

LESLIE H. KONDO State Auditor

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December 9, 2024

VIA EMAIL

The Honorable Ronald D. Kouchi Senate President 415 South Beretania Street Hawai'i State Capitol, Room 409 Honolulu, Hawai'i 96813

VIA EMAIL

The Honorable Nadine K. Nakamura Speaker, House of Representatives 415 South Beretania Street Hawai'i State Capitol, Room 431 Honolulu, Hawai'i 96813

RE: Financial Audit of the Employees' Retirement System of the State of Hawai'i

Dear President Kouchi and Speaker Nakamura:

The audit report on the financial statements of the Employees' Retirement System of the State of Hawai'i for the fiscal year ended June 30, 2023, was issued on October 22, 2024. The Office of the Auditor retained KKDLY LLC to perform the financial audit. For your information, we are attaching a copy of the two-page Auditor's Summary of the financial audit report.

You may view the financial audit report and Auditor's Summary on our website at:

https://files.hawaii.gov/auditor/Reports/2023 Audit/ERS2023.pdf; and

https://files.hawaii.gov/auditor/Reports/2023_Audit/ERS_Summary_2023.pdf.

If you have any questions about the report, please contact me.

Very truly yours,

Leslie H. Kondo State Auditor

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Attachment

ec/attach (Auditor's Summary only): Members of the Senate

Members of the House of Representatives Carol Taniguchi, Senate Chief Clerk Brian Takeshita, House Chief Clerk

Auditor's Summary

Financial Audit of the Employees' Retirement System of the State of Hawai'i

Financial Statements, Fiscal Year Ended June 30, 2023



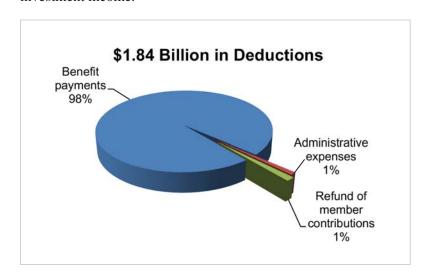
THE PRIMARY PURPOSE of the audit was to form an opinion on the fairness of the presentation of the financial statements for the Employees' Retirement System of the State of Hawai'i, as of and for the fiscal year ended June 30, 2023. The audit was conducted by KKDLY LLC.

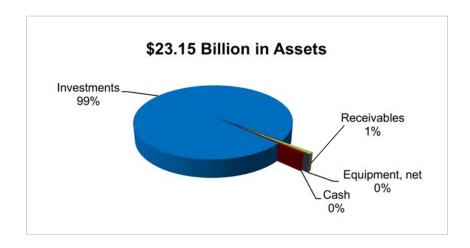
About the System

The Employees' Retirement System of the State of Hawai'i (ERS) is a cost-sharing, multiple-employer retirement system for government workers. Through its pension benefits program, ERS provides a defined-benefit pension plan for all state and county employees, including teachers, professors, police officers, firefighters, correction officers, judges and elected officials. ERS is governed by a Board of Trustees, which consists of eight members.

Financial Highlights

FOR THE FISCAL YEAR ended June 30, 2023, ERS reported total net additions of approximately \$2.41 billion. Additions consisted of \$1.58 billion from contributions and \$827 million in net investment income.





Total deductions of approximately \$1.84 billion consisted of (1) \$1.79 billion for benefit payments; (2) \$19 million for administrative expenses; and (3) \$26 million for refund of member contributions.

As of June 30, 2023, assets totaled \$23.15 billion and liabilities totaled \$727 million, leaving a net position balance of \$22.42 billion. Total assets included (1) investments of \$22.86 billion; (2) receivables of \$200 million; (3) cash of \$92 million; and (4) net equipment of \$4 million.

Auditor's Opinion

ERS RECEIVED AN UNMODIFIED OPINION that the financial statements were presented fairly, in all material respects, in accordance with generally accepted accounting principles.

Findings

THERE WERE NO REPORTED DEFICIENCIES in internal control over financial reporting that were considered to be material weaknesses and no instances of noncompliance or other matters required to be reported under *Government Auditing Standards*.



Link to the complete report:

Financial Audit

https://files.hawaii.gov/auditor/Reports/2023_Audit/ERS2023.pdf



Employees' Retirement System of the State of Hawaii

Financial Statements and Supplementary Information (With Independent Auditors' Report)

June 30, 2023

Financial Statements and Supplementary Information

June 30, 2023

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Financial Statements and Supplementary Information

June 30, 2023

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PART I INTRODUCTION SECTION



October 22, 2024

The Auditor State of Hawaii:

Board of Trustees Employees' Retirement System of the State of Hawaii:

We have completed our audit of the financial statements of the Employees' Retirement System of the State of Hawaii (the ERS), as of and for the year ended June 30, 2023. We transmit herewith our independent auditors' report containing our opinion on those financial statements and our independent auditors' report on internal control over financial reporting and on compliance and other matters based on an audit of financial statements performed in accordance with *Government Auditing Standards*.

Audit Objectives

The objectives of the audit were as follows:

- 1. To provide an opinion on the fair presentation of the ERS' financial statements in accordance with accounting principles generally accepted in the United States of America.
- 2. To consider the ERS' internal control over financial reporting in order to determine our auditing procedures for the purpose of expressing our opinion on the financial statements.
- 3. To perform tests of the ERS' compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts.

Scope of Audit

We performed our audit of the ERS' financial statements as of and for the year ended June 30, 2023, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States.

As part of the audit of the ERS' financial statements, we considered the ERS' internal control over financial reporting to determine our auditing procedures for the purpose of expressing our opinion on the financial statements. We also performed tests of the ERS' compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements.

Organization of Report

This report has been organized into three parts as follows:

- 1. The Introduction Section describes briefly the objectives and scope of our audit and the organization and contents of this report.
- 2. The Financial Section includes management's discussion and analysis (unaudited), the ERS' financial statements and the related notes, required supplementary information (unaudited), and other supplementary information as of and for the year ended June 30, 2023, and our independent auditors' report thereon.
- 3. The Internal Control and Compliance Section contains our independent auditors' report on the ERS' internal control over financial reporting and on compliance and other matters based on an audit of financial statements performed in accordance with *Government Auditing Standards* and a schedule of findings and responses.

* * * * * * *

We would like to take this opportunity to express our appreciation for the courtesy and assistance extended to us by the personnel of the ERS during the course of our engagement. Should you wish to discuss any of the matters contained herein, we will be pleased to meet with you at your convenience.

Very truly yours,



PART II FINANCIAL SECTION



Independent Auditors' Report

The Auditor State of Hawaii:

Board of Trustees Employees' Retirement System of the State of Hawaii:

Report on the Audit of the Financial Statements

Opinion

We have audited the statement of fiduciary net position of the Employees' Retirement System of the State of Hawaii (the ERS) as of June 30, 2023, and the related statement of changes in fiduciary net position for the year then ended, and the related notes to financial statements, which collectively comprise the ERS' basic financial statements as listed in the table of contents.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the fiduciary net position of the ERS as of June 30, 2023, and the changes in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States (*Government Auditing Standards*). Our responsibilities under those standards are further described in the *Auditors' Responsibilities for the Audit of the Financial Statements* section of our report. We are required to be independent of the ERS and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the ERS' ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditors' Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with auditing standards generally accepted in the United States of America and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by reasonable user based on the financial statements.

In performing an audit in accordance with auditing standards generally accepted in the United States of America and *Government Auditing Standards*, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit
 procedures that are appropriate in the circumstances, but not for the purpose of expressing an
 opinion on the effectiveness of the ERS' internal control. Accordingly, no such opinion is
 expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the ERS' ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, the schedule of changes in the employers' net pension liability and related ratios, schedule of the employers' net pension liability, and schedule of investment returns (collectively the

required supplementary information) be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the ERS' basic financial statements. The supplementary information included in Schedules 1 through 4 as listed in the table of contents is presented for purposes of additional analysis and is not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information included in Schedules 1 through 3 has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supplementary information included in Schedules 1 through 3 is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

The information included in Schedule 4 has not been subjected to the auditing procedures applied in the audit of the financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated October 22, 2024, on our consideration of the ERS' internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the ERS' internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the ERS' internal control over financial reporting and compliance.

KKDLY LLC

Honolulu, Hawaii October 22, 2024

Management's Discussion and Analysis (Unaudited)

June 30, 2023

This Management's Discussion and Analysis (MD&A) of the Employees' Retirement System of the State of Hawaii (the ERS) provides highlights and comparisons of the financial position and performance of the ERS as of and for the year ended June 30, 2023. The MD&A is presented as a narrative overview and analysis in conjunction with the Letter of Transmittal, which is included in the Introductory Section of the separately issued ERS Annual Comprehensive Financial Report (the ACFR). For more detailed information pertaining to the ERS' financial activities, the reader should also review the actual financial statements, including the notes and supplementary information.

Overview of the Financial Statements

The ERS is responsible for administering a defined-benefit pension plan for state government, local government, and public education employees in the State of Hawaii (the State).

The ERS' financial statements include fiduciary type funds that are used to account for resources held for the benefit of parties outside of the ERS. The primary fund is defined as a Pension Trust Fund as these assets are held for the benefit of its members and their beneficiaries for the payment of pension benefits. Throughout this discussion and analysis, units of measure (i.e., billions, millions, and thousands) are approximate, being rounded up or down to the nearest tenth of the respective unit value.

This discussion and analysis is intended to serve as an introduction to the ERS' financial reporting, which comprises the following components:

- The two main basic financial statements include the statement of fiduciary net position as of June 30, 2023, and the related statement of changes in fiduciary net position during the fiscal year from July 1, 2022 to June 30, 2023 (FY 2023). These provide a snapshot of the resources available at the end of the fiscal year and a summary of changes in resources available to pay pension benefits to members, retirees, and beneficiaries.
- The related notes to financial statements are an integral part of the basic financial statements and include detailed information that is essential to a full understanding of the data provided in the basic financial statements.
- The Required Supplementary Information, which includes the schedules of changes in the employers' net pension liability and related ratios, employers' net pension liability, and investment returns, and the related notes to required supplementary information, are required to be presented to supplement the basic financial statements for placing the financial statements in an appropriate operational, economic, or historical context.

Management's Discussion and Analysis (Unaudited)

June 30, 2023

• The Other Supplementary Information is derived from and relates directly to the underlying accounting and other records used to prepare the financial statements, and provides additional detailed information concerning the changes in operating reserves established by legislation, and the operating and investment related expenses of the ERS. The Other Supplementary Information also includes a report on employer social security contribution amounts for the State that are paid directly to the Internal Revenue Service (IRS). This information is separate from the financial information of the Pension Trust Fund.

Financial Highlights

- The fiduciary net position increased to \$22.4 billion as of June 30, 2023, with a decrease in funded status during the fiscal year to 61.9%. The ERS' fiduciary net position was \$21.9 billion, for a 62.8% funded status as of June 30, 2022.
- The ERS investment return (net and gross of fees, and contains lagged and non-lagged components) was 2.4% for the 2023 fiscal year compared to 4.0% for the 2022 fiscal year, using the time-weighted rate of return methodologies that are generally accepted by the Global Investment Performance Standards (GIPS) (that is shown in the *Investment Section* of the ACFR). The investment program underperformed its actuarial and investment goal of 7.0% that was effective June 30, 2023. Under Governmental Accounting Standards Board (GASB) Statement No. 67, *Financial Reporting for Pension Plans an amendment of GASB Statement No. 25*, the annual money-weighted return on ERS' pension plan investments, net of pension plan investment expense, was 3.8% and 0.8% for FY 2023 and FY 2022, respectively.

Effective October 1, 2014, the Board of Trustees of the ERS (the Board) approved the adoption of a change in its asset allocation policy from the asset-class policy to a new risk-based asset allocation framework. Following the completion of the 2019 Asset Liability Study, the Board adopted a new long-term strategic allocation policy that established two major asset classes of Broad Growth and Diversifying Strategies (rather than four: Broad Growth, Principal Protection, Real Return and Crisis Risk Offset) that was completed during the 2022 fiscal year. Please refer to Note E.1, Investment Policy, for more detailed information on the asset allocation policy.

- During 2023 and 2022, there was no significant legislation passed that significantly affects the operations or provisions of the pension trust.
- Total pension liability as of June 30, 2023 increased to \$36.2 billion from \$34.8 billion as of June 30, 2022, while the corresponding net pension liability increased to \$13.8 billion as of June 30, 2023 from \$13.0 billion as of June 30, 2022. Covered payroll for the ERS increased in FY 2023 to \$4.7 billion compared to FY 2022 of \$4.5 billion for a 4.3% increase.

Management's Discussion and Analysis (Unaudited)

June 30, 2023

- The fiduciary net position as a percentage of total pension liability decreased to 61.9% from 62.8% as of June 30, 2023 and June 30, 2022, respectively, while the funded ratio on an actuarial basis increased to 62.2% from 61.2%, respectively. The main difference between the two methods is under GASB Statement No. 67 for financial reporting purposes, the fiduciary net position is based only on the market value of assets while under actuarial value for the net assets for funding purposes allows for a four-year market smoothing of assets of net appreciation.
- Contributions from members and employers increased by a total of \$48.8 million during FY 2023, or 3.2% from FY 2022. The increase is primarily an increase in covered payroll from member pay increases, more active members being required to contribute, and new employees contributing at higher contribution rates. The historical summary of legislation impacting the ERS actuarial valuations is discussed in more detail in the "Summary of Plan Changes" in the Actuarial Section of the ACFR.
- Total benefit payments increased by \$56.6 million, or 3.3% in FY 2023 from FY 2022. Pension benefits continue to increase due to 1.8% more retirees and beneficiaries (54,973 in 2023 compared to 53,990 in 2022), an increase in the average pension benefit for new retirees, and the annual 2.5% postretirement increase paid to most retirees.
- Administrative expenses increased by \$1.0 million to \$18.5 million in FY 2023 from \$17.5 million in FY 2022. The increase in administrative expenses is primarily the result of an increase in pay raises and fringe benefit assessment costs and to a lesser extent an increase in legal and computer related (equipment, cloud and maintenance) costs. These costs were offset by a decrease in depreciation and other miscellaneous costs. Administrative expenses for all years were within the ERS' budgeted amounts.

Management's Discussion and Analysis (Unaudited)

June 30, 2023

Analysis of Fiduciary Net Position

Summary of Fiduciary Net PositionJune 30, 2023 and 2022

June 30, 2023 and 2022 (Dollars in millions)

		2023	2022	FY 2023 % Change
Assets:	-			
Cash and cash equivalents and short-term				
investments	\$	497.9	\$ 1,008.3	(50.6) %
Receivables		199.9	155.9	28.2 %
Investments		21,959.0	20,821.5	5.5 %
Invested securities lending collateral		491.5	735.9	(33.2) %
Equipment, net		4.0	 5.0	(20.0) %
Total assets		23,152.3	 22,726.6	1.9 %
Liabilities:				
Securities lending collateral		491.5	735.9	(33.2) %
Investment accounts and other payables		235.4	 135.9	73.2 %
Total liabilities	,	726.9	 871.8	(16.6) %
Fiduciary net position restricted for pensions	\$	22,425.4	\$ 21,854.8	2.6 %

Management's Discussion and Analysis (Unaudited)

June 30, 2023

Summary of Changes in Fiduciary Net Position

Years Ended June 30, 2023 and 2022 (Dollars in millions)

			FY 2023	
	2023	2022	% Change	_
Additions:				
Contributions	\$ 1,584.0	\$ 1,535.2	3.2	%
Net investment income	 826.9	 164.6	402.4	%
Total additions, net	 2,410.9	 1,699.8	41.8	%
Deductions:				
Benefit payments	1,795.4	1,738.8	3.3	%
Refunds of member contributions	26.4	24.5	7.8	%
Administrative expenses	 18.5	 17.5	5.7	%
Total deductions	 1,840.3	 1,780.8	3.3	%
Increase (decrease) in fiduciary net position restricted for pensions	570.6	(81.0)	804.4	%
Fiduciary net position restricted for pensions:				
Beginning	 21,854.8	 21,935.8		
Ending	\$ 22,425.4	\$ 21,854.8		

Investments, Investment Income, and Investment Expense

The ERS is a long-term investor and manages its pension assets with long-term objectives in mind. A primary element of the ERS' investment philosophy is diversification among various asset classes. The ERS makes estimates of long-term market returns and establishes an asset allocation strategy taking into account the risks associated with each asset class.

Investments for the risk-based allocation policy approved in FY 2015, as revised, based on the type of security for financial reporting are listed below. In 2016, the ERS began using this framework with four major asset classes that shifts the portfolio asset allocation from a return-based process to a risk-based process that makes use of strategic/functional classes that in-turn utilize underlying asset classes and strategies. Each of these classes is designed to achieve a certain goal (e.g., Real Return class) and/or be exposed to a specific set of macroeconomic risks that are common among the different strategy types and/or assets within the class (e.g., Broad Growth class). As a result of this structure, each strategic class is expected to be exposed to a set of major and minor macroeconomic risks. Following a 2019 Asset Liability Study that was completed in FY 2020, the Board adopted a new long-term strategic allocation policy. As part of the long-term strategic policy, the portfolio transitioned to two major asset classes (rather than four). Prevailing classes and sub-classes were remapped to the two major strategic classes

Management's Discussion and Analysis (Unaudited)

June 30, 2023

where applicable. During FY 2023, the ERS continued utilizing its long-term strategic allocation plan that was consistent with the FY 2022 allocation regarding asset allocation, investment types, etc. A subsequent asset liability study was completed in FY 2023 that will impact the strategic allocation in future fiscal years. Information about ERS' investment program is available on the ERS website at https://ers.ehawaii.gov/investments/program.

The asset distribution of the ERS' investment securities for the pension trust, excluding pending trade settlements and securities lending collateral, at June 30, 2023 and 2022 are presented below at fair value. Fluctuations will occur based on the trading activity and timing of the settlements. Investment balances between the asset classes will change over time based on market sectors' performance and our rebalancing efforts to maintain asset allocation targets. Please refer to the Investment Section of the ACFR for a discussion on the risk-based methodology, asset allocation plan targets, and investments by investment strategy.

Asset Class
June 30, 2023 and 2022
(Dollars in millions)

	2023		%		2022	%
Cash and cash equivalents and						
short term investments	\$	497.9	2.2%	\$	1,008.3	4.6%
Equity securities		5,288.9	23.6%		5,360.4	24.6%
Fixed income securities		3,525.7	15.7%		3,263.0	14.9%
Real assets investments		3,774.8	16.8%		3,372.2	15.4%
Alternative investments		9,369.6	41.7%		8,825.9	40.5%
Total investment assets	\$	22,456.9	100.0%	\$	21,829.8	100.0%

The rate of return (gross of fees time-weighted rate of returns) on the ERS investment portfolio was 2.4% from the challenging investment markets in FY 2023, underperforming the overall ERS investment target of 7.0%. The Broad Growth asset class returned 3.6% during the fiscal year while the Diversifying Strategies asset class had a negative return of -0.6%. This compares to an overall return on the portfolio of 4.0% in FY 2022. Total net investment income increased to \$826.9 million in FY 2023 from \$164.6 million in FY 2022.

The ERS had positive returns of 3.6% in the Broad Growth asset class including positive returns in public growth (+10.6%), offset by negative returns in private growth (-3.8%) and real assets (-1.1%). During FY 2023 the Diversifying Strategies asset class returned a loss of -0.6% lead by positive returns in liquid diversifying (+4.4%), offset by negative returns in illiquid diversifying (-1.8%) and liquid defensive (-5.5%) segments. A summary of investment returns (by sub-component of the risk-based allocation) is included within the *Report on Investment Activity by Investment Consultant* that is located in the Investment Section of the ACFR.

Management's Discussion and Analysis (Unaudited)

June 30, 2023

The ERS participates in a securities lending program through its global custodian as a way to earn incremental income to enhance the investment portfolio yield.

Investment expenses includes investment management fees paid to external investment advisor firms that oversee the ERS' investment portfolio.

Total investment management fees earned by external investment advisors decreased slightly in FY 2023 from FY 2022 due to the elimination of incentive investment fees that were accrued in previous fiscal years with the reduction of cumulative excess earnings on certain private market investments above the corresponding investment benchmark for those investments. Investment advisor fees include incentive fees for superior investment returns by the manager above their corresponding benchmark, while maintaining an acceptable level of investment risk. Incentive fees for certain investment managers are recognized on the accrual basis of accounting for the change in real estate values during the year, and are only paid upon the sale of the asset if the asset has "excess earnings" when the real estate asset is actually sold. The ERS requires external managers to provide the ERS with a "most favored nations" contract clause that guarantees the ERS with the lowest management fees the managers offer their clients for investment accounts with similar investment mandates and similar account size.

Contributions

Contributions from employers and employees totaled \$1,584.0 million and \$1,535.2 million in FY 2023 and FY 2022, respectively. During FY 2023, total contributions increased by \$48.8 million, or 3.2%, primarily from pay raises that resulted in an increase in covered payroll that contributions are assessed on.

Pension Plan Benefits and Expenses

Pension benefit payments continue to be the primary deduction of the ERS with payments increasing to \$1,795.4 in FY 2023 from \$1,738.8 in FY 2022. The pension benefits increase is attributed to the continued net increase in the number of retirees being paid, higher pension benefits for recent retirees, and the annual postretirement increase for ERS' retirees.

Refunds to terminating hybrid and contributory class members increased to \$26.4 million in FY 2023 from \$24.5 million in FY 2022.

Administrative expenses increased to \$18.5 million in FY 2023 from \$17.5 million in FY 2022 due primarily from pay raises and related fringe benefit assessment costs and to a lesser extent the increase in legal and computer related (cloud, equipment, and repairs) costs, which was partially offset by a decrease in depreciation expense.

Pension Plan Changes

There was no significant legislation passed in 2023 and 2022 that affects pension plan provisions. Pension plan changes, including legislative and the Board's actions, are summarized in the Introductory Section and Actuarial Section of the ACFR.

Management's Discussion and Analysis (Unaudited)

June 30, 2023

Actuarial Valuations and Measurement of Net Pension Liability

The funding status decreased during FY 2023 on the fiduciary net position (market asset basis) to 61.9% as of June 30, 2023 from 62.8% as of June 30, 2022, as a result of lower than expected investment returns.

During FY 2023, the ERS' investment portfolio earned 2.4% based on the market value of assets. This compares to rate of return for the actuarial value of 3.8% in FY 2023, which is different than the market return calculation due to the smoothing methodology used in the determination of the actuarial value of assets.

The total pension liability for fiscal year ended June 30, 2023 is based on the actuarial valuation performed as of June 30, 2023 and a measurement date of June 30, 2023.

Per the valuation as of June 30, 2023, the ERS' total pension liability was \$36.2 billion, covered payroll was \$4.7 billion and the ERS' fiduciary net position was \$22.4 billion, resulting in a net pension liability of \$13.8 billion. The ERS' fiduciary net position as a percentage of total pension liability was 61.9% and 62.8% as of June 30, 2023 and 2022, resulting in the net pension liability as a percentage of covered payrolls of 295.2% and 289.2%, respectively. The increase in pension liabilities is the result of overall payroll growth and individual salary increases.

Based on the results of the actuarial valuation as of June 30, 2023, including existing statutory employer contribution rates, the ERS actuary determined that the funding period for paying off the unfunded actuarial accrued liability (UAAL) of the ERS Pension Trust decreased to 23 years from 24 years as of June 30, 2022. Because this period is less than the 30 years, the objectives set in Hawaii Revised Statutes (HRS) are currently being realized. HRS§88-122(e)(1) state that the employer contribution rates are subject to adjustment when the funding period is in excess of 30 years.

The actuarial assumptions and changes to the assumptions are discussed in Note F, Pension Liability, and in the Required Supplementary Information – Unaudited section. The Actuarial Section in the ACFR contains more information on changes to the actuarial assumptions.

Requests for Information

This financial report is designed to provide a general overview of the ERS' finances. For questions concerning any information in this report or for additional information, contact the Employees' Retirement System of the State of Hawaii, 201 Merchant Street, Suite 1400, Honolulu, Hawaii 96813.

Statement of Fiduciary Net Position

June 30, 2023

Assets:	
Cash and cash equivalents and short-term investments:	
Cash and cash equivalents	\$ 92,041,414
Short-term investments	405,865,095
	497,906,509
Receivables:	
Employer and member contributions	151,378,373
Accrued investment income	28,989,788
Investment sales proceeds	15,982,313
Accounts receivable and other	3,589,353
	199,939,827
Investments, at fair value:	
Equity securities	5,288,938,937
Fixed income securities	3,525,645,635
Real assets investments	3,774,821,802
Alternative investments	9,369,579,364
	21,958,985,738
Other assets:	
Invested securities lending collateral	491,507,300
Equipment, at cost, net of depreciation	4,010,465
	495,517,765
Total assets	23,152,349,839
Liabilities:	
Accounts and other payables	202,903,305
Payable for securities purchased	32,554,259
Securities lending collateral	491,507,300
Total liabilities	726,964,864
Fiduciary net position restricted for pensions	\$ 22,425,384,975

Statement of Changes in Fiduciary Net Position

Year Ended June 30, 2023

Additions:	
Contributions:	
Employers contributions	\$ 1,274,221,056
Members contributions	309,761,053
Total contributions	1,583,982,109
Investment income:	
From investing activities:	
Net appreciation in fair value of investments	473,600,753
Interest on fixed income securities	165,069,675
Alternative investment income	161,545,169
Income on real assets investments	84,105,658
Dividends on equity securities	81,301,818
Interest on short-term investments	11,021,420
Miscellaneous	918,073
	977,562,566
Less investment expenses	153,900,913
Net investment income from investing activities	823,661,653
From securities lending activities:	
Securities lending income	27,760,929
Less: securities lending expenses, net	24,519,707
Net investment income from securities lending	3,241,222
Total net investment income	826,902,875
Total additions, net	2,410,884,984
Deductions:	
Benefit payments	1,795,410,787
Refunds of member contributions	26,353,782
Administrative expenses	18,549,472
Total deductions	1,840,314,041
Net increase in fiduciary net position	570,570,943
Fiduciary net position restricted for pensions:	
Beginning of year	21,854,814,032
End of year	\$ 22,425,384,975

Notes to Financial Statements

June 30, 2023

Note A – Description of the ERS

1. General

The Employees' Retirement System of the State of Hawaii (the ERS) began operations on January 1, 1926, having been established by the Territorial Legislature in the preceding year. The provisions of the ERS are contained in Chapter 88 of the Hawaii Revised Statutes (HRS) and applicable provisions of the federal Internal Revenue Code. The ERS is a cost-sharing, multiple-employer public employee retirement system established as a defined benefit pension plan to administer a pension benefits program for all State and county employees, including teachers, professors, police officers, firefighters, correction officers, judges, and elected officials.

The ERS is a qualified defined-benefit pension plan under Section 401(a) of the Internal Revenue Code. Since January 1, 1988, member contributions have been tax deferred under Section 414(h)(2) of the Internal Revenue Code, and Chapter 88 of the HRS (Chapter 88, HRS) mandates that employers pick up the employee contributions. These contributions are classified as member contributions in the financial statements. As a public entity, the ERS is not required to file a federal income tax return with the Internal Revenue Service. As a defined-benefit pension plan, the ERS is required to withhold federal income tax from member and benefit recipient payments in accordance with the Internal Revenue Code.

The ERS Pension Trust is comprised of three pension classes for membership purposes and considered to be a single plan for accounting purposes because all assets of the ERS may legally be used to pay the benefits of any of the ERS members or beneficiaries, as defined by the terms of the ERS. The ERS provides retirement, survivor, and disability benefits for three membership classes known as the contributory, hybrid, and noncontributory members.

Generally, all full-time employees of State and counties of Hawaii are required to be members of the ERS. Some positions of the State and counties of Hawaii are not eligible for ERS membership and may be covered by another separate retirement program. Membership of the plan and the benefits provided are based on the individual's employment group and ERS membership date. A member may belong to only one class based on their latest employment. A member may change classes in certain situations due to a change in their employment date or job classification. If a member earns service in different classes or benefit structures, the member's retirement benefit is bifurcated based on the applicable membership service earned (such as service credits and benefit multiplier percentage of such service).

The two major employment groups applicable to employer and member contribution rates, vesting requirements, and benefit provisions are (a) Police and Firefighters and (b) All Other Employees. There are four major benefit structures for contributory class members based on employment group and membership date while there are two benefit structures for hybrid class members based on their membership date as discussed below. The noncontributory class has one benefit structure.

Notes to Financial Statements

June 30, 2023

Employer, pensioner, and employee membership data as of March 31, 2023 are as follows:

Employers: State	1
County	4
Total employers	
10th employers	
Pensioners and beneficiaries currently receiving benefits:	
Pensioners currently receiving benefits: Police and firefighters	4,280
All other employees	45,412
Total pensioners	49,692
Beneficiaries currently receiving benefits:	49,092
Police and firefighters	407
All other employees	4,874
Total beneficiaries	5,281
Total pensioners and beneficiaries	
currently receiving benefits	54,973
Terminated vested members entitled to benefits but	
not yet receiving benefits: Police and firefighters	228
All other employees	8,769
1 7	
Total terminated vested members	8,997
Inactive members:	
Police and firefighters	1,001
All other employees	25,899
Total inactive members	26,900
Total terminated vested and inactive members	35,897
Active members:	
Vested:	
Police and firefighters	3,006
All other employees	30,722
Total vested members	33,728
Nonvested:	
Police and firefighters	1,826
All other employees	28,689
Total nonvested members	30,515
Total active members	64,243
rotal active members	
Total membership	155,113

Notes to Financial Statements

June 30, 2023

2. The Financial Reporting Entity

As required by accounting principles generally accepted in the United States of America (GAAP), these financial statements present the ERS (the primary government) as a separate reporting entity from the State of Hawaii (the State). The ERS is not part of the State's financial reporting entity because it is a separate legal entity that is fiscally independent of the State. The ERS was established by Chapter 88, HRS and is governed by a Board of Trustees (the Board) as discussed below.

The Board administers the ERS on behalf of public employees of both the State and county governments. Except for limited administrative functions, the State does not have the power to supervise or control the Board in the exercise of its functions, duties, and powers. The Board consists of eight members. The State Director of Finance is a statutory member of the Board. Four members of the Board are elected by members and retirants of the ERS and the other three members of the Board are appointed by the Governor. Decisions are made with the concurring vote of five members of the Board. The Board appoints the Executive Director and Chief Investment Officer and engages actuarial and other services required to transact the business of the ERS.

3. Class Descriptions and Funding Policy

Members of the ERS are contributory, hybrid, or noncontributory members. All assets of the ERS (in the Pension Trust) may be used to pay benefits to any member of the ERS. Contribution rates are determined by state law as a percentage-of-payroll.

The statutory employer contribution rate includes the normal cost and accrued liability contribution and is determined separately for two groups of employees: (a) Police and Firefighters and (b) All Other Employees. Employer contribution rates are subject to adjustment in certain situations based on the Pension Trust's funded status or actuarial investigations. The ERS performs an actuarial investigation of the experience at least once every three years, plus an annual actuarial valuation of the assets and liabilities of the funds of the Pension Trust. The Board adopts mortality, service, and other assumptions, factors, and tables as deemed appropriate and necessary, based on the actuarial investigation and actuary recommendation. Generally, actuarial assumptions and methods were adopted by the Board on August 8, 2022 as recommended by Gabriel, Roeder, Smith and Company (GRS) (from the experience study as of June 30, 2021, with most of the assumptions based on the period from July 1, 2016, through June 30, 2021) while the investment return assumption was adopted beginning with the 2016 valuation. See the Actuarial Section in the separately issued ERS Annual Comprehensive Financial Report (the ACFR) for all actuarial assumptions used.

Notes to Financial Statements

June 30, 2023

Effective July 1, 2008, the statutory employer contribution rate for employees in the Police and Firefighters category increased from 15.75% to 19.70%, and the rate for employees in the All Other category increased from 13.75% to 15.00%. Per legislation passed in 2011, the rate for Police and Firefighters increased to 22.00% on July 1, 2012; 23.00% on July 1, 2013; 24.00% on July 1, 2014; and 25.00% on July 1, 2015, and the rate for All Other Employees increased to 15.50% effective July 1, 2012; 16.00% effective July 1, 2013; 16.50% effective July 1, 2014; and 17.00% effective July 1, 2015. These employer contribution rates are applied to the total covered payroll in each respective category to determine the required employer contributions. Administration of the Pension Trust is financed through contributions from the employers and employees (if applicable) and investment earnings.

Per Act 17 (SLH 2017), employer contribution rates from the State and counties are expected to increase pursuant to a phased-in contribution rate increase over four years beginning July 1, 2017. The rate for Police and Firefighters increased to 28.00% on July 1, 2017; 31.00% on July 1, 2018; 36.00% on July 1, 2019; and 41.00% on July 1, 2020; and the rate for All Other Employees increased to 18.00% on July 1, 2017; 19.00% on July 1, 2018; 22.00% on July 1, 2019; and 24.00% on July 1, 2020.

Effective July 1, 2012, employers may be required to make additional employer contributions to the ERS in certain situations. This legislation requires employers to pay additional contributions if a retiring employee, who was first employed prior to July 1, 2012 and who was last employed by the employer, has significant non-base pay increases included in their average final compensation. The additional contribution is equal to the actuarial present value of the additional benefits earned due to the "excessive" non-base pay increases.

Until June 30, 1984, all employees were required to be contributory members. Employees covered by Social Security on June 30, 1984 were given the option of changing to a noncontributory member or remain a contributory member. All new employees hired after June 30, 1984 and before July 1, 2006, who are covered by Social Security, were generally required to be noncontributory members. Qualified employees that were contributory or noncontributory members were given the option to change to a hybrid class benefits structure effective July 1, 2006, or remain in their existing class. Starting July 1, 2006, all new employees covered by Social Security are required to be hybrid members, unless they are required to be contributory members. Most employees not covered by Social Security (primarily Police and Firefighters employees) are required to be contributory members.

Notes to Financial Statements

June 30, 2023

The three membership classes provide a monthly retirement allowance (maximum allowance) equal to the benefit multiplier % (generally 1.25% or 2.00%), multiplied by the average final compensation (the AFC), multiplied by years of credited service. The benefit multiplier decreased by 0.25% for new hybrid and contributory members hired after June 30, 2012. If a member earns service in a different benefit structure, the member's retirement benefit is bifurcated based on the applicable membership service earned (such as service credits and benefit multiplier percentage of such service). In lieu of the maximum allowance, the member may elect to receive an actuarially equivalent alternate retirement option with a reduced lifetime allowance (such as survivor benefit).

The AFC is the average salary earned during the five highest paid years of service, including the payment of salary in lieu of vacation, or three highest paid years of service, excluding the payment of salary in lieu of vacation, if the employee became a member prior to January 1, 1971. The AFC for members hired on or after this date, and before July 1, 2012, is based on the three highest paid years of service excluding the payment of salary in lieu of vacation. For new members hired after June 30, 2012, the AFC is based on the five highest paid years of service excluding the payment of salary in lieu of vacation.

For postretirement increases, every retiree's original retirement allowance is increased by 2.50% on each July 1 following the calendar year of retirement, if the retiree became an ERS member prior to July 1, 2012. This cumulative benefit is not compounded and increases each year by 2.50% of the original retirement allowance without a ceiling (2.50% of the original retirement allowance the first year, 5.00% the second year, 7.50% the third year, etc.). For new members hired after June 30, 2012, the postretirement annuity increase was decreased to 1.50% per year of the original retirement allowance without a ceiling (1.50% of the original retirement allowance the first year, 3.00% the second year, 4.50% the third year, etc.).

The following summarizes the provisions relevant to the largest employee groups of the respective membership class. Retirement benefits for certain groups, such as sewer workers, judges, and elected officials, vary from general employees.

All contributions, benefits, and eligibility requirements are governed by Chapter 88, HRS. For a more detailed summary of benefits for employees and a description of special provisions to groups of employees, refer to the Summary of Retirement Benefit Plan Provisions contained in the Introductory Section of the ACFR. All of the statutory member contributions discussed in this section are classified as "member contributions" with the adoption of GASB Statement No. 82, Pension Issues – an amendment of GASB Statements No. 67, No. 68, and No. 73.

Notes to Financial Statements

June 30, 2023

Contributory

Police officers, firefighters, and certain other members that are not covered by Social Security first hired prior to July 1, 2012 contribute 12.20% of their salary and receive a retirement benefit using the benefit multiplier of 2.50% for qualified service, up to a maximum of 80% of the AFC. These members may retire at age 55 with 5 years of credited service or at any age with 25 years of credited service, provided the last 5 years of credited service is any of the qualified occupations.

Police officers, firefighters and certain other members that are not covered by Social Security first hired after June 30, 2012 contribute 14.20% of their salary and receive a retirement benefit using the benefit multiplier of 2.25% for qualified service, up to a maximum of 80% of the AFC. These members may retire at age 60 with 10 years of credited service or at age 55 with 25 years of credited service, provided the last 5 years of credited service is any of the qualified occupations.

All other employees hired prior to July 1, 2012 are required to contribute 7.80% of their salary and are fully vested for benefits upon receiving 5 years of credited service. Contributory members may retire with full benefits at age 55 and 5 years of credited service. They may take early retirement at any age with at least 25 years of credited service and receive benefits reduced 5.00% per year under age 55 plus 4.00% per year under age 50. The benefit multiplier is 2.00% for employees covered by Social Security.

All other employees in the contributory class hired after June 30, 2012 are required to contribute 9.80% of their salary and are fully vested for benefits upon receiving 10 years of credited service. These members may retire with full benefits at age 60 and 10 years of credited service. Members may take early retirement at age 55 with 25 years of credited service and receive benefits reduced by 5.00% per year under age 60. The benefit multiplier is 1.75% for employees covered by Social Security.

Hybrid

All other employees hired before July 1, 2012 are required to contribute 6.00% of their salary and are fully vested for benefits upon receiving 5 years of credited service. Employees may retire with full benefits at age 62 and 5 years of credited service or at age 55 and 30 years of credited service. Early retirement benefits are available at age 55 and 20 years of credited service with benefits reduced by 5.00% per year under age 62. The benefit multiplier used to calculate retirement benefits is 2.00%. Hybrid members are covered by Social Security.

Notes to Financial Statements

June 30, 2023

All other employees hired after June 30, 2012 are required to contribute 8.00% of their salary and are fully vested for benefits upon receiving 10 years of credited service. Employees may retire with full benefits at age 65 and 10 years of credited service or at age 60 and 30 years of credited service. Early retirement is available at age 55 and 20 years of credited service with benefits reduced 5.00% per year under age 65. The benefit multiplier used to calculate retirement benefits is 1.75%. Hybrid members are covered by Social Security.

Noncontributory

All other employees are fully vested upon receiving 10 years of credited service and are covered by Social Security. The employer is required to make all contributions for these members. Employees may retire with full benefits at age 62 years and 10 years of credited service or age 55 and 30 years of credited service. Early retirement is available at age 55 years and 20 years of credited service with benefits reduced by 6.00% per year under age 62. The benefit multiplier used to calculate retirement benefits is 1.25%.

Ordinary disability retirement benefits require a minimum of 10 years of service, whereas service-connected disability resulting from a job-related accident does not have any service requirement. There is no age requirement to qualify for disability benefits.

Ordinary death benefits for contributory and noncontributory members require at least one year and 10 years of service, respectively. Ordinary death benefits for hybrid members require five years of service if hired prior to July 1, 2012 or 10 years of service if hired after June 30, 2012. There is no service requirement to qualify for service-connected death benefits.

4. The ERS as Employer

As an employer, the ERS participates in its pension benefits program, through the State. The ERS provides benefits for all of its full-time employees as contributory, hybrid, or noncontributory membership. Contributions are calculated as part of the State's total contribution requirements and are reimbursed to the State's General Fund as part of the fringe benefit rate on the ERS' employees' actual salaries.

5. Other Post Employment Benefits (OPEB)

In addition to the retirement benefits provided by the ERS Pension Trust, the participating employers, pursuant to Chapter 87A, HRS, provide certain healthcare and life insurance benefits for State and county qualified employees and retirees. The Hawaii Employer-Union Health Benefits Trust Fund (the EUTF) was established on July 1, 2003 to design, provide, and administer health benefits plans and a group life insurance benefits program for State and county employees and retirees.

Notes to Financial Statements

June 30, 2023

Under Section 87A-33 of the HRS, the participating employers pay the EUTF a base monthly contribution for the health benefits plans of certain retired employees, including those who were hired before July 1, 1996 and retired after June 30, 1984, with 10 or more years of credited service.

Under Section 87A-34 of the HRS, the participating employers pay the EUTF one-half of the base monthly contribution for the health benefits plans of retired employees who were hired before June 30, 1996, and retired after June 30, 1984, with fewer than 10 years of credited service.

Under Sections 87A-35 and 87A-33(a)(6) of the HRS, the participating employers pay the EUTF for the health benefits plans of retired employees who were hired after June 30, 1996 but before July 1, 2001: (a) one-half of the base monthly contribution if the employee retired with between 10 and 15 years of credited service; (b) 75% of the base monthly contribution if the employee retired with between 15 and 25 years of credited service; and (c) 100% of the base monthly contribution if the employee retired with 25 or more years of credited service.

Under Section 87A-36 of the HRS, the participating employers pay the EUTF for the health benefits plans of retired employees who were hired after June 30, 2001: (a) one-half of the base monthly contribution for a self-only plan if the employee retired with between 10 and 15 years of credited service; (b) 75% of the base monthly contribution for a self-only plan if the employee retired with between 15 and 25 years of credited service; and (c) 100% of the base monthly contribution for a self-only plan if the employee retired with 25 or more years of credited service.

The net assets of the EUTF are not included in the ERS Pension Trust net assets. The EUTF issues a financial report that includes financial statements and required supplementary information.

Note B – Summary of Significant Accounting Policies

A summary of the significant accounting policies consistently applied in the preparation of the accompanying financial statements follows:

1. Basis of Accounting

Fiduciary funds are used to account for assets held by the ERS in a trustee capacity or as an agent for other governments, and/or other funds. The fiduciary fund type used by the ERS is a Pension Trust Fund. The fiduciary fund is considered a separate fiscal and accounting entity with a self-balancing set of accounts that comprise its assets, liabilities, equity, revenues and expenditures, or expenses, as appropriate. The accounting and reporting treatment applied to a fund is determined by its measurement focus. The Pension Trust Fund is accounted for on a flow of economic resources measurement focus.

Notes to Financial Statements

June 30, 2023

The financial statements are prepared in conformity with GAAP using the accrual basis of accounting. Administrative expenses are financed exclusively with investment income.

2. Cash Equivalents

All highly liquid investments with an original maturity of three months or less when purchased are considered to be cash equivalents.

3. Investments

The ERS' investment policy, including the legal authority, is discussed in Note E.1, Investment Policy. Investments are reported at fair value. Refer to Note E.3, Investments, for the ERS' fair value disclosures.

Purchases and sales of securities are recorded on a trade-date basis. Interest income is recorded on the accrual basis. Dividend income is recorded on the ex-dividend date.

Realized and unrealized gains and losses are recorded in the accompanying financial statements based on the difference between the fair value of assets at the beginning of the fiscal year, or at the time of purchase for assets purchased during the fiscal year, and the related fair value on the day investments are sold with respect to realized gains and losses, or on the last day of the fiscal year for unrealized gains and losses.

4. Revenue Recognition - Contributions

Contributions from employers and members are recognized in the period in which the contributions are legally due.

5. Payment of Benefits

Benefits and refunds are recognized when due and payable in accordance with the terms of the Pension Trust.

Notes to Financial Statements

June 30, 2023

6. Securities Lending

The ERS records collateral received under securities lending agreements where the ERS has the ability to spend, pledge, or sell the collateral without borrower default. Liabilities resulting from these transactions are also recorded. Additionally, costs associated with securities transactions, broker commissions paid, and lending agent management fees are reported as investment expenses in the accompanying financial statements. The statement of fiduciary net position does not include detailed holdings of securities lending collateral by investment classification.

7. Interest and Earnings Allocation

Pursuant to Sections 88-21 and 88-107 of the HRS, the Board shall annually allocate interest and other earnings of the Pension Trust Fund, as follows:

- a. *Annuity Savings Reserves* Fixed at 4.50% regular interest rate for employees hired before July 1, 2011 and 2.00% regular interest rate for employees hired after June 30, 2011.
- b. *Expense Reserves* To be credited with all money to pay the administrative expenses of the ERS.
- c. Pension Accumulation Reserves To be credited with any remaining investment earnings.

8. Risk Management

The ERS reports liabilities, as discussed in Note G, Risk Management, related to certain types of losses (including torts, theft of, damage to, or destruction of assets, errors or omissions, natural disasters, and injuries to employees) when it is probable that the losses have occurred and the amount of those losses can be reasonably estimated.

9. Use of Estimates

In preparing financial statements in conformity with GAAP, management is required to make estimates and assumptions that affect certain reported amounts and disclosures. Actual results could differ from those estimates.

Investments in limited partnerships and other alternative investments are illiquid and the underlying assets are generally not publicly traded companies. Because of the inherent uncertainty in valuing privately held securities, the fair value may differ from the values that would have been used had a ready market for such securities existed, and the difference can be material. Accordingly, the realized value received upon the sale of the asset may differ from the recorded fair value.

Notes to Financial Statements

June 30, 2023

The total pension liability is based on calculations that incorporate various actuarial and other assumptions, including discount rate, mortality, investment rate of return, inflation and payroll growth. The actuarial assumptions were based on the results of an experience study as of June 30, 2021, with most of the assumptions based on the period from July 1, 2016, through June 30, 2021.

10. Recently Issued Accounting Policies

GASB Statement No. 96

In May 2020, the GASB issued Statement No. 96, Subscription-Based Information Technology Arrangements. This statement provides guidance on the accounting and financial reporting for subscription-based information technology arrangements (SBITAs) for government end users. This statement (1) defines a SBITA; (2) establishes that a SBITA results in a right-to-use subscription asset - an intangible asset - and a corresponding subscription liability; (3) provides the capitalization criteria for outlays other than subscription payments, including implementation costs of a SBITA; and (4) requires note disclosures regarding a SBITA. Implementation of this statement, effective July 1, 2022, did not have a significant effect on the ERS' financial statements for the year ended June 30, 2023.

GASB Statement No. 99

The GASB issued Statement No. 99, *Omnibus*. The primary objectives of this statement are to enhance comparability in accounting and financial reporting and to improve the consistency of authoritative literature by addressing practice issues that have been identified during implementation and application of certain GASB statements. Certain requirements of this statement were effective immediately while other requirements are effective for fiscal years beginning after June 15, 2022 and June 15, 2023, respectively. The requirements that were effective immediately and beginning after June 15, 2022 did not have a material effect on the ERS' financial statements. For the remaining requirements, the ERS is currently evaluating the impact that this statement will have on its financial statements.

GASB Statement No. 100

The GASB issued Statement No. 100, Accounting Changes and Error Corrections – an amendment of GASB Statement No. 62. The primary objective of this statement is to enhance accounting and financial reporting requirements for accounting changes and error corrections to provide more understandable, reliable, relevant, consistent, and comparable information for making decisions or assessing accountability. The requirements of this statement are effective for reporting periods beginning after June 15, 2023. The ERS is currently evaluating the impact that this statement will have on its financial statements.

Notes to Financial Statements

June 30, 2023

GASB Statement No. 101

The GASB issued Statement No. 101, *Compensated Absences*. The primary objective of this statement is to better meet the information needs of financial statement users by updating the recognition and measurement guidance for compensated absences. The requirements of this statement are effective for reporting periods beginning after December 15, 2023. The ERS is currently evaluating the impact that this statement will have on its financial statements.

Note C – Description of Reserves

Section 88-109 of the HRS requires the establishment and maintenance of specific reserves within the ERS. The reserves in the Pension Trust Fund and their purposes are described hereunder:

1. Pension Accumulation Reserves

To accumulate contributions made by the State and counties (except member contributions "picked up" as employer contributions pursuant to IRC Section 414(h)(2)), transfers of retired members' contributions plus related interest income from the Annuity Savings Reserves and income from investments. All pension benefits, including the pensioners' bonus, are paid through this reserve.

2. Annuity Savings Reserves

To accumulate members' contributions (including member contributions "picked up" as employer contributions pursuant to IRC Section 414(h)(2)) and related interest income. Upon a member's retirement, the accumulated contributions and related interest income are transferred to the Pension Accumulation Reserves or refunded to the member upon termination.

3. Expense Reserves

To pay all the expenses necessary in connection with the administration and operation of the ERS, the Board estimates the amount of money necessary to be paid into the expense reserve for the ensuing biennium to provide for the expense of operation of the ERS, and pays that amount into the expense account from the investment earnings of the ERS, subject to review by the legislature and approval by the Governor.

Notes to Financial Statements

June 30, 2023

Fiduciary net position restricted for pensions as of June 30, 2023 are as follows:

Pension accumulation reserves	\$	18,685,002,497
Annuity savings reserves		3,729,248,623
Expense reserves		11,133,855
Total fiduciary net position restricted for pensions	\$	22,425,384,975

Note D - Contributions

The ERS' funding policy provides for periodic employer contributions expressed as a percentage of annual covered payrolls. The funding method used to calculate the total employer contribution required is the entry age normal actuarial cost method. Employer contributions are governed by Chapter 88, HRS. The actuarially determined contribution rates may differ from the statutory contribution rates.

Employer rates are set by statute based on the recommendation of the ERS actuary resulting from an experience study conducted every three years. Employer contribution rates are a fixed percentage of compensation, including the normal cost plus amounts required to pay for the unfunded actuarial accrued liabilities. See Note A.3, Class Descriptions and Funding Policy, for the effective statutory employer contribution rates.

The employer normal cost is the level percentage of payroll contribution required to pay all benefits. Actuarial gains and losses resulting from differences between actual and assumed experience are reflected in the employer unfunded accrued liability.

Effective July 1, 2012, the last employer is required to make "additional contributions" to the ERS for employees that first became ERS members before July 1, 2012 and retire after June 30, 2012, if the member has "excessive" nonbase pay during the last 10 years of employment. The additional contributions are based on the increased costs of the actuarial equivalent increase in pension benefits the member will be paid in retirement compared to the pension benefits that would be paid if the member did not have excess nonbase pay in their AFC amount.

Member contributions rates are statutorily established in accordance with Chapter 88, HRS, and are discussed in Note A.3, Class Descriptions and Funding Policy. Since 1989, participating employers "pick up" ERS member contributions made by payroll deduction as "employer contributions" for tax purposes under IRC section 414(h)(2). These contributions are classified as member contributions being paid by the member for ERS purposes.

Notes to Financial Statements

June 30, 2023

Note E – Deposits and Investment Disclosures

1. Investment Policy

Investments are governed pursuant to Sections 88-119 and 88-119.5 of the HRS. The Pension Trust Fund may invest in real estate loans and mortgages; preferred and common stocks; government obligations; corporate obligations; certain other debt obligations (such as obligations secured by collateral of certain other authorized securities listed here, obligations issued or guaranteed by certain development banks, and insurance company obligations); real property; alternative investments; and other securities and futures contracts. Investments in the securities lending collateral pool are limited to investment grade, short-term marketable securities.

The investment decisions are further dictated by the Investment Policy Statement, internal investment policies and asset allocation established by the Board. As a long-term investor, the ERS has established through its investment policy that preservation of capital is the primary goal of the ERS. Preservation of capital is to be attained with a consistent, positive return for the fund by diversifying the investment portfolio. The ERS recognizes risk associated with individual securities or asset classes may be reduced through diversification. Investments will be prudent and consistent with the best investment practices, in accordance with the Board's asset allocation strategy, assigned investment mandate, and in compliance with Chapter 88, HRS, as amended.

Use of leverage is restricted to certain asset classes in order to enhance yields of approved investments and/or to facilitate diversification of the portfolio. The use of debt must result in positive leverage where cash flow is in excess of debt service. Plan assets are managed on a total return with the long-term objective of achieving and maintaining a fully funded status basis (when combined with receiving the required employer and member contribution requirements) for the benefits provided through the Pension Trust. As part of the investment policy, the Board reviews the asset allocation annually and should perform a formal asset allocation study at least every three years to verify or amend the targets.

As of June 30, 2023, the ERS was strategically invested in the following classes:

	Strategic Allocation (functional/risk-based classes) 1,2,3				
Broad Growth Diversifying Strategies	65.0% 35.0%				
Total	100.0%				

¹ Uses an expected inflation of 2.6%.

² The strategic allocation is supported by a multitude of underlying sub-asset classes.

³ Actual allocations varied.

Notes to Financial Statements

June 30, 2023

During FY 2023, the Broad Growth strategic asset class includes sub-asset classes or components of Public Growth (Traditional Equity, Stabilized Equity, and Global Credit), Private Growth, and Real Assets (Core Real Estate, Non-Core Real Estate, Other Real Assets, Infrastructure, Timber and Agriculture). The Diversifying Strategies asset class includes Illiquid Diversifying (Idiosyncratic Return Capture, and Insurance Linked), Liquid Defensive (Systematic Trend Following, Defensive Return Capture and Treasury Agency Duration Capture), and Liquid Diversifying (Relative Value Arbitrage and Alternative Return Capture Strategies). The ERS may also hold Opportunities and other investments.

As a result of the formal asset-liability study that began in fiscal year 2019 and was completed in fiscal year 2020, the Board adopted a new long-term strategic allocation policy. As part of this new long-term strategic policy, the portfolio transitioned to two major strategic classes (rather than four). Prevailing classes and sub-classes were remapped to the two major strategic classes where applicable. As planned, the final allocations across the new long-term strategic allocation policy was largely completed by the end of the 2023 fiscal year.

The ERS utilizes two high-level strategic classes (Broad Growth and Diversifying Strategies) for allocating assets and managing risk within the total portfolio. Both of these strategic classes contain sub-components that in-turn utilize asset classes and/or specific strategies for implementation. The Broad Growth class utilizes three sub-components (Public Growth, Private Growth, and Real Assets) which are ultimately invested in public equity, options-based equity, credit fixed income, private real assets, and private equity. The Diversifying Strategies class is designed to be uncorrelated to the Broad Growth class and it utilizes three sub-components (Liquid Defensive, Liquid Diversifying, and Illiquid Diversifying). The Diversifying Strategies class utilizes a multitude of asset classes and strategies, including US treasury and agency bonds, inflation-linked treasury bonds, systematic trend following, alternative risk premia, global macro, insurance-linked securities, relative value strategies, and niche private assets, among others. The ERS may also hold opportunities and other investments if they are determined to be additive to the portfolio's risk/return posture.

Notes to Financial Statements

June 30, 2023

The Board manages the expected return/risk posture of the Plan as part of the formal asset-liability studies that are completed every three-to-five years. Based on the 2019 asset-liability study and updated capital markets assumptions (as of June 30, 2023), the Total Fund was positioned to achieve a long- term return of approximately 7.7% with an annualized volatility of approximately 10.2% over a horizon of 10-20 years. During fiscal year 2023, the Board initiated a new asset-liability study that was completed at the end of fiscal year 2023. The resulting new long-term strategic allocation policy came into effect in January 2024. The ERS will strategically invest in the following strategic asset classes:

Strategic Allocation (risk-based classes)	Strategic Class Weights	Expected Long- Term Geometric Average Return ¹	Expected Volatility
Broad Growth	65.0%	8.7%	15.0%
Diversifying Strategies	35.0%	5.2%	8.1%
Total portfolio	100.0%	7.7%	10.2%

¹ Uses an expected inflation of 2.6%

The implementation plan for the long-term strategic policy established in 2020 is expected to be completed by the end of FY 2023 as follows:

	6/30/2020	7/1/2020	Long-Term 7/1/2021	Long-Term 7/1/2022
Broad Growth	68.0%	72.0%	67.5%	65.0%
Principal Protection	8.0%			
Real Return	8.0%			
Crisis Risk Offset	16.0%			
Diversifying Strategies		28.0%	32.5%	35.0%
Total portfolio	100.0%	100.0%	100.0%	100.0%

Notes to Financial Statements

June 30, 2023

Rate of Return

For the year ended June 30, 2023, the annual money-weighted return on pension plan investments, net of pension plan investment expense, was 3.8%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for changing amounts actually invested.

2. Cash and Cash Equivalents

Cash and cash equivalents include amounts in demand deposits for operations and invested funds held by ERS investment managers. The deposits are held in several financial institutions, including the custodian bank for processing investment transactions. Per State statute, deposits held by banks located in the State, in excess of Federal Deposit Insurance Corporation (FDIC) coverage are guaranteed by securities pledged as collateral by the bank with the State Director of Finance. Uninsured and uncollateralized amounts are primarily cash held by the investment custodian for settlement of investment transactions. Deposits are presented in the basic financial statements at cost, which represent market or fair value.

Custodial credit risk for deposits is the risk that in the event of a bank failure, the ERS' deposits may not be returned to them. The ERS has not adopted a formal policy specific to custodial credit risk. The ERS' policy is to deposit cash in excess of operating requirements in income producing investments to maximize investment income.

At June 30, 2023, the carrying amount of deposits totaled \$92,041,414, and the corresponding bank balance was \$98,401,207, all of which was exposed to custodial credit risk.

Notes to Financial Statements

June 30, 2023

3. Investments

The following table shows the ERS' investments by investment type at fair value as of June 30, 2023:

Short-term investments:	
Short-term bills and notes	\$ 2,948,529
Pooled and others	402,913,935
	, ,
Equity securities:	
Common stocks	4,113,999,427
Equity funds	1,146,328,799
Preferred shares and others	28,610,711
Fixed income securities:	
U.S. Treasury bonds and notes	479,069,599
U.S. government agencies bonds	14,445,750
U.S. government agency mortgage backed	130,213,540
U.S. government-sponsored agency mortgage backed	11,709,818
U.S. corporate bonds	30,768,242
Non-U.S. corporate bonds	252,801
Convertible and others	260,511,761
Fixed income funds	2,595,657,833
Derivative financial instruments:	
Forwards - cash and short-term instruments	2,631
Futures - debt securities	3,016,291
1 utures - debt securities	3,010,271
Real assets investments	3,774,821,802
A 14	0.260.570.264
Alternative investments	 9,369,579,364
Total investments	\$ 22,364,850,833
Short-term investments for securities lending collateral pool	\$ 491,507,300

Notes to Financial Statements

June 30, 2023

Investments are measured at fair value. The ERS categorizes its fair value measurements within the fair value hierarchy established by GAAP. Fair value is a market-based measurement of the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. A fair value measurement assumes that a transaction to sell an asset or transfer a liability takes place in either the principal market or most advantageous market (after taking into account transaction costs and transportation costs).

The fair value hierarchy categorizes the inputs to valuation techniques used to measure fair value into three levels. The hierarchy is based on the valuation inputs used to measure the fair value of the asset and give the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (level 1 measurements) and the lowest priority to unobservable inputs (level 3 measurements).

- Level 1 Unadjusted quoted prices for identical instruments in active markets.
- Level 2 Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs are observable.
- Level 3 Valuations derived from valuation techniques in which significant inputs are unobservable.

If the fair value of an asset or a liability is measured using inputs from more than one level of the fair value hierarchy, the measurement is considered to be based on the lowest priority level input that is significant to the entire measurement. The categorization of investments within the hierarchy is based upon the pricing transparency of the instrument and should not be perceived as the particular investment's risk.

Fair Value Hierarchy Levels

Equity securities classified in level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities based on published market prices, quotations from national security exchanges, and security pricing services as of each month-end closing of the New York Stock Exchange. Short-term investments and fixed income securities classified as Level 1 include U.S. Treasuries. Derivative financial instruments classified in Level 1 include certain options and futures which are valued using prices quoted in active markets for those securities.

Preferred shares, fixed income securities, and invested securities lending collateral classified in Level 2 have non-proprietary information that was readily available to market participants from multiple independent sources, which are known to be actively involved in the market. Pricing inputs may include market quotations, yields, maturities, call features and ratings.

Notes to Financial Statements

June 30, 2023

Preferred shares classified in Level 3 are private investments, thinly traded securities, where input data is sourced from instruments whose values are estimated, out of necessity, using unobservable inputs due to lack of comparable securities in the market place or are valued using discounted cash flows.

Real assets investments – real estate (direct investment) classified as Level 3 are individual properties valued internally by the investment companies at least annually, in accordance with standard industry practice, and are adjusted as frequently as quarterly if material market or operational changes have occurred. Properties are generally valued every one to three years by external third-party appraiser(s). The valuation techniques vary based on investment type and involve a certain degree of expert judgment.

Investments Measured at the Net Asset Value (NAV)

Investments measured at NAV are not required to be categorized in the fair value hierarchy levels. The fair value of investments in certain fixed income funds, equity funds, real assets and alternative investments are based on the investments' net asset value (NAV) per share (or its equivalent).

Short-term investment funds, equity funds (not publicly traded), and fixed income funds (not publicly traded) are reported on their respective net asset value (NAV). Fair value for these investments are based on the ERS' pro rata ownership percentage of the fund reported by the fund manager based on the fair value of the underlying assets that is determined by published market prices, or quotations from national security exchanges. Annual audits of the investments include a review of compliance with the investment company's valuation policies.

Real assets and alternative investments (pooled or commingled funds) are measured at their respective NAV and are generally audited annually. The most significant element of NAV is the fair value of the investment holdings. These holdings are valued by the general partners using valuation assumptions based on both market and property specific inputs, which are not observable and involve a certain degree of expert judgment. The valuation techniques vary based on investment type and involve a certain degree of expert judgment.

Notes to Financial Statements

June 30, 2023

The following table shows the fair value hierarchy by investment type as of June 30, 2023:

	Fair Value Measurement Using						
	Total	Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)			
Investments Measured by Fair Value Level:							
Short-term investments:							
Short-term bills and notes	\$ 2,948,529	\$ 2,948,529	<u> </u>	_\$ -			
Equity securities:							
Common stocks	4,113,999,427	4,113,999,427	-	<u>-</u>			
Preferred shares and other	28,610,711	18,052,160	10,515,711	42,840			
Total equity securities	4,142,610,138	4,132,051,587	10,515,711	42,840			
Fixed income securities:							
U.S. Treasury bonds and notes	479,069,599	479,069,599	-	-			
U.S. government agencies bonds	14,445,750	-	14,445,750	-			
U.S. government agency mortgage backed	130,213,540	-	130,213,540	-			
U.S. government-sponsored agency mortgage backed	11,709,818	-	11,709,818	-			
U.S. corporate bonds	30,768,242	-	30,768,242	-			
Non-U.S. corporate bonds	252,801	-	252,801	-			
Convertible and others	260,511,761		260,511,761				
Total fixed income securities	926,971,511	479,069,599	447,901,912				
Real assets investments - real estate (direct investment)	58,200,000			58,200,000			
Total investments (excluding derivatives),							
measured by fair value level	5,130,730,178	4,614,069,715	458,417,623	58,242,840			
Derivative financial instruments:							
Currency purchases forwards	2,631	-	-	2,631			
Index fixed income futures	3,016,291	3,016,291					
Total derivative financial instruments	3,018,922	3,016,291		2,631			
Total investments measured by	0.5.122.510.100	0.4415.004.004					
fair value level	\$ 5,133,749,100	\$ 4,617,086,006	\$ 458,417,623	\$ 58,245,471			
Invested Securities Lending Collateral:							
Short-term investments:							
Repurchase agreements	\$ 186,136,735	\$ -	\$ 186,136,735	\$ -			
Global commercial paper	9,409,110	-	9,409,110	-			
Global corporate notes	295,961,455	-	295,961,455	-			
Total invested securities lending collateral	\$ 491,507,300	<u> </u>	\$ 491,507,300	\$ -			

Notes to Financial Statements

June 30, 2023

Investments Measured at Net Asset Value (NAV):

Short-term investments - pooled and other	\$ 402,913,935
Equity funds	1,146,328,799
Fixed income funds	2,595,657,833
Real assets investments - real estate	2,166,123,723
Real assets investments - other	1,550,498,079
Alternative investments - diversifying strategies	4,878,726,355
Alternative investments - other	 4,490,853,009
Total investments measured at NAV	\$ 17,231,101,733

	 June 30, 2023		Unfunded ommitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period (Days)
Short-term investments - pooled and other (a)	\$ 402,913,935	\$	-	Daily	1 day
Equity funds (b)	1,146,328,799		-	Daily	2 days
Fixed income funds (c)	2,595,657,833		380,328,000	Various	Various
Real assets investments - real estate (d)	2,166,123,723		742,120,000	Not eligible	n/a
Real assets investments - other (d)	1,550,498,079		547,428,000	Not eligible	n/a
Alternative investments - div. strategies (e)	4,878,726,355		-	Daily	1-2 days
Alternative investments - traditional (f)	4,490,853,009	2	2,056,028,000	Not eligible	n/a
Total investments measured at NAV	\$ 17,231,101,733	\$ 3	3,725,904,000		

- (a) Short-term investments pooled and other primarily consist of two pooled funds to invest excess cash at the ERS' custodian, The Bank of New York Mellon. NAV is based on the ERS' pro rata ownership percentage of the fund reported by the fund manager based on the fair value of the underlying assets that is determined by published market prices, or quotations from national security exchanges.
- (b) Equity funds consist of three funds, including one fund that invests based on the all country world index. NAV is based on the ERS' pro rata ownership percentage of the fund reported by the fund manager based on the fair value of the underlying assets that is determined by published market prices, or quotations from national security exchanges.
- (c) Fixed income funds consist of 15 private market limited partnerships or limited liability companies to capitalize in multiple strategies that target investments on a global basis including, but not limited to, obligations of leveraged, financially troubled, or liquidating businesses or entities, bank loans, high yield bonds, securitized credit (including debt issued by asset-backed security offerings), derivatives (such as swap agreements), etc. NAV is based on the ERS' pro rata ownership percentage of the fund reported by the fund manager based on the fair value of the underlying assets that is determined by published market prices or quotations from national security exchanges.

Notes to Financial Statements

June 30, 2023

- (d) Real assets investments (real estate and other) consist of limited partnerships, limited liability companies, or corporations, that are deemed to be investments, include 75 funds that primarily invest in U.S. real estate and 15 that invest in other real assets such as infrastructure, agriculture or other assets. The most significant element of NAV is the fair value of the investment holdings. These holdings are valued by the general partners using valuation assumptions based on both market and property specific inputs, which are not observable and involve a certain degree of expert judgment and are generally audited annually.
- (e) Alternative investments diversifying strategies consist of 20 limited partnerships or limited liability companies to provide stability, diversification, and liquidity complements to the Broad Growth strategic asset class that produce uncorrelated returns during both crisis and non-crisis periods for Broad Growth assets. These investments focus on capital efficiency and employ certain financial mechanisms to target specific levels of volatility (e.g., derivatives-based leverage). This approach emphasizes capital efficiency thereby enabling the relatively small capital base of the Diversifying Strategies strategic asset class to offset a meaningful level of volatility inherent in the Broad Growth strategic asset class. The most significant element of NAV is the fair value of the investment holdings. These holdings are valued using valuation assumptions based on both market and property specific inputs, which are not observable and involve a certain degree of expert judgment and are generally audited annually. The ERS determines when redemptions and/or contributions are made.
- (f) Alternative investments traditional consist of 256 limited partnerships or limited liability companies that invest in venture capital, growth equity, corporate finance/buyout, special situations, mezzanine debt, distressed debt, co/direct investments or specialty investments. The most significant element of NAV is the fair value of the investment holdings. These holdings are valued by the general partners using valuation assumptions based on both market and property specific inputs, which are not observable and involve a certain degree of expert judgment and are generally audited annually. Redemptions are controlled by the general partner/investment manager.

Reconciliation of Investments Measured by Fair Value Level and by NAV to the Statement of Fiduciary Net Position

	Investments Measured by Fair Value Level			Investments Measured by NAV	In Mo	vestments easured by air Value Level	Statement of Fiduciary Net Position	
Short-term investments	\$	2,948,529	\$	402,913,935	\$	2,631	\$	405,865,095
Equity securities	4	,142,610,138		1,146,328,799		-		5,288,938,937
Fixed income securities		926,971,511		2,595,657,833		3,016,291		3,525,645,635
Real assets investments		58,200,000		3,716,621,802		-		3,774,821,802
Alternative investments				9,369,579,364				9,369,579,364
	\$ 5	5,130,730,178	\$	17,231,101,733	\$	3,018,922	\$ 2	22,364,850,833
Invested securities lending collateral	\$	491,507,300	_\$_		\$		\$	491,507,300

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4. Credit Risk

Credit risk is defined as the risk that an issuer or other counterparty to an investment will not fulfill its obligations. Information regarding ERS' credit risk for derivative financial instruments is discussed in Note E.10, Derivative Financial Instruments, while policies related to credit risk for securities lending program are discussed in Note E.9, Securities Lending.

Risk Based Asset Class

The credit portfolio consists of investment strategies and assets that are largely exposed and/or susceptible to various collateral types (corporate cash flows, mortgages, various credit receivables, etc.) that produce relatively high levels of income. These investments may be traded in public markets or sourced through private issuance. Such investments typically contain relatively lower levels of risk and exhibit lower volatility than other Broad Growth components but do have exposure to growth-related characteristics. In addition, periodic income will likely be a material portion of the credit portfolio's investment return. The overall objectives of the Diversifying Strategies strategic asset class are to provide stability, diversification, and liquidity complements to the Broad Growth strategic asset class. This class can help diversify the Broad Growth strategic asset class during challenging periods, such as material equity market drawdowns. Individual investment managers have specific investment policy guidelines, limits, and/or requirements for their portfolio, that may include limits on, but not limited to, security type, sectors, currency, duration, credit rating and issue amounts.

The ERS may invest, across the Broad Growth and Diversifying Strategies asset classes, in directly held securities, Partnerships/Fund of Ones or commingled funds which invest in liquid and less liquid corporate credit across the capital structure as well as opportunistically provide private financing. Investment instruments and/or strategies include but are not limited to the purchase and/or origination of investment grade, broadly syndicated high yield bonds, broadly syndicated leveraged loans, narrowly syndicated private debt ("club deals"), collateralized loan obligations ("CLO") debt and equity, municipal securities, capital solutions and convertibles. Other investment instruments and/or strategies include but are not limited to U.S. Treasuries and government-backed, high-quality, very liquid agencies, the purchase and/or origination of legacy non-agency residential mortgage-backed securities, asset backed securities, agency risk transfer, FNMA/Freddie preferred equity, non-qualified mortgage, origination, re-performing loans, credit tenant leases, bridge financings, and other types. Derivative financial instruments may be used for managing interest rate, volatility, term structure, country, currency, sector exposures, etc. as authorized by their mandate.

A table of the ERS' fixed income securities as of June 30, 2023 is below. Securities below investment grade of Baa and non-rated issues (average rating by S&P, Moody's and/or Fitch) amounted to \$231,927,848 or 25.0% of directly held fixed income investments (excluding funds). All short-term investments, not held in a pooled investment, are rated A1/P1or better.

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Credit Ratings – Average rating by S&P, Moody's and Fitch as of June 30, 2023

Ratings	US	Govt Agency	Govt Agency	US	S Corporate Bonds		Non-US orporate Bonds	_	onvertible & Others	 Total
AAA	\$	14,445,750	\$ 130,132,296	\$	216,665	\$	-	\$	-	\$ 144,794,711
AA1		-	81,244		706,365		-		-	787,609
AA3		-	-		2,413,926		-		-	2,413,926
A1		-	-		1,963,270		252,801		-	2,216,071
A2		-	-		6,982,014		-		-	6,982,014
A3		-	-		9,140,289		-		4,908,570	14,048,859
BAA1		-	-		5,527,846		-		1,528,083	7,055,929
BAA2		-	-		3,301,029		-		10,789,567	14,090,596
BAA3		-	-		516,838		-		11,357,693	11,874,531
BA1		-	-		-		-		6,347,815	6,347,815
BA2		-	-		-		-		8,104,685	8,104,685
CAA1		-	-		-		-		1,565,662	1,565,662
CAA2		-	-		-		-		1,620,503	1,620,503
Not rated			 						214,289,183	 214,289,183
		14,445,750	\$ 130,213,540	\$	30,768,242	\$	252,801	\$	260,511,761	436,192,094
					Treasury bon			N	[ational	479,069,599
					government a	_	-			11 700 919
				IV	Iortgage Asso	ciati	on (GNIMA:	s) mor	igage backed	 11,709,818
					Subtotal	direc	tly held inv	estmei	nts	926,971,511
				Fix	ed income fur	ıds				2,595,657,833
				De	rivative financ	ial ii	nstruments (debt s	ecurities)	 3,016,291
					Total fixed in	come	securities i	n inve	stments	\$ 3,525,645,635

5. Custodial Credit Risk

Custodial credit risk for investments is the risk that, in the event of a failure of the counterparty, the ERS will not be able to recover the value of the investment or collateral securities that are in the possession of an outside party. All securities, except certain pooled funds, are registered in the name of the ERS and are held in the possession of the ERS' custodial bank, The Bank of New York Mellon. Pooled funds not held by the custodial bank, such as certain equity investments, are registered in the name of the ERS. The ERS had \$98,401,207 in cash and securities exposed to custodial credit risk as of June 30, 2023.

6. Concentrations of Credit Risk

The ERS' debt securities managers are expected to maintain diversified portfolios by sector, quality, and maturity as discussed in the Credit Risk section above.

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Equity securities shall be diversified by industry and in number. An investment manager may not hold more than 5% of an individual company's stock if that company's securities represent less than 3% of the investment manager's respective benchmark. (If those securities constitute more than 3% of the respective benchmark the manager shall not hold more than the benchmark weight plus 2 percentage points.)

At June 30, 2023, there was no single issuer exposure within the ERS' portfolio that comprises over 5% of the overall portfolio, or an investment that exceeded the above manager guidelines, and therefore, there is no concentration of credit risk to report.

7. Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. The ERS has not adopted a formal policy that limits investment maturities as a means of managing its exposure to fair value changes arising from changing interest rates. External investment managers are given full discretion within their operational guidelines and are expected to maintain a diversified portfolio between and within sectors, quality, and maturity.

Duration is a measure of a debt investment's exposure to fair value changes arising from changes in interest rates. It uses the present value of cash flows, weighted for those cash flows as a percentage of the investment's full price. At June 30, 2023, the table below shows fixed income investment securities by investment type, amount, and the effective weighted duration for the ERS' total portfolio. Interest rate risk associated with swaps and other derivative instruments are discussed in the derivatives disclosure below:

The effective duration of fixed income investments by security type (excluding derivatives and fixed income funds) are as follows:

	Fair Value	Weighted Modified Duration (Years)
Fixed income investments:	 	
U.S. Treasury bonds and notes	\$ 479,069,599	13.5
U.S. government agencies bonds	14,445,750	2.4
U.S. government agency mortgage backed	130,213,540	5.8
U.S. government-sponsored agency mortgage backed	11,709,818	5.6
U.S. corporate bonds	30,768,242	5.2
Non-U.S. corporate bonds	252,801	5.3
Convertible and others	 260,511,761	2.8
Total	\$ 926,971,511	8.9

Notes to Financial Statements

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8. Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely impact the fair value of an investment. The foreign currency risk exposure to the ERS arises from the international fixed income and international equity investment holdings. Board policy limits the use of foreign currency as a defensive measure to protect the portfolio value of non-U.S. equity and non-U.S. fixed income investments. External investment managers authorized to invest in these securities are given full discretion regarding their respective portfolio's foreign currency exposures, including using currency forward contracts, as established by their investment mandate. Cross-hedging is only allowed in non-U.S. fixed income portfolios. Counterparties for foreign currency derivative financial instruments must be rated A or equivalent. Derivative financial instruments are discussed in more detail in Note E.10, Derivative Financial Instruments.

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June 30, 2023

The following table summarizes the ERS' exposure to foreign currency risk in U.S. dollars as of June 30, 2023. (securities denominated in U.S. dollars are not presented.)

	Cash and Short Term			
	Instruments	Derivatives	Equities	Grand Total
Australian dollar	\$ 1,216	\$ -	\$ 30,731,852	\$ 30,733,068
Brazilian real	4,025	-	15,708,072	15,712,097
Canadian dollar	312,353	103,134	57,842,291	58,257,778
Chilean peso	604	-	3,934,570	3,935,174
Chinese yuan renminbi	-	-	2,341,940	2,341,940
Colombian peso	32,226	-	19,793	52,019
Czech koruna	6,608	-	341,841	348,449
Danish krone	144,131	172,077	19,874,256	20,190,464
Euro currency unit	129,129	(11,636)	340,354,439	340,471,932
Hong Kong dollar	120,498	199,817	77,470,225	77,790,540
Hungarian forint	-	-	631,657	631,657
Indian rupee	1,153	-	96,795,383	96,796,536
Indonesian rupiah	7,948	(1,179)	1,281,558	1,288,327
Israeli shekel	2,024	-	694,607	696,631
Japanese yen	651,716	3,489,715	197,982,731	202,124,162
Malaysian ringgit	3,583	-	4,583,432	4,587,015
Mexican peso	934	81,891	11,634,416	11,717,241
New Taiwan dollar	750,814	-	78,809,440	79,560,254
New Zealand dollar	6,799	-	2,126,822	2,133,621
Norwegian krone	903	-	4,683,350	4,684,253
Philippine peso	10,971	-	3,305,281	3,316,252
Polish zloty	-	-	522,428	522,428
Pound sterling	132,433	199,560	223,290,965	223,622,958
Russian ruble	-	-	383,168	383,168
Singapore dollar	12,922	-	3,699,451	3,712,373
South African rand	11,880	-	3,106,047	3,117,927
South Korean won	10	-	22,554,473	22,554,483
Swedish krona	65,901	336,543	23,703,200	24,105,644
Swiss franc	73,274	21,594	61,079,476	61,174,344
Thai baht	-	-	4,274,190	4,274,190
Turkish lira	1,236		1,018,189	1,019,425
Total	\$ 2,485,291	\$ 4,591,516	\$ 1,294,779,543	\$ 1,301,856,350

Notes to Financial Statements

June 30, 2023

9. Securities Lending

The ERS participates in a securities lending program administered by its bank custodian, The Bank of New York Mellon. Under this program, which is permissible under Chapter 88, HRS, certain equity and fixed-income securities of the ERS are lent to participating broker-dealers and banks (borrowers). In return, the ERS receives cash, securities issued or guaranteed by the U.S. government, securities issued or guaranteed by OECD (Organization for Economic Cooperation and Development) member states or their local authorities, Canadian Provincial debt, equity securities that are part of the U.S. and non U.S. indices, and/or letters of credit as collateral. The ERS does not have the ability to pledge or sell collateral securities absent of borrower default, thus only cash received as collateral is reported on the financial statements in accordance with accounting standards. Risk is mitigated by the investment policies and operational procedures regarding issuer, credit, exposure and rating limits utilized in the securities lending program. Borrowers are required to deliver collateral for each loan equal to: (a) in the case of loaned fixedincome securities and loaned equity securities denominated in U.S. dollars or whose primary trading market was located in the U.S., 102% of the market value of the loaned securities; and (b) in the case of loaned equity securities not denominated in U.S. dollars or whose primary trading market was not located in the U.S., 105% of the market value of the loaned securities. The collateral is marked to market daily. If the market value of the collateral falls below the minimum collateral requirements, additional collateral is provided. In addition, the bank custodian indemnifies the ERS by agreeing to purchase replacement securities or return cash collateral in the event the borrower fails to return the loaned security or fails to pay the ERS for income distributions by the securities' issuers while the securities are on loan.

The ERS does not impose any restrictions on the amount of loans the bank custodian made on behalf of the ERS. Also, the ERS and the borrowers maintain the right to terminate securities lending transactions on demand. The Bank of New York Mellon invests the cash collateral related to the ERS' loaned securities in a separate account in accordance with the ERS investment policies and procedures as discussed in Note E.1, Investment Policy. As such, the maturities of the investments made with cash collateral generally do not match the maturities of the securities loans. The extent of such mismatch as of June 30, 2023 was 100 days.

At June 30, 2023, there was no credit risk exposure to borrowers since the ERS was collateralized as discussed above. The total securities on loan and collateral received are shown below.

Securities Lent for Collateral	_	Fair Value of Underlying Securities	Cash	 Noncash
U.S. fixed income	\$	215,069,926	\$ 197,164,958	\$ 24,233,065
U.S. equities		312,390,863	275,822,216	46,447,232
International equities		179,674,045	 18,520,126	 181,463,001
	\$	707,134,834	\$ 491,507,300	\$ 252,143,298

Notes to Financial Statements

June 30, 2023

10. Derivative Financial Instruments

Derivatives are financial instruments (securities or contracts) whose value is dependent on such things as stock or bond prices, interest rate levels, or currency exchange rates. These are financial arrangements between two parties whose payments are based on or "derived" from the performance of some agreed-upon benchmark. As with any investment, derivative contracts are subject to various types of credit and market risks. Notably, these would include the possible inability of the counterparty to meet the terms of the contract, changes in the market value of the underlying collateral, changes in the interest rate environment, and fluctuation in foreign currency rates. The ERS enters into various derivative investment contracts to hedge, for the minimization of transaction costs and as a means of implementing value added strategies to enhance returns as authorized by Board policy, as discussed below.

Generally, derivatives are subject both to market risk and counterparty risk. The derivatives utilized by the ERS typically have no greater risk than their physical counterparts, and in many cases are offset by exposures elsewhere in the portfolio. Counterparty risk, the risk that the "other party" to a contract will default, is managed by utilization of exchange-traded futures and options where practicable (in which case the futures exchange is the counterparty and guarantees performance) and by careful screening of counterparties where use of exchange-traded products is impractical or uneconomical. ERS investment managers seek to control this risk through counterparty credit evaluations and approvals, counterparty credit limits, posting collateral, and exposure monitoring procedures. The ERS anticipates that counterparties will be able to satisfy their obligations under the contracts.

Derivative securities are priced and accounted for at their fair value. For exchange-traded securities such as futures and options, closing prices from the securities exchanges are used. Foreign exchange contracts are valued at the price at which the transaction could be settled by offset in the forwards markets.

The tables below summarize the ERS' investments in derivative securities and contracts held at June 30, 2023 and their associated risks. The various risks associated with these investments are included in the tables expressed in terms of market values, summarized by the type of contract as follows: credit, equity, foreign exchange, interest, and other. Due to the level of risk associated with certain derivative investment securities, it is reasonably possible that changes in the values of investment securities will occur in the near term, and such changes could affect the amounts reported in the financial statements. ERS could be exposed to risk if the counterparties to the contracts are unable to meet the terms of the contracts. ERS investment managers seek to control this risk through counterparty credit evaluations and approvals, counterparty credit limits, posting collaterals, and exposure monitoring procedures.

Notes to Financial Statements

June 30, 2023

The notional amount is the nominal or the underlying face amount that is used to calculate payments made on that instrument or contract. Changes in the market value of all derivative contracts are recorded as net appreciation (depreciation) in fair value of investments in the statement of changes in fiduciary net position.

The following table summarizes the ERS' investments in derivative securities and contracts held at June 30, 2023 with the related maturity information:

Asset Categories	Notional Value	Market Value	Maturity (Range From)
Forwards - Currency purchases	\$ -	\$ 2,631	0.0 years
Futures - Interest rate contracts	511,581,938	3,016,291	0.3 years
Total	\$ 511,581,938	\$ 3,018,922	

Forward Currency Exchange Contracts and To-Be-Announced (TBA) Securities

The ERS enters into various forward currency exchange contracts to manage exposure to changes in foreign currency exchange rates and to facilitate the settlement of foreign security transactions. A forward contract is an agreement to buy or sell a specific amount of currency at a specific delivery or maturity date for an agreed-upon price. Risks associated with such contracts include movements in the value of the foreign currency relative to the U.S. dollar and the ability of the counterparty to perform in accordance with the terms of the contract.

The TBA market that ERS invests in as part of its toolkit to manage interest rates and liquidity includes the forward trading of mortgage-backed securities (MBS) issued by federal agencies and federally sponsored agencies (commonly known as pass-through securities issued by Freddie Mac, Fannie Mae, and Ginnie Mae). The TBA market is one of the most liquid, and consequently the most important secondary market for mortgage loans as one MBS pool can be considered to be interchangeable with another pool.

Futures

Futures represent commitments to purchase (asset) or sell (liability) securities at a future date and at a specified price. Futures contracts are traded on organized exchanges (exchange traded) thereby minimizing the ERS' credit risk. The net change in the futures contracts value is settled daily in cash with the exchanges. Net gains or losses arising from the daily settlements are included in the net appreciation/(depreciation) in fair value of securities in the statement of changes in fiduciary net position. Refer to the table above for the net notional value of futures contracts at June 30, 2023.

Notes to Financial Statements

June 30, 2023

Options

Options represent or give the buyers the right, but not the obligation, to buy or sell an asset at a preset price over a specified period. The option's price is usually a small percentage of the underlying asset's value. As a writer of financial options, the ERS receives a premium at the outset of the agreement and bears the risk of an unfavorable change in the price of the financial instrument underlying the option. As a purchaser of financial options, the ERS pays a premium at the outset of the agreement and the counterparty bears the risk of an unfavorable instrument underlying the option.

Swaps

Swaps represent an agreement between two or more parties to exchange sequences of cash flows over a period in the future. In the most common type of interest rate swap arrangement, one party agrees to pay fixed-interest payments on designated dates to a counterparty who, in turn, agrees to make return interest payments that float with some reference rate. Credit default swaps are the most common global credit market derivative that allows flexibility as an active portfolio management tool based on its ability to customize the exposure to corporate credit such as credit spreads and default risks. Credit default spreads and total return swaps are also used to gain access to global markets that do not have the transparency or efficiency of the U.S. credit markets. Gains and losses from swaps are determined on market values and are included in the net appreciation/(depreciation) in fair value of securities in the statement of changes in fiduciary net position.

Derivatives, such as interest rate swaps, total return swaps, and credit default swaps, are a tool or instrument used to manage interest rate, credit quality, and yield curve exposures of the investments. In certain situations, derivatives may result in a lower overall cost to the portfolio than owning individual securities underlying the derivatives. When evaluating securities, risk, and return are measured at the security and portfolio levels.

On June 30, 2023, credit ratings of the counterparty for ERS' investments in derivatives were as follows:

Counterparty	S&P's Rating	Fair Value			
Exchange traded derivatives	n/a	\$ 3,018,922			

Notes to Financial Statements

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Note F – Pension Liability

1. Net Pension Liability

The components of the net pension liability of the ERS at June 30, 2023, were as follows:

Total pension liability	\$ 36,224,617,253
Less: plan fiduciary net position	22,425,384,975
Net pension liability	\$ 13,799,232,278
Plan fiduciary net position as a percentage of total pension liability	61.91%
Net pension liability as a percentage of covered payroll	295.20%

Multi-year trend information regarding whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liabilities for benefits can be found in the Required Supplementary Information section, which follows the notes to financial statements.

2. Summary of Actuarial Assumptions

The total pension liability was determined using the provisions of the GASB Statements No. 67 and No. 82 actuarial valuation as of June 30, 2023. These GASB rules only define pension liability for financial reporting purposes. The actuarial assumptions were based on the results of an experience study as of June 30, 2021, with most of the assumptions based on the period from July 1, 2016, through June 30, 2021.

Notes to Financial Statements

June 30, 2023

A summary of the actuarial valuation as of June 30, 2023 follows:

Valuation date	June 30, 2023
Actuarial cost method	Entry age normal
Amortization method	Level percent, open
Actuarial assumptions:	
Inflation assumption	2.50%
Investment rate of return, including inflation at 2.50%	7.00%
Payroll growth rate	3.50%
Projected salary increases, including inflation at 2.50%	
- Police and firefighters	5.00% to 6.00%
- General employees	3.75% to 6.75%
- Teachers	3.75% to 6.75%
Cost of living adjustments (COLAs):	
- COLAs are not compounded; and are	
based on original pension amounts.	
- Membership date prior to July 1, 2012	2.5%
- Membership date after June 30, 2012	1.5%

Mortality rate assumptions include the effects of the retirement status of members.

Pre-retirement mortality rates are:

Multiples of the Pub-2010 mortality table for active employees based on the occupation of the member as follows:

	General Employees	Teachers	Police and Firefighters
Туре	Male & Female	Male & Female	Male & Female
Ordinary	94%	92%	80%
% of Ordinary Choosing Annuity	41%	52%	24%
Duty Related	6%	8%	20%

Notes to Financial Statements

June 30, 2023

Post-Retirement Mortality rates are:

Healthy Retirees: The 2022 Public Retirees of Hawaii mortality tables. The rates are projected on a fully generational basis by Scale MP from the year 2022 (with immediate convergence) and with multiplier and setbacks based on plan and group experience. The following are sample rates of the base table as of 2022 with the corresponding multipliers:

Healthy Annuitant Mortality Rates Before Projection (Multiplier Applied)

	General E	mployees	Teac	hers	Police and Firefighters				
Age	Male Female		Male	Female	Male	Female			
50	0.2094%	0.1276%	0.1698%	0.0951%	0.2421%	0.1130%			
55	0.3215%	0.1687%	0.2883%	0.1596%	0.3473%	0.1633%			
60	0.5570%	0.3095%	0.4672%	0.2467%	0.6179%	0.2799%			
65	0.8041%	0.4488%	0.7256%	0.4063%	0.8426%	0.4283%			
70	1.2621%	0.7066%	1.0762%	0.6015%	1.4172%	0.6565%			
75	2.0700%	1.0964%	1.7879%	0.9358%	2.3227%	1.0121%			
80	3.5996%	2.1275%	3.0429%	1.6565%	4.1824%	1.8863%			
85	6.5891%	4.1569%	5.5564%	3.2698%	7.6513%	3.6977%			
90	11.9340%	8.3647%	10.1056%	6.5007%	13.6689%	7.3991%			
Multiplier	102%	98%	97%	101%	93%	100%			
Setback		(1)	1	1	(2)				

Notes to Financial Statements

June 30, 2023

The following table provides the life expectancy for individuals retiring in future years based on the assumption with full generational projection:

Life Expectancy for an Age 65 Retiree in Years

Year of Retirement									
Gender	Gender 2025 2030 2035 2040								
General Retirees									
Male	22.8	23.2	23.5	23.9	24.2				
Female	26.3	26.6	26.9	27.2	27.5				
		Teacl	iers						
Male	24.1	24.5	24.9	25.2	25.5				
Female	28.0	28.3	28.6	28.9	29.2				
Police and Firefighters									
Male	21.8	22.1	22.4	22.8	23.1				
Female	27.1	27.4	27.7	28.0	28.3				

Disabled retirees: Base Table for healthy retiree's occupation, set forward three years, generational projection using the MP projection table from the year 2022 with immediate convergence. Minimum mortality rate of 3.5% for males and 2.5% for females.

Notes to Financial Statements

June 30, 2023

The long-term expected rate of return on pension plan investments was determined using a "top down approach" of the Client-Constrained Simulation-based Optimization Model (a statistical technique known as "resampling with replacement" that directly keys in on specific plan-level risk factors as stipulated by the ERS Board) in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are then combined to produce the long-term expected rate of return by weighting the expected future nominal rates of return (real returns + inflation) by the target asset allocation percentage. The rate of returns based on ERS' investment consultant as of June 30, 2023, are summarized in the following table (a new asset/liability study for the ERS was completed in June 2023 that will be effective for FY 2024):

Classes	Strategic Class Weights	Long-Term Expected Geometric Rate of Return	Volatility
Broad Growth:			
Private equity	13.50%	10.00%	28.00%
Global equity	20.00%	7.90%	18.00%
Low volatility equity	4.00%	7.10%	14.40%
Global options	4.00%	5.80%	13.00%
Credit	6.00%	8.00%	12.50%
Core real estate	6.00%	6.00%	12.00%
Non-core real estate	4.50%	7.90%	22.40%
Timber/agriculture/infrastructure	5.00%	7.20%	12.40%
Diversifying Strategies:			
TIPs	2.00%	3.20%	7.00%
Global macro	4.00%	6.00%	15.00%
Reinsurance	4.00%	7.00%	12.00%
Alternative risk premia	8.00%	5.00%	10.00%
Long treasuries	5.00%	3.80%	12.00%
Intermediate government	4.00%	3.20%	3.00%
Systematic trend following	10.00%	4.70%	18.00%
	100.00%		

The ERS utilizes two high-level strategic classes (Broad Growth and Diversifying Strategies) for allocating assets and managing risk within the total portfolio. Both of these strategic classes contain sub-components that in-turn utilize asset classes and/or specific strategies for implementation. The Broad Growth class utilizes three sub-components (Public Growth, Private Growth, and Real Assets) which are ultimately invested in public equity, options-based equity, credit fixed income, private real assets, and private equity. The Diversifying Strategies class is

Notes to Financial Statements

June 30, 2023

designed to be uncorrelated to the Broad Growth class and it utilizes three sub-components (Liquid Defensive, Liquid Diversifying, and Illiquid Diversifying). The Diversifying Strategies class utilizes a multitude of asset classes and strategies, including US treasury and agency bonds, inflation-linked treasury bonds, systematic trend following, alternative risk premia, global macro, insurance-linked securities, relative value strategies, and niche private assets, among others. The ERS may also hold opportunities and other investments if they are determined to be additive to the portfolio's risk/return posture.

Single Discount Rate

A single discount rate of 7.00% was used to measure the total pension liability as of June 30, 2023. This single discount rate was based on the expected rate of return on pension plan investments of 7.00%. The projection of cash flows used to determine this single discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

3. Sensitivity of the Net Pension Liability to Changes in the Single Discount Rate

The following presents the ERS' net pension liability calculated using a single discount rate of 7.00%, as well as what the ERS' net pension liability would be if it were calculated using a single discount rate that is 1–percentage-point lower (6.00%) or 1–percentage-point higher (8.00%) than the current discount rate.

Current Discount									
1% Decrease	Rate	1% Increase							
(6.00%)	(7.00%)	(8.00%)							
\$ 18,551,927,406	\$ 13,799,232,278	\$ 9,863,182,556							

Notes to Financial Statements

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Note G – Risk Management

The ERS is exposed to various risks of loss related to torts; theft of, damage to, or destruction of assets; errors or omissions; natural disasters; and injuries to employees. As required by state law, the ERS participates in coverage with the State. The State retains various risks and insures certain excess layers with commercial insurance policies. The excess layers are consistent with the prior fiscal year. Settled claims for the State did not exceed the coverage provided by commercial insurance policies during the year ended June 30, 2023. Losses not covered by insurance are generally paid from legislative appropriations.

1. Torts

The ERS is involved in various litigation and claims, including claims regarding retirement benefits, the outcome of which cannot be presently determined. In the opinion of management, the outcome of these actions will not have a material adverse effect on the ERS' financial position.

2. Property and Liability Insurance

The ERS also purchased property and liability insurance for all real estate owned from outside carriers. During the past three fiscal years, no loss settlements exceeded insurance coverages.

3. Workers' Compensation Policy

The State has a self-insured workers' compensation policy. Workers' compensation claims are paid from legislative appropriations.

Note H – Commitments

In the normal course of business, the ERS enters into commitments with associated risks. The ERS adheres to the same credit policies, financial and administrative controls, and risk limiting and monitoring procedures for these commitments as for all investments.

The ERS has future financial commitments of up to \$3,725,904,000 as of June 30, 2023, consisting of \$380,328,000 for fixed income funds, \$1,289,548,000 for real assets investments, and \$2,056,028,000 for alternative investments.

Notes to Financial Statements

June 30, 2023

Note I – Deferred Compensation Plan

The ERS does not sponsor a deferred compensation program. The ERS' employees are eligible to participate in the deferred compensation plan sponsored by the State. The State-sponsored plan was created in accordance with Internal Revenue Code Section 457. The plan, available to all ERS employees, permits them to defer a portion of their salaries. The deferred compensation is not available to the employees until termination, retirement, death, or an unforeseeable emergency. All compensation deferred under the plan is held in trust by a custodian for the exclusive benefit of participants and beneficiaries.

Note J – Subsequent Events

Between March 4, 2022, and March 25, 2022, State and county employers declared COVID-19 Emergencies (dates vary by employer agency) to control the spread of COVID-19 and provide for the health, safety, and welfare of the people of the State. Union and employee organizations, representing individuals employed by the State and county employers, requested Temporary Hazard Pay (THP) on behalf of State and county employees (Affected Employees) designated to perform essential functions during the COVID-19 pandemic. Subsequently, arbitration/litigation was initiated by these parties to settle claims for THP. In February, July, and September 2024, some of the State and county employer agencies/employees reached settlement/arbitration agreements, that represents only a portion of total number of employees during COVID-19 Emergencies. THP claims/litigations for most State and county employer agencies/employees have not been settled.

Pursuant to HRS §88-21.5, only THP payments to Affected Employees whose ERS membership dates were before July 1, 2012, are considered ERS eligible compensation that are subject to ERS employer and member contributions. THP payments are not eligible compensation for individuals whose ERS membership date is after June 30, 2012. The ERS is currently unable to predict with reasonable certainty the magnitude of (a) ERS' potential liability and (b) amount of contributions due to ERS as a result of these THP claims litigations.

The ERS has evaluated subsequent events through October 22, 2024, the date at which the financial statements were available to be issued, and determined there are no other items to disclose.

REQUIRED SUPPLEMENTARY INFORMATION (UN	(AUDITED)
REQUIRED SOTTEDINE INTORNATION (C.)	

Required Supplementary Information (Unaudited)

Schedule of Changes in the Employers' Net Pension Liabiity and Related Ratios

As of and for the Years Ended June 30, 2014 to 2023

		2014	_	2015	_	2016		2017		2018	_	2019	_	2020		2021		2022		2023
A. Total pension liability																				
Service cost	\$	421,956,129	\$	437,901,029	\$	484,278,499	S	576,724,568	\$	584,470,193	\$	619,504,278	\$	626,699,489	S	642,140,242	\$	613,550,345	S	665,262,225
2. Interest on the total pension liability		1,618,917,776		1,693,252,684		1,748,619,873		1,894,622,190		1,976,275,120		2,063,885,936		2,164,804,653		2,252,271,074		2,349,503,644		2,397,116,921
Changes of benefit terms		-		-		-		-		-		-		-		-		-		-
 Difference between expected and actual 																				
experience of the total pension liability		66,400,876		(192,816,757)		297,534,219		61,179,390		124,753,379		221,473,495		71,837,371		228,048,119		(361,275,093)		161,224,056
Changes of assumptions		-		261,213,541		2,915,922,677		-		-		60,320,037		-		-		(154,960,000)		-
Benefit payments		(1,122,445,642)		(1,170,744,770)		(1,232,589,353)		(1,306,788,954)		(1,395,881,342)		(1,469,634,809)		(1,545,589,761)		(1,651,431,372)		(1,738,751,492)		(1,795,410,787)
7. Refunds		(8,475,969)	_	(10,507,888)	_	(12,927,672)	_	(16,340,290)		(20,846,500)	_	(16,502,635)	_	(22,443,593)		(23,618,435)	_	(24,454,256)		(26,353,782)
Net change in total pension liability		976,353,170		1,018,297,839		4,200,838,243		1,209,396,904		1,268,770,850		1,479,046,302		1,295,308,159		1,447,409,628		683,613,148		1,401,838,633
Total pension liability - beginning		21,243,744,377	_	22,220,097,547		23,238,395,386		27,439,233,629	_	28,648,630,533	_	29,917,401,383	_	31,396,447,685		32,691,755,844	_	34,139,165,472		34,822,778,620
10. Total pension liability - ending	_	22,220,097,547	_	23,238,395,386	_	27,439,233,629	_	28,648,630,533	_	29,917,401,383	_	31,396,447,685	_	32,691,755,844	_	34,139,165,472	_	34,822,778,620		36,224,617,253
B. Plan fiduciary net position																				
Contributions - employer		653,127,697		717,792,981		756,558,222		781,244,218		847,595,466		922,635,334		1,098,589,013		1,281,558,696		1,242,139,095		1,274,221,056
Contributions - employer (picked-up																				
employee contributions)		204,821,010		221,909,859		235,079,968		249,211,751		257,294,033		270,764,670		284,142,994		299,473,128		292,422,087		309,509,309
Contributions - employee		1,306,327		1,595,560		1,721,893		1,492,316		2,133,901		2,458,908		3,255,037		1,153,318		605,473		251,744
Net investment income		2,175,479,960		556,436,475		(169,368,110)		1,934,512,507		1,225,572,599		932,696,412		358,282,664		4,662,225,761		164,559,035		826,902,875
Benefit payments		(1,122,445,642)		(1,170,744,770)		(1,232,589,353)		(1,306,788,954)		(1,395,881,342)		(1,469,634,809)		(1,545,589,761)		(1,651,431,372)		(1,738,751,492)		(1,795,410,787)
Refunds		(8,475,969)		(10,507,888)		(12,927,672)		(16,340,290)		(20,846,500)		(16,502,635)		(22,443,593)		(23,618,435)		(24,454,256)		(26,353,782)
Pension plan administrative expense		(12,626,030)		(14,032,964)		(13,960,587)		(14,986,159)		(15,784,490)		(13,798,866)		(17,782,865)		(19,049,861)		(17,497,621)		(18,549,472)
7. Other			_	-							_		_	-				-		
8. Net change in plan fiduciary net position		1,891,187,353		302,449,253		(435,485,639)		1,628,345,389		900,083,667		628,619,014		158,453,489		4,550,311,235		(80,977,679)		570,570,943
9. Fiduciary net position - beginning		12,311,827,950		14,203,015,303		14,505,464,556		14,069,978,917		15,698,324,306		16,598,407,973		17,227,026,987		17,385,480,476		21,935,791,711		21,854,814,032
						14.000.030.017				16 500 407 073										
10. Fiduciary net position - ending		14,203,015,303	_	14,505,464,556	_	14,069,978,917	_	15,698,324,306	_	16,598,407,973	_	17,227,026,987	_	17,385,480,476	_	21,935,791,711	_	21,854,814,032	_	22,425,384,975
C. Net pension liability ending	\$	8,017,082,244	\$	8,732,930,830	\$	13,369,254,712	S	12,950,306,227	\$	13,318,993,410	\$	14,169,420,698	\$	15,306,275,368	S	12,203,373,761	\$	12,967,964,588	S	13,799,232,278
D. Fiduciary net position as a percentage																				
of the total pension liability		63.92%		62.42%		51.28%		54.80%		55.48%		54.87%		53.18%		64.25%		62.76%		61.91%
E. Covered payroll	\$	3,829,002,983	\$	3,995,447,345	\$	4,112,227,306	s	4,243,521,876	\$	4,256,052,840	\$	4,376,216,753	\$	4,481,443,808	s	4,667,346,006	\$	4,483,686,505	s	4,674,478,467
F. Net pension liability as a percentage of covered payroll		209.38%		218.57%		325.11%		305.18%		312.94%		323.78%		341.55%		261.46%		289.23%		295.20%

Required Supplementary Information (Unaudited)

Schedule of the Employers' Net Pension Liability

June 30, 2014 to June 30, 2023

Fiscal Year	Total Pension Liability	Fiduciary Net Position	Net Pension Liability	Fiduciary Net Position as a % of Total Pension Liability	Covered Payroll	Net Pension Liability as a Percentage of Covered Payroll
2014	\$ 22,220,097,547	\$ 14,203,015,303	\$ 8,017,082,244	63.92%	\$ 3,829,002,983	209.38%
2015	23,238,395,386	14,505,464,556	8,732,930,830	62.42%	3,995,447,345	218.57%
2016	27,439,233,629	14,069,978,917	13,369,254,712	51.28%	4,112,227,306	325.11%
2017	28,648,630,533	15,698,324,306	12,950,306,227	54.80%	4,243,521,876	305.18%
2018	29,917,401,383	16,598,407,973	13,318,993,410	55.48%	4,256,052,840	312.94%
2019	31,396,447,685	17,227,026,987	14,169,420,698	54.87%	4,376,216,753	323.78%
2020	32,691,755,844	17,385,480,476	15,306,275,368	53.18%	4,481,443,808	341.55%
2021	34,139,165,472	21,935,791,711	12,203,373,761	64.25%	4,667,346,006	261.46%
2022	34,822,778,620	21,854,814,032	12,967,964,588	62.76%	4,483,686,505	289.23%
2023	36,224,617,253	22,425,384,975	13,799,232,278	61.91%	4,674,478,467	295.20%

Required Supplementary Information (Unaudited)

Schedule of Investment Returns

Years Ended June 30, 2014 to 2023

Fiscal	Annual			
	Money-Weighted			
<u>Year</u>	Rate of Return			
2014	17.9%			
2015	4.0%			
2016	-1.2%			
2017	13.7%			
2018	7.8%			
2019	5.7%			
2020	2.1%			
2021	26.9%			
2022	0.8%			
2023	3.8%			

Notes to Required Supplementary Information (Unaudited)

June 30, 2023

Note A - Description

There have been no changes in benefit terms or actuarial assumptions since the last valuation.

Note B – Significant Factors Affecting Trends in Actuarial Information

2022 Changes in Actuarial Assumptions

The following changes were made to the actuarial assumptions as of June 30, 2021 to June 30, 2022:

- The administrative expenses assumption was increased from 0.35% to 0.40%.
- The general wage inflation assumption represents the average increase in wages in the general economy and is used to index salaries for each cohort of new entrants in projections. The general productivity component of the general wage inflation assumption for General Employees and Teachers decreased from 1.00% to 0.50%, that now yields a nominal assumption of 3.00%. There was no change to the assumption for Police and Firefighters employees.
- The assumed salary increase schedules increased for all employees. These schedules include an ultimate component for general wage inflation that may add on additional increases for individual merit (which would include promotions) and then an additional component for step rates based on service. The schedules of assumed salary increase, that are the same, for General Employees and Teachers increased to 4.66%, from 4.41% for General Employees and from 4.37% for Teachers; while Police and Firefighters Employees schedules increased to 5.78% from 5.57%.
- Pre-retirement mortality rates increased for Police and Firefighters Employees.
- Retiree mortality is updated to the 2022 Public Retirees of Hawaii mortality tables. The rates are projected on a fully generational basis by the long-term rates of scale UMP from the year 2022 and with multiplier and setbacks based on plan and group experience.
 - While there is no change to the assumption that mortality rates will continue to improve in the future using a fully generational approach, the improvement scale used to project future improvement is updated to the ultimate values of the most recently published Scale MP2021. Further adjustments are applied to this set of base tables based on occupation (General Employees, Teachers, and Public Safety).

Notes to Required Supplementary Information (Unaudited)

June 30, 2023

2019 Changes in Actuarial Assumptions

The following changes were made to the actuarial assumptions as of June 30, 2018 to June 30, 2019:

- The assumed salary increase schedules continues to include an ultimate component for general wage inflation that may add on additional increases for individual merit (which would include promotions) and then an additional component for step rates based on service. There were no changes for General Employees and Teachers. The overall impact increased for salary rate increase rates received for most Police and Firefighters over their career due to extending the 2-year step schedule to 25-years.
- Mortality rates generally decreased due to the continued improvements in using a fully generational approach and Scale BB (published by the Society of Actuaries), although mortality rates increased in certain age groups across all employment groups.
- The rates of disability of active employees increased for all General Employees and Teachers, and for Police and Firefighters from duty-related reasons.
- There were minor increases in the retirement rates for members in certain groups based on age, employment group and/or membership class.

2016 Changes in Actuarial Assumptions

The following changes were made to the actuarial assumptions as of June 30, 2015 to June 30, 2016:

- The investment rate of return assumption was decreased from 7.65% to 7.00%.
- Change the investment return assumption from net of all expenses to net of only investment expenses, add explicit charge for administrative expenses (0.35% of pay).
- The inflation assumption was decreased from 3.00% to 2.50 %.
- Decrease the wage inflation (or employer budget growth) assumption from 4.00% to 3.50%.

Notes to Required Supplementary Information (Unaudited)

June 30, 2023

- The inflation component of salary increase rates decreased for all groups. The salary increase rates were changed to reflect a smaller productivity component for Teachers and Police and Firefighters. The service based component generally increased for most General Employees, decreased for most Teachers, and remain unchanged for most Police and Firefighters. The overall impact decreased assumed salary rate increase rates for all General Employees and Teachers, while remaining unchanged for almost all Police and Firefighters.
- The rates of mortality for active employees were decreased.
- The rates of mortality for healthy retirees and beneficiaries for most employee groups were decreased, adding an explicit assumption for continued future mortality improvement (generational approach).
- The rates of mortality for disabled retirees for most employee groups were decreased.
- The rates of disability of active employees increased for all General Employees, for Police and Firefighters from duty-related reasons and for Teachers from non-duty-related reasons.
- The rates of termination assumption for all employee groups was changed from separate
 male and female by employee group to a combined male and female by employee group.
 The rate of terminations for Police and Firefighters was increased. The rate of
 terminations for General Employees in the first six years of service decreased, and
 remains unchanged for other General Employees. After six years of service, the rates of
 termination generally increased for Teachers, and remained unchanged for other
 Teachers.

2015 Changes in Actuarial Assumptions

The investment rate of return assumption was decreased from 7.75% as of June 30, 2014 to 7.65% as of June 30, 2015.

2011 Changes in Plan Provisions Since 2010

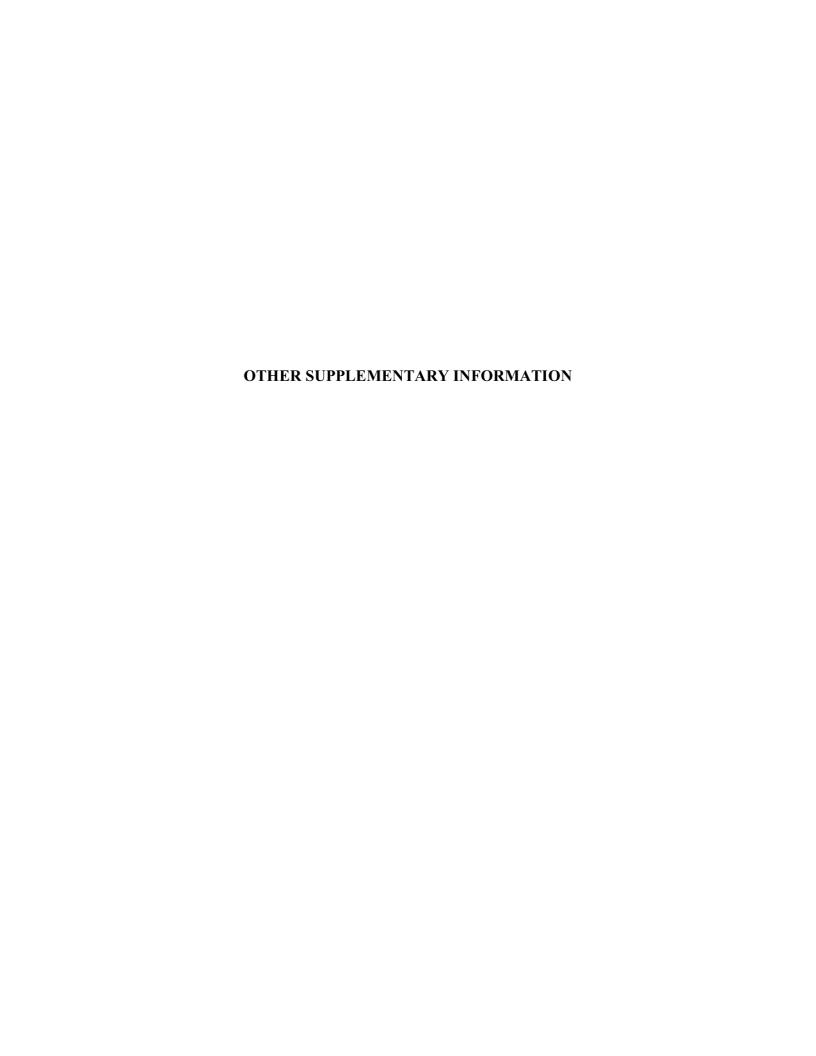
The following changes were made to the actuarial assumptions:

• The investment rate of return assumption decreased from 8.00% to 7.75%.

Notes to Required Supplementary Information (Unaudited)

June 30, 2023

- The salary increase rates were changed to reflect a larger productivity component for Police and Firefighters. Small changes also made to service-based components for all groups. The overall impact increased assumed salary increase rates for all employees.
- The rates of mortality for healthy retirees and beneficiaries for most employee groups were decreased.
- The rates of mortality for disabled retirees for most employee groups were increased.
- The rates of mortality for active employees for most employee groups were increased.
- The rates of disability for active employees for most general employees and teachers were decreased.
- The rates of retirement for most employees were increased.
- The rates of termination in the first six years of service for males generally increased, and remained mostly unchanged for females. After six years of service, the rates of termination generally increased for younger employees and decreased for employees from the age of 50.



Combining Schedule of Changes in Fiduciary Net Position - All Trust Funds

Year Ended June 30, 2023

	Pension Accumulation Reserves		Annuity Savings Reserves		Expense Reserves		Total
Additions:							
Appropriations and contributions:							
Employers	\$	1,274,221,056	\$	-	\$	-	\$ 1,274,221,056
Members		-		309,761,053		-	309,761,053
Net investment income		826,902,875					 826,902,875
Total additions		2,101,123,931		309,761,053	_	-	 2,410,884,984
Deductions:							
Benefit payments		1,795,410,787		-		-	1,795,410,787
Refunds of member contributions		-		26,353,782		-	26,353,782
Administrative expenses						18,549,472	 18,549,472
Total deductions		1,795,410,787		26,353,782		18,549,472	1,840,314,041
Other changes in net position restricted for pension benefits:							
Transfer due to retirement of members		183,476,757		(183,476,757)		-	-
Transfer of interest allocation		(122,663,484)		122,663,484		-	-
Transfer to pay administrative expenses Return of unrequired funds due to savings		(20,102,490)		-		20,102,490	-
in administrative expenses		4,901,393		<u> </u>		(4,901,393)	
		45,612,176		(60,813,273)		15,201,097	
Net increase/(decrease)		351,325,320		222,593,998		(3,348,375)	570,570,943
Fiduciary net position restricted for pensions:							
Beginning of year		18,333,677,177		3,506,654,625		14,482,230	 21,854,814,032
End of year	\$	18,685,002,497	\$	3,729,248,623	\$	11,133,855	\$ 22,425,384,975

Schedule of Administrative Expenses

Year Ended June 30, 2023

Personnel services:	
Salaries and wages	\$ 7,866,623
Fringe benefits	4,003,873
Net change in unused vacation credits	51,252
Total personnel services	11,921,748
Professional services:	
Actuarial	133,900
Auditing and tax consulting	595,907
Disability hearing expenses	21,735
Legal services	697,979
Medical	390,289
Other services	141,594
Total professional services	1,981,404
Communication:	
Postage	285,701
Printing and binding	69,006
Telephone	95,668
Travel	93,841
Total communication	544,216
Rentals:	
Rental of equipment	85,125
Rental of premises	25,093
Total rentals	110,218
Other:	
Equipment and cloud costs	471,133
Repairs and maintenance	2,337,817
Office and other administrative costs	209,178
Total other	3,018,128
Depreciation	973,758
•	
	\$ 18,549,472

Schedule of Investment Expenses

Year Ended June 30, 2023

Real estate and alternative investment expenses:	
Operating expenses	\$ 5,634,706
Investment expenses:	
Investment manager/advisor fees	104,893,751
Bank custodian fees	312,169
Other investment expenses	43,060,287
Total investment expenses	148,266,207
Securities lending expenses:	
Borrower rebates	24,008,189
Management fees	511,518
Total securities lending expenses	24,519,707
	\$ 178,420,620

Social Security Contribution Fund

Statement of Changes in Assets and Liabilities (Unaudited)

Year Ended June 30, 2023

	Beginning Balance		Additions	Deductions	Ending Balance	
Assets:	¢		\$ 261 221 640	\$ 261 221 640	\$	
Receivable from employers	<u> </u>		\$ 261,221,640	\$ 261,221,640	3	
Total assets	\$		\$ 261,221,640	\$ 261,221,640	\$	
Liabilities:						
Due to employers	\$		\$ 261,221,640	\$ 261,221,640	\$	
Total liabilities	\$		\$ 261,221,640	\$ 261,221,640	\$	

Note A - Social Security Contribution Fund

The Social Security Contribution Fund (Contribution Fund) was established under Section 88-224 of the HRS for the following purposes:

- 1. To receive all federal Social Security employers' contributions from the State and interest and penalties on unpaid amounts;
- 2. To receive any appropriations to the Contribution Fund;
- 3. To pay amounts required to be paid to the Internal Revenue Service (the IRS); and
- 4. To invest and collect income on resources held by the Contribution Fund.

All other non-State governmental agencies remit Social Security contributions directly to the IRS. Social Security contributions withheld from employees are remitted directly to the IRS by the employers. At June 30, 2023, the ERS held no amounts in the Contribution Fund as all employer contribution amounts from the State were paid directly to the IRS.

PART III INTERNAL CONTROL AND COMPLIANCE SECTION



Independent Auditors' Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance With Government Auditing Standards

The Auditor State of Hawaii:

Board of Trustees Employees' Retirement System of the State of Hawaii:

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States (*Government Auditing Standards*), the financial statements of the Employees' Retirement System of the State of Hawaii (the ERS) as of and for the year ended June 30, 2023, and the related notes to financial statements, and have issued our report thereon dated October 22, 2024.

Report on Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the ERS' internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the ERS' internal control. Accordingly, we do not express an opinion on the effectiveness of the ERS' internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected, on a timely basis. A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses or significant deficiencies may exist that were not identified.

Report on Compliance and Other Matters

As part of obtaining reasonable assurance about whether the ERS' financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the ERS' internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the ERS' internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

KKDLY LLC

Honolulu, Hawaii October 22, 2024