds. In fact, a political member may not have enough financial culture, which will arise the risk of investing in poorly performing firms rather than in high present value project's, just because those firms profit of a political connection. Add to this, political members may have the incentive to practice a favoritism, whether in investment decisions or in recruiting employees for the fund. This is especially specific in countries with low democratic values and governance. A political influence may also cause the emergence of agency problems. Let's us not forget that generally, a sovereign fund has objectives that are defined on the long term. But an important political implication in the fund governance will probably modify the investment horizon of a fund from long term to short term. Problems may arise

then due to different horizons between SWF and central banks (or any institutional authority related). Central banks transfer their excess of reserves or revenues to SWF to fulfill their macro and micro- economic objectives, as fiscal and monetary policies. If a SWF has a different time horizon than the central bank, it may compromise authority's objectives. Another effect of the political member's incentive to favorize short term horizon is to pressure sovereign fund to back-up domestic firms, and even to modify national industrial policies.

To better understand SWF investment behavior, some researchers compared SWF to other institutional investors. Avendano et al (2009) compared SWF and mutual funds to determine if sovereign funds' investment were politically biased. Avendano wanted to prove that there is no reason of fearing SWF and that they may have strategic driven objectives. After constructing samples for SWF and mutual funds, he analyzes the possible similarities and differences between the two by considering several determinants influencing investment decisions as geographical and sector distribution, portfolio characteristics, and political aspects as governance and political regimes. He found that there is no relevant evidence that SWF are different than mutual funds. SWF behave similarly to other institutional investors and are motivated by risk-return objectives rather than political objectives. The author also advises to avoid the principle of double standards. For him, SWF should make better efforts in transparency and governance, but other investors as central banks of western countries should do as well. This will help to restore confidence between SWF countries home and western countries

Other researchers tried a similar comparison. Boubakri et al (2011) analyzes SWF investment behavior by comparing sovereign funds with another important institutional investor, mutual funds. Based on previous studies, he defined mutual funds to be financially motivated investors looking for obtaining the best returns from their investments, and decide to compare their investment behavior with SWF behavior. To do so, Boubakri determined 13 major factors that affect institutional investors investment's decision, as the firm size, liquidity, valuation of the firm or the financial and economic development of the host country. He constructs then 2 samples of companies' acquisitions, one for mutual funds and another one for sovereign funds. He found evidence that sovereign funds have higher incentives to invest in larger but less liquid firms, facing a financial distress but often characterized by a satisfactory level of growth prospects. Another difference is that SWF are not necessarily interested by innovative firms, and have a higher likelihood than mutual funds to acquire stakes in firms located in less developed but geographically closer countries.

Boubakri (2016) also published another article where he compared sovereign funds with pension funds regarding their targets selection. Boubakri considered that pension funds are investors seeking for maximizing their profits and do not pretend to any strategic objectives, and therefore defined 3

main investment determinants that should be taken in account by both SWF and pension funds. The first determinant is the firm's specific factors, the second one is the industry-specific factors and finally the country-specific factors. The author uses 2 samples, one consisted of firms targeted by SWF and another one of firms targeted by pension funds. He found that there is a higher probability that SWF invest less than pension funds in large, liquid and dividend paying companies. Also, SWF are more interested by investing in strategic sectors than pension funds. The last finding regarding country's factors is that SWF have a higher probability than pension funds to target firms in countries characterized by with a weaker legal environment and a high economic growth.

While many scholars focus on the microeconomics characteristics that determine SWF investment decision, others considered the macroeconomics factors. Ciarlone (2016) uses macroeconomics characteristic as economic development, stock market development, investor protection, quality of institutions... Regarding the methodology, he used a three-step modelling approach, with a data constituted of 1903 acquisitions done by 29 sovereign funds during the period 1995-2010. He found that SWF invest more in countries characterized by a higher degree of economic development, more liquid and important financial markets, with institution that guarantee protection to investors rights. Ciarlone also wanted to analyze the effect of a financial crises on SWF investment's motivation. The result was that SWF increase their acquisitions and investments in countries victims of a crises, and therefore may have a stabilization effect during crises periods.

Through this literature, we observed that the debate concerning SWF investment's objectives is still of actuality and there is no convincing evidence to claim whether sovereign funds are financially driven investors or strategically driven investors. In fact, scholar's opinions differ as we saw it previously. One objective of this thesis is to better understand SWF investment incentives. Generally, financially driven investors are characterized as being rational investors. A firm is considered acting rationally if it respects two characteristics of rational decision making that are the maximization of profits and the maximization of market value (Modigliani and Miller, 1958). This imply that a company will have an interest in investing in an asset if and only if this asset will increase the net profit of the company.

**It is interesting** to compare sovereign wealth fund investment behavior to another institutional investor decision behavior. For that, mutual fund consists a good benchmark, since they are important institutional investor that theoretically follow a rational behavior, which is to maximize their profits. To compare the two entities, we well defined several determinants that characterized profitability, rationality, political involvement and transparency, and that are generally used by institutional investor when it comes to acquisition decision; firm size, liquidity, operating performance, stock price, valuation of the firm, dividend yield, ownership concentration, the level of

investor protection in the country, the level of the financial development of the host country, governance structure and transparency.

If we look closely to the previous studies, we observe that all sovereign funds were regrouped into one and unique sample. This step is actually misleading and provide biased results. SWF differs one from another, since they have different kind of resources, and also are categorized into several classes, each class having its own investment policy and objectives and therefore its own governance and asset allocation. Therefore, we will propose to consider the five categories of SWF, and compared each one with mutual funds, to better understand their investment's behavior.

## II. IMPACT OF SOVEREIGN WEALTH FUNDS' INVESTMENTS ON TARGETED FIRMS.

Another important question regarding sovereign fund' investments is to know whether these investments may have an impact on the targeted firm's performance or not. One may think that SWF have a positive impact on the performance of firms they invest in, since they are important investors, with no explicit liabilities and having a long-term horizon. It's not necessarily the case according to the literature. Bortolotti et al (2009) performed an event study using 235 acquisitions done by sovereign funds on publicly traded firms in order to know SWF investment effect on targeted firms. They found that SWF acquisitions announcement had a positive impact on targeted firms on the very short term, with a positive abnormal return of 0.9%, while on the long term the effect is negative, with a negative return of -15.49% up to 240 days. Therefore, to Bortolotti et al, SWF equity acquisitions may deteriorate firm's performance on the long term. Comparable results were found by Dewenter et al (2010), who observed that returns following SWF investment announcements are returns non-monotonic. The immediate impact is an increase of results, but with time, results tend to decrease. Another finding they made concerns acquisition and sale impact on return. Acquisition of shares buy SWF had a positive impact on abnormal return of the firm, but shares sale had a negative impact on firms. This may imply that an acquisition announcement sends a positive information to the market, while a sale announcement sends a negative information.

Fernandes (2009) analyze SWF investment's impact on firms and if funds influence firm's management. He sets up an important data, containing more than 21000 investments. The first finding was that sovereign funds investment leads to a significant premium on the value of targeted firms (between 15% and 20%). It also leads to a better operating performance. He also found that SWF prefer to target large and profitable companies, which benefit from an important analyst coverage. He concludes then that SWF have a positive impact in firms they invest in, by creating long-term shareholder value, and therefore their motivations are financially driven.



The influence of SWF announcement on firm's results may illustrate the motivations of sovereign funds. In fact, many scholars as Bortolotti (2009), Dewenter (2010) or Fernandes (2014) noticed that some funds preferred to take participations in low performing companies. We may assume that such a decision is taken by SWF in order to have a better negotiating power. It is possible then that funds investing in distressed and low performing companies are more interested in having a decision power in the firm governance, while funds investing in strong and high performing companies are more interested in revenues and profits.

**We propose** to analyze the possible impact that a sovereign fund may have when investing in a firm: will SWF' investment had a positive, negative or neutral impact on the targeted firm performance? Again, we will consider five different type of funds, due to the fact that have different objectives, and therefore they may impact differently the firm's performance.

## CHAPITRE 6 – SOVEREIGN WEALTH FUNDS DURABILITY

### I. SOVEREIGN WEALTH FUNDS LONGEVITY

The fast growth of sovereign wealth funds was motivated by the exploitation of natural resources and the increase of fiscal and exchange reserves. The total value of SWF has increased during the last decades. However, the two main sources of funding of SWF seems to have a compromised future. In fact, since 2014, we have observed an important decrease of oil prices, from 110\$ to less than 50\$ the barrel<sup>12</sup>. International trading activity have not decreased yet, but it's slowing down. It may be a little soon to trigger the alarm signal, but it is primordial that SWF began to elaborate new strategies to prepare for the rarefication of resources, especially funds that depend on oil exploitation. This issue has been rarely discussed and studied in the literature. Nusair (2016) analyzed the effect of oil price variation on the GDP of the Gulf Cooperation Council (GCC) states. Even though it isn't a direct correlation study of oil price impact on SWF, it is quite related since all these countries have created sovereign funds, and their funds are financed by oil exploitation. Therefore, any impact on the GDP of these countries should hypothetically had an impact on the financing of their SWF. The author found that a positive oil price variation lead to an increase of the GDP for all the GCC states. However, when oil price decreases, the impact is only negative for 3 countries, neutral for one and positive for two. This result may imply that some of the GCC countries that were economically dependent to oil exploitation manage to diversify their activities to be more resource's independent.

**It would be interesting** to see if sovereign funds could manage to survive and developed their assets in case their financing ceases, that is if they could become resource's independent. It is a crucial problematic that need to be developed, since it is related to their survival.

### II. SOCIALLY RESPONSIBLE INVESTMENT: IMPLICATION FOR SOVEREIGN WEALTH FUNDS

We have also observed this past years that more and more firms as well as governments tend to promote innovation by investing in new technologies and sectors, and more precisely activities that are socially responsible. One main example is the development of pollution-free electricity production, using sun or wind power. It is called the socially responsible investment (SRI). SRI refers to an investment philosophy that *"adds concerns about social, ethical or environmental issues to the normal ones of risk and returns as determinants of equity portfolio construction or activity."* (Sparkes, 2008). The literature of SWF and its implication in SRI is relatively poor. Monk (2009) was one the first to talk about the responsible investment aspect, when he studied the case of the Norwegian Government Pension Fund. In fact, the Norwegian fund was the first to adopt an ethical code that

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<sup>12</sup> <http://www.nasdaq.com>

prevent him to invest in firms that violate social and environmental justice. For Monk, the success of the fund to invest more socially responsible is due to a good implementation of ethical standards in the fund governance. Richardson (2011) did a similar analysis on the Norwegian and New Zealander funds, and proposed conclusions comparable to the ones of Monk. Karametaxas (2016) described actual regulations and governance structures and rules of SWF, and tried to see if they are compatible with the SRI concept. She noticed that a few funds tried to adapt their legal structures to responsible and sustainable principals, but that more work and efforts should be done.

**However**, there exists no literature concerning the influence of socially responsible investment on SWF' performance. Our objective then is to observe SWF implication in SRI, that is if they invest in it or not, and if they do, what are the motivations behind it. Add to this, we are also interested in the impact that SRI may have on the performance of SWF, that is if investing in SRI improve or decrease funds' performance.

## PART 3

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## METHODOLOGY DEVELOPMENT

## **CHAPITRE 7 – DATA CONSTRUCTION**

A lot of people tend to think that sovereign wealth funds have a lack of transparency, and disclose no information regarding their governance, portfolio construction or investments. This is of course not true. In fact, there exist many funds, as the Norwegian fund, Temasek the Singaporean fund or ADIA, Abu Dhabi fund, and others that disclose information concerning their investments, as well as their governance. All this information is available on their website, or in detailed reports they disclose yearly. However, this may not be enough, and therefore, we should consider other database sources. Two important institutes dealing with SWF issues exist: Sovereign Wealth Fund Institute and Preqin. They have gain an important notoriety these past years thank to the quality of their information and data, and have a rich database concerning funds showing a lack of transparency. Their information reveal material about funds governance, policies, investment's policies, portfolio construction and sectorial and geographical distribution of their assets, as well as their investments, that are useful to perform any study about SWF. Add to this, we could also use press article and journal that often highlight SWF investments. Similarly, previous articles existing in the literature disclose their data and their sources. It will be interesting then to use this information.

To complete our database, especially the one concerning SWF investments, there exist many databases that deal with investment performed by institutional investors on equity markets, and that precise the nature of those investors. We have found two main databases in this area: FactSet/Lionshares and Thomson Financial. It would be easy then to found investment done by sovereign funds on equity markets. There exist also other databases that not only deals with equity markets, but also with bonds trading, mergers and acquisitions, Private Equity or shareholder activism. Factiva, a database developed by Dow Jones & Company provides these information, as well as SDC Platinum, developed by Thomson Reuters. Finally, to accrue all qualitative information, it would be interesting to contact directly SWF in order to submit them question, especially about their governance, legal structure, investment policies and implication in socially responsible investment. Some funds accept to respond for academic and scholars who perform research.

## **CHAPITRE 8 – METHODOLOGY**

To obtain satisfying results and conclusions, an appropriate methodology should be used to answer our questions. Once the data will be fully collect and construct, we will be able to use them to perform the different method we will use. Some of these methods are quantitative, while others are qualitative

### **I. GOVERNANCE**

#### **A. New Governance models**

The first part of this research concerns sovereign wealth funds governance, as well as the issue regarding their activism. Those issues will be studied using both qualitative and quantitative methodologies. We will analyze the governance of the different existing funds in order to better understand how they are organized and operated. We can do so by collecting information available on their website and also in articles. We can also address surveys to the funds. The survey will mainly focus on the hierarchy existing in the legal structure of the fund, as well as the supervisory bodies, the governing bodies and the interactions existing between them. We could also ask about the degree of the political implication and interference in the governance of the fund. The next step will be to compare the fund's governance with the existing governance models in the literature, in order to propose a new model of governance for SWF that will take in consideration their objectives. After a review of previous articles dealing with SWF, we noticed that authors have the tendency in their methodology to regroup all funds in a unique sample. However, it does have an inconvenient since it could provide us biased results. In fact, sovereign funds differ one from another, since they do not have the same investments policies and objectives. We propose then to regroup funds that present similarities together. Therefore, we will construct five sample, each one representative of a type of fund: stabilization, saving, reserves incorporation, pension and development funds. In fact, each category will regroup funds that have similar long-term objectives and investment policies, which will provide us more precise results. It will be more suitable then to propose a model for each type of fund.

#### **B. SWF Activism**

The second main point regarding SWF governance is related to their activism. To determine if SWF are active or passive investors, we will use the model developed by Ryan and Schneider (2002). This model was originally created to determine the activism of institutional investors. However, in our case, we will apply this model for SWF. Once again, we will consider the diverse types of funds, and apply the Ryan-Schneider model for each type. The model takes in consideration six main

criteria: the institutional activism, the size of the investor, the investment horizon, legal restraints, future returns and portfolio management (whether the portfolio is managed internally or not). We could then verify empirically if differences exist between the different types of funds. A complementary quantitative study will be used, using linear regression model, with institutional activism as the only dependent variable, and the remaining five criteria as independent variables.

## II. PERFORMANCE ANALYSIS

### A. Determining the impact of SWF investments on firms

Analyzing the impact of SWF on the firms they invest in is primordial, because it shows us their effect on the firm's performance and market value, and therefore reveal the performance of the fund itself: if the market value of the firm increase, so will the assets of the fund. To measure their performance, we will use an event study. This method consists in measuring the difference between observed returns and theoretical returns. The event that will be studied is the impact of SWF investments on the targeted firm's performance, that will be illustrated by measuring abnormal returns. Then the event window and the study or interest window should be determined. Generally, the event window is longer than the study event, to better examines period around the announcement day. In our case, the announcement date is the day SWF announce they will invest in a company. The study period should include the announcement date, as well at least 2 days: one just before the announcement date and one after, to better capture the price variation caused by the announcement after the closing of the market. In our case, we will establish a study window of 20 days, separated equally around the announcement date, and an event study of 200 days, as proposed by Kothari and Warner (2006). Then, abnormal returns should be calculated. An abnormal return is the actual price observed on the event window minus the normal return observed on the same window. For a firm  $I$  and an event date  $\tau$ , the abnormal return is:

$$AR_{it} = R_{it} - E(R_{it}|X_{\tau}),$$

where  $AR_{it}$ ,  $R_{it}$  and  $E(R_{it}|X_{\tau})$  are respectively the abnormal return, the actual one and the normal one on a period  $\tau$ . To calculate this return, we propose to use the market model developed by Fama et al (1969). This model allows us to take in consideration the risk related to each asset. The theoretical return of an asset is related to the market return with a proportionality coefficient,  $\beta$ , unique for each asset:

$$R_{it} = \alpha + \beta R_{mt} + \epsilon_{it},$$

where  $E(\epsilon_{it}) = 0$  and  $\text{Var}(\epsilon_{it}) = \sigma^2\epsilon_i$ , and  $R_{it}$  and  $R_{mt}$  are the returns for the period  $t$  of the asset  $I$  and the market portfolio.  $B$  is the regression coefficient measuring the return of the asset  $I$  and the

market, and  $\alpha$  the ordered at the origin, so  $\beta_i = \text{Cov}(R_i, R_m) / \sigma^2 R_m$ . The calculation of returns is done as following:

$$R_{it} = \log(P_t / P_{t-1}),$$

where  $P_t$  is the price of the asset at time  $t$  and  $\log$  refers to the logarithmic function. In the case of the market model,  $R^2$  is equal to:

$$R^2 = 1 - (\text{Variance of abnormal returns} / \text{Variance of normal returns}).$$

Finally, a hypothesis test should be done, the Student test, to verify the following hypothesis: a null hypothesis  $H_0$  that states that there are not abnormal returns, and an alternative hypothesis  $H_1$ , that claims the existence of abnormal returns. The same procedure should be repeated for each samples of SWF.

### B. Determining SWF investments motivations

Regarding sovereign wealth funds objectives, whether they are financially or strategically motivated, it would be interesting to compare their investment behavior with those of another institutional investor that is financially driven. We decide then to compare SWF with Mutual Funds, that have theoretically financial motivations. To do so, we will proceed to a similar methodology used by Boubakri (2016). However, we will also not consider here just one sample representative of SWF as Boubakri did. Instead, we will construct five different samples, each one representative for a type of fund. Therefore, it would be possible to compare investment behavior of each category of funds to Mutual Funds. We will reproduce the multivariate regression analysis performed by Boubakri (2016). The variables used will be divided into three main categories. The first one concerns the firm's specific factors, as the size, liquidity, profitability, dividends, growth and risk. The second one is the industry-specific factors, by determining the activity sector of the firm, whether it is a strategic sector or not. Finally, the last category will be related to the country-specific factors, as the economic growth, bilateral accord between the home and host country, as well as the legal and institutional environment of the country

## III. THE DURABILITY OF SOVEREIGN WEALTH FUNDS

### A. SWF Longevity

Regarding the longevity of the funds, we will study the consequences of oil price variations on the performance of the sovereign wealth funds. We will consider here only the funds that are financed with oil resources. Therefore, we will use the methodology used by Nusair (2016), when he studied the impact of oil price variation on the GDP of Gulf countries, and apply it on the case of



sovereign funds. This model is the nonlinear cointegrating autoregressive distributed lag model (NARDL), which was created first by Shin et al. (2013), and then developed by Nusair.

### *B. Impact of SRI on SWF*

Finally, the last point concerns socially responsible investment. The objective here is to determine to which degree SWF are interested in SRI, and if it is reflected on their investments, and on their legal structure. To do so, we will collect all information regarding socially responsible investments done by SWF. Then, we could proceed to descriptive statistics to better illustrate the actual tendency, and to better understand SWF interest and motivation to invest in SRI. Another essential point is to try to determine the possible impact (whether its positive, negative or neutral) of SRI on sovereign funds' performance. Therefore, the independent variable will be the use of SRI (which could be expressed as a percentage or a binary variable), and the dependent variable will be the financial performance. It will also be necessary to establish moderator variables to be tested, which will be external variables influencing the intensity of the link between investing in a socially responsible way and financial or stock market performance. Several measures can be used. In order to demonstrate a positive effect of SRI on financial performance, this can be studied by means of "medium-variance" measures. To study a neutral effect, single-factor measures of the "Stock-Picking" type can be used. Finally, to measure a negative effect, single-factor measures of the "Market-timing" type are effective (Revelli et al., 2011).

## CONCLUSION

We have witnessed several changes this past years in the financial world. The world had to face one of the most violent financial crises that took place in 2008. Its seems like it was the collapse of modern capitalism the financial and banking system. However, this system managed to survive, thanks to state interventions. By state interventions, we mean central banks and authorities interfering on financial markets, but also a specific institutional investor that emerged during this period: we are talking of sovereign wealth funds. In fact, those funds invested and injected billion and billions of dollars, which contributed to rescue institution that were supposed to be “too big to fail”. This is why we have decided to study SWF.

Sovereign funds are not a recent phenomenon since the first one was created back in 1953. But they tend to emerge and rise in the beginning of the 2000s. In this research, we have first give a descriptive overview of SWF. They are financed through two main types of resources: natural resources and commercial resources. We have also seen that there exist five main categories of funds, each one created for specific purposes: saving funds, stabilization funds, reserve investment corporation, pension reserve funds and development funds. To achieve their objectives, they invest in all types of assets, mainly bonds, equity, Private equity and alternatives assets as infrastructures and real estates. Finally, we illustrated their governance structure, as well as their legal environment.

The second part was dedicated to developing our research topics. We proposed four main problematics that we found interesting. The first one is regarding SWF governance. We made a literature review and found out that a well-managed and transparent governance could reduce concerns about SWF motivations. We proposed then to develop five main models of governance, one for each types of funds. We also noticed that activism of funds is not necessarily welcomed in western countries. We decided then to see if funds are active or passive investors. The second problematic is about the funds’ performance. Even though it has already been discussed in the literature, there is not a consensus on the question. Therefore, we will analyze the impact of the investments of each types of fund on targeted firms. We also try to determine whether funds have strategic or financial motivations. The third and fourth problematics are related to funds durability. The third research topic focus on the longevity of funds, that is if SWF (especially the one that are financed through natural resources) could be resource’s independent and survive just with the profits of their actual assets. Finally, the fourth problematic is to try to see the implication of sovereign funds in socially responsible investment, and if this kind of investment have a positive or negative effect on the funds’ performance.

In the third part, we developed and exposed several methodologies that we enable us to answer our problematics and bring responses that should be useful, for the funds and their environment. There is a lot of SWF' aspect that haven't been studied till today. However, we think that more efforts should be done in this field, because sovereign funds are becoming an important actor in the world, whether it is on the economic, financial, social or political level. We hope this research will provide more light on SWF.

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## SIGLES ET ABREVIATIONS UTILISES

Abréviations :

- SWF : Sovereign Wealth Fund
- SRI : Socially Responsible Investment
- IMF : International Monetary Fund

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# RÉSUMÉ

Les fonds souverains sont devenus un acteur important sur le plan économique et financier. Cependant, leurs hausses ont également suscité de nombreuses inquiétudes, car ils sont souvent accusés de poursuivre des motivations stratégiques et même politiques. Cette thèse a pour objectif de voir si ces préoccupations ont des raisons d'être. Nous élaborerons de nouveaux modèles de gouvernance respectueux des objectifs des fonds et analyserons l'activisme des fonds. Nous essaierons également de déterminer leur performance ainsi que leur impact sur les entreprises dans lesquelles ils investissent, en considérant cinq types distincts de fonds. Enfin, nous étudierons la longévité des fonds et leur implication dans un investissement socialement responsable.

## SUMMARY SINTESI RESUMEN ZUSAMMENFASSUNG

Sovereign wealth funds have become an important actor on the economic and financial sphere. However, their rises have also brought many concerns, since there are accused to pursue strategic and even political motivations. This thesis has for objectives to see if those concerns have reasons to be. We will elaborate new governance models that are respectful of the funds objectives, and analyze funds' activism. We will also try to determine their performance as well as their impact on the firms they invest in, by considering five distinct types of funds. Finally, we will study the funds longevity, and their implication in socially responsible investment.

**MOTS CLÉS :** Fonds souverains, performance, gouvernance, durabilité, investissement socialement responsable

**KEY WORDS:** Sovereign wealth funds, performance, governance, durability, socially responsible investment