Department of Business Administration
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Master's Thesis

THE APPROPRIATENESS FOR TAIWAN TO ESTABLISH SWF

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Abstract

Because of global financial crisis since 2007, the financial subcommittee under the Office of the President, Republic of China, addressed the possibility of establishing Sovereign Wealth Fund (SWF) of Taiwan in 2008, in order to integrate resources in a more efficient way, and to stimulate domestic economy development. However, the comments regarding this issue are controversial and there are few people in Taiwan who understand SWF.

Therefore, the subject of this thesis is to study "if it is appropriate for Taiwan to establish SWF, and the best process to establish SWF if it is".

In Chapter II, I will introduce what is SWF. SWF is a government-owned investment vehicle, which has already shown up since 1953 but be only noticed these years due to its dramatic growth. The importance of SWF is the impacts that SWF brings, including both the good sides (financial stabilization) and the bad sides (exacerbating market volatility and lacking of transparency). Also, the national security issue of the bad impacts and the relative regulation system are the most critical concerns for SWF host countries and recipient countries.

In Chapter III, I use six criteria (Background, Funding Purpose, Scale, Source, Investment Policy, and Governance) to analysis six SWFs (GIC, Singapore Temasek, CIC, ADIA, Norway GPF, and KIC); trying to figure out the appropriateness for Taiwan to set up SWF, and the way how to establish if it is appropriate. The result of this analysis is posted in

the end of this study (Chapter IV)--Taiwan definitely has the capability to establish its own SWF, and the whole society will benefit from it:

1. Background

    (1) Taiwan holds huge amounts of foreign exchange reserves.

    (2) It is hard to find good objectives to invest overseas.

    (3) Taiwan domestic market needs capital injection to stimulate the domestic economy

2. Funding Purpose

    (1) Manage foreign exchange reserves more efficiently and seek for better investment return; and

    (2) Inject capital domestically to prompt industry upgrading or transforming; in order to stimulate country development.

3. Scale

    It should depends on how much does it take for SWF's investment portfolio, or for the policy of upgrading domestic industry.

4. Source

    Foreign exchange reserves is the best sources for funding SWF. Considering Taiwan is not the member of IMF and may need more foreign exchange reserves against hot money attacks, I use two ways to demonstrate that the foreign exchange reserves is absolutely sufficient as the source for SWF.

5. Investment Policy

   (1) Put more weights on domestic investments.

   (2) Follow government industry policy, to invest capital in the future blue-chip industry.

   (3) Invest in those industries that Taiwan familiar with or good at.

6. Governance

   (1) Establish another company to manage the assets of SWF which were entrusted by government.

   (2) Let external funds managers stand an appropriate proportion in all managers.

   (3) Make the specific regulation about Taiwan SWF.

   (4) Bottom-up periodic report mechanism and the up-down authorization system.

It is important that the suggestion above can only be done and be implemented by an integrity entity or government. Only when Taiwanese government takes preparation well beforehand, the advantages of SWF can be seen completely.

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I. Introduction

On Oct. 1st, 2008, the financial subcommittee under the Office of the President, Republic of China, addressed the possibility of establishing Sovereign Wealth Fund (SWF) of Taiwan in order to integrate resources in a more efficient way, and to stimulate domestic economy development. However, there were controversial comments and discussions regarding this issue. There were many commentators asserting their opinions about the appropriateness for Taiwan to establish SWF, and the discussions were becoming more and more intensive. Thanks to those controversies, SWF became the centre of spotlight for the first time in Taiwan.

Most people in Taiwan do not understand SWF or even have not heard about it before, even though SWF, which is the government owned-investment vehicle, was not new. This term has already shown up since 1953. The subject of this thesis is to study "if it is appropriate for Taiwan to establish SWF, and the best process to establish SWF if it is".

At the beginning of this study, it is necessary to review the literature in order to understand SWF clearly. At the beginning of literature review (Chapter II), I will clarify the definition of SWF and its categories. Second, I will introduce the emergence and the growth overview of SWF. Third, I will introduce how SWF operates and illustrate some investment policies. Fourth, I will mention what impact SWF may bring, including both the good sides (financial stabilization) and the bad sides (exacerbating market volatility and lacking of transparency); at the same time, I will highlight the controversial issue about SWF- the national security issue of the bad impacts. And at the last, I will discuss the relative management and the regulation about SWF.

After having a basic understanding about SWF, the case-study method will be used in Chapter III. I will choose some SWFs as examples to demonstrate their characteristics, including their country backgrounds; establishment purposes; funds' scales and sources; investment policies; and the governance. The country backgrounds of some cases mentioned here are similar to Taiwan, such as Singapore, China, and Korea. On the contrary, some country backgrounds are different from Taiwan, such as Norway and Abu Dhabi. Through analyzing each SWF thoroughly, it is aimed to gain some valuable information and experiences as references for Taiwanese government if SWF is eventually established.

At the end of this study, in Chapter IV, I will come back to the main purpose of this study—whether it is appropriate for Taiwan to establish SWF. In this chapter, I will analyze the circumstances around Taiwan to see if there are any advantages for Taiwan to set up SWF. Also, I will indicate what crucial elements that should be considered if Taiwan decides to set up its own SWF. These elements will be the characteristics used in cases: country backgrounds; establishment purposes; funds' scales and sources; investment policies; and the governance. Ultimately, I hope this study can provide the Taiwanese government some advices for better decision making, and furthermore, to stimulate the domestic economy development.

II. Literature Review

1. What is SWF?

1.1. Definitions

There are lots of government organizations, international financial institutions, and private researchers publishing research results and reports about SWFs in these years. Those reports have their own definitions of the SWFs. Until now, the definition of SWF is still vague. The definition of SWF may vary with the characteristics they have—the investment policies, the ownership, the accountability, or the investment subjects.

Some investment banks and private research institutes define SWF as a separate pool of government-owned or government-controlled asset that invests in a portfolio with wide range of classes and risks.

However, the most accepted definition of SWF is from IMF (February, 29, 2008): SWFs are government-owned investment funds, set up for a variety of macroeconomic purpose. They are commonly funded by the transfer of foreign exchange assets that are invested long term, overseas.[1]

Lots of people would mix up SWFs with other two sovereign investment vehicles, State Owned Enterprises (SOE) and Public Pension Funds. As Table 1 shows, the key differences are (1) the ownership and controller of SWF is government, but SOE and Pension Funds

[1] Mark Allen and Jaime Caruana, "Sovereign Wealth Funds—A Work Agenda", IMF, February 29, 2008, 4-5

aren't; and (2) the sources of SWF are from commodity or non-commodity exports, but SOEs are from earnings, and Pension Funds are from contributions.

Table 1. Defining the difference between: SWFs, SOES, and Public Pension Funds[2]

Sovereign Investment Vehicle Characteristics

	Sovereign Wealth Funds	State Owned Enterprises	Public Pension Funds
Asset Ownership	Government	Primarily Government	Pension Members
Primary Purpose	Varies	Varies	Fund Defined Benefit Obligations
Funding Source	Commodity / Non-Commodity	Government / Corporate Earnings	Pension Contributions
Government Control	Total	Significant	Insignificant
Disclosure	Varies	Varies	Transparent
Investor Class Growth	High	Steady	Steady
Examples	Abu Dhabi Investment Authority	Chinalco	CalPERS
	China Investment Corporation	Banco da Amazônia	CalSTRS
	Korea Investment Corporation	Rosneft OJSC	NYSTRS
	Kuwait Investment Authority	(EDF) Electricite de France SA	Teacher Retirement System of Texas

Source: Sovereign Wealth Fund Institute

To summarize those various definitions, in my opinion, SWF is a large pool of capital with 4 characteristics: (1) owned by sovereign government, (2) funded for the purpose of national interests, (3) mostly sourced by excess reserves and revenues from international trade surplus, and (4) invests in wide range of subjects with different classes and risks with long term investment horizon.

1.2. The Categories of SWFs

There are several categories for the SWF. The most common method to classify SWF is

[2] Sovereign Wealth Fund Institutes. http://www.swfinstitute.org/research/investmentvehicles.php

based on two criteria: one classification is used according to the resource of the funds (Kimmitt, 2008) and the other is used according to the SWFs' purposes or policies.

<u>Classification by Sources</u>

According to the classification cited by Kimmitt, the SWFs can generally be divided into two categories according to the source of the foreign exchange assets: Commodity SWFs and Non-commodity SWFs.

(1) Commodity SWFs

Commodity SWFs are funded by commodity exports that are either owned or taxed by the government (Kimmitt, 2008). This kind of funds serves different purposes, like fiscal revenue stabilization, balance-of-payments, and intergenerational saving[3]. Because of the current extended rise in commodity prices, many funds were initially established for the purpose of fiscal stabilization or balance-of-payments sterilization have evolved into intergenerational savings funds.

Typical examples of this type of SWFs are the SWFs funded by oil-exporting countries, like Kuwait, the United Arab Emirates, and Saudi Arabia.

(2) Non-commodity SWFs

Non-commodity SWFs are typically established through transfers of assets from official

[3] Here, an intergeneration saving is a saving from selling natural nonrenewable resources by older generation, which used to share with the younger generation in case of running out of nonrenewable resources.

foreign exchange reserves (Kimmitt, 2008). Non-commodity exporters with large amounts of balance-of-payments surpluses can take advantage of these huge "excess" foreign exchange reserves, transfer them to stand-alone investment funds to be managed, and chase for higher returns.

Typical examples of this type of SWFs are some Asia exporting countries, like China Investment Corporation in China and Khazanah National Berhad in Malaysia.

Classification by Purpose

SWFs can also be classified into several types according to the purpose or the dominant objectives they serve. The followings are five types of SWFs that are commonly accepted in relevant reports[4].

(1) Stabilization funds

Stabilization funds are set up by countries with abundant natural resources in order to insulate the budget and economy from volatile commodity prices (e.g., usually oil prices). For those countries with abundant natural resources, establishing stabilization funds can help to smooth fiscal revenue or sterilize foreign currency inflows. These funds build up assets during the years of ample fiscal revenues to prepare for leaner years.

(2) Savings funds

Savings funds, or intergeneration funds, are established to share wealth across

[4] IMF, "Global Financial Stability Report", October 2007,p 46

generations. For countries with rich natural resources, setting savings funds can transfer non-renewable assets into a diversified portfolio of international financial assets. Thus, they can provide wealth for future generations, or take advantage of wealth on other long-term objectives. Therefore, they can reduce the impacts of running out of non-renewable resource in the future.

(3) Reserve investment corporations

Reserve investment corporations are usually established as a separate entity. Its purpose is either to reduce the negative cost-of-carry of holding reserves or to pursue investment policies with higher returns. Usually, the assets in this type of arrangements are still counted as reserves.

(4) Development funds

Development funds are set up for country development. These funds allocate resources for funding priority socioeconomic projects, such as infrastructure.

(5) Pension reserve funds

Pension reserve funds have identified pension or contingent-type liabilities on the government's balance sheet. Sometimes, the development funds and Pension reserve funds can be considered as subsets of SWFs that are linked to long-term fiscal commitments.

Other purposes may include enhancing the transparency in managing revenues from commodity exports and fiscal policy. In practice, SWFs have multiple purposes or gradually changing objectives when situations change. For example, some countries establish SWFs for savings and stabilization purposes, but when the circumstances change, the purpose they emphasis may also change (e.g., change to development funds). This is especially true for countries that export natural resources.

2. The emergence and the growth of SWF

The first SWF recognized in the modern era can be traced back to the 1950s. In 1953, the Kuwait Investment Board was set up with the aim of investing surplus oil revenues to reduce the country's reliance on its finite oil resources (Steffen Kern, 2007)[5]. In 1965, it was replaced by the Kuwait Investment Office (KIO), a subsidiary of the Kuwait Investment Authority (KIA). Today, KIA organization manages a substantial part of the Future Generation Fund (FGF), which allocates 10% of the country's (Kuwait) oil revenues annually.

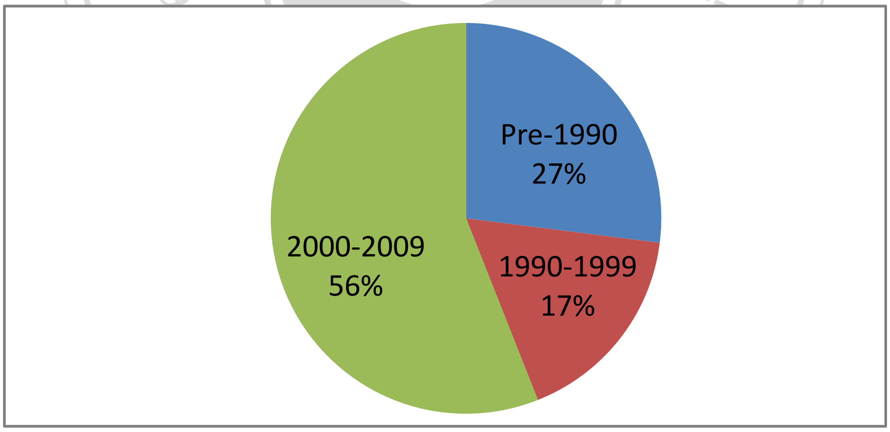
The second SWF was established by is British colonial administration in the Gilbert Islands (the Republic of Kiribati since 1979) in 1956, the Revenue Equalization Reserve Fund (RERF). This fund was set up to hold royalties from phosphate mining in trust for the Pacific island state. It is the major source of revenues for the country and well diversified with investments overseas. Since its inception, assets under management by RERF have

5 Steffen Kern, "Sovereign wealth funds-state investments on the rise", Deutsche Bank Research, September 10, 2007, p.4

grown to nine times of Kirbati's GDP (AUD 636 millions) and returned investment income of around 33% of GDP (Steffen Kern, 2007).

After these first two funds were established, the SWFs have been set up essentially in two major waves (Steffen Kern, 2007). The first one is in the 1970s, (e.g., the Singapore's Temasek Holdings in 1974 and the Abu Dhabi Investment Authority, ADIA, in 1976), and the second one began since 1990s with setting up of Norway's Government Pension Fund-Global. However, the massive increasing trend of SWFs is from 2000. According to International Financial Service London (IFSL) research (Figure 1), there are 56% of top 50 SWFs which set up between 2000~2009. The fact behind this phenomenon is the current account imbalance between main developed countries and developing countries.

Figure 1. Launch year of top50 SWFs, % share by number[6]



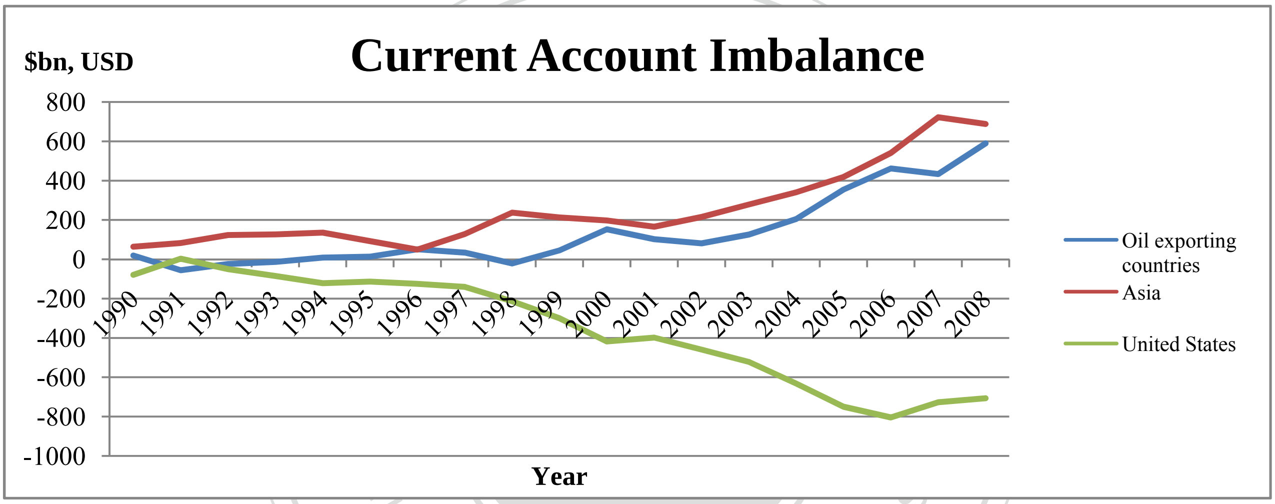
Source: International Financial Service London (IFSL) Research

As Figure 2 shows, the current account deficit of U.S.A. has been increasing since 1991; what the worse is that the deficit was more than 800 billion dollars in 2006, or 6% of

[6] "Sovereign Wealth Funds 2010", International Financial Service London (IFSL) Research, March 2010, p3

American GDP. This huge deficit would be a serious worry for America, and also reflect the increasing current account surplus in Asia and oil-exporting countries. Therefore, due to holding with huge current account surplus, Asian countries and oil-exporting countries have lots of incentives to take advantage of it, and these countries became the main forces to stimulate the fast growing of SWFs.

Figure 2. Current Account Imbalance[7]



Source: IMF, WEO DATA BASE

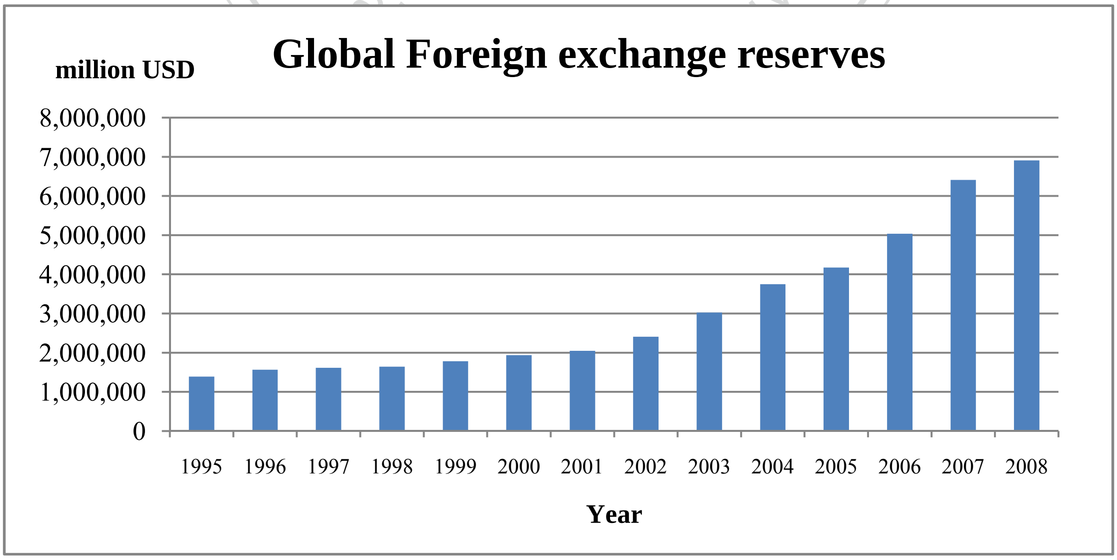
<u>Asian Countries</u>

As Figure 3 shows, the global foreign exchange reserve has been increasing more than three times since 2000, and it almost reached 7000 billion dollars at the end of 2008. This phenomenon is important because the distribution of these foreign exchange reserves is very concentrate to Asian countries.

[7] IMF, WEO DATA BASE. Asian countries are China, Korea, Japan, Taiwan, Hong Kong, Singapore, Thailand, Malaysia, and Vietnam. Oil exporting countries are Saudi Arabia, Russia, Norway, Iran, Iraq, Venezuela, United Arab Emirates, Kuwait, Nigeria, and Algeria.

Table 2 shows the top 10 countries with foreign exchange reserves. It is obvious that China and Japan are the 1st and the 2nd biggest countries holding with foreign reserves (2,399,152 million dollars and 1,053,070 million dollars respectively); Hong Kong and Singapore have the huge percentages of foreign exchange reserves relative to their GDP (122.5% and 115.1% respectively); and 7 of top 10 countries are Asian countries: China, Japan, Taiwan, India, South Korea, Hong Kong, and Singapore. Most of these Asian countries are not natural resources abundant countries (Taiwan, Singapore, Hong Kong, Japan, and Korea); however, they accumulated their wealth through exporting. Holding with enormous foreign exchange reserves, setting up SWF becomes a better way to utilize the capital and seek for better profitability (e.g., CIC in China, KIC in Korea, and Temasek and GIC in Singapore…etc). Therefore, these Asian exporting countries accelerated the growth of SWFs.

Figure 3. Global Foreign Exchange Reserves[8]



Source: IMF, COFER DATA

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[8] IMF, COFER DATA BASE

Table 2. Top 10 countries by foreign exchange reserves[9]

Rank	Country	Foreign Exchange Reserves (millions of USD)	Foreign Exchange Reserves/GDP
1	China	2,399,152 (Dec. 2009)	48.9%
2	Japan	1,053,070(Jan. 2010)	20.3%
3	Russia	439,043(Dec. 2009)	35.0%
4	Taiwan	350,711(Jan. 2010)	91.0%
5	India	283,470(Dec. 2009)	22.8%
6	South Korea	273,694(Jan. 2010)	32.0%
7	Hong Kong	255,816(Dec. 2009)	122.5%
8	Brazil	240,483(Jan. 2010)	14.0%
9	Germany	178,717(Jan. 2010)	5.4%
10	Singapore	187,809(Dec.2009)	115.1%

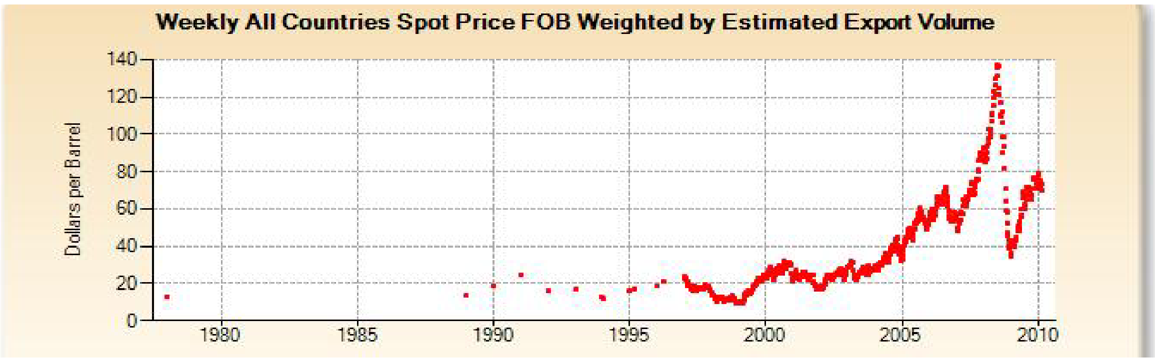
Source: IMF, Central Bank of China and Taiwan

<u>Oil Exporting Countries</u>

For oil exporting countries, the volatility of oil price and the nonrenewable feature of natural resources became the main motive for them to set up SWFs. By establishing SWF, oil exporting countries have more investment choices; they can reduce their reliance on nonrenewable natural resources and stabilize their national income from volatile oil price. As Figure 4 shows, the world crude oil price had been increased dramatically since 2000, and reached the highest price is $137.11 per barrel in July 2008. Hence, oil exporting countries accumulated lots of national wealth during this period and make use of this capital for setting up SWFs. This raise of oil price boosted the rapid growth of SWFs.

9 IMF, The people's bank of China, Central Bank of R.O.C.(Taiwan)

Figure 4. Crude Oil Price[10]



Source: U.S. Energy Information Administration

Since last decade, what attracted the world's attention about the SWFs was the anticipated rate of growth. The combined heft of SWFs is currently estimated to be $3.9 trillion in 2009, or between 1 and 1.5 percent of global asset markets. They have grown at an annual rate of 24 percent over the past five years. The persistence of global macroeconomic imbalances and the inelastic demand and high price of oil lead many analysts to predict an annual 20 percent growth rate over the next decade. The total valuation could range in size from $9 trillion to $16 trillion by 2015, or close to 4 percent of global asset markets. (Daniel W. Drezner, 2008)[11]

Whether this size is large or small depends on what it is compared with. Figure 5 shows the comparison among SWFs and other assets. If one wants to make SWFs appear large, one can compare SWFs' scale to those of Pension Fund and Private Equity Fund. That will be

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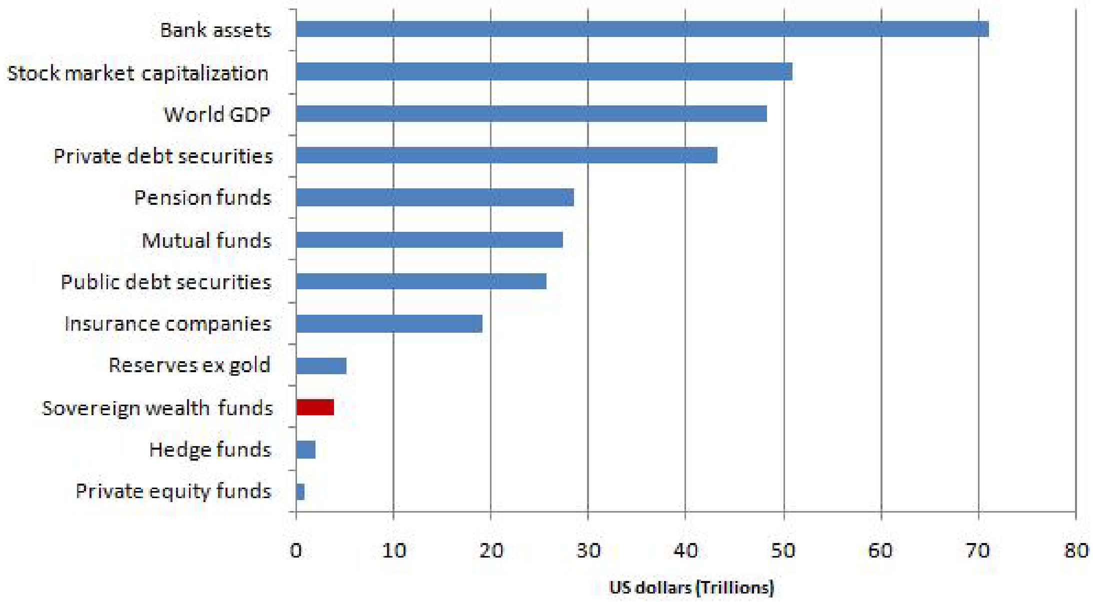
[10] U.S. Energy Information Administration

[11] Daniel W. Drezner, "Sovereign wealth funds and the (in)security of global finance", Journal of International Affairs, Fall/Winter 2008, Vol. 62, No.1.,p 116

$3~$3.9 trillion with SWFs compares to estimated $1.7 trillion with Hedge funds, and $0.7 trillion with Private Equity Fund (IFSL estimate, 2009). On the contrary, if one wants to make SWFs to appear small, one can compare the number with other figures, like the world's GDP (which is around $48 trillion); or note that the $13.9 trillion is only a fraction of the global financial assets, which are roughly $140 trillion in March, 2009($50 trillion reduction from 2008 due to the subprime crisis).

There are two critical points: One is that SWFs are already large enough to be systemically significant. The other is that SWFs are very likely to grow larger with a stunning speed in the future.

Figure 5. Asset Comparison-Investment and Asset Classifications[12]



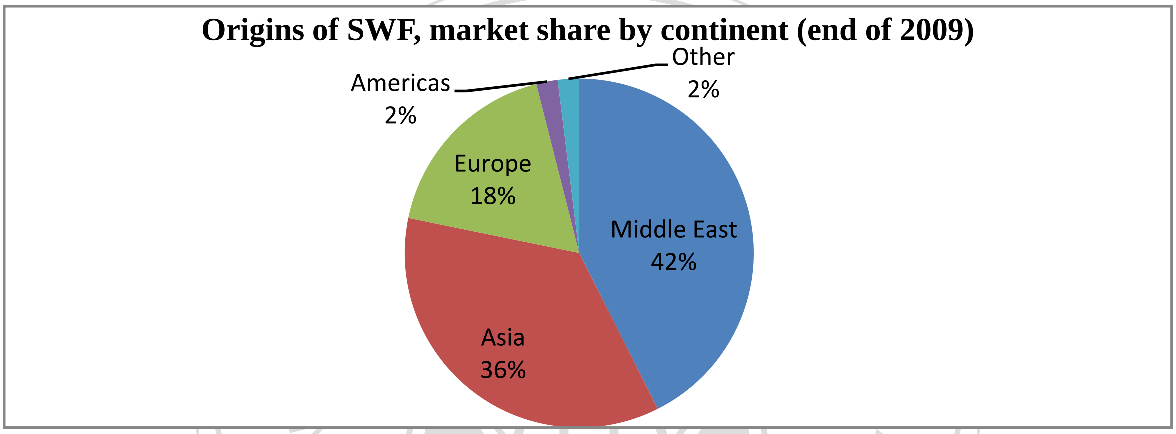
Source: SWF Institute

As Figure 6 shows, till the end of 2009, Middle East countries and Asian countries hold

[12] SWF Institute, http://www.swfinstitute.org/research/assetcomparison.php

over three-quarter of global SWFs' market share (42% and 36% respectively). This distribution means the economic status change is happening now. For the past years, developed countries had always played a dominant role in the world economic growth; however, the developing countries are becoming more and more powerful and influential since they hold the huge capital- SWFs.

Figure 6. SWFs market share by continent[13]



Source: International Financial Service London (IFSL) Research

Until now (2010), there are 59 SWFs which are recognized by SWF Institute, relative only 35 SWFs as 2008. Table 3 indicates the estimates of assets under management for main SWFs. The top 3 SWFs are all funded from oil revenues; the biggest is ADIA of UAE, which is about 16.5% of global SWFs scale; the second biggest is SAMA Foreign Holdings of Saudi Arabia, which is 11.4% of global SWFs scale; and the third one is GPFG of Norway, which is 10%. SWFs in China, Singapore and Hong Kong are funded from foreign exchange reserves;

[13] "Sovereign Wealth Funds 2009", International Financial Service London (IFSL) Research, March 2010, p3

CIC of China is 7.6% of global SWFs scale; the GIC in Singapore is 6.5%; Temasek Holding is 3.2%, and Hong Kong Monetary Authority IP is 3.7%. Kuwait and Russia are 5.3% and 4.4% respectively.

These SWFs (with assets more than 100 billion dollars) gain over 68% of global SWFs assets, and most of them are developing countries, or say, oil-exporting countries and south-east Asian countries.

Table 3.Estimates of Assets Under Management for SWFs[14]

Name of Fund		Assets ($ bn)	Source
UAE	Abu Dhabi Investment Authority (ADIA)	627	Oil
Saudi Arabia	SAMA Foreign Holdings	433	Oil
Norway	Government Pension Fund-Global	380	Oil
China	China Investment Corporation	288.8	Non-commodity
Singapore	Government of Singapore Investment Corporation	247.5	Non-commodity
Kuwait	Kuwait Investment Authority	202	Oil
Russia	Russia National Welfare Fund & Oil Stabilization Fund	168	Oil
Hong Kong	Hong Kong Monetary Authority Investment Portfolio	139.7	Non-commodity
Singapore	Temasek Holdings	122	Non-commodity
Libya	Libyan Investment Corporation	70	Oil
Qatar	Qatar Investment Authority	65	Oil
Australia	Future Fund	49.3	Non-commodity
Algeria	Revenue Regulation Fund	47	Oil
Kazakhstan	Kazakhstan National Fund	38	Oil, Gas, Metals

14 IMF, "Sovereign Wealth Funds—a work agenda", February 29, 2008; SWF Institute

Brunei	Brunei Investment Agency	30	Oil
Korea	Korea Investment Corporation	27	Non-commodity
UAS(Alaska)	Alaska Permanent Fund	26.7	Oil
Malaysia	Khazanah Nasional Berhad	25	Non-commodity
Iran	Oil Stabilization Fund	23	Oil
Chile	Pension Reserve & Social and Economic Stabilization Fund	21.8	Copper

Source: IMG, SWF Institute

To make a summary about the emerging and growth of SWFs: SWFs had been existed in the world since 1950s, but it grew dramatically only during these years (from 2000) due to the increasing oil price and current account imbalance. The SWFs assets scale are estimated to 3.8 trillion in the end of 2009, and over 68% of SWFs are composed of (1) natural resources abundant countries (oil-exporting countries) and (2) exporting countries (Asian developing countries). The distribution of origin countries of SWFs, the government-owned feature of SWFs, and the fast growth rate of SWFs, make it more and more important and grab the world's attention.

3. The Investment policy of SWFs

Generally speaking, the governments usually invest their foreign exchange reserves in safe, low return and low risky portfolio, such as Government Bonds (T-Bond). However, SWFs have different investment attitude even though they are owned by government as well; they can endure more risks and they want to seek better profits. Because SWFs lack transparency, we cannot know exactly the investment policy of each SWF, but we can sum up some common characteristics of SWFs' investment activities. Typically, SWFs (1) adopt a long term investment horizon; (2) use low leverage; (3) have higher risk tolerance; (4) have wide range distribution of portfolio; and (5) choose the investment target which can satisfy their funding purposes or national interests; (6) seek higher expected returns than central bank foreign currency reserves (John Gieve, 2008[15]).

Nevertheless, SWFs have considerable freedom with their assets allocation; hence, these features may differ significantly according to each SWF's different purpose, objectives, and constraints. Take stabilization SWF as example (e.g., oil stabilization SWFs), the purpose of these SWFs is to reduce the impact of short term national liquidity and financing needs (e.g., capital shortage); therefore, they will adopt long term investment horizons.

According to Drezner (2008), the returns of 53 SWFs equity purchases from 1989 to 2008 indicated that on average SWFs' two-year abnormal returns amounted to negative 41 percent. And McKinsey Global Institute also estimates that as of July 2008, SWFs had collectively lost $14 billion from recent investment in the financial sector.[16]

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15 John Gieve, "Sovereign Wealth Funds and Global Imbalance", Bank of England Quarterly Bulletin 2008 Q2, p196

16 Daniel W. Drezner, "Sovereign wealth funds and the (in)security of global finance", Journal of International Affairs, Fall/Winter 2008, Vol. 62, No.1.,p 123

Investment Target

For investment target aspect, SWFs are used to investing overseas, and putting lots of focuses on finance region; besides, the investment attitude was more passive. But this situation has been changing in recent years since the financial crisis in 2007, which hit the performances of SWFs badly. Due to the financial crisis, SWFs became more cautious when doing investment activities. Investments trends of SWFs have been changing in these years and recent transactions suggested that the acquisition would become smaller and more diverse in the coming years.

First, SWFs usually invest overseas, especially focused on developed countries, but currently, they invest domestically. SWFs are used to taking control of companies through cross-border mergers and acquisitions or acquiring monitory stakes; such investments totaled \$187 billion between 1995 and July 2008 (IFSL 2009), and over half of them were in finance sector.

Figure 7 indicates that America is the major target of SWFs investments (\$48,006.00 million dollars), over 44% of top 10 investment targets; and United Kingdom is the 2nd one (\$16,115.53 million dollars), 15% of top 10 investment targets. But since sub-prime crisis, (1) developed countries tightened their capital invested in developing countries (most of them are SWFs countries), and (2) SWFs experienced significant losses from investing foreign companies; the investment trends had gradually changed. SWFs in some oil-exporting countries have switched their focuses from the Western markets to their domestic markets recently. They invested more SWFs in domestic market as a way to inject liquidity domestically and help to revive their local economies.

Second, the target sector of SWFs investment activities was finance, but since the sub-prime crisis, they changed the weights of investment targets. As Figure 8 shows, it was 62% that SWFs invest in finance sector in 2008, but this proportion decreased to 42% in 2009; and SWFs put more weights on other targets such as Services.

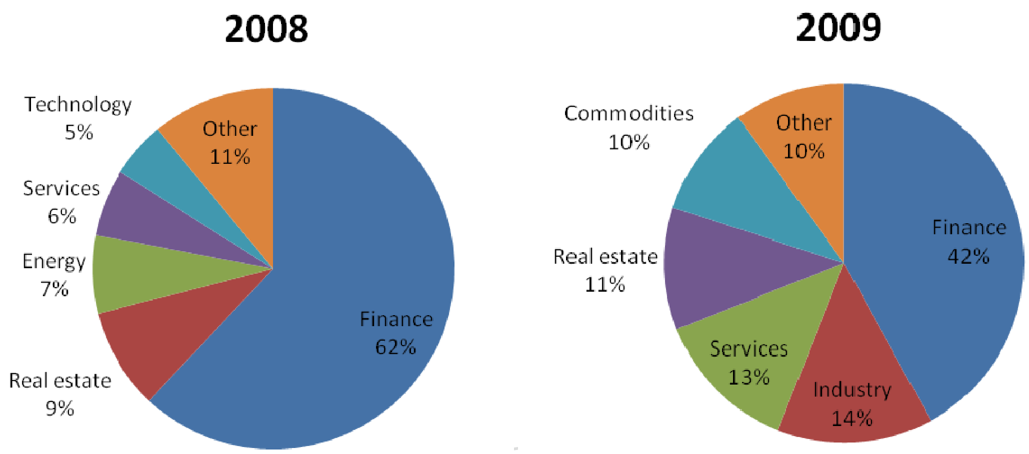
Figure 7. Top Target of SWFs Investments Identified by Dealogic (2000-2008)[17]

Recipient country	Total deal value (dollars in millions)
United States	$48,006.00
United Kingdom	16,115.53
Switzerland	12,121.82
China	11,738.43
France	4,449.79
Thailand	4,267.84
Indonesia	4,170.85
India	3,207.24
Japan	2,050.20
Turkey	1,921.00

Source: United states Government Accountability Office

[17] "Sovereign Wealth Funds", United States Government Accountability Office (GAO) Highlights, September, 2008, 34

Figure 8. SWF Investments by sector[18]



Source: International Financial Service London (IFSL) Research

<u>Strategic Asset Management (SAA) of SWFs</u>

Strategic asset allocation (SAA) reflects the fund's return objective, risk tolerance, and identified constraints (such as investment horizon, financing and liquidity needs, and regulatory requirements). There are two major considerations that play a critical role guiding the allocation and distribution of SWFs assets. One is the accumulation and withdrawal rules regarding the fund's future cash flows where applicable. The other is the fund's objectives (IMF, 2007).

Therefore, different types of SWFs can have different SAA decisions to match their different needs about the constraints and purposes. For example, SWFs in oil-producing countries may invest in assets which are negative correlation to oil prices, like energy stocks, to reduce the variance of government revenue. Take stabilization funds for instance, these funds are generally more conservative about their SAA decision (short-term investments)

[18] "Sovereign Wealth Funds 2009", International Financial Service London (IFSL) Research, March 2009 & 2010

since they are typically designed to insulate the trade shocks and to meet contingent financing requirements. Under this consideration, they have to satisfy the safety and liquidity requirement first, and this requirement results the conservative SAA decision. Take savings funds as the opposite example, this type SWFs are more likely to have long-term objectives, and may be better able to accommodate short-term volatility in asset returns.

To summarize, the information of investment policies of SWFs are limited, but we can come up to some common features: SWFs (1) have long term investment horizon; (2) use low leverage; (3) have higher risk tolerance; (4) have wide range distribution of portfolio; and (5) choose the investment target which can satisfy their funding purposes or national interests; (6) seek higher expected returns than central bank foreign currency reserves. However, according to different purposes of different SWFs, each SWF has its different SAA decision to match its different needs about the constraints and purposes.

4. The Impact that SWFs bring

One of the reasons why SWFs play a more and more critical role and attracted everyone's attention in global market is the impacts they bring. The influence followed by SWFs can be roughly divided into two angles, advantages and disadvantages. Just like a good quote from French journalist Christian Chavagneux:

"*Like Janus, sovereign funds have a double face. Like the Roman god, they look* *simultaneously to East and to the West. It is said that his reign was peaceful and that he was a god of peace. But specialists do not forget to recall that he was also the guardian of the gate of hell. (Chavagneux 2008: 12: translation)*[19]".

Advantages

(1) Financial Stabilization

Lots of commentators emphasize the key function that SWFs bring, the stabilizing role in global financial markets. First, due to the long-term investment strategy of SWFs, they have no imminent call on their assets. Therefore they can stick to their investment objectives longer during the market downturn or even against the market trend. In this point, they can accommodate the short-term volatility. Second, because of SWFs diversified investment allocation, SWFs can dampen the asset price volatility and lower liquidity risk; at the same time, they can also contribute to greater global market efficiency.

(2) Increase global capital liquidity

The capital of SWFs is mainly from trade revenues. Through international trade, the capital flows from developed countries (mostly from U.S.A.) to developing countries (mostly are oil-exporting countries and Asian exporting countries). After that, this capital flows to other countries over the world (mostly are western countries) via SWFs' investment activities.

[19] Benjamin J. Cohen, "Sovereign Wealth Funds And National Security: The Great Tradeoff", Department of Political Science University of California, August 20,2008, p.6

Through this capital flow circle, the existence of SWFs increases the global capital liquidity. At the same time, because of the frequently capital shifting between Middle East (oil-exporting area) and Asia, SWFs would also stimulate the growing of Asian financial market, Middle East and its neighbors (e.g., Egypt and Jordan).

(3) Abundant capital injection

The growing size of SWFs provides an abundant capital injection. If the capital injects into SWFs' original countries, it can promote domestic economy growth and developments. On the other side, if the capital injects overseas, this abundant capital played as a Savior role to rescue those almost got bankrupt banks and financial institutions. The following table (Table 4) arranges the major investments (capital injections to those almost bell-out financial institutions from this sub-prime crisis) of SWFs from 2007 to 2008. During this short period (2007 ~ beginning of 2008), at least 5 financial institutes (Blackstone Group, Carlyle Group, Citigroup, Morgan Stanley, and Merrill Lynch) accept capital injection help from SWFs. Without SWFs, the bankruptcy of financial institution from financial crisis would even worse.

Table 4. SWFs major investments in financial institutes, from 2007 to 2008[20]

Announcement date	Nature of announcement	Description
5/20/2007	Blackstone Group announces a $3 billion deal with the China Investment Corporation.	In addition to raising capital through their IPO, the Blackstone Group sold to the China Investment Corporation 101,334,234 non-voting common units at a purchase price of $29.605 per unit on 6/27/2007. The price was set to be 95.5 percent of the initial public offering price. The number of shares issued was restricted so that the fund's ownership interest would not exceed 10 percent at the time of the transaction. The fund is required to hold the common stock units for at least four years. Concurrently with this transaction, Blackstone raised an additional $4 billion in capital with a public offering.
9/20/2007	Carlyle Group announces a $1.35 billion deal with the Mubadala Development Company.	As part of adding to their capital base and expanding their business, the Carlyle Group entered a deal with the United Arab Emirate's Mubadala Development Company for $1.35 billion. This transaction granted the Mubadala Development Company a 7.5 percent ownership percentage in the Carlyle Group. The ownership stake was based on both parties' agreed-upon $20 billion valuation of the firm with a liquidity discount of 10%. The rest of the firm's owners consist of the Managing Directors at Carlyle and CalPERS, the California Public Employees Retirement Systems, which owns approximately 5 percent.
11/26/2007	Citigroup announces a $7.5 billion deal with the Abu Dhabi Investment Authority.	As part of strengthening their capital base and expanding their participation in alternative investments and emerging markets financial services areas, Citigroup entered into a deal with the Abu Dhabi Authority for $7.5 billion worth of Upper DECS equity units The Equity Units consist of four series of trust preferred securities and four series of forward purchase contracts to acquire Citigroup common stock. Each Equity Unit will pay a fixed annual rate of 11 percent, payable quarterly, consisting of a payment on each series of trust preferred securities and a contract payment on the purchase contracts. The common stock purchase contracts will settle on dates ranging from March 15, 2010 to September 15, 2011 (Citigroup 10-K, p. 111). In conjunction with this transaction, the SWF agreed not to own more than a 4.9 percent ownership interest in Citigroup. In addition, they are prohibited from selling their equity units until December 3, 2009.
12/19/2007	Morgan Stanley announces a $5.579 billion deal with China Investment Corporation.	Morgan Stanley entered into a transaction with the China Investment Corp. for $5.579 billion of equity units. The equity units consist of an undivided beneficial ownership interest in three series of trust preferred securities. The interest rate on the equity units is 9 percent. China Investment Corp.'s ownership percentage is restricted to 9.9 percent.
12/24/2007	Merrill Lynch announces a $6.2 billion deal with Temasek Holdings and Davis Selected Advisors.	As part of raising capital in order to strengthen the firm's balance sheet, Merrill Lynch entered into a deal with Singapore's Temasek Holdings and the United States' Davis Selected Advisors for $5 billion and $1.2 billion respectively. Temasek Holdings initially purchased 91.7 million shares of common stock for $48 per share and then exercised its option to purchase at additional $600 million in common stock at the same price. According to the agreement, Temasek's ownership position was required to be less than 10 percent for a specified period of time. Meanwhile, Davis Selected Advisors purchased 25 million shares at $48.
1/15/2008	Citigroup announces a $12.5 billion deal with the Government of Singapore Investment Corp, the Kuwait Investment Authority, Capital Research Global Investors, and other private investors.	In order to strengthen its capital base to allow it to refocus on earnings and earnings growth, Citigroup issued a $12.5 billion private offering of 7 percent, Non-Cumulative Convertible Preferred Securities. There is a six month restriction on the sale of the preferred stock.
1/15/2008	Merrill Lynch announces a $6.6 billion deal with the Korean Investment Corporation, Kuwait Investment Authority, Mizuho Corporate Bank, and other private investors.	As part of raising capital to strengthen its balance sheet and increase its strategic opportunities around the world, Merrill Lynch entered into a deal with a series of investors to sell an aggregate of 66,000 shares of newly issued 9 percent Non-Voting Mandatory Convertible Non-Cumulative Preferred Stock. The investors are prohibited from selling the stock for 1 year after the transaction close.

Source: United states Government Accountability Office

[20] "Sovereign Wealth Funds", United States Government Accountability Office (GAO) Highlights, September, 2008, p44,45

Disadvantages

(1) Exacerbating market volatility

With large size and vague investment purpose, SWFs are just like a knife with two blades. Without the accountability to publish their investment strategies and objectives, they can alter their SWFs purposes and change their structures sharply for any reason, and this action may lead to exacerbate market volatility in some assets price. In other words, they have the potential to cause market disturbance by shifting amounts of capital from one asset to another.

Besides, due to lacking of transparency, SWFs may attract another concern: unfair competitiveness of information gathering. For instance, the governments may take advantage of the ownership by SWFs to learn how other companies operate, and use this information to bolster rival state-owned enterprises. Another possible situation is that the governments may use SWFs' advantage to gather information that is not available for normal private companies or investors.

(2) National security

The national security issue is the most controversial when talking about SWFs. Like private equity funds and pension funds, SWFs have no accountability to publish their information to public, including their SWF's structure, investment policy, objectives, and investment purpose…etc. But unlike PE funds and pension funds, SWFs are owned by countries. The "government-owned" characteristic makes SWFs home countries have potential to influence the policies and capabilities of recipient countries. The most direct way can be to get the direct ownership and control the strategic and sensitive industry or critical infrastructure in recipient countries.

Practically, the national security concerns are truly considerable. SWF's home countries have potential to seek strategic interests rather than maximize financial returns through investments. As Tonelson (2008) mentioned, "If, for example, the Chinese government held market-makers, and if our nation's current period of financial weakness persists, how willing would Washington be to stand up to Beijing in a Taiwan Straits crisis?"[21]

There are some examples to manifest this political concern. (1) China agreed to buy $300 million Costa Rican bonds as an incentive for Costa Rica to drop its diplomatic recognition of Taiwan in favor of China instead; (2) Temasek Holdings' purchased of the telecom businesses of Thai Prime Minister Thaksin Shinawatra[22]; (3) Norway's SWF has a policy against investment in certain armory manufacturers, and in 2005, that fund sold its stake in Wal-Mart, citing human rights concerns.[23]

According to Drezner (2008), "there is indeed a strong relationship between SWF

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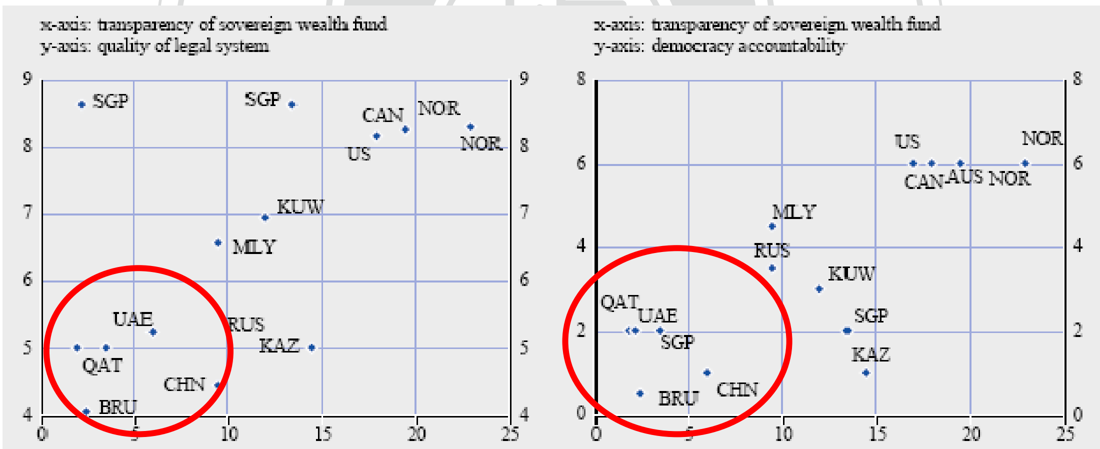
[21] United States House of Representatives, U.S.-China Economic and Security Review Commission," Hearing on the Implications of Sovereign Wealth Fund Investment for National Security", testimony be Alan Tonelson, 110th Cong., 2nd sess., 7 February 2008

[22] January 23, 2006, the Shinawatra-family sold its remaining 49.6% stake in Shin Corporation, a leading Thai telecommunications company

[23] Anna L. Paulson, "Raising capital: The role of sovereign wealth funds", Chicago Fed Letter, No. 258, January 2009

transparency and the political characteristics of the home country. The transparency of government investment vehicles is closely and positively correlated with the home country's rule of law and democratic accountability."[24] Figure 9 (Truman 2007) shows the relationship between SWFs' transparency and home countries' democracy and quality of legal system. It is obvious that the SWFs with low transparency also have low quality of legal system and low democracy, such as UAE, Qatar, China, and Brunei. This phenomenon would make SWFs recipients worry about national security while they accept the investment from low transparency SWFs.

Figure 9. Transparency and Institutional development[25]



Source: Truman (2007), International, Country Risk Guide

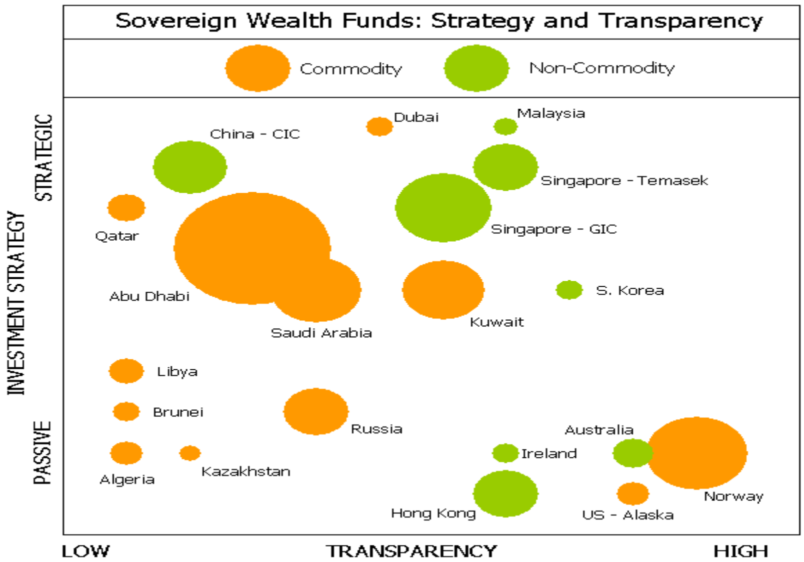
Figure 10 is the coordinate axis which exhibits the top 20 SWFs' transparency and investment strategies. It is obvious that SWFs in developed countries are more willing to disclose their SWFs' information. And from this axis, what should be highlighted are those

[24] Daniel W. Drezner, "Sovereign wealth funds and the (in)security of global finance", Journal of International Affairs, Fall/Winter 2008, Vol. 62, No.1.,p 122

[25] Roland Beck and Michael Fidora, "The impact of sovereign wealth funds on global financial markets", European Central Bank Occasional Paper Series, No 91 , July 2008, p13

SWFs in the upper left corner of the location. Those SWFs such as Saudi Arabia, CIC, and ADIA, have more strategic investment policies, but with low-transparency. These SWFs are more easily to trigger political (national security) concerns.

Figure 10. Sovereign Wealth Transparency & Investment Strategy[26]



Source: Sovereign Wealth Fund Institute

Most SWFs' home countries are either classified as emerging or developing country with low-democracy accountability. Without disclosure obligation, the investors (SWFs countries government) have the potential to invest in some sensitive industries, like energy industry, telecommunications industry, or military industry. On the other hand, the recipient countries may also doubt the "real purpose behind the actions". For recipient countries, it is a dilemma to accept SWFs. Although they really need SWFs to inject ample capitals into their domestic market; they are worried about exposing their national security under SWFs' actions.

[26] SWF Institute, http://www.swfinstitute.org/research/strategytransparency.php

If the national security concerns cannot be eliminated, it is possible to cause protectionism triggered by recipient countries, especially developed countries. It also makes developed countries fall into a dilemma situation. For decades, the world economic rule is "free market", that is also what developed countries advocate extremely, but now, the situation reverses. If SWFs really trigger the next national financial protectionism wave, the effect they bring is the overall change of global economic rule in a dramatic way.

To make a simple conclusion from above, the impacts that SWFs bring can be generalized as below:

Advantage	**Disadvantage**
Financial Stabilization	Exacerbating market volatility
Increase global capital liquidity	National security
Abundant capital injection	

SWFs can stabilize global financial markets due to their long term investment horizon; increase global capital liquidity via their wide range of investment objectives; provide an abundant capital injection to those in need. However, they may also exacerbate the global financial market to become more volatile since they can change their investment activities without any reasons; trigger the national financial protectionism and national security concerns, as most big SWFs lack transparency about their operation.

5. The management and regulation of SWFs

There is no precise model to manage SWFs now, but there are two regular ways be seen.

One way is to be managed by the central bank directly; the other way is to set up a new investment entity insulated from the central bank to take charge of SWFs. The advantage of setting up SWFs under the central bank is that it can strengthen the function of the central bank. Like HKMA (Hong Kong Monetary Authority), it sets up two different investment portfolios under the central bank; according to different purpose, risk, and horizon, to meet the needs of liquidity and higher investment returns purpose.

The advantage of setting up an independent investment entity for SWFs is that it can divide the different roles from the owner of SWFs and the owner of foreign exchange reserves strictly. This kind of management can be classified into two types. One is to make a special law to regulate SWFs, like what KIC (Koran Investment Corporation) did. Korean Congress promulgates Korean Investment Corporation Act to establish KIC aiming to manage their SWF. There are precise regulations in this Act to stipulate how KIC operate. The other type is to manage SWFs by normal Company Law and be monitored by financial inspection authority, like GIC and Temasek Holdings in Singapore. These two institutions were established by Singapore Ministry of Finance, but their operation is insulated from the government. The government only has the rights to monitor the operation and receive the annual report, but no rights to intervene the companies' business decisions.

Although lots of commentators and recipient countries fear that the national security may be threatened by SWFs' home countries, there is no direct evidence to proof the SWFs home countries have the political investment strategy till now. At this moment, the most important thing is to find the balance between western calls for transparency and the funds' insistence on fair treatment. Not only the recipient countries but also the home countries should step back since that- if SWF is really economically driven, both sides would benefit from the investment activities. Here are some responses and the relative regulations for SWFs.

5.1. Principles for both sides

Both SWFs themselves and the countries in which SWFs invest in have responsibility to resolve the dilemma. According to Kimmitt (2008), there are 4 principles for recipient countries and five principles for SWFs home countries to achieve this goal.

Principles for recipient country

(1) Avoid protectionism

Countries should not raise counterproductive barriers for investments. No matter the investors have the controlling of national firms or not, erecting the investment obstacle is never a friendly behavior.

(2) Uphold fair and transparent investment frameworks

Investment policies, processes, and regulations should be public clearly, no vagueness, no discriminating, and should be predictable, especially the rules which relate to national security considerations.

(3) Respect investor decisions

Recipient countries should respect investors' decisions. Do not ask investors or intervene how to do their SAA decisions, especially those decisions are relative to investor's gains and losses. The rights how to allocate the investment objectives should belong to investors.

(4) Treat investors equally

Any relative regulations and laws for investors should not be discriminating, not only between domestic and foreign investors but also between different foreign investors.

<u>Principles for home country</u>

(1) Invest commercially, not politically

SWFs investment decisions should be purely based on economic consideration rather than political or foreign policy purpose. In order to eliminate recipient countries' fear, investors should incorporate this principle into their basic investment management policies.

(2) Convey world-class institutional integrity

Because of SWFs' huge size and state-owned characteristic, obscure investment policy would raise recipient countries' worries. Therefore SWFs should be transparent about their investment policies, including their purpose, objectives, governance structure, and internal controls.

(3) Compete fairly with the private sector

Since SWFs have more potential to get the competitive advantage information than private entities, they should be careful not to take advantage of this information to erect unfair competing environment.

(4) Promote international financial stability

As public-sector entities which can benefit from healthy global markets, SWFs have the responsibility to promote the international financial stability. Especially during times of financial crisis, SWFs should try to do something to sustain the regular operation of global economic market.

(5) Respect host-country rules

SWFs should comply with all regulation established by countries which invest in and co-operate what the host-country rules ask, such as disclosing required information.

5.2. Linaburg-Maduell Transparency Index[27]

The Linaburg-Maduell Transparency Index was developed by Carl Linaburg and Michael Maduell at the Sovereign Wealth Fund Institute. This index is a rating system for measuring transparency of sovereign wealth funds. SWFs, as a state-owned investment vehicle, will receive more unethical concerns and suspicions than private investors from public. Therefore, there are calls to make a regulation or rating system aiming at those SWFs with large opaque or non-transparency in order to show their investment intentions.

[27] SWF institute, http://www.swfinstitute.org/research/transparencyindex.php

The index is based on ten principles that illustrate SWFs transparency to the public. Table 5 presents the principles, and each principle adds one point of transparency when calculating the index rating. The minimum rating a fund can receive is a 1, but according to the recommends of Sovereign Wealth Fund Institute, the minimum rating to ensure SWFs have adequate transparency is 8. This index is still an ongoing project in Sovereign Wealth Fund Institute, and the ratings for each SWF may change as funds publish additional information.

Table 5. Principles of the Linaburg-Maduell Transparency Index[28]

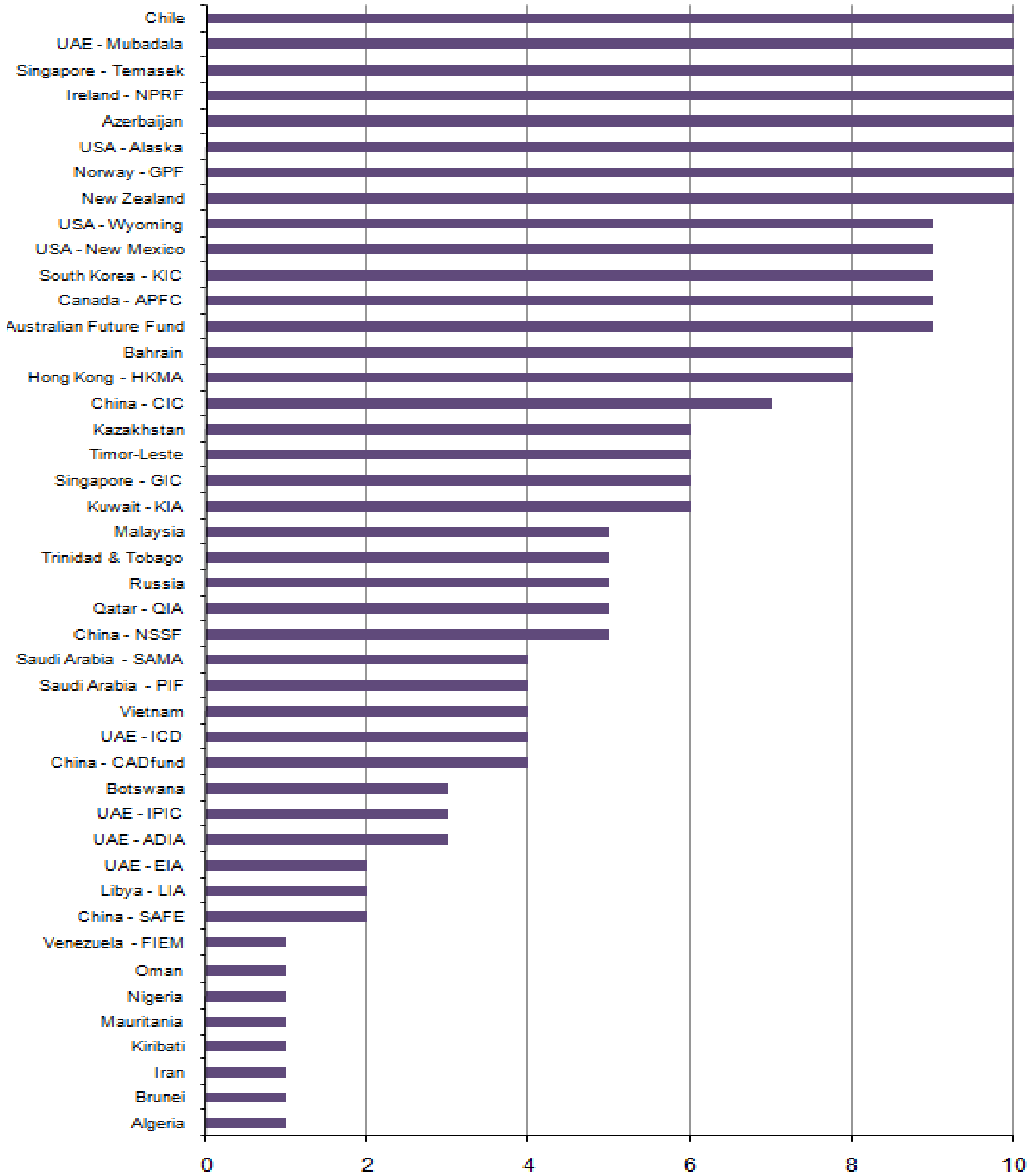
Point	Principles of the Linaburg-Maduell Transparency Index
+1	Fund provides history including reason for creation, origins of wealth, and government ownership structure
+1	Fund provides up-to-date independently audited annual reports
+1	Fund provides ownership percentage of company holdings, and geographic locations of holdings
+1	Fund provides total portfolio market value, returns, and management compensation
+1	Fund provides guidelines in reference to ethical standards, investment policies, and enforcer of guidelines
+1	Fund provides clear strategies and objectives
+1	If applicable, the fund clearly identifies subsidiaries and contact information
+1	If applicable, the fund identifies external managers
+1	Fund manages its own web site
+1	Fund provides main office location address and contact information such as telephone and fax

Source: SWF Institute

The following figure (Figure 11) is the latest release (4^{st} quarter in 2009) for LMTI ratings. From the figure, most of the SWFs home countries with grades over 8 are high quality legal system, or high democracy countries. Like Singapore, Ireland, USA, Norway, New Zealand, Canada, and Australian.

[28] SWF institute, http://www.swfinstitute.org/research/transparencyindex.php

Figure 11. 4Q09 Linaburg-Maduell Transparency Index ratings released[29]



Source: SWF institute

5.3. Legislation by advanced economies

Because of the political fears brought by SWFs and no particular regulation until the publishing of GAPP (Generally Accepted Principles and Practices) in 2008, many advanced

[29] SWF institute, http://www.swfinstitute.org/research/transparencyindex.php

economies issued or revised their laws which are related to foreign investment activities. The most famous is the FINSA (Foreign Investment and National Security Act) promulgated by United States.

The United States Congress passed the FINSA in 2007 and its responsibility is to monitor the acquisitions by government-owned entities, mandate the involvement of high-level officials in CFIUS[30] , and report to Congress.

The other developed countries also did some legislative actions to respond. Table 6 collects those legislations issued by France, Japan, Canada, Australia, Germany, and United States. Those legislations are established for recipient countries' national security concerns and make precise ordinance for foreign investors.

Table 6. Legislation actions by developed countries[31]

Country	Year	Legislation Description
U.S.A	Oct.2007	Passed FINSA to do the scrutiny of acquisitions by government-owned investments.
France	Dec.2005	Published a new ordinance mandating prior authorization for foreign investments that may affect "national defense interests."
Japan	Aug.2007	Emended its inward investments regulation to address the words "changed security environment surrounding Japan and trends in international investment activity."
Canada	Dec.2007	Published "clarifications" of its rules on foreign investment for state-owned enterprises under the Investment Canada Act.
Australia	Feb.2008	Announce six principles that govern reviews of foreign investments by SWFs and other government-linked entities.
Germany	Apr.2008	Published new legislation authorizing policy makers to pre-examine selected foreign investments, especially those coming from SWFs.

Source: Department of Political Science

[30] CFIUS, an interagency body created in 1975, which was led by Treasury Department and its responsibility is to monitor and review incoming investments

[31] Benjamin J. Cohen, "Sovereign Wealth Funds And National Security: The Great Tradeoff", Department of Political Science University of California, August 20,2008, p.9

5.4. International Regulation Institutes

Since there is no particular rule for SWFs actions, international organizations are asked to do something about SWFs regulation. IMF and OECD got a strong pressure from the finance ministers and central bank chiefs of G-7 to identify the "best practices" for all the SWFs players (including both sides). After the summit meeting of the Group of Eight in June 2007, IMF and OECD start trying to develop related guidelines. The IMF would take charge of the behavior of SWFs, and the OECD would manage guideline for recipient countries.

The International Working Group of Sovereign Wealth Funds (IWG) was established in a meeting with SWFs countries attended during April 30 to May 1st, 2008. IWG comprises representatives from 26 IMF member countries with SWFs, and it would be initiated, facilitated and coordinated by IMF. The aim for IWG is to develop a generally accepted principles and practices (GAPP) for SWFs home countries to reflect their investment practices and objectives properly. And finally, the GAPP was published in October 2008 and it became the main and formal principles about SWFs in the world.

At the beginning in PART II of GAPP, it indicates that the principles and practices are based on a voluntary code of conduct, and hope to alleviate recipient countries' fears that SWFs might operate in political purpose. The followings are the simple introduction about the guidelines and purpose of GAPP[32]:

[32] Source are all from "Sovereign Wealth Funds Generally Accepted Principles and Practices- Santiago Principles"

Guiding principles of GAPP

(1) Help to maintain a stable global financial system and free flow of capital and investment.

(2) Comply with all applicable regulatory and disclosure requirements in the countries where the funds invest.

(3) Invest on the basic consideration of economic and financial risk and return.

(4) Create and maintain a transparent and sound governance structure that provides for adequate operational controls, risk management, and accountability.

Purposes of GAPP

(1) Identify the framework of generally accepted principles and practices that reflect proper governance, accountability arrangements, and the conduct of investment practices by SWFs on a prudent and sound basis.

(2) Help to improve both the recipient and home countries' understanding of SWFs as economically oriented entities.

(3) Stabilize the global financial system, reduce the protectionism, and maintain a stable and open investment surrounding.

Summing up the management and regulation about SWFs; there are two common ways to manage SWFs: one is to set up SWFs under central bank; the other is to establish another independent institution to manage SWFs. The advantage of the prior way is to strengthen the function of central bank; the advantage of the latter one is to divide the different ownership of SWFs' capital and foreign exchange reserves. With regard to the regulation aspects, there are lots of principles suggested by commentators, and those principles are based on respect, indiscriminate, commercial oriented criteria. Linaburg-Maduell Transparency Index was developed by SWF Institute, and the minimum rating to ensure SWFs have adequate transparency is recommended to be over 8. GAPP is the newest and most formal principle which is published by IWG. Its purpose is to identify the generally accepted principle about SWFs; improve the relationship between SWFs' home countries and recipient countries, and stabilize the global financial system.

III. Methodology

According to Yin (1994), it was recommended to use case-study protocol as part of a carefully designed research project that would include the following sections:

- Overview of the project (project objectives and case study issues)
- Field procedures (credentials and access to sites)
- Questions (specific questions that the investigator must keep in mind during data collection)
- Guide for the report (outline, format for the narrative)

Our study theme "Whether Taiwan is appropriate to establish SWF?" conforms to Yin's case-study principles. Besides, in order to discuss whether Taiwan should establish SWF or not, it is essential to research some existing benchmarking of SWFs. Via analyzing the countries backgrounds, funding purpose, operations and managements of each SWFs; it is hoped to gain some useful information to certify the appropriateness for Taiwan to set up SWF. Consequently, I decided to use case-study approach as my research methodology.

According to the literature review, I can summarize six important criteria to analyze each SWF: Background, Funding Purpose, Scale, Source, Investment Policy, and Governance. Therefore, in this chapter, there are six famous SWFs chosen and were analyzed according to the same critical criteria. The principles for choosing SWFs are their significance, size, visibility, and their country background. Hence, GIC, Singapore Temasek, CIC, ADIA, Norway GPF, and KIC were picked from various SWFs worldwide as the content for the case-study.

Singapore, Korea, and Taiwan were three of Four Asian Tigers. These three countries have similar background: small territory and barren of natural resources, but won the active financial market and had an amazing economic booming before. Therefore, GIC, Singapore Temasek and KIC were picked here to investigate how Singapore and Korea operate their SWF. Besides, Temasek Holdings has the best investment performance among other SWFs during the past years, so it is also worth to study how Singapore manages their two SWFs.

CIC was picked here not only because China and Taiwan have the most closed relationship compared to other countries, but also CIC was the newest and the fastest growing SWF. Although China has plentiful natural resources, CIC is mainly funded by foreign exchange reserves since China holds the biggest foreign exchange reserves in the world; and this funding way is what Taiwan government thinking about.

ADIA and Norway GPF were picked here because they are the oldest and the most typical SWFs in the world; especially Norway GPF, it exerts the biggest efforts on information disclosure among all the SWFs in the world, and gains the least controversy on investment activities. Norway and UAE are natural resource abundant countries, and both of them are funded by exporting oil revenues. These two countries background are totally different from Taiwan and Asian SWFs home countries, but we can still get some valuable information to learn via studying their operation process.

It is expected that the results can be a reference for Taiwan government to decide whether Taiwan is appropriate to set up SWF or not, and what Taiwan can benefit or harm from it.

A. Singapore – Government of Singapore Investment Corporation (GIC)

Background

Since 1970s., Singapore government had accumulated huge foreign reserves and high national savings. Therefore, the Singapore government decided to make use of this money. The government wanted to manage the excess reserves more efficiently and actively, and hoped to facilitate the country's economy by this way as well. On 22 May 1981, the Government of Singapore Investment Corporation (GIC) was incorporated to fulfill this goal.

Purpose and Intention

1. Find a better way to manage Singapore's foreign reserves for a higher return within acceptable risk limits over the long term.
2. Enhance and preserve Singapore government's global purchasing power.

Scale

Current scale: (as March 2008)

1. Over 100 billion U.S. dollars.
2. Invest in more than 40 markets worldwide.
3. 8 offices located in the key financial capitals worldwide as networks.

Source

Basically, there are three source for GIC, and the first two are the main sources:

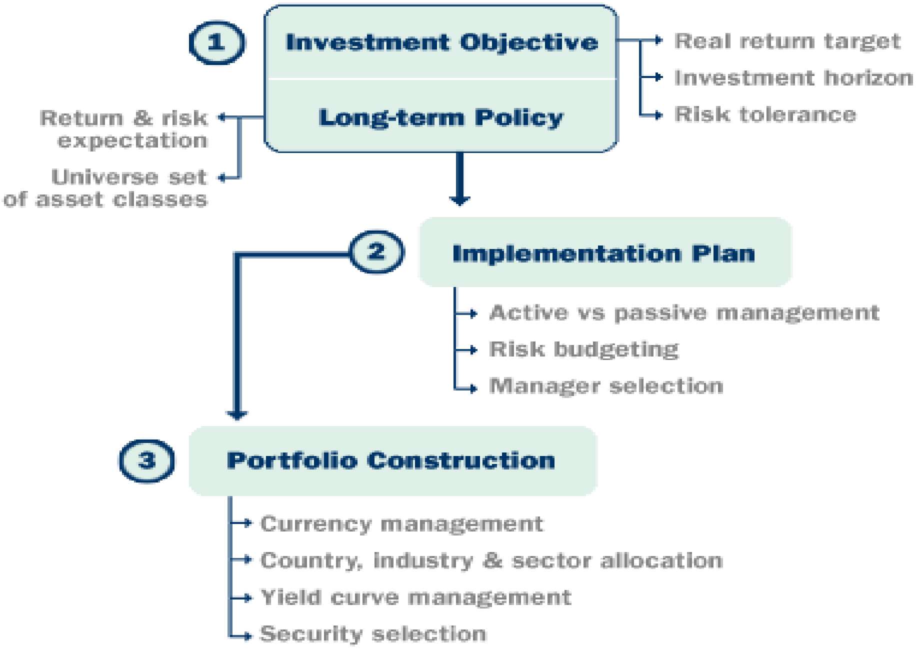
1. National savings (main)
2. Foreign reserves (main)
3. Investment returns by GIC

Investment Policy

The investment of GIC is globally and well diversified by investing in multiple asset classes and regions. There are 3 levels of investment decisions, as shown in Figure 12, to help accessing GIC's purpose:

Step 1, the long-term allocation decision is based on the clients' (government) risk tolerance, investment objectives, time horizon, and the return expectations of asset class. After that, GIC would manage on how to implement the mix policy, including the proportion of funds, the active or passive managing way, and the type of investment strategies, risk capital allocation, and the manager selection. In the last step, GIC would make portfolio construction and decisions, which includes the currency management, allocation decision, and others.

Figure 12. Three levels of investment decision of GIC[33]



Source: GIC website

The investment objectives of GIC is comprehensive, including equities, fixed income, foreign exchange, commodities, money markets, alternative investments, real estate, private equity and infrastructure. And those investment portfolios are managed by 3 subsidiaries: GIC Asset Management Private Ltd, GIC Real Estate Private Ltd, and GIC Special Investment Private Ltd. Each subsidiary operates independently and has its own authority to oversee the operations.

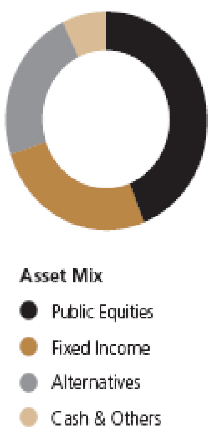
GIC Asset Management Private Ltd takes charge of the investment in public markets. It can be organized into 3 departments: Equities, External Managers, and Fixed Income Currency Commodity. GIC Real Estate Private Ltd takes charge of the investment in real estate. It is one of the top 10 global real estate investment firms. Its investments include

[33] GIC website, http://www.gic.com.sg/aboutus_invest.htm

traditional private real estate, public equities, and real estate vehicles. GIC Special Investment Private Ltd takes charge of private equity investment. Its mission is to become one of the world's biggest and experienced private equity investors. Its investment strategy is to select and cultivate the best performing private equity and venture capital funds. The objectives it invests in are top global, regional, country focus, sector focus, and special situation funds.

The charts and table following are the assets allocation classified by class and region. The biggest part of asset class invested is the Public Equities (44%). For the geographical distribution, America and Europe are still the main targets (40% and 35% respectively).

Figure 13.The actual asset class distribution of the portfolio as of 31 March 2008[34]



		%	%
Public Equities	Developed Markets	34	44
	Emerging Markets	10	
Fixed Income	Nominal Bonds	20	26
	Inflation-Linked Bonds	6	
Alternatives	Real Estate	10	23
	Private Equity, Venture Capital & Infrastructure	8	
	Absolute Return Strategies	3	
	Natural Resources	2	
Cash & Others		7	7
Total		**100**	**100**

Source: GIC "Report on the Management of the Government's Portfolio for the Year 2007/08"

[34] "Report on the Management of the Government's Portfolio for the Year 2007/08",GIC, pp 11

Figure 14.The geographical distribution of the portfolio as of 31 March 2008[35]

		%	%
Americas	United States	34	40
	Others	6	
Europe	United Kingdom	8	35
	France	5	
	Germany	3	
	Ireland	3	
	Italy	3	
	Switzerland	3	
	Others	10	
Asia	Japan	11	23
	China/Hong Kong	4	
	South Korea	2	
	Taiwan	2	
	Others	4	
Australasia	Australia	2	2
Total		**100**	**100**

Source: GIC "Report on the Management of the Government's Portfolio for the Year 2007/08"

From Table 7, it is obvious that the highlights of GIC's investment industries are financials and real estate. There are 5 financial and 5 real estate transactions among those major investments.

35 "Report on the Management of the Government's Portfolio for the Year 2007/08",GIC, pp 11

Table 7. GIC's major direct foreign investments till 2008[36]

Company	Country	Industry	% Ownership	*Comments*
Beijing Capital International Airport Co	China		21.1%	
Gravity Co Ltd - Dep Rcpt	South Korea	Industrials	18.5%	
Beijing Capital Land Ltd	China	Financials	16.2%	
Kingsoft Corporation	Hong Kong	Software	15.4%	
Thakral Holdings Group	Australia	Financials	13.9%	
AEI	United States	Energy	11%	
Brixton	United Kingdom	Real Estate	10%	GICS London - Subsidiary
Li Ning Co Ltd	Hong Kong	Consumer Goods	10.0%	
Rreef China Commercial Trust	Hong Kong	Financials	9.9%	
Shanghai Prime Machinery Co Ltd	China	Industrials	9.0%	
Dev Property Development Plc	United Kingdom		8.6%	GICS London - Subsidiary
Bengang Steel Plates Co Ltd	China	Steel	8.2%	
Citic 1616 Holdings Ltd	Hong Kong	Telecommunications	8.0%	
UBS	Switzerland	Financials	7.9%	Subprime Infusion - $9.7 Billion
GPT Group Ltd	Australia	Real Estate	7.8%	
Syniverse Holdings Inc	United States	Technology	7.6%	
British Land Co Plc	United Kingdom	Real Estate	7.1%	
Sinopec Shanghai Petrochemical Co Ltd	China	Oil	7.0%	
Dongfang Electric Corp Ltd	China	Energy	6.9%	
Anant Raj Industries Ltd	India	Infrastructure	6.3%	
China National Building Material Co Ltd	China	Materials	6.2%	
Lonking Holdings Ltd	China	Manufacturing	6.1%	
Lianhua Supermarket Holdings Co Ltd	China	Retail	6.0%	
Champion Real Estate Investment Trust	Hong Kong	Financials	5.7%	
Tripod Technology Corp	Taiwan	Electronic Manufacturing	5.6%	
Liberty International Plc	United Kingdom	Real Estate	5.0%	GICS London - Subsidiary
Great Portland Estates Plc	United Kingdom	Real Estate	4.95%	GICS London - Subsidiary

Source: SWF Institute

<u>Governance</u>

GIC was established as a private company under the Companies' Act, and the ownership was held wholly by Singapore Government. GIC itself does not own the funds but manage them for its clients (The Government of Singapore and the Monetary Authority).

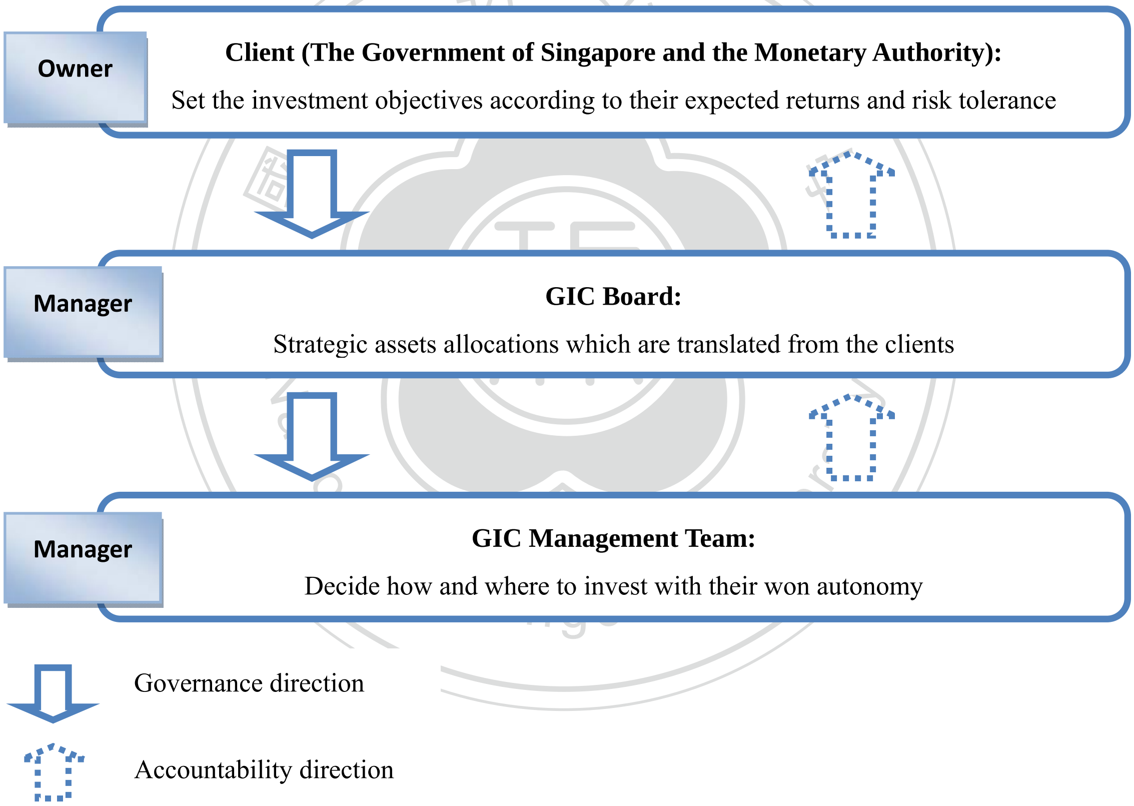
As Figure 15 shows, the governance accountability of GIC is up to down: the clients would set the investment objectives for GIC; and GIC Board is given the autonomy to decide

[36] SWF institute, http://www.swfinstitute.org/fund/gic.php

the SAA, which is translated from the clients' (the government) investment objectives; and the management team will accomplish the left investing tasks.

On the other hand, the accountability system in GIC is in the bottom-up style: GIC has accountability to its clients and the clients have the rights to monitor GIC's overall performance.

Figure 15. The flow chart of GIC governance accountability[37]



Source: GIC website

GIC was designated a "Fifth Schedule"[38] company under the Constitution of the Republic of Singapore since it manages the country's foreign reserves. Being a Fifth

[37] GIC website, http://www.gic.com.sg/aboutus_invest.htm

Schedule company, GIC operates under the purview of Singapore's President in several key areas such as the appointment or removal of GIC's Directors and Group Management Directors. Simultaneously, GIC needs to submit its financial statements and budget proposal to President for approval. In addition, GIC is also audited by the Auditor-General regularly.

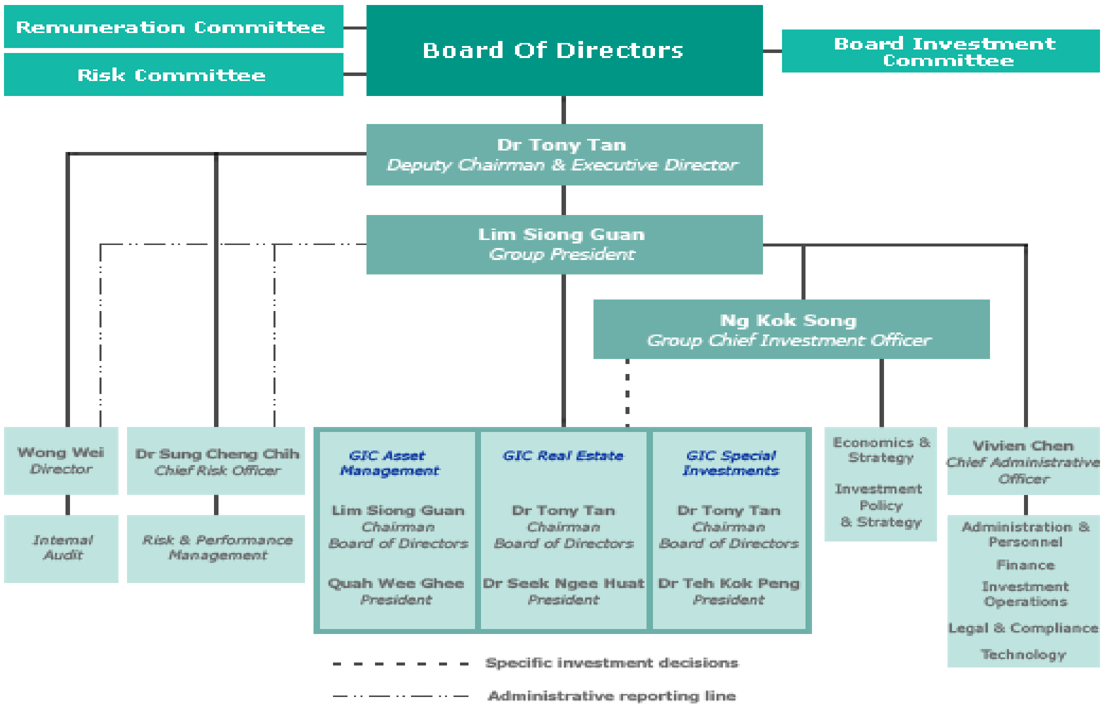
As Figure 16 shows, there are three additional committees formed independently at the group level in order to coordinate and review the entire group, ensuring the GIC's operations are fiscal and ethical. These three committees look into issues that involve people, risk, policy, planning and operations; in the meantime, they report to the Group Executive Committee:

Committee	Descriptions
Board Investment Committee	Oversee GIC's performance and manage the implementation of investment policies.
Risk Committee	Provide oversight about the risks issues in GIC group like reviewing the appropriateness and effectiveness of the risk management.
Remuneration Committee	Oversee GIC's remuneration policies and executive compensation.

The Committees' members and the managers in GIC are composed by scholars and government officers. Although the members in manage levels are kind of government concerns, the criteria that GIC hire staff is according to their performance. Hence GIC recruit the talents from all around the world, but most of them are Singaporeans.

[38] In 1991, the Singapore Constitution was amended to provide for the direct election of the President of the Republic of Singapore. This constitutional amendment gives the President an independent role as an elected Head of State to safeguard Singapore's critical assets and past reserves. After that, the companies that should obey this amended Constitution were designated the "Fifth Schedule Company".

Figure 16. The GIC Organizational structure[39]



Source: GIC website

39 GIC website, http://www.gic.com.sg/aboutus_structure.htm

B. Singapore - Temasek Holdings

Background

From 1960, Government of Singapore already had direct stakes in local industries. These companies became government linked companies (GLC). Because Singapore Government is the market rule maker, it is not appropriate for the government to play the market regulation role at the same time. Therefore, Singapore Government needed a private company to own and manage the investments that were held previously by Ministry of Finance of Singapore in order to ensure those investments are made by a commercial basis. Due to this consideration, the Temasek Holdings was incorporated in 1974, and it can also let the government to focus on the economy in the larger interest.

Purpose and Intention

1. Create and maximize long-term investment returns as an active investor and shareholder of blue-chip enterprises.
2. Contribute to the country and communities as a responsible corporate citizen through supporting efforts to develop a better environment for people, like establishing research institutions, scholarships, and other non-profit philanthropic organizations.

Scale

Start with an initial portfolio of US $134 million.

Source

1. Dividends received from portfolio companies.

2. Divestment proceeds.

3. Commercial borrowings.

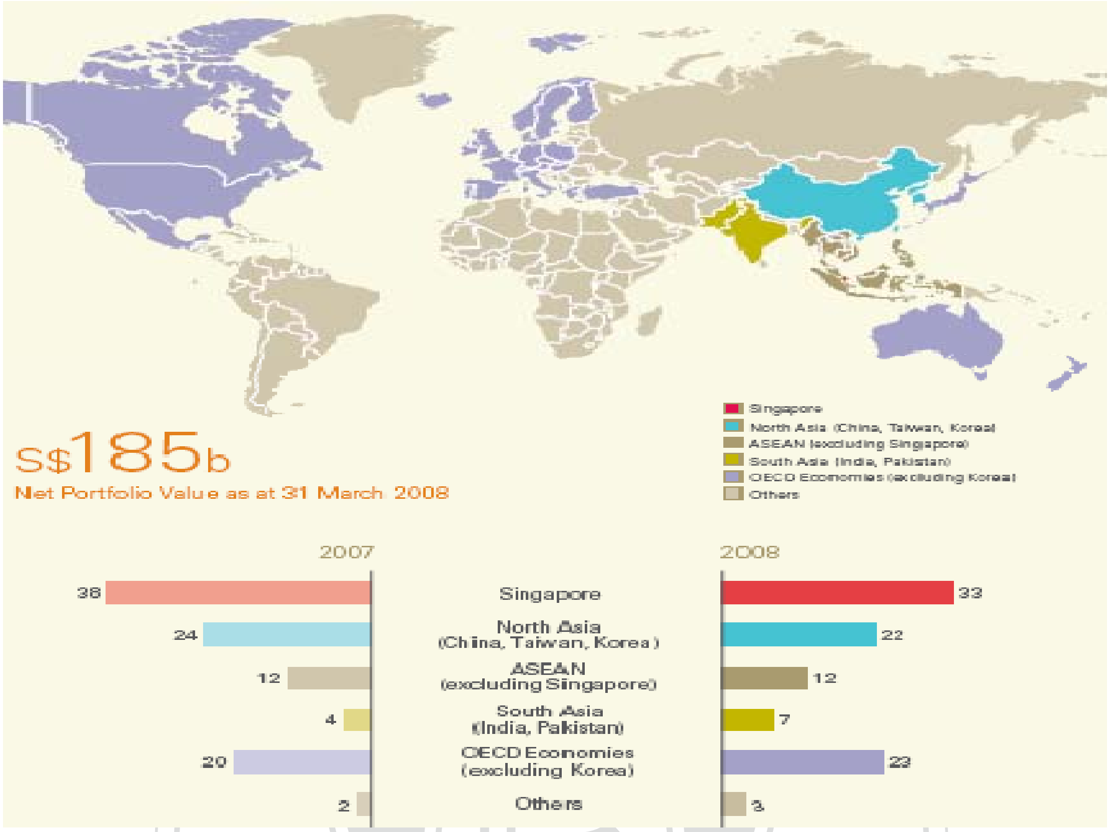
4. The maiden Yankee bond (issued in 2005).

5. Seldom asset injections from Temasek Holdings' shareholder, the Ministry of Finance.

Investment Policy

Temaske Holding adapts a long-term investment policy based on commercial basis. Figure 17 indicates that the investment locations are focused primarily on Singapore (33%), North Asia (22%), and OECD(23%) economics. Within the Asia exposure, the investment in AA/AAA-rated and OECD economies is about 62%.

Figure 17. Portfolio by Geography (%)[40]



Source: Temasek Review 2008

Temasek Holdings investments are focused on four themes:

1. Transforming economies

Temasek Holdings would invest in those industry sectors that are connected with and helpful about the economic transformation of Singapore. Take the deal of selling Tuas Power Ltd. (the electric company which generates one third of the electricity needs of Singapore) for example. Temasek Holdings sold Tuas Power for S$4.2 billion to SinoSing Power in March 2008. This deal represented that Temasek Holdings spent 14 years to restructure power

[40] Temasek Review,2008, p12

generating industry of Singapore successfully. By being cooperated with relevant Singapore government agency closely, Temasek Holdings played an important role to institutionalize a sturdy and sustainable market regulatory framework for the electricity market.

2. Growing middle class

Temasek Holdings would invest in companies and industries whose growth is stimulated by the increasing purchasing power of the middle class. Take the investments in Tiger Airways and Orangestar investment Holdings (the low-cost airlines) for example. This action represented the air travel needs for emerging Asian middle class.

3. Depending comparative advantages

Temasek Holdings would invest in companies with potential comparative advantages. Like the investments in Interpharma Investment Ltd., the largest pharmaceutical distribution company in Asia. The intention behind this action is the increasing significance of healthcare and pharmaceuticals in Asia

4. Emerging champions

Temasek Holdings would invest in companies with best performance whether in industry or globally.

From the inception till March 2008, the total shareholder return is more than 18% compounded annually. Besides, Temasek Holdings also got AAA/Aaa corporate credit rating by Standard & Poor’s and Moody’s respectively.

The investment portfolio of Temasek covers various industries, including: Banking and Financial Services, Telecommunications and Media, Transportation and Logistics, Real Estate, Infrastructure, Engineering and Technology, Energy and Resources, Bioscience and Healthcare, Consumer and Lifestyle, and others. However, the Financial Services and Telecommunications & Media sectors are more than half of the investment portfolio due to both objectives fit Temasek Holdings' investment themes. (Both sectors will benefit Singaporean when Asia economic transforming with its growing middle-class demands)

As Table 8 shows, about half of Temasek Holdings major direct foreign investments are in financial fields. Especially for the deals of PT Bank Danamon Indonesia, Temask owned more than half ownership in this company.

Table 8. Temasek Holdings' major direct foreign investments[41]

Company	Country	Industry	% Ownership	*Comments*
PT Bank Danamon Indonesia	Indonesia	Financials	59%	Fullerton Financial Holdings
Global Crossing Ltd	Bermuda	Telecommunications	53.8%	Temasek Holdings Pte. Ltd
Shin Corporation	Thailand	Telecommunications	42%	Aspen Holdings
PT Bank Internasional Indonesia	Indonesia	Financials	34%	Fullerton Financial Holdings
Lai Fung Holdings Ltd	Hong Kong	Financials	20%	
Standard Chartered Plc	United Kingdom	Financials	19.3%	Fullerton Financial Holdings
Bank of China Ltd	China	Financials	15.51%	Fullerton Financial Holdings
ABC Learning Centres	Australia		14.66%	
Olam International Limited	Singapore	Agriculture	13.76%	Temasek Holdings Pte. Ltd
Sino Forest Corp	Canada	Basic Materials	13.2%	Temasek Holdings Pte. Ltd
Vical Inc	United States	Health Care	12.71%	
Equinix Inc	United States	Technology	11.88%	
Citic Resources Holdings Limited	Hong Kong	Industrials	10.79%	
Hana Financial Group Inc	South Korea	Financials	8.73%	Fullerton Financial Holdings
Intercell AG	Austria	Technology	8.70%	
ICICI Bank Ltd	India	Financials	8.5%	Fullerton Financial Holdings
M Dream Inworld Ltd	Hong Kong	Technology	8.18%	
Air China	China	Consumer Services	6.94%	
Xinyu Hengdeli Holdings Ltd	Hong Kong	Consumer Goods	6.32%	
China Construction Bank	China	Financials	6%	Fullerton Financial Holdings
E.Sun FHC	Taiwan	Financials	6%	Fullerton Financial Holdings

Source: SWF Institute

[41] SWF institute, http://www.swfinstitute.org/fund/temasek.php

Overall, Temasek Holdings can be regarded as a strategic SWF. It plays as a medium for government to adjust the industry policy. Temasek Holdings would withdraw from the industries without strategic intentions and without the needs for government intervening (private enterprises can operate well by themselves). On the contrary, Temasek Holdings would like to play a pioneer role entering the industries with higher risk, more strategic, and less mature. Whenever the industries grow to be mature enough for private company entering, Temasek Holdings would withdraw from the sectors gradually.

Governance

Temasek Holdings was designated a "Fifth Schedule" company under the Constitution of the Republic of Singapore, and operated under all other applicable laws and regulations governing companies incorporated in Singapore. Therefore, Temasek Holdings should operate under the purview of Singapore's President in several key areas such as the appointment or removal of Board members and the CEO and Temasek Holdings cannot draw on or diminish past reserves without the President's concurrence. The President of Singapore act as a check to institutionalize the role of Temasek's Board in safeguarding Temasek's past reserves; simultaneously, the CEO and the Chairman have the accountability to President.

The Board of Director is largely consisted of non-executive independent private company leaders, and the remainders are the officials. The officials represent the concerns about country's benefits and strategies; the members with business background represent the ensuring of the efficient operation in competitive market. The Board has full operation autonomy, provides overall guidance and policy directions to the management on a commercial principles, and pursues maximize long-term investment return. Neither the President nor the Singapore Government can direct the Board's business decisions.

The Board is assisted by the Executive Committee (EXCO), the Audit Committee (AC), and the Leadership Development & Compensation Committee (LDCC).

Executive Committee takes charge of formulating guidelines and policies to manage Temasek Holdings' capital resources efficiently. Audit Committee takes charge of reviewing the systems and processes to ensure the proper direct of company business. Leadership Development & Compensation Committee takes charge of establishing policies and providing guidance in areas of succession plans for key positions, leadership, Board appointments, and compensation…etc.

C. China - China Investment Corporation (CIC)

Background

Holding the biggest amounts of foreign reserves in the world, China wants to find a better way to manage reserves. This emerging country wants to take advantage of the reserves for higher investment returns, better risk diversification, and less reliance for US currency. Therefore, China Investment Corporation was established in September 2007 under the Company Law of the People's Republic of China. As for the previous institution, Central Huijin Investment Limited, a state-owned institution, was merged into CIC as a wholly-owned subsidiary company.

Purpose and Intention

1. Seek and maximize long-term investment returns under the acceptable risk tolerance as an active investor for its shareholder's benefit.

2. Improve the governance and help the operations of key state-owned financial institutions.

Scale

Start with the capital of US200billion.

Source

Foreign reserves. Ministry of Finance issued Treasury bonds to purchase foreign reserves. (Therefore, CIC has to use its investment returns to pay dividends to the State Council, as the cost of special treasury bonds.)

Investment Policy

CIC has full autonomy in making investments decisions which are based on its assessment of objectives. It committed to maintain a strict commercial orientation about the investment policy, and all the actions are driven by purely economic and financial purpose. Some of CIC's fund money is used for helping certain State Owned Enterprises in China.

From the investment policy disclosed by CIC, its investment objectives are not limited to geography, industries, or asset classes;, and most of its investment portfolios are equity, fixed income and alternative investments (including hedge funds, private equity, commodities, real estates, and etc.). Regarding the investment geography concept, CIC plans to invest in both developed and emerging markets.

From the recently investment activities made by CIC (see Table 9), it appears that the objectives are concentrated on financial industry, or say, the global financial institutes. However, CIC only bought little ownership in these transactions: 17.2% in Teck Resources

Limited, and 9.9% in Blackstone Group and Morgan Stanley. For private company investment, CIC bought more than half (around80%) of ownership.

Table 9. CIC's major direct foreign investments (Public)[42]

Company	Country	Industry	% Ownership	*Comments*
Teck Resources Limited	Canada	Mining	17.2%	
Blackstone Group	United States	Financials	9.9%	9.9% was a $3 Billion Purchase, Set to purchase up to 12.5%
Morgan Stanley	United States	Financials	9.9%	
Visa	United States	Financials		Around $100 Million from the IPO

(Private)

Company	Country	Type	% Ownership	*Comments*
JC Flowers PE Fund	United States	PE Fund	~80%	$4 Billion US PE Fund

Source: SWF Institute

Governance

CIC has the accountability to the State Council of the People's Republic of China; and furthermore, to the citizens of the People's Republic of China.

CIC commits to maintain the highest professional and ethical standards in operation and implement these standards in governance, accountability, and transparency. CIC assert that they don't intervene the operation, ownership, or controlling in companies that they invest in.

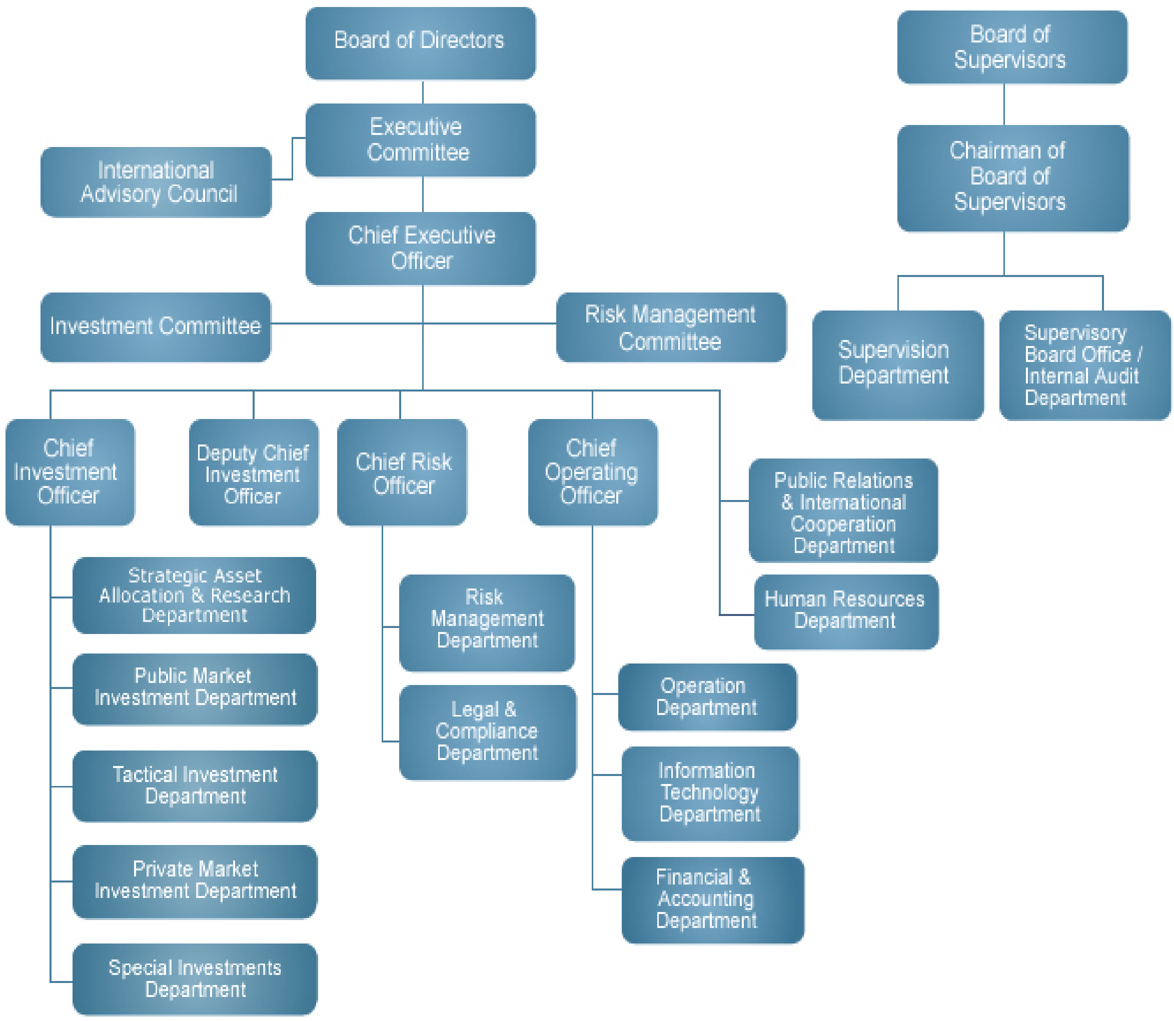
Figure 18 shows the organizational structure of CIC. The Board of Directors has decision making authority, and it won't be influenced by the government. There are two committees and one council established to enhance the operation of CIC, but their roles are

42 SWF institute, http://www.swfinstitute.org/fund/cic.php

more like to assist the execution running well, rather than an independent department to enhance and supervise the justice of investment decisions. About the supervision system, CIC has another department that is independent from the Board of Directors Executive

Under CIC, there is a subsidiary company, Central Huijin Investment Ltd, which is 100% owned by CIC. It was set up to invest in key state-owned financial institutions in China as a capital supporter, but does not intervene any other commercial activities.

Figure 18. CIC's Organizational Structure[43]



Source: CIC website

[43] CIC website, http://www.china-inv.cn/cicen/governance/organizational.html

D. Norway – Government Pension Fund-Global (GPF)

Background

Norway has been always well-known of its abundant hydrocarbon resources. It is the largest oil reserves country in Western Europe and the world's fourth largest oil exporter in 2008. It is predicted that Norway's oil revenue is almost in its peak period and will decline over the next decades. Due to this consideration, in 1990, the Norwegian government created State Petroleum Fund (SPF) to manage Norway's petroleum wealth in a sustainable manner to eliminate the disrupting effects of highly fluctuating oil prices and to ensure their generations can share the wealth as well. SPF was activated in 1995 and was renamed the Government Pension Fund – Global (GPF) under the administration of Norges Bank Investment Management (NBIM), a division of the Norwegian Central Bank.

Purpose and Intention

One purpose of GPF is to manage Norway's petroleum revenue in order to help safeguard and build financial wealth for the future generations. Besides, this fund was also set up to meet Norway's rising national expenditure on pensions and health care in the coming years. The other purpose is government wants to promote the living standards for the citizens; through the ownership that GPF owned, it can encourage high ethical and environment standards at the companies that GPF invests in.

Scale

The current market value is NOK 2076 billion (about US$327 billion, on 31 March 2009).

Source

The source of GPF is from the Norway's petroleum revenue, which is mainly from taxes of companies, payments for licenses to explore, and the State's Direct Financial Interest and dividends from the partial ownership of StatoiHydro (an integrated technology-based international energy company primarily focused on upstream oil and gas operations).

Investment Policy

NBIM adopted a high-return and moderate-risk tolerance within a long-term investment policy. When choosing the investments companies, those chosen companies have to abide by the "ethical guidelines", which is based on company behavior and published by Council of Ethics. If the investee companies operated in conflict with the guidelines, the Fund will consider withdrawing the money. The ethical guidelines are based on two premises:

1. The investee companies should help to benefit future generations by promoting a sustainable development in the economic, environment, and society.

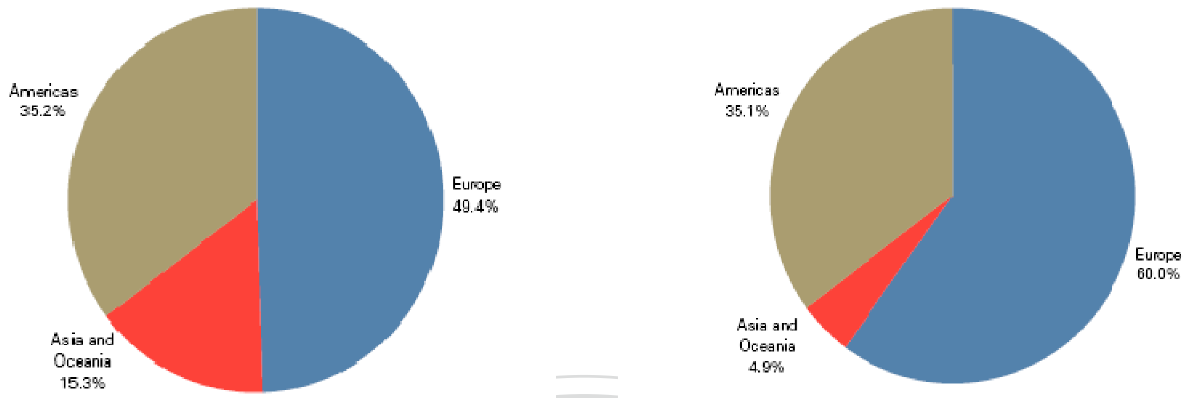
2. GPF should not invest with an unacceptable risk or contribute to unethical acts or omissions.

GPF's portfolio is divided into equities and fixed income instruments, and they use external management organizations to manage parts of their investment portfolio. This fund has a benchmark while choosing the investment objectives. The benchmark is composed of stocks in the FTSE equity index in 46 developed and emerging countries and of the Barclays Global Aggregate bond index in the currencies of 21 countries, and its asset classes and regional weightings will change as the changes of the market prices for the securities in the benchmark. According to the first quarter 2009 report, the investment benchmark portfolio was 40% and 60% for fixed income and equities respectively. They currently do not invest in private equity.

As Figure 19 shows, the biggest part of the investment targets is focusing on Western Countries (Europe, and then the America); These regions are more developed economic regions rather than emerging regions .The equities accounts for 60% of the Fund's strategic benchmark portfolio, and its geographic distribution was: Europe 50%, Americas 35%, and Asia and Oceania 15%. The fixed income instrument accounts for 40 percents of the Fund's strategic benchmark portfolio, and its geography distribution was: Europe 60%, Americas 35%, and Asian and Oceania 5%.

Figure 19. GPF's regional breakdown of the portfolio on 31 March 2009[44]

Equity (60% of all investments) **Fixed income (40% of all investments)**



Source: NBIM Quarterly Report First quarter 2009

From Table 10, we can see that the government bonds and securitized debt are the main segments of GPF's fixed income portfolio (45% and 30.2% respectively). Furthermore, more than half of GPF's bonds and fixed income holdings are AAA credit ratings. These investment phenomena all reflect GPF has relative risk-averse investment tendency. Also, from the Table 11, it indicates that GPF's major holdings of the equity portfolio were focus on industries of what Norway is good at--energy & petrochemical industry, telecommunication industry, and health care industry.

[44] NBIM Quarterly Report, Government Pension Fund – Global, First quarter 2009, p9

Table 10. Fixed income portfolio on 31 March 2009 by credit rating[45]

Percentage of fixed income portfolio	Aaa	Aa	A	Baa	Ba	Lower	No rating
Government and government-related bonds	32.7	9.3	2.1	0.6	0.1	0.0	0.2
Inflation-linked bonds	4.2	2.4	0.6	-	-	-	-
Corporate bonds	0.5	3.5	7.5	5.4	0.4	0.2	0.1
Securitised debt	27.5	0.9	0.6	0.2	0.2	0.6	0.2
Total bonds and other fixed income instruments	64.9	16.1	10.9	6.1	0.7	0.8	0.5

Source: NBIM Quarterly Report First quarter 2009

Table 11. GPF's largest equity holdings on 31 March 2009[46]

Company	Country	Industry	Holding in millions of NOK
Royal Dutch Shell plc	UK	Energy and Petrochemicals	14,550
Nestle SA	Switzerland	Food producer	14,043
BP plc	UK	Energy	13,221
Total SA	France	Oil	11,874
Exxon Mobil Corporation	US	Oil and Gas	11,057
Roche Holding AG	Switzerland	Health care	10,470
Vodafone Group plc	UK	Telecommunication	10,375
Telefonica SA	Spain	Telecommunication	9,550
Novartis AG	Switzerland	Pharmaceutical & Health care	8,961
GlaxoSmithKline plc	UK	Health care	8,265

Source: NBIM Quarterly Report First quarter 2009

45 NBIM Quarterly Report, Government Pension Fund – Global, First quarter 2009, p13
46 NBIM Quarterly Report, Government Pension Fund – Global, First quarter 2009, p9

Governance

The Ministry of Finance has delegated the operational management of GPF's international assets to NBIM, a part of the Norwegian Central Bank. The NBIM exercise its ownership rights based on the UN Global Compact and the OECD Guidelines for Corporate Governance and Multinational Corporations with two key principles: openness and transparency.

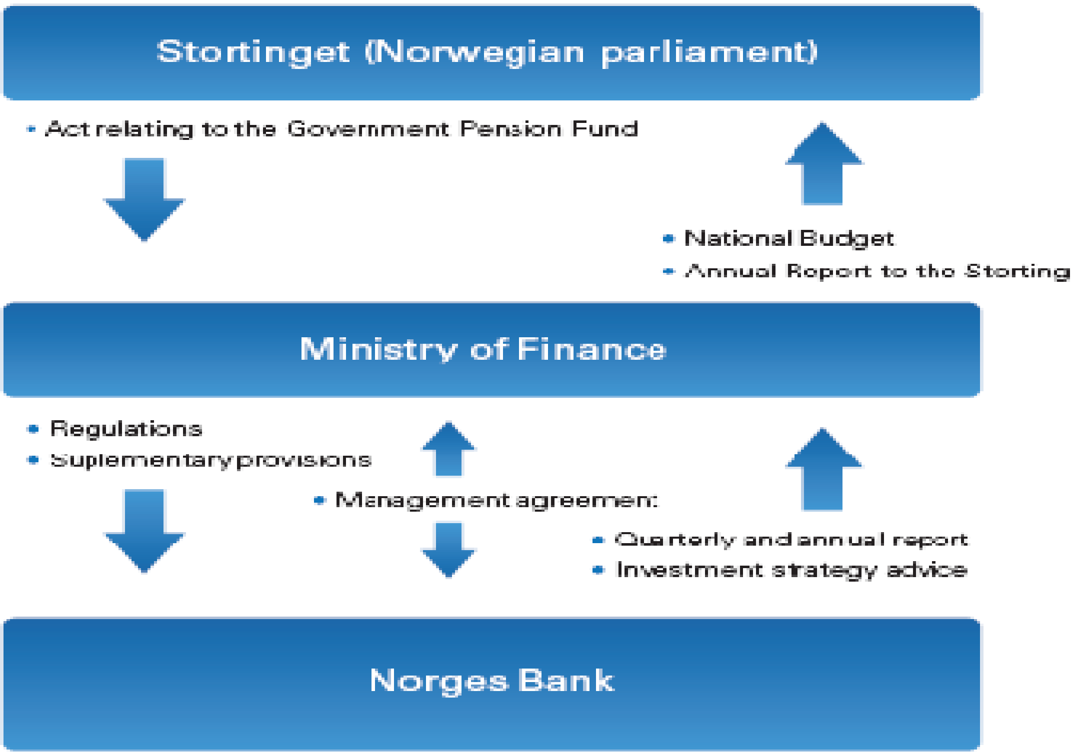
Figure 20 represents the delegation and accountability relationship between each related institutions:

The Norwegian Parliament laid down the framework of the fund in Government Pension Fund Act, and The Ministry of Finance takes charge of administration job. The Ministry of Finance will set the main rule and the ethical guidelines for the fund's investments in regulation and supplementary provisions. The operation of GPF has been delegated to Norges Bank, (or say, NBIM more specifically). The Executive Board of Norges Bank will define the long term investment strategy and the portfolio benchmark, and NBIM is responsible for implementing this strategy and management. There is a management agreement between The Ministry of Finance and NBIM to regulate their role: client and operational manager respectively.

In 2007, the Supervisory Council of Norges Bank had an agreement with accountancy firm Deloitte AS on financial auditing of the GPF. After that, Deloitte and Central Bank

Audit have to submit a separate audit statement in the financial report to Norges Bank, and present in a note to Norges Bank's annual financial statements. Norges Bank will submit this quarterly and annual report and the investment strategy advices to the Ministry of Finance. And the Ministry of Finance has the accountability to report to Stortinget.

Figure 20. The delegation relationship of GPF[47]



Source: NBIM Quarterly Report 2008

47 NBIM Quarterly Report 2008, Government Pension Fund – Global, p7

E. Abu Dhabi Investment Authority (ADIA)

Background

Due to the oil crisis in 1973, oil exporter countries accumulated abundant of oil revenues, and Abu Dhabi is one of them. Considering the large amounts of financial surplus from oil revenue and the concern of decreasing petroleum resources, Sheikh Zayed bin Sultan al-Nahyan, the founder of UAE, established the Abu Dhabi Investment Authority in 1976 to manage and maintain the prosperity for future generations of the Emirate of Abu Dhabi.

Purpose and Intention

Safeguard and maintain the current and future wealth of the Emirate of Abu Dhabi by investing government's surpluses across various asset classes and regional locations.

Scale

US$875billion (till February 2008)

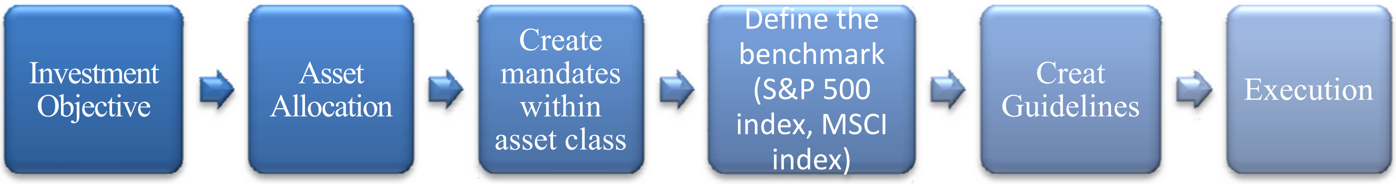
Sources

The source of the fund is from financial surplus (the oil revenues), specifically from the Abu Dhabi National Oil Company and the dividends from its subsidiaries.

Investment Policy

Figure 21 indicates the investment process of ADIA:

Figure 21. ADIA investment process[48]



Source: AIDA website

ADIA has always adopted a low-profile investment strategy based on economic and long-term return concerns. Its portfolio is globally diversified across regions and asset classes, including public listed equities, fixed income, real estate, and private equity. ADIA would not take an active management or any intervene about the investee companies that ADIA invested in. Recently, ADIA has not only focused on developed countries, but also taken interest in emerging markets, like China and India. About 75% of AIDA's management assets are administered by external managers, and 60% of those assets are passively managed by tracking indexed funds.

Table 12 shows the major investment made by ADIA. From the information, it is obviously that ADIA has slants toward investing in financial industry.

Table 12. Direct Foreign Investment (Public)[49]

Company	Country	Industry	% Ownership	*Comments*
Eastern European Trust Plc	United Kingdom	Trust Company	16.0%	ADIC (SWE)
Macquarie International Infrastructure Fund Ltd	Bermuda	Financials	9.8%	ADIC (SWE)
Egyptian Financial Group Hermes Holding Company	Egypt	Financials	8.3%	
Suez Cement Company	Egypt	Industrials	7.6%	
Ziopharm Oncology Inc	United States	Technology	5.1%	Procific (SWE)
Citigroup	United States	Financials	4.9%	Subprime Bailout
Toll Brothers	United States	Real Estate		

Source: SWF Institute

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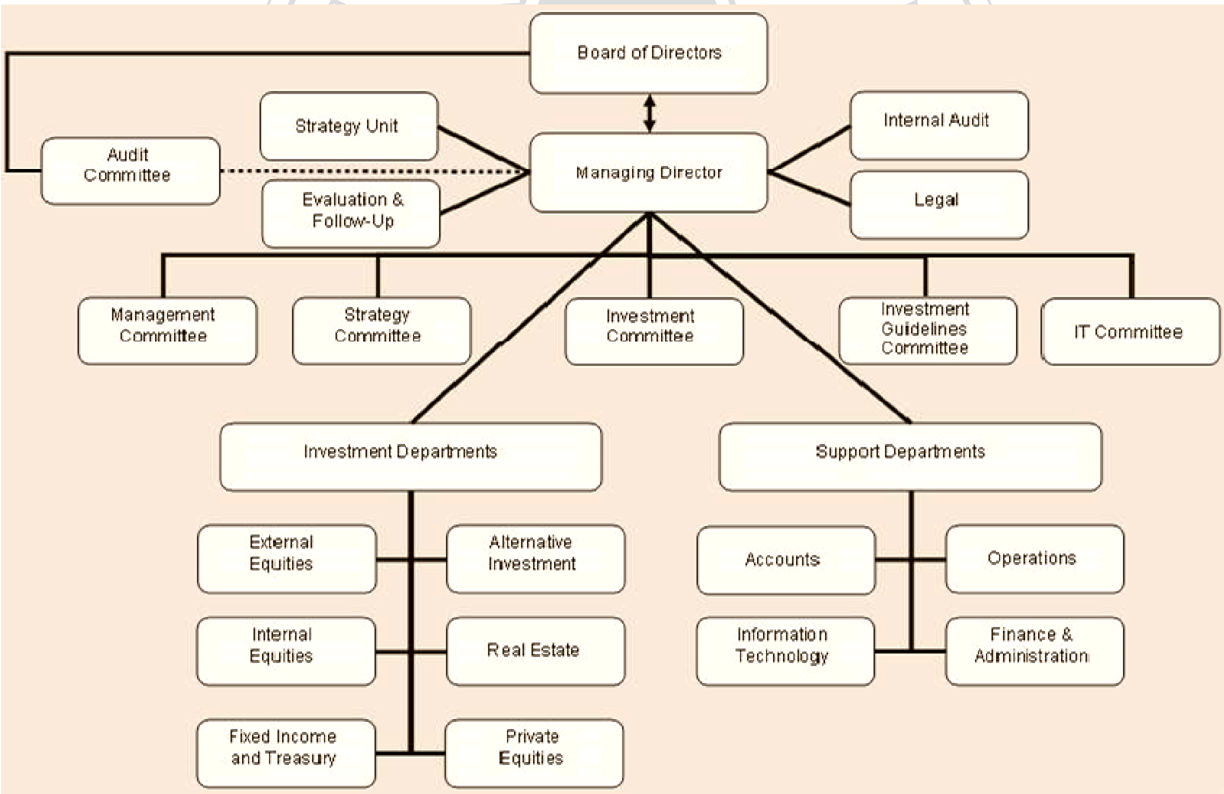
[48] ADIA website, http://www.adia.ae/ADIA_AE_governance.asp?navLoc=governance
[49] SWF institute, http://www.swfinstitute.org/fund/adia.php

Governance

ADIA is wholly owned and supervised by the government of Abu Dhabi. Its Board of Directors has whole control over ADIA's offices and business. The members in the Board are all senior government officials appointed by Ruler's Decree, and the key decisions are decided by various committees, including investment, Strategy, Guidelines, Management, I.T., Compensation, and Audit Committee. (see the organizational chart, Figure 22)

Figure 22. ADIA organizational structure[50]



Source: ADIA website

[50] ADIA website, http://www.adia.ae/ADIA_AE_structure.asp?navLoc=structure

F. Korea Investment Corporation (KIC)

Background

In order to enhance Korean sovereign wealth and prompt the domestic financial industry development, Korea government established Korean Investment Corporation (KIC) on July 1 2005, to manage the assets which were entrusted by the Government and the Bank of Korea.

Purpose and Intention

The basic purpose for establishing KIC is to preserve and enhance the value of Sovereign Wealth. Besides, there are another three important missions for KIC:

1. Achieve higher return

Increase long-term purchasing power of Korean sovereign wealth is the foremost mission for KIC.

2. Promote financial industry development

Korean Government wants to transform Korea into a major financial center and promote local financial industry development by transferring know-how from the experiences of international financial market to domestic market.

3. Foster talent pool

By transferring the investment know-how and experience from international financial market to local financial industry, the setting of KIC can cultivate local asset management professionals. This talent pool will also encourage the development of domestic financial market.

Scale

Start with US $ 20 billion, and the current scale is US $ 24.7 billion (end of December 2008).

Source

The main source is from the foreign exchange reserves of the Bank of Korea, and the rest is from the foreign exchange stabilization fund of the Ministry of Finance and Economy; for the proportion of the initially scale, it is about 85% and 15% respectively

Investment Policy

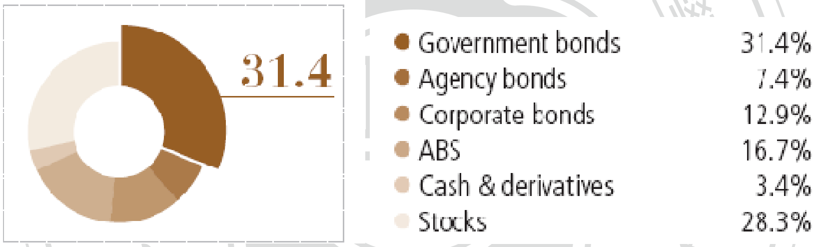
KIC adopted a long-term return investment policy, and a passive strategy. The principle of selecting investment objectives are stableness and the continuous return, which should excess the benchmark with an appropriate risk tolerance. There are two investment principles:

1. Minimize the investment risks by widely portfolio diversification.
2. Maintain the proper flexibility to seize any investment opportunities quickly, and pursue sustainable return at the same time.

About the asset allocation of KIC, they can be classified into strategic asset allocation

(SAA) and tactical asset allocation (TAA). The TAA may be employed to react to market situation in the short term within the range allowed by SAA. The assets that KIC invested in are mandated under the Korea Investment Corporation Act. Those assets classes are across securities, foreign currency, real estate, and derivatives; however, as Figure 23 shows, the investments are concentrated on bonds (Government bonds, Agency bonds, Corporate bonds, and ABS…etc.)and stocks at the present. In the future, KIC plants to invest in alternative asset classes such as PE fund, LBO, mezzanine, venture capital, distressed, and hedge funds.

Figure 23. Portfolio weighting US $ 20 billion portfolio (as of Dec. 31, 2008)[51]



Source: KIC Annual Report 2008

Table 13 shows the currencies and countries in KIC's investment portfolio. From the distribution of the portfolio, it is obvious that KIC's investment is well-diversified; which is across various currencies and countries to reduce risks. KIC's bond portfolios are composed of bonds in 21 currencies from 55 countries and its benchmark is Barclays Capital Global Aggregate Bond Index. The Stock portfolios are composed of equities in 26 currencies from 37 countries and its benchmark is Morgan Stanley Capital International (MSCI) World Index. On the end of 2008, KIC invested US$ 12.6 billion in global bonds and US $ 5.2 billion in global stocks.

[51] KIC Annual Report 2008,p22

Table 13. Currencies and countries in investment portfolios as of the end of 2008[52]

Countries in Investment Portfolios

Bond investment in 55 countries + supranational agencies

Australia	England	Canada	Denmark
Japan	New Zealand	Norway	Singapore
Sweden	Switzerland	USA	Austria
Belgium	Finland	France	Germany
Greece	Ireland	Italy	Luxemburg
Netherlands	Portugal	Spain	Qatar
Saudi Arabia	UAE	Slovania	Bermuda
Hong Kong	Taiwan	Bahrain	Cyprus
Estonia	Iceland	Lithuania	Slovakia
Trinidad	Chile	China	Czech
Hungary	Israel	Malaysia	Poland
Croatia	Kazakhstan	Latvia	Romania
Bulgaria	Tunisia	India	Mexico
Russia	South African Republic		Thailand
Supranational			

Stock investment in 37 countries

Australia	England	Canada	Denmark
Japan	New Zealand	Norway	Singapore
Sweden	Switzerland	USA	Austria
Belgium	Finland	France	Germany
Greece	Ireland	Italy	Luxemburg
Netherlands	Portugal	Spain	Hong Kong
Taiwan	Chile	China	Czech
Hungary	Israel	Malaysia	Poland
India	Mexico	Russia	
South African Republic		Thailand	

Currencies in Investment Portfolios

Bond investment in 21 currencies

US Dollar	Canadian Dollar	Euro
Pound Sterling	Danish Krone	Norwegian Krone
Swedish Krona	Japanese Yen	Australian Dollar
New Zealand Dollar	Singapore Dollar	Hong Kong Dollar
Czech Koruna	Hungarian Forint	Mexican Peso
Polish Zloty	Slovakian Koruna	Chilean Peso
South African Rand	Malaysian Ringgit	Taiwan Dollar

Stock investment in 26 currencies

US Dollar	Canadian Dollar	Euro
Pound Sterling	Danish Krone	Norwegian Krone
Swedish Krona	Swiss Franc	Japanese Yen
Australian Dollar	New Zealand Dollar	Singapore Dollar
Hong Kong Dollar	Czech Koruna	Hungarian Forint
Mexican Peso	Polish Zloty	Chilean Peso
Israeli Shekel	Russian Ruble	Indian Rupee
South African Rand	Chinese Yuan	Taiwan Dollar
Thai Baht	Malaysian Ringgit	

Source: KIC Annual Report 2008

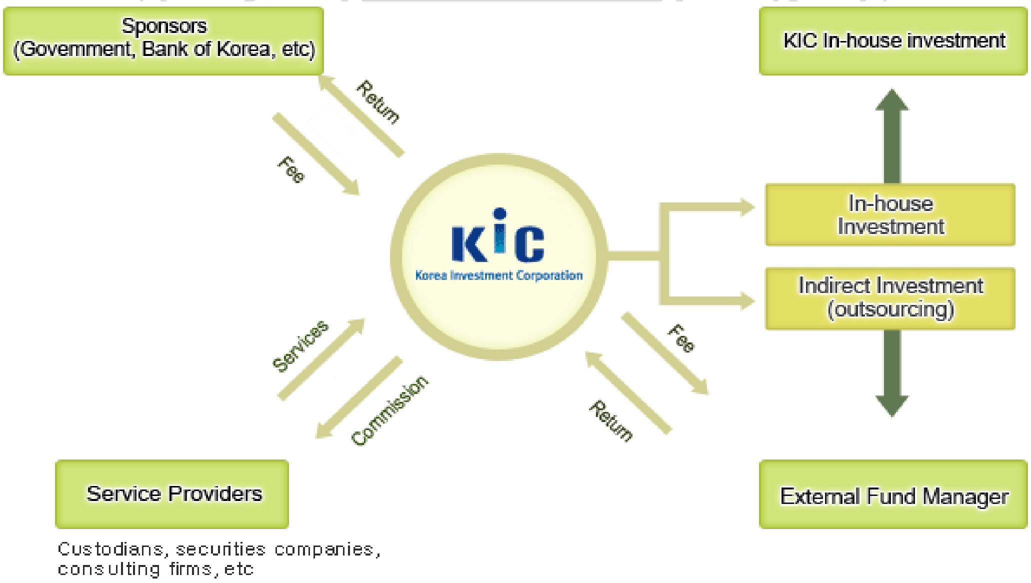
For risk management, KIC uses the ex-ante tracking error derived from quantitative models as the tool to manage relative market risk. Besides, KIC also designates the lowest grade eligible for investment which is based on the credit ratings given by international credit rating agencies such as Moody's, S&P, and Fitch Ratings.

[52] KIC Annual Report 2008, p21

Governance

According to the Korea Investment Corporation Act, KIC can make direct and indirect investments by re-entrusting assets to Korean or overseas financial institutions. Figure 24 presents KIC investment framework. From the chart, it is known that KIC manages the assets entrusted by its sponsors, and pays the needed services from out of KIC to invest the assets. When investing the assets, KIC can choose to invest by itself or re-entrust to external fund manager in order to achieve the biggest efficiency. According to KIC annual report 2008, 35% of the portfolio was managed in house (KIC itself) and the remaining 65% was re-entrusted by external managers. KIC also asserted in the annual report that they will enhance the asset management capability and gradually increase the proportion of in-house investment.

Figure 24. KIC investment framework[53]



Source: KIC website

[53] KIC website, http://www.kic.go.kr/en/?mid=ki02

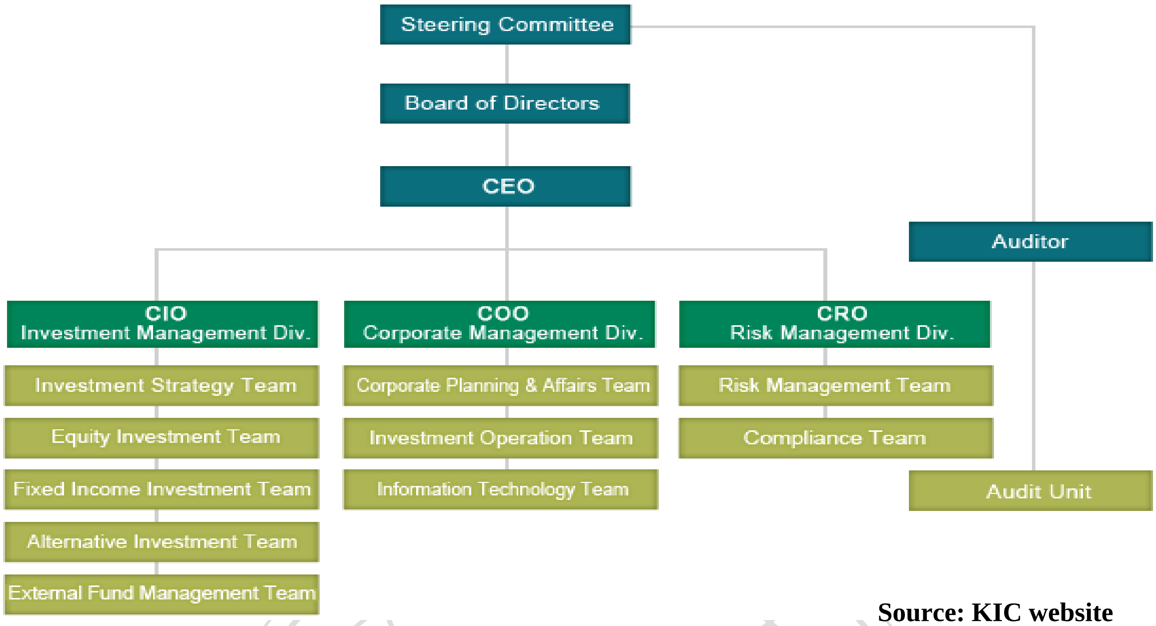
Figure 25 shows KIC's organization. The Steering Committee is the highest governing body to make sure KIC's autonomy and independence from the Government and the Bank of Korea. The task for Steering Committee is to oversee the policy and direction of KIC, and its members include six professionals from the private sector due to more professional management.

Under the Steering Committee, there are two Sub-steering Committees—The Investment Subcommittee and Risk Management Subcommittee. They take charge of matters related to investments and risks which are delegated to them by the Steering Committee, and they have to report their findings to the Steering Committee.

The Board resolves the matters to be referred to the Steering Committee, and the directors are appointed and dismissed by CEO following deliberation by the Steering Committee. The CEO is recommended by the Minister of Strategy and Finance and is appointed by the President of the Republic of Korea and deliberated by the Steering Committee.

According to KIC Act., KIC should have an independent audit sector separated from the management. The full-time Statutory Auditor is appointed by the Minister of Strategy and Finance through deliberation by the Steering Committee. The Auditor's role and responsibilities is auditing business and accounting activities within KIC.

Figure 25. KIC organizational structure[54]



Source: KIC website

KIC has adopted ethics and transparency as basic principles of its operation and strives to promote ethical awareness and transparent management. There are some governing mechanisms to achieve this goal:

1. External Advisor

KIC utilize external advisors for other service, including the investment advice, legal advice, and tax advice relate to the investment of entrusted assets.

2. Custodian

Board of Director is supposed to appoint a custodian bank for efficient management of the entrusted assets, such as the settlement of trades, reporting and accounting.

3. Periodic performance monitoring and evaluation

There are monthly, quarterly, and annual reports as a performance monitoring mechanism. These reports shall present the review on KIC's portfolio, market trend, and other overall performance to KIC's client.

[54] KIC website, http://www.kic.go.kr/en/?mid=in04

IV. Case of Taiwan

IF Taiwan wants to establish SWF, there are some key concerns to think about. Here, I use the same framework as case analysis: background; the purpose and intention; the scale; the source of SWF; investment policy of Taiwan SWF; and the governance. When considering establishing SWF, Taiwanese government can refer to other SWFs as examples, especially Singapore's SWFs since the background and situation are similar to each other—high foreign exchange reserve, lacking of natural resources, and having high development of domestic financial market. On the other hand, the strategic function of SWF, such as Singapore Temasek Holdings, may be the way that Taiwan needs to learn about.

Background

From the cases, we know that SWF home countries can be those countries with abundant natural resources or not. Like Norway and Abu Dhabi are abundant with oil resources, however, Singapore and Korea are lack of natural resources. The only common thing is that SWF home countries have the needs to manage huge government revenue. For Taiwan background, it is obvious that Taiwan is lack of natural resources. Even though, Taiwan government holds huge foreign exchange reserves and Taiwan is a high development of domestic financial markets. The followings are the description about Taiwan background that I think why it is the time to set up Taiwanese SWF.

After the global financial tsunami that erupted in the mid of 2007, the world economy went into recession, and Taiwan faced the same situation and not completely recover from it. In addition, even though the global economy seems to start reviving, all investors still do not dare investing oversea easily. In this situation that (1) Taiwan holds huge amounts of foreign exchange reserves, (2) it is hard to find good objectives to invest overseas, and (3) Taiwan domestic market needs capital injection to stimulate the domestic economy, but it's hard to get finance from foreign investors; the background of Taiwan is just like Singapore in 1970s', and it is a perfect timing to make action setting up Taiwan SWF.

<u>Purpose</u>

From previous cases, every SWF were set up for their own purpose: the management needs for huge government revenue and the purpose to increase countries interests. The purposes of SWFs are different as different countries backgrounds and needs. ADIA plays an important role on government revenue stabilization, and invests in objects with negative correlation relative to oil price. Norway GPF was set up to safeguard and build financial wealth for the future generation, and to meet Norway's rising national expenditure on pensions and health care in the coming years. Singapore Temasek Holdings plays a strategic role, like a pioneer, which entered into those immature or key industries (financial and telecommunication industry) for the country to stimulate domestic industry development. And now those fields become the main industries in Singapore. KIC, which focused on financial field, also had a comprehensive plan to transfer Korea into a major centre of financial.

Now, let us turn back to Taiwan case. Why Taiwan needs to set up SWF? What is its purpose?

First of all, it is true that Taiwan holds a huge amount of foreign exchange reserves, and we need to find a more efficient way to manage this government revenue since the current main investing policy is conservatively buying foreign government bonds. Second, after the prosperity of domestic economy that semiconductor industry brought, Taiwan needs to figure out the next blue-chip industry, and invest it hardly. This domestic investment is especially important to help Taiwan recover from financial crisis, and lead the next economic thriving era. The domestic industry upgrading needs significant capital, and SWF can play the key role to stimulate the action.

Therefore, I think Taiwan has two intentions to establish SWF: (1) manage foreign exchange reserves more efficiently and seek for better investment return; and (2) inject capital domestically to prompt industry upgrading or transforming; in order to stimulate country development. By establishing SWF, this capital can be utilized in a more efficient way and get better investment returns.

Scale

There is no specific stipulation about the basic scale for a SWF. According to the literature research and the cases study, we knew that the scale of SWFs vary from different amount of government revenue to be managed. Like ADIA, the biggest SWF in the world, which has a scale of US $875billion; but KIC of Korean just has a scale of US $24.7 billion.

Then, what is the appropriate SWF scale for Taiwan? I think it should depends on how much does it take for SWF's investment portfolio, or for the policy of upgrading domestic industry.

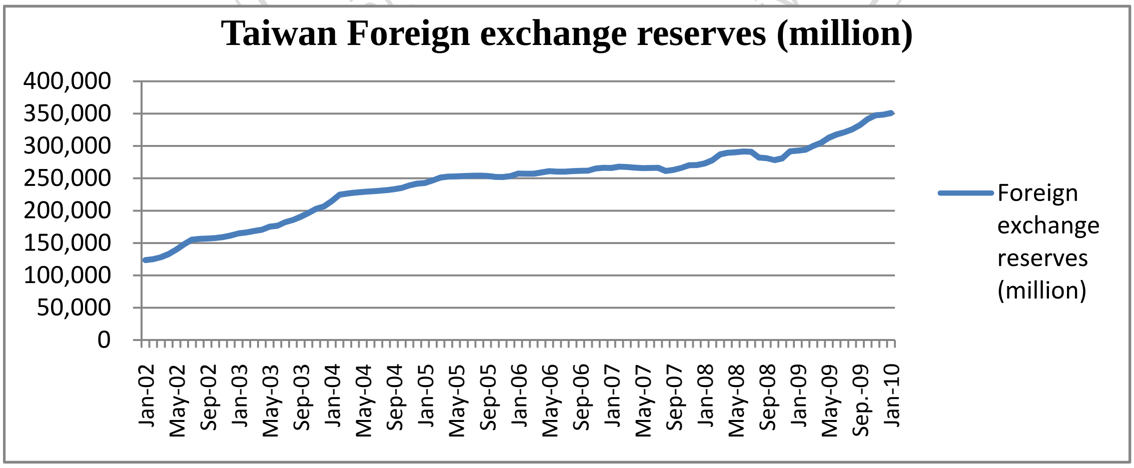
Sources

From literature review and cases study, the sources of SWF can be easily divided into two categories: Commodity SWFs and Non-commodity SWFs. Commodity SWFs, like ADIA and Norway GPF, were sourced by exporting natural resources. Non-commodity SWFs, like Singapore and Korea, were sourced by huge foreign exchange reserves.

For Taiwan case, we are the top forth countries with foreign exchange reserves in the world, and just follow behind China, Russia, and Japan. According to the financial statistic data published by Central Bank of the Republic of China (Taiwan), the foreign exchange reserve is US $350 billion as Jan. 2010, which was about 91% of Taiwanese GDP. Therefore, the foreign exchange reserves can be a good source, and the quantity of the capital is absolutely enough.

There are some commentators who claim that Taiwan is not one of the IMF member countries and needs to store more foreign exchange reserves to prevent the attacks from international hot money. Nevertheless, this increasing amount of foreign exchange reserve (see Figure 26) is still enough to set up SWF without violating CBC's management philosophy of its foreign exchange reserves--- "The CBC's management philosophy of its foreign exchange reserves centers around liquidity, security, and profitability. The foreign exchange reserves have also been used to promoting economic development and industrial upgrading."[55] Furthermore, to utilize foreign exchange reserves via setting SWF to promote industrial upgrading is one of the ways to fit CBC's management philosophy.

Figure 26. Taiwan foreign exchange reserves[56]



Source: CBC website

[55] CBC website, http://www.cbc.gov.tw/np.asp?ctNode=444&mp=2
[56] Arrange from CBC's publish financial statistic data

Here, I will use Greenspan-Guidotti Rule to demonstrate that Taiwan foreign exchange reserves is absolutely enough for setting up SWF without worry about national economic security. According to Greenspan-Guidotti Rule, in order to prevent financial account crisis for a country, the foreign exchange reserves should sustain enough to cover short term external debt (due within a year).

From Table 14, we know that after considering the short term external debts, the Central Bank of Taiwan still hold $293 billion dollars as excess foreign exchange reserves. The foreign exchange reserves is over 8 times of short term external debts; this number is way to over optimal level. Therefore, Taiwanese do not need to fear that using foreign exchange reserves will trigger Taiwanese financial account crisis.

Table 14. Taiwan excess foreign exchange reserves via Greenspan- Guidotti Rule (2009 Q3, unit: $bn)[57]

Foreign exchange reserves (A)	**Short term external debts (due within a year) (B)**	**Excess foreign exchange reserves (A)-(B)**	**Foreign exchange reserves/ short term external debts (A)/(B) Optimal level = 1.0**
332.239	38.75	293.489	8.57

Source: CBC website, Joint External Debt Hub (JEDH) Database

[57] CBC website: http://www.cbc.gov.tw/ct.asp?xItem=1866&ctNode=511&mp=2
Joint External Debt Hub: http://www.jedh.org/jedh_dbase.html

Another criterion to make sure foreign exchange reserves is enough for a country to protect its current account safety is: the foreign exchange reserves withhold should support at least 3 to 6 months import value. For conservative measurement, I take 6 months import value to measure how much excess foreign exchange reserves Taiwan holds.

As Table 15 shows, after deducting 6 months import value from foreign exchange reserves, Taiwan still hold US $253.5 billion dollars as excess foreign exchange reserves. This number ensures that Taiwan foreign exchange reserves is quite enough for another use without the risks for current account security.

Table 15.

Taiwan excess foreign exchange reserves under the criterion that foreign exchange reserves withhold should support 6 months import value (end 2009, unit: $bn)[58]

Foreign exchange reserves (A)	Average 6 months import value (B)	Excess foreign exchange reserves (A)-(B)
348.198	94.70	253.498

Source: CBC website; Ministry of Finance, R.O.C. website

In some reports, Taiwan National Stabilization Fund was classified as SWF; however, in my opinion, it is not SWF and neither appropriate to transfer into SWF. Taiwan National Stabilization Fund was set up in 1999 with scale about $500 billion NTD. Its intention is to

[58] CBC website: http://www.cbc.gov.tw/ct.asp?xItem=1866&ctNode=511&mp=2
Ministry of Finance, R.O.C. website: http://210.69.109.17/njswww/jspproxy.aspx?sys=100&funid=defjspt2

secure Taiwan stock market from turbulence; therefore, National Stabilization Fund is essential to maintain its independence from other function. The nature of SWF is to seek higher investment return and promote country development; that means SWF should take higher risks. As security function that National Stabilization Fund positioned, it cannot endure high risky investment policy. Furthermore, if we take National Stabilization Fund as SWF, or part of them, it may hurt the security function and harm Taiwan stock market harder when SWF get investment loses. Therefore, I think foreign exchange reserves is the best sources for funding SWF.

Investment Policy

From cases study, when selecting investment targets, SWF companies may tend to choose the industries that they are familiar with or they want to develop with. For example, Norway GPF selected energy; telecommunication; and health care industries as their major investment objectives. Those three industries are prosperous and famous in North Europe area. Singapore GIC selected finance and real estate industries as their major investment objectives, since Singapore had no natural resources but abundant excellent human resources. It is their chance to utilize SWF developing itself as financial centre in Asia. China CIC invested in global financial institutions so far since they are not really expert at any fields.

Then, what objectives should be invested in if Taiwan SWF really established? What are the investment industries? Should we invest domestically or overseas? What's the best SAA for Taiwan SWF?

Generally speaking, it is a more conservative and safe way to diversify investment portfolio not only industrially but also geographically. However, if Taiwan SWF positioned itself as a strategic SWF to promote Taiwan industry upgrading, I will suggest that it would be better to put more weights on domestic investments. The objectives choosing should follow government industry policy, to invest capital in the future blue-chip industry, such as science and technology industry, biotechnology industry, or even tourism industry.

On the other hand, Taiwan SWF can also learn from famous global SWFs, like Norway GPF and Singapore GIC, to invest in those industries that Taiwan familiar with or good at. By investing in industries that Taiwan familiar with, it can reduce the investment risk as well.

Take Cloud Computing Technology for example. This is a popular issue in IT industry these days. Cloud Computing Services Industry represents the huge business profit potential and market in the future. Taiwan has its advantages to promote Cloud Computing Services no matter on creativity in software or on productivity in hardware. On April 7, 2010, Taiwan Clod Computing Industry Alliance was established to develop three Cloud Service Applications: Infrastructure, Platform, and Application. Cloud Computing Technology could be the next blue-chip industry for Taiwan, and we could utilize the capital of SWF, it is not impossible for Taiwan to be the next Singapore.

<u>Governance</u>

In governance aspect, in order to eliminate the worries from investee countries, every SWF legislate regulation and supervision mechanism to make themselves as independent entities. Also, having a clear responsibility distribution among the whole SWF entity is vital element to make it operates efficiently. From successful experiences of SWFs (Norway and Singapore), it is a good way to manage SWF via entrusting relationship: managers and clients. However, it is obvious that the transparency of SWF is still the most critical issue at the moment. Like ADIA and CIC cases in the study, we can just gain barren information from their website. If investee countries know more about their SWF investors, they have less worries and obstruction accepting investment activities.

For governance issue in Taiwan SWF, we should ask some question first: Who should manage SWF? Who has the ownership of the assets? Is there any need to hire external managers?

From the cases in previous chapter, it is known that separate the assets' ownership and managerial authority is a common way to ensure the independence and autonomy of SWF. The advantage of this way is to eliminate the political color from SWF investment activities and make SWF operated more efficiently. For Taiwan environment, political issue is always an unstable element for any policy or action. Therefore, it is a good way for Taiwan to establish another company to manage the assets of SWF which were entrusted by government, and make sure the independence and the neutrality of this company.

About the professional funds manager issue, my suggestion is to let external funds managers stand an appropriate proportion in all managers. From the lousy performance of many Taiwanese government funds (e.g., Taiwan National Stabilization Fund, Pension Fund, and Labor Insurance Fund…etc), it is obvious that the professional funds managers can operate the funds more efficiently. Also, by cooperation with professional external managers, it can help Taiwanese government cultivate more talents, and prompt transferring know-how from international financial market to domestic market.

About the regulation issue, having an explicit regulation is significant to ensure SWF can run well. What Act should SWF abide by? How can SWF preserve its autonomy? How to make a good monitor mechanism? How to legislate the rule to stipulate the responsibility?

The advantage of having a specific regulation to stipulate SWF is to have a clear rule for details (including the responsibility of entrust relationship), and it can also show the importance that how government regard SWF. However, it may hard to do since legislating process needs time and money. In my opinion, it would be necessary to make the specific regulation about Taiwan SWF, but before the rule was created, the more efficient and temporary way is to use the existing rule (e.g., Banking Act, Corporation Act…etc), and add additional necessary rules to strengthen it. Meanwhile, from the cases, it is showed that the bottom-up periodic report mechanism and the up-down authorization system is a pretty thoughtful legislative framework. And this report mechanism is the most important part which should be considered when making the SWF regulation.

Most importantly, all these regulations should be implemented under an honest and trusting government and entity; and this is also what Taiwan should work for.

To sum up all the suggestions above, let us come back to the original question in this study--Is Taiwan appropriate to set up SWF or not? In my opinion, the answer is yes. Taiwan definitely has the capability to establish its own SWF, and the whole society will benefit from it. But there are two most important things to think about before setting up SWF, which are: (1) ascertain the purpose and the intention for funding SWF, and (2) make sure all the relative regulations be done and can be implemented by an integrity entity or government. Only when Taiwanese government takes preparation well beforehand, the advantages of SWF can be seen completely.

V. Conclusion

SWF is becoming more and more important these days because of its fast growth rate and the national security issue it brings. There are lots of successful examples showing that setting up SWF can utilize government revenue more efficiently, and even stimulate county development. Hence, there are lots of controversial in Taiwan about setting up Taiwan SWF to promote domestic economy under this economic recession.

Back to the theme of this study: “Is Taiwan appropriate to set up SWF or not?” In my opinion, the answer is yes. Taiwan definitely has the capability to establish its own SWF, and the whole society will benefit from it. We have the abundant capital resource---foreign exchange reserves; the right purpose---utilize foreign exchange reserves in a better way and promote domestic industry development; the perfect investment target---technology industry. What we need is to make sure all the relative regulations be done and can be implemented by an integrity entity or government. Only when Taiwanese government takes preparation well beforehand, the advantages of SWF can be seen completely.

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