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Annual Report Financial Committee

Advisory Committee to the Ministry of Finance for Chile's Sovereign Wealth Funds

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April 2022, Santiago, Chile

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Advisory Committee to the Ministry of Finance for Chile's Sovereign Wealth Funds

2 1

Contents

Preface

As stipulated in the Fiscal Responsibility Law of 2006, the Financial Committee was created in 2007 to advise the Finance Minister on the investment of Chile's two Sovereign Wealth Funds: The Economic and Social Stabilization Fund (ESSF) and the Pension Reserve Fund (PRF). The Financial Committee is an independent external advisory board, whose members have a vast experience in economic and financial areas. The Committee meets periodically to analyze matters relating to the investment of the funds. This Report—the fifteenth prepared by the Committee—describes its work and activities in 2021.

The publication of this Report fulfills the requirement established under Decree N° 621, issued by the Ministry of Finance in 2007, which stipulates that the Committee must present an annual report on its work to the Finance Minister and submit a copy of this report to the Finance Commissions of the Senate and the House of Representatives and to the Joint Budget Commission.

The Committee

Executive summary

At the close of 2021, the market value of the funds was US$ 9,930 million, of which US$ 2,457 million was in the Economic and Social Stabilization Fund (ESSF) and US$ 7,473 million was in the Pension Reserve Fund (PRF). The net return in dollars in the year was -4.92% for the ESSF and 3.27% for the PRF,[1] while the net return in pesos was 13.66% and 23.45%, respectively. In the case of the ESSF, the strategic asset allocation was 96.3% in sovereign bills and bonds and 3.7% in inflation-indexed sovereign bonds. For the PRF, the strategic asset allocation was 34% in sovereign and government-related bonds, 8% in inflation-indexed sovereign bonds, 6% in U.S. agency MBS, 13% in corporate bonds, 8% in high-yield bonds, and 31% in equities.

1 The returns published in this report are based on the time-weighted rate of return (TWR) methodology, unless the use of the internal rate of return (IRR) is explicitly identified. Returns for periods greater than one year are annualized. For periods of less than one year, the return corresponds to the change during the period. Net returns reported are net of management fees.

Members of the Financial Committee

President **Juan Andrés Fontaine**

Mr. Fontaine holds a degree in Business Administration from the Universidad Católica de Chile and a Master's degree in Economics from the University of Chicago, where he also undertook doctoral studies. He has previously served as Minister of Economy, Minister of Public Works, Research Director at the Central Bank of Chile, and board member for various companies. He was a Professor at the Universidad Católica de Chile and the Universidad de Chile, as well as a Visiting Professor at the University of California, Los Angeles (UCLA). He currently works as an economic and financial consultant. Mr. Fontaine joined the Committee in August 2021.

Vice President **Macarena Pérez Ojeda**

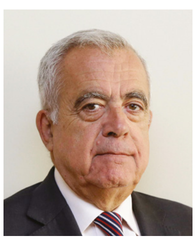
Ms. Pérez holds a degree in Business Administration from the Universidad Católica de Chile. She is currently a partner of Econsult, where she works as an investment advisor for families, individuals, and institutions. She is also a board member for Bbosch, Fundación Mujer Impacta, and Fundación la Fuente; a member of the development council of the Universidad Finnis Terrae, and a mentor for Women in Finance. Her previous positions include CEO of IM Trust AGF, Institutional Distribution Manager at IM Trust, Partner and CFO of Credicorp Capital, and board member of Empresas Volcán SA and Credicorp Capital. She joined the Committee in August 2021.

Member **Ricardo Budinich Diez**

Mr. Budinich holds a degree in Industrial Civil Engineering and a bachelor's degree in Engineering Science, both from Universidad de Chile, and holds a diploma in corporate governance from Universidad Católica de Chile. Currently, he serves on the Board of Directors of several companies and is a member of Vigilance Committees of foreign private equity, global debt, small-mid cap equities, and real estate funds. He was Chief Financial Officer of Copec, Director of Sonacol and many subsidiaries from the same company, Chief Financial Officer of Casaideas and advisor to its Board of Directors, member of the Consultative Counsel of Fundación Copec-UC, member of the Investment Committee of Compañía de Seguros Cruz del Sur and assistant professor of Universidad de Chile. He also performed several executive positions in companies from the financial sector. He joined the Committee in September 2016.

Member Nicolás Eyzaguirre Guzmán

Mr. Eyzaguirre holds a degree in Business Administration and a Master's degree in Economics from the Universidad de Chile, and a Master's degree in Economics from Harvard University, where he also undertook doctoral studies. He previously served as Minister of Finance, Secretary-General of the Presidency, Minister of Education, Research Manager and Director at the Central Bank of Chile, Executive Director and Director of the Western Hemisphere Department at the International Monetary Fund, Chairman of the Chilean National Innovation Council for Competitiveness, Chairman of the Canal 13 corporate group, and Professor at the Universidad de Chile, Universidad de Santiago de Chile, Harvard University, and other universities. He currently works as a consultant. He joined the Committee in August 2021.



Member Martín Costabal Llona

Mr. Costabal holds an MBA from the University of Chicago and a degree in Business Administration from Universidad Católica de Chile. He has performed as Finance Minister and Budget Director, executive of Empresas Pizarreño and Infraestructura Dos Mil, CEO of AFP Habitat and Member of the Technical Advisory Committee of Investment established by the Pension Reform. Currently he serves on the Boards of Directors of private companies. He joined the Committee in January 2007.

Member Mauricio Villena Chamorro

Mr. Villena holds a Ph.D. and Master's degree from Selwyn College, University of Cambridge, England; and a Master's degree from the Leeds University Business School, University of Leeds, England. He is a Civil Industrial Engineer by profession. He is currently the Dean of the Economics and Business Administration Department at the Universidad Diego Portales de Chile, where he also serves as Professor of Business Economics. His past positions include Deputy Director and Head of the Research Department at the Budget Office, in the Ministry of Finance; and he was a member of the Finance Ministry's Advisory Committee on the Benchmark Copper Price. At the Universidad Adolfo Ibáñez, he served as Professor of Economics in the Business School, Interim Dean, Vice-Dean, Vice-Dean of Graduate Studies and Research, Director of Research, Director of the Business Administration Doctoral Program, and Director of Undergraduate Studies (Business Administration) at the Universidad Adolfo Ibáñez Business School. He joined the Committee in August 2021.

CHAPTER 1

Fiscal policy and the funds’ objectives, institutional framework and investment policy

A. Fiscal policy

Chile's fiscal policy is aimed at contributing to macroeconomic stability and providing public goods that increase opportunities and social protection for Chilean citizens.[2]

Since 2001, Chile's fiscal policy is guided by a structural balance rule or, more precisely, a cyclically adjusted balance rule,[3] which mitigates the effect on public finances of fluctuations in economic activity and the copper price. This implies saving in boom times and being able to use those savings during cyclical downturns. As a result, the fiscal rule has a stabilizing effect on public finances and the economic cycle and improves access to financing for both the public and private sectors.

B. Objectives and rules on the use of the funds

To ensure the sustainability of public spending over time and contribute to the competitiveness of the economy, Law 20,128 on Fiscal Responsibility was passed in September 2006. This law created the PRF and authorized the President of the Republic to create the ESSF, which was then officially established in February 2007. These two funds accumulate the resources resulting from the application of the structural balance rule as detailed below.

Objectives

The funds created by the Fiscal Responsibility Law (henceforth, the Sovereign Wealth Funds) have specific objectives. In the case of the ESSF, the objectives are to accumulate resources to finance potential fiscal deficits and to amortize public debt, thereby contributing to cushioning fiscal spending against fluctuations in the world economy and the volatility of revenues from taxes and copper. The ESSF resources can also be used to finance the PRF if necessary. In the case of the PRF, the objective is to support the financing of fiscal liabilities deriving from the state pension guarantee for old-age and disability solidarity pension benefits, as well as old-age and disability solidarity pension contributions established by the Pension Reform. The PRF thus complements the financing of future pension-related contingencies.

Rules on fund contributions

The rules on establishing the funds and accumulating resources therein are established by law (see Figure 1).[4]

The PRF is increased each year by a minimum of 0.2% of the previous year's gross domestic product (GDP). If the effective fiscal surplus exceeds 0.2% of GDP, the PRF receives a contribution equivalent to the surplus, up to 0.5% of GDP. PRF contributions only have to be made until the fund reaches UF 900 million (Unidad de Fomento, UF). In the framework of the current health crisis, Article 4 of Law N° 21,225, which establishes support measures for families and micro, small, and medium-sized businesses to address the impact of COVID-19, suspends contributions to the PRF in 2020 and 2021.

2 Decree N° 1,579 of 2020, which modifies Decree N° 743 of 2018, both from the Ministry of Finance, establishes the basis of fiscal policy, in accordance with the provisions of Article 1° of Law N° 20,128 on Fiscal Responsibility.

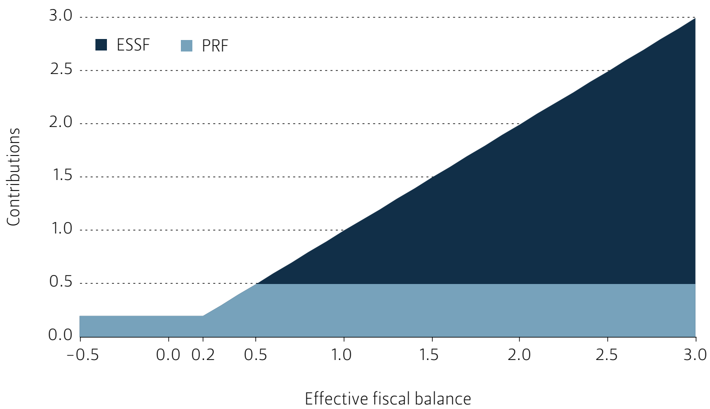
3 The structural balance rule (or cyclically adjusted balance rule) has undergone some changes since it was first implemented. For a detailed discussion of its design, modifications, application and results, see Marcel, Tokman, Valdés and Benavides (2001); García, García and Piedrabuena (2005); Rodríguez, Tokman, and Vega (2006); Velasco, Arenas, Rodríguez, Jorratt and Gamboni (2010); Comité Asesor para el diseño de una política fiscal de balance estructural de segunda generación para Chile (2011); Larraín, Costa, Cerda, Villena and Tomaselli (2011); Schmidt Hebbel (2012); Velasco and Parrado (2012) and the Budget Office (2013, 2014, 2015, 2016, 2017, 2018, 2019, and 2020).

4 For the PRF, the Fiscal Responsibility Law; for the ESSF, Statutory Decree (DFL) N° 1, issued by the Ministry of Finance in 2006.

The yearly contribution to the ESSF corresponds to the balance of the effective fiscal surplus (if positive) after subtracting the PRF contribution, less public debt pay downs and any advance contributions to the fund.[5] Additionally the fund can receive extraordinary contributions from the sale of assets or debt issue.

FIGURE 1

Fiscal savings rule
(percent of GDP)



SOURCE: Ministry of Finance of Chile.

Rules on the use of the funds

Starting in 2016, the PRF resources can be used to complement the financing of fiscal liabilities deriving from the state guarantee for old-age and disability solidarity pension benefits, as well as old-age and disability solidarity pension contributions. The annual withdrawal of PRF resources cannot exceed one-third of the difference between expenditures on pension liabilities in the current year and the pension expenditure in 2008, adjusted for inflation.[6]

However, in the framework of the pandemic, Article 19 of Law N° 21,227, which facilitates access to unemployment insurance under Law N° 19,728, establishes that under exceptional circumstances, and without prejudice to the provisions of Article 8 of the Fiscal Responsibility Law, the amount of resources that will be withdrawn from the PRF in 2020 and 2021 will correspond to the totality of the difference between total expenditures classified as pension expense for each year and total expenditures for that expense item in 2008, adjusted for inflation.

As of 2021, the PRF will cease to exist if the withdrawals in a calendar year do not exceed 5% of the fiscal pension expenditure established in that year's budget. When the PRF is eliminated, the remaining balance will be transferred to the ESSF.

5 The current legislation allows the pay down of public debt and advance contributions to the ESSF using resources from the fiscal surplus of the current year, which must be deposited into the fund in the current or subsequent years.

6 Until 2016, withdrawals from the PRF were allowed equivalent to the returns generated in the previous year.

The ESSF resources can be used at any time to complement fiscal revenues as needed to finance authorized public spending in the event of a fiscal deficit. These resources can also be used for the regular or extraordinary pay down of public debt (including Recognition Bonds) and for financing the annual contribution to the PRF, as per a decision by the Finance Minister.

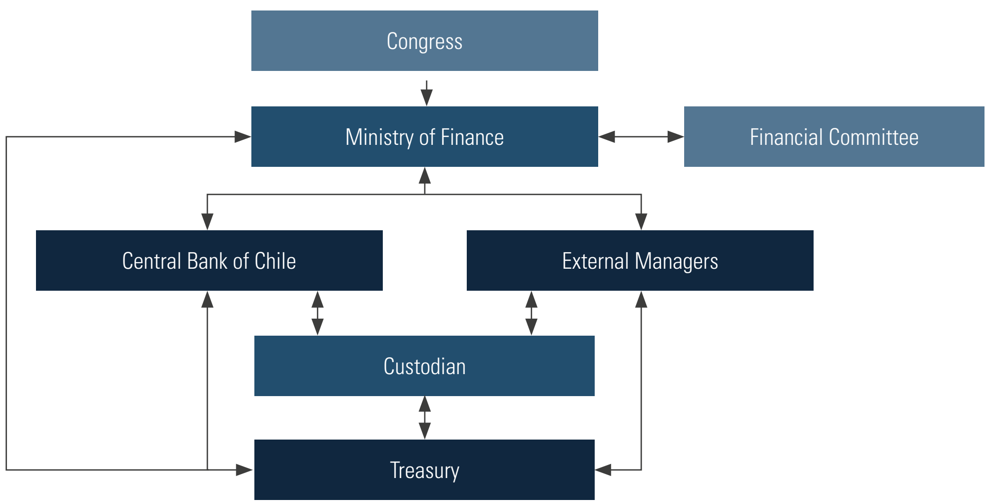
Withdrawals from the ESSF and the PRF are effectuated through a decree from the Ministry of Finance.

C. Institutional framework

The legal framework establishes a clear division of roles and responsibilities in order to ensure accountability and operational independence in the management of the funds. This section provides a brief description of the roles of each of the bodies involved in fund management (see Figure 2).

FIGURE 2

Institutional framework for Chile's Sovereign Wealth Funds



SOURCE: Ministry of Finance of Chile

Ministry of Finance and dependent bodies

The Fiscal Responsibility Law establishes that the funds are the property of the Fisco of Chile and that the General Treasury holds the legal title to the resources. The law authorizes the Finance Minister to make decisions on how the funds are managed and to dictate their investment policies. To this end, the Ministry of Finance draws up the investment guidelines, which define the criteria that must be followed by the funds' managers. The Ministry monitors the managers' performance and compliance with the investment guidelines and issues monthly, quarterly and annual reports on the state of the funds.

The General Treasury is responsible for the funds' accounting and the preparation of their audited financial statements, for monitoring compliance with the investment limits, for reconciling information on the portfolios from the managers and the custodian and for approving payments to the managers. The Budget Office is responsible for budgetary issues related to the funds.

Central Bank of Chile

Through Decree N° 1,383 of 2006 ("Agency Decree"), modified by Decree N° 1,618 of 2012, the Ministry appointed the Central Bank of Chile (CBC) to the role of fiscal agent, with the following responsibilities: (i) manage portfolios comprising instruments that are eligible for investing the Bank's International Reserves; (ii) delegate the management of these portfolios to external managers; (iii) select external portfolio managers; and (iv) manage the custodian, among other duties. In carrying out these tasks, the CBC must follow the guidelines issued by the Finance Minister.

External Managers

The external managers are international companies that have been contracted to manage a share of the sovereign wealth fund investments. These firms are chosen based on a selection process carried out by the CBC, with the support of international consultants and Finance Ministry personnel.

In most cases, the Ministry is responsible for supervising the external managers, with support from the Treasury; however, the CBC supervises external managers that invest in instruments that are eligible for its International Reserves.

Table 1 lists the external portfolio managers that were under contract at year-end 2021.

TABLE 1

Sovereign wealth fund external managers, 31 December 2021.

External Manager	Supervision	PRF
BlackRock Institutional Trust Company, N.A. (BlackRock)	Ministry/Treasury	High-yield bonds
BNP Paribas Asset Management (BNP Paribas)	CBC	U.S. agency MBSs
Credit Suisse	Ministry/Treasury	Corporate bonds
Mellon Investments Corporation (Mellon)	Ministry/Treasury	Equities
Nomura Asset Management (Nomura)	Ministry/Treasury	High-yield bonds
UBS Asset Management (Americas) Inc. (UBS)	Ministry/Treasury	Equities
		Corporate bonds
Western Asset Management Company (Western Asset)	CBC	U.S. agency MBSs

SOURCE: Ministry of Finance of Chile

Following a selection process carried out in 2020, the CBC contracted UBS and Credit Suisse to manage PRF corporate fixed-income portfolios and UBS and Mellon to manage PRF equity portfolios.

Subsequently, considering that the ESSF equity mandate is identical to that of the PRF, though much smaller in size, and based on recommendations by the Financial Committee, the Ministry instructed the CBC to select one of the two firms contracted for the PRF equity mandate to manage the corresponding portfolio in the ESSF. The CBC chose UBS due to its better cost proposal.

All the managers contracted in 2020 began managing their portfolios on 1 December of the same year.[7]

Notwithstanding the above, based on the Financial Committee's recommendations, the ESSF equity investment program was terminated on 1 October 2021, so as of that date the fund is wholly managed by the CBC.

Financial Committee

The Fiscal Responsibility Law stipulates that the Ministry of Finance must establish an Advisory Committee to give advice to the Finance Minister on the Sovereign Wealth Funds (henceforth, the Financial Committee). This Committee monitors the investment of the funds' resources and advises the Minister on the definition of the investment policies consistent with the funds' objectives. In compliance with these provisions, on 23 December 2006, the Finance Minister announced the establishment of both the Sovereign Wealth Funds and the Financial Committee. The Committee was then officially created through Decree N° 621, issued by the Ministry of Finance in 2007. In accordance with that decree, the Committee must be made up of six members who have experience in investment portfolio management, have held an executive position in a financial institution or have held or currently hold an academic post. The six Committee members are appointed for two years, with half the seats being renewed each year. The current and former members of the Financial Committee are presented in Appendix 1. The Committee's president receives a fee per session of 25.5 UTMs (Unidades Tributarias Mensuales, UTM), with an annual cap of 127.5 UTMs. The remaining members receive a fee of 17 UTMs per session, with an annual cap of 85 UTMs. The Committee must meet at least once every six months, but in practice it has met at least five times a year. A summary of the Committee's meetings during 2021 is presented in Appendix 2.

Decree N° 621 also stipulated the Financial Committee's functions and the rules of procedure for its proper functioning. Thus, the duties and powers of the Committee are as follows:

- To advise the Finance Minister, when requested, on key issues related to the funds' investment policy, such as the distribution of investments by asset class (asset allocation), the incorporation of new investment alternatives, the specification of portfolio benchmarks (see Box 1), the permissible range of deviation from the asset allocation and the limits on the funds' investment possibilities.
- To submit recommendations to the Finance Minister, when requested, on custody and investment instructions and on the tender and selection processes for the management of the funds' portfolios.
- To express an opinion at the request of the Finance Minister about the structure and content of the annual reports on the funds' portfolio management that are presented to the Ministry of Finance by the institution(s) responsible for their management or custody and, on the basis of these reports, to express an opinion about the funds' management and, particularly, its consistency with their investment policies.

7 Based on the results of this selection process, on 30 November 2020 BlackRock and Allianz ceased to manage their PRF corporate bond portfolios and BlackRock its PRF equity portfolio. On the same date, BlackRock and Mellon ceased to manage their ESSF equity portfolios. For more information on the selection of external portfolio managers in 2020, see Chapter 3, Section C of the Annual Report of the Financial Committee 2020.

- To express an opinion about the structure and content of the reports on the funds prepared quarterly by the Ministry of Finance.
- To advise the Finance Minister, when requested, on any matter related to the funds' investment.
- To express its views and recommendations regarding other matters related to the funds' investment policies, taking into account the principles, objectives, and rules that govern the funds.

To promote transparency, the Financial Committee decided that the decree regulating its activities, the minutes of its meetings, and the corresponding press releases should be publicly disclosed. The Ministry of Finance's website thus includes a special section containing all information on these issues.[8]

BOX 1: Portfolio benchmarks

Portfolio benchmarks are representative market indexes for the different asset classes. In principle, they represent the passive investment performance of diversified portfolios invested in certain asset classes, where the return of each instrument is typically weighted by its relative share of market capitalization. The indexes are used as a reference for measuring the performance of the managers in charge of investing the funds.

Each asset class in an investment portfolio is associated with a benchmark. The benchmark for the total portfolio is thus constructed by weighting the selected indexes by the percentage allocation of each class, as defined in the investment policy.

Both the ESSF and the PRF have mainly passive investment policies. That is, their investment strategy aims to achieve the benchmark return.

D. Investment policy

Economic and Social Stabilization Fund

Investment objectives: Consistent with the ESSF objectives, the investment policy aims to maximize the fund's accumulated value in order to partially cover cyclical reductions in fiscal revenues while maintaining a low level of risk. Its aversion to risk is reflected in the choice of an investment portfolio with a high level of liquidity and low credit risk and volatility, thereby ensuring the availability of the resources to cover fiscal deficits and avoiding significant losses in the fund's value.

8 https://www.hacienda.cl/english/work-areas/international-finance/sovereign-wealth-funds.

Strategic asset allocation: The ESSF investment policy stipulates a strategic asset allocation of 96.3% in sovereign bills and bonds and 3.7% in inflation-indexed sovereign bonds. The fixed-income portfolio has a currency allocation of 43.1% in USD, 27.1% in EUR, 21.6% in JPY, and 8.2% in CHF, expressed as a percentage of the total portfolio.[9]

Portfolio benchmarks: A benchmark has been defined for each component of the strategic asset allocation, using a representative market index (see Table 2).

TABLE 2

Benchmarks ESSF
(percent of portfolio)

Asset class		Percent of portfolio	Benchmark
1. Treasury bills and sovereign bonds	1.1. Treasury bills	11.9	ICE BofA US Treasury Bill Index
		14.2	ICE BofA Germany Treasury Bill Index
		10.8	ICE BofA Japan Treasury Bill Index
		36.9	**Subtotal Treasury bills**
	1.2. Sovereign bonds	28.6	Bloomberg Global Aggregate -Treasuries: U.S. 7-10 Yrs
		11.8	Bloomberg Global Aggregate - Treasuries: Germany 7-10 Yrs
		10.8	Bloomberg Global Aggregate -Treasuries: Japan 7-10 Yrs
		8.2	Bloomberg Global Aggregate -Treasuries: Switzerland 5-10 Yrs
		59.4	**Subtotal Sovereign bonds**
		96.3	**Subtotal Treasury bills and Sovereign bonds**
2. Inflation-indexed sovereign bonds		2.6	Bloomberg Global Inflation-Linked: U.S. TIPS 1-10 Yrs
		1.1	Bloomberg Global Inflation-Linked: Germany 1-10 Yrs
		3.7	**Subtotal Inflation-indexed sovereign bonds**

SOURCE: Ministry of Finance of Chile

Management: The ESSF is managed in its entirely by the CBC.

Ex ante tracking error:[10] The ex-ante tracking error is capped at 50 basis points for the fixed-income portfolio.

Eligible currencies and issuers: Only currencies in the corresponding benchmark are eligible for investment. In the case of treasury bills, the eligible issuers are the United States, Germany, and Japan; for sovereign bonds, the United States, Germany, Japan, and Switzerland; and for inflation-indexed bonds, the United States and Germany. Other eligible issuers include supranational institutions, agencies, and entities with an explicit government guarantee according to the eligibility criteria used by the CBC for investing its International Reserves and in conformance with the pre-established limits defined in the investment guidelines.

9 On 1 October 2021, bank deposits and equities investments were eliminated from the strategic asset allocation. For more information about this modification see Chapter 3, Section B.

10 The ex-ante tracking error is an estimate of the standard deviation of the difference between the portfolio and benchmark returns. The lower the ex-ante tracking error, the more passive the portfolio management.

Leveraging and the use of derivatives: Leveraging is not allowed.[11] Regarding derivatives, the use of forwards and swaps is only allowed for foreign currency hedging. The total notional amount cannot exceed 4% of the fixed-income portfolio.

Rebalancing policy: The rebalancing policy will be revised in 2022 to consider both, the removal of the banks' deposit and equity shares in the strategic asset allocation defined in 2021 and the investment policy study, which could modify the strategic allocation.[12] Any time there is a withdrawal or contribution, the portfolio must converge to the target allocation defined for the fund.

Investment guidelines: The investment guidelines, which are published in Spanish and English and available online at the Ministry of Finance website,[13] provide additional information on the ESSF investment policy, such as special restrictions on investment in specific countries and other relevant limits, as well as other aspects of portfolio management.

Pension Reserve Fund

The PRF investment policy, which was approved by the Finance Minister in late 2017, was adjusted in 2020 to take into account the impact of some legal reforms on the size of the fund, due to the increase in disbursements in 2020 and 2021 and the suspension of contributions in those same years. These reforms were approved by Congress as part of the social agenda implemented in late 2019 and to support the funding of fiscal expenditures during the pandemic in 2020 and 2021 (see box 2).[14]

Based on the Financial Committee's recommendations and considering the large disbursements expected as a result of the above reforms, in 2020 the Finance Ministry divided the fund into two investment portfolios: the Short-Term Portfolio Investment (STIP) and the Long-Term Portfolio Investment (LTIP).[15]

The main characteristics of the respective investment policies are described below:

Short-term investment portfolio[16]

Investment objective: The main investment objective is to have exposure to highly liquid instruments, so as to preserve the value of the invested funds, within the risk standards specified in the investment guidelines.

11 Leveraging is the purchase of assets through debt.

12 For more information, see Chapter 3, Sections A and B.

13 https://www.hacienda.cl/english/work-areas/international-finance/sovereign-wealth-funds/economic-and-social-stabilization-fund/investment-policy.

14 At year-end 2021, the Congress was debating the Universal Guaranteed Pension, which could change the rules on PRF contributions and withdrawals established in the Fiscal Responsibility Law.

15 In 2020, the Financial Committee recommended dividing the PRF portfolio into two sub-portfolios. The STIP will hold expected disbursements in 2020 and 2021; the LTIP will hold resources that will not be withdrawn in the short term, to invest the funds at a medium- to long-term investment horizon. For more information on this modification, see Chapter 3, Section B of the Annual Report of the Financial Committee 2020.

16 As of 8 June 2021, the STIP has a zero balance because the funds were used to finance most of the withdrawals from the PRF in the year.

BOX 2: Legal reforms of 2019 - 2020 that have had an impact on the PRF.

In 2019 and 2020, a series of legal reforms were passed that had an impact on the future evolution of the PRF. These include the following:

- The law on the Solidarity Pension System, passed in December 2019, introduced a 50% increase in the basic solidarity pension (PBS) and the maximum solidarity pension contribution (PMAS), defined in Articles 7 and 13 of Law N° 20,255. Additionally, it standardized the calculation rule for the old-age solidarity pension contribution (APS) for new beneficiaries; created a new rule on the use of capitalization account resources for funding the APS, using individual funds first; and incorporated a benefit for people who have a self-funded reference pension (PAFE) that is higher than the PMAS, but whose scheduled withdrawal potentially falls below the value of the PBS.
- In the framework of the pandemic, Law N° 21,225, passed in March 2020, which establishes support measures for families and micro, small, and medium-sized businesses to address the impact of COVID-19, suspends contributions to the PRF in 2020 and 2021 (Article 4).
- Law N° 21,227, passed in April 2020, which facilitates access to unemployment insurance under Law N° 19,728, established in Article 19 that under exceptional circumstances, and without prejudice to the provisions of Article 8 of the Fiscal Responsibility Law, the amount of resources that will be withdrawn from the PRF in 2020 and 2021 will be equivalent to the full difference between total expenditures classified as pension expense for each year and total expenditures for that expense item in 2008, adjusted for inflation.

Strategic asset allocation: The portfolio allocation is 93% U.S. Treasury bills and 7% U.S. Sovereign bonds.

Benchmarks: Each component of the strategic asset allocation has a defined benchmark, which corresponds to a representative index of the respective market (see Table 3).

TABLE 3

Benchmarks: STIP
(percent of STIP)

Asset class	Percent of STIP	Benchmark
U.S. Treasury bills	93	ICE BofA US Treasury Bill Index
U.S. Sovereign bonds	7	Bloomberg Global Aggregate – Treasury: U.S. 1–3 Yrs

SOURCE: Ministry of Finance of Chile

Management: The entire portfolio is managed by the CBC.

Benchmark duration: The effective duration of the total portfolio cannot deviate from the benchmark by more than +/– 0.5 years.

Eligible currencies, issuers, and instruments: Only currencies and issuers that are included in the corresponding benchmark are eligible for investment. Eligible instruments are those that are included in the benchmark and those that will be incorporated into the benchmark in the coming month.

Use of leverage and derivatives: The STIP does not allow the use of leverage or derivatives.

Long-term investment portfolio

Investment objective: The investment objective is to earn an expected annualized return in pesos of at least 2% over Chilean inflation in a ten-year period, with a probability of at least 60%. The risk tolerance establishes that the probability that the fund's real return will be less than –12%, expressed in pesos, must not be over 5% in any given year.[17]

Strategic asset allocation: : The portfolio allocation is 31% equities, 34% sovereign and government-related bonds, 13% corporate bonds, 8% high-yield bonds, 6% U.S. agency MBSs, and 8% inflation-indexed bonds.[18] In contrast to the ESSF, which has a fixed investment currency allocation, in the PRF the currency composition derives from the share of each currency in the benchmarks (see Box 3).

17 This objective was defined in the investment policy approved by the Minister of Finance in late 2017 but it will be revised in 2022 considering the Minister's decision to stop convergence to the strategic asset allocation of said policy (for more information see Chapter 3, Section B of the Annual Report of the Financial Committee 2020).

18 This strategic asset allocation has been in place for the fund since January 2020; the Finance Minister decided to maintain this allocation when the decision was made to stop convergence to the investment policy defined in late 2017.

BOX 3: **Currency composition of the ESSF and PRF**

In the ESSF, the currency composition defined for the fixed-income portfolio has been stable since August 2013, when the investment policy was modified based on recommendations by the Financial Committee. As of October 2021, the fund is only invested in fixed-income securities.[1] As shown in Table R3.1, the ESSF is mainly invested in what are considered reserve currencies, which tend to appreciate in the event of an international crisis that could trigger a withdrawal from this fund. Furthermore, the table also shows that the currency composition of the ESSF is in line with the benchmark, which is consistent with a passive management strategy.

TABLE R3.1

Currencies composition in the ESSF as of December 31, 2021
(percent of the portfolio)

Currency	ESSF	Benchmark Composition
USD	43.1	43.1
EUR	27.1	27.1
JPY	21.6	21.6
CHF	8.2	8.2
Total	**100**	**100**

SOURCE: Ministry of Finance of Chile.

The PRF, in turn, has a currency allocation that tracks the relative share of each currency in the different benchmarks used for the fund. Table R3.2 presents the currency composition of the PRF at year-end 2021. As the table shows, the number of currencies is much greater than in the ESSF due to the use of global indexes in almost all the asset classes.[2] Additionally, the PRF portfolio is fairly close aligned with the benchmark currency allocation,[3] which is also consistent with the passive strategy implemented in almost all the asset classes.

1 From August 2013 to September 2020, a small share of the ESSF was invested in stocks, and the currency composition of this equity portfolio largely depended on the relative share of the currency of each stock in the portfolio. Specifically, starting in mid-August 2013, 7.5% of the ESSF was invested in equities; this share was reduced to 5% in April 2020 and then to 0% in October 2021.

2 U.S. agency MBS is the only PRF asset class that is invested solely in dollars.

3 The difference between the PRF and the benchmark in terms of the USD share reflects the fact that in the equity portfolio, ETFs are used for some restricted markets where it was decided not to invest locally due to the associated operating costs or greater complexity (for example, Taiwan, India, etc.). Because these ETFs are traded in the United States, they are considered to be invested in USD, although from the perspective of the benchmark, those restricted markets are reported in the “other” currency category.

TABLE R3.2

Currencies composition in the PRF as of December 31, 2021
(percent of the portfolio)

Currency	PRF	Benchmark Composition
USD	54.6	52.9
EUR	17.0	17.2
JPY	8.2	8.4
GBP	6.4	6.5
CNY	3.8	4.0
CAD	2.6	2.6
AUD	1.4	1.3
HKD	1.1	1.0
KRW	1.0	1.0
CHF	1.0	0.9
SEK	0.4	0.4
Other	2.4	3.7
Total	**100.0**	**100.0**

SOURCE: Ministry of Finance of Chile.

Benchmarks: A benchmark has been established for each component of the strategic asset allocation, using a representative market index (see Table 4).

TABLE 4

Benchmarks – LTIP
(percent of LTIP)

Asset class	Percent of LTIP	Benchmarks
Sovereign and government-related bonds[(a)]	34	Bloomberg Global Aggregate: Treasury Bond Index (unhedged)
		Bloomberg Global Aggregate: Government-Related (unhedged)
Inflation-indexed sovereign bonds	8	Bloomberg Global Inflation-Linked Index (unhedged)
Corporate bonds	13	Bloomberg Global Aggregate: Corporates Index (unhedged)
U.S. agency MBS	6	Bloomberg US Mortgage Backed Securities (MBS) Index
High yield bonds	8	Bloomberg Global High Yield Index (unhedged)
Equities	31	MSCI All Country World Index ex Chile (unhedged with reinvested dividends)

(a) The two subindexes of this asset class are added in accordance with their relative capitalization.

SOURCE: Ministry of Finance of Chile

Management: The sovereign and government-related bonds portfolio and the inflation-indexed bond portfolio are managed directly by the CBC, acting as fiscal agent. The equity, corporate bond, high yield, and U.S. agency MBS portfolios are managed by external portfolio managers selected by the CBC with support from the Ministry of Finance and a consulting firm (RVK, Inc.).

Ex ante tracking error: The ex-ante tracking error has been set at 50 basis points for the aggregate portfolio of sovereign and government-related bonds and inflation-indexed sovereign bonds, 60 basis points for the equity portfolio, 50 basis points for the corporate bond portfolio, and 150 basis points for the high yield bond portfolio. For the U.S. agency MBS portfolio, the monthly average cannot exceed 20 basis points, and the maximum daily value cannot exceed 30 basis points.

Eligible currencies, issuers, and instruments: For each asset class, only currencies that are included in the respective benchmarks are eligible for investment. Eligible issuers and instruments are mainly those included in the benchmark, but each asset class includes some eligible issuers and instruments that are not in the benchmark, so as to give the portfolio managers more flexibility in managing their portfolios. These include the following:

- U.S. agency MBS: debt instruments issued or guaranteed by the U.S. government or by MBS issuing agencies, interest rate futures, and TBAs.[19]
- Corporate bonds: market-traded futures and reopened issues that are comparable to the instruments included in the benchmark.
- High yield bonds: futures, reopened issues that are comparable to the instruments included in the benchmark, sovereign instruments, and investment-grade bonds that leave the benchmark.
- Equities: ETFs, mutual funds, American Depositary Receipts (ADRs), Global Depositary Receipts (GDRs), and futures.

Leveraging and use of derivatives: The LTIP does not allow leveraging. The use of derivatives is differentiated by portfolio:

- Aggregate portfolio of sovereign and government-related bonds, and inflation-indexed sovereign bonds: forwards or swaps can only be contracted for the purpose of currency hedging. The nominal value of forwards or swaps that are contracted with a given eligible counterparty cannot exceed 1.0% of the market value of the portfolio if the counterparty has a credit rating of at least AA– and 0.5% if the credit rating is A– to A+. At the same time, the aggregate notional value of all current forward or swap contracts cannot exceed 4% of portfolio.
- U.S. agency MBS: Exposure to TBAs cannot exceed 30% of the portfolio. The nominal amounts of U.S. interest rate futures valued at market price and expressed in absolute value cannot exceed 10% of the market value of the portfolio.

19 To be announced (TBA): MBS forwards.

- Equities, corporate bond, and high yield bond portfolios: Each manager can only contract forwards or swaps for the purpose of currency hedging; and futures—equities or fixed-income, as indicated—for hedging purposes or to gain exposure to part of the benchmark. The nominal value of the forwards or swaps that are contracted by a given manager with a given eligible counterparty cannot exceed 3% of the market value of the portfolio under management. The aggregate nominal amount of futures, forwards, and swaps cannot exceed 10% of the portfolio of any given manager.

Investment guidelines: The investment guidelines for both, the STIP and LTIP, which are published on the Ministry of Finance's website,[20] provide additional information on the PRF investment policy, including details on the admissible instruments and other key limitations, as well as other issues related to fund management.

20 https://www.hacienda.cl/english/work-areas/international-finance/sovereign-wealth-funds/pension-reserve-fund/investment-policy.

CHAPTER 2

State of the Sovereign Wealth Funds

A. Analysis of the international economy

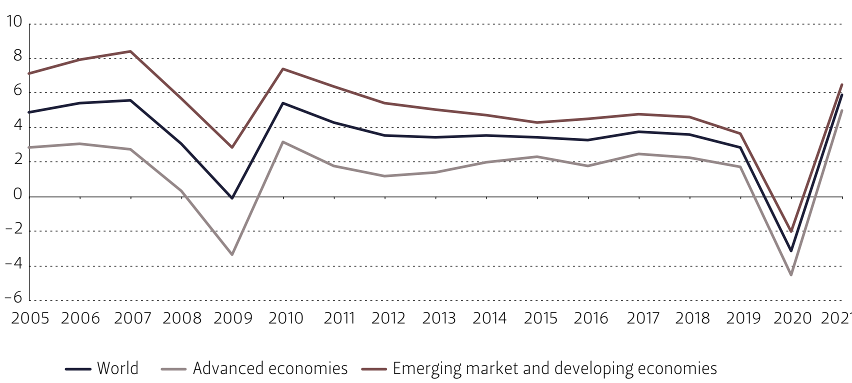
To better understand the recent performance of the sovereign wealth funds, this section reviews the main events and trends in the world economy in 2021.

The year was marked by the economic recovery stemming from the reopening of various economies around the world, although logistical problems in supply chains, the energy crisis, high inflation, and the appearance of new COVID-19 variants heightened the uncertainty of the recovery. In this scenario, the world economy grew 5.9% in 2021, versus a contraction of 3.1% in 2020, according to estimates by the International Monetary Fund (IMF).[21]

On aggregate and in this economic context, the advanced economies recorded growth of 5.0% in 2021 after contracting 4.5% the previous year. The emerging and developing economies grew 6.5% in 2021, following a contraction of 2.0% in 2020 (see Figure 3). Among the advanced economies, the United Kingdom and the United States stand out, with estimated growth of 7.2% and 5.6%, respectively (see Figure 4). Of the emerging and developing economies, India recorded the highest growth rate, at 9.0% (see Figure 5).

FIGURE 3

Real GDP growth, 2005 – 2021
(percent)

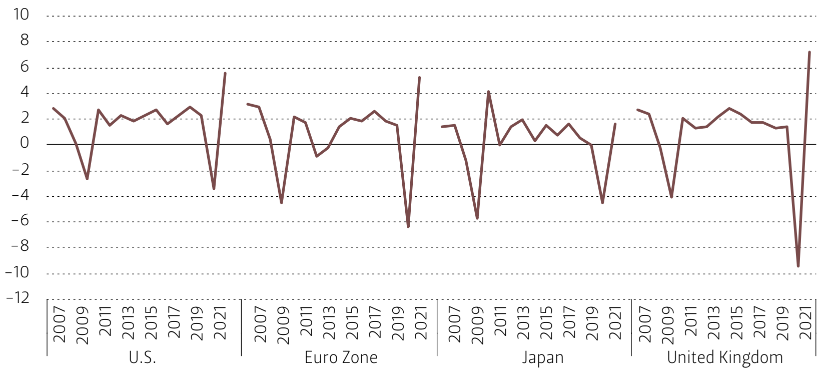


SOURCE: International Monetary Fund.

21 The growth figures in this section are extracted from the IMF World Economic Outlook Database (October 2021 and the January 2022 update).

FIGURE 4

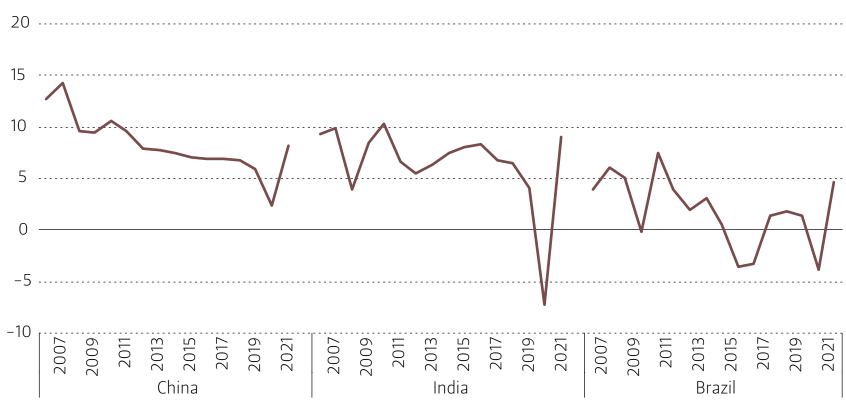
Real GDP growth in specific developed economies, 2006 – 2021
(year-on-year change, percent)



SOURCE: International Monetary Fund

FIGURE 5

Real GDP growth in specific emerging economies, 2006 – 2021
(year-on-year change, percent)



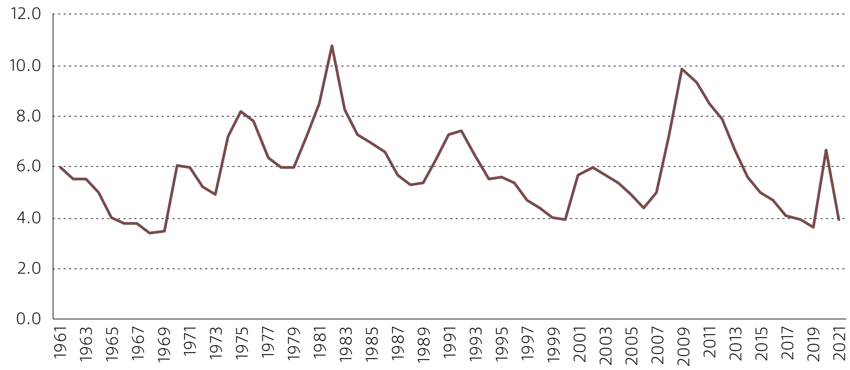
SOURCE: International Monetary Fund

With regard to the United States, the unemployment rate was 3.9% in December, which represents a reduction of 41.8% relative to the previous year's rate. Nevertheless, unemployment ended the year above the pre-pandemic level (see Figure 6). At year-end, the nominal wage per hour had increased 4.7% relative to the previous year (see Figure 7).[22] In the case of inflation, the general price index ended the year up 7.0% relative to 2020, above the 2.0% annual target of the U.S. Federal Reserve (Fed), while core inflation, which excludes food and energy prices, was 5.5% in the year (see Figure 8). In a context in which the global economy and the United States try to recover from the crisis caused by Covid-19, the Fed kept the monetary policy rate (federal funds rate) constant in a range of 0.0% to 0.25%, following a reduction of 150 basis points in 2020. The Fed began the stimulus withdrawal process in November 2021, reducing its asset purchases by US$ 15 billion a month; this was followed by an announcement in December that asset purchases would be decreased further to US$ 30 billion.

22 The low annual growth rate of wages in the month of April was mainly due to the high wage level recorder in April of the previous year. The increase in wages in April 2020, in turn, was due to a sharp drop in the employment of low-wage workers due to the pandemic.

FIGURE 6

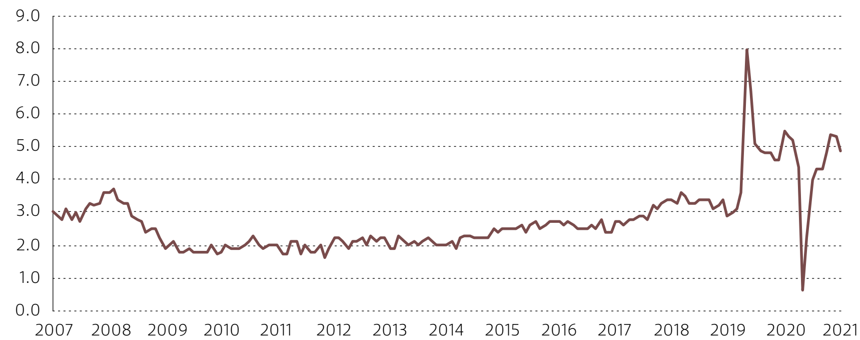
U.S. unemployment rate, 1961 - 2021
(percent)



SOURCE: Bureau of Labor Statistics

FIGURE 7

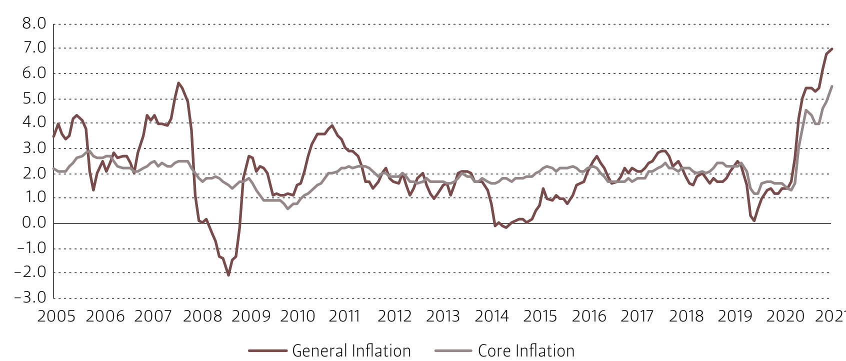
U.S. wage growth, 2007 - 2021
(year-on-year change, percent)



SOURCE: Bloomberg

FIGURE 8

U.S. consumer price index, 2005 - 2021
(year-on-year change, percent)

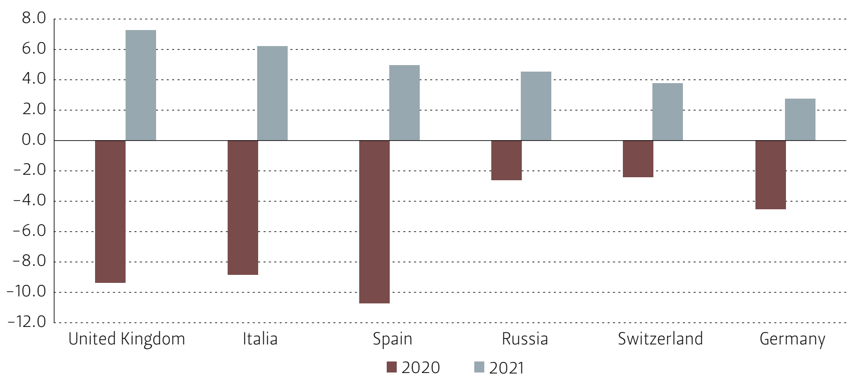


SOURCE: Bloomberg

The Eurozone went from an annual contraction of 6.4% in 2020 to estimated growth of 5.2% in 2021, reflecting the economic recovery in the countries that make up the bloc. GDP grew 7.2% in the United Kingdom, 6.2% in Italy, and 4.9% in Spain (see Figure 9). Inflation ended the year at 5.0% in the Eurozone (see Figure 10). The unemployment level declined over the course of the year, ending at 7.0% in December (see Figure 11). In this scenario, to address the impact of the pandemic on the economy, the European Central Bank (ECB) continued its Pandemic Emergency Purchase Program (PEPP) launched in March 2020,[23] and announced in December that the program's net purchases would be reduced in the first quarter of 2022 and would end in March of this year. At the same time, the ECB held its interest rates on the main refinancing operations, the marginal lending facility, and the deposit facility at 0.00%, 0.25%, and –0.50 %, respectively.

FIGURE 9

Real GDP growth in selected Eurozone countries in 2021
(year-on-year change, percent)



SOURCE: International Monetary Fund. Estimates

FIGURE 10

Eurozone annual inflation, 2005 - 2021[24]
(percent)

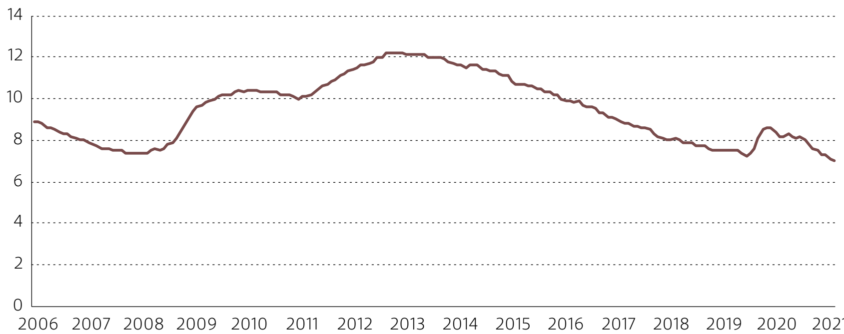
SOURCE: Bloomberg

23 Pandemic Emergency Purchase Programme (PEPP) is a temporary asset purchase program for public and private sector securities.

24 The data corresponds to the HICP.

FIGURE 11

Eurozone unemployment rate, 2005 - 2021
(percent)



SOURCE: Bloomberg

Japan, in turn, recorded a recovery, with growth reaching 1.6% in 2021. The Bank of Japan held its short-term target rate at –0.1% and also maintained its ten-year bond purchase program, in order to keep ten-year rates at around 0%.

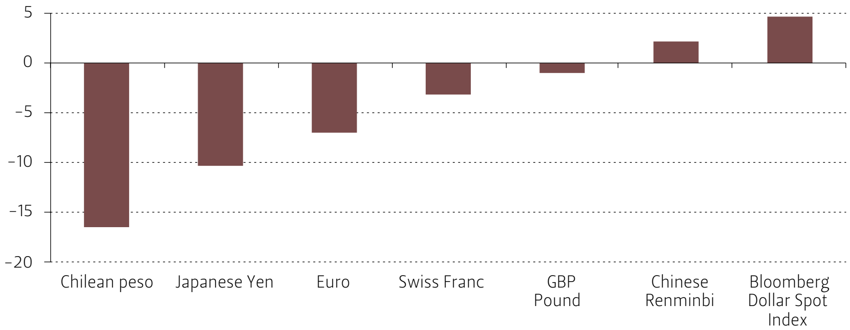
China grew 8.1% in 2021, widely exceeding its 2020 growth rate of 2.3%. The Chinese economic context was marked by an energy crisis and a slowdown in construction following the debt crisis of the Evergrande real estate company. Additionally, the Chinese government tightened financial regulations for systemically important banks, increasing their loss-absorption capacity and reducing the permitted leverage ratio. They also implemented a series of regulatory measures related to technology in order to protect market competition. Finally, the People's Bank of China injected liquidity into the economy through a small business loan program and a reduction in the required reserve ratio for financial institutions.

In this global context, the U.S. dollar strengthened against the main world currencies by 4.7% (see Figure 12).[25] Among the investment currencies of the sovereign wealth funds, the Japanese yen and the euro depreciated the most (10.3% and 6.9%, respectively). The Chilean peso depreciated 16.5%.

25 The Bloomberg Dollar Spot Index is a tradable index that shows the value of the dollar relative to the world's ten main currencies. Index returns above zero indicate that the dollar appreciated against the basket of currencies, while negative returns reflect a depreciation of the dollar vis–à–vis the value of the basket.

FIGURE 12

Selected currencies against the U.S. dollar in 2021[26]
(year-on-year change, percent)

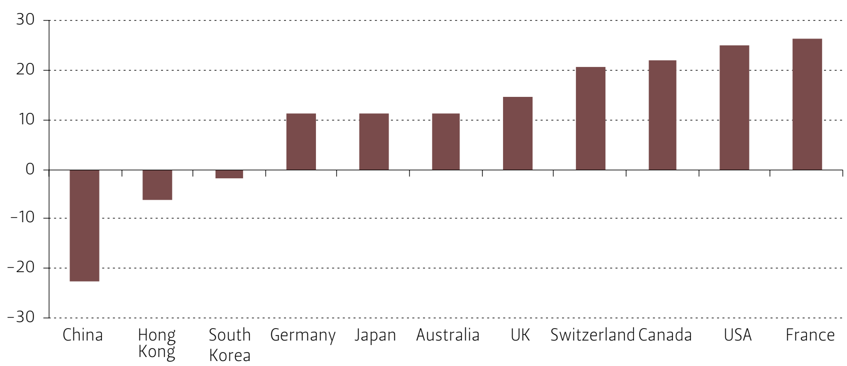


SOURCE: Bloomberg

In 2021, share prices fluctuated widely and returns were mixed for a selected sample of stock markets (see Figure 13). The best performing markets were France, United States and Canada, which posted returns, measured in local currency, of 26.7%, 25.2% and 22.3%, respectively. The indexes with the worst performance in relative terms, in local currency, were China, Hong Kong and South Korea, with -22.4%, -5.9% and -1.6%, respectively.

FIGURE 13

MSCI equity index returns in 2021
(percent, measured in local currency)



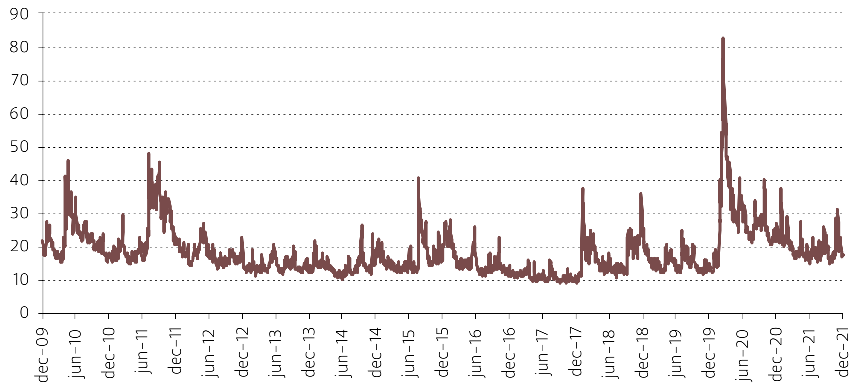
SOURCE: Bloomberg

Equity market volatility (S&P 500), measured by the Chicago Board Options Exchange (CBOE) Volatility Index (VIX), was lower, on average, in 2021 than in the previous year. The maximum value was 37.2 which was registered in January. The average value of the VIX in 2021 was above the average of the last ten years (see Figure 14).

26 Negative performances indicate depreciation of the currency, while positive performance indicates appreciation.

FIGURE 14

Equity market volatility (VIX): S&P 500, 2009–2021
(in levels)

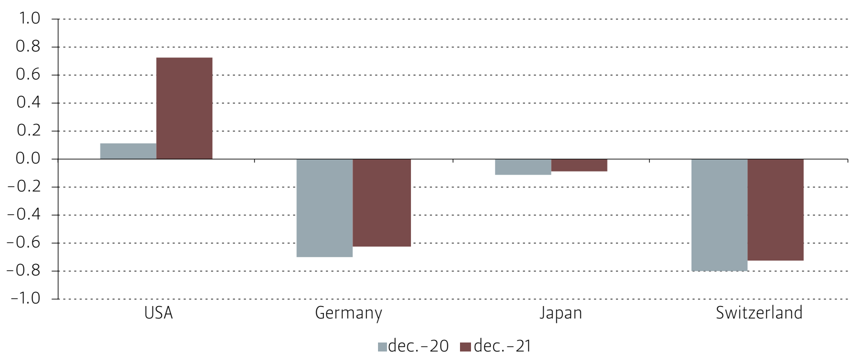


SOURCE: Bloomberg

At year-end, two-year and ten-year nominal sovereign interest rates had increased in the United States, Germany, Switzerland, and Japan relative to year-end 2020 (see Figures 15 y 16).

FIGURE 15

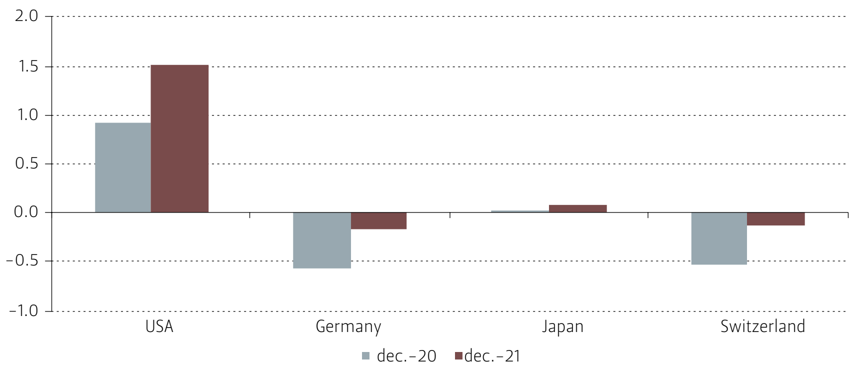
Internal rate of return (IRR) on two-year bonds in selected countries, 2020 – 2021
(percent)



SOURCE: Bloomberg

FIGURE 16

Internal rate of return (IRR) on ten-year bonds in selected countries, 2020 - 2021
(percent)

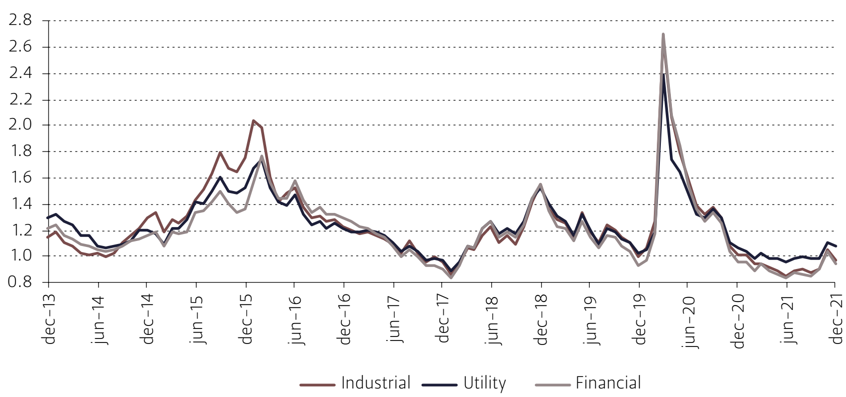


SOURCE: Bloomberg

Regarding the corporate market in 2021, the spreads of the industrial, utility, and financial sectors in the Bloomberg Global Aggregate Corporate Index peaked in November at 1.0%, 1.1%, and 1.0%, respectively, although they closed the year at around the level of year-end 2020 (see Figure 17). High-yield bond spreads, in turn, decreased relative to 2020. As measured by the Bloomberg Global High-Yield Index, spreads reached their peak in November at 4.4% but declined to 3.8% by year-end, versus 4.1% at the close of 2020 (see Figure 18).

FIGURE 17

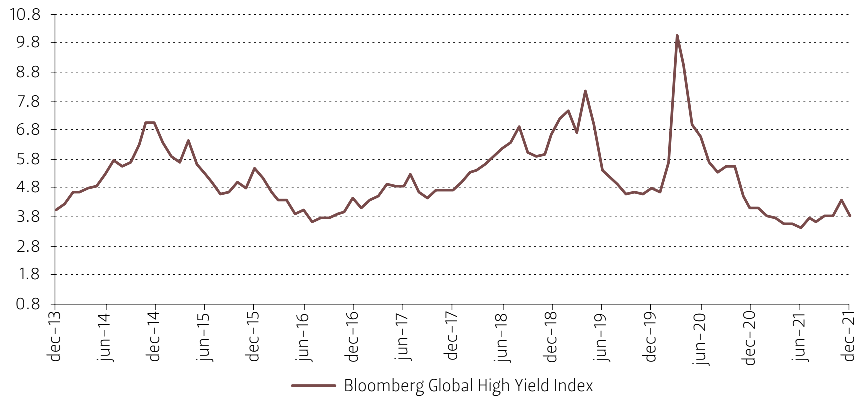
Investment grade corporate spreads by industry, 2013 – 2021
(percent)



SOURCE: Bloomberg

FIGURE 18

High yield bonds spreads, 2013 – 2021
(percent)

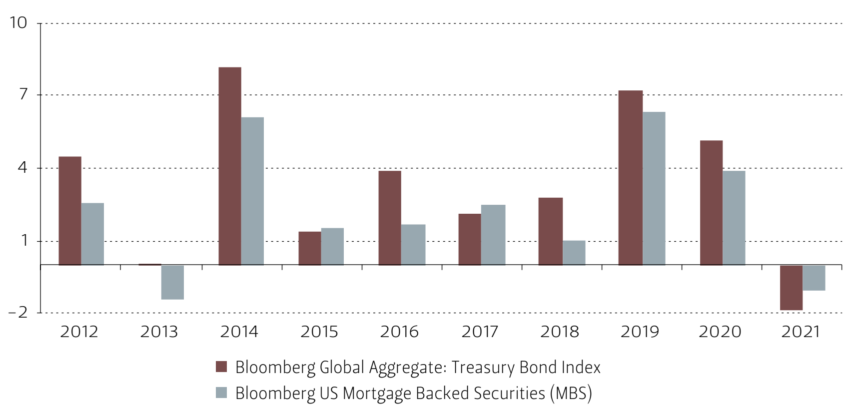


SOURCE: Bloomberg

In 2021, investment-grade sovereign bonds and U.S. agency MBS recorded negative returns in local currency. Thus, the Bloomberg Global Aggregate: Treasury Bond Index (hedged) and the Bloomberg U.S. Mortgage-Backed Securities (MBS) closed the year with yields of -1.9% and -1.0%, respectively (see Figure 19). Investment-grade corporate bonds, represented by the Bloomberg Global Aggregate: Corporates Index (hedged), and high-yield bonds (sovereign and corporate), represented by the Bloomberg Global High-Yield Index (hedged), closed the year with returns of -0.8% and 2.5%, respectively (see Figure 20).

FIGURE 19

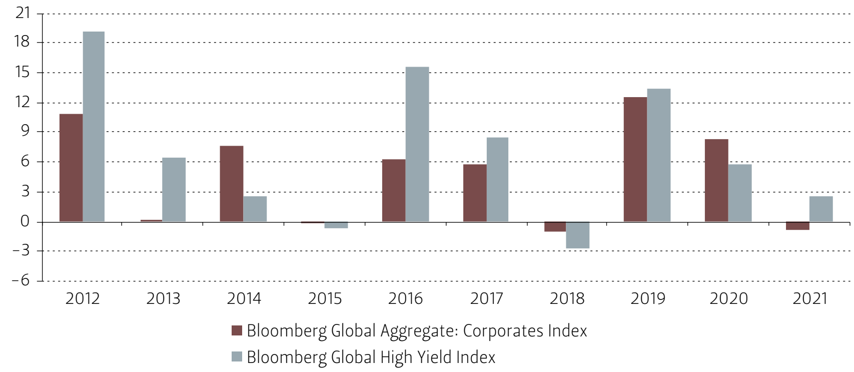
Bloomberg: Global Aggregate Treasury bonds (hedged) y US MBS (hedged), 2012 - 2021
(percent, measured in local currency)



SOURCE: Bloomberg

FIGURE 20

Bloomberg Global: Aggregate Corporates (hedged) y High Yield (hedged), 2012 – 2021
(percent, measured in local currency)

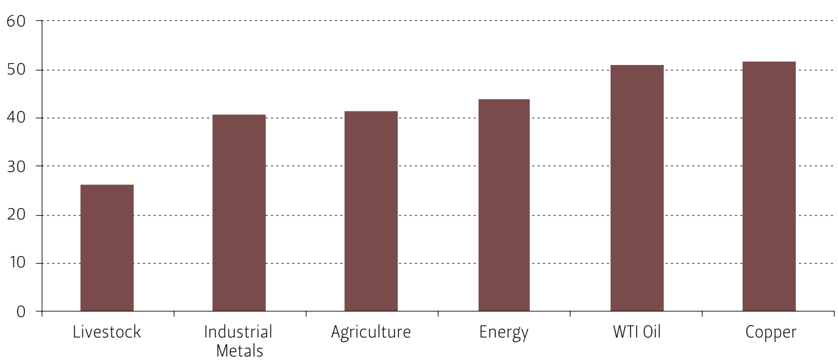


SOURCE: Bloomberg

A comparison of average commodity prices in 2021 versus 2020 reveals positive variations in livestock, industrial metals, agriculture, and energy. Also, the increase of 50.7% and 51.5% in the average prices of oil and copper stands (see Figure 21).

FIGURE 21

Standard & Poor's commodity index in 2021
(year-on-year change, percent)



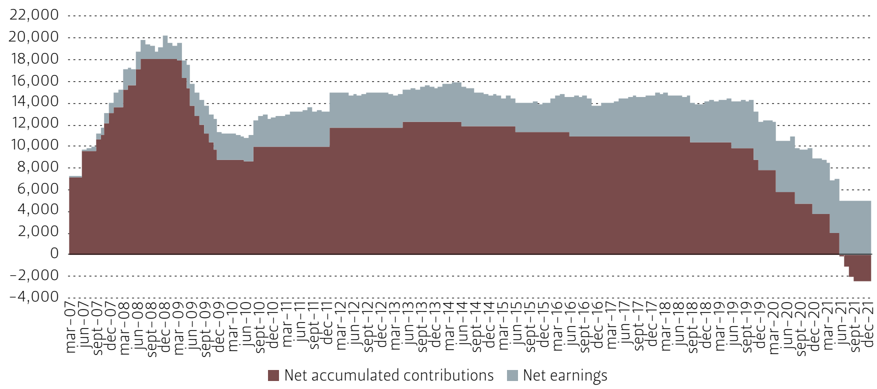
SOURCE: Bloomberg

B. Market value

At year-end 2021, the market value of the ESSF and the PRF was US$ 2,457 million and US$ 7,473 million, respectively, versus US$ 8,955 million and US$ 10,157 million, respectively, at year-end 2020. The decrease in the value of the ESSF was mainly due to withdrawals of US$ 6,197 million, used to support the Fisco funding needs deriving from the decrease in fiscal revenues in 2021 because of the pandemic in 2020 and 2021. In addition, the ESSF incurred in net investment losses of US$ 301 million (see Figure 22). During 2021 no contributions were made to the ESSF. The decrease in the PRF, in turn, was mainly due to the withdrawals of US$ 2,960 million, which was partially offset by the net gains on the fund's investments of US$ 276 million (see Figure 23). As mentioned above, during 2021 no contributions were made to the PRF.[27]

FIGURE 22

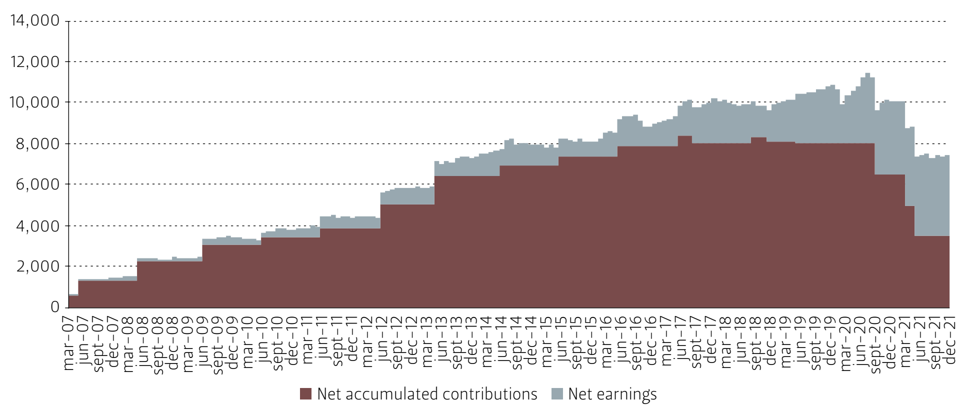
ESSF: Market value, March 2007 to December 2021
(millions of dollars)



SOURCE: Ministry of Finance of Chile

FIGURE 23

PRF: Market value, March 2007 to December 2021
(millions of dollars)



SOURCE: Ministry of Finance of Chile

27 See Chapter 1, Section B and Box 2.

C. Returns

In 2021, the net return in dollars was -4.92% in the ESSF and 3.27% in the PRF (see Table 5).

For the ESSF, the negative return breaks down into a -5.77% return on the fixed-income portfolio, and 12.59%,[28] return on the equity portfolio. The fixed-income return is the sum of -1.44% yields on instruments in local currency and -4.39% due to exchange rate fluctuations against the dollar of the currencies in which these instruments are denominated (see Box 4).

The PRF return breaks down into the STIP, which recorded yields of 0.04%,[29] and the LTIP, which grew 3.79% in the year. The positive return on the latter portfolio was mainly due to equity investments, which yielded 18.83% in the year, and, to a lesser extent, inflation-indexed and high-yield bonds, which had returns of 2.62% and 0.73%, respectively. The returns for the other fixed income asset classes were -5.57% for sovereign and government-related bonds, -3.12% for corporate bonds, and -1.10% for U.S. agency MBS.

The funds' return expressed in Chilean pesos depends on the peso-dollar exchange rate. Thus, the value of the portfolio expressed in pesos increases (decreases) when the peso depreciates (appreciates) against the dollar. In 2021, the Chilean peso depreciated against the dollar, which explains the higher annual returns in national currency of 13.66% in the ESSF and 23.45% in the PRF. The real return of the funds, which is calculated by taking the nominal return in pesos and discounting the variation in the Unidad de Fomento (UF) for the respective period, was 6.61% for the ESSF and 15.80% for the PRF.

TABLE 5[30]

ESSF and PRF: Determinants of returns in dollars, 2021
(percent)

Fund	Component	Quarter				2021
		I	II	III	IV	
ESSF	Fixed Income[(a)]	-5.00	1.00	-0.83	-0.96	-5.77
	Local currency	-2.08	0.70	-0.03	0.02	-1.44
	Exchange rate fluctuations	-2.99	0.30	-0.80	-0.98	-4.39
	Equities	4.67	7.62	-0.06	-	12.59
	Total return (USD)	**-4.50**	**1.35**	**-0.80**	**-0.97**	**-4.92**
	Total return (CLP)	-1.70	1.79	8.41	4.78	13.66
	Total return (Real in UF)	-2.79	0.71	7.05	1.73	6.61

28 Equity portfolio returns in 2021 correspond to the period between 1 January and 30 September 2021. UBS ceased to manage the equity mandate on 27 September 2021, and cash was held in the portfolio for the final days of that month due to the liquidation of the corresponding assets.

29 The STIP was implemented on 1 October 2020 and ended on 8 June 2021, date in which 2021 PRF's withdrawals were executed.

30 Returns for periods of over one year are compound annualized rates. For periods of less than one year, the return corresponds to the change in the given period.

PRF	Sovereign and government-related bonds	-4.91	1.13	-1.06	-0.75	-5.57
	Inflation-indexed sovereign bonds	-3.46	2.86	0.66	2.66	2.62
	U.S. agency MBS	-0.99	0.27	0.25	-0.64	-1.10
	Corporate bonds	-4.41	2.76	-0.76	-0.60	-3.12
	High Yield bonds	-0.93	3.01	-0.44	-0.86	0.73
	Equities	4.68	7.33	-1.03	6.86	18.83
	Return LTIP (USD)	**-1.04**	**3.65**	**-0.75**	**1.94**	**3.79**
	Retorno PICP (USD)[(b)]	**0.02**	**0.02**	**-**	**-**	**0.05**
	Total return (USD)	**-0.75**	**2.83**	**-0.75**	**1.94**	**3.27**
	Total return (CLP)	2.16	3.28	8.48	7.86	23.45
	Total return (Real in UF)	1.04	2.18	7.11	4.72	15.80

(a) For the ESSF fixed-income portfolio, the table presents an estimate of the return in local currency and the return deriving from exchange rate fluctuations affecting the portfolio. The impact of exchange rate fluctuations is approximated and calculated using the benchmark currency allocation, taking into account that the ESSF is invested under a passive mandate. The return in local currency is calculated by subtracting that estimate from the fixed-income return.

(b) STIP return measurement starts on 1 October 2020 and ends on 8 June 2021.

SOURCE: Ministry of Finance of Chile

BOX 4: Factors affecting returns in the Sovereign Wealth Funds

The investment returns in the Sovereign Wealth Funds depends on a number of factors that affect the different types of instruments included in the different fund portfolios.

For the fixed-income portfolios, the main factors are interest rates, the credit quality of issuers, default, prepayment, and exchange rate fluctuations. Market interest rates directly influence time deposit rates offered by financial institutions and sovereign bond rates at the time of issue. Moreover, changes in the interest rate level affect the price of fixed-income instruments that are traded in the market, especially in the case of medium- and long-term securities, where a rise has a negative effect, and a fall has a positive one. The credit quality of a fixed-income issuer also affects the price at which the security is traded in the market: a deterioration in quality causes the price to fall, while an improvement leads to an increase.[1] Additionally, all fixed-income instruments have some level of probability of default, that is, the probability that the issuer will not pay either the interest or the principal (or both). In investment-grade instruments, this probability is very low, but it increases with high-yield bonds.[2] Prepayment risk, in turn, mainly affects U.S. agency MBS, since the underlying assets are mortgage loans that can be refinanced if interest rates fall. If a mortgage is paid off early, the individual who refinances their mortgage loan returns the value of what is owed to the MBS investor, who loses the present value of future payments that would have been received, which are higher than the mortgages in which they can reinvest.[3] Finally, since the funds' performance is measured in dollars and a large share of their portfolios are invested in instruments denominated in other currencies, exchange rate fluctuations against the dollar will have an effect on yields.

1 In the case of corporate bonds, credit quality is generally measured through the spread, that is, the difference between the bond's interest rate and the benchmark sovereign interest rate. An increase (decrease) in the spread on a corporate bond is associated with a reduction (increase) in the bond's value.

2 To mitigate this risk in high-yield bonds, the contracted external managers carry out an exhaustive analysis of each issuer in order to avoid these defaults to the extent possible.

3 Prepayment risk also affects some corporate bonds that give the issuer the option of paying off the issued debt early (i.e., callable bonds).

For the equity portfolios, returns will largely depend on the market's perception of the issuing corporation's income generation capacity and the risks associated with the company, as well as market financial conditions.

Since the inception of the funds, the annual return in dollars as of year-end 2021 was 2.42% for the ESSF and 4.20% for the PRF. Expressed in Chilean pesos, the annual return for this full period was de 5.63% for the ESSF and 7.46% for the PRF. Finally, the real annual return since inception was 1.95% for the ESSF and 3.72% for the PRF.

In 2021, the ESSF's return did not differ in basis points with its benchmark. In turn, the PRF's return was 9 basis points lower. Since 31 March 2007, the difference between the average annual return of the ESSF and PRF and their benchmarks was -3 basis points and -25 basis points, respectively.[31]

Figure 24 shows the index of accumulated returns for each fund. For the ESSF, the index increased 42.3% between 31 March 2007 and year-end 2021; for the PRF, the increase was 83.4% in the same period. The Figure illustrates how the two funds' returns began to differentiate in 2012, when the PRF investment policy was changed.[32]

The internal rate of return in 2021 was -5.25% and 3.39% for the ESSF and PRF, respectively.

FIGURE 24

ESSF and PRF: Accumulated returns index, in dollars
(31 March 2007 = 100)

SOURCE: Ministry of Finance of Chile

31 This means that the manager's portfolio generated lower returns, on average, than the implicit benchmark portfolio in the full period (2007–2021).

32 The investment policies of both funds were identical before 2012.

CHAPTER 3

Activities and Recommendations of the Financial Committee

A. ESSF investment policy study

The ESSF investment policy was defined in 2012, based on recommendations from the Financial Committee and a study carried out by Eduardo Walker (2011). At that time, the currency mix was adjusted (with a reduction in the share of dollars and euros and an increase in yen), and the diversification of the investment portfolio was increased, adding sovereign instruments denominated in Swiss francs (7.5%) and a small equity share (7.5%). These changes were implemented in mid-2013. Additionally, the equity share was reduced from 7.5% to 5.0% in 2020, considering that there would be significant withdrawals from the fund that year due to the pandemic, and the decision was made to end investment in stocks and bank deposits in 2021 (see next section).

Based on best practices, which include a periodic review of investment policies, and the Committee's recommendation, the Minister commissioned a study from RVK, which has been contracted to support the Ministry on issues related to the investment of the sovereign wealth funds.

RVK made an initial presentation to the Committee at its April 2020 meeting. However, given the context of the pandemic and its potential impact on the assumptions used in the study, the Committee recommended postponing the study until early 2021.

RVK met with the Committee four times in 2021 to report its progress on the study and to give Committee members the opportunity to recommend adjustments in the methodology used by the consulting firm. The main recommendations made by the Committee include the following:

- Carrying out the study in Chilean pesos and in real terms, so that the returns, volatility, and variance-covariance matrix incorporate the existing relationship between the different asset classes and the peso in real terms;
- Analyzing the optimal currency allocation, especially in fixed income, as it is not clear how the use of a global index is consistent with the fund's objective of investing mainly in reserve currencies;
- Studying the performance of the different proposed portfolios in relation to the copper price; and
- Incorporating alternatives for smaller fund sizes, given the reduction of the ESSF between 2020 and 2021.

RVK presented its final conclusions to the Financial Committee in December 2021, including strategic asset allocations depending on the size of the ESSF. Table 6 presents the current strategic asset allocation and the alternatives proposed by the consulting firm for the different fund sizes.

TABLE 6

Current strategic asset allocation and RVK's recommendations for different sizes of the ESSF
(in percent unless otherwise stated)

Asset Class	Actual	Less than US$ 3 billion	Between US$ 3 and US$ 5 billion	More than US$ 5 billion
ICE Bofa US Dollar 3 Month Deposit Bid Rate Average Index	-	-	6.0	6.0
ICE Bofa Euro Currency 3 Month Deposit Bid Rate Average Index	-	-	3.0	3.0
ICE Bofa Japanese Yen 3 Month Deposit Bid Rate Average Index	-	-	3.0	3.0
Bank deposits	**-**	**-**	**12.0**	**12.0**
ICE Bofa US Treasury Bills Index	11.9	50.0	24.0	5.0
ICE Bofa German Treasury Bills Index	14.2	25.0	12.0	2.5
ICE Bofa Japan Treasury Bills Index	10.8	25.0	12.0	2.5
Treasury bills	**36.9**	**100.0**	**48.0**	**10.0**
Bloomberg Global Aggregate - Treasury: US 7-10 yrs	28.6	-	-	-
Bloomberg Global Aggregate - Treasury: Germany 7-10 yrs	11.8	-	-	-
Bloomberg Global Aggregate - Treasury: Japan 7-10 yrs	10.8	-	-	-
Bloomberg Global Aggregate - Treasury: Switzerland 5-10 yrs	8.2	-	-	-
Bloomberg Global Aggregate 5-7 years total return index unhedged[(a)]	-	-	30.0	60.0
Sovereign bonds	**59.4**	**-**	**30.0**	**60.0**
Bloomberg Global Inflation-Linked: US TIPS 1-10 yrs	2.6	-	-	-
Bloomberg Global Inflation-Linked: Germany 1-10 yrs	1.1	-	-	-
Bloomberg Global Inflation Linked Index[(b)]	-	-	5.0	8.0
Inflation-linked bonds	**3.7**	**-**	**5.0**	**8.0**
Credit	**-**	**-**	**-**	**5.0**
Equities	**-**	**-**	**5.0**	**5.0**
Expected Arithmetic Return (real CLP)	**-3**	**-3.1**	**-2.6**	**-2.3**
Expected Risk (standard deviation)	**10.4**	**11.1**	**11.0**	**10.9**
Duration (years)	**5**	**0.3**	**2.5**	**5**

(a) RVK proposes using a global sovereign bond index whose components must have a maturity between 5 and 7 years. This diverges from the current portfolio, which defines a specific percentage that must be invested in the United States, Germany, Japan, and Switzerland, with maturities of 7 to 10 years for the first three countries and 5 to 10 years for the latter.

(b) RVK recommends a global index for inflation-indexed bonds. This diverges from the current portfolio, which defines a fixed percentage in the United States and Germany.

In the event the ESSF is less than US$ 3 billion, RVK recommends that the investment portfolio be made up solely of treasury bills, which are highly liquid and thus could be used to finance large disbursements in a short period without incurring significant losses. For a fund size between US$ 3 billion and US$ 5 billion, they suggest a portfolio that is highly concentrated in treasury bills (48% of the portfolio) while also incorporating longer-term sovereign bonds (30%), bank deposits (12%), inflation indexed bonds (5%), and equities (5%). This recommendation maintains the objective of having a highly liquid fund but improves the portfolio's expected return. Should the ESSF exceed US$ 5 billion, in order to increase the expected return while maintaining the risk level relative to the prior proposals, they propose a portfolio that incorporates a new asset class (namely, credit, at 5% of the portfolio),[33] increases sovereign bond exposure significantly to 60% of the fund, and slightly increases the inflation-indexed bond exposure to 8%. At the same time, exposure to treasury bills is reduced to 10%, and bank deposits and equities are held at 12% and 5%,

33 RVK considered in its study a credit portfolio that includes investment grade corporate bonds (50%), MBS (35%), bank loans (5%), U.S. high yield bonds (5%) and emerging country corporate bonds (5%).

respectively. For fund sizes above US$ 3 billion, RVK recommends using global benchmarks for sovereign bonds and inflation-indexed bonds. Finally, all recommendations adjust the currency allocation of treasury bills slightly relative to the current policy.

B. Changes to the ESSF investment policy

In 2021 the Financial Committee recommended the following adjustments to the ESSF investment policy, which were accepted and implemented by the Finance Minister:

- Bank deposits: The Committee recommended eliminating bank deposits from the strategic asset allocation because it was becoming increasingly difficult for the CBC to align with it as withdrawals became more significant in relation to the total size of the fund. The Bank's difficulty derived from the fact that investments in time deposits cannot be used until they mature, so in order to finance the withdrawals in 2021, it was necessary to sell other securities (treasury bills and bonds), which generated distortions in the portfolio composition relative to the strategic asset allocation. This change was implemented on 1 October 2021.
- Equities: The Committee recommended eliminating equities from the strategic asset allocation in mid-2021. This recommendation took into account the fact that the fund's investment horizon had shortened significantly due to the large disbursements implemented in the year, together with the existing uncertainty on the future size of the fund. Moreover, if the fund experienced additional disbursements, the equity portfolio would fall below the minimum size required by the portfolio managers to meet the risk standards established for this asset class. The change was implemented on 1 October 2021.
- Sovereign bonds: The eligibility criteria for sovereign securities were simplified, because it was previously necessary to monitor that each security was in the benchmark. Based on the proposed modifications, investment is allowed in all sovereign bills, sovereign bonds, and inflation-indexed sovereign bonds issued by the United States, Germany, Japan, and Switzerland, in accordance with the strategic asset allocation.[34]

C. Transaction cost analysis

In 2021 the Financial Committee examined the services offered by some international companies specialized in the analysis of transaction costs incurred by investment managers. The objectives were to better understand the type of analysis that can be undertaken, to evaluate whether it is worth contracting such services for the investment strategies followed in the Chilean sovereign wealth funds, and to learn the costs involved. To this end, the Financial Committee's Technical Secretariat asked two firms—namely, Zeno Solutions and Global Trading Analytics Babelfish (GTA)—to analyze the costs incurred by the sovereign wealth fund managers in order to assess whether they were within acceptable margins. The former firm analyzed the ESSF, while the latter looked at the PRF, in periods in which there were a lot of transactions associated with fund withdrawals. Both companies found that the costs incurred by the CBC and the external portfolio managers were reasonable. In this scenario, GTA, which had analyzed a portfolio involving many asset classes, was asked to present its methodology and the results of the analysis to the Committee. Based on the presentation, the Committee members gained a more detailed understanding of the methodology and could thus corroborate that the costs incurred by the portfolio managers were low. However, the Committee concluded that the benefit of this type of analysis is limited under passive investment strategies and that contracting the

34 This modification was also recommended for the Strategic Contingency Fund.

service is not justified in a context in which the size of the funds has decreased significantly.

D. Responsible investment

In its final meeting of the year, the Financial Committee was informed that the Finance Minister had requested an assessment of the possibility of incorporating responsible investment criteria in the sovereign wealth fund investment policies.

This request is based on the Ministry's commitment under the Acuerdo Verde, signed in December 2019, to evaluate revising the PRF and ESSF investment guidelines to incorporate climate change management and environmental, social, and governance requirements.

Based on information presented by the Technical Secretariat on responsible investment criteria and experiences, the Committee came to a preliminary conclusion that, in the case of the PRF, this type of consideration could be applied to only part of the portfolio, since the portfolio includes equities, where there is more international experience with this type of investment. The Committee asked the Technical Secretariat for additional information with which to determine the feasibility of making a concrete recommendation to the Finance Minister in this area.

E. Monitoring of external fund managers

The Financial Committee received delegations from the CBC, BlackRock, Nomura and Western Asset, which are required to report annually on their portfolio management to the members of the Committee and the Finance Ministry. In their presentations, the different fund managers described their portfolio performance, explained the underlying reasons for that performance, described their investment methodologies and main positions, and reported on any organizational or team changes that could affect their portfolio management. They also analyzed the situation in the markets, which were strongly affected by the global pandemic. These visits are part of the mandatory activities through which the external fund managers are required to report on their performance.

The presentations by Mellon, Credit Suisse, UBS, and BNP Paribas, which were scheduled for the last four months of 2021, were postponed until the first half of 2022, because changes in the composition of the Financial Committee meant that the dates of meetings scheduled for that period had to be moved.

APPENDIX 1 CURRENT AND FORMER FINANCIAL COMMITTEE'S MEMBERS

Members	Position	Incorporation Date	Departure Date
Juan Andrés Fontaine Talavera	President	August 2021	-
Macarena Pérez Ojeda	Vice-President	August 2021	-
Nicolás Eyzaguirre Guzmán	Counselor	August 2021	-
Mauricio Villena Chamorro	Counselor	August 2021	-
Ricardo Budinich Diez	Counselor	August 2016	-
Martín Costabal Llona	Counselor	August 2007	-
José De Gregorio Rebeco	President	September 2014	August 2021
Cristián Eyzaguirre Johnston	Counselor Vice-President	March 2010 September 2011	August 2021
Jaime Casassus Vargas	Counselor	September 2014	August 2021
Paulina Yazigi Salamanca	Counselor	September 2018	August 2021
Igal Magendzo Weinberger	Counselor	September 2014	September 2018
Eduardo Walker Hitschfeld	Counselor	August 2007	August 2016
Arturo Cifuentes Ovalle	President Counselor	January 2014 August 2011	August 2014
Rodrigo Valdés Pulido	Counselor	February 2014	April 2014
Eric Parrado Herrera	Counselor	August 2011	March 2014
Klaus Schmidt-Hebbel Dunker	President Counselor	August 2011 September 2009	January 2014
Andrés Bianchi Larre	President	August 2007	August 2011
Ana María Jul Lagomarsino	Vice-president	August 2007	August 2011
Andrés Sanfuentes Vergara	Counselor	August 2007	March 2010
Oscar Landerretche Moreno	Counselor	August 2007	June 2009

APPENDIX 2 SUMMARY OF MEETINGS IN 2021[35]

MEETING 1 | 12 MARCH 2021

In the first meeting of the year, a delegation from the CBC, led by the Financial Markets Division Manager, discussed the results of the management of both sovereign wealth funds in 2020 and reported on the main developments in the Bank's international reserves. The consulting firm RVK presented an update on the ESSF investment policy study that was started in 2020 and then suspended due to the potential impact of the COVID-19 pandemic on the underlying assumptions used. The new version of the study incorporated new market assumptions. Based on this presentation, the Committee requested that the report include the results of optimizing returns in dollars, as well as other methodological suggestions. Separately, the Committee recommended not revising the PRF investment policy, given that there was no additional information on the evolution of the fund that would justify a modification. The Committee also suggested that presentations by external portfolio managers be held remotely for the rest of the year, and the members agreed on the next phases in the preparation of the Financial Committee's 2020 Annual Report. Finally, the Technical Secretariat was asked to present the results of the transaction cost analysis carried out for the funds by external firms at the next meeting.

MEETING 2 | 16 APRIL 2021

In its second meeting, the Financial Committee met with a delegation from BlackRock, which is responsible for investing one of the high-yield bond portfolios in the PRF. The firm reported on its organization, its investment processes, and the main results obtained in 2020 and the first quarter of 2021. The presentation included a discussion of the market situation, with an emphasis on the effect of the COVID-19 pandemic. The Committee also met with the consultant RVK to analyze in depth the currency in which the study should be conducted. After an exchange of views, the Committee recommended that the study be carried out in pesos and in real terms, and it accepted RVK's proposal on how to incorporate the copper price into the study. Finally, the Technical Secretariat was instructed to ask the CBC for information on inflation-protected assets that might be considered in the ESSF study.

MEETING 3 | 11 JUNE 2021

In the third meeting, Nomura gave a presentation on its management of one of the high-yield bond portfolios in the PRF, including its organization, its investment processes, and the main results obtained in 2020 and through May 2021, as well as the market situation. The firm GTA presented the results of its transaction cost analysis of the PRF, covering transactions in the third quarter of 2020, when the year's withdrawal was implemented. Based on this analysis, the Committee corroborated that the costs incurred by the portfolio managers at that time were low and expressed its satisfaction with this type of analysis. In this scenario, the Committee asked the Technical Secretariat to study the cost of contracting a transaction cost analysis service in the context of passive mandates. Finally, the Committee approved the modification of the eligibility criteria for sovereign bills and bonds in the ESSF and the Strategic Contingency Fund (SCF) in order to facilitate the process of monitoring investment limits.

35 Due to the pandemic, all the Financial Committee's meetings were held remotely starting in April 2020.

MEETING 4 | 13 AUGUST 2021

At its fourth meeting, the Committee met with the team from Western, which is responsible for investing part of the U.S. agency MBS portfolio for the PRF. The CBC also participated in the meeting, given its role in supervising the firm. Western's presentation covered its organization, its investment processes, and the main results obtained in the first seven months of 2021 and since the start of its mandate in January 2019. Subsequently, the Committee recommended eliminating bank deposits and equity exposure in the ESSF to better meet the fund's liquidity needs in the final months of the year. Specifically, it suggested that the share allocated to bank deposits be transferred to treasury bills in the same currency, while the equity share be distributed proportionally among treasury bills, sovereign bonds, and inflation-indexed sovereign bonds. With regard to the ESSF investment policy study, RVK presented its final conclusions on the strategic asset allocation, including some recommendations for a smaller fund given the disbursements made in 2021. The Committee members thanked the consultant for its work and recommended incorporating some additional analysis in the final report related to the assumptions used and the fund's shorter investment horizon. Finally, the Committee recommended against contracting transaction cost analysis services due to the expense involved and the fact that it is less important for passive investment strategies.

MEETING 5 | 22 NOVEMBER 2021

The Financial Committee's fifth meeting of the year was the first held following the renewal of several Committee members. The new Chairman, Juan Andrés Fontaine, welcomed the new members: Macarena Pérez, who was elected Vice-Chair; Nicolás Eyzaguirre; and Mauricio Villena. At this meeting, the Committee was focused on reviewing the main aspects of sovereign wealth fund investment. It also analyzed the Committee's prior recommendations for the SCF. Considering that several members were new, the Committee recommended that the consulting firm RVK presents the conclusions of its ESSF investment policy study at the next meeting. The Committee also took the opportunity to thank José De Gregorio, Jaime Casassus, Cristián Eyzaguirre, and Paulina Yazigi for their service as former Committee members.

MEETING 6 | 6 DECEMBER 2021

In the final meeting of the year, the Committee was informed of the Finance Minister's request to begin work on assessing the incorporation of responsible investment criteria in the sovereign wealth fun investment policies. Based on information presented by the Technical Secretariat, the Committee's preliminary conclusion was that this type of consideration could be applied to equity investments in the PRF, where there is more international experience on how to incorporate this type of investment consideration. The Committee asked the Technical Secretariat for additional information with which to determine the feasibility of making a concrete recommendation to the Finance Minister in 2022. Subsequently, the consulting firm RVK presented its final report on the ESSF investment policy study. The Committee members took note of the main conclusions, which included different strategic asset allocations for different fund sizes. The Committee decided to analyze these conclusions in 2022, based on the expected evolution of the fund over the coming years. The Committee also reviewed additional information on the SCF to better understand the policy objective and the effective behavior of its flows. This information will be used by the Committee to review in 2022 the strategic asset allocation that was defined for this fund in 2020. Finally, the Committee reviewed the forecasts for PRF and ESSF contributions and withdrawals in the coming years.

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Glossary

Active management — an investment strategy that seeks to obtain a higher return than a given benchmark.

Alternative investments — investments other than those traditionally used (equities and fixed-income); they mainly include private equity, venture capital, hedge funds, commodities and real estate.

American depositary receipts (ADR) —negotiable certificate issued by a U.S. bank representing a specified number of shares (or one share) in a foreign stock traded on a U.S. exchange.

Asset class — a specific investment category such as equities, corporate bonds, sovereign bonds or money market instruments. Assets of the same class generally share characteristics that make them similar from a tax, legal and structural perspective, but this does not imply that they respond the same way to a given market event.

Basis point — one one-hundredth of a decimal point; 1 basis point = (1/100) de 1%.

Bond — a financial liability of an issuer (for example, a company or a government) to investors, under which the issuer undertakes not only to return the investors' capital, but also to pay an agreed interest rate on a specific date(s).

Cash — cash in hand and bank demand deposits.

Corporate bond — a bond issued by a corporation or company.

Credit default swap (CDS) — a financial instrument used by investors as protection against default on a bond; can also be used to take a speculative position on a bond covered by the CDS.

Credit rating — the level of solvency of the issuer of a financial instrument (company or country) as defined by a credit rating agency.

Duration — a measure of the sensitivity of a bond's price to changes in interest rates: the longer the duration, the farther the bond's price will fall in response to an increase in interest rates.

Equities — securities that represent the ownership or capital of a company; buyers of equities become owners or shareholders of the company and thus have earnings or losses depending on the company's performance.

Ex ante tracking error — a measure of the difference between the return on an investment fund and its benchmark.

Exchange-traded fund (ETF) — a market-traded financial instrument that typically replicates a market index; traditionally used to obtain passive exposure to equity market indexes, but has expanded into fixed-income, commodities and even active strategies.

Fiscal Responsibility Law — Law N° 20,128, published in Chile's Official Gazette on 30 September 2006.

Fixed-income — investment instruments with a yield over a given period that is known at the time of their acquisition; sovereign and corporate bonds and bank deposits are fixed-income assets.

Global depositary receipts (GDR) — bank certificate issued in more than one country for shares in a foreign company. The shares are held by a foreign branch of an international bank. The shares trade as domestic shares but are offered for sale globally through the various bank branches.

Headline or reputational risk — the risk of an adverse public perception of an entity's management.

High Yield Bonds — non investment grade sovereign and corporate bonds.

Inflation-indexed bond — a bond whose value varies in line with an inflation index; in the United States, these securities are known as Treasury Inflation-Protected Securities (TIPS).

Internal rate of return (IRR) — the effective yield on an investment, calculated taking the net present value of all cash flows as zero.

Investment policy — the set of criteria, guidelines and instructions that regulate the amount, structure and dynamics of an investment portfolio.

Leverage — the level of debt carried by a firm or investment vehicle.

LIBID — London interbank bid rate; the interest rate paid on interbank deposits. By definition, this rate is equal to the LIBOR minus 0.125%.

LIBOR — London interbank offered rate; the interest rate charged on interbank borrowing.

Liquidity — the degree to which an asset or security can be quickly bought or sold in the market without affecting the asset's price.

Money market instrument — a short-term asset with a maturity of less than a year, which can readily be converted into cash and is less volatile than other asset classes.

Mortgage-backed securities (MBS) from U.S. agencies — instruments that are secured by a mortgage related to the purchase of mortgage properties. These instruments are issued by Ginnie Mae, Fannie Mae and Freddie Mac.

Mutual fund — an investment vehicle managed by an entity that brings together the capital of different investors and provides them with exposure to different asset classes; unlike ETFs, mutual funds are not traded on the market.

Passive management — an investment strategy that seeks to replicate the return on a representative index of an asset class or combination of asset classes.

Portfolio — the combination of investments acquired by an individual or institutional investor.

Quantitative easing — an unconventional monetary policy tool used by some central banks to increase the money supply, usually through the purchase of the country's own government bonds.

Recognition bond (bono de reconocimiento) — an instrument issued by Chile's Pension Normalization Institute (Instituto de Normalización Previsional) representing a worker's contributions to the old pension system before joining the new (private) AFP system.

Return (total) — the combination of the return in local currency and the return generated by exchange rate fluctuations.

Return generated by exchange rate movements — the share of the return that is generated by variations in the value of the dollar against other currencies in which assets are held.

Return in local currency — the return generated by a financial instrument in the currency in which it is denominated; corresponds to the share of returns associated with the level of interest rates and their movements, creditworthiness and other factors.

Risk — the possibility of suffering a financial loss; the variability of the return on an investment.

Sovereign bond — a bond issued by a government.

Special Drawing Rights (SDR) — international reserve assets created by the IMF to supplement its member countries' official reserves. SDRs can be exchanged for freely usable currencies.

Spread — the difference between the yield rate at maturity of two fixed-income instruments; used to measure their level of relative risk.

Swift — Society for Worldwide Interbank Financial Telecommunication.

TED Spread — the difference between the interbank borrowing rate (LIBOR) and the risk-free rate (U.S. Treasury bills). A higher TED spread typically indicates a lower level of market liquidity.

To Be Announced (TBA) — denotes the forward mortgage-backed securities (MBS) trade, and pass-through securities issued by Freddie Mac, Fannie Mae and Ginnie Mae.

Time-weighted rate of return (TWR) — a measure of return obtained by compounding or multiplying daily returns, excluding contributions and withdrawals; unlike the IRR, it excludes the effect of net cash flows.

Variable-income — equities.

VIX — the Chicago Board Options Exchange (CBOE) Volatility Index, which reflects market expectations for volatility over the next 30 days; based on the implied volatilities of a wide range of S&P500 index options.

Volatility — a measure of a financial asset's risk, representing the variation shown by its price over a period of time.

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