ECONOMIC AND SOCIAL STABILIZATION FUND

Fourth Quarter, 2009

I. BACKGROUND

The Economic and Social Stabilization Fund (ESSF) was established under the Finance Ministry's Decree with Force of Law (DFL) N°1 (2006). This merged into the ESSF the additional fiscal-income stabilization resources saved under Decree Law N° 3.653 (1981) and those of the Copper Income Compensation Fund. The first payment into the ESSF was made on March 6, 2007.

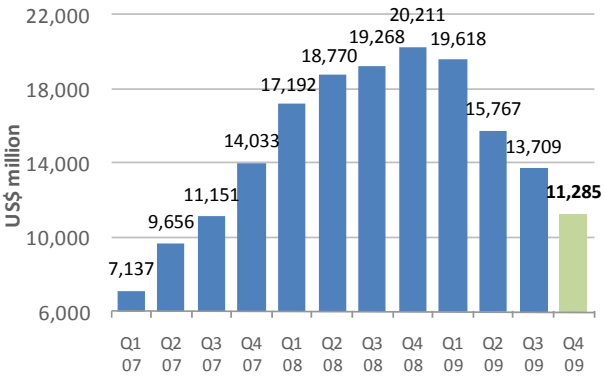
The ESSF's management was entrusted to the Central Bank of Chile (CBC), which acts as Fiscal Agent[1,2] and invests its assets according to instructions from the Finance Ministry.[3] Under the ESSF's current investment policy, its assets are held exclusively as international fixed-income instruments with credit ratings as set out in Appendix VII.2.

This report includes a review of the markets that affect the ESSF's performance, prepared by the CBC in its role as Fiscal Agent (Section VI).

II. SUMMARY OF THE QUARTER

At the close of the fourth quarter, the ESSF held assets that, at market prices, were worth US$11,284.78 million. The change in its value as compared to September 30 was explained by withdrawals for US$2,341.00 million, accrued interest of US$68.25 million and a US$151.55 million drop in the market value of its assets (net of management and custody fees).

Figure 1: Market Value, 2007-2009



Source: Dipres

Signs of a recovery in global activity began to become apparent in the second half of 2009, with improvements in growth indicators in countries that included the United States, Japan and those of the Euro Zone. However, this upturn was not sufficient to offset the contractions seen in the first half of the year. Moreover, at the end of the year, some countries such as Dubai, Greece and Spain registered large deficits, leading to a return of global economic uncertainty and, in December, an important appreciation of the dollar against the euro and the yen with a negative impact on the performance of the ESSF.

[1] Acceptation Agreement adopted by the Central Bank Board in Ordinary Meeting N° 1.321, held on February 22, 2007. Since the ESSF's inception, its assets have been managed by the CBC.

[2] Under the Finance Ministry's Supreme Decree N° 1.383.

[3] The Finance Minister determines the ESSF's investment policy with the advice of an external Financial Committee.

III. MARKET VALUE OF THE FUND

As of December 31, the ESSF had a value of US$11,284.78 million, down by US$2,424.30 million on the close of the third quarter.

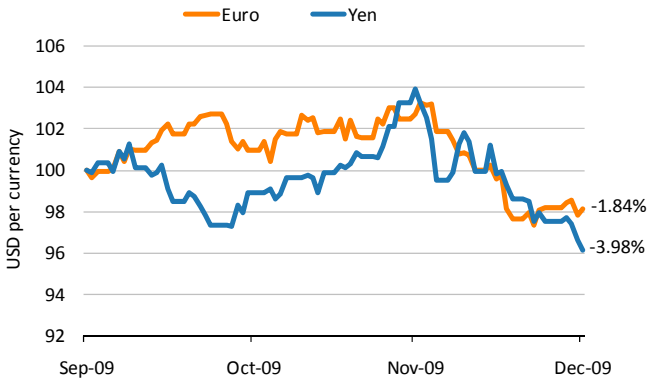
This change was explained by withdrawals for US$2,341.00 million,[4] accrued interest earnings of US$68.25 million and a capital loss of US$151.55 million (after management and custody costs).

The fund's capital loss was due principally to the depreciation of the euro and the yen against the dollar as compared to the previous quarter (Figure 2) which had a negative impact on the value of its portfolio, particularly in December. An increase in international interest rates also negatively affected the return on its assets (Figure 3).

In October, the ESSF showed a capital gain[5] of US$32.64 million due mainly to exchange-rate movements, with a rise in the exchange rate giving a gain of US$36.21 million while interest- rate movements resulted in a loss of US$3.57 million. In October, no management or custody fees were paid.[6]

In November, the ESSF went on to show a capital gain of US$211.67 million, comprising US$147.40 million due to a rise in the exchange rate and US$64.33 million due to the positive impact of market interest rates, while management and custody costs, considered in this item, reached US$0.06 million.

Figure 2: Exchange Rates
(4th quarter)



Source: JPMorgan

Table 1: Historical Summary of the ESSF
(since inception)

US$ million	2007	2008	2009						Summary Total
			1st Sem	Q3	Oct	Nov	Dec	Summary Q4	
Starting Value	0.00	14,032.61	20,210.68	15,767.39	13,709.08	12,927.75	12,603.61	13,709.08	**0.00**
Contributions	13,100.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	**18,100.00**
Withdrawals	0.00	0.00	-4,376.71	-2,560.00	-840.00	-560.00	-941.00	-2,341.00	**-9,277.71**
Interest Income*	326.15	623.95	243.75	92.27	26.03	24.18	18.04	68.25	**1,354.37**
Capital gains (losses)**	606.46	554.11	-310.32	409.42	32.64	211.67	-395.86	-151.55	**1,108.12**
Final Value	**14,032.61**	**20,210.68**	**15,767.39**	**13,709.08**	**12,927.75**	**12,603.61**	**11,284.78**	**11,284.78**	**11,284.78**

* includes interest from the securities lending program
** includes custody and administrative costs

Source: Dipres

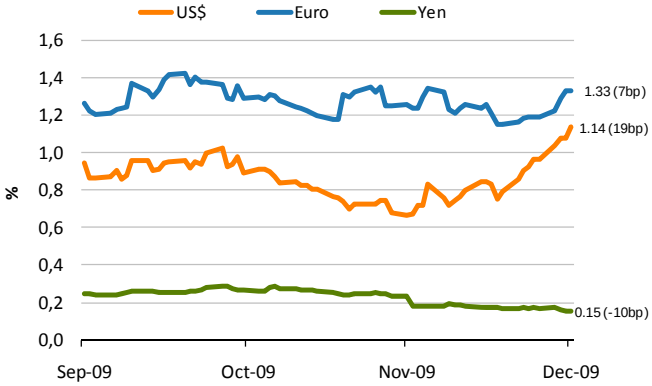
[4] Withdrawals from the ESSF began on March 25, 2009.

[5] Capital gains (losses) on the ESSF and the Pension Reserve Fund (PRF) are the result of movements in exchange rates and market interest rates in a given period.

[6] A summary for the quarter is shown in Table 5.

In December, the depreciation of the euro and the yen against the dollar meant a capital loss of US$288.64 million while increases in international interest rates accounted for a loss of US$106.86 million. Management and custody costs, included in this item, amounted to US$0.36 million.[7]

Figure 3: Interest Rates on Sovereign Bonds (2-year duration)



Source: Bloomberg

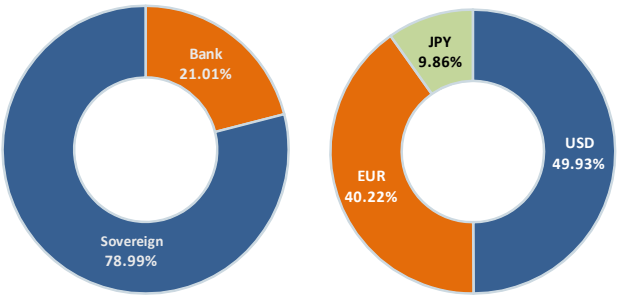
Since its inception, the value of the ESSF at market prices has shown a net increase of US$2,462.49 million in capital and interest earnings.

IV. INVESTMENT PORTFOLIO

Under the ESSF's present investment strategy, 100% of its assets can be held as sovereign-risk instruments, 60% as multilateral instruments, 50% in banking institutions and up to 30% in agencies (Appendix VII.2). In addition, its guidelines establish a currency allocation[8] of 50% in US dollars, 40% in euros and 10% in yens.

At the end of the quarter, 78.99% of the ESSF's assets corresponded to sovereign bonds and 21.01% to bank deposits. In the case of its currency allocation, 49.93% was held in dollars, 40.22% in euros and 9.86% in yens.

Figure 4: Investment Portfolio by Asset Class and Currency (December 31, 2009)



Source: Dipres based on information provided by JP Morgan.

In terms of amounts, the fund held US$8,913.96 million in sovereign bonds at the end of the fourth quarter and US$2,370.82 million in bank deposits while, by currency, it held US$5,634.39 million in dollars, US$4,538.19 million in euros and US$1,112.21 million in yens.

As shown in Table 2, the duration of the fund's financial investments was 2.46 years, equivalent to an average duration of 898 days.

Table 2: Summary of ESSF Investments

Assets	Original currency	4th Quarter 2009 US$ million		
		Oct	Nov	Dec
Sovereign	USD	4,939.63	4,750.19	4,388.91
	EUR	4,447.04	4,116.13	3,750.29
	YEN	892.77	875.06	774.76
Agencies	USD	0.00	0.00	0.00
	EUR	0.00	0.00	0.00
	YEN	0.00	0.00	0.00
Banks	USD	1,526.06	1,600.95	1,245.48
	EUR	721.05	882.13	787.90
	YEN	401.21	379.15	337.45
Total		12,927.75	12,603.61	11,284.78
Duration (years)		2.38	2.27	2.46

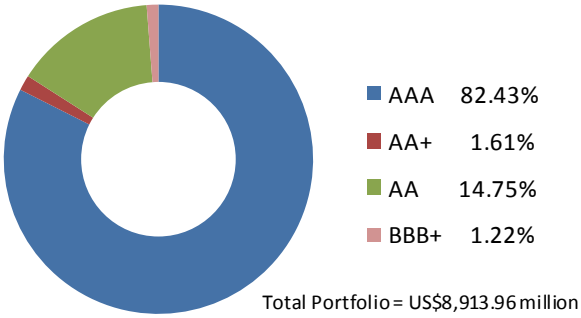
Source: Dipres based on data provided by JP Morgan.

[7] A summary for the quarter is shown in Table 5.

[8] A variation of +/- 5% is permitted in currency allocation.

As indicated above, the ESSF's current investment strategy allows it to maintain up to 100% of its assets in sovereign-risk instruments with an AAA credit rating (Appendix VII.2.A1). As of December 31, 82.43% of its assets were invested in this category while only 1.22% corresponded to a BBB+ rating.

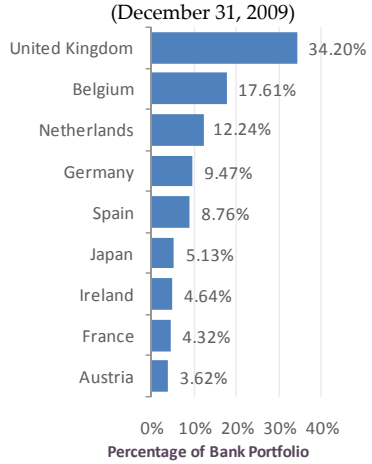
Figure 5: Investment Portfolio by Sovereign Risk (December 31, 2009)[9]



Percentages calculated over 100% of sovereign-risk portfolio.
Source: Dipres based on data provided by JP Morgan.

As of December 31, 64.05% of the ESSF's bank-risk investments were held in the United Kingdom, Belgium or Holland (Figure 6) while 35.95% corresponded to other Euro Zone countries.

Figure 6: Investment Portfolio by Bank Risk (December 31, 2009)



Source: Dipres based on information provided by CBC.

[9] Information based on trade date.

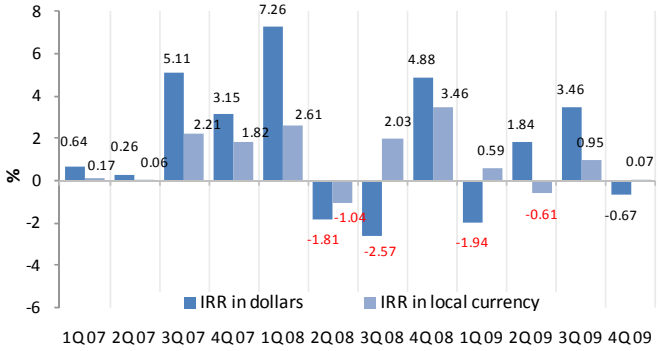
IV.1. Investment Portfolio Returns

The indicator used to measure returns on the ESSF's portfolio is the Internal Rate of Return (IRR).[10] This represents the effective return received by investors and takes account of all flows during the period.

In the fourth quarter of 2009, the IRR on the ESSF, measured in dollars, was -0.67%. This reflected principally the depreciation of the euro and the yen against the dollar, which accounted for a drop of 0.74% in the IRR while interest-rate movements meant a gain of 0.07%.

Measured since its inception, the ESSF's IRR in dollars reached 6.16%. This was explained mainly by the results of the third and fourth quarters of 2007, the first and fourth quarters of 2008 and the third quarter of 2009.

Figure 7[11]: Quarterly IRR in Dollars and Local Currency[12]



Source: Dipres based on data provided by JP Morgan and CBC.

[10] See Glossary.

[11] Data on returns may differ from previous reports since, as from 2009, these were recalculated to include cost flows.

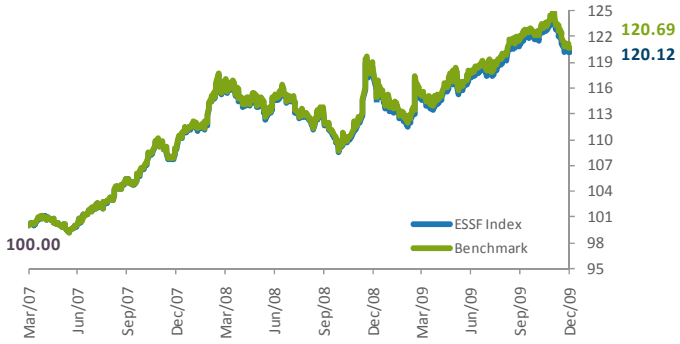
[12] The Internal Rate of Return (IRR) is compound and considers all flows. The IRR in local currency is the result of excluding the exchange-rate effect.

IV.2. Investment Portfolio Performance

The Time-Weighted Rate of Return (TWR)[13] is used to measure the ESSF's performance relative to its benchmark.

In order to measure its performance over a period of time, an index is calculated based on daily variations in the portfolio's market value in dollars. The base value is 100 as of March 31, 2007, the date established to start comparisons with its benchmark.[14]

Figure 8: TWR on ESSF vs. Benchmark.
(March 31, 2007 = 100)



Source: Dipres based on information provided by JP Morgan and CBC.

In the fourth quarter of 2009, the index showed a return of -0.96% as compared to -0.99% for the benchmark. In relative terms, this means that the ESSF's performance was 3 basis points (bps) above the benchmark.

Measured since the ESSF's inception, its TWR was 6.88% or 18 bps short of its benchmark. This difference was explained mainly by the relatively lower contribution of returns in local currency[15] (Table 3).

Table 3: Returns

Return indicators	4Q 09	Since inception[1]
IRR[2]	-0.67%	6.16%
TWR	-0.96%	6.88%
Benchmark	-0.99%	7.06%
Differential	0.03%	-0.18%
ESSF Local currency (TWR)	0.01%	4.49%
BMK Local currency (TWR)	-0.02%	4.67%
Risk-adjusted return	**4Q 09**	**Since inception[1]**
TWR ESSF	0.28	1.04
Benchmark	0.28	1.06

[1] March 31, 2007
[2] March 6, 2007

Source: Dipres

The ex-post tracking error (TE_{ep})[16] is an indicator that provides information about the risk level of investments as compared to their benchmark. For passively-managed portfolios that comprise exclusively fixed-income instruments, it can run at between 50 and 70 bps. In the case of the ESSF, the TE_{ep}, measured in annual terms since the fund's inception, reached 0.18% or 18 bps. This implies that, on average since the ESSF's inception, the differences between its returns and the benchmark have been small, also reflecting conservative management of the fund by the Fiscal Agent.

A summary of the main risk indicators is shown in Table 4.

Table 4: Risk Indicators

Risk indicators	4Q 09[2]	Since inception[1]
Standard deviation ESSF	3.45%	6.64%
Standard deviation BMK	3.49%	6.69%
Ex-post tracking error	-	0.18%
Information ratio	-	-1.00

[1] March 31, 2007
[2] Last 12 months

Source: Dipres

[13] See Glossary.
[14] See Appendix VII.4.
[15] See Glossary.
[16] The TE considers the return differential since the fund's inception expressed in annual terms.

V. OTHER FLOWS

V.1. Securities Lending

The securities lending program consists in the temporary loan of financial instruments under which the lender and borrower establish the conditions and/or collateral with which the latter undertakes to comply.

The ESSF's securities lending program is managed by the custodian institution (JP Morgan), using the financial assets held in the fund's portfolio as established in the Custody Contract with JP Morgan. In the fourth quarter, operations of this type generated additional income of US$175,077 for the ESSF.

V.2. Costs

In the fourth quarter, management and custody costs totaled US$422,703 of which US$187,000 corresponded to the management services provided by the CBC and US$235,703 to custody fees paid to JP Morgan.

Table 5: Summary of Other Quarterly Flows

Other Flows (US$)	*Q4*
Management (CBC)	-187,000
Custody (JP Morgan)	-235,703
Other costs	0
Total costs	-422,703
Securities Lending	175,077
Total other Flows	**-247,626**

Source: Dipres based on information provided by JP Morgan and CBC.

VI. BEHAVIOR OF RELEVANT MARKETS

VI.1. General Situation

In the fourth quarter of 2009, the world's main central banks made no changes in their respective monetary-policy interest rates. In the United States, the Federal Open Market Committee (FOMC) held its target range for the federal funds rate at 0% to 0.25% while both the European Central Bank (ECB) and the Bank of Japan (BJ) maintained their monetary-policy rates at 1%. In this context and in view of faster-than-expected economic recovery, the Australian and Norwegian monetary authorities raised their rates by 75 and 50 bps, respectively, during the quarter, taking them to 3.75% and 1.75%.

In November, international financial markets were concerned by Dubai's request to postpone payments on the debt of its Dubai World conglomerate, admitting its inability to honor its different financial liabilities[17] and creating fears of a possible default. In December, Abu Dhabi lent Dubai US$10 billion so as to allow Dubai World to pay its immediate liabilities and cover its general needs through to April 2010.

However, in December, concern was again raised by the decision of Fitch Ratings, Standard and Poor´s and Moody´s Investor Service to reduce their long-term sovereign ratings for Greece from "-A" to "BBB+", from "-A" to "BBB+" and from "A1" to "A2", respectively. They attributed these downgrades mainly to the sustained deterioration of Greece's public finances as reflected in the country's inability to reduce its fiscal deficit and public debt, which reached 12% and 113% of GDP, respectively.

In the fourth quarter of 2009, the world's main currencies weakened against the dollar while the yield curves of the different economic zones steepened. In general terms, there continued to be signs of economic improvement, accompanied by growing uncertainty about the inflation outlook. This situation was reflected in an increase in the premium for inflation risk, which resulted in a steepening of the yield curve in the major economies.

VI.2. Main Economic Trends

- **United States**

The principal indicators of confidence in the United States showed a small increase with respect to the third quarter of 2009. However, they remained at historically low levels, reflecting the uncertainty prevailing in the US economy.

As in the third quarter, the Leading Index continued to register positive monthly figures during the fourth quarter, anticipating an improvement in the US economy. Similarly, industrial production increased at an average monthly rate of 0.5%, confirming the recovery of this sector which had begun in the third quarter. Unemployment, however, increased from 9.8% to 10% while job creation maintained its negative trend, with a quarterly loss of 310,000 jobs, although this compared favorably with the third-quarter loss of 780,000 jobs. Annual inflation rose from -1.3% to 2.7% while annual core inflation increased from 1.5% to 1.8%.

In the fourth quarter of 2009, the yield curve steepened in the United States. The evolution of the structure of interest rates implied that the yield on 2-year Treasury bills increased by 19 bps while that on 10-year Treasury bills rose by 53 bps. In general terms, interest rates rose for all maturities, with an average increase of 37 bps in the yield on US bonds.

[17] Dubai's total debt reached US$80 billion of which US$70 billion corresponded to state companies, with Dubai World accounting for US$59 billion of this total. Nakheel, a real estate company owned by Dubai World, was scheduled to make payments of approximately US$3.5 billion on Islamic bonds in December 2009 and asked its creditors to wait until at least May 30, 2010.

- **Euro Zone**

In Europe, the main indicators of confidence[18] also strengthened with respect to the close of the third quarter of 2009, but remained historically low and well below their levels before the financial crisis.

Through to the third quarter, Germany's ZEW survey, which provides an indication of economic activity, showed positive results and, in line with this, the Euro Zone saw a 0.4% increase in GDP in the third quarter of 2009. Similarly, indicators of activity in the services and manufacturing sectors[19] remained positive in the fourth quarter of 2009, reinforcing the trend seen since the second quarter of the year. Industrial output also showed a recovery, reducing its annual contraction from 12.8% to 7.1%. Unemployment increased from 9.8% to 10%, its highest level since 1998.[20] In the fourth quarter of 2009, annual inflation rose from -0.3% to 0.9% while annual core inflation showed a slight drop from 1.2% to 1.1%.

In the Euro Zone, the relevant yield curve steepened.[21] The yield on 2-year German bonds increased by 7 bps while that on 10-year bonds rose by 17 bps. In general, there was an upward shift in interest rates, principally for maturities of between 6 and 10 years where the yield on German bonds increased by an average of 18 bps.

- **Japan**

In contrast to the situation in the United States and Europe, Japan's main indicators of confidence[22] showed a moderate contraction with respect to the third quarter of 2009, remaining historically low and reflecting consumers' lack of confidence in the recovery of the Japanese economy.

In the fourth quarter, there were, however, signs of a stabilization of the Japanese economy. These included a 0.3% third-quarter increase in GDP, equivalent to 1.3% in annual terms. In this context, industrial production[23] showed an important recovery, with its annual contraction dropping from 18.4% to 3.9%, while retail sales maintained their positive trend, with a reduction in their annual contraction from 1.3% to 1.0%. Unemployment dropped slightly from 5.3% to 5.2% in line with market expectations. Annual inflation rose from -2.2% at the end of the third quarter to -1.9% while annual core inflation closed at -1.2%.

In the fourth quarter of 2009, Japan's yield curve steepened. This was reflected in the yield on 2-year Japanese sovereign bonds, which fell by 10 bps, while that on 10-year bonds fell by 1 bps. In general, interest rates for all maturities shifted downwards and the yield on Japanese bonds fell by an average of 6 bps.

[18] Euro Zone indicators of confidence published by the European Commission.

[19] Eurozone Services PMI Markit Survey, EC Composite PMI Output and Eurozone Manufacturing PMI Markit Survey Ticker.

[20] Figures for industrial output and unemployment in the Euro Zone are for November 2009 and were the latest available at the close of this report.

[21] The yield curve referred to by Bloomberg as EUR German Sovereign.

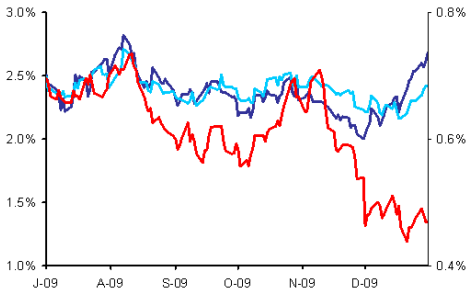
[22] Japan Consumer Confidence Overall Nationwide NSA and Japan Consumer Confidence Households NSA.

[23] Figures for industrial output, retail sales, unemployment and inflation in Japan are for November 2009 and were the latest available at the close of this report.

VI.3. Fixed-Income Market

In the fixed-income market, the behavior of interest rates on 5-year government bonds was mixed. In the United States, interest rates rose but, in Japan, yields dropped while, in Europe, they showed practically no change for this maturity (Figure 9).

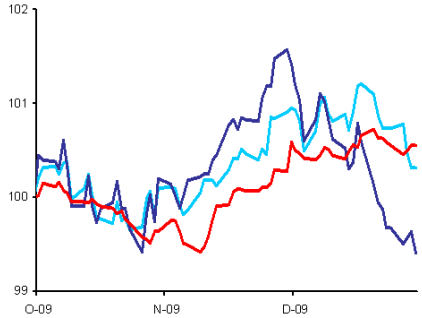
Figure 9: Interest Rates on 5-year Sovereign Bonds
Blue: United States
Light blue: Europe
Red: Japan (secondary axis)



Source: Bloomberg

Returns were negative in the United States while, in both Japan and Europe, total returns performed positively (Figure 10).

Figure 10: Total Returns (JP Morgan Index 1-10 years).
(September 30, 2009 = 100)
Blue: United States
Light blue: Europe
Red: Japan



Source: JP Morgan

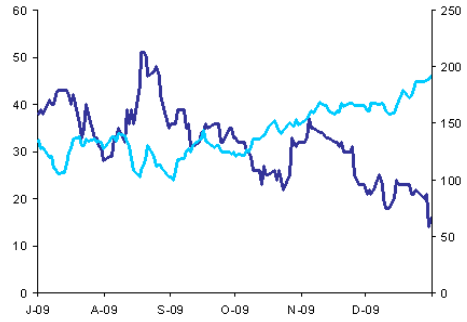
VI.4. Main Spreads on Portfolio Securities

The spread on 5-year agency bonds dropped by 17 bps in the fourth quarter of 2009 (Figure 11). As a result, their return[24] was higher than that on 5-year US Treasury bills.

US Inflation-Linked Bonds (TIPS) also showed a higher return than (nominal) US Treasury bills of an equivalent maturity.[25] This was reflected in the spread on TIPS[26] which increased by 70 bps, due principally to increasing uncertainty about the inflation outlook and a higher premium for inflation risk.

Figure 11: Agency and TIPS Spread vs. Treasuries
(Spreads in bps compared to 5-year Treasuries)

Blue: Agencies
Light blue: TIPS (secondary axis)



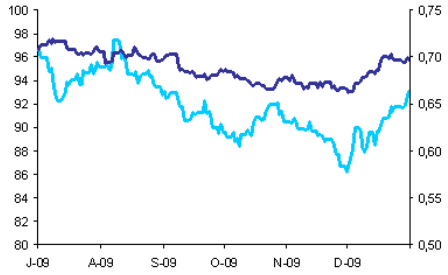
Source: Bloomberg

[24] Strictly, the return on 5-year US agency bonds in the second quarter (-1.9%) was less negative than that on Treasury bills of the same maturity (-12.2%).
[25] During the fourth quarter of 2009, the return on 5-year inflation-indexed bonds (8.6%) was higher than on Treasury bills of the same maturity (-2.0%).
[26] TIPS spread: Return on a US Treasury bill minus the return on TIPS of an equivalent maturity.

VI.5. Exchange Rates

In the fourth quarter of 2009, the euro and the yen depreciated against the dollar, losing 1.84% and 3.98%, respectively (Figure 12). As a result, the yen/euro exchange rate showed an appreciation of 2.06% over the same period.

Figure 12: Exchange Rates
(against the dollar)
Blue: Euro (secondary axis)
Light blue: Yen



Source: JP Morgan

VII. APPENDIX

VII.1. Positions with Sovereign Issuers and Financial Institutions

The Fiscal Agency has investments in **Sovereign Bonds** of the United States, Germany, France, Japan, Greece, Portugal, Italy, Belgium, and Ireland.

ESSF and PRF
Banks with Deposits, December 31, 2009

1	ABN AMRO Bank NV
2	Allied Irish Banks
3	Banco Santander Central Hispano S.A.
4	Bank of Ireland
5	Bank of Scotland Plc
6	Barclays Bank Plc
7	Bayerische Hypo-und Vereinsbank AG
8	Bayerische Landesbank
9	Caja de Ahorros y Monte de Piedad de Madrid
10	Dexia Bank Belgium SA
11	Erste Group Bank AG
12	Fortis Bank NV/SA
13	ING Bank NV
14	KBC Bank NV
15	Landesbank Baden-Württemberg
16	Lloyds TSB Bank Plc
17	Mizuho Corporate Bank Ltd.
18	Raiffeisen Zentralbank Österreich AG (RZB)
19	Société Générale
20	The Royal Bank of Scotland Plc

Source: JP Morgan

VII.2. Investment Limits

A. Credit Risk

The ESSF's investments must fulfill the following credit-risk conditions and requirements:

The eligible issuers are:

Asset Class (Risk)	Upper Limit
Sovereigns	100%
Multilaterals	60%
Banks	50%
Agencies	30%

A.1 Sovereign Risk

The eligible countries are those, other than Chile, that over the previous 24 months have held a long-term risk classification equivalent to **A-** or higher issued at least by two of the following international credit rating agencies: Fitch, Moody's and Standard & Poor's.

Investment limits for eligible sovereign risk (between **AAA** and **A-**) are:

Risk Classification	Upper Limit
AAA	100%
AA+ AA AA-	90%
A+ A A-	30%

A.2 Supranational or Multilateral Risk

The eligible international organizations are those with a long-term risk classification equivalent to **AA-** or higher issued at least by two of the following international credit rating agencies: Fitch, Moody's and Standard & Poor's.

Investment limits for eligible multilateral risk (between **AAA** and **AA-)** are:

Risk Classification	Upper Limit (US$ million)
AAA Aaa	800
AA+ Aa1 AA Aa2 AA- Aa3	600

A.3 Bank Risk

The methodology for selecting banking institutions and assigning limits is based on international risk classifications and the size of the institutions.

Eligible institutions are those that have a long-term risk classification of A- or higher issued at least by two of the following international credit rating agencies: Fitch, Moody's and Standard & Poor's, and a minimum shareholders' equity equivalent to **US$1,000 million**.

Investment limits by institution are expressed in discrete intervals according to the table below:

Risk Classification	Upper Limit (US$ million)
AAA Aaa	600
AA+ Aa1 AA Aa2 AA- Aa3	400
A+ A1 A A2 A- A3	300

A.4 Agency Risk

The eligible agencies are those in the United States with a long-term risk classification equivalent to **AAA** issued at least by two of the following international credit rating agencies: Fitch, Moody's and Standard & Poor's, and a minimum shareholders' equity equivalent to **US$1,000 million**. Investment in any one agency may not exceed **US$800 million.**

VII.3. Methods of Calculating Estimated Returns

The method used to calculate the return on a portfolio depends on the nature of the fund and on whether the return to the investor or the performance of the portfolio manager is being evaluated.

In the Quarterly Report, two main methods are used: the **Time-Weighted Rate of Return (TWR)** and the **Internal Rate of Return (IRR)**, with the latter serving as a measure of money-weighted return. While the

TWR is used to analyze the performance of the fund's management relative to the chosen benchmark, the IRR is used to determine the effective fund's return to the Republic.

A conceptual description of each of these methods is provided below, along with a discussion of their general use in the financial market and their application to Chile's sovereign wealth funds, followed by some brief final comments.

VII.3.1 Internal Rate of Return (IRR)

The Internal Rate of Return (IRR) on the net flows of a given period is the rate of return actually received by an investor.

The Association for Investment Management and Research (AIMR) recommends using the IRR to measure return on investments in instruments that are not publicly traded (property, private equity, etc.) since, in these cases, the portfolio manager has greater control over the amount and timing of cash flows.

The IRR is the implicit return at which the initial investment equals the present value of flows and interest or, in other words, the discount rate at which the present value of all cash flows equals zero. This is equivalent to resolving the following equation:

$$\text{, with } CF_i = \text{net flow of day } i.$$

Rates of return calculated using the iterative IRR method are affected by the timing and size of net cash flows during the period.[27]

VII.3.2 Time-Weighted Rate of Return (TWR)

This method is used by market participants to measure the performance of funds invested in publicly-traded instruments. In the case of these instruments, fund managers tend not to control investors' cash flows because they are constantly buying and selling.

The TWR[28] is the rate of growth measured as a percentage of the change in the value of an asset over a given period without considering the effect of cash flows. In order to obtain the TWR for the period, the daily

[27] Alternatively, the IRR can be calculated using the Modified Dietz Method (MDM):

where:

- *EMV* is the market value at the end of the period plus accrued interest.
- *BMV* is the market value at the beginning of the period plus accrued interest.
- *CF* is net cash flow during the period.

Net Adjusted Cash Flow is the average of each individual cash flow weighted by the length of time (as a percentage of the total period) during which the flow affected the portfolio.

[28] Fabozzi and Frank, *Investment Management*, © 1995, pgs 611-618.

returns are net of contributions and withdrawals as well as costs[29] and income from the securities lending program.

$$TWR_{period} = \prod_{i}^{period}(1+r_i)-1$$

where:

$$r_i = \frac{value\_assets_i - \text{contributions} + \text{withdrawals} + \text{costs} - \text{securities\_lending}}{value\_assets_{i-1}}$$

The TWR measures the ability of a fund manager to generate value through a defined investment policy, independently of the contributions and/or withdrawals made during the period analyzed.

In the case of Chile's sovereign wealth funds, it allows their performance to be compared with the benchmark. This is achieved by converting daily returns (measured as the difference in market value from one day to another, excluding cash flows during the latter) into an index.

VII.3.3 TWR vs. IRR

The TWR is utilized to measure the performance of a fund manager or managers against the chosen benchmark. An alternative method of measurement is to assume that the resources are permanently invested in a portfolio that generates the same daily return as the benchmark and to compare the value of this hypothetical portfolio with that of the actual portfolio. However, under this latter method, it is more difficult to build the benchmark and verify its results.

The usual practice in financial markets is, therefore, to use the TWR to measure a fund manager's performance and to be able to compare this with a benchmark that it is easily constructed by an external party.

The IRR, on the other hand, serves to measure a fund's performance from the point of view of the investor, in this case the State of Chile.

Although the two indicators measure different aspects of an investment, both are considered necessary in order to properly evaluate performance.

VII.4. Calculation of ESSF Benchmark

The reference portfolio (benchmark) has three main components:

- ✓ **Short-term money market instruments**: Merrill Lynch Libid 6-Month Average index and Merrill Lynch Treasury Bills index in the three reference currencies are used.

[29] Only includes custody and consultancy costs.

- ✓ **Nominal bonds**: Barclays Global Treasuries sub indices for sovereign bonds of 1-3 years, 3-5 years, 5-7 years and 7-10 years in the three currencies are used.

- ✓ **Inflation-linked bonds:** Barclays US Govt. Inflation-Linked Bond Index (US TIPS) is used. This index monitors sovereign bonds with a duration between 1 and 10 years.

The weight of each of these components is as follows:

Composition	USD	EUR	JPY	Total
Money Market (*)	***15.0%***	***12.0%***	***3.0%***	***30.0%***
Merrill Lynch Libid 6-Month Average	7.5%	6.0%	1.5%	15.0%
Merrill Lynch Treasury Bills	7.5%	6.0%	1.5%	15.0%
Nominal Sovereign Bonds	***31.5%***	***28.0%***	***7.0%***	***66.5%***
Barclays Capital Global Treasury Index 1-3 years	14.2%	12.6%	3.2%	29.9%
Barclays Capital Global Treasury Index 3-4 years	9.5%	8.4%	2.1%	20.0%
Barclays Capital Global Treasury Index 5-7 years	3.9%	3.5%	0.9%	8.3%
Barclays Capital Global Treasury Index 7-10 years	3.9%	3.5%	0.9%	8.3%
Inflation-Indexed Sovereign Bonds	***3.5%***			***3.5%***
Barclays US Govt. Inflation-Linked Bond Index	3.5%			3.5%
TOTAL	***50.0%***	***40.0%***	***10.0%***	***100.0%***

VII.4.1 Calculation of LIBID and T-Bill Benchmark

The benchmark for the money market investments is calculated from the indexes Merrill Lynch Libid[30] 6-Month Average and Merrill Lynch Treasury Bills for the three currencies included in the portfolio. The daily returns are obtained from the change in value of said indexes denominated in USD:

$$\mathrm{Re}t\_Libid_t = 7{,}5\% \cdot \left(\frac{ML\_Libid_t^{USD}}{ML\_Libid_{t-1}^{USD}} - 1 \right) + 6{,}0\% \cdot \left(\frac{ML\_Libid_t^{EUR}}{ML\_Libid_{t-1}^{EUR}} - 1 \right) + 1{,}5\% \cdot \left(\frac{ML\_Libid_t^{JPY}}{ML\_Libid_{t-1}^{JPY}} - 1 \right)$$

Similarly, for T-bills, the daily return of each index is:

$$Ret\_TBill_t = 7{,}5\% \cdot \left(\frac{ML\_TBill_t^{USD}}{ML\_TBill_{t-1}^{USD}} - 1 \right) + 6{,}0\% \cdot \left(\frac{ML\_TBill_t^{EUR}}{ML\_TBill_{t-1}^{EUR}} - 1 \right) + 1{,}5\% \cdot \left(\frac{ML\_TBill_t^{JPY}}{ML\_TBill_{t-1}^{JPY}} - 1 \right)$$

[30] According to convention, the LIBID rate is equal to LIBOR less 1/8 o 0.125.

VII.4.2 Calculation of Nominal Bond Benchmark

The benchmark for sovereign bonds is calculated using the different Barclays Capital Global Treasury indexes, with durations of 1 to 3 years, 3 to 5 years, 5 to 7 years and 7 to 10 years for the United States (USD), Germany (EUR) and Japan (JPY). The daily return of each index in its local currency is:

$$\mathrm{Ret}\_BNom_t = \frac{Idx\_Bcls_t}{Idx\_Bcls_{t-1}} - 1$$

The benchmark's daily return in dollars for each country is

$$\mathrm{Ret}\_BNom\_USD_t = \sum_{duration} \mathrm{Ret}\_Idx\_USD_t^{duration} \cdot w_{USD}^{duration}$$

$$\mathrm{Ret}\_BNom\_EUR_t = \sum_{duration} \left[(1 + \mathrm{Ret}\_Idx\_EUR_t^{duration}) \cdot \frac{EUR_t}{EUR_{t-1}} - 1 \right] \cdot w_{EUR}^{duration}$$

$$\mathrm{Ret}\_BNom\_JPY_t = \sum_{duration} \left[(1 + \mathrm{Ret}\_Idx\_JPY_t^{duration}) \cdot \frac{JPY_t}{JPY_{t-1}} - 1 \right] \cdot w_{JPY}^{duration}$$

where:

$$w_{USD} = \begin{cases} \text{duration } 1\text{-}3 \text{ years} = 14.1750\% \\ \text{duration } 3\text{-}5 \text{ years} = 9.4500\% \\ \text{duration } 5\text{-}7 \text{ years} = 3.9375\% \\ \text{duration } 7\text{-}10 \text{ years} = 3.9375\% \end{cases} \qquad w_{EUR} = \begin{cases} \text{duration } 1\text{-}3 \text{ years} = 12.6000\% \\ \text{duration } 3\text{-}5 \text{ years} = 8.4000\% \\ \text{duration } 5\text{-}7 \text{ years} = 3.5000\% \\ \text{duration } 7\text{-}10 \text{ years} = 3.5000\% \end{cases}$$

$$w_{JPY} = \begin{cases} \text{duration } 1\text{-}3 \text{ years} = 3.1500\% \\ \text{duration } 3\text{-}5 \text{ years} = 2.1000\% \\ \text{duration } 5\text{-}7 \text{ years} = 0.8750\% \\ \text{duration } 7\text{-}10 \text{ years} = 0.8750\% \end{cases}$$

The indexes are expressed in their local currency and adjusted by the exchange rate to obtain the return in dollars.

Finally, the benchmark for nominal bonds in USD is:

$$\mathrm{Ret}\_BNom_t = \mathrm{Ret}\_BNom\_USD_t + \mathrm{Ret}\_BNom\_EUR_t + \mathrm{Ret}\_BNom\_JPY_t$$

VII.4.3 Calculation of Inflation-Linked Bond Benchmark

The benchmark for inflation-linked bonds is simply:

VII.4.4 Calculation of Benchmark for the Funds

The daily return on the benchmark for the funds is:

$$Ret\_Libid_t + Ret\_TBill_t + Ret\_BNom_t + Ret\_TIPS_t$$

VII.4.5 Formula for Exchange-Rate Adjustment

Exchange-rate adjustment follows from:

(1)

(2)

(3)

Replacing (1) in (3):

(4)

And, finally, replacing (2) in (4):

(5)

VIII. GLOSSARY[31]

Accrued interest: Interest earned in a given period that has yet to be withdrawn or paid.

Bank risk: The risk associated to an investment in bank financial instruments; refers to the different risks faced by banking institutions in the course of their activities. This normally varies in line with the institution's line of business. These risks include credit, liquidity, exchange-rate and interest-rate risk.

Basis point: One hundredth of a percentage point; the smallest unit for measuring the return on a bond or a change in interest rates.

Benchmark: A portfolio used for the purposes of comparison; permits evaluation of a fund manager's performance. For an investor in fixed-income instruments, benchmarks are, in general, optimum portfolios with clearly defined investment parameters such as the relative weight of the portfolio's components, currency allocation and credit risk.

Carry trade: A financial strategy that consists in borrowing in one currency in order to invest the resources in instruments denominated in another currency with an expected rate of return that is relatively higher than the cost of borrowing in the first currency. Under this strategy, there is no coverage against exchange-rate risk.

Commercial paper: A debt security in local or foreign currency, with a maturity of between 90 days and 1 year, issued by governments, financial institutions and large companies to cover short-term financing needs. A trade bill's yield depends on the issuer's risk rating; maturities, interest rates, repayment terms, currency and expiry vary.

Counterpart risk: The risk arising from the possibility of default on the financial obligations of the counterpart in a financial operation.

Credit risk: The risk that an issuer may not fully comply with a financial liability either at the time it falls due or at some subsequent time. In systems for the exchange of securities, this definition in general includes replacement and principal risks.

Duration: A measure of exposure to interest-rate risk that measures the sensitivity of the price of a fixed-income instrument (bond) to changes in interest rates or, in other words, how much the instrument's price changes in response to a change in interest rates.

***Financial agencies in the US*:** Mortgage lenders in the United States with explicit or implicit government backing.

Flight to quality: Investors' movement of funds to assets of better credit quality and, therefore, lower risk during periods of uncertainty or great volatility.

Inflation-linked bonds: Bonds whose value is adjusted in accordance with an inflation index; in the US, these bonds are known as TIPS.

Information ratio: A measure of the risk-adjusted return on financial securities or a portfolio; defined as the difference between the return on the security or portfolio and the benchmark divided by the TE. It can be interpreted as the ability of the manager to generate returns in excess of the benchmark for each unit of relative risk.

Internal Rate of Return (IRR): The rate of return actually perceived by an investor; corresponds to the internal rate of return on net flows during a given period.

Investment guidelines: Criteria under which investments are managed.

[31] Sources: Central Bank of Chile (CBC) and Bloomberg.

LIBID: London Interbank Bid Rate, the interest rate paid on interbank deposits; by definition, it is equal to LIBOR (offered rate) minus 0.00125 or 0.125%.

LIBOR: London Interbank Offered Rate, the interest rate charged on interbank borrowing.

Local Currency: Denomination currency of financial instruments.

Market risk: The risk that the value of an investment may be reduced by changes in market factors.

Money market instruments: Financial instruments with a maturity of up to a year.

Multilateral risk: The risk of default by an official multilateral issuer.

Operational risk: The risk that deficiencies in internal information systems or controls may result in unexpected losses.

Overnight deposits: Deposits with a maturity of one day.

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

Reference duration: Benchmark duration devised to guide and evaluate the duration of investments.

Reference structure: A reference portfolio used to guide and evaluate portfolio management.

Return differential: A measure of the performance of a portfolio compared to its benchmark.

Risk: The possibility of suffering damage or losses; the variability of the return on an investment.

Risk classification: The level of credit risk associated with a financial instrument, institution or country as defined by a risk rating agency.

Secondary market: The market in which financial assets that have already been issued are traded. Each transaction involves a sale/purchase between investors.

Sovereign risk: The risk arising from investment in sovereign instruments; generally used to refer to the risk classification of a sovereign state. This classification corresponds to the opinion issued by bodies specialized in risk evaluation as to the possibility that a state will properly comply with its financial obligations, taking into account factors that include its payment record, political stability, economic situation and willingness to repay borrowing.

Spread: The difference between yield-to-maturity on fixed-income securities; used to evaluate the relative performance of different instruments.

Subprime mortgages: Loans for house purchase granted to persons whose credit profile excludes them from access to standard financing. These mortgages are relatively more risky.

Time-Weighted Rate of Return (TWR): Rate of growth measured as a percentage of the change in a financial instrument's value over a period of time without taking account of the effect of cash flows.

Total return: Annualized rate of growth of the economic value of an instrument or portfolio considering all the potential sources of income such as capital gains or losses, coupons and their reinvestment.

Tracking Error (TE): An indicator of the risk arising from active positions taken by a portfolio manager as compared to its benchmark.

Value at risk (VaR): An indicator of the risk of a portfolio that provides an estimate of the amount that could be lost over a given period of time with a given level of probability.

Volatility: A measure of an asset's risk, representing the variation in its price over a period of time. Values can fluctuate with market swings due to events such as variations in interest rates, unemployment and economic changes in general.

Waiver: Explicit and voluntary authorization for non-compliance during a certain period of time with certain rules, parameters and/or procedures established in specific investment guidelines.

Weekend deposits: Deposits with a maturity of a weekend.