Annual Report Financial Committee

Advisory Committee to the Ministry of Finance on Sovereign Wealth Funds

2007

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Introduction

Since 2001, the fiscal policy has been governed by the structural balance rule, whose purpose is to ensure long-term sustainability of public spending, thus contributing to the macroeconomic stability of the country.

The structural balance rule excludes the effect of cyclical fluctuations arising from the economic activity, copper price, and other factors of similar nature on the public finances. Thus, public spending is linked to structural fiscal revenues and not to fluctuations in transitory revenues.

In line with the implementation of a fiscal policy ensuring sustainability of the public spending and the economy's competitiveness, the Fiscal Responsibility law established the Pension Reserve Fund (PRF) and the Economic and Social Stability Fund (ESSF), through which the resources arising from the enforcement of the structural balance rule are managed.

With the purpose of deciding on the investment policy for the funds and the guidelines required for its implementation, the Minister of Finance relies on the assistance of an external Financial Committee which is composed of experienced external professionals in the areas of finance and economics.

This report, a summary of the activities performed by the Financial Committee in 2007, is part of the systematic effort to disseminate and inform to the public about the deliberations of this Committee and about the status of the fiscal responsibility funds. In this way, the Committee complies with the requirement to inform the public of its activities and the status of the sovereign wealth funds according to the Ministry of Finance Decree N° 621, which requires an annual report to the minister of finance, the Financial Affairs Committee of the Senate and House of Representatives and the Joint Budget Committee.

I. Fiscal Policy and the Purpose of the Funds

A. Fiscal Policy

The purpose of the current fiscal policy is to contribute to macroeconomic stability and to provide public assets to improve the opportunities and social protection of the Chileans. In order to fulfill these goals, this policy has focused on the efficient use of public resources and transparency in their management.

Since 2001, the fiscal policy has been guided by the structural balance rule. The structural balance concept reflects the trend financial situation of the Central Government. To this effect, the effect of cyclical fluctuations of the economic activity, copper price and other factors of similar nature are excluded. Thus, public spending depends on the trend of structural fiscal revenues rather than on the cyclical evolution of the fiscal revenues. This helps avoid drastic adjustments in public spending in face of adverse economic effects in booming times, when the Government receives substantial transitory revenues.

In line with the implementation of a fiscal policy ensuring sustainability of the public spending in time and competitiveness of the economy, a fiscal responsibility law was enacted in September 2006. This law established the Pension Reserve Fund (PRF) and the Economic and Social Stability Fund (ESSF), through which the resources arising from the application of the structural balance rule are managed. In addition, the law provides specific accumulation rules for the revenues on both funds as well as for possible contributions by the Government to the Central Bank of Chile (BCCh).

Likewise, with the purpose of improving the economy's competitiveness by reducing pressures on the international exchange rate, the Ministry of Finance provided that the resources accumulated in these funds would be fully invested abroad, in instruments expressed in foreign currency.

B. Fund Objectives, Rules and Management

Objectives

The funds created through the fiscal responsibility law (the "Funds") have particular and different objectives.

As regards the PRF, the purpose is to supplement the financing of future contingencies related to pensions. In particular, the PRF is intended to support the financing of government obligations arising from the government guarantee on basic old-age and disability solidarity pensions, as well as the old-age and disability solidarity pension contributions.

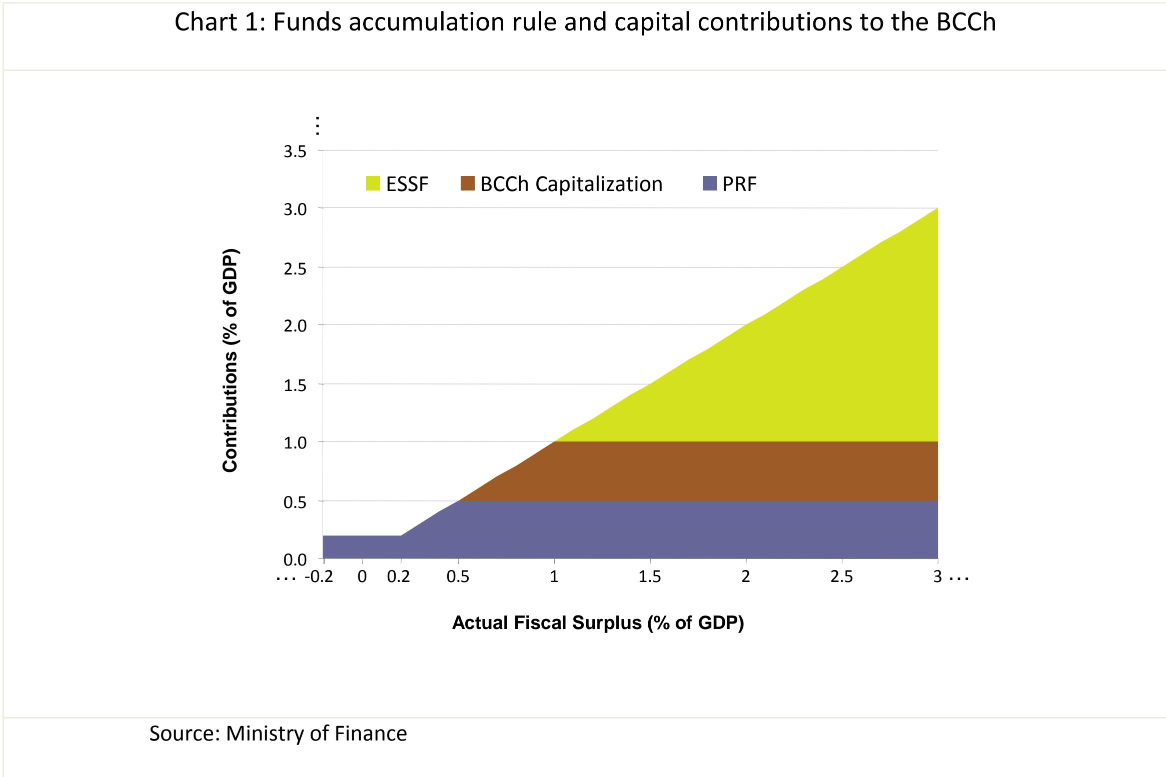
In the case of the ESSF, its main objectives are to finance potential fiscal deficits and to amortize public debt. This way, the ESSF will help for public spending not to be greatly affected by government revenue volatility.

Rules for contributing to the funds

The Fiscal Responsibility Law sets forth the rules for the creation and accumulation of the Funds and raises the possibility of capitalizing the BCCh. Chart 1 illustrates the Funds' accumulation rules and the contribution to the BCCh at different levels of fiscal surplus.

In accordance with the law, the PRF increases, each year, by an amount equivalent to 0.2% of the gross domestic product (GDP) of the previous year. If the actual fiscal surplus exceeds 0.2% of GDP, the PRF receives a contribution equivalent to said surplus, to a maximum of 0.5% of GDP. The contributions to the PRF shall be made only until the year the resources accrued therein amount to the equivalent of 900 million Unidades de Fomento (UF). Once this amount has been reached, the contributions to said fund will cease.

Chart 1: Funds accumulation rule and capital contributions to the BCCh



Source: Ministry of Finance

The fiscal responsibility law provides that the Government could make capital contributions to the BCCh in an annual amount equivalent to the balance resulting from subtracting from the actual surplus the contribution to the PRF, provided this balance is positive. However, the annual contribution may not exceed 0.5% of GDP of the previous year. The power to make said allocations will remain in force for a five-year period, as of September 2006.

Lastly, the ESSF will receive the balance resulting from subtracting from the actual surplus the contributions to the PRF and to the BCCh, provided this balance is positive.

Rules of use

As indicated above, the monetary contributions to the PRF are exclusively intended to supplement financing of fiscal obligations arising from the government guarantee on basic old-age and disability solidarity pensions, as well as the old-age and disability solidarity pension contributions. However, said resources may only be used to this effect as of September, 2016.

As of this date, the amount of the PRF's resources that may be used on a yearly basis shall not exceed a third of the difference between the total spending associated to the payment of the mentioned pension obligations in the respective year and the total spending made on said item in 2015, this latter having to be updated on a yearly basis, in accordance with the variation shown by the Consumer Price Index (CPI).

The PRF will legally expire if, having fifteen years as of September 2006 elapsed, the drawings to be made in one calendar year do not exceed five percent of the sum of the spending on government guarantee on basic old-age and disability solidarity pensions and the old-age and disability solidarity pension contributions contained in the Budget Law for said year. Once the PRF has expired, any existing surplus shall be transferred to the ESSF.

In the case of the ESSF, this fund will provide any resources required to finance the Government's operations in the event of a fiscal deficit and/or of the amortization, regular or extraordinary, of any public debt (including Recognition Bonds).

Current management and investment policies

In order to carry out the investment policy for the Funds, the Ministry of Finance, through Decree Nº 1,383 of December, 2006 ("Agency Decree"), appointed the BCCh as the Fiscal Agent to act on is behalf and in the name of the Government to manage and invest the Funds' resources. The BCCh must follow specific instructions issued by the Ministry of Finance ("Investment Guidelines"). These guidelines set forth the requirements and conditions applicable to the BCCh for the correct and complete execution of the functions assigned to it as Fiscal Agent.

Since March 2007, the investment policy of the Funds has been that of investing in assets classes similar to the investment portfolio of the international reserves managed by the BCCh. As a result, the present structure only includes short-term and low-risk financial instruments. In fact, 30% of the portfolio is invested in money market instruments, 66.5% in sovereign bonds, and 3.5% in inflation-indexed sovereign bonds. In addition, among other restrictions, the present portfolio sets limits to currency exposure, establishing the following benchmark ratios: 50% in US dollars, 40% in Euros, and 10% in Yens.

II. Mandate and Role of the Financial Committee

A. Functions

Fiscal Responsibility Law established that the Minister of Finance must be assisted by a Financial Committee to decide on the financial investment of the Funds' resources and define the necessary guidelines for implementation thereof.

In compliance with such provision, on December 23, 2006, together with announcing the creation of the Funds, the Minister of Finance informed of the setting up of a private advisory committee, composed of long-experience professionals in the economic and financial fields.

Said committee was officially created through Ministry of Finance Decree No. 621, published in the Official Gazette of August 11, 2007. Such decree made official the appointment of the first committee members: Andrés Bianchi Larre, Martín Costabal Llona, Ana María Jul Lagomarsino, Oscar Landerretche Moreno, Andrés Sanfuentes Vergara and Eduardo Walker Hitschfeld. The Minister of Finance appointed Andrés Bianchi as the president of the Financial Committee, and its members elected Ana María Jul as its Vice-President.

The functions of the Financial Committee and the procedural norms required for its proper operation were determined in same decree. In accordance with it, the functions and powers of the Committee are as follows:

a. Provide, at the request of the Minister of Finance, advice on fundamental aspects for a long-term investment policy, such as investment allocation by asset classes, inclusion of new investment alternatives, determination of the Funds' portfolio benchmarks, definition of the limits to allowed deviations and determination of the limits of the Funds' investment possibilities;

b. Recommend to the Minister of Finance instructions of investment and custody as consulted by him, and make proposals regarding bidding and selection procedures to be carried out for managing the Funds' portfolio;

c. Express an opinion, at the request of the Minister of Finance, on the structure and contents that should be included in the yearly reports on the Fund's management that the entity or entities in charge of their management or custody must submit to the Ministry of Finance and, based on said reports, express an opinion on the management of the funds, particularly on their coherence with the investment policies established;

d. Express an opinion on the structure and contents of the quarterly reports that the Ministry of Finance must prepare on the status of the Funds; and

e. Advice the Minister of Finance on all matters related to the investment of the Funds, as assigned by him.

In addition, the Committee may express its viewpoints on other matters related to the long-term investment policy applied to the Funds.

The Financial Committee bases its recommendations on the principles, objectives and rules governing the Funds, aspects already mentioned in the preceding section.

In order to foster transparency on Fund-related decisions, the Financial Committee decided that the decree regulating its activities, the minutes of its meetings, and the appropriate press releases, must be publicly advertised. To this effect, a special section relating to the Funds was included on the Ministry of Finance's web page, which is available for consultation and contains updated information related to these matters.[1]

B. Meetings

The Financial Committee held eight formal meetings in 2007. These meetings represent the main instances where the recommendations the Financial Committee submitted to the Minister of Finance regarding Fund investment policies were agreed upon. In spite that the Committee must meet at least once each semester, according to the decree that established it, its members deemed it necessary to increase the frequency of the meetings (Table 1).

Table 1: Regular Meetings of the Financial Committee in 2007

Meetings	Date
Meeting 1	2 January
Meeting 2	27 March
Meeting 3	25 June
Meeting 4	30 July
Meeting 5	3 September
Meeting 6	2 October
Meeting 7	26 October
Meeting 8	30 November

In addition to these working meetings, and in compliance with its mission, the Committee also held meetings with representatives of sovereign wealth funds and international consultants. Between meetings, the Committee members also exchanged information and analyses via electronic mail.

The Committee reviewed different institutional schemes implemented in other countries that have these types of funds –among them, Norway, Australia and New Zealand – in order to gather information and antecedents useful to Chile. In this context, the Financial Committee met with Knut Kjaer, former Director of *Norges Bank Investment Management* (NBIM), an entity established in the Central Bank of Norway that manages Norway's fiscal funds. The Committee invited experts from the Superintendency of Pension Fund Managers (SAFP) and of the BCCh to get acquainted

[1] http://www.hacienda.gov.cl

with their experiences regarding the investment of pension funds abroad and the process of selecting external managers, respectively.

To facilitate its work, the Financial Committee is assisted by specialized personnel of the Ministry of Finance. To this effect, the Minister of Finance appointed one of his key advisors as the Financial Committee's counterpart. Until August 2007, this assignment was performed by Economic Policy Coordinator Luis Felipe Céspedes, and since then, by International Finance Coordinator Eric Parrado. The Ministry of Finance team, in addition, includes a senior economist and a lawyer from the International Finance area, the head of the Public Finance Department of the Office of the Budget, and head of the Financial Planning Department, as well as two analysts of the same department.

In general, the regular meetings held by the Financial Committee are comprised of four parts. First, the team of the Ministry of Finance submits, among other matters, the status of the Funds, including the information on the accrued assets and their return. Second, ministry experts provide data, analyses and international comparisons related to the management of the assets and their investment policies, presenting the possible advantages and disadvantages of the different options. These are then reviewed and evaluated by the Committee. In the third stage, the Committee members substantiate and vote on recommendations. Lastly, they approve the press release that informs the public on the agreed upon recommendations.

Below are the main topics analyzed in each meeting and a summary of the adopted agreements.

Meeting N° 1: January 2, 2007

The first meeting of the Financial Committee focused on the finance minister's presentation of the fiscal policy enacted by the government, the fiscal responsibility law and the functions it assigned to the Committee. In addition, the different rules governing the Funds, the initial policy for investing their assets, the functions the Minister wished to assign to the Committee, including the proposal of new investment guidelines, and the selection of external managers for the portfolio, were reviewed. In this meeting the advisors adopted different agreements related to the internal operation of the Committee, such meeting frequency: at least quarterly; the publication of the minutes of meetings on the Ministry's web page; and working via electronic mail in the periods between meetings.

Meeting N° 2: March 27, 2007

The second meeting was devoted to: analyzing the decree that regulates the Financial Committee and its internal rules; the status of the discussion on the decrees and official letters regarding the Funds; and a general discussion on the investment policy applied to the Funds and the selection of the external portfolio managers.

Meeting N° 3: June 25, 2007

At this meeting, the Committee got acquainted with the Central Bank's experience in selecting external portfolio managers. In addition, the Ministry of Finance reported on the hiring of the company *Mercer Investment Consulting* (Mercer) to provide advice on the design of the new

investment policy for the Funds. Mercer is a leading company in providing advisory services related to the investment of public funds, and its client portfolio is comprised, among others, of the Central Bank of Europe, the central banks of countries such as Chile and Spain, and numerous sovereign wealth funds.

Meeting N° 4: July 30, 2007

The fourth meeting of the Committee was devoted to reviewing Mercer's draft report on investment policy proposals for the PRF and ESSF. Representatives and specialists from the consulting firm answered questions that had been previously submitted by the Committee. The discussion was focused on the assumptions, methodology and results presented by Mercer's report. The Committee members and the Ministry of Finance team also analyzed topics related to the valuation, liquidity and terms of maturity of the Funds' investments.

Meeting N° 5: September 3, 2007

The main purpose of the meeting was to review institutional matters related to managing the Funds. The Committee analyzed a preliminary version of a World Bank report on this topic. The possibility of assigning the asset management policies and performance monitoring functions to highly technical and specialized independent units subordinated to the Finance Ministry or Central Bank were analyzed in detail. The different institutional aspects of other countries with sovereign wealth funds were also reviewed to gather relevant information applicable to Chile.

The Committee resolved to submit to the Minister of Finance the following work schedule relative to the investment policy of the Funds:

The second half of 2007:

- Define and implement a new investment policy for the PRF.
- Define a new investment policy for the ESSF.
- Strengthen the highly technical financial management unit in the Ministry of Finance.
- Assign the management of a portion of the PRF's assets to external managers.

The first half of 2008:

- Implement a new investment policy for the ESSF.
- Assign the management of a portion of the ESSF's assets to external managers.

Meeting N° 6: October 2, 2007

The focus of the sixth meeting was to discuss the new investment policy for the Funds, and concluded with a proposal by the Financial Committee to the Minister of Finance on this matter. First, the proposals presented by the members of the Committee were analyzed, as were various reports by experts and other international fund experiences, including those of the Province of

Alberta (Canada), Australia, Norway, New Zealand, Russia and Singapore, Chilean and Californian (Calpers) pension funds, and university endowment funds such as Harvard, Stanford and Yale.

Second, the Financial Committee analyzed alternative structures of investment for the Funds and agreed to recommend to the Minister a policy intended to diversify the investment portfolios. To this effect, the Committee proposed that the two Fund portfolios should be invested nearly 15% in equity securities and 20% in corporate fixed income by the end of 2008. These increases would come from gradual reductions in currently held investments, particularly investments in liquid assets. The purpose of this policy is to maximize the financial returns on the Funds subject to tolerable risk limits in line with their purpose and investment horizons.

The Committee recommended that this policy be implemented gradually, and to perform a bidding process of a portion of the Funds to select the external managers.

The decisions made included the following criteria: a mid- to long-term investment policy horizon; financial diversification of both portfolios; investment in assets outside of Chile; and selection of investments that have a low correlation to copper prices and the growth rate of the Chilean economy.

Meeting N° 7: October 26, 2007

At its seventh meeting, the Committee agreed on proposing an external manager selection policy for the Funds.

The meeting was divided into two parts. In the first, experts from the Superintendency of Pension Fund Managers (AFP) and the Central Bank of Chile presented respectively their experiences in: investing pension funds abroad, and in selecting external fund managers. These presentations addressed operational matters and described the stages and time periods for the selection of these types of managers and the contributions they may make. In addition, the Committee reviewed the strengths and weaknesses of different types of management and the quantitative and qualitative requirements that must be taken into account when selecting external managers.

The second part focused on evaluating proposals for the selection of external managers for the PRF and ESSF. The agreed upon recommendations included retaining an external consultant to support the manager selection process in order to take advantage of its technical assistance and extensive databases to evaluate the participants. Retaining different managers for each asset class was also recommended (hiring more than one per asset class), as were: assigning each manager a specific amount; initially using a predominantly passive investment management and gradually evolving towards a more active management.

Meeting N° 8: November 30, 2007

In its eighth meeting, the Financial Committee recommended to the Minister of Finance a series of guidelines for implementing its proposal to diversify the Fund portfolios, in the terms agreed in its seventh meeting.

The Committee recommended that the Minister consider a benchmark portfolio for each asset class in order to evaluate the performance of the investment decisions made for: liquid assets, sovereign bonds, indexed sovereign binds, corporate bonds and equity securities. In order to maximize the financial returns on both funds while maintaining low risk exposure, the Committee stated it was convenient to establish minimum diversification requirements, both on fixed-income and equity securities, as well as global limits to the composition of fixed-income portfolio risk.

C. Investment Guidelines

The recommendations made by the Financial Committee in 2007 present the first stage of the process to define the new investment policy (Box 1).

Box 1: Stages in defining the new investment policy

This process was carried out in several stages, among which the most relevant included:

Recommendations of the Financial Committee: At this stage, the Committee prepared a series of recommendations to be submitted to the Minister of Finance related to the investment policy for the Funds. These suggestions were submitted after reviewing a number of reports and different international experiences.

Discussion and acceptance of the recommendations by the Ministry of Finance: The recommendations made by the Committee were analyzed by the Ministry of Finance. Once reviewed, the Minister of Finance accepted them all, after which new investment guidelines for the BCCh were prepared.

Acceptance of new guidelines by the BCCh: The BCCh accepted the task of continuing to manage the Funds' resources under these new guidelines.

The main recommendations made by the Committee are in connection with five topics. Firstly, the operational management of the Funds, that is, the way of making the financial investment of their resources. Secondly, the Funds' investment structure, implying determining the proportions that different assets classes must represent in their portfolios. The third topic refers to the external portfolio manager selection process, including selection criteria, determination of who will be in charge of evaluating and selecting the managers, and the kind of management being sought. The fourth aspect refers to the selection of an external consultant helping to select the most suitable managers based on the Funds' objectives. The last topic consisted in deciding on the *benchmarks* and methodologies to measure performance, safeguards and monitoring the financial risks assumed by the BCCh and the external managers (Box 2).

Box 2: What is a *benchmark*?

A *benchmark* is a portfolio that is used for comparative purposes to evaluate the performance of a manager. A *benchmark* broadly represents a specific type of asset, and is well known and accessible to the public. It usually includes most of the assets belonging to a specific class (international fixed-income, international equity securities, corporate bonds, etc.). In order to represent *benchmark* performance, indices are usually constructed assigning to each security within the asset class a weight which depends on its market capitalization. Examples of commonly used benchmarks are the *MSCI All Country World Index (ACWI)* for global investments in stocks, and the *Lehman Global Aggregate Corporate Index* for corporate bonds.

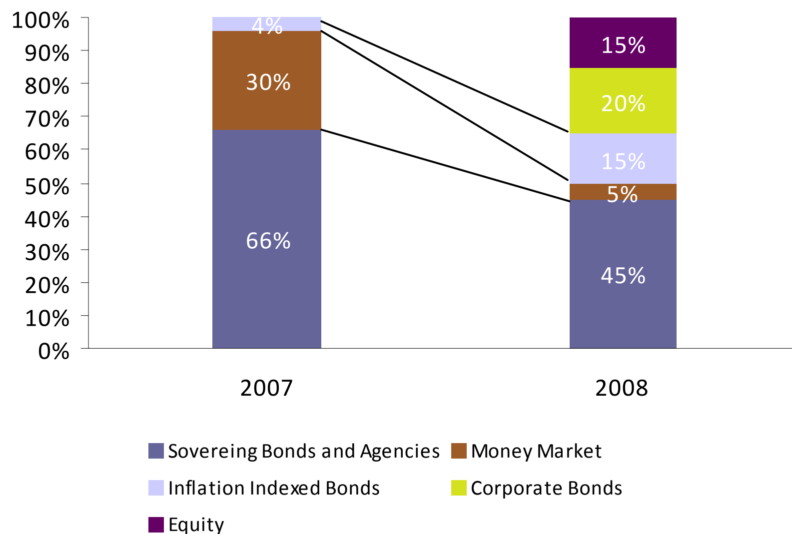
Operational Management

As mentioned above, the fiscal responsibility law provided that the operational management may be assigned to the BCCh, as Fiscal Agent, or be awarded to external managers through a selection process. Considering BCCh's wide experience in managing the country's international reserves, the Committee suggested that during 2008 the BCCh should continue to operationally manage the resources of the Funds. In addition, taking into account that the BCCh has carried out several external manager selection processes, the Committee proposed that the selection of external managers be carried out under the delegated managers' modality of the Fiscal Agent, as allowed by the fiscal responsibility law and the agency decree.

Investment Structure

After analyzing the proposals submitted by the Committee members as well as different international experiences and expert reports, the Committee recommended expanding the asset classes of the Funds' current portfolios, which, as has been stated, are similar to those of the BCCh's international reserves. In particular, the Committee proposed that the current portfolio structure of both funds – 30% in money market, 66.5% in sovereign bonds, and 3.5% in inflation-indexed sovereign bonds — be gradually changed to a more diversified investment structure. The Committee especially recommended that, towards the end of 2008, the funds' new structure should include investing 15% of the portfolio in equity, 20% in corporate fixed-income, 45% in sovereign bonds, 15% in inflation-indexed bonds, and 5% in money market (Chart 2).

Chart 2: Investment structure:
present (2007) and proposed (2008)



Source: Ministry of Finance

The Committee's recommendation considers, on the one hand, the different nature and differing objectives of the international reserves, and, those of the Funds, on the other. In effect, the essential purpose of the reserves is to ensure high liquidity to face potential external crises. Because of this, reserves are invested in short-term liquid assets with a relatively low risk and return.

On the other hand, the ESSF – in light of current perspectives – and the PRF – due to its own nature – have mid- to long-term investment horizons. In these cases, both financial theory and experience indicates that a diversified portfolio invested in different asset classes (including equity) should provide additional returns in the mid- to long-term. However, experience also indicates that equity investments are more volatile than short-term liquid assets. However, the risk posed by the structure proposed is limited, because the portion of the Funds' portfolio that, as recommended by the Committee, would be invested in corporate bonds and equity would only amount to 1/3; whereas the remaining 2/3 would continue to be invested in assets having a lower risk (Box 3). This structure is at the prudent or conservative extreme for similar funds at national and international level.[2]

[2] The exposure to stocks as proposed equals to the minimum limit of Fund C of the Chilean pension system and is within the authorized limits for Fund D.

Box 3: Comparison between current investment structure and the Financial Committee proposal

The investment structure proposed considers a gradual investment of part of the Funds' resources in corporate fixed-income instruments and in equity; an increase in the "duration" of investments; greater currency diversification; and greater tolerance to credit risk. In effect, current restriction on currency benchmark composition, which only includes US dollar, Euro and Yen, is released; the number of eligible currencies is raised from 12 to 22; "duration" is significantly extended from 1.9 to 5.4 years; and maximum credit risk rating accepted changes from A- to BB+.

More specifically, the current guideline has a fixed benchmark composition of 50% US dollars, 40% Euros, and 10% in Yen, while the new guidelines do not rigidly fixed the currency composition, since this will depend on the evolution of the currency weights in the selected *benchmarks*. For example, Table 2 illustrates the possible change in the currency composition, considering, to this effect, the *benchmark* composition of the new investment structure.

Table 2: Comparison by currency composition
(percentage of total)

Currencies	Current Guidelines	New Guidelines
Canadian dollar	0	2
US dollar	50	35
Euro	40	31
Pound	0	8
Japanese Yen	10	16
Other	0	8

Table 3 compares both guidelines in terms of credit risk. It must be noted that, in this case, the credit composition of the new guidelines will also depend on the performance of the *benchmarks* selected. Consequently, for purposes of the example, the current composition of the *benchmarks* of the new investment structure was considered.

Table 3 : Comparison by credit risk
(percentage of total)

Credit Risk	Current Guidelines	New Guidelines
AAA	65	46
AA	30	30
A	5	16
BBB	0	8
BB+	0	0

Selection of external managers

The Committee recommended hiring external managers for the investments in equity and corporate fixed-income instruments, choosing different managers for each asset class, and assigning to each one of them specific amounts. It also proposed that, initially, equity and corporate fixed-income investments should be predominantly managed under a passive investment strategy, and that it would gradually evolve to a more active one (Box 4). Further, it

recommended to the Minister of Finance that both the Ministry of Finance as the BCCh jointly participate in the selection of these external managers.

Box 4: Passive and active management

Once the investment policy has been defined, portfolio management strategies must be selected. These may be classified as active and passive.

An active strategy uses existing information and short to mid-term projections to try to obtain returns higher than those of the representative *benchmark* for a given asset class. A passive strategy, on the other hand, seeks to equal the performance of the *benchmark*.

The selection of either strategy depends on the existing perception of the efficiency of the financial markets. In efficient markets, obtaining returns higher than those offered by passive strategies for the same asset class is unlikely. Higher expected returns would only correspond to higher risk levels.

However, the debate on the relative advantages of either of these strategies has not yet been settled, and both have advocates and detractors. Some advantages of passive management include that the benchmarks of the representative asset classes usually exceed the return on actively managed assets in the long-term. This is mainly due to the fact that passive strategies carry lower transaction and management costs than active strategies. It is difficult to find active managers whose long-term performance surpasses that of the *benchmarks* by a margin large enough to offset their higher costs.

On the other hand, there are cases where active managers have generated returns substantially higher than their *benchmarks* for extended periods. Nevertheless, a question that is always difficult to answer is whether these higher returns were the result of having taken on higher risk or the result of markets inefficiencies. This point is precisely what maintains the debate on the relative advantages of the two management strategies at a standstill.

Selection of the external consultant

After analyzing the external manager selection process, the Committee recommended that an external consultant be hired to provide advice on the selection of external managers. The consultant would provide support in the form of specialized technical assistance, as well as access to the large databases owned by the consultant, and would collaborate with the Committee in evaluating and selecting the external managers. Specific tasks the consultant would carry out include: proposing suitable managers; suggesting evaluation questionnaires and schemes; expressing opinions on specific quantitative and qualitative aspects of each firm; and preparing a shortlist of potential managers.

The Committee proposed to the Minister of Finance that selection of the consultant be according to the following criteria: cost (of the consulting service); terms (number of weeks the service will

be provided); experience (customer and services portfolio); and coverage of their databases (amount and quality of the data). Based on these criteria, the Committee recommended hiring the firm *Strategic Investment Solutions.*

Evaluation of manager performance and risk monitoring

In order to evaluate the manager's performance, the Committee recommended considering a specific benchmark portfolio for each asset class, so that to assess the decisions made regarding the investments in liquid assets, sovereign bonds, inflation-indexed sovereign bonds, corporate bonds and equity securities (Table 4).

Table 4: Comparison of *benchmarks* by asset class

	Current Guidelines	**New Guidelines**
Benchmark Liquid Assets (short-term)	6 Month Libid rate / 6 Month T-bills rate	Merrill Lynch Libid 6 Month Average/Merrill Lynch T-Bills Index
Benchmark Sovereign Bonds (nominal)	JPMorgan Global Bond Index	Lehman Global Treasury and Other Government Related Securities Index
Benchmark Sovereign Bonds Indexed (real)	Barclays US TIPS 1-10 Years	Lehman Global Inflation-Linked Index
Benchmark Corporate Bonds	-	Lehman Global Aggregate Corporate Securities Index
Benchmark Equity	-	MSCI All Country World Index (ACWI) – Global Equity Index

To maximize the financial return for both funds keeping a limited risk exposure, the Committee expressed the convenience of establishing minimum requirements for diversification in both fixed-income and equity securities, as well as global limits to the composition of fixed-income portfolios based on risk. In addition, it recommended setting maximum deviation bands for managers with respect to the *benchmarks*. As for the portfolios managed by external managers (equity and corporate bonds), it proposed that deviations as regards the *benchmarks* be subject to a risk limit by asset class.

III. Potential Effect of the Recommendations

As mentioned above, since their inception, the asset classes considered in the Funds' investment policy have been similar to those included in the international reserves investment portfolio. Nonetheless, under the current perspectives, the Funds have different objectives and time horizons. The most relevant factor for the international reserves is liquidity. Consequently they are invested in short-term assets with relatively low risk and return.

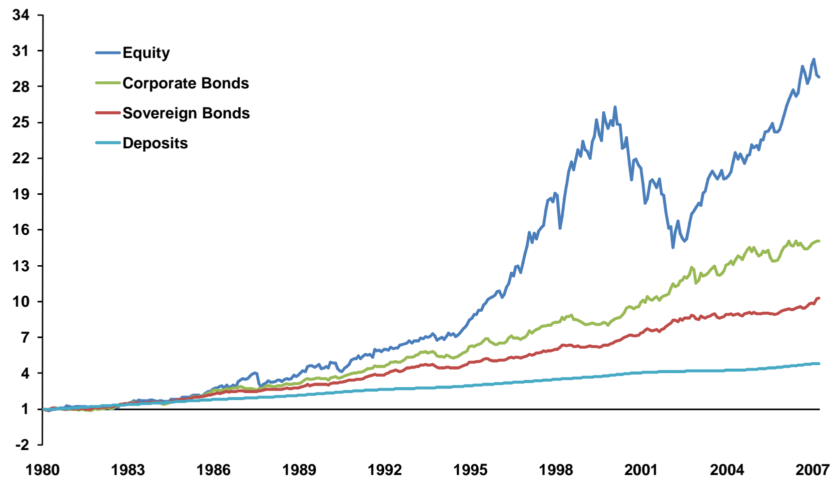
However, given the longer investment horizon of the Funds, greater variability in short-term returns may be acceptable and, therefore, the Funds may expect a greater return than under the current investment policy, assuming an acceptable risk level.

Both theory and empirical evidence suggest that a diversified investment portfolio with minimum risk for a given long-term return includes fixed-income asset combinations – both of the government and corporations – and equity securities. The returns for this portfolio should be greater than those from one composed only by short-term fixed-income or money market instruments. Considering the anticipated time horizons for the ESSF and the PRF, adding a moderate portion of equity securities and longer term fixed-income instruments with prudent credit risk should generate greater returns without significantly affecting the level of risk.

Historical data show that between 1980 and 2007 equity generated greater returns than other asset classes.[3] An investment of US$ 1 in shares in 1980 would grow to US$ 28 by the end of 2007. Had this same amount been invested in corporate bonds, its value would have amounted to US$15 at the end of 2007. The same amount invested in sovereign bonds and in time deposits by the end of 2007 would have totaled US$10 and US$5, respectively (Chart 3).

[3] Luis Arcentales "Chile: Can't Beat the Real Thing", Morgan Stanley Research Latin America, 17 March 2008.

Chart 3: Total returns for different asset classes
(January 1980=1)



Source: Morgan Stanley Research Latin America

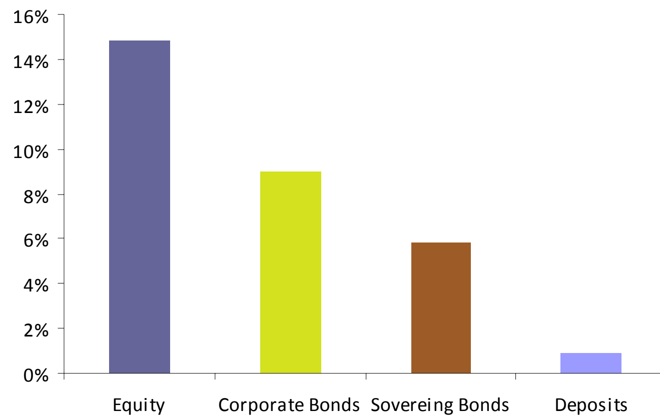
Return, however, is only one of the variables that must be considered. Volatility of returns must also be considered. As represented in charts 3 and 4, equity clearly showed the most volatility during the period. So the selection of different asset classes for the Fund portfolios must seek a suitable balance between the expected return and volatility.

One measure of the relationship between returns and volatility is the Sharpe ratio, which represents the returns adjusted by its volatility. The higher the Sharpe ratio for an asset or portfolio, the better will be under certain assumptions. During this period the Sharpe ratios of sovereign bonds, corporate bonds and equity were roughly equal, but were lower than the Sharpe ratio of the portfolio suggested by the Committee (Chart 5).

In this context, the investment recommendations presented by the Committee and accepted by the Ministry of Finance seek to maximize the Fund returns according to an acceptable risk. This is why, as already explained, the new investment policy for both funds will include by the end of 2008: 15% in equity, 20% in corporate bonds, 45% in sovereign bonds, 15% in inflation-indexed sovereign bonds, and 5% in money market (deposits). This new investment structure provides greater investment diversification and is more in line with the objectives of the Funds.

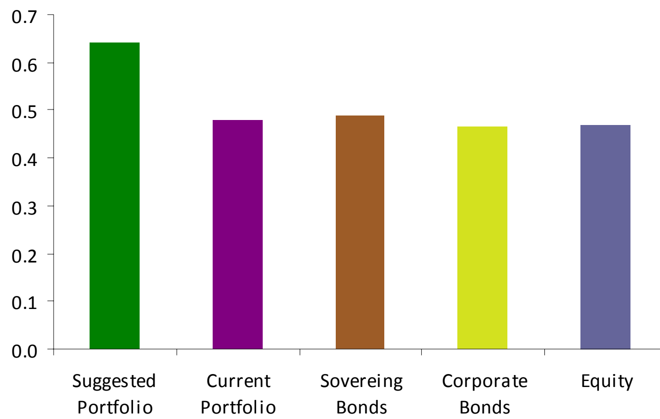
Finally, three observations on the new investment policy proposed for 2008: First, it is a conservative policy that seeks gradual diversification; second, it involves a transition stage that may be followed by a less conservative policy; third, it is identical for both funds, which is justified by the economies of scale that may arise from using an identical distribution of assets for both funds at this stage. However, given the different objectives of the two Funds, the portfolio structures will be different in each fund in the future.

Chart 4: Volatility of returns on different asset classes



Source: Morgan Stanley Research Latin America

Chart 5: Total volatility-adjusted return index



Source: Morgan Stanley Research Latin America

IV. Annex

Annex 1: Market Value Evolution and Performance of the PRF and ESSF

Since its creation on December 28, 2006, the PRF has received contributions totaling US$ 1,340.89 million. Its value at the end of December 2007 amounted to US$ 1,466.35 million. Therefore, investments during this period generated additional resources for the total amount of US$ 125.46 million, implying an internal rate of return (IRR) of 11.84% annualized.[4]

Since its creation on March 6, 2007, the ESSF has received contributions totaling US$ 13,100 million. Its value at the end of December 2007 amounted to US$ 14,032.61 million. Investment during this period generated additional resources for the total amount of US$ 932.6 million (Table A1.1 and A1.2), implying an IRR of 12.24% annualized.

Table A1.1: Market value evolution of the PRF

Change in Market Value (Million USD)	2006	Year 2007				
	Total	1 Qtr	2 Qtr	3 Qtr	4 Qtr	Total
Initial Market Value		604.6	611.4	1,350.1	1,418.9	
Contributions	604.5		736.4			1,340.9
Change in Market Value	0.1	6.8	2.4	68.7	47.5	125.5
Final Market Value	604.6	611.4	1,350.1	1,418.9	1,466.4	

Source: JP Morgan

Table A1.2: Market value evolution of the ESSF

Change in Market Value (Million USD)	Year 2007				
	1 Qtr	2 Qtr	3 Qtr	4 Qtr	Total
Initial Market Value		7,128.8	9,656.4	11,150.5	
Contributions	7,100.0	2,500.0	1,000.0	2,500.0	13,100.0
Change in Market Value	28.8	27.6	494.2	382.1	932.6
Final Market Value	7,128.8	9,656.4	11,150.5	14,032.6	

Source: JP Morgan

Two main factors favorably affected the market value of both funds.

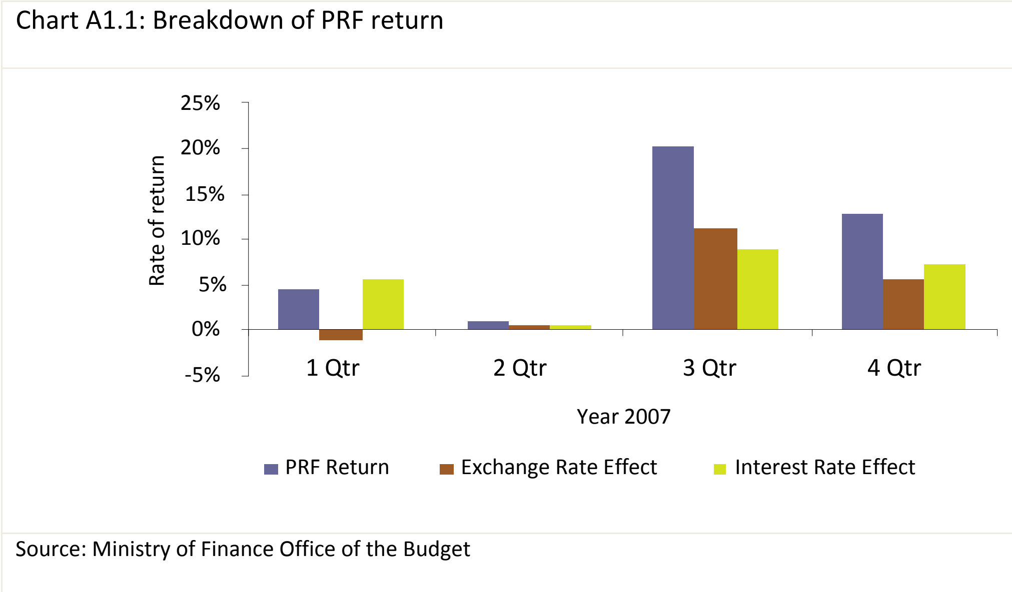
The first was the drop in U.S. interest rates. In order to confront the so-called *sub-prime* crisis, the Federal Reserve cut the relevant interest rate by 100 base points in the first half of 2007 to 4.25%. Consequently, yields on fixed-income instruments fell substantially and their market value rose. The crisis also caused interbank liquidity problems, which drove investors to seek refuge in safer assets, which exacerbated the fall in fixed-income yields and caused their value rise further.

[4] IRR is the return implicit calculated from a series of cash flows. This is the return that equals the initial investment with the present value of those flows, or is the discount rate that makes the present value of all cash flows equal to zero.

The second factor that increased the value of the funds was the depreciation of the US dollar. Given that half the value of Fund portfolios is invested in currencies other than the US dollar – 40% in Euro and 10% in Yen – their appreciation versus the US dollar substantially increased the value of the Funds expressed in dollars.

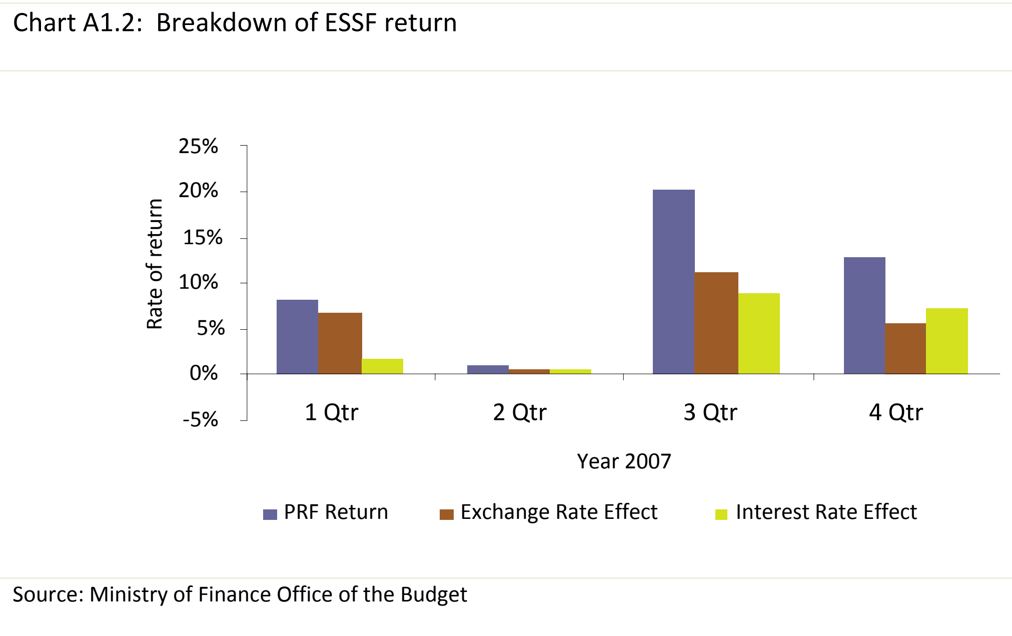
Charts A1.1 and A1.2 illustrate the contribution to the returns due to changes in the exchange rates between the euro, yen and the US dollar, and to the decline in interest rates.

Chart A1.1: Breakdown of PRF return



Source: Ministry of Finance Office of the Budget

Chart A1.2: Breakdown of ESSF return

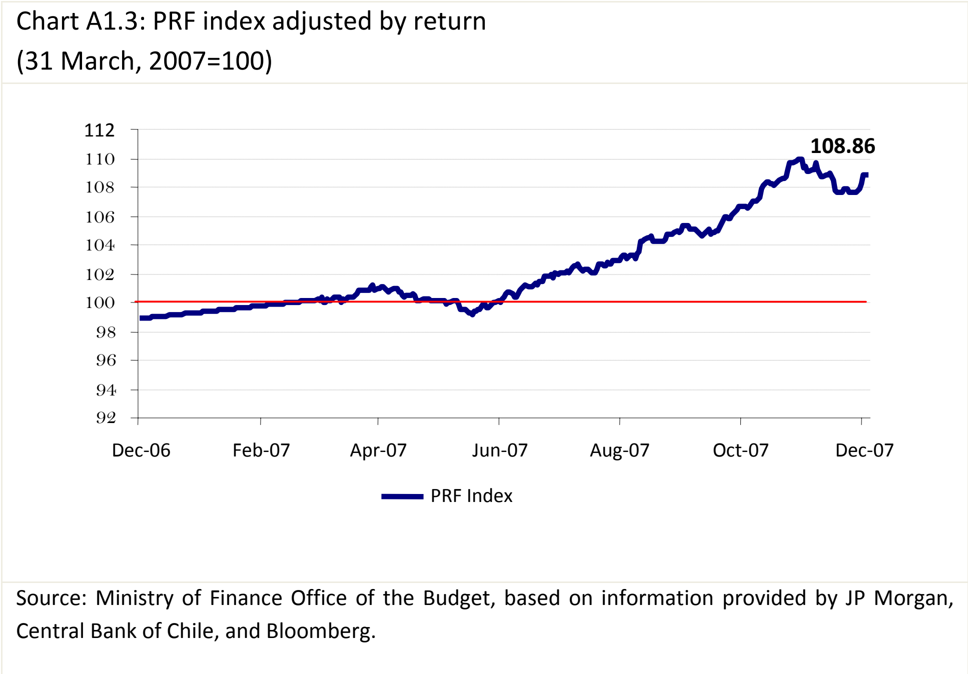


Source: Ministry of Finance Office of the Budget

It should be noted that IRR depends not only on the return on investments, but also on the timing and size of contributions and withdrawals. Because of this, the IRR is not the most appropriate measure of portfolio manager performance, since they do not control the timing or the amount of the potential Fund's contributions and withdrawals.

To eliminate the effects of the net cash flows (contributions less withdrawals) in the returns of the Funds, the time-weighted return (TWR) was utilized.[5] The *TWR* for a particular period is determined calculating and averaging the portfolio's daily returns, net of contributions and withdrawals. Indices for both funds were constructed based on the TWR to measure their performance. For both funds, the base of the indices is 100 on March 31, 2007, and their value was 108.86 for the PRF and 108.89 for the ESSF on December 31 (Chart A1.3 and Chart A1.4). This implies an annualized return of 11.60% for the PRF and of 11.64% for the ESSF. Both were slightly lower the *benchmark* (11.93%).

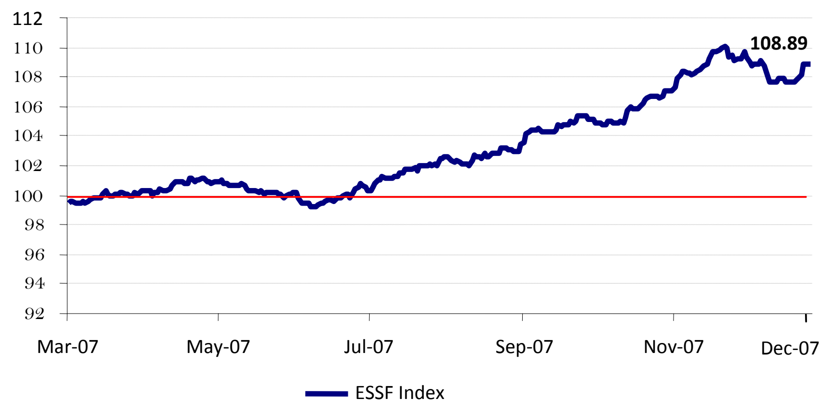
Chart A1.3: PRF index adjusted by return
(31 March, 2007=100)



Source: Ministry of Finance Office of the Budget, based on information provided by JP Morgan, Central Bank of Chile, and Bloomberg.

[5] Time Weighted Return (TWR) is the growth rate determined as a percentage of change in the value of an asset over a period of time that does not consider the effect of input and output capital flows.

Chart A1.4: ESSF Index adjusted by return
(31 March, 2007=100)



Source: Ministry of Finance Office of the Budget, based on information provided by JP Morgan, Central Bank of Chile, and Bloomberg.

Annex 2: Sovereign Wealth Funds in the World

Characteristics of sovereign wealth funds

Sovereign wealth funds (SWFs) are vehicles created by governments to invest fiscal surpluses, and there are two main types of SWF depending on the origin of their resources:

i) Commodity-based funds: Funds that accumulate international assets purchased with revenue generated from the export of oil and other non-renewable resources. Examples are: Botswana, diamonds; Norway and Russia, oil; and Chile, copper.

ii) *Non-commodity*-based funds: Funds that accumulate international assets purchased with the surplus in the current account. Examples include China and Singapore.

The existence of these funds is not a new phenomenon. For instance, the *Kuwait General Reserve Fund* was created in 1953, and the *Abu Dhabi Investment Authority* (ADIA) was set up in 1976. ADIA, the largest SWF, has estimated assets of US$875 billion. The most recently created SWFs are those of Russia, Korea and Chile.

The reserves currently held in the world's sovereign wealth funds are said to be on the order of US$2.9 trillion (2,900,000 million) (Table A2.1). If global national reserves were added to this, the total amount rises to some US$5.6 trillion (5,600,000 million).

Table A2.1: Major sovereign wealth funds

Country	Fund Name	Assets Million US$	Inception Date	Source of Accumulation
United Arab Emirates	ADI	875,000	1976	Oil
Norway	Government Pension Fund - Global	341,200	1996	Oil
Singapore	GIC	330,000	1981	Other
Saudi Arabia	Saudi Arabian funds of various types	300,000	N/A	Oil
Kuwait	Reserve Fund for Future Generation	250,000	1953	Oil
China	State FX Investment Corp. + Hueijing Co.	200,000	2007	Other
Singapore	Temasek Holdings	159,210	1974	Other
Russia	Stabilisation Fund	133,000	2003	Oil
Libya	Oil Reserve Fund	50,000	2005	Oil
Algeria	Fond de régulation des recettes	42,600	2000	Oil
Qatar	Qatar Investment Authority	40,000	N/A	Oil, gas
United States of America (Alaska)	Permanent Reserve Fund	38,000	1976	Oil
Brunei	Brunei Investment Authority	30,000	1983	Oil
Malaysia	Khazanah Nasional BHD	25,700	1993	Other
Korea	KIC (Korea Investment Corporation)	20,000	2006	Other
Kazakhstan	National Fund	17,600	2000	Oil, gas
Taiwan	National Stabilisation Fund	15,000	N/A	Other
Canada	Alberta Heritage TF	15,500	1976	Oil
Iran	Oil Stabilisation Fund	15,000	1999	Oil
Chile	Fund for Economic and Social Stabilization (FESS)	11,151	2007	Copper
Nigeria	Excess Crude Account	11,000	2003	Oil
Botswana	Pula Fund	6,800	1966	Diamond
Oman	State General RF	2,000	1980	Oil, gas
Azerbaijan	State Oil Fund	1,500	1999	Oil
Venezuela	FIE	756	1998	Oil
Canada	Fond des générations (Québec)	560	2006	Electricity
Trinidad & Tobago	Revenue SF	460	2000	Oil
Kiribati	Revenue Equliz. Fund	400	1956	Phosphates
Uganda	Poverty Action Fund	350	1998	Donors
TOTAL		**2,932,787**		
Oil or gas-related funds		**2,163,616**		
Non oil or gas-related funds		**769,171**		

Source: Morgan Stanley Research Global

According to Stephen Jen, a *Morgan Stanley Research Global* researcher, a typical SWF should have the following characteristics: be sovereign, show high foreign currency exposures, have no explicit liabilities, show high risk tolerance, and have long investment horizons.[6]

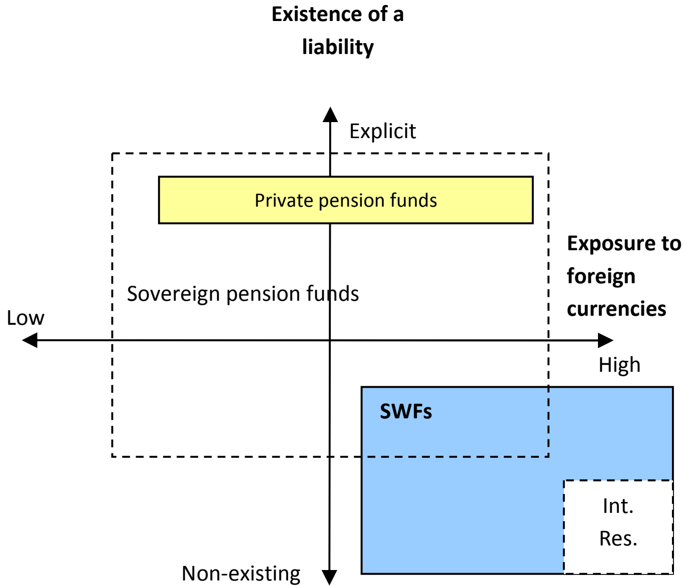
Jen positions different types of funds existing in the market — private pension funds, public pension funds, SWFs and international reserves —according to two dimensions: the existence of a liability and foreign currency exposure (Chart A2.1).

By definition, 100% of international reserves are invested in foreign currency. They do not have any explicit liabilities, although they indirectly finance open market operations, especially papers placed in the local market.

Although SWFs must not be 100% invested in foreign currency, most of them have a high exposure to foreign currencies. Examples of sovereign funds that are not 100% invested in foreign currencies include: Singapore's *Temasek Holdings*, Malaysia's *Khazanah Nasional BHD* and Canada's *Fond des Generations* (Quebec).

Sovereign Pension Funds (or SPFs) are usually less exposed to foreign currencies. For example, the Japanese GPIF fund and the *US Social Security Trust Fund* have a 0% and 13% invested in foreign currencies, respectively. SPFs tend to have relatively clear explicit or implicit liabilities.

Chart A2.1: Funds according to the existence of liability and exposure to foreign currencies

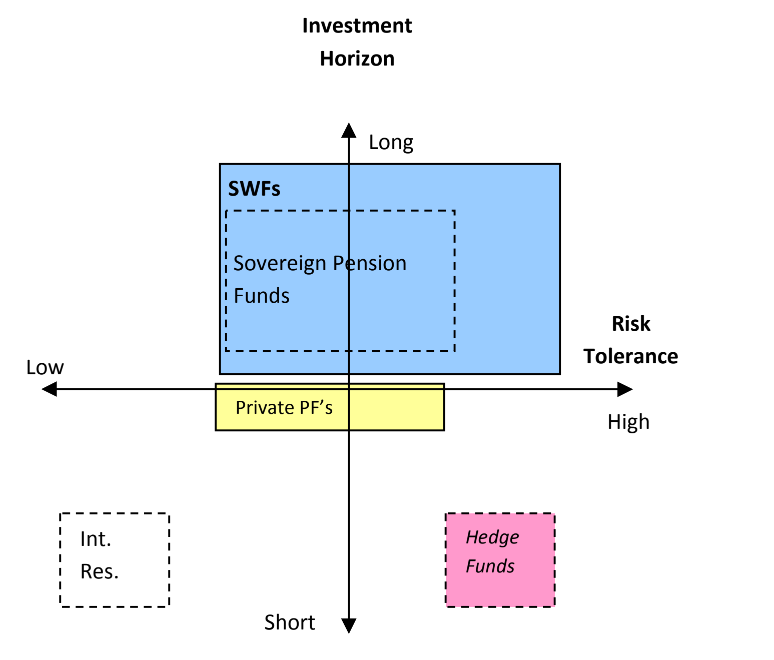


Source: Morgan Stanley Research Global

[6] Stephen Jen "The Definition of a Sovereign Wealth Fund", Morgan Stanley Research Global, 25 October 2007.

Finally, Jen also positions the same funds, adding the *hedge funds*, according to two dimensions: investment horizon and risk tolerance (Chart A2.2). Due to the need for liquidity and security, international reserves have a low credit risk tolerance and short-term investment horizon. As a result, most of them are invested in very liquid sovereign bonds and in deep markets. *Hedge funds* also tend to make short-term investments, but with a higher risk tolerance. SWFs and SPFs generally present medium risk tolerance (between the international reserves and the *hedge funds*), and a relatively long-term investment horizon.

Chart A2.2: Funds according to investment horizon and risk tolerance



Fuente: Morgan Stanley Research Global

SWF Diversification by Type of Asset

Jen states that in coming years SWFs will tend to exhibit a more diversified investment structure similar to that of SPFs[7] and will include about 25% in fixed-income (sovereign and corporate), 45% in equity securities, and 30% in alternate investments (Table A2.2).[8]

Table A2.2: Investment structure of CDP, ABP, NBIM and the SWF model portfolio
(Percentages of the total)

Asset Class	CDP of Canada	ABP (Netherlands)	NBIM (Norway)	Model Portfolio
Fixed-Income	35	40	58	25
Equity Securities	36	34	42	45
Alternate Investments	29	26	-	30

Sources: Annual reports of Caisse de dépôt et placement du Quebec (Canada), of ABP (The Netherlands) and of NBIM (Norway); and of Morgan Stanley Research

One example of this phenomenon, according to the researcher, is Norway's pension fund, which may be going through this maturity process, transitioning, from a larger allocation to equity (from 40% to 60%) to the subsequent inclusion of alternative investments. Norway recently announced its intent to diversify its pension fund into alternate types of investment.

[7] Jen's exercise considers the investment structure of the largest two SPFs in the world: Caisse de dépôt et placement du Quebec (Canada) and ABP (The Netherlands).

[8] Alternate investments include *hedge funds*, *commodities*, infrastructure, real estate and risk capital.

Transparency

As a result of its strong growth and possible impact on financial markets, SWFs have recently drawn more attention and interest. One of the dimensions considered is their transparency, which, among other of their characteristics, defines the nature, objectives and corporate governance of SWFs.

In response to the existing uncertainty regarding corporate governance and the investment policy applied to some sovereign wealth funds, numerous developed countries have expressed concerns about the funds being invested in strategic sectors. Among said concerns and unanswered questions are those relating to the structure of these funds: Are these a political tool of their governments? Do they adhere to the practices and norms applied to trust funds in the countries? Will they have the capacity to affect markets' financial stability?

These questions have not yet been clearly answered, due, to a great extent, to the little information provided by some funds, especially about their objectives, investments, risk management and institutional responsibilities. Encouraged by the above, several international initiatives have been implemented to established good practices regarding the transparency of this kind of funds. Worth noting is the IMF's recent initiative to classify sovereign funds based on their sources of accumulation, objectives and investment structure. The IMF has, at the same time, started talks with different funds managers in order to discuss on best practices as per transparency in governments and investment structure.

Norway's pension fund is usually cited as an example of transparency. Chilean sovereign funds are also included within the most transparent sovereign funds (Table A2.3).

Table A2.3: Summary of SWF best practice evaluation
(Percentage of maximum possible rating)

Fund	Transparency and Accountability	Aggregate Evaluation
United States (Alaska) Alaska Permanent Fund	100	94
Norway Government Pension Fund–Global	100	92
United States (Wyoming) Permanent Mineral Trust Fund	82	91
United States (New Mexico) Severance Tax Permanent Fund	86	86
Timor-Leste Petroleum Fund for Timor-Leste	96	80
Azerbaijan State Oil Fund of the Republic of Azerbaijan	89	77
Canada (Alberta) Alberta Heritage Savings Trust Fund	79	74
Chile Economic and Social Stabilization Fund	82	70
Hong Kong Exchange Fund	79	67
Kazakhstan National Fund for the Republic of Kazakhstan	64	64
Botswana Pula Fund	54	55
Trinidad and Tobago Heritage and Stabilization Fund	46	53
Korea Korea Investment Corporation	45	51
Russia Reserve Fund and National Welfare Fund	50	51
São Tomé and Príncipe National Oil Account	29	48
Kuwait Kuwait Investment Authority	41	48
Mexico Oil Income Stabilization Fund	43	47
Singapore Temasek Holdings	61	45
Singapore Government of Singapore Investment Corporation	39	41
Malaysia Khazanah Nasional	46	38
China China Investment Corporation	14	29
Kiribati Revenue Equalization Reserve Fund	7	29
Algeria Revenue Regulation Fund	11	27
Nigeria Excess Crude Account	14	26
Iran Oil Stabilization Fund	18	23
Venezuela Macroeconomic Stabilization Fund	18	23
Venezuela National Development Fund	27	20
Oman State General Reserve Fund	18	20
Sudan Oil Revenue Stabilization Account	14	20
Brunei Darussalam Brunei Investment Agency	25	18
United Arab Emirates (Abu Dhabi) Mubadala Development Company	7	15
United Arab Emirates (Dubai) Istithmar World	7	14
Qatar Qatar Investment Authority	2	9
United Arab Emirates (Abu Dhabi) Abu Dhabi Investment Authority	4	9
Average	**44**	**46**

Source: Edwin Truman, "A Blueprint for Sovereign Wealth Fund Best Practices", *Policy Brief* Peterson Institute for International Economics, April 2008.

Annex 3: Members of the Financial Committee

ANDRÉS BIANCHI LARRE - President

Mr. Bianchi holds a masters degree in economics from Yale University and a degree in judicial and social sciences from the Universidad de Chile. He was president of the Central bank of Chile from 1989 to 1991, and Chilean ambassador to the United States from 2000 to 2006. He has also been president of the Credit Lyonnais Bank and of the Dresdner Banque Nationale de Paris, and executive secretary of ECLAC. He has worked as an advisor to the World Bank, the IDB and the central banks of Bolivia, Colombia, Mexico and Venezuela.

ANA MARíA JUL LAGOMARSINO - Vice President

Ms. Jul holds a PhD in Economics from the University of Pennsylvania and worked for the IMF for 27 years, where she served as adjunct director and as executive director of the IMF board of directors where she represented Chile and four other countries of the southern region of South America. She has worked as a consultant to the Ministry of Economy and Finance of Peru, the Inter-American Development Bank and for a private consulting company in Chile.

MARTÍN COSTABAL LLONA- Advisor

Mr. Costabal holds an MBA from the University of Chicago and a degree in business administration from the Universidad Catolica de Chile. He has served as the nation's finance minister and budget director, and has been a manager of Empresas Pizarreño and of Infraestructura 2000. He was chief executive of AFP Habitat and a former member of the board of ICARE. He is currently a member of the board of directors of CMPC S.A. and of Empresas Pizarreño S.A.

OSCAR LANDERRETCHE MORENO – Advisor

Mr. Landerretche holds a PhD in Economics from the Massachusetts Institute of Technology and degree in business administration from the Universidad de Chile. He is currently a professor at the School of Economics of the Universidad de Chile and co-academic director of the joint master's degree program in public policy of the Universidad de Chile and the University of Chicago.

ANDRÉS SANFUENTES VERGARA- Advisor

Mr. Sanfuentes holds a master's degree in economics from the University of Chicago and a degree in business administration from the Universidad de Chile. He has served as president of the Banco Estado (1990–2000), consultant, and has taught at the University of Chile in the Ilades-Georgetown program.

EDUARDO WALKER HITSCHFELD –Advisor

Mr. Walker holds a PhD in Business Administration with a concentration in finance from the University of California at Berkeley and a degree in business administration from the Universidad Católica de Chile. He is currently a full professor at the School of Administration of the Pontificia Universidad Católica de Chile. He has also been an associate visiting professor in the Finance

Department of the McCombs School of Business of the University of Texas at Austin, head of research for AFP Habitat, a member of the Capital Market Committee and of the Risk Rating Commission, as well as an international consultant.

Annex 4: Glossary

Basis point: One one-hundredth of a percentage point. The smallest unit used to value bond returns or changes in interest rates.

Bonds: A bond is a financial obligation assumed by an issuer (for example, a company or a government) with investors. The issuer promises to return the principal lent and to pay an agreed upon interest rate on one or more specific dates.

Cash: Cash and bank deposits.

Corporate bonds: Bonds issued by corporations or companies.

Duration: Indicates the sensitivity of a bond's price to changes in interest rates. The longer the duration of the bond, the greater its sensitivity to changes in interest rates.

Equity securities: Instruments representing the ownership or capital of a corporation or company. Buyers of equity securities become owners or shareholders in a corporation and will obtain gains or losses, depending on the company's financial performance. If the company is profitable, it may pay dividends to its shareholders and the market price of a share will tend to rise. If the company shows losses, it may not pay dividends and the price of a share will tend to fall.

Fixed-income: Investment instruments that yield a known return over a specified period when the investment is made. These securities or bonds represent debt for the issuing entity (for example, companies or governments). The issuer or debtor must return the entire principal and pay interest as agreed upon over a specific period of time.

Inflation-indexed bonds: Bonds whose value is adjusted according to a particular inflation index. US inflation-indexed bonds are called *Treasury Inflation Protected Securities* (TIPS).

Investment policy: Set of criteria, guidelines and instructions that regulate the amount, structure and dynamics of the investments in a portfolio.

Type of asset: A specific category of investment, such as equity, corporate bonds, sovereign bonds and money market, among others. All assets in a given category generally have similar characteristics in terms of risk and structure, react to the market in a similar manner, and are usually subject to the same regulations.

Libid Rate: *London interbank bid rate*, interest rate on interbank deposits. By definition, it is the Libor rate minus 0.125%.

Libor Rate: *London interbank offered rate*, interest rate on interbank loans.

Liquid assets: Short-term instruments that may be readily converted into cash, with very low risk that their will value change.

Liquidity: Readiness with which an investment (or instrument) may be sold.

Monetary market instruments: Tradable instruments maturing within a period shorter than or equal to one year.

Portfolio: A combination of investment instruments acquired by an individual or an institutional investor.

Risk rating: Refers to the degree of credit risk of a financial instrument, institution or country, as defined by a credit-rating agency.

Risk: The likelihood that damages or losses will occur. Variability in the investment returns.

Sovereign Bonds: Bonds issued by governments.

Spread: The difference in yields between fixed-income instruments for a given maturity. This differential is used to evaluate the relative performance of different instruments.

Stocks: A stock is an instrument representing a portion of equity or ownership in a company. When a stock is acquired, one participates in the gains and losses that the business might generate.

Sub-prime mortgages: Loans intended to finance the purchase of a home by people whose weak credit profile does not make them eligible for standard financing. These mortgages are relatively more expensive and risky.

US financial agencies: US mortgage finance institutions that are explicitly or implicitly backed by the government.

Volatility: A risk indicator for any asset. It represents the variation in price for an asset over a period of time. Values may fluctuate with variations in the market, or due to events such as changes in interest rates, unemployment or other changes in the economy.