EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF HAWAII

COMPREHENSIVE ANNUAL FINANCIAL REPORT

FOR THE FISCAL YEAR ENDED JUNE 30, 2015

EMPLOYEES'
RETIREMENT SYSTEM
OF THE
STATE OF HAWAII

COMPREHENSIVE ANNUAL FINANCIAL REPORT

FOR THE FISCAL YEAR ENDED JUNE 30, 2015

Prepared by the Staff of the:
Employees' Retirement System of the State of Hawaii
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THOMAS WILLIAMS, Executive Director
KANOE MARGOL, Deputy Executive Director
VIJOY P. CHATTERGY, Chief Investment Officer

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Employees' Retirement System

of the State of Hawaii

INTRODUCTORY SECTION

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Letter of Transmittal

DAVID Y. IGE
GOVERNOR

THOMAS WILLIAMS
EXECUTIVE DIRECTOR

KANOE MARGOL
DEPUTY EXECUTIVE DIRECTOR

STATE OF HAWAII
EMPLOYEES' RETIREMENT SYSTEM

November 18, 2016

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

Dear Board Members:

We present the Comprehensive Annual Financial Report (CAFR) of the Employees' Retirement System for the fiscal year ended June 30, 2015. Responsibility for both the accuracy of the data, as well as the completeness and fairness of the presentation, rests with the management of the ERS. We trust that you and the members of the ERS will find this report useful in understanding your retirement system.

BACKGROUND

The ERS was established by the Legislature in 1925 to administer a retirement, disability, and survivor benefits program for State and county employees including teachers, professors, police officers, firefighters, judiciary employees, judges, and elected officials. The ERS is a qualified defined benefit public pension plan covered under Section 401(a) of the Internal Revenue Code. Hawaii Revised Statutes Chapter 88 and Hawaii Administrative Rules Title 6, Chapters 20 – 29 contain the language governing the pension trust. The ERS covers all eligible full-time and part-time State and county employees in the State of Hawaii. The ERS uses the entry age normal funding method to determine its current and future costs and appropriateness of its funding requirements. Funding for benefit payments comes from employer and member contributions, and investments.

Members of the Pension Trust belong to either the Contributory, Hybrid (a contributory class), or Noncontributory Class. Contributory and Hybrid Members make employee contributions to the Pension Trust and employers make contributions for employees of all three classes. Since 2006 most new employees of participating employers in the Pension Trust are required to join the Hybrid Class, except for certain employee groups that are required to be members of the Contributory Class. New benefit structures were established in 2011 for new members hired after June 30, 2012.

On March 31, 2015 the ERS' total membership of 132,846 was comprised of 67,310 active members, 44,283 retirees and beneficiaries, 7,413 inactive vested members and 13,840 inactive non-vested members. This compares to 119,006 under historical methodology used in the actuarial valuation that excludes

Employees' Retirement System
of the State of Hawaii

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The ERS is also responsible for the custody of the Social Security Contribution Fund for the State of Hawaii. The Social Security contributions withheld from employees are remitted directly to the Internal Revenue Service by the State. As an agency type fund that is custodial in nature, the ERS has limited discretion in the management of this fund.

MAJOR ACCOMPLISHMENTS AND INITIATIVES IN FY 2015

The ERS continued positive momentum with modest gains over the past few quarters ending the year with a moderate 4.2% return for the fiscal year ended June 30, 2015 and net assets of $14.5 billion. Although the investment returns (gross of fees, time weighted rate of return) during the current fiscal year have not been as strong as the previous few years, the overall positive performance to date will still benefit the System and its members.

Since the 2008 financial market turmoil, the ERS has undertaken multiple reforms to better structure the pension plan to meet its long-term obligations. Effective October 1, 2014, the Board of Trustees approved a new risk-based asset allocation strategy to increase insight and transparency to the risks embedded in the allocation decision to put risk management at the center of its asset allocation decisions. The new framework did not have a meaningful change in the strategies and fund managers responsible for the ERS's assets during FY 2015, thus the financial reporting is based on the asset allocation plan during the year. However, as we move towards a risk class framework to replace the asset class framework (as described in Investment Section of this CAFR), we believe that the portfolio will be well-positioned over the long-term to weather any potential economic downturns, achieve higher returns, and overall help improve the pension plan's sustainability.

The 2015 legislative session included four new laws posed to help reduce our unfunded liability. The "housekeeping" measure, Act 85 (S.B. 1087), will correct discrepancies regarding Hybrid vested death benefits in order to conform to the pension reforms of Act 163/2011. Act 86 (S.B. 1089) will require employees receiving workers' compensation benefits to have retirement contributions deducted from those benefits. It will also: (1) impose deadlines to claim for and initiate purchases of service credit by Contributory and Hybrid members, and (2) provide for payment based on actuarial cost, instead of a member's salary which is significantly lower. In addition to these bills, Act 87 (S.B. 1090) will help the ERS to finalize pensions sooner and promptly pay retirees their full retirement benefits. Act 88 (S.B. 1208) will clearly allow the ERS Board to hold closed-door meetings when necessary in order for the ERS to maintain a competitive advantage when investing or selling investment assets.

During FY 2015, the Board conducted a nationwide recruitment and search for the Executive Director of the ERS to with the departure of Wesley Machida who became the Director of Finance for the State of Hawaii Department of Budget and Finance in December 2014. On August 27, 2015, the ERS Board of Trustees announced that Thomas Williams, former executive director of the Wyoming Retirement System, had accepted the position of executive director of the ERS, effective November 2, 2015.

ACCOUNTING SYSTEM AND REPORTS

The accrual basis of accounting is used to record financial transactions. Expenses are recorded when the liability is incurred, and revenues are recorded in the accounting period in which they are earned and become measurable. Interest earned is accrued on a monthly basis. Accounts receivable at year end, in addition to accrued interest receivable, reflect accrued employer charges and investment proceeds due on sales that have not yet settled. Investments are recorded at fair value. Fixed assets are recorded at cost less accumulated depreciation.

The ERS adopted Governmental Accounting Standards Board (GASB) Statement No. 82, Pension Issues-an amendment of GASB Statement No. 67, No. 68 and No. 73 in FY 2015. . The major impact for the ERS reporting is to rescind the change implemented from GASB Statement No. 67 for FY 2014 that required almost all "member contributions" to be classified for financial statement reporting as "employer contributions" since these member contributions are "picked up" by the employer and treated as employer contributions under Internal Revenue Code section 414(h)(2).

The *Notes to the Financial Statements (Notes)* contain additional detailed information on the statutory provisions under which the ERS operates. In addition, the Notes include a summary of significant accounting policies, and provide explanatory information to help readers better understand the data contained in the financial statements.

The management of the ERS is responsible for and has implemented systems of internal accounting controls designed to provide reasonable assurances for the safeguarding of assets and the reliability of financial records. We believe that the internal accounting controls currently in place are adequate to meet the purpose for which they were intended. To the best of our knowledge and belief, the enclosed data, including the financial statements, supporting schedules and statistical tables is accurate in all material respects and is reported in a manner that fairly presents the financial position and results of the ERS' operations.

INVESTMENTS

The Board of Trustees diversified the ERS' investment portfolio to secure consistent, positive long-term investment returns while preserving capital. The diversification of investments through a long-term asset allocation strategy is generally regarded as the most important decision made in the investment process. A summary of the ERS' long-term asset allocation strategy for the fiscal year may be found in the Investment Section of this report. The new asset allocation strategy effective on October 1, 2014 is discussed in the Investment Section of this CAFR. The full Investment Policies, Guidelines, and Procedures Manual is available on the ERS website at http://ers.ehawaii.gov.

Professional investment managers have been retained to execute the Board's investment strategies and have full discretion within statutory provisions, Board policies and their respective guidelines. The investment managers retained by the Board as of June 30, 2015 are listed in the Investment Section.

Net investment income, including dividends, interest, other investment earnings, and gains/losses on the sale of investments was slightly more than $556 million in FY2015. This resulted in an investment gain of approximately 4.2% for the year, using rate of return methodologies that are generally accepted by the Global Investment Performance Standards (GIPS).

Letter of Transmittal (continued)

FUNDING AND ACTUARIAL OVERVIEW

In the June 30, 2015 report of the Fund's valuation our actuaries, Gabriel Roeder Smith & Company noted that that our unfunded actuarial accrued liability (UAAL) increased to $8.7 billion from $8.5 billion on June 30, 2014 based on the previous GASB reporting standards. Under the current market-based GASB standards effective in FY 2014, the Net Pension Liability increased to $8.7 billion on June 30, 2015 from $8.0 billion as of June 30, 2014. On the market basis, this represents a decrease in funded position to 62.4% for FY 2015 from 63.9% for FY 2014. The ERS full funding period remain unchanged at 26 years. This is a primarily from the effects of the 2011 pension reforms which became effective on July 1, 2012.

PROFESSIONAL SERVICES

Professional consultants are appointed by the Board of Trustees to perform professional services that are essential to the effective and efficient operation of the ERS. Opinions from KPMG LLP, the auditors for the ERS, and the actuary, Gabriel, Roeder, Smith & Company, are included in this report. Pension Consulting Alliance, Inc. is the ERS' investment consultant, and their report on the ERS' investment program and performance results is also included in this report.

ACKNOWLEDGEMENTS

This report is from the collaborative efforts of the ERS staff and consultants to provide extensive and reliable information as a basis for making management decisions, determining compliance with legal provisions, and for determining responsible stewardship of the assets contributed by the ERS' members and their employers. This report will be provided to the Governor, legislators, State and county departments and other interested parties.

Aloha,

Thomas Williams

Thomas Williams
Executive Director

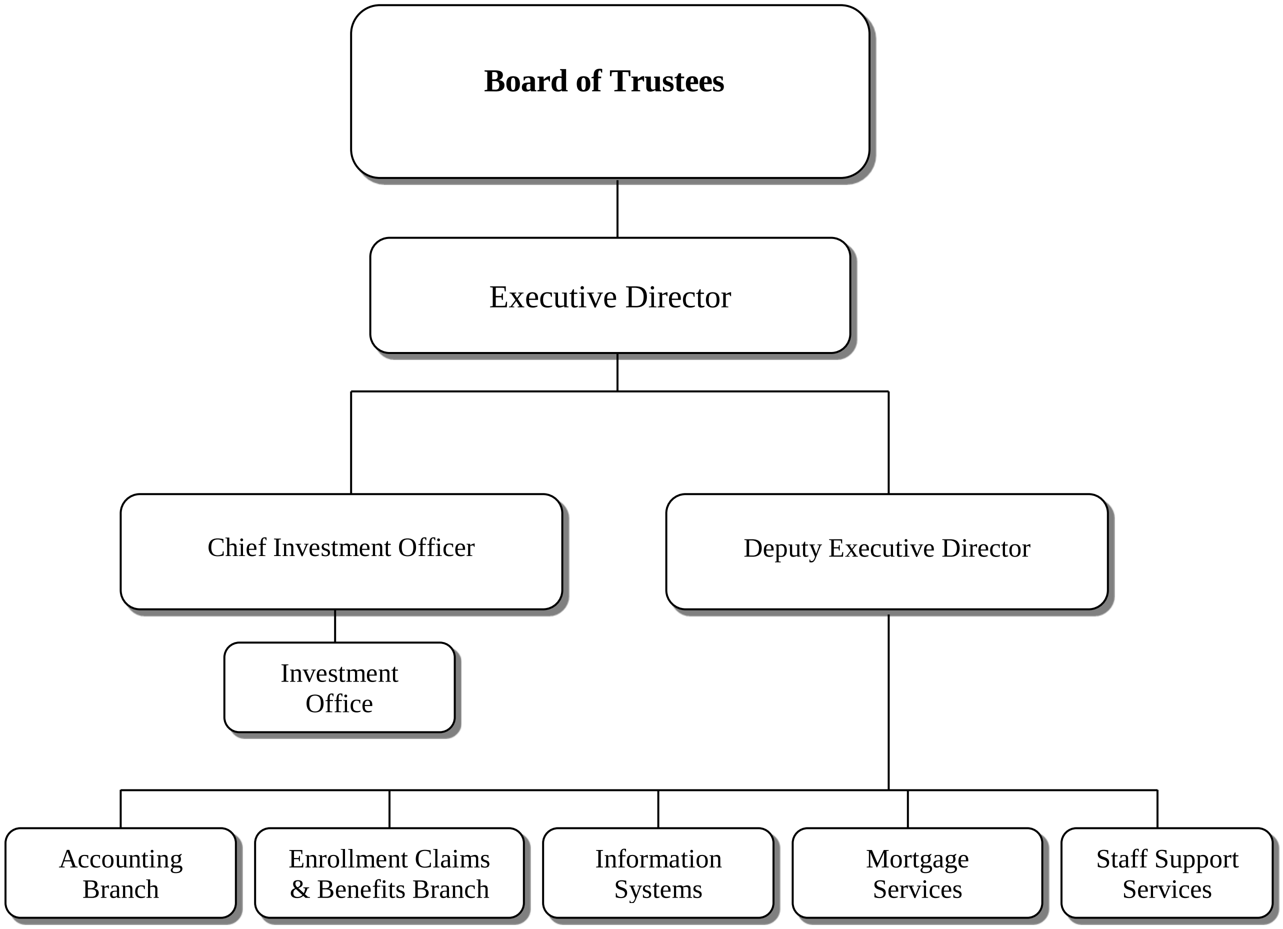
Board of Trustees

The Board of Trustees is the governing body of the Employees' Retirement System of the State of Hawaii, with certain areas of administrative control vested in the State Department of Budget and Finance.

Four of the eight members on the Board are elected by the membership: two general employees, a teacher and a retiree. Three members are citizens of the State, one of whom is an officer of a bank authorized to do business in the State or a person of similar experience, who are not employees and are appointed by the Governor. The State Director of Finance is an ex-officio member by statute.

	Date Current Term Began	**Date Term Ends**
Elected:		
Ms. Pilialoha E. Lee Loy, Chair	January 2, 2010	January 1, 2016
Mr. Patrick Frane	November 19, 2013	January 1, 2018
Ms. Jackie Ferguson-Miyamoto	January 2, 2014	January 1, 2020
Mr. Emmit A. Kane	January 2, 2014	January 1, 2020
Appointed:		
Mr. Vincent Barfield	August 11, 2011	January 1, 2017
Mr. Colbert M. Matsumoto	January 2, 2013	January 1, 2019
Mr. Jerry E. Rauckhorst	January 2, 2014	January 1, 2020
Ex-Officio:		
Mr. Wesley K. Machida	December 27, 2014	December 26, 2018

Organizational Structure



Executive Director	Thomas Williams
Deputy Executive Director	Kanoe Margol
Chief Investment Officer	Vijoy P. Chattergy

Actuary
Gabriel, Roeder, Smith and Company

Auditors
State of Hawaii, Office of the Auditor
KPMG LLP

Legal Advisor
Attorney General of the State of Hawaii

Medical Board
Dr. Patricia L. Chinn, Chair
Dr. Howman Lam, Member
Dr. Gerald J. McKenna, Member

** A list of investment professionals is located in the *Investment Section* of this CAFR.

Plan Summary

The Employees' Retirement System (ERS) of the State of Hawaii was established by the Legislature in 1925 to provide retirement, disability and survivor benefits for State employees, teachers, professors, county employees, police officers, firefighters, judges and elected officials.

The ERS is a qualified defined benefit pension plan under Section 401(a) of the Internal Revenue Code. As such, the ERS is exempt from federal income taxation on its investment earnings. Since January 1, 1988, member contributions have been tax deferred under Section 414(h) of the Internal Revenue Code.

Members are covered by the provisions of the Contributory, Hybrid or Noncontributory retirement class. Except for employees in certain positions who are required to be Contributory members, most new employees from July 1, 2006 are enrolled as Hybrid Members.

Those in the Contributory Class are required to make contributions to the ERS and may also be covered by Social Security. Employees in the following occupational groups are required to be members of the Contributory Class: police officers, firefighters, judges, elected officials, legislative officers, attorney general investigators, narcotics enforcement investigators, and public safety investigations staff investigators. As of March 31, 2015, 6,169 active employees were enrolled in the Contributory Class, or about 9.2% of our active members.

On July 1, 2006, the Hybrid Class became effective pursuant to Act 179/2004. Members in the Hybrid Class (a contributory benefit structure) must also contribute to the ERS and are generally covered by Social Security. The Hybrid Class covers most employees hired from July 1, 2006, as well as certain employees hired before July 1, 2006 who elected to change to Hybrid Membership. The Hybrid membership will continue to increase going forward as most new employees hired from July 1, 2006 will be required to become a Hybrid members. As of March 31, 2015, the Hybrid Class had 45,118 members or about 67.0% of the ERS' active membership.

Noncontributory Members do not make contributions to the ERS and are covered by Social Security. The Noncontributory Class covers employees hired from July 1 , 1984 to June 30, 2006, as well as employees hired before July 1, 1984 who elected to join the Noncontributory Class. As of March 31, 2015, there were 16,023 active employees in the Noncontributory Class, which represents over 23.8% of all active members on this date.

Most employees hired after June 30, 2012 fall under the new tier of benefits, contributions and vesting requirements as a result of legislation passed in 2011.

A summary of the general retirement benefits, including retirement options, for Contributory, Hybrid and Noncontributory members are on the following pages. For more detailed and current information on the contributions, benefits, eligibility and other plan details please visit the ERS website at http://ers.ehawaii.gov/.

Summary of Retirement Benefit Plan Provisions

Membership for employees hired prior to July 1, 2012 [(a)]

	Noncontributory	**Contributory**	**Hybrid**
Employee Contributions	No employee contributions	7.8% of salary	6.0% of salary
Normal Retirement			
Eligibility	Age 62 and 10 years credited service; ***or*** Age 55 and 30 years credited service	Age 55 and 5 years credited service	Age 62 and 5 years credited service; ***or*** Age 55 and 30 years credited service
Benefit	1-1/4% of average final compensation* times years of credited service	2% of average final compensation* times years of credited service	2% of average final compensation* times years of credited service, with a split formula for Noncontributory service at 1-1/4%

* Average final compensation (AFC) is an average of the highest salaries during any three years of credited service, excluding any salary paid in lieu of vacation or if ERS membership occurred prior to 1/1/71, AFC may be an average of the highest salaries during any five years of credited service including any salary paid in lieu of vacation.

	Noncontributory	**Contributory**	**Hybrid**
Early Retirement			
Eligibility	Age 55 and 20 years credited service	Any age and 25 years credited service	Age 55 with 20 years credited service
Benefit	Maximum allowance reduced 6% per year under age 62	Maximum allowance reduced 5% per year under age 55 plus 4% per year under age 50	Maximum allowance reduced 5% per year under age 62
Deferred Vesting			
Eligibility	10 years credited service	5 years credited service and contributions left in the ERS	5 years credited service and contributions left in the ERS
Benefit	Accrued maximum allowance payable as early as age 55 or at age 65 with 10 but less than 20 years of credited service	Accrued maximum allowance payable at age 55	Accrued maximum allowance payable as early as age 55 or at age 62 with 5 but less than 20 years of credited service

[(a)] Per Act 163/2012, SLH, the major changes to membership requirements, contribution amounts, and benefits structures for employees hired after June 30, 2012 are discussed on pages 17-21.

Summary of Retirement Benefit Plan Provisions (continued)

Membership for employees hired prior to July 1, 2012 (continued) [(a)]

	Noncontributory	**Contributory**	**Hybrid**
Annuity Savings Account			
Interest	Not applicable	4.5% per annum on employee contributions and accrued interest, ***or*** If hired after June 30, 2011, 2.0% per annum on employee contributions and accrued interest	4.5% per annum on employee contributions and accrued interest, ***or*** If hired after June 30, 2011, 2.0% per annum on employee contributions and accrued interest
Refund Eligibility	Not applicable	Contributions may be withdrawn upon retirement or termination of employment; upon refund, all service and any future retirement benefit will be forfeited	Contributions may be withdrawn upon retirement or termination of employment; upon refund, all service and any future retirement benefit will be forfeited
Refund Benefit			
- Terminates with less than 5 years credited service	Not applicable	Return of member's contributions and accrued interest	Return of member's contributions and accrued interest
- Terminates with 5 or more years of credited service	Not applicable	Return of member's contributions and accrued interest	Return of member's Hybrid contributions and accrued interest, times 150%; plus any non-Hybrid contributions and accrued interest
Ordinary Disability			
Eligibility	10 years credited service	10 years credited service	10 years credited service
Benefit	1-1/4% of AFC times years of credited service, unreduced for age (Minimum is 12.5% of AFC)	1-3/4% of AFC times years of credited service, unreduced for age (Minimum is 30% of AFC)	2% of AFC times years of credited service, unreduced for age; split formula for Noncontributory service at 1-1/4% (Minimum is 25% of AFC)

(a) Per Act 163/2012, SLH, the major changes to membership requirements, contribution amounts, and benefits structures for employees hired after June 30, 2012 are discussed on pages 17-21.

Summary of Retirement Benefit Plan Provisions (continued)

Membership for employees hired prior to July 1, 2012 (continued) [(a)]

	Noncontributory	**Contributory**	**Hybrid**
Service-Connected Disability			
Eligibility	Any age or credited service	Any age or credited service	Any age or credited service
Benefit	Lifetime pension of 35% of AFC ** For accidents occurring before July 1, 2004, accrued maximum allowance, but not less than 15% of AFC	Lifetime pension of 50% of AFC plus refund of member's contributions and accrued interest ** For accidents occurring before July 7, 1998, a different benefit is used	Lifetime pension of 35% of AFC plus refund of member's contributions and accrued interest
Ordinary Death			
Eligibility	Active employee at time of death with at least 10 years of credited service	Active employee at time of death with at least 1 year of service	Active employee at time of death with at least 5 years of service
Benefit	Surviving spouse/reciprocal beneficiary (until remarriage or reentry into a new reciprocal beneficiary relationship) and dependent children (up to age 18) receive a benefit equal to a percentage of member's accrued maximum allowance unreduced for age; ***or*** Option B (100% Joint and Survivor) lifetime pension for surviving spouse/reciprocal beneficiary if member was eligible for retirement at time of death.	Lump sum payment of member's contributions and accrued interest plus a percentage of the salary earned in the 12 months preceding death; ***or*** Option 3 (50% Joint and Survivor) lifetime pension if member was not eligible for retirement at the time of death, credited with at least 10 years of service, and one beneficiary designated; ***or*** Option 2 (100% Joint and Survivor) lifetime pension if member was eligible for retirement at the time of death and one beneficiary designated; ***or*** If less than 1 year of service, return of member's contributions and accrued interest.	Lump sum payment of member's Hybrid contributions and accrued interest (times 150%) plus return of non-Hybrid contributions and accrued interest; ***or*** Option 3 (50% Joint Survivor) lifetime pension if member was not eligible for retirement at the time of death, credited with at least 10 years of service and one beneficiary designated; ***or*** Option 2 (100% Joint Survivor) lifetime pension if member was eligible for retirement at the time of death, and one beneficiary designated; ***or*** If less than 5 years of service, return of member's contributions and accrued interest.

[(a)] Per Act 163/2012, SLH, the major changes to membership requirements, contribution amounts, and benefits structures for employees hired after June 30, 2012 are discussed on pages 17-21.

Summary of Retirement Benefit Plan Provisions (continued)

Membership for employees hired prior to July 1, 2012 (continued) [a]

	Noncontributory	**Contributory**	**Hybrid**
Service-Connected Death			
Eligibility	Any age or service	Any age or service	Any age or service
Benefit	Surviving spouse/reciprocal beneficiary receives monthly benefit equal to 30% of AFC (until remarriage or re-entry into a new reciprocal beneficiary relationship); additional benefits payable to surviving dependent children (up to age 18). If there is no spouse/reciprocal beneficiary or dependent children, no benefit is payable.	Lump sum payment of member's contributions and accrued interest to designated beneficiary, plus monthly benefit of 50% of AFC to surviving spouse/reciprocal beneficiary (until remarriage or re-entry into a new reciprocal beneficiary relationship). If there is no surviving spouse or reciprocal beneficiary, surviving dependent children (up to age 18) or dependent parents shall be eligible for a monthly benefit. If there is no spouse/reciprocal beneficiary or dependent children/parents, the ordinary death benefit shall be payable to the designated beneficiary.	Lump sum payment of member's contributions and accrued interest to designated beneficiary, plus monthly benefit of 50% of AFC to surviving spouse/reciprocal beneficiary (until remarriage or re-entry into a new reciprocal beneficiary relationship). If there is no surviving spouse or reciprocal beneficiary, surviving dependent children (up to age 18) or dependent parents shall be eligible for a monthly benefit. If there is no spouse/reciprocal beneficiary or dependent children/parents, the ordinary death benefit shall be payable to the designated beneficiary.
Post Retirement Benefit - For all types of retirements (service, disability or death)	Each retiree's original retirement allowance is increased by 2.5% on each July 1 beginning the calendar year after retirement. This cumulative benefit is not compounded and increases each year by another 2.5% of the original retirement allowance without a ceiling (i.e., 2.5% of the original retirement allowance the first year, 5% the second year, 7.5% the third year, etc.).		

[a] Per Act 163/2012, SLH, the major changes to membership requirements, contribution amounts, and benefits structures for employees hired after June 30, 2012 are discussed on pages 17-21.

Summary of Retirement Benefit Plan Provisions (continued)

Membership for employees hired prior to July 1, 2012 (continued) [(a)]

The plan provisions summarized in the preceding pages apply to teachers and most State and County employees, hired before July 1, 2012. Special provisions applicable to other groups of employees, hired by July 1, 2012, are summarized in Item A to D below:

A) Police officers, firefighters, investigators of the Department of the Attorney General, narcotic enforcement investigators, and public safety investigations staff investigators contribute 12.2% of their monthly salary to the ERS instead of 7.8%. These members may retire at age 55 with 5 years of credited service or at any age with 25 years of credited service and receive a retirement benefit of 2-1/2% of average final compensation (AFC) for each year of such service up to a maximum of 80% AFC, provided the last 5 years is credited service in any of these occupations.

B) Judges, elected officials, and legislative officers may retire at age 55 with at least 5 years of credited service, or at any age with at least 10 years of credited service and receive a pension of 3-1/2% of AFC for each year of such service plus an annuity from their contributions allocable to the period of such service. This benefit cannot exceed 75% of the AFC. Judges hired after June 30, 1999 need 25 years of credited service in order to retire before age 55.

C) Sewer workers in specified classifications and water safety officers may retire at any age if they are credited with 25 years of such service with the last 5 or more years in these occupations. Hybrid members in this job category are required to contribute 9.75% of their salary to the ERS.

D) Emergency medical technicians (EMT) may retire at any age if they are credited with 30 years of such service with the last 5 or more years in these occupations effective June 30, 2003. The years of service to qualify for early retirement is gradually being reduced through June 30, 2008 when 25 years of EMT service will qualify these members for early retirement. Hybrid members in this job category are required to contribute 9.75% of their salary to the ERS.

[(a)] Per Act 163/2012, SLH, the major changes to membership requirements, contribution amounts, and benefits structures for employees hired after June 30, 2012 are discussed on pages 17-21.

Summary of Retirement Benefit Plan Provisions (continued)

Membership for employees hired after June 30, 2012 [b]

	Noncontributory	Contributory	Hybrid
Employee Contributions	No employee contributions	9.8% of salary	8.0% of salary
Normal Retirement			
Eligibility	Age 62 and 10 years credited service; ***or*** Age 55 and 30 years credited service	Age 60 and 10 years credited service	Age 65 and 10 years credited service; ***or*** Age 60 and 30 years credited service
Benefit	1-1/4% of average final compensation* times years of credited service	1.75% of average final compensation* times years of credited service	1.75% of average final compensation* times years of credited service, with a split formula for Noncontributory service at 1-1/4%

* Average final compensation (AFC) is an average of the highest salaries (limited to base pay and shortage differentials) during any five years of credited service, excluding any salary paid in lieu of vacation.

	Noncontributory	Contributory	Hybrid
Early Retirement			
Eligibility	Age 55 and 20 years credited service	Age 55 with 25 years credited service	Age 55 with 20 years credited service
Benefit	Maximum allowance reduced 6% per year under age 62	Maximum allowance reduced 5% per year under age 60 plus 4% per year under age 55	Maximum allowance reduced 5% per year under age 65
Deferred Vesting			
Eligibility	10 years credited service	10 years credited service and contributions left in the ERS	10 years credited service and contributions left in the ERS
Benefit	Accrued maximum allowance payable as early as age 55 or at age 65 with 10 but less than 20 years of credited service	Accrued maximum allowance payable at age 60, or at age 55 with 25 years of service with age reduction	Accrued maximum allowance payable as early at age 65 or at age 60 with 30 years of service, or at age 55 with 20-29 years of credited service with age reduction

[b] Membership requirements, contribution amounts, and benefits structures for employees hired before July 1, 2012 are discussed on pages 12-16.

Summary of Retirement Benefit Plan Provisions (continued)

Membership for employees hired after June 30, 2012 (continued) [(b)]

	Noncontributory	**Contributory**	**Hybrid**
Annuity Savings Account			
Interest	Not applicable	2.0% per annum on employee contributions and accrued interest	2.0% per annum on employee contributions and accrued interest
Refund Eligibility	Not applicable	Contributions may be withdrawn upon retirement or termination of employment; upon refund, all service and any future retirement benefit will be forfeited	Contributions may be withdrawn upon retirement or termination of employment; upon refund, all service and any future retirement benefit will be forfeited
Refund Benefit			
- Terminates with less than 10 years credited service	Not applicable	Return of member's contributions and accrued interest	Return of member's contributions and accrued interest
- Terminates with 10 or more years of credited service	Not applicable	Return of member's contributions and accrued interest	Return of member's Hybrid contributions and accrued interest, times 120%; plus any non-Hybrid contributions and accrued interest
Ordinary Disability			
Eligibility	10 years credited service	10 years credited service	10 years credited service
Benefit	1-1/4% of AFC times years of credited service, unreduced for age (Minimum is 12.5% of AFC)	1-3/4% of AFC times years of credited service, unreduced for age (Minimum is 30% of AFC)	1-3/4% of AFC times years of credited service, unreduced for age (Minimum is 25% of AFC)

[(b)] Membership requirements, contribution amounts, and benefits structures for employees hired before July 1, 2012 are discussed on pages 12-16.

Summary of Retirement Benefit Plan Provisions (continued)

Membership for employees hired after June 30, 2012 (continued) [b]

	Noncontributory	Contributory	Hybrid
Service-Connected Disability			
Eligibility	Any age or credited service	Any age or credited service	Any age or credited service
Benefit	Lifetime pension of 35% of AFC	Lifetime pension of 50% of AFC plus refund of member's contributions and accrued interest	Lifetime pension of 35% of AFC plus refund of member's contributions and accrued interest
Ordinary Death			
Eligibility	Active employee at time of death with at least 10 years of credited service	Active employee at time of death with at least 1 year of service	Active employee at time of death with at least 10 years of service
Benefit	Surviving spouse/reciprocal beneficiary (until remarriage or reentry into a new reciprocal beneficiary relationship) and dependent children (up to age 18) receive a benefit equal to a percentage of member's accrued maximum allowance unreduced for age; ***or*** Option B (100% Joint and Survivor) lifetime pension for surviving spouse/reciprocal beneficiary if member was eligible for retirement at time of death.	Lump sum payment of member's contributions and accrued interest plus a percentage of the salary earned in the 12 months preceding death; ***or*** Option 3 (50% Joint and Survivor) lifetime pension if member was not eligible for retirement at the time of death, credited with at least 10 years of service, and one beneficiary designated; ***or*** Option 2 (100% Joint and Survivor) lifetime pension if member was eligible for retirement at the time of death and one beneficiary designated; ***or*** If less than 1 year of service, return of member's contributions and accrued interest.	Lump sum payment of member's Hybrid contributions and accrued interest (times 120%) plus return of non-Hybrid contributions and accrued interest; ***or*** Option 3 (50% Joint Survivor) lifetime pension if member was not eligible for retirement at the time of death, credited with at least 10 years of service and one beneficiary designated; ***or*** Option 2 (100% Joint Survivor) lifetime pension if member was eligible for retirement at the time of death, and one beneficiary designated; ***or*** If less than 10 years of service, return of member's contributions and accrued interest.

[b] **M**embership requirements, contribution amounts, and benefits structures for employees hired before July 1, 2012 are discussed on pages 12-16.

Summary of Retirement Benefit Plan Provisions (continued)

Membership for employees hired after June 30, 2012 (continued) [(b)]

	Noncontributory	Contributory	Hybrid
Service-Connected Death			
Eligibility	Any age or service	Any age or service	Any age or service
Benefit	Surviving spouse/reciprocal beneficiary receives monthly benefit equal to 30% of AFC (until remarriage or re-entry into a new reciprocal beneficiary relationship); additional benefits payable to surviving dependent children (up to age 18). If there is no spouse/reciprocal beneficiary or dependent children, no benefit is payable.	Lump sum payment of member's contributions and accrued interest to designated beneficiary, plus monthly benefit of 50% of AFC to surviving spouse/reciprocal beneficiary (until remarriage or re-entry into a new reciprocal beneficiary relationship). If there is no surviving spouse or reciprocal beneficiary, surviving dependent children (up to age 18) or dependent parents shall be eligible for a monthly benefit. If there is no spouse/reciprocal beneficiary or dependent children/parents, the ordinary death benefit shall be payable to the designated beneficiary.	Lump sum payment of member's contributions and accrued interest to designated beneficiary, plus monthly benefit of 50% of AFC to surviving spouse/reciprocal beneficiary (until remarriage or re-entry into a new reciprocal beneficiary relationship). If there is no surviving spouse or reciprocal beneficiary, surviving dependent children (up to age 18) or dependent parents shall be eligible for a monthly benefit. If there is no spouse/reciprocal beneficiary or dependent children/parents, the ordinary death benefit shall be payable to the designated beneficiary.
Post Retirement Benefit - For all types of retirements (service, disability or death)	Each retiree's original retirement allowance is increased by 1.5% on each July 1 beginning the calendar year after retirement. This cumulative benefit is not compounded and increases each year by another 1.5% of the original retirement allowance without a ceiling (i.e., 1.5% of the original retirement allowance the first year, 3% the second year, 4.5% the third year, etc.).		

[(b)] Membership requirements, contribution amounts, and benefits structures for employees hired before July 1, 2012 are discussed on pages 12-16.

Membership for employees hired after June 30, 2012 (continued) [(b)]

The plan provisions summarized in the preceding pages apply to teachers and most State and County employees, hired after June 30, 2012. Special provisions applicable to other groups of employees, hired after June 30, 2012, are summarized in Item A to D below:

A) Police officers, firefighters, investigators of the Department of the Attorney General, narcotic enforcement investigators, and public safety investigations staff investigators contribute 14.2 % of their monthly salary to the ERS instead of 9.8%. These members may retire at age 60 with 10 years of credited service or at age 55 with 25 years of credited service and receive a retirement benefit of 2-1/4% of average final compensation (AFC) for each year of such service up to a maximum of 80% AFC, provided the last 5 years is credited service in any of these occupations.

B) Judges may retire at age 60 with at least 10 years of credited service, or at age 55 with at least 25 years of credited service and receive a pension of 3% of AFC for each year of such service plus an annuity from their contributions allocable to the period of such service. Similarly, elected officials and legislative officers may retire at any age with 10 years of elected, legislative or mixed service and receive a pension of 3% of AFC for each year of service plus an annuity from their contributions allocable to the period of such service. These benefits cannot exceed 75% of the AFC.

C) Contributory Class sewer workers in specified classifications, water safety officers and emergency medical technicians may retire at age 60 with 10 years of credited service or at age 55 with 25 years of such service with the last 5 or more years in these occupations.

D) Hybrid Class sewer workers in specified classifications, water safety officers and emergency medical technicians may retire at age 65 with 10 years of credited service or at age 55 with 25 years of such service with the last 5 or more years in these occupations. They are required to contribute 11.75% instead of 8% of their salary to the ERS.

[(b)] Membership requirements, contribution amounts, and benefits structures for employees hired before July 1, 2012 are discussed on pages 12-16.

Summary of Retirement Benefit Plan Provisions (continued)

Taxation of Benefits

All retirement benefits are subject to Federal income tax but are exempt from Hawaii State income tax. Certain occupational (work related) disability benefits are exempt from Federal income tax. Arrangements to initiate voluntary withholding of Federal income tax can be made at any time. The ERS provides retirees with a 1099-R tax form on or before January 31 of each year.

Additional Benefits

Retirees, their spouses and dependent children under age 19 are eligible to receive life insurance, medical, dental, vision, and prescription drug coverage from the Employer-Union Health Benefits Trust Fund (EUTF) if they were hired before July 1, 1996, and retire with at least 10 years of continuous credited service. If they were first hired after June 30, 1996, health benefits are available on a cost-sharing basis as long as the member retires with at least 10 years of continuous service. A dependent of a retiree who is a full-time student at an accredited college, university or technical school and who is 19 through 26 years old is also eligible for coverage. A retiree with a hire date after July 1, 2001 will only receive coverage for him or herself on a cost sharing basis.

Unused sick leave is excluded from credited service in determining health benefit coverage.

Retirees are responsible for premiums in excess of the amount of employer contributions. Retirees and their spouses are eligible to receive a reimbursement of the Medicare Part B medical insurance premium. More information is available on the EUTF's website at www.eutf.hawaii.gov.

Applying for Retirement

A service retirement application can be filed with the ERS 150 days but no less than 30 days prior to the effective date of retirement. Once the application has been filed, cancellation prior to the effective date of retirement is permitted; however, the law requires mandatory retirement upon the third application. Members may obtain retirement information and application forms at the following locations:

Oahu Office
City Financial Tower
201 Merchant Street, Suite 1400
Honolulu, HI 96813
Phone: (808) 586-1735
Fax: (808) 587-5766

Kauai Office
3060 Eiwa Street, Room 302
Lihue, Hawaii 96766
Phone: (808) 274-3010
Fax: (808) 241-3193

Hawaii Office
101 Aupuni Street, Suite 208
Hilo, Hawaii 96720
Phone: (808) 974-4076
Fax: (808) 974-4078

Maui Office
54 S. High Street, Room 218
Wailuku, Hawaii 96793
Phone: (808) 984-8181
Fax: (808) 984-8183

Molokai and Lanai
Toll-free to Oahu:
1-800-468-4644, ext 61735

Continental U.S. only
Toll free to Oahu
1-888-659-0708

Summary of Retirement Benefit Plan Provisions (continued)

Counseling Service

It is the policy of the ERS to render every possible service to its members; however, as thousands of inquiries are received and answered annually, in addition to the actual processing of claims and benefits, present staff and appropriations restrict this service to those members whose immediate welfare is dependent upon the prompt settlement of benefits. Members who are definite about retirement should contact the ERS to request formal retirement estimates. For members who are not planning immediate retirement and interested in their benefit status a retirement benefit calculator and other retirement information are available on the ERS' website at http://ers.ehawaii.gov/.

Retirement Options

CONTRIBUTORY AND HYBRID MEMBERS

Maximum Allowance: The member receives a lifetime maximum allowance; at death, the difference between the value of the member's contributions at the time of retirement and the retirement allowance paid prior to death is paid to the designated beneficiary(ies) or estate.

Option One: The member receives a reduced lifetime allowance based on age; at death, the difference between the initial insurance reserve and the retirement allowance paid prior to death is paid to the designated beneficiary(ies) or estate. In lieu of the lump-sum balance, the beneficiary may elect to receive an allowance for life based on the value of the balance; provided that the allowance is not less than $100 per month.

Option Two (100% Joint and Survivor): The member receives a reduced lifetime allowance based on ages of both the member and the sole beneficiary and at death; the same allowance is paid to the designated beneficiary for life. Should the designated beneficiary predecease the retiree, another beneficiary cannot be named and all payments will cease at the retiree's death. For retirements on or after December 1, 2004, should the beneficiary predecease the retiree, the retiree's reduced pension "pops up" or increases to the corresponding Maximum Allowance instead of remaining at the reduced amount.

Option Three (50% Joint and Survivor): This option is similar to Option Two. The member receives a reduced lifetime allowance which is higher than Option Two and is based on ages of both the member and the sole beneficiary; however, at death one-half of the allowance is paid to the designated beneficiary for life. Like Option Two, should the designated beneficiary predecease the retiree, another beneficiary cannot be named and all payments will cease at the retiree's death. For retirements on or after December 1, 2004, should the beneficiary predecease the retiree, the retiree's reduced pension "pops up" or increases to the corresponding Maximum Allowance instead of remaining at the reduced amount.

Option Four: This option allows the member to devise a plan that will provide a benefit according to the member's specifications. It requires certification by the Actuary and approval of the Board of Trustees. The following Option Four plans have been approved:

Combination of Options Five and Maximum Allowance: The member receives a reduced lifetime allowance and is allowed to withdraw the pre-1987 nontaxable contributions, 50% of accumulated contributions, or 75% of accumulated contributions (Hybrid members are not allowed the 75% option); at death, the difference between the value of the member's contributions at the time of retirement and the retirement allowance paid prior to death is paid to the designated beneficiary(ies) or estate.

Combination of Options Five and One: The member receives a reduced lifetime allowance and is allowed to withdraw the pre-1987 nontaxable contributions, 50% of accumulated contributions, or 75% of accumulated contributions (Hybrid members are not allowed the 75% option); at death, the difference between the initial insurance reserve and the retirement allowance paid prior to death is paid to the designated beneficiary(ies) or estate.

Combination of Options Five and Two: The member receives a reduced lifetime allowance based on ages of both the member and the sole beneficiary, and is allowed to withdraw the pre-1987 nontaxable contributions, 50% of accumulated contributions, or 75% of accumulated contributions (Hybrid members are not allowed the 75% option); at death, the same allowance is paid to the designated beneficiary for life. As in the case of Option Two, should the designated beneficiary predecease the retiree, another beneficiary cannot be named and all payments will cease at the retiree's death. For retirements on or after December 1, 2004, should the beneficiary predecease the retiree, the retiree's reduced pension "pops up" or increases to the corresponding Maximum Allowance instead of remaining at the reduced amount.

Retirement Options (continued)

CONTRIBUTORY AND HYBRID MEMBERS (continued)

Combination of Options Five and Three: The member receives a reduced lifetime allowance based on ages of both the member and the sole beneficiary, and is allowed to withdraw the pre-1987 nontaxable contributions, 50% of accumulated contributions, or 75% of accumulated contributions (Hybrid members are not allowed the 75% option); at death, one-half of the allowance is paid to the designated beneficiary for life. As in the case of Option Three, should the designated beneficiary predecease the retiree, another beneficiary cannot be named and all payments will cease at the retiree's death. For retirements on or after December 1, 2004, should the beneficiary predecease the retiree, the retiree's reduced pension "pops up" or increases to the corresponding Maximum Allowance instead of remaining at the reduced amount.

Option Five: The member receives a reduced lifetime allowance and is allowed to withdraw all accumulated contributions; at death, there is no further benefits payable.

Option Four and Option Five are restricted to those members with at least ten years of credited service excluding unused sick leave credit.

Regardless of the option selected, should death of the Contributory or Hybrid member occur during the first year of retirement, the designated beneficiary may elect to receive benefits as if death had occurred immediately prior to retirement in lieu of the death benefits described above.

NONCONTRIBUTORY MEMBERS

Maximum Allowance: The member receives a lifetime pension and at death, there is no further benefit payable.

Option A (50% Joint and Survivor): The member receives a reduced lifetime pension and at death, one-half of the pension is paid to the sole designated beneficiary for life. Should the designated beneficiary predecease the retiree, another beneficiary cannot be named and all payments will cease upon the retiree's death. For retirements on or after December 1, 2004, should the beneficiary predecease the retiree, the retiree's reduced pension "pops up" or increases to the corresponding Maximum Allowance instead of remaining at the reduced amount.

Option B (100% Joint and Survivor): The member receives a reduced lifetime pension and at death, the same pension is paid to the sole designated beneficiary for life. Like Option A, should the designated beneficiary predecease the retiree, another beneficiary cannot be named and all payments will cease upon the retiree's death. For retirements on or after December 1, 2004, should the beneficiary predecease the retiree, the retiree's reduced pension "pops up" or increases to the corresponding Maximum Allowance instead of remaining at the reduced amount.

Option C (Ten-Year Guarantee): The member receives a reduced lifetime pension. Should death occur within ten years of retirement, the same pension will be paid to the designated beneficiary, or otherwise to the retiree's estate for the balance of the ten-year period. Should the designated beneficiary predecease the retiree, another beneficiary can be named.

Regardless of the option selected, should death occur during the first year of retirement, the designated beneficiary may elect to receive benefits under Option B in lieu of the death benefits described above, provided that if the retiree would not have been permitted by applicable law or the rules of the Board to name the designated beneficiary under Option B, the designated beneficiary may elect to receive the death benefit under Option A.

Legislative Highlights 2015

The following Acts were passed by the 2015 Legislature and approved by the Governor. . For more information on these and other legislation, you may visit the website at www.capitol.hawaii.gov.

Act 85 (SB1087): Relating to the Employees' Retirement System Housekeeping
This Act includes housekeeping measures to be consistent with the primary intent of Act 163/2011 which was to help reduce the ERS' unfunded liability.

- This Act requires 10 years of service for new Hybrid members in order to receive the vested death benefits of members who terminate and pass away after leaving government service but before retirement the same as those for vested refunds. In addition, this Act reduces the vested lump sum benefit payable to the member's beneficiary to be consistent with Act 163 benefits (i.e., from 150% of the members accumulated contributions to 120%).
- Effective: June 5, 2015

Act 86 (SB1089): Relating to Service Credit Purchases by Members of the Employees' Retirement System
The intent of this Act is to help improve the ERS funded status by properly funding membership service credit for Contributory and Hybrid members.

- Requires that an employee receiving workers' compensation benefits have retirement contributions deducted from those benefits contemporaneously with the payment of those wage replacement benefits. Also requires members on unpaid leave of absences to make contributions (required as a condition to inclusion of membership) within one year after the return from leave of absence.
- Establishes deadlines (1) for members who join the ERS after June 30, 2016 to claim for previous service and for military service credit; and (2) for starting payments to acquire previous service, military service and unpaid leaves.
- After June 30, 2020, the calculation of the cost to purchase service will be based on the actuarial cost compared to current percentage-of-pay methodology.
- Effective: June 5, 2015

Act 87 (SB1090): Reporting Requirements of Participating Employers to the Employees' Retirement System
The purpose of this Act is to improve the reporting process of payroll and personnel data by participating employers to the ERS. The Act:

- Authorizes the ERS to obtain payroll and personnel transactions (including adjustments) from the State and counties by requiring employers to report the information electronically in an ERS approved format by July 1, 2020.
- Starting July 1, 2020, if not compliant, employers will be required to pay their employer contributions at the beginning of the following fiscal year (rather than on a monthly basis) with interest applied to late payments.
- ERS will monitor employers' progress with reports to the legislature during sessions 2016 through 2020, effective June 5, 2015.
- Effective: July 1, 2020

Act 88 (SB1087): Relating to the Employees' Retirement System Housekeeping
This Act confirms the authority of the ERS board to meet in executive session to consider confidential information related to investments subject to the deliberative process privilege.

- Effective: June 5, 2015

Employees' Retirement System

of the State of Hawaii

Submitted by

THE AUDITOR
STATE OF HAWAII

FINANCIAL SECTION

Independent Auditors' Report

KPMG LLP
Suite 2100
1003 Bishop Street
Honolulu, HI 96813-6400

The Auditor
State of Hawaii:

Report on the Financial Statements

We have audited the accompanying financial statements of the Employees' Retirement System of the State of Hawaii (the ERS) as of and for the year ended June 30, 2015 and the related notes to the financial statements, which collectively comprise the ERS' basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal controls relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. 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. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements 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 entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting principles used and the reasonableness of significant estimates made by management, as well as evaluating the overall presentation of the financial statements.

The Auditor
State of Hawaii:

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Employees' Retirement System of the State of Hawaii as of June 30, 2015, and the changes in fiduciary net position for the year then ended, in conformity with U.S. generally accepted accounting principles.

Emphasis of Matter

As discussed in Note C(1) to the financial statements, in 2015, the ERS adopted Government Accounting Standards Board Statement No. 82, *Pension Issues – an amendment of GASB Statements No. 67, No. 68, and No. 73*. Our opinion is not modified with respect to this matter.

Other Matters

Required Supplementary Information

U.S. generally accepted accounting principles require that the management's discussion and analysis on pages 31 through 37 and required supplementary information including the schedule of changes in the employers' net pension liability and related ratios, employers' net pension liability, employer contributions and investment returns on pages 71 through 76 be presented to supplement the basic financial statements. Such information, 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.

Supplementary and Other 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 combining schedule of changes in fiduciary net position, social security contribution

The Auditor
State of Hawaii

fund, statement of changes in assets and liabilities, schedules of administrative expenses and investment expenses, and the Introductory, Investment, Actuarial and Statistical sections are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The combining schedule of changes in fiduciary net position, social security contribution fund, statement of changes in assets and liabilities, schedules of administrative expenses and investment expenses are 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. Such information 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 combining schedule of changes in fiduciary net position, social security contribution fund, statement of changes in assets and liabilities, schedules of administrative expenses and fairly stated in all material respects in relation to the basic financial statements taken as a whole.

The information contained in the Introductory, Investment, Actuarial, and Statistical sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on them.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated November 18, 2016 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 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 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.

KPMG LLP

Honolulu, Hawaii
November 18, 2016

Management's Discussion and Analysis (Unaudited)

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, 2015. 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 ERS Comprehensive Annual Financial Report (CAFR). For more detailed information pertaining to the ERS' financial activities, the reader should also review the actual financial statements, including the notes and supplementary schedules.

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 also oversees the short-term investments of the federal Social Security employer contributions for the State in the Social Security Contribution Fund (Contribution Fund).

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, while the Contribution Fund is an agency type fund that is custodial in nature. 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.

The ERS adopted Governmental Accounting Standards Board (GASB) Statement No. 82, *Pension Issues-an amendment of GASB Statement No. 67, No. 68 and No. 73,* in 2015. As a result, certain FY 2014 amounts for contributions have been reclassified to be consistent with the current year reporting.

The objective of GASB Statement No. 82 is to address certain issues that have been raised with respects to GASB Statement No. 67, No. 68 and No. 73, regarding (1) the presentation of payroll-related measures in required supplementary information, (2) the selection of assumptions and the treatment of deviations from the guidance in an Actuarial Standard of Practice for financial reporting purposes, and (3) the classification of payments made by employers to satisfy employee (plan member) contribution requirements. The major impact for the ERS reporting is to rescind the change implemented for FY 2014 that required almost all "member contributions" to be classified for financial statement reporting as "employer contributions" since these member contributions are "picked up" by the employer and treated as employer contributions under Internal Revenue Code section 414(h)(2). The new standards are discussed in more detail later in the applicable sections of this MD&A and the Notes to Financial Statements.

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, 2015, and the related statement of changes in fiduciary net position during the fiscal year from July 1, 2014 to June 30, 2015 (FY 2015). 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 Schedules of Changes in the Employers' Net Pension Liability and Related Ratios, Employers' Net Pension Liability, Employer Contributions 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.
- The remaining supplementary information are derived from and relate 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.

Financial Highlights

- While the fiduciary net position restricted for pension benefits (or net assets) increased during FY 2015 to $14.5 billion, the funded status of ERS decreased slightly during year. This represents an increase of $0.3 billion, 2.1%, from the fiduciary net position restricted for pension benefits of $14.2 billion as of June 30, 2014.
- In FY 2015 the ERS earned a moderate 4.2% return, down from FY 2014, when the ERS achieved the returns of 17.8% on its investment portfolio, (gross of fees) 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 this CAFR). The investment program underperformed its actuarial goal and investment benchmark of 7.65% for the one-year period. Under GASB Statement No. 67 pension reporting standards, the annual money-weighted return on ERS' pension plan investments, net of pension plan investment expense, was 4.0% and 17.9% for FY 2015 and FY 2014, respectively.

  Effective October 1, 2014, the Board of Trustees of the System approved the adoption of a change in its asset allocation policy from the asset-class policy to a new risk-based asset allocation framework within the categories of Broad Growth, Principal Protection, Real Estate and Real Return. The results of operations for these FY 2015 financial statements are prepared on the historical asset-based investment strategy since these policies were in effect for the entire fiscal year, except for fixed income which transitioned to the new risk based strategy in the last quarter of the year. Please refer to Note F1 later in Notes to Financial Statements and the Investment Section of this CAFR for more detailed information on the asset allocation policy.
- There was no legislation implemented in 2015 that significantly impacts the pension trust. The BOT reduced the nominal investment return target rate for the ERS investment portfolio from 7.75% at June 30, 2014 to 7.65% as of June 30, 2015 while the payroll growth and inflation assumptions remained constant at 3.5% and 3.0%, respectively.
- Total pension liability as of June 30, 2015 increased to $23.2 billion from June 30, 2014 that was $22.2 billion, while the corresponding net pension liability was $8.7 billion and $8.0 billion, respectively. Covered payroll for the ERS increased in FY 2015 to $4.0 billion from FY 2014 total of $3.8 billion, for 5.3% increase.

- The fiduciary net position as a percentage of total pension liability was 62.4% and 63.9% as of June 30, 2015 and June 30, 2014, while the funded ratio on an actuarial basis increased to 62.2% from 61.4%, 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 $82.1 million during FY 2015, or 9.6%. Most of the increase is due to an increase in required contribution rates paid by the employers for all employee groups, and to a lesser extent an increase in member contributions with more active members being required to contribute, and an increase in new employees contributing at higher contribution rates. In accordance with 2011 legislation, the employer contribution rate will increase at the beginning of the next fiscal year and new members will pay a higher contributions rate. 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.
- Total retirement benefit payments increased by $48.3 million, or 4.3%, to $1,170.7 million in FY 2015 from $1,122.4 million in FY 2014. Pension benefits continues to increase due to 2.8% more retirees and beneficiaries (44,283 in 2015 versus 43,087 in 2014), an increase in the average pension benefit for new retirees, and the annual 2.5% postretirement increase.
- Administrative expenses increased $1.4 million, to $14.0 million in FY 2015 from $12.6 million in FY 2014 or 11.1% mainly due to the increase in payroll related costs. Administrative expenses for all years were within the ERS' budgeted amounts.

Analysis of Fiduciary Net Position Restricted for Pension Trust

Summary of Fiduciary Net Position
June 30, 2015 and 2014
(Dollars in millions)

	2015	2014	FY 2015 % change
Assets:			
Cash and cash equivalents and short-term investments	$ 656.5	$ 421.3	55.8 %
Receivables	213.5	189.1	12.9
Investments	14,145.3	14,064.0	0.6
Invested securities lending collateral	1,232.8	1,233.1	0.0
Equipment	8.3	10.1	(17.8)
Total assets	16,256.4	15,917.6	2.1
Liabilities			
Securities lending liability	1,232.8	1,233.1	0.0
Investment accounts and other payables	518.1	481.5	7.6
Total liabilities	1,750.9	1,714.6	2.1
Fiduciary net position restricted for pensions	$ 14,505.5	$ 14,203.0	2.1

Summary of Changes in Fiduciary Net Position
June 30, 2015 and 2014
(Dollars in millions)

	2015	2014	FY 2015 % change
Additions:			
Contributions	$ 941.3	$ 859.2	9.6 %
Net investment income	556.4	2,175.5	(74.4)
Total additions	1,497.7	3,034.7	(50.6)
Deductions:			
Retirement benefit payments	1,170.7	1,122.4	4.3
Refund of contributions	10.5	8.5	23.5
Administrative expenses	14.0	12.6	11.1
Total deductions	1,195.2	1,143.5	4.5
Increase in fiduciary net position	$ 302.5	$ 1,891.2	(84.0)

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.

The ERS investment portfolio earned 4.2% on investments (gross of fees time-weighted rate of returns) during due to the strength of the domestic public private equity markets during the year compared to 17.8% in FY 2014. Total net investment income was $556.4 in FY 2015 and $2,175.5 in FY 2014.

Real estate, private equity and domestic equity asset-type allocations exceeded the 7.65% investment benchmark for FY 2015 with returns of 18.7%, 12.8% and 8.1%, respectively. Other classes with positive returns that did not exceed the benchmark include international fixed income at 6.8%, covered calls at 5.6%, real return at 5.4% diversified fixed-income at 1.9%. Only international equity incurred losses at -4.3% during the year.

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.

The asset distribution of the ERS' investment securities for the pension trust, excluding pending trade settlements and securities lending collateral, at June 30, 2015 and 2014 is presented below at fair value. Investment balances between the asset classes will change over time based on market sectors' performance and our rebalancing efforts to maintain asset allocation targets. Changes will also occur for financial reporting since certain real estate and alternative investments are reported on the consolidated method of accounting using the value of the underlying investments since ERS is the majority owner of the business organization. Please refer to the Investment Section of the CAFR for a discussion on asset allocation plan targets and investments by investment strategy.

Investments in short-term securities and cash are generally held by external investment managers for liquidity to settle pending trades and investments, and should not exceed 5-10 percent of the investments for certain managers based on their investment mandate. These amounts reported on the financial statements also include cash requirements used by ERS to fund pension benefits and transition amounts between individual investments. Fluctuations will occur based on the trading activity and timing of the settlements. The changes during FY 2015 are mainly due to positive investment returns in most asset classes and to a lesser extent asset rebalancing.

Asset Class
June 30, 2015 and 2014
(Dollars in millions)

	2015	%	2014	%
Short term investments and cash	$ 656.5	4.4 %	$ 421.3	2.9 %
Equity securities	9,261.5	62.6	9,450.3	65.2
Fixed income	2,807.1	19.0	2,670.1	18.4
Real estate	1,188.5	8.0	1,192.6	8.2
Alternative investments	888.2	6.0	751.1	5.3
Total investment assets	14,801.8	100.0	14,485.4	100.0
Less loans on real estate and alternative investments	247.4		251.1	
	$ 14,554.4		$ 14,234.3	

Investment expenses includes (a) investment management fees paid to external investment advisor firms that oversee the ERS' investment portfolio and (b) operational activities of certain real estate and alternative investments since these assets are reported on the consolidated method of accounting using the activity of the underlying investments since ERS is the majority owner of the business organization.

Total investment management fees earned by external investment advisors increased approximately 30.3% during FY 2015 compared to FY 2014 primarily from incentive fees accrued during the year for excess returns by real estate managers on the separately managed accounts. During FY 2014, there were negative accruals of incentive fees since real return on the real estate portfolios did not exceed the benchmark required for the manager to be eligible for the incentive fees. The real estate investment managers may receive an incentive fee for superior investment returns by the manager above their corresponding benchmark, while maintaining an acceptable level of investment risk. Incentive fees are recognized on the accrual basis of accounting for the increase or decrease of 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.

Effective October 1, 2014, the ERS adopted a risk-based, functional framework for allocating capital within the total portfolio. This framework 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. The effect of the new risk-based methodology is discussed in the *Investment Section* of this CAFR.

Contributions

Contributions from employers and employees totaled $941.3 million and $859.2 million in FY 2015 and FY 2014, respectively. During FY 2015, total contributions increased by $82.1 million, or 9.6%, with the continued implementation of legislation passed in 2011 and 2012 that raised employer contribution rates for all employee groups and increased contribution rates for new members. The increase in contributions is mainly due to an increase in employer contribution rates effective July 1, 2014, and to a lesser extent, an increase in covered payroll and an increase in the percentage of active members required to make during the year. The 2011 legislation further increases employer contribution rates again on July 1, 2015. Please refer to the Financial Section in the ERS 2015 and 2014 CAFR for more information.

Pension Plan Benefits and Expenses

Pension benefit payments continue to be the primary expense of the ERS with payments increasing to $1,170.7 million in FY 2015 from $1,122.4 million in FY 2014. The pension benefits increase can be 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 slightly during the year.

Administrative expenses increased in FY 2015 by $1.4 million primarily from an increase in salaries and fringe benefits cost, and to a lesser extent a slight increase in auditing and tax consulting. These costs were offset by slight decrease in computer system maintenance.

Pension Plan Changes

There was no significant legislation passed in 2015 that affects pension plan provisions. Pension plan changes, including legislative and Board of Trustees' actions, are summarized in the Introductory Section and Actuarial Section of the CAFR.

Actuarial Valuations and Measurement of Net Pension Liability

As discussed later in the Notes to Financial Statements, the GASB Statement No. 67 includes reporting requirements for defined-benefit pension plans and the terminology used to evaluate the effectiveness of its funding policy. These financial statements are presented based on amendments in GASB Statement No. 82 that was adopted by ERS for FY 2015.

The total pension liability for fiscal year ended June 30 is based on the actuarial valuation performed as of June 30, 2015 and a measurement date of June 30, 2015.

Per the valuation as of June 30, 2015, the ERS' total pension liability was $23.2 billion, covered payroll totaled $4.0 billion, and the ERS' fiduciary net position was $14.5 billion resulting in a net pension liability of $8.7 billion. The June 30, 2014 valuation results include the ERS' total pension liability of $22.2 billion, covered payroll at $3.8 billion, and the ERS' fiduciary net position of $14.2 billion resulting in a net pension liability of $8.0 billion. The ERS' fiduciary net position as a percentage of total pension liability was 62.4% and 63.9% on June 30, 2015 and 2014, resulting in the net pension liability as a percentage of covered payroll of 218.6% and 209.4%, respectively.

Requests for Information

This financial report is designed to provide a general overview of the Employees' Retirement System of the State of Hawaii's 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.

Financial Statements

Combining Statement of Fiduciary Net Position

June 30, 2015

Assets		
Cash and cash equivalents and short-term investments		
Cash and cash equivalents	$	99,161,481
Short-term investments		557,297,842
		656,459,323
Receivables		
Accounts receivable and others		7,436,038
Investment sales proceeds		93,202,906
Accrued investment income		45,817,527
Employer and member contributions		67,055,380
		213,511,851
Investments, at fair value		
Equity securities		9,261,462,836
Fixed income securities		2,807,089,435
Real estate investments		1,188,494,377
Alternative investments		888,218,644
		14,145,265,292
Other		
Invested securities lending collateral		1,232,818,935
Equipment, at cost, net of depreciation		8,297,696
		1,241,116,631
Total assets		16,256,353,097
Liabilities		
Accounts and other payables		50,822,998
Payable for securities purchased		219,884,122
Securities lending collateral		1,232,818,935
Notes payable		247,362,486
Total liabilities		1,750,888,541
Commitments and contingencies		
Fiduciary net position restricted for pensions	$	14,505,464,556

See accompanying notes to financial statements

Financial Statements (continued)

Statement of Changes in Fiduciary Net Position

Year ended June 30, 2015

Additions		
Contributions		
Employer contributions	$	717,792,981
Member contributions		223,505,419
Total contributions		941,298,400
Investment income		
From investing activities		
Net appreciation in fair value of investments		231,015,994
Interest on fixed income securities		87,362,110
Dividends on equity securities		146,174,760
Income on real estate investments		102,510,933
Interest on short-term investments		170,574
Alternative investment income		80,491,282
Miscellaneous		482,442
		648,208,095
Less investment expenses		97,364,284
Net investment income from investing activities		550,843,811
From securities lending activities		
Securities lending income		5,401,083
Securities lending expenses, net		(191,581)
Net investment income from securities lending activities		5,592,664
Total net investment income		556,436,475
Total additions		1,497,734,875
Deductions		
Benefit payments		1,170,744,770
Refunds of member contributions		10,507,888
Administrative expenses		14,032,964
Total deductions		1,195,285,622
Net increase in fiduciary net position		302,449,253
Fiduciary net position restricted for pensions		
Beginning of year		14,203,015,303
End of year	$	14,505,464,556

See accompanying notes to financial statements.

June 30, 2015

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. The ERS' current favorable determination letter from the Internal Revenue Service expires on January 31, 2019. Since January 1, 1988, member contributions have been tax deferred under Section 414(h)(2) of the Internal Revenue Code, and Chapter 88 mandates that employers pick up the employee contributions. With the adoption of GASB Statement 82 for FY 2015 these contributions are being classified as member contributions. (For FY 2014, GASB Statement No. 67 reporting requirements mandated these contributions be classified as "employer contributions".) 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 (continued)

Note A – Description of the ERS (continued)

1. General (continued)

Employer, pensioner, and employee membership data as of March 31, 2015 are as follows:

Employers:	
State	1
County	4
Total employers	5
Pensioners and beneficiaries currently receiving benefits:	
Pensioners currently receiving benefits:	
Police and firefighters	3,402
All other employees	37,255
Total pensioners	40,657
Beneficiaries currently receiving benefits:	
Police and firefighters	270
All other employees	3,356
Total beneficiaries	3,626
Total pensioners and beneficiaries	44,283
Terminated vested members entitled to benefits but not yet receiving benefits:	
Police and firefighters	361
All other employees	7,052
Total terminated vested members	7,413
Inactive members	
Police and firefighters	566
All other employees	13,274
Total inactive members	13,840
Total terminated vested and inactive members	21,253
Active members:	
Vested:	
Police and firefighters	4,157
All other employees	44,786
Total vested members	48,943
Nonvested:	
Police and firefighters	887
All other employees	17,480
Total nonvested members	18,367
Total active members	67,310
Total membership	132,846

Note A – Description of the ERS (continued)

2. The Financial Reporting Entity

As required by U.S. generally accepted accounting principles, 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 of the 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 officers and firefighters and (b) all other employees. Employer contribution rates are subject to adjustment in certain situations based on the plan's funded status or actuarial investigations. The ERS performs an actuarial investigation of the experience at least once every five years, plus an annual actuarial valuation of the assets and liabilities of the funds of the pension trust. The Board of Trustees 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 Board of Trustees on December 20, 2010 as recommended by Gabriel, Roeder, Smith and Company (GRS) (from the 2010 Experience Study for the five-year period from June 30, 2005 through June 30, 2010) while the investment return assumption was adopted beginning with the 2012 valuation. See the Actuarial Section for all actuarial assumptions used.

Effective July 1, 2008, the statutory employer contribution rate for employees in the Police and Fire 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 Fire employees 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.

Note A – Description of the ERS (continued)

3. Plan Descriptions and Funding Policy (continued)

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 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 Fire employees) are required to be Contributory members.

The three membership classes provide a monthly retirement allowance (maximum allowance) equal to the benefit multiplier % (generally 1.25% or 2%), multiplied by the average final compensation (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 2.5% 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 2.5% of the original retirement allowance without a ceiling (2.5% of the original retirement allowance the first year, 5.0% the second year, 7.5% the third year, etc.). For new members hired after June 30, 2012, the postretirement annuity increase was decreased to 1.5% per year of the original retirement allowance without a ceiling (1.5% of the original retirement allowance the first year, 3.0% the second year, 4.5% the third year, etc.).

Note A – Description of the ERS (continued)

3. Class Descriptions and Funding Policy (continued)

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 of the Hawaii Revised Statutes. 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 this report. All of the statutory member contributions discussed in this section are classified as "member contributions" with the adoption of GASB Statement No. 82.

Contributory

Police officers, firefighters, and certain other members that are not covered by Social Security first hired prior to July 1, 2012 contribute 12.2% of their salary and receive a retirement benefit using the benefit multiplier of 2.5% for qualified service, up to a maximum of 80% of 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 14.2% 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 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 7.8% 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% per year under age 55 plus 4% per year under age 50. The benefit multiplier is 2% for employees covered by Social Security.

All other employees in the contributory class hired after June 30, 2012 are required to contribute 9.8% 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% per year under age 60. The benefit multiplier is 1.75% for employees covered by Social Security.

Note A – Description of the ERS (continued)

3. Plan Descriptions and Funding Policy (continued)

Hybrid

All other employees hired before July 1, 2012 are required to contribute 6% 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% per year under age 62. The benefit multiplier used to calculate retirement benefits is 2%. Hybrid members are covered by Social Security.

All other employees hired after June 30, 2012 are required to contribute 8% 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% 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. 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 services. Early retirement is available at age 55 years and 20 years of credited service with benefits reduced by 6% 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 ten years of service, respectively. Ordinary death benefits for hybrid members require five years of service if hired prior to July 1, 2012 or ten years of service if hired after June 30, 2012. There is no service requirement to qualify for service-connected death benefits.

Note A – Description of the ERS (continued)

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 HRS Chapter 87A, provide certain healthcare and life insurance benefits for State and county qualified employees and retirees. The Hawaii Employer-Union Health Benefits Trust Fund (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.

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 ten 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 ten 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 ten and fifteen years of credited service; (b) seventy-five percent of the base monthly contribution if the employee retired with between fifteen and twenty-five years of credited service; and (c) one hundred percent of the base monthly contribution if the employee retired with twenty-five or more years of credited service.

Under HRS § 87 A-36, 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 ten and fifteen years of credited service; (b) seventy-five percent of the base monthly contribution for a self-only plan if the employee retired with between fifteen and twenty-five years of credited service; and (c) one hundred percent of the base monthly contribution for a self-only plan if the employee retired with twenty-five or more years of credited service.

Under Section 87A-37 of the HRS, the participating employers pay the EUTF a base monthly contribution (currently $4.16) for each retired employee enrolled in the EUTF group life insurance plan.

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

Note B – 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 (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. The Contribution Fund is considered an agency fund for financial reporting purpose. At June 30, 2015, the ERS held no amounts in the Contribution Fund as all amounts deposited into the Contribution Fund were paid directly to the IRS.

Note C – 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 individuals, private organizations, other governments, and/or other funds. The fiduciary fund types used by the ERS are a Pension Trust Fund and the Social Security Fund as an agency fund. Each of the fiduciary funds 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. As an agency fund, the Contribution Fund is custodial in nature and does not measure results of operations.

The financial statements are prepared in conformity with U.S. generally accepted accounting principles (GAAP) using the accrual basis of accounting. Employer and member contributions are recognized in the period in which the contributions are legally due. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan. Investment purchases and sales are recorded as of their trade date. Administrative expenses are financed exclusively with investment income.

Note C – Summary of Accounting Policies (continued)

1. Basis of Accounting (continued)

The ERS implemented the provisions of GASB Statement No. 82 during the year ended June 30, 2015. This Statement clarifies that payments that are made by an employer to satisfy contribution requirements that are identified by the pension plan terms as plan member contribution requirements should be classified as plan member contributions for purposes of Statement 67 and as employee contributions for purposes of Statement 68. The ERS has adopted GASB Statement No. 82 for fiscal year ended June 30, 2015. The major impact for the ERS reporting is to rescind the change implemented for FY 2014 that required almost all “member contributions” to be classified for financial statement reporting as “employer contributions” since these member contributions are “picked up” by the employer and treated as employer contributions under Internal Revenue Code section 414(h)(2).

2. Method Used to Value Cash and Investments

The ERS’ investment policy for cash and investments, including the legal authority, are discussed below in Note F.

Cash and investments are reported at fair value. Unrealized gains and losses are included as investment income in the statement of changes in fiduciary net position. The investments of the Pension Trust Fund and Contribution Fund (the Retirement Funds) are valued on a monthly basis using the following sources:

Publicly Traded Securities (Corporate stock, exchange-traded investment derivatives, and fixed income): Fair values are 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.

Fixed Income Securities (including investment derivatives not publicly traded): Fair values are based on equivalent values of comparable securities with a similar yield and risk.

Pooled Equity, Fixed Income, and Short-Term Investment Funds (not publicly traded): Fair value 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.

Limited Partnerships: The fair value of investments that are organized as limited partnerships and have no readily ascertainable fair value (such as private equity, real estate, and tangible assets) are valued based on their respective net asset value (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. Because of the inherent uncertainties in estimating fair values, it is at least reasonably possible that the estimates will change in the near-term.

Note C – Summary of Accounting Policies (continued)

2. Method Used to Value Cash and Investments (continued)

Private Equity Limited Partnerships: The fair value of individual capital account balances is based on the valuations reported by private equity partnerships using the following methodologies to value the underlying portfolio companies:

- Valuations of publicly traded portfolio companies are based on active exchanges using quoted market prices as of the close of trading for each month-end.
- When a portfolio company investment does not have a readily available market price, but has a return that is determined by reference to an asset for which a market price is readily available, valuations are based on the closing market price of the reference asset on the valuation date, adjusted for factors that affect the fair value of the investment held.
- When the portfolio company investments are private holdings and are not traded on active security exchanges, valuation methodologies used consist primarily of income and market approaches. The income approach involves a discounted cash flow analysis based on portfolio companies' projections. The market approach involves valuing a company at a multiple of a specified financial measure generally Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA) based on multiples at which comparable companies trade.

Real Estate and Alternative Investments Limited Partnerships and Limited Liability Companies: The ERS has a controlling interest in certain real estate and alternative investment partnerships and limited liability companies. These investment companies provide quarterly valuations based on the most recent capital account balance to ERS management. Individual properties are 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), depending upon the investment company. Alternative investments are valued using 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 in conjunction with management, investment advisors, and valuation specialists. The valuation techniques vary based on investment type and involve a certain degree of expert judgment. The fair value for these investments could differ significantly if a readily accessible market values for these assets existed. Annual audits of most partnerships and limited liability companies include a review of compliance with the investment company's valuation policies.

Notes Payable: Notes payable are shown at estimated fair values. Notes payable consists of mortgage notes within the limited liability companies and limited partnerships that are secured by real estate of the respective company.

3. Revenue Recognition

Interest and dividend income is recognized when earned. Capital gains and losses are recognized on a trade-date basis. Purchases and sales of investments are also recorded on a trade-date basis.

Contributions are recorded when legally due.

Note C – Summary of Accounting Policies (continued)

4. **Payment of Benefits**

   Withdrawals are recorded when due and payable in accordance with the terms of the plan.

5. **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.

6. **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 to the funds of the Pension Trust Fund, as follows:

   a. Annuity Savings Reserve – Fixed at 4-1/2% regular interest rate for employees hired before July 1, 2011 and 2% regular interest rate for employees hired after June 30, 2011.

   b. Expense Reserve – To be credited with all money to pay the administrative expenses of the ERS.

   c. Pension Accumulation Reserve – To be credited with any remaining investment earnings.

7. **Risk Management**

   The ERS reports liabilities, as discussed in note H, 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.

8. **Use of Estimates**

   In preparing financial statements in conformity with accounting principles generally accepted in the United States, 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 tend to be 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.

Note C – Summary of Accounting Policies (continued)

8. Use of Estimates (continued)

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 for the period from July 1, 2005 through June 30, 2010.

9. Recently Issued Accounting Policies

In February 2015, the GASB issued Statement No. 72, *Fair Value Measurement and Application*. Statement No. 72 addresses accounting and financial reporting issues related to fair value measurements. The definition of fair value is 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. This Statement provides guidance for determining a fair value measurement for financial reporting purposes and will enhance comparability of financial statements among governments by requiring measurement of certain assets and liabilities at fair value using a consistent and more detailed definition of fair value and accepted valuation techniques. Implementation requires disclosures to be made about fair value measurements, the level of fair value hierarchy, and valuation techniques. GASB Statement No. 72 will be effective for periods beginning after June 30, 2015. ERS has not yet determined the impact of this standard on its financial statements and disclosures.

In March 2016, the GASB issued Statement No. 82, *Pension Issues - an amendment of GASB Statements No. 67, No. 68, and No. 73*. The objective of GASB Statement No. 82 is to address certain issues that have been raised with respects to GASB Statement No. 67, No. 68 and No. 73. regarding (1) the presentation of payroll-related measures in required supplementary information, (2) the selection of assumptions and the treatment of deviations from the guidance in an Actuarial Standard of Practice for financial reporting purposes, and (3) the classification of payments made by employers to satisfy employee (plan member) contribution requirements. GASB Statement No. 82 will be effective for reporting periods beginning after June 15, 2016 (except for certain selections of assumptions that will be effective June 15, 2017 in certain situations; that are not applicable to the ERS). The ERS has adopted GASB Statement No. 82 for fiscal year ended June 30, 2015. The major impact for the ERS reporting is to rescind the change implemented for FY 2014 that required almost all "member contributions" to be classified for financial statement reporting as "employer contributions" since these member contributions are "picked up" by the employer and treated as employer contributions under Internal Revenue Code section 414(h)(2).

Note D – 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 under pursuant to IRC Section 414(h)(2)), transfers of retired members' contributions plus related interest income from the Annuity Savings Reserve 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 under 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 Reserve 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.

Note D – Description of Reserves (continued)

Fiduciary net position restricted for pensions as of June 30, 2015 are as follows:

		2015
Pension Accumulation Reserve	$	12,201,467,662
Annuity Savings Reserve		2,293,539,670
Expense Reserve		10,457,224
Total fiduciary net position restricted for pensions	$	14,505,464,556

Note E – 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 of the 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 five years. Since July 1, 2005, employer contribution rates are a fixed percentage of compensation, including the normal cost plus amounts required to pay for the unfunded actuarial accrued liability. From July 1, 2005 to June 30, 2008, the required contribution rates for employers were 15.75% for their police officers and firefighters, and 13.75% for all other employees. From July 1, 2008 to June 30, 2012, employers contributed 19.70% for their police officers and firefighters, and 15.00% for all other employees. Effective July 1, 2012, the employer rate increased to 22.00% for their police officers and firefighters, and 15.50% for all other employees. Effective July 1, 2013, the employer rate increased to 23.00% for their police officers and firefighters, and 16.00% for all other employees. Effective July 1, 2014, the employer rate increased to 24.00% for their police officers and firefighters, and 16.50% for all other employees.

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" non-base 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 non-base pay in their Average Final Compensation amount.

Member contributions rates are statutorily established in accordance with Chapter 88 of the HRS, and are discussed in note A.3. Plan Descriptions and Funding Policy above. 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). In accordance with GASB Statement No. 82 these contributions are classified as member contributions. (In FY 2014, GASB Statement No. 67, classified these as employer contributions in the financial statements.) For the ERS actuarial valuation purposes member contributions are being calculated as being paid by the member.

Note F – Deposit 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 and the Contribution Fund are limited to investment grade, short-term marketable securities.

The investment decision is further dictated by 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 for 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.

In 2010, the Board adopted an Evolving Investment Policy Asset Allocation to allow for a smooth transition to the new long- term policy asset allocation targets that became effective on July 1, 2014, and remained in place at September 30, 2014. In August 2014, the Board of Trustees of the System approved the adoption of a change in its asset allocation policy from the asset-class policy to a new risk-based asset allocation framework within the categories of Broad Growth, Principal Protection, Real Estate and Real Return. The new policy became effective as of October 1, 2014. The following table shows the high level mapping for the transition in methodologies.

Historical Asset Type Asset Allocation	
Prior Asset Classes	Long-term Strategic Allocation
Domestic Equity	30%
Non-US Equity	26%
Fixed Income	20%
Real Estate	7%
Private Equity	7%
Real Return	5%
Covered Calls	5%
Total	100%

Risk Based Asset Allocation			
Broad Growth	Principal Protection	Real Return	Real Estate
30%			
26%			
8%	12%		
			7%
7%			
		5%	
5%			
76%	12%	5%	7%

Note F – Deposit and Investment Disclosures (continued)

1. Investment Policy (continued)

As of June 30, 2015, only fixed income assets were transitioned to the new risk based asset allocation. The following shows the historical asset-based allocation for the ERS as of June 30, 2015 since the transition to the new risk based strategy will be implemented over the next four fiscal years, thus the presentation of the risk-based allocation methodology is not very informative for financial reporting purposes at this time.

Historical Asset-Type	Strategic Allocation	Strategic Range	Long-term expected Arithmetic rate of return
Domestic equity	30%	23% - 37%	8.50%
Non-US Equity	26%	21% - 33%	9.25%
Fixed-income	20%	15% - 25%	3.10%
Real Estate	7%*	5% - 9%	9.20%
Private Equity	7%*	4% - 9%	11.85%
Real Return	5%*	0% - 10%	6.65%
Covered Calls	5%	0% - 10%	7.65%
Total	100%		

* The real estate, private equity, and real return targets will be the percentage actually invested up to 7%, 7%, and 5%, respectively of the total fund. Changes in the real estate, private equity, and real return targets will be offset by an equal percentage change in the large cap domestic equity target.

Rate of Return

For the year ended June 30, 2015, the annual money-weighted return on pension plan investments, net of pension plan investment expense, was 4.0%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for changing amounts actually invested.

2. Deposits

Cash includes 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.

Note F – Deposit and Investment Disclosures (continued)

2. Deposits (continued)

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, 2015, the carrying amount of deposits totaled approximately $99,161,481 and the corresponding bank balance was $101,977,439, all of which was exposed to custodial credit risk

3. Investments

The following table shows the investments of the ERS by investment type as of June 30, 2015. Please refer to Note C-2 above for a discussion of fair value on investments.

Investments at fair value		
Cash and short-term instruments		
Cash and cash equivalents	$	99,161,481
Short-term bills and notes		38,792,691
Pooled and others		520,225,656
Fixed income securities		
U.S. Treasury bonds and notes		384,056,356
U.S. government agencies bonds		22,416,591
U.S. government agency mortgage backed		5,649,276
U.S. government-sponsored agency mortgage backed		222,438,939
Commercial mortgage backed securities		28,215,237
U.S. corporate bonds		864,304,416
Non-U.S. government / agency bonds		821,612,252
Non-U.S. corporate bonds		374,723,613
Pooled and Others		9,370,072
Derivatives		
Forwards - Cash and short-term instruments		(1,881,666)
Forwards - Debt securities		72,311,288
Options - Cash and short-term instruments		161,161
Options - Equities		(4,546,519)
Options - Debt securities		(320,215)
Swaps		2,311,610
Equities		9,266,009,355
Real estate		1,188,494,377
Alternative investments		888,218,644
Total investments	$	14,801,724,615
Short-term instruments for securities lending collateral pool	$	1,232,818,935

Note F – Deposits and Investment Risk Disclosures (continued)

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 on derivative investments is discussed below in derivative disclosures note F10 while policies related to credit risk for securities lending program are discussed in note F9 below.

The ERS' utilized two fixed income mandates during most of the fiscal year: (i) a "Diversified Manager" whose benchmark is 85% Lehman Universal/15% Lehman Multiverse ex-USD Hedged Index and (ii) an "International Mandate" whose benchmark is Lehman Multiverse ex-USD Hedged Index. The ERS expects its debt securities investment managers to maintain diversified portfolios within the mandate assigned by the Board using the following guidelines as to permissible credit quality ranges, exposure levels within individual quality tiers, and average credit quality:

- Securities with a quality rating of below Baa (based on Moody's rating scale) or equivalent are considered below investment grade.
- Invest in money market instruments; commercial paper (rated A1/P1); certificates of deposits and bankers acceptance; U.S. Treasury bonds, notes, and bills; U.S. government and agency securities; municipal bonds; 144A private placements; bank loans; non-leveraged structured notes; convertible bonds; mortgages, collateralized mortgage obligations (CMO) and asset backed securities (backed by pools of mortgages guaranteed by the U.S. government or its agencies or corporate issues rated at least Aaa); investment grade corporate debt issues, emerging markets debt, preferred stock and common stock; sovereign debt instruments (issued by agencies of, or guaranteed by foreign governments; and certain foreign securities (corporate debt issues, asset backed securities, CMOs, 144A private placements, convertibles and supranational issues). The minimum issuance size is $150 million.

- Summary of Concentration Limits for debt securities are:
  - Specific Issue or Issuer of 5% (excludes supranationals, U.S. Treasuries, U.S. agencies, and sovereign debt and equivalently rated agencies of Organisation for Economic Co-operation and Development (OECD) governments).
  - All fixed income manager portfolios are limited to (i) 15% in below investment grade securities with no more than 2% below a B rating; (ii) 10% in private placements; (iii) 5% in convertible securities; (iv) 10% in preferred stocks and common stocks (common stock holdings not to exceed 180 days); and (v) 10% in non-U.S. Agency CMOs.
  - Diversified managers are limited to (i) 10% in emerging markets (local currency and debt); (ii) 30% of Non-U.S. Dollar denominated securities (excludes money market securities and money market futures); (iii) a 15% net foreign currency exposure (as measured by net amount of currency's outstanding long and short positions versus the U.S. Dollar); and (iv) a 30% gross foreign currency exposure (as measured by absolute value of all country-level currency long and short currency positions versus the U.S. Dollar).
  - International managers are limited to (i) 20% in emerging markets (local currency and debt); and (ii) 25% of U.S. Dollar denominated securities (excludes money market securities and money market futures).

Note F – Deposits and Investment Risk Disclosures (continued)

4. Credit Risk (continued)

A table of the ERS' fixed income securities as of June 30, 2015 is below. Securities below investment grade of Baa and non-rated issues (average rating by S&P, Moody's and/or Fitch) amounted to $631,273,544 or 22.5% of total fixed income investments. All short-term investments, not held in a pooled investment, are rated A1/P1or better.

Credit Ratings - Average rating by S&P, Moodys and Fitch as of June 30, 2015

Ratings	US Govt Agency	US Govt sponsored-agency mortgage backed	US corporate bonds	Commercial mortgage backed securities	Non-US corporate bonds	Non US-govt/agencies bonds	Pooled & others	Total
AAA	$ 22,416,591	$ 221,899,350	$ 10,141,679	$ 19,691,702	$ -	$ 222,597,634	$ -	$ 496,746,956
AA1	-	539,589	1,743,744	1,414,306	6,345,591	181,016,223	-	$ 191,059,453
AA2	-	-	-	46,220	5,936,407	31,017,585	1,874,653	$ 38,874,865
AA3	-	-	19,733,711	-	43,632,487	19,381,989	-	$ 82,748,187
A1	-	-	11,757,436	421,456	9,611,861	6,841,460	-	$ 28,632,213
A2	-	-	37,683,860	1,806,292	49,374,022	105,414,194	-	$ 194,278,368
A3	-	-	66,190,149	230,602	44,117,693	49,603,783	-	$ 160,142,227
BAA1	-	-	74,689,235	1,303,890	22,541,993	38,011,938	-	$ 136,547,056
BAA2	-	-	55,359,658	1,470,390	38,430,899	166,941,821	-	$ 262,202,768
BAA3	-	-	99,884,952	1,631,999	18,272,907	785,625	-	$ 120,575,483
BA1	-	-	50,122,949	35,045	26,835,759	-	-	$ 76,993,753
BA2	-	-	63,516,841	18,184	10,265,165	-	-	$ 73,800,190
BA3	-	-	62,710,886	52,707	20,219,787	-	-	$ 82,983,380
B1	-	-	96,834,204	-	18,298,182	-	-	$ 115,132,386
B2	-	-	75,087,848	-	30,935,953	-	-	$ 106,023,801
B3	-	-	46,580,424	-	10,461,568	-	-	$ 57,041,992
CAA1	-	-	31,391,305	-	10,370,020	-	-	$ 41,761,325
CAA2	-	-	12,921,725	13,055	1,187,550	-	-	$ 14,122,330
CAA3	-	-	-	1,354	-	-	-	$ 1,354
CA	-	-	887,420	-	-	-	-	$ 887,420
DEF	-	-	-	56,181	-	-	-	$ 56,181
Not rated	-	-	47,066,390	21,854	7,885,769	-	7,495,419	$ 62,469,432
	$ 22,416,591	$ 222,438,939	$ 864,304,416	$ 28,215,237	$ 374,723,613	$ 821,612,252	$ 9,370,072	2,343,081,120

US Treasury Bonds and Notes	384,056,356
US Government agency - Government National Mortgage Association (GNMAs) mortgage backed	5,649,276
subtotal	$ 2,732,786,752
Derivatives	74,302,683
Total fixed income securities in Investments	$ 2,807,089,435

Transition to new Risk Based Asset Class - In the last quarter of FY 2015, the fixed income mandate was transitioned to the new risk-based asset allocation methodology. All fixed income investment managers were retained as of June 30, 2015. Authorized security types are the same as the Asset-type based allocation guidelines. Investment managers were assigned to:

- Extended Global Credit component of the Broad Growth risk-based asset class, or
  - Benchmark: 50% BC Global Credit (Hedged) + 33.34% BC Global High Yield (Hedged) + 16.66% S&P LSTA Leveraged Loan
- Principal Protection risk-based asset class.
  - Benchmark: BC U.S. Intermediate Aggregate ex-Credit

Note F – Deposits and Investment Risk Disclosures (continued)

4. Credit Risk (continued)

Transition to new Risk Based Asset Class (continued)

- Summary of Concentration Limits for debt securities are:
  - Principal protection managers may invest in specific Issue or Issuer of 5% (without limit in supranationals, U.S. Treasuries, U.S. agencies, CMOs and asset-backed securities with minimum of AAA rating, sovereign debt and equivalently rated agencies of Organisation for Economic Co-operation and Development (OECD) governments). These managers are limited to (i) 10% in emerging markets (local currency and debt); (ii) 10% in private placements; (iii) 10% in preferred stocks and converted common stocks (common stock holdings not to exceed 180 days); (iv) 10% in non-U.S. Agency CMOs; and (v) 10% of Non-U.S. Dollar denominated securities (excludes money market securities and money market futures
  - Extended Global Credit managers may invest in specific Issue or Issuer of 5% (without limit in supranationals, U.S. Treasuries, U.S. agencies, CMOs and asset-backed securities with minimum of AAA rating, sovereign debt and equivalently rated agencies of Organisation for Economic Co-operation and Development (OECD) governments). They are limited to: (i) 10% in preferred stocks and converted common stocks (common stock holdings not to exceed 180 days); (iii) 75% in non-investment grade / Unrated; (iv) in Non-Benchmark markets up to 40% of non-benchmark non-government supported and up to 40% of non-benchmark government supported. Foreign currency is limited to (i) a 40% net foreign currency exposure (as measured by net amount of currency's outstanding long and short positions versus the U.S. Dollar); and (ii) a 80% gross foreign currency exposure (as measured by absolute value of all country-level currency long and short currency positions versus the U.S. Dollar)

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 $49,220,483 in cash and securities exposed to custodial credit risk.

6. Concentrations of Credit Risk

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

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.)

Note F – Deposits and Investment Risk Disclosures (continued)

6. Concentrations of Credit Risk (continued)

At June 30, 2015, 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, 2015, 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:

Effective duration of fixed income assets by security type (excluding derivatives)

		Fair Value	Effective Weighted Duration (years)
Fixed Income Securities			
U.S. Treasury bonds and notes	$	384,056,356	7.4
U.S. government agencies bonds		22,416,591	1.7
U.S. government agency mortgage backed		5,649,276	2.9
U.S. government-sponsored agency mortgage backed		222,438,939	2.8
Commercial mortgage backed securities		28,215,237	0.6
U.S. corporate bonds		864,304,416	6.1
Non-U.S. government / agency bonds		821,612,252	8.9
Non-U.S. corporate bonds		374,723,613	5.4
Pooled and Others		9,370,072	4.8
Total	$	2,732,786,752	5.2

Note F – Deposits and Investment Risk Disclosures (continued)

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 derivatives must be rated A or equivalent. Derivatives investments are discussed in more detail in Note F.10.

The following table summarizes the ERS' exposure to foreign currency risk in U.S. dollars as of June 30, 2015. (Securities denominated in U.S. dollars are not presented.)

	Cash and Short Term Instruments	Debt Securities	Derivatives	Equities	Alternative	Real Estate	Grand Total
Argentine peso	$ 3,116	$ -	$ -	$ -	$ -	$ -	$ 3,116
Australian dollar	180,273	95,839,787	494,840	43,630,222	-	-	140,145,122
Brazilian real	145,989	7,747,917	(3,574)	69,515,948	-	-	77,406,280
Canadian dollar	36,210	10,506,038	358,143	66,366,141	-	-	77,266,532
Chilean peso	48,376	-	-	2,340,586	-	-	2,388,962
Colombian peso	3,937	-	-	-	-	-	3,937
Czech koruna	62,157	-	-	725,268	-	-	787,425
Danish krone	9,452	1,015,276	(22,621)	48,549,388	-	-	49,551,495
Egyptian pound	88,888	-	-	2,750,592	-	-	2,839,480
Euro	(6,853,686)	268,371,751	36,073,850	503,214,680	-	-	800,806,595
Hong Kong dollar	432,876	-	-	314,538,179	-	-	314,971,055
Hungarian forint	43,804	-	-	1,176,135	-	-	1,219,939
Indian Rupee	-	-	33,204	-	-	-	33,204
Indonesian rupiah	166,693	-	-	17,292,250	-	-	17,458,943
Israeli Shekel	-	-	-	6,494,091	-	-	6,494,091
Japanese yen	13,499,675	41,739,344	(20,407)	257,356,228	-	-	312,574,840
Malaysian ringgit	80,449	-	-	13,031,277	-	-	13,111,726
Mexican peso	609,477	5,473,541	358,424	24,785,147	-	-	31,226,589
New Taiwan dollar	11,012	-	-	99,267,576	-	-	99,278,588
New Turkish Lira	8,615	-	-	11,517,187	-	-	11,525,802
New Zealand dollar	45,322	96,251,992	7,117,220	-	-	-	103,414,534
Norwegian krone	10	-	(4,599)	4,065,674	-	-	4,061,085
Philippine peso	8,037	1,866,267	-	2,041,851	-	-	3,916,155
Polish zloty	201,523	88,643,725	389,672	20,146,833	-	-	109,381,753
Pound sterling	4,232,170	205,298,496	(5,181,809)	322,607,422	-	-	526,956,279
Qatari riyal	48,248	-	-	3,236,770	-	-	3,285,018
Russian ruble (new)	79,212	-	-	10,906,513	-	-	10,985,725
Singapore dollar	398	-	(17,394)	27,222,800	-	-	27,205,804
South African rand	77,801	73,210,632	(534,336)	80,879,279	-	-	153,633,376
South Korean won	68,547	-	-	132,432,050	-	-	132,500,597
Swedish krona	186,403	6,520,519	(447,220)	12,880,649	-	-	19,140,351
Swiss franc	809	-	56	194,197,733	-	-	194,198,598
Thai baht	130,116	-	-	31,009,971	-	-	31,140,087
UAE Dirham	96,920	-	-	743,717	-	-	840,637
Various Countries	-	-	-	1,406,290,379	-	-	1,406,290,379
Total	$ 13,752,829	$ 902,485,285	$ 38,593,449	$ 3,731,212,536	$ -	$ -	$ 4,686,044,099

Note F – Deposits and Investment Risk Disclosures (continued)

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 of the 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. 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 fixed-income 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 maintains 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, according to the ERS investment policies and procedures as discussed above in notes C2 and F1. 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, 2015 was 128 days.

At June 30, 2015, 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	$ 411,149,440	$ 225,071,538	$ 199,232,967
U.S. equities	1,258,747,667	967,664,196	347,944,183
International equities	259,871,110	40,083,201	247,553,514
International fixed income	51,673,834	-	55,319,489
	$ 1,981,442,051	$ 1,232,818,935	$ 850,050,153

Note F – Deposits and Investment Risk Disclosures (continued)

10. Derivative Financial Instruments

Derivatives are 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.

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, 2015 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.

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, 2015 with the related maturity information:

Note F – Deposits and Investment Risk Disclosures (continued)

10. Derivative Financial Instruments (continued)

Asset categories		Notional values	Market value	Maturity (Range from)
Forwards	Currency purchases	$ -	$ (1,881,666)	0.0 yrs
	To Be Announced (TBAs)	-	72,311,288	14.9 yrs to 30.0 yrs
	Total forwards	-	70,429,622	
Futures	Interest rate contracts	10,672,102	-	0.2 yrs to 2.5 yrs
	Futures total	10,672,102	-	
Options	Options	-	(4,546,519)	0.0 yrs to 5.3 yrs
	Options on debt securities	-	(320,215)	0.0 yrs to 0.4 yrs
	Options on currency	-	161,161	0.0 yrs to 10.1 yrs
	Options total	-	(4,705,573)	
Swaps	Credit default swaps	-	91,441	5.0 yrs to 8.7 yrs
	Currency swaps	-	681,443	5.5 yrs to 10.5 yrs
	Inflation swaps	-	(3,015)	14.9 yrs to 29.9 yrs
	Interest rate swaps	-	1,541,741	1.8 yrs to 30.8 yrs
	Swaps total	-	2,311,610	
	Grand Total	$ 10,672,102	$ 68,035,659	

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 in fair value of securities in the Statement of Changes in Fiduciary Net Position. At June 30, 2015, the net notional value of futures contracts was $10,672,102.

Note F – Deposits and Investment Risk Disclosures (continued)

10. Derivative Financial Instruments (continued)

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. At June 30, 2015, the ERS had interest rate, credit default swaps, and total return swaps as allowed by Board policy. 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. Total return swaps combine both market risk and credit risk in a single product as the holder also receives capital gains or losses. 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 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.

Note F – Deposits and Investment Risk Disclosures (continued)

10. Derivative Financial Instruments (continued)

On June 30, 2015, credit ratings of the counterparty for ERS' investments in derivatives were as follows:

	Derivatives Counterparty Credit Ratings								
	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	N/A	Grand Total
Bank of America Corp	-	-	-	-	548,042	-	-	-	$ 548,042
Barclays PLC	-	-	-	-	-	-	(207,575)	-	(207,575)
Citigroup Inc	-	(5,767)	-	-	(160,752)	-	-	-	(166,519)
CME Group Inc/IL	1,127,672	-	-	-	-	-	-	-	1,127,672
Credit Suisse Group AG	-	-	-	-	-	(25,526)	-	-	(25,526)
Deutsche Bank AG	-	-	-	(11,257)	-	-	-	-	(11,257)
Goldman Sachs Group Inc/The	-	-	-	(64,828)	-	-	-	-	(64,828)
Intercontinental Exchange Inc	-	-	573,780	-	-	-	-	-	573,780
JPMorgan Chase & Co	-	-	-	(329,575)	-	-	-	-	(329,575)
London Stock Exchange Group PLC	-	-	-	-	344,843	-	-	-	344,843
Morgan Stanley	-	-	-	1,965	-	-	-	-	1,965
Foreign Currency Forwards	-	-	-	-	-	-	-	(1,881,666)	(1,881,666)
Exchange traded - Swap, Options and TBAs	-	-	-	-	-	-	-	68,126,303	68,126,303
Total	$ 1,127,672	$ (5,767)	$ 573,780	$ (403,695)	$ 732,133	$ (25,526)	$ (207,575)	$ 66,244,637	$ 68,035,659

Note G – Pension Liability

1. Net Pension Liability

The components of the net pension liability of the ERS at June 30, 2015 were as follows:

Total Pension Liability	$23,238,395,386
Plan Fiduciary Net Position	14,505,464,556
Net Pension Liability	$ 8,732,930,830

Plan Fiduciary Net Position as a Percentage of Total Pension Liability	62.4%
Net Pension Liability as a Percentage of Covered Payroll	218.6%

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 following the *Notes to the Financial Statements.*

Note G – Pension Liability (continued)

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, 2015. These GASB rules only define pension liability for financial reporting purposes. The actuarial assumptions were based on the results of an experience study for the period from July 1, 2005, through June 30, 2010. When measuring the total pension liability, GASB uses the same actuarial cost method, all actuarial assumptions, and the same discount rate as the ERS uses for funding which can be found in the Notes to Required Supplementary Information.

Summary of Actuarial Valuation as of June 30, 2015 follows:

Valuation date	June 30, 2015
Actuarial cost method	Entry Age Normal
Amortization method	Level percent, open
Actuarial assumptions:	
Inflation assumption	3.00%
Investment rate of return, including inflation at 3.00%	7.65%
Payroll growth rate:	3.50%
Projected salary increases, including inflation at 3.00%	
- Police and Fire Employees	5.00% to 19.00%
- General Employees	4.00% to 8.00%
- Teachers	4.50% to 8.50%
Cost of living adjustments (COLAs)	2.5%/1.5%
- COLAs are not compounded; and are based on original pension amounts.	

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

Post-Retirement Mortality rates are:

Healthy:	General Employees	Client specific table for males, 89% multiplier Client specific table for females, 89% multiplier
	Teachers	Client specific table for males, 65% multiplier Client specific table for females, 67% multiplier
	Police and Fire	1994 US Group Annuity Mortality Static Table for males, 85% multiplier 1994 US Group Annuity Mortality Static Table for females, 85% multiplier
Disabled:	General Employees	1994 US Group Annuity Mortality Static Table for males, set forward nine years 1994 US Group Annuity Mortality Static Table for females, set forward nine years
	Teachers	1994 US Group Annuity Mortality Static Table for males, set forward five years 1994 US Group Annuity Mortality Static Table for females, set forward six years
	Police and Fire	1994 US Group Annuity Mortality Static Table for males, set forward three years 1994 US Group Annuity Mortality Static Table for females, set forward three years

Note G – Pension Liability (continued)

2. Summary of Actuarial Assumptions (continued)

Pre-retirement mortality rates are:

For males, multiples of a custom table that has
- RP-2000 Male Employee rates for age 1 to 70 and RP-2000 Combined Male Rates for ages over 70

For females, multiples of a custom table that has
- RP-2000 Female Employee rates for age 1 to 70 and RP-2000 Combined Female Rates for ages over 70

The following factors are used in conjunction with the described above to derive the death rates:

	General Employees		Teachers		Police and Fire	
Type	Males	Females	Males	Females	Males	Females
Ordinary	64%	48%	50%	40%	15%	15%
Accidental (Service-related)	16%	12%	10%	5%	35%	35%

The long-term expected arithmetic rate of returns on pension plan investments based on ERS' investment consultant, Pension Consulting Alliance, Inc.'s 2015 capital market projections for the target asset allocation as of June 30, 2015, are summarized in the following table:

Asset Class	Long-term Expected arithmetic rate of return
Domestic equity	8.50%
International equity	9.25%
Total Fixed-income	3.10%
Real Estate	9.20%
Private Equity	11.85%
Real Return	6.65%
Covered Calls	7.65%

Single Discount Rate

A single discount rate of 7.65% was used to measure the total pension liability. This single discount rate was based on the expected rate of return on pension plan investments of 7.65%. 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.

Note G – Pension Liability (continued)

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 7.65%, 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 (6.65%) or 1–percentage-point higher (8.65%) than the current rate.

1% Decrease (6.65%)	Current Discount Rate (7.65%)	1% Increase (8.65%)
$11,056,770,369	$8,732,930,830	$6,409,091,292

Note H – 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, 2015. 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 I – 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 $986,000,000 as of June 30, 2015, consisting of $265,000,000 in real estate investments, and $721,000,000 in alternative investments.

Note J – 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.

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

Fiscal Years Ended June 30, 2015 and 2014

	2014	2015
A. Total pension liability		
1. Service Cost	$421,956,129	$437,901,029
2. Interest on the Total Pension Liability	1,618,917,776	1,693,252,684
3. Changes of benefit terms	0	0
4. Difference between expected and actual experienceof the Total Pension Liability	66,400,876	(192,816,757)
5. Changes of assumptions	0	261,213,541
6. Benefit payments, including refunds of employee contributions	(1,130,921,611)	(1,181,252,658)
7. Net change in total pension liability	$976,353,170	$1,018,297,839
8. Total pension liability – beginning	21,243,744,377	22,220,097,547
9. Total pension liability – ending	$22,220,097,547	$23,238,395,386
B. Plan fiduciary net position		
1. Contributions – employer	$653,127,697	$717,792,981
2. Contributions – employer (picked-up employee contributions)	204,821,010	221,909,859
2. Contributions – employee	1,306,327	1,595,560
3. Net investment income	2,175,479,961	556,436,475
4. Benefit payments, including refunds of employee contributions	(1,130,921,611)	(1,181,252,658)
5. Pension Plan Administrative Expense	(12,626,030)	(14,032,964)
6. Other	0	0
7. Net change in plan fiduciary net position	$1,891,187,354	$302,449,253
8. Fiduciary net position – beginning	12,311,827,949	14,203,015,303
9. Fiduciary net position – ending	$14,203,015,303	$14,505,464,556
C. Net pension liability	$8,017,082,244	$8,732,930,830
D. Fiduciary net position as a percentage of the total pension liability	63.92%	62.42%
E. Covered-employee payroll	$3,829,002,983	$3,995,447,345
F. Net pension liability as a percentage of covered employee payroll	209.38%	218.57%

* Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

Schedule of the Employers' Net Pension Liability
Fiscal Year Ended June 30, 2013 to June 30, 2015*

Fiscal year ended June 30,:	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
2013	$21,243,744,377	$12,311,827,949	$8,931,916,428	57.96%	$3,720,809,962	240.05%
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%

* Schedule is intended to show information for 10 years. Additional years will be built prospectively as data becomes available.

Schedule of Employer Contributions
2006 to 2015
(In thousands)

Fiscal year ended June 30,:	Statutory Contributions	Covered Employee Payroll	Contributions as a Percentage of Covered Payroll
2006	$423,446	$3,113,737	13.6%
2007	454,494	3,340,488	13.6%
2008	488,770	3,601,722	13.6%
2009	578,672	3,838,000	15.1%
2010	547,670	3,713,593	14.7%
2011	538,692	3,731,383	14.4%
2012	548,353	3,706,137	14.8%
2013	581,447	3,720,810	15.6%
2014	653,128	3,829,003	17.1%
2015	717,793	3,995,447	18.0%

Notes: All contributions shown reflect statutory employer-paid contributions only. Employer contributions (picked-up employee/member contributions) and member contributions are excluded.
Information provided by Gabriel, Roeder Smith and Company, the ERS's actuary

Schedule of Investment Returns
2014 to 2015

For fiscal year ended June 30,:	Annual Money-Rate of Return
2014	17.9%
2015	4.0%

* Schedule is intended to show information for 10 years. Additional years will be built prospectively as data becomes available.

Notes to Required Supplementary Information - Unaudited

June 30, 2015

Note A - Description

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

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

Methods and Assumptions Used in Calculations of Actuarially Determined Contributions

The actuarially determined contribution rates in the schedule of contributions are calculated as of June 30, 2015. The following significant actuarial methods and assumptions were used to determine contribution rates reported in that schedule. Please refer to the Actuarial Section for additional information on actuarial assumptions.

Valuation date	June 30, 2015
Actuarial cost method	Entry Age Normal
Amortization method	Level percent, open
Asset valuation method	4-year smoothed market
Assumed inflation rate	3.0%
Investment rate of return	7.65% (including 3.0% for inflation and a 4.65% net real rate of return)
Cost-of-living adjustments (COLAs)	
- COLAs are not compounded; they are based on original pension amount.	
- Membership date prior to July 1, 2012	2.5% (not compounded)
- Membership date after June 30, 2012	1.5% (not compounded)
Payroll growth rate assumption	3.50%

Projected salary increases are comprised of the following components:

	General Employees	Teachers	Police and Fire
Service component by year of credited service (a)	0.0% to 4.0%	0.0% to 4.0%	0.0% to 14.0%
General increase (b)	1.0%	1.5%	2.0%
Inflation (c)	3.0%	3.0%	3.0%
Total increase (a + b +c)	4.0% to 8.0%	4.5% to 8.5%	5.0% to 19.0%

Notes to Required Supplementary Information - Unaudited

Detailed salary increase rates by years of service are shown below:

	General Employees		Teachers	
Years of Service	Service-related Component (a)	Total Annual Rate of Increase (a + b +c)	Service-related Component (a)	Total Annual Rate of Increase (a + b +c)
1	4.00%	8.00%	4.00%	8.50%
2	3.00%	7.00%	3.25%	7.75%
3	2.00%	6.00%	2.50%	7.00%
4	1.25%	5.25%	2.00%	6.50%
5	1.00%	5.00%	1.50%	6.00%
6	0.75%	4.75%	1.00%	5.50%
7	0.50%	4.50%	1.00%	5.50%
8	0.50%	4.50%	0.75%	5.25%
9	0.50%	4.50%	0.75%	5.25%
10	0.25%	4.25%	0.75%	5.25%
11	0.25%	4.25%	0.50%	5.00%
12	0.25%	4.25%	0.50%	5.00%
13	0.25%	4.25%	0.50%	5.00%
14	0.25%	4.25%	0.50%	5.00%
15 or more	0.00%	4.00%	0.00%	4.50%

	Police and Fire	
Years of Service	Service-related Component (a)	Total Annual Rate of Increase (a + b +c)
0	14.00%	19.00%
1	12.00%	17.00%
2 or more	0.00%	5.00%

Mortality rates used in the valuation are:

Post-Retirement Mortality rates are:

Healthy:	General Employees	Client specific table for males, 89% multiplier Client specific table for females, 89% multiplier
	Teachers	Client specific table for males, 65% multiplier Client specific table for females, 67% multiplier
	Police and Fire	1994 US Group Annuity Mortality Static Table for males, 85% multiplier 1994 US Group Annuity Mortality Static Table for females, 85% multiplier
Disabled:	General Employees	1994 US Group Annuity Mortality Static Table for males, set forward nine years 1994 US Group Annuity Mortality Static Table for females, set forward nine years
	Teachers	1994 US Group Annuity Mortality Static Table for males, set forward five years 1994 US Group Annuity Mortality Static Table for females, set forward six years
	Police and Fire	1994 US Group Annuity Mortality Static Table for males, set forward three years 1994 US Group Annuity Mortality Static Table for females, set forward three years

Pre-retirement mortality rates are:

For males, multiples of a custom table that has

- RP-2000 Male Employee rates for age 1 to 70 and RP-2000 Combined Male Rates for ages over 70

For females, multiples of a custom table that has

- RP-2000 Female Employee rates for age 1 to 70 and RP-2000 Combined Female Rates for ages over 70

The following factors are used in conjunction with the described above to derive the death rates:

	General Employees		Teachers		Police and Fire	
Type	Males	Females	Males	Females	Males	Females
Ordinary	64%	48%	50%	40%	15%	15%
Accidental (Service-related)	16%	12%	10%	5%	35%	35%

Change of 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.

Note B – Significant Factors Affecting Trends in Actuarial Information

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%.
- The salary increase rates were changed to reflect a larger productivity component for Police & Fire. 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.

Supplementary Information

Schedule 1

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

Year ended June 30, 2015

	2015			
	Pension Accumulation Reserves	**Annuity Savings Reserves**	**Expense Reserves**	**Total**
Additions				
Appropriations and contributions:				
Employers	$ 717,792,981	$ -	$ -	$ 717,792,981
Members	-	223,505,419	-	223,505,419
Net investment gain	556,436,475	-	-	556,436,475
Total additions	1,274,229,456	223,505,419	-	1,497,734,875
Deductions				
Benefit payments	1,170,744,770	-	-	1,170,744,770
Refunds of member contributions	-	10,507,888	-	10,507,888
Administrative expenses	-	-	14,032,964	14,032,964
Total deductions	1,170,744,770	10,507,888	14,032,964	1,195,285,622
Other changes in net position restricted for pension benefits:				
Transfer due to retirement of members	126,857,976	(126,857,976)	-	-
Transfer of interest allocation	(100,217,487)	100,217,487	-	-
Transfer to pay administrative expenses	(11,799,484)	-	11,799,484	-
Return of unrequired funds due to savings in administrative expenses	-	-	-	-
	14,841,005	(26,640,489)	11,799,484	-
Net increase (decrease)	118,325,691	186,357,042	(2,233,480)	302,449,253
Fiduciary net position restricted for pensions:				
Beginning of year	12,083,141,971	2,107,182,628	12,690,704	14,203,015,303
End of year	$ 12,201,467,662	$ 2,293,539,670	$ 10,457,224	$ 14,505,464,556

See accompanying independent auditors' report.

Supplementary Information (continued)

Schedule 2

Social Security Contribution Fund

Statement of Changes in Assets and Liabilities

Year ended June 30, 2015

	2015			
	Beginning Balance	**Additions**	**Deductions**	**Ending Balance**
Assets				
Receivable from employers	$ -	$ 219,661,553	$ 219,661,553	$ -
Total assets	$ -	$ 219,661,553	$ 219,661,553	$ -
Liabilities				
Due to employers	$ -	$ 219,661,553	$ 219,661,553	$ -
Total liabilities	$ -	$ 219,661,553	$ 219,661,553	$ -

Schedule 3

Schedule of Administrative Expenses

Year ended June 30, 2015

		2015
Personnel services		
Salaries and wages	$	5,361,833
Fringe benefits		2,504,812
Net change in unused vacation credits		145,712
Total personnel services		8,012,357
Professional services		
Actuarial		103,500
Auditing and tax consulting		476,145
Disability hearing expenses		47,120
Legal services		536,357
Medical		327,625
Other services		510,080
Total professional services		2,000,827
Communication		
Postage		109,206
Printing and binding		117,300
Telephone		93,890
Travel		82,732
Total communication		403,128
Rentals		
Rental of equipment		85,827
Rental of premises		17,032
Total rentals		102,859
Other		
Armored car service		6,706
Computer and office automation systems		39,375
Repairs and maintenance		1,245,563
Stationery and office supplies		23,248
Miscellaneous		63,458
Total other		1,378,350
Depreciation		2,135,443
	$	14,032,964

See accompanying independent auditors’ report.

Schedule 4

Schedule of Investment Expenses

Year ended June 30, 2015

		2015
Real estate and alternative investment expenses		
Operating expenses	$	43,362,259
Mortgage interest		9,157,266
Total real estate and alternative investment expenses		52,519,525
Investment expenses		
Investment manager/advisor fees	$	43,257,089
Bank custodian fees		407,909
Other investment expenses		1,179,761
Total investment expenses		44,844,759
Securities lending expenses		
Borrower rebates		(953,732)
Management fees		762,151
Total securities lending expenses		(191,581)
	$	97,172,703

See accompanying independent auditors' report.

Employees' Retirement System
of the State of Hawaii

INVESTMENT SECTION

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Letter from Chief Investment Officer

DAVID Y. IGE
GOVERNOR

THOMAS WILLIAMS
EXECUTIVE DIRECTOR

KANOE MARGOL
DEPUTY EXECUTIVE DIRECTOR

STATE OF HAWAII
EMPLOYEES' RETIREMENT SYSTEM

November 18, 2016

Board of Trustees
201 Merchant Street, Suite 1400
Honolulu, HI 96813

Dear Members of the Board:

I am pleased to present investment highlights and performance for the Investment Section of the Comprehensive Annual Financial Report (CAFR) for the fiscal year ending June 30, 2015.

- ERS Fiduciary net position was valued at $14.5 billion as of June 30, 2015. The portfolio increased by $0.3 billion over the fiscal year. The ERS continued to be ranked as one of the largest 250 institutional investors globally, a peer group that includes sovereign wealth funds, public retirement plan sponsors, and corporate plan sponsors.

- The ERS investment portfolio outperformed its one year and three year Policy Benchmark returns by 1.5% and 0.9%, respectively, while ending slightly below the Policy Benchmark for the five year return at -0.1%. The portfolio's return for the year was 4.2%. The portfolio continued to outperform its peer group as measured by the BNY Mellon Public Funds Greater than $1 billion, generating above median returns of 1.1% for the past year and 0.9% for the trailing three years. It matched the median public fund's performance for the five year period.

ECONOMIC CONDITIONS

Markets continued to have inconsistent bouts of positive and negative performance throughout the fiscal year. The U.S. Federal Reserve ended its bond buying program in October, and U.S. rates continued to hold steady. Oil prices have dropped dramatically. The US dollar strengthened against most major currencies except for pound sterling. The US economy posted back-to-back quarterly GDP growth not seen since 2003. Meanwhile, the Japan economy experienced a mild recession, and saw the prime minister delay a tax hike before important lower house elections. In Europe, growth prospects continued to dim, and the European monetary authorities continued to position for accommodative measures, while the U.K. electorate threatens to abandon the European Community, depending on the direction of spring parliamentary elections. China continued to grapple with slowing economic growth while down playing political unrest in former British colony Hong Kong. Given this backdrop selloffs of over 7% peak to trough, were followed by strong gains back up over 9% in subsequent months.

Much of the performance, with notable exceptions, derived from U.S. equity managers (up 8.1%), with large-cap growth and small-cap equities generating positive performance of 11.4% and 9.0%, respectively. International equities for developed and emerging markets lost value, brought down in-part by expectations for slowing growth in Europe and China, as well as other geopolitical risks.

Support for markets came from signs of strength that the US economy will continue to grow at a steady pace. Job growth improved, and the unemployment rate dipped below 6% for the first time since middle-2008. The US deficit pared way back as a percentage of GDP, and lower oil prices imply improved conditions for consumers. Interest rates defied market logic by drifting lower, and the Fed hinted that a rise rates is not immediate. One of the most surprising price moves continued to be oil, as OPEC decided not to decrease production forced investors to come to terms with what may be a prolonged oil glut. The result is continued pressure on oil exporters and producers. That contributed to a relatively superior position of the U.S. economy resulting in strength for the dollar, stocks, and bonds.

There was increasing divergence of global central bank policy as U.S. monetary authorities talked about entering a tightening phase while the central banks in Europe and in Japan positioned for further monetary easing. The Europeans and Japanese are coaxing growth into their economies, while the U.S. saw a spectacular 5% quarterly year-over-year GDP growth in the first fiscal year quarter, and an improving employment situation.

Volatility returned to markets at the beginning of the new calendar year. Weighing heavily on global markets was worsening growth prospects in Europe. In response the European Central Bank announced a highly anticipated bond buying program which received a torpid response from markets. However, Swiss Central Bank authorities surprised markets by abandoning its peg to the U.S. dollar, allowing its currency to strengthen resulting in market dislocations. Concerns also focused on Greek national elections that brought an anti-austerity coalition to power and once again put the specter of a European Union unraveling on the minds of investors.

U.S. equity markets were whipsawed by the concern for global growth and uncertainty in Fed policy. Weakness overseas contributed to U.S. 10 year note strengthening over the period, with rates falling as low as 1.6% and the U.S. dollar also strengthened versus major currencies such as the Euro and Yen. Overall the U.S. economy grew at about 2.6% in the second fiscal year quarter, which was approximately half the strength of GDP growth from the previous quarter. Oil prices dropped well below $50 dollars a barrel and the repercussions from repricing of the key commodity are only beginning to be felt. Despite relative slowing in the U.S. and overseas, the domestic economy continues to be on the mend, and numerous market participants continued to indicate a preference for U.S. investments.

As the year carried on the slide in oil prices stabilized and the Federal Reserve Chair, Janet Yellen, indicated that an increase in the Fed Funds rate would not come before the summer of 2015. Also, there appeared to be some measure of respite in the negotiations between the newly formed Greek government and the European Union on the terms of its debt repayments. However, Europe continued to grapple with anemic growth and very low levels on inflation. The European Central Bank's much discussed bond buying program of 60 billion euros a month remained short on details, but markets continued to anticipate the easing action. As a result, the U.S. dollar remained strong relative to the euro. Dollar strength versus the Japanese yen was also expected to continue.

The Federal Reserve backpedaled on a rate increase, pushing anticipated lift off to sometime before year-end, but the decision would be data driven. Meanwhile, Europe and Japan central banks remained accommodative. In China, despite slowing economic activity, the stock market is enjoyed a strong rally. Its financial stocks rallied some 116% over the previous 12 months. Commentators warned of overly optimistic valuations, but no one was calling for an immediate end to the rally.

The event that caused markets to end the fiscal year in pain was the ability for Greece and its creditors to come to terms for extending debt financing. In spite of opportunities to come to terms well before the end of June, the Greek government and its creditors prolonged debate and caused markets to swoon. Cooler head and terms extension would have to wait until the new fiscal year, which meant market sold off in late June.

Portfolio Activity

The first two quarters of the year were essentially flat. Then the market started to perform in the second half of the fiscal year, and the performance was quite good almost until the end of the period when the news out of Europe became negative (due to Greece's economic turmoil). That helped drive ERS returns down 3 percent at the end of June. The of the Greek debt refinancing with European authorities made performance measurable worse, especially because it fell at the end of the fiscal year. However, the three year annualized return of 11.4% and the five year return of 10.8% exceeded the actuarial assumed target rate of return, which was 8.0% over most of the period.

As mentioned above, the strongest liquid market returns came from U.S. large-cap growth equities and U.S. small-cap equities. Illiquid markets performed even better. Private equity returned 12.8% for the year. Private real estate returned 18.7% for the year. These high returns are expected to come down over time, but in markets buffeted by uncertainty oversees, it was positive that the portfolio had diversified strategies to offset the downdraft.

The ERS is also transforming the portfolio into a structure based on functional risk classes. The previous structure was designed on asset class definition. The difference is that the new risk focused approach will lead to lower risks, greater transparency, and better diversification. Overall, as the strategies and managers are changed in the coming quarters, the portfolio will exhibit better risk-return characteristics over a full market cycle. The portfolio will better withstand a major market crisis and have more stable returns through time. It is an innovative approach that demonstrates the Trustees insight and appreciation for lessons learned from the Great Financial Crisis and Technology Bubble.

Letter from Chief Investment Officer (continued)

Office Development

Fiscal Year 2015 was the first complete year working together for the Investment Office's team of three Investment Officers, two Investment Specialists, one Chief Investment Officer, and one Secretary. The enhancement to the office functions and capabilities is measurable. There are more manager meetings and improved monitoring of policy and compliance implementation. Communications with the Trustees, consultants, and fund managers is improved and increased. Staff is actively improving ways to optimize operations, deliver cost savings through fee negotiations, and generate better returns. The ongoing support of the Board of Trustees for the development of the Investment Office is greatly appreciated. Professional management of the trust's assets will greatly increase the potential for the overall pension plan to remain a sustainable program.

OUTLOOK

As was written in these pages previously, the outsized returns of a couple of years ago are now met by a year of underperformance and increased if periodic price swings. The investment environment has become considerably more challenging. The timing the of Greek debt negotiations breakdown was unfortunate because it took 3% off of returns at year-end. More importantly, the nature of the market disruption is worrisome. It represented more political then fundamental factors that are difficult to predict. It portends market conditions that may be impossible to appreciate in making investment decisions.

However, given the long-investment horizon and patience with investment capital of a pension fund, the ERS should be able to weather the uncertainty of unpredictable short-term market shocks. That is not to say that losing 3% market value at year-end is not extremely disappointing. It means that as long-term investors who readily admit are unable to time market moves, the focus must remain beyond the immediate year or trend. As investors we must be strategic, prudent, and risk-adverse. Investment decisions and portfolio structure must be conducted to provide a long-term return that allows the pension plan to continue to function. Despite the return of the current year the portfolio design and operations continue to improve to ensure the future remains certain.

Respectfully yours,

Vijoy P Chattergy

Vijoy P. Chattergy
Chief Investment Officer

PCA PENSION CONSULTING ALLIANCE

MEMORANDUM

August 26, 2016

Board of Trustees
Employees' Retirement System of the State of Hawaii
City Financial Tower
201 Merchant Street, Suite 1400
Honolulu, HI 96813-2980

Dear Trustees:

Enclosed is our report on the investment activity for the Employees' Retirement System of the State of Hawaii (ERS) for periods ending June 30, 2015, as requested by the Government Financial Officers' Association (GFOA).

Hawaii ERS-Total Fund Performance

The total assets of the Retirement System were $14.5 billion as of June 30, 2015, an increase of roughly $0.3 billion for the fiscal year. The ERS Total Fund generated positive absolute returns throughout the majority of the portfolio, as well as generally positive relative performance versus the major strategic classes' benchmarks. The investment return for the Total Fund, expressed as a time-weighted total rate of return, was +4.2% for the 2015 fiscal year, compared to the benchmark's return of +2.7% and the BNY Mellon Public Funds Greater than $1 Billion Database peer median return of +3.1%. For the three-year period ending June 30, 2015, the Total Fund returned +11.4% per annum versus the benchmark's return of +10.5% and the BNY Mellon Public Funds Greater than $1 Billion Database peer median return of +10.5%. For the trailing five-year period ending June 30, 2015, the Total Fund returned +10.8% per annum versus the benchmark's return of +11.0% and the BNY Mellon Public Funds Greater than $1 Billion Database peer median return of +10.8%. The strong absolute returns over the three- and five-year periods are largely attributable to above-average returns within the public equity and private markets segments of the capital markets.

Strategic Class Performance

Domestic Equity[1] returned +8.0% for the 2015 fiscal year versus the Domestic Equity Index's return of +7.3% and the BNY Mellon Domestic Equity Database peer median return of +7.8%. Diversified Fixed Income posted a +1.9% return for the fiscal year versus the Diversified Fixed Income Blended Index's return of +1.9% and the BNY Mellon Domestic Fixed Income Database peer median return of +1.8%. International Equity[1] posted a -4.3% return for the fiscal year versus the International Equity Index's return of +21.8-5.3% and the BNY Mellon International Equity Database peer median return of -5.3%. International Fixed Income returned +6.8% for the fiscal

1 Domestic and International Equity returns reflect the appropriate portion of the Global Equity portfolio (funded August 2011).

year versus the International Fixed Income Blended Index's return of +3.7% and the BNY Mellon International Fixed Income Database peer median return of -10.0%. Real Estate[2] returned +18.7% for the year ending June 30, 2015, versus the NCREIF[2] Total Index's return of +12.7%. Additional strategic classes and their fiscal year returns include; Private Equity[2] at +12.8%, Real Return at +5.4%, and Covered Calls at +5.6%.

During 2014, the ERS adopted a risk-based, functional framework for allocating capital within the Total Fund. This framework makes use of strategic/functional classes that in-turn utilize underlying asset classes and strategies. As a result, nearly all of the ERS's existing asset classes have been remapped to various risk-based, functional strategic classes. Two pre-existing classes (Real Return and Real Estate), however, remained unchanged at this stage in the process. Based on these changes, the verbiage below highlights the performance of the ERS's new risk-based strategic classes.

As calculated by BNY Mellon, the ERS's custodial bank, the Broad Growth[3] class did not have a complete fiscal year return. The Principal Protection class produced a +2.8% return for the fiscal year versus the Principal Protection Index's return of +1.7%. Real Return class produced a return of +5.4% for the year ending June 30, 2015. Real Estate[4] returned +18.7% for the year ending June 30, 2015, versus the NCREIF[4] Total Index's return of +12.7%.

The ERS's transition to this new risk-based, functional allocation framework will likely require multiple years to fully complete. Furthermore, as a result of the 2015 Asset-Liability Study that was finalized post-fiscal yearend, it is expected that the ERS's implementation of a new long-term strategic allocation will be completed by the end of fiscal year 2020.

Market Conditions

The market backdrop for fiscal year 2015 was largely an extension of fiscal year 2014, characterized by improving economic fundamentals, geopolitical uncertainty, and the continued, methodical middle stages of unwinding the Federal Reserve's quantitative easing program. While fiscal year 2014 experienced strong positive returns throughout the global capital markets, fiscal year 2015 experienced material dichotomy. In particular, U.S. equities, private equity, private real estate, and duration-oriented fixed income assets saw positive absolute returns near or above long-term expected levels, whereas non-U.S. equities and commodities experienced negative absolute returns. Furthermore, credit-oriented fixed income generated total returns near zero percent. As a general statement, while the global economy improved at the margin, any assets that had exposure to international markets and commodity prices were negatively impacted.

2 Lagged one quarter.
3 Contains lagged and non-lagged components
4 Lagged one quarter.

Letter from Investment Consultant (continued)

PCA PENSION CONSULTING ALLIANCE

During fiscal year 2015, equities within the U.S., as measured by the Russell 3000 Index, advanced by +7.3%, while non-U.S. equities, as measured by the MSCI ACWI ex U.S. Index, declined by -4.8%. In-line with fiscal years 2011, 2012, and 2014, growth stocks outperformed value stocks across the entire domestic equity market cap spectrum. Additionally, during fiscal year 2015, emerging markets equities trailed developed non-U.S. equities, although there was considerable divergence among developed non-U.S. market segments. In particular, the Pacific region outperformed the European region by +10.1%.

The fixed income markets provided investors with flat to marginal returns across the globe. At a high-level, duration-oriented assets produced positive returns whereas more credit-oriented assets were roughly flat. With respect to particular indices, investment-grade bonds, as measured by the Barclays Capital Aggregate Bond Index, returned +1.9%. Government bonds (BC Government) produced a return of +2.3%, mortgage-backed bonds (BC MBS) generated a +2.3% return, investment-grade credit bonds (BC Credit) rose by +0.9%, high-yield corporate bonds (BC High Yield) returned -0.4%, and emerging markets bonds (BC Emerging Markets) increased by +0.2%.

Throughout the complicated market conditions of the past few years, with its constant review and oversight, the Board continues to position the Employees' Retirement System of the State of Hawaii for competitive long-term performance consistent with its objectives.

Sincerely,

Pension Consulting Alliance, LLC

Report on Investment Activity by Investment Consultant (continued)

Report on Investment Activity for the
Employees' Retirement System of the State of Hawaii
Prepared by Pension Consulting Alliance, LLC
June 2015

Outline of Investment Policies

The primary goal of the Plan is the preservation of capital. The Board of Trustees seeks preservation of capital with a consistent, positive return for the Fund. Although pure speculation is to be avoided, the Board appreciates the fact that an above-average return is associated with a certain degree of risk. Risk to be assumed must be considered appropriate for the return anticipated and consistent with the total diversification of the Fund.

Strategic Asset Allocation Policy

A formal asset-liability study is conducted every three-to-five years to verify or amend the Plan's policy targets. The targets are designed to achieve a certain level of return, and associated level of risk, that is aligned with the Plan's goals and objectives. The targets are evaluated on the basis of assets designated to each strategic class by the Board, rather than on a current invested position. The targets will be pursued primarily by cash flow on a long-term basis and will be revised if significant changes occur within the economic and/or capital market environment according to the rebalancing guidelines. The targets are to be reviewed annually for reasonableness relative to significant economic and market changes. While the last formal asset-liability study was completed during fiscal year 2010, the Board of Trustees initiated a new asset-liability study during fiscal year 2015 that was completed post-fiscal yearend. As a result of the 2010 asset-liability study, the Board adopted a new long-term strategic allocation policy which included evolving policy targets designed to efficiently transition the Plan to the new long-term strategic allocation over time. The transition was completed as of 7/1/2013. Furthermore, during 2014, the ERS adopted a risk-based, functional framework for allocating capital within the Total Fund. While the underlying asset class weights did not materially change at this time, new high-level classes were implemented without impacting the risk/return posture of the Fund.

Strategic Asset Allocation Policy (as of 6/30/2015)

During the 2015 fiscal year, the Plan was strategically invested in the following classes:

	Strategic Allocation (asset classes)		Strategic Allocation (risk-based classes)
Domestic Equity	**30%**	Broad Growth	**76%**
International Equity	**26%**	Principal Protection	**12%**
Total Fixed Income	**20%**	Real Return	**5%**
Real Estate	**7%**	Real Estate	**7%**
Private Equity	**7%**		
Real Return	**5%**		
Covered Calls	**5%**		

Report on Investment Activity by Investment Consultant (continued)

PENSION CONSULTING ALLIANCE

Long-Term Strategic Allocation Policy

As a result of the formal asset-liability study conducted during fiscal year 2010, the Board adopted a new long-term strategic allocation policy. The plan began transitioning to the new strategic allocation policy during fiscal year 2012, and the transition was completed as of 7/1/2013. A new long-term strategic allocation policy will be presented in the fiscal year 2016 report as a result of the asset-liability study that was completed post-fiscal 2015 yearend.

Expected Annualized Return and Risk

Based on PCA's 2015 capital market projections for 10 years, the target allocation is expected to achieve a geometric average return of 7.0% (4.5% real return with expected inflation of 2.5%). The annual nominal return over this 10-year period is expected to fall within a range of minus (5.8%) and 21.4% two-thirds of the time.

Long-Range Strategic Allocation Targets

The ERS will strategically invest in the following asset classes:

	Strategic Allocation (asset classes)		**Strategic Allocation (risk-based classes)**
Domestic Equity	**30%**	Broad Growth	**76%**
International Equity	**26%**	Principal Protection	**12%**
Total Fixed Income	**20%**	Real Return	**5%**
Real Estate	**7%**	Real Estate	**7%**
Private Equity	**7%**		
Real Return	**5%**		
Covered Calls	**5%**		

* The Real Estate, Private Equity, and Real Return targets will be the percentages actually invested up to 7%, 7%, and 5% (respectively) of the Total Fund. Changes in the Real Estate, Private Equity, and Real Return targets, if any, will be offset by an equal percentage change in the Domestic Equity target.

PCA PENSION CONSULTING ALLIANCE

Evolving Strategic Asset Allocation Policy

	Target Policy 10/1/2011	**Target Policy 7/1/2012**	**Target Policy 7/1/2013**
Domestic Equity	35%	30%	30%
International Equity	21%	26%	26%
Total Fixed income	24%	21%	20%
Real Estate	7%	7%	7%
Private Equity	5%	6%	7%
Real Return	5%	5%	5%
Covered Calls	3%	5%	5%
Total	**100%**	**100%**	**100%**

Manager Evaluation

Public markets managers are measured against relevant indices and/or their respective peer groups of managers. Market indices and peer group benchmarks (when applicable) are assigned to each manager and are intended as a guide for the investment manager to understand the risk/reward posture of their portfolio. Real Estate managers are measured against the median performance of the BNY Mellon Real Estate Database and the NCREIF Total Return Index. Private Equity managers are measured against public market proxies and relevant peer groups. Managers have full discretion to manage the risk posture of their portfolios relative to their designated market index and may, with conviction and appropriate expertise, execute security strategies not reflected by their market index as long as they conform to the investment guidelines and the laws of the State of Hawaii.

Investment Practices

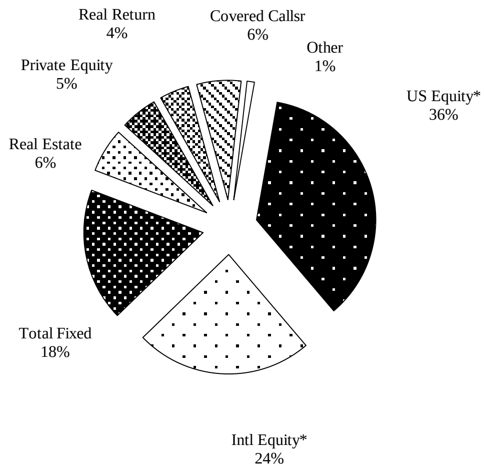
The full Employees' Retirement System of the State of Hawaii Investment Policy, Guidelines, and Procedures Manual (Manual) describes, in detail, acceptable investment practices, manager reporting requirements, manager performance guidelines, distribution of brokerage commissions, and securities lending guidelines. Material revisions to the Manual occurred during each of the last three fiscal years and will continue to transpire throughout the evolution of the Plan.

All rates of return are calculated using methodologies that are generally accepted by the Global Investment Performance Standards (GIPS). All public markets manager returns are time-weighted rates of return based on daily or monthly custodial data. Real Estate and Private Equity returns seek to accurately represent cash flows and appraisal values.

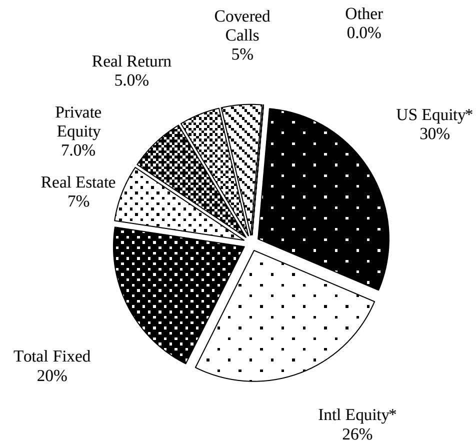
Report on Investment Activity by Investment Consultant (continued)

Strategic Allocation as of June 30, 2015 (Asset Classes):

Actual Allocation



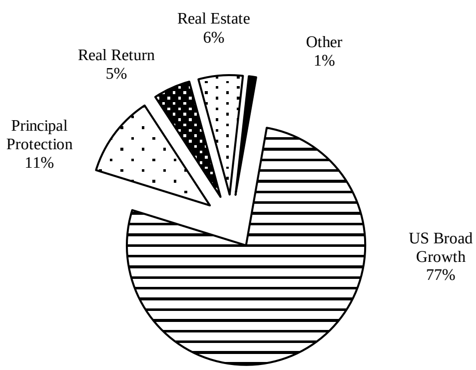
Target Allocation



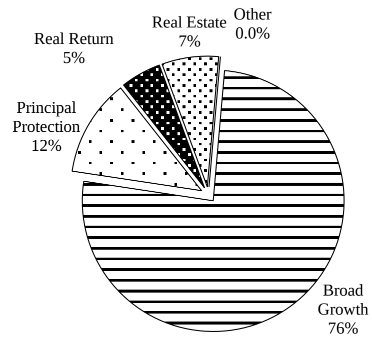
* Domestic and International Equity allocations reflect the appropriate portion of the Global Equity portfolio (funded August 2011).

Strategic Allocation as of June 30, 2015 (Risk-based Classes):

Actual Allocation



Target Allocation



Report on Investment Activity by Investment Consultant (continued)

Investment Results as of June 30, 2015 (Asset Classes):

	Year Ended June 30,					3 Years Ended	5 Years Ended
	2015	2014	2013	2012	2011	6/2015	6/2015
Domestic Equity*	**8.01%**	**26.28%**	**21.16%**	**1.08%**	**31.83%**	**18.23%**	**17.10%**
Domestic Equity Blended Index[1]	7.29%	25.22%	21.46%	3.84%	32.37%	17.73%	17.54%
Median Total Domestic Equity**	7.75%	25.30%	22.16%	1.38%	33.22%	18.77%	17.99%
Diversified Fixed-Income	**1.90%**	**6.28%**	**1.72%**	**7.51%**	**5.51%**	**3.28%**	**4.56%**
Diversified Fixed Income Blended Index[2]	1.93%	5.28%	0.72%	7.19%	4.20%	2.62%	3.84%
Median Domestic Fixed**	1.77%	6.11%	0.41%	8.10%	5.90%	2.70%	4.26%
International Equity*	**(4.28%)**	**20.80%**	**12.64%**	**(14.36%)**	**30.24%**	**9.27%**	**7.75%**
International Equity Blended Index[3]	(5.26%)	21.75%	13.63%	(14.36%)	30.07%	9.44%	7.87%
Median Non-U.S. Equity**	(2.71%)	22.34%	15.77%	(13.10%)	29.81%	11.38%	9.59%
International Fixed-Income	**6.80%**	**6.88%**	**9.26%**	**3.42%**	**4.12%**	**7.64%**	**6.08%**
International Fixed Blended Index[4]	3.71%	5.72%	3.47%	6.22%	0.91%	4.29%	3.99%
Median Non-U.S. Fixed**	(10.02%)	9.04%	2.23%	6.56%	12.70%	1.64%	4.02%
Covered Calls***	**5.56%**	**13.53%**	**6.57%**	---	---	**8.49%**	
Covered Calls Index[5]	3.64%	14.12%	5.29%	---	---	7.59%	---
Real Estate****	**18.69%**	**6.47%**	**20.77%**	**15.99%**	**21.41%**	**15.13%**	---
NCREIF Total Property Index****	12.72%	11.18%	10.52%	13.41%	16.03%	11.47%	16.53%
Median Real Estate**	13.72%	14.20%	10.80%	9.45%	17.06%	13.49%	12.75%
Private Equity****	**12.83%**	**20.39%**	**8.91%**	**11.87%**	**16.46%**	**13.95%**	**14.53%**
Real Return	**5.37%**	**7.96%**	**0.34%**	**5.48%**	**(0.73%)**	**4.51%**	**3.63%**
Total Fund	**4.23%**	**17.77%**	**12.57%**	**(0.14%)**	**21.25%**	**11.38%**	**10.84%**
Composite Benchmark[6]	3.47%	17.51%	11.61%	2.70%	21.47%	10.72%	11.10%
Median Fund**	3.11%	17.14%	12.65%	1.35%	22.47%	10.50%	10.80%

*Domestic and International Equity returns reflect the appropriate portion of the Global Equity portfolio (funded August 2011).

**Universe data provided by BNY Mellon: Public Funds > $1 billion for fiscal years 2014 and 2015 and trailing periods. Northern Trust: Public Funds > $1 Billion for fiscal years 2011-2013.

***Received funding during fiscal year 2012.

****Lagged one quarter.

[1] 80% S&P 500 Index, 10% S&P Mid Cap 400 Index and 10% Russell 2000 Index through 12/31/08; Russell 3000 Index thereafter.

[2] BC Aggregate Index through 6/30/08; 85% BC US Universal Index and 15% Multiverse Non-US Hedged Index thereafter.

[3] 85% MSCI EAFE Free ND Index and 15% MSCI Emerging Markets ND Index through 6/30/11; 85% MSCI World ex US ND Index and 15% MSCI Emerging Markets ND Index through 6/30/12; MSCI ACWI ex US ND Index thereafter.

[4] Citigroup Non-US WGBI through 6/30/08; BC Multiverse Non-US Hedged Index thereafter.

[5] CBOE S&P 500 BXM Index.

[6] 34.9% S&P 500 Index, 4.5% S&P 400 Mid Cap Index, 4.5% Russell 2000 Index, 14.5% MSCI EAFE Free ND Index, 2.5% MSCI Emg Mkts ND Index, 7.5% NCREIF Property Index lagged, 3.6% Alternative Investments, 21.0% BC Aggregate Index, and 7.0% CG WGBI ex US Index through 12/31/08;
41.0% Russell 3000 Index, 14.5% MSCI EAFE Free ND Index, 2.5% MSCI Emg Mkts ND Index, 9.0% NCREIF Property Index lagged, 5.0% Alternative Investments, 21.0% BC Universal Index, and 7.0% BC Multiverse ex US Hedged Index through 6/30/11;
41.0% Russell 3000 Index, 14.5% MSCI World ex US ND Index, 2.5% MSCI Emg Mkts ND Index, 9.0% NCREIF Property Index lagged, 5.0% Alternative Investments, 21.0% BC Universal Index, and 7.0% BC Multiverse ex US Hedged Index through 9/30/11;
35.0% Russell 3000 Index, 18.0% MSCI World ex US ND Index, 3.0% MSCI Emg Mkts ND Index, 7.0% NCREIF Property Index lagged, 5.0% Private Equity, 5.0% Real Return, 18.0% BC Universal Index, 6.0% BC Multiverse ex US Hedged Index, and 3.0% CBOE BXM Index through 6/30/12;
30.0% Russell 3000 Index, 26.0% MSCI ACWI ex US ND Index, 7.0% NCREIF Property Index lagged, 6.0% Private Equity, 5.0% Real Return, 15.75% BC Universal Index, 5.25% BC Multiverse ex US Hedged Index, and 5.0% CBOE BXM Index through 6/30/13;
30.0% Russell 3000 Index, 26.0% MSCI ACWI ex US ND Index, 7.0% NCREIF Property Index lagged, 7.0% Private Equity, 5.0% Real Return, 15.0% BC Universal Index, 5.0% BC Multiverse ex US Hedged Index, and 5.0% CBOE BXM Index thereafter.

Report on Investment Activity by Investment Consultant (continued)

PCA PENSION CONSULTING ALLIANCE

Investment Results as of June 30, 2015 (Risk-based Classes):

	Year Ended June 30,					3 Years Ended	5 Years Ended
	2015	2014	2013	2012	2011	6/2015	6/2015
Broad Growth *	---	---	---	---	---	---	---
Broad Growth Blended Index[1]	---	---	---	---	---	---	---
Principal Protection	**2.78%**	**6.28%**	**1.72%**	**7.51%**	**5.51%**	**3.57%**	**4.74%**
Principal Protection Blended Index[2]	1.73%	5.28%	0.72%	7.19%	4.20%	2.56%	3.79%
Real Estate***	**18.69%**	**6.47%**	**20.77%**	**15.99%**	**21.41%**	**15.13%**	**16.53%**
NCREIF Total Property Index***	12.72%	11.18%	10.52%	13.41%	16.03%	11.47%	12.75%
Median Real Estate**	13.72%	14.20%	10.80%	9.45%	17.06%	13.49%	14.53%
Real Return	**5.37%**	**7.96%**	**0.34%**	**5.48%**	**(0.73%)**	**4.51%**	**3.63%**
Total Fund	**4.23%**	**17.77%**	**12.57%**	**(0.14%)**	**21.25%**	**11.38%**	**10.84%**
Composite Benchmark[3]	2.74%	17.51%	11.61%	2.70%	21.47%	10.45%	10.95%
Median Fund**	3.11%	17.14%	12.65%	1.35%	22.47%	10.50%	10.80%

* Per BNY Mellon data, the Broad Growth composite was incepted 10/1/2014.

**Universe data provided by BNY Mellon: Public Funds > $1 billion for fiscal years 2014 and 2015 and trailing periods. Northern Trust: Public Funds > $1 Billion for fiscal years 2011-2013.

*** Lagged one quarter.

[1] 78% MSCI ACWI IMI ND, 6.8% CBOE BXM Index, 5.1% BC Global Credit (hedged) Index, 3.4% BC Global High Yield (hedged) Index, 1.7% S&P LSTA Leveraged Loan Index, and 5% MSCI ACWI IMI ND (quarter lagged) + 2%.

[2] BC Aggregate Index through 6/30/08; 85% BC US Universal Index and 15% Multiverse Non-US Hedged Index through 9/30/14; BC Global Intermediate Aggregate ex. Credit (hedged) Index thereafter.

[3] 34.9% S&P 500 Index, 4.5% S&P 400 Mid Cap Index, 4.5% Russell 2000 Index, 14.5% MSCI EAFE Free ND Index, 2.5% MSCI Emg Mkts ND Index, 7.5% NCREIF Property Index lagged, 3.6% Alternative Investments, 21.0% BC Aggregate Index, and 7.0% CG WGBI ex US Index through 12/31/08;
41.0% Russell 3000 Index, 14.5% MSCI EAFE Free ND Index, 2.5% MSCI Emg Mkts ND Index, 9.0% NCREIF Property Index lagged, 5.0% Alternative Investments, 21.0% BC Universal Index, and 7.0% BC Multiverse ex US Hedged Index through 6/30/11;
41.0% Russell 3000 Index, 14.5% MSCI World ex US ND Index, 2.5% MSCI Emg Mkts ND Index, 9.0% NCREIF Property Index lagged, 5.0% Alternative Investments, 21.0% BC Universal Index, and 7.0% BC Multiverse ex US Hedged Index through 9/30/11;
35.0% Russell 3000 Index, 18.0% MSCI World ex US ND Index, 3.0% MSCI Emg Mkts ND Index, 7.0% NCREIF Property Index lagged, 5.0% Private Equity, 5.0% Real Return, 18.0% BC Universal Index, 6.0% BC Multiverse ex US Hedged Index, and 3.0% CBOE BXM Index through 6/30/12;
30.0% Russell 3000 Index, 26.0% MSCI ACWI ex US ND Index, 7.0% NCREIF Property Index lagged, 6.0% Private Equity, 5.0% Real Return, 15.75% BC Universal Index, 5.25% BC Multiverse ex US Hedged Index, and 5.0% CBOE BXM Index through 6/30/13;
30.0% Russell 3000 Index, 26.0% MSCI ACWI ex US ND Index, 7.0% NCREIF Property Index lagged, 7.0% Private Equity, 5.0% Real Return, 15.0% BC Universal Index, 5.0% BC Multiverse ex US Hedged Index, and 5.0% CBOE BXM Index through 6/30/14;
30.0% Russell 3000 Index, 26.0% MSCI ACWI ex US ND Index, 7.0% NCREIF Property Index lagged, 7.0% Private Equity, 5.0% Real Return, 15.0% BC Universal Index, 5.0% BC Multiverse ex US Hedged Index, and 5.0% CBOE BXM Index thereafter.

Investment Professionals

INVESTMENT MANAGERS

U.S. EQUITIES (BROAD GROWTH)
- Bank of Hawaii
- Barrow, Hanley, Mewhinney & Strauss
- CM Bidwell & Associates
- CS McKee Investment Managers
- Jennison Associates
- JP Morgan Chase
- Mellon Capital Management Corporation
- Sands Capital
- T. Rowe Price

INTERNATIONAL EQUITIES (BROAD GROWTH)
- Franklin Templeton
- JP Morgan Chase
- Mellon Capital Management Corporation
- Mercator Asset Management
- Quantitative Management Associates (QMA)
- Research Affiliates

PRIVATE EQUITY (BROAD GROWTH)
- Hamilton Lane
- Stafford Partners

COVERED CALLS (BROAD GROWTH)
- Gateway

FIXED-INCOME (BROAD GROWTH)
- Bradford and Marzec
- Pacific Investment Management Company
- Western Asset Management Company

FIXED-INCOME (PRINCIPAL PROTECTION)
- First Hawaiian Bank
- Oechsle International Advisors
- Pacific Income Advisers
- Pacific Investment Management Company

REAL ESTATE
- Angelo Gordon
- Almanac
- Blacksand Capital
- Blackstone Realty
- CB Richard Ellis
- Fortress Japan
- Heitman Capital Management
- Invesco Realty Advisors
- ISquared
- LaSalle Investment Management
- Lone Star
- Lowe Enterprises
- Mesa Capital
- Prudential

REAL RETURN
- Blackrock
- Hancock Timber Resource Group
- Kohlberg Kravis Roberts

OTHER SERVICE PROVIDERS

COMMISSION RECAPTURE BROKERS
- ConvergEx Execution Solutions, LLC
- Capital Institutional Services, Inc.

CUSTODIAL BANK
- Bank of New York Mellon

INVESTMENT ADVISOR
- Pension Consulting Alliance, Inc.
- Courtland Partners
- Hamilton Lane

Investment Schedules

List of Assets Directly Held (by fair value)*

as of June 30, 2015 (excludes investments in pooled vehicles and index funds)

** A complete list of holdings is available for review upon request.*

	Par / Shares	Security	Coupon	Maturity	Average Issue Rating	Fair Value
Domestic Fixed Income						
1	69,000,000	U.S. Treasury Note	1.000%	3/15/2018	AAA	$ 69,161,460
2	35,000,000	U.S. Treasury Note	0.500%	2/28/2017	AAA	34,978,300
3	26,221,000	U.S. Treasury Note	0.500%	1/31/2017	AAA	26,212,871
4	21,462,599	U.S. Treasury CPI Inflation	0.250%	1/15/2025	AAA	21,051,805
5	14,223,317	U.S. Treasury CPI Inflation	0.750%	2/15/1942	AAA	13,070,944
6	12,499,799	U.S. Treasury CPI Inflation	0.125%	7/15/2022	AAA	12,405,050
7	11,974,000	Federal National Mortgage Association	0.875%	5/21/2018	AAA	11,902,276
8	9,895,961	U.S. Treasury CPI Inflation	2.375%	1/15/2025	AAA	11,641,708
9	10,943,692	U.S. Treasury CPI Inflation	0.125%	1/15/2021	AAA	11,575,471
10	9,490,784	U.S. Treasury CPI Inflation	2.375%	1/15/2027	AAA	11,355,533
International Fixed Income						
1	22,526,583	United Kingdom Gilt Inflation	0.125%	3/22/2024	AA1	38,291,875
2	20,535,000	United Kingdom Gilt	1.250%	7/22/2018	AA1	32,514,551
3	115,504,000	Republic of Poland	0.000%	1/25/2016	A2	30,439,200
4	26,892,000	Italy Buoni Poliennali Del Tes	1.050%	12/1/2019	BAA2	29,945,688
5	23,065,000	Republic of Ireland	3.400%	3/18/2024	A3	29,654,103
6	95,700,000	Republic of Poland	2.500%	7/25/2018	A2	25,607,441
7	23,858,000	Republic of Iceland	4.875%	6/16/2016	BAA2	24,690,143
8	86,255,000	Republic of Poland	5.250%	10/25/2017	A2	24,589,934
9	35,723,000	KFW	3.750%	6/14/2018	AAA	24,529,781
10	19,000,000	Republic of Slovenia	4.000%	3/22/2018	BAA1	23,087,784
Domestic Equities						
1	557,551	Applie Common				69,930,835
2	961,080	Wells Fargo & Co Common				54,051,139
3	792,462	JPMorgan Chase Common				53,697,225
4	590,069	Facebook Inc Common				50,607,268
5	720,021	Visa Inc Common				48,349,410
6	1,031,700	Microsoft Common				45,549,556
7	407,407	Amerisourcebergen Corp Common				43,323,660
8	616,945	American International Group I Common				38,139,540
9	909,435	Oracle Common				36,650,230
10	71,168	Regereron Pharmaceuticals Inc Common				36,304,932
International Equities						
1	156,253	Roche Holdings AG Genusscheine				43,805,345
2	30,755,000	China Construction Bank				28,086,939
3	265,052	Novartis AG				26,135,083
4	1,106,136	WPP PLC				24,806,982
5	1,915,500	China Mobile Ltd				24,522,689
6	21,067	Samsung Electronics Co Ltd				23,948,138
7	28,519,259	Industrial & Commercial Bank of China				22,660,755
8	1,380,740	ARM Holdings PLC				22,518,349
9	869,820	Burberry Group				21,490,744
10	32,188,000	Bank of China Ltd				20,925,698

Investment Schedules (continued)

Investments Summary

- excludes cash and cash equivalents and short-term investments

(Dollar values expressed in thousands)

	Fair Value as of June 30, 2015	Percentage
Equity securities		
Common stock	$ 6,533,937	46.20%
Pooled and others	2,727,526	19.28%
	9,261,463	65.48%
Fixed income securities		
US treasury / government / agencies	412,122	2.91%
US mortgage-backed	250,654	1.77%
US corporate	864,304	6.11%
Non-US government / agencies	821,612	5.81%
Non-US corporate	374,724	2.65%
Pooled and others	83,673	0.59%
	2,807,089	19.84%
Others		
Real estate investments	1,188,494	8.40%
Alternative investments	888,219	6.28%
	2,076,713	14.68%
Total, investments at fair value	$ 14,145,265	100.00%

Schedule of Investment Fees

by Asset Class Allocation

(Dollar values expressed in thousands)

	Fair value as of June 30, 2015	Total FY 2015 Investment Fees	Basis Points
Equities			
U.S. equities	$ 5,115,167	$ 13,387	26 bp
International equities	3,416,406	10,413	30
	8,531,573	23,800	28
Fixed Income			
Diversified income	1,997,985	3,416	17
Non U.S. fixed income	611,526	1,026	17
	2,609,511	4,442	17
Other Asset Allocations			
Real estate	922,284	9,281	101
Real return	640,537	2,364	37
Covered calls	853,470	1,810	21
Other assets	191,282	24	1
Private equity	688,375	212	3
	3,295,948	13,691	42
Other Investment Services			
Custodian fees	n/a	408	n/a
Investment consultant fees	n/a	1,324	n/a
Total	$ 14,437,032	$ 43,665	30

Investment Schedules (continued)

Schedule of Broker Commissions

The Employees' Retirement System participates in a Commission Recapture Program with three brokerage firms for equity trades, which are listed in the Investment Professionals section. Certain domestic and international equity investment managers are required to direct at least 35% of all brokerage transactions to participating brokers, subject to best execution. Commissions charged per share are based on the investment manager's normal rate schedule. All commissions recaptured are used exclusively by the ERS for the benefit of its members and beneficiaries. ERS does not guarantee participating brokers any minimums, required volumes or fees. During the fiscal year ended June 30, 2015 the ERS recaptured $327,685 in commissions.

The following is a list of brokers who received commissions during Fiscal Year 2015.

Brokerage Firms	Shares Traded	Dollar Volume of Trades	Commission Dollar Amount	Commission Per Share
ABG SEC AS (NORGE), FILIAL, STOCKHOLM	110,710	$ 1,277,818	$ 1,082	$ 0.010
ABG SECS, OSLO	276,729	4,101,321	6,014	0.022
ACADEMY SECURITIES, INC, NEW YORK	14,857	871,800	323	0.022
AUTONOMOUS LLP, LONDON	113,278	4,788,963	4,691	0.041
AUTONOMOUS RESEARCH US LP,NEW YORK	5,200	272,788	222	0.043
AVONDALE PARTNERS LLC, NASHVILLE	4,007	110,578	1,385	0.346
B RILEY AND CO INC, NEW YORK	5,100	153,194	51	0.010
BAIRD, ROBERT W & CO INC, MILWAUKEE	281,018	11,287,677	6,829	0.024
BANCO BILBAO VIZCAYA, MADRID	958,541	6,494,311	7,248	0.008
BANCO SANTANDER, NEW YORK	389,784	1,912,176	142	0.000
BANK OF BOSTON/ SHAREHOLDER SVCS, BOSTON	1	167	-	-
BANK OF NEW YORK, BRUSSELS	2,361,275	456,295	181	0.000
BANQUE PARIBAS, PARIS	55,000	1,679,152	185	0.003
BARCLAYS CAPITAL LE, JERSEY CITY	634,303	18,683,441	14,693	0.023
BARCLAYS CAPITAL, LONDON (BARCGB33)	3,490,232	29,118,500	27,360	0.008
BB&T SECURITIES, LLC, RICHMOND	42,773	658,536	1,278	0.030
BERENBERG GOSSLER & CIE, HAMBURG	66,655	1,005,864	111	0.002
BERNSTEIN SANFORD C & CO, NEW YORK	892,368	50,672,516	23,832	0.027
BLOOMBERG TRADEBOOK LLC, NEW YORK	572,742	19,321,147	10,164	0.018
BMO CAPITAL MARKETS CORP, NEW YORK	132,960	3,232,701	2,738	0.021
BNP PARIBAS PEREGRINE SEC LTD, HONG KONG	146,100	3,465,548	6,074	0.042
BNP PARIBAS PRIME BROKERAGE, JERSEY CITY	67,000	2,248,975	2,829	0.042
BNP PARIBAS PRIME BROKERAGE,INC,NEW YORK	32,400	2,304,586	5	0.000
BNP PARIBAS SEC SVCS, LONDON (PARBGB2L)	116,164	8,012,747	6,105	0.053
BNY CONVERGEX / LJR, HOUSTON	10,425,447	482,858,636	65,891	0.006
BNY CONVERGEX, NEW YORK	1,805,522	181,995,974	423,023	0.234
BREAN CAPITAL LLC, JERSEY CITY	1,100	7,328	8	0.007
BT SECURITIES COMPANY LTD, BANGKOK	352,397	1,891,543	4,667	0.013
BTG CAPITAL CORP, JERSEY CITY	17,449	116,851	595	0.034
BTIG LLC, SAN FRANCISCO	341,812	6,401,769	5,070	0.015
BUCKINGHAM RESEARCH GRP INC, BROOKLYN	200	12,200	9	0.045
CACEIS BANK DEUTSCHLAND, GERMANY	61,589	6,072,199	6,411	0.104
CALYON SECURITIES, NEW YORK	3,545,700	11,943,371	3,587	0.001
CANACCORD GENUITY INC, JERSEY CITY	269,257	3,900,935	4,381	0.016
Amounts carried forward	27,589,670	867,331,607	637,184	

Investment Schedules (continued)

Schedule of Broker Commissions (continued)

Brokerage Firms	Shares Traded	Dollar Volume of Trades	Commission Dollar Amount	Commission Per Share
Amounts brought forward	58,316,063	$ 1,110,643,380	$ 800,833	
CANACCORD GENUITY INC.NEY YORK	57,700	1,274,180	1,261	$ 0.022
CANTOR FITZGERALD & CO INC, NEW YORK	233,582	9,051,167	5,618	0.024
CAP INSTL SVCS INC-EQUITIES, DALLAS	5,231,810	269,828,057	29,498	0.006
CBA EQUITIES LIMITED, SYDNEY	19,453	1,208,382	4,519	0.232
CELFIN CAPITAL SA CORREDORES, SANTIAGO	1,260,568	1,781,367	1,430	0.001
CHASE BK, LONDON	3,874,700	15,363,252	8,694	0.002
CIBC WORLD MKTS INC, TORONTO	70,000	3,853,967	3,296	0.047
CIMB GK SECURITIES PTE LTD, SINGAPORE	22,000	87,706	47	0.002
CITATION GROUP/BCC CLRG, NEW YORK	102,424	5,951,750	1,371	0.013
CITIBANK CUSTODIAL, TORONTO (CITC)	26,300	1,153,039	269	0.010
CITIGROUP GBL MKTS INC, NEW YORK	871,760	37,842,778	15,270	0.018
CITIGROUP GBL MKTS INC, TAIPEI	1,315,000	5,804,890	-	-
CITIGROUP GBL MKTS/SALOMON, NEW YORK	16,220,539	28,691,665	15,179	0.001
CITIGROUP GLOBAL MARKETS LTD, LONDON	2,173,665	36,186,541	43,973	0.020
CLSA AUSTRALIA PTY LTD, SYDNEY	1,238,636	3,382,999	5,573	0.004
CLSA SINGAPORE PTE LTD (CHV), SINGAPORE	86,035,272	155,307,515	72,703	0.001
COWEN AND COMPANY LLC, NEW YORK	452,344	13,163,859	12,871	0.028
CREDIT AGRICOLE SECURITIES, NEW YORK	308,440	15,958,442	5,752	0.019
CREDIT LYONNAIS SEC, SEOUL	77,564	10,540,341	11,596	0.150
CREDIT LYONNAIS SECS (ASIA), HONG KONG	6,148,034	8,231,304	12,554	0.002
CREDIT LYONNAIS SECS, SINGAPORE	2,778,462	7,566,888	13,540	0.005
CREDIT RESEARCH & TRADING LLC, JERSEY	179,600	1,545,374	729	0.004
CREDIT SUISSE (EUROPE), LONDON	3,697,851	49,794,536	19,820	0.005
CREDIT SUISSE (HK) LIMITED, HONG KONG	4,790,372	11,205,671	7,382	0.002
CREDIT SUISSE, NEW YORK (CSUS)	2,226,676	79,504,360	38,151	0.017
CRT CAPITAL GROUP LLC, STAMFORD	72,240	2,434,500	2,269	0.031
D CARNEGIE AB, STOCKHOLM	259,200	1,692,211	3,726	0.014
DAEWOO SECURITIES CO LTD, SEOUL	217,016	14,864,680	3,463	0.016
DAIWA SECS (HK) LTD, HONG KONG	476,400	7,865,329	5,442	0.011
DAIWA SECS AMER INC, NEW YORK	3,907,756	14,580,075	9,446	0.002
DAVIDSON(D A) & CO INC, NEW YORK	3,000	129,569	136	0.045
DBS VICKERS SEC PTE LTD, SINGAPORE	954,595	7,861,885	6,247	0.007
DEN DANSKE BANK, COPENHAGEN	103,409	1,372,332	15,522	0.150
DEUTSCHE BK INTL EQ, LONDN (DEUTGB22EEQ)	3,758,730	16,514,784	15,274	0.004
DEUTSCHE BK SECS INC, NY (NWSCUS33)	85,717,152	166,827,574	131,747	0.002
DEUTSCHE MORGAN GRENFELL SEC, SYDNEY	271,312	3,416,538	7,181	0.026
DEUTSCHE SEC ASIA LTD, HONG KONG	7,456,130	22,015,853	19,003	0.003
DEUTSCHE SEC ASIA LTD, SEOUL	131,361	8,820,649	13,300	0.101
DNB NOR MARKETS CUSTODY, OSLO	91,094	2,738,992	2,856	0.031
DOWLING & PARTNERS, JERSEY CITY	45,010	482,561	756	0.017
DREXEL HAMILTON LLC, JERSEY CITY	3,400	168,667	140	0.041
Amounts carried forward	301,196,620	2,156,709,609	1,368,437	

Investment Schedules (continued)

Schedule of Broker Commissions (continued)

Brokerage Firms	Shares Traded	Dollar Volume of Trades	Commission Dollar Amount	Commission Per Share
Amounts brought forward	301,196,620	$ 2,156,709,609	$ 1,368,437	
EXANE, PARIS (EXANFRPP)	103,830	2,275,265	2,856	$ 0.028
FATOR-DORIA ATHERINO S/A CV, SAO PAULO	754,900	7,768,220	4,047	0.005
FBR CAPITAL MARKETS & CO, ARLINGTON	96,922	1,431,379	1,625	0.017
FIDELITY CAP MKTS (DIV OF NFSC), BOSTON	21,184	1,244,229	570	0.027
FOX RIVER EXECUTION TECH,LLC,JERSEY CITY	242,800	16,401,962	4,486	0.018
FUJI SECURITIES INC, JERSEY CITY	700	54,081	6	0.009
GK GOH SECURITIES	2,063,970	2,383,714	4,675	0.002
GMP SECURITIES, LLC, NEW YORK	3,800	58,025	326	0.086
GOLDMAN SACHS & CO, NY	2,015,630	70,868,924	39,201	0.019
GOLDMAN SACHS EXECUTION & CLEARING, NY	521,512	21,295,340	3,491	0.007
GOLDMAN SACHS INTL, LONDON (GSILGB2X)	1,115,408	21,471,395	19,786	0.018
GORDON HASKETT CAP CORP, NJ	25,300	1,126,138	979	0.039
GREEN STREET ADVISORS, JERSEY CITY	18,900	418,272	417	0.022
GUGGENHEIM CAPITAL MKT LLC, JERSEY CITY	70,044	3,240,374	1,043	0.015
GUZMAN & COMPANY, CORAL GABLES	123,000	5,138,902	681	0.006
HONG KONG & SHANGHAI BKG CORP, HONG KONG	58,100,300	66,653,901	29,424	0.001
HSBC BANK BRASIL SA (COR), SAO PAULO	1,294,400	11,598,939	6,413	0.005
HSBC BANK PLC (MIDLAND BK)(JAC), LONDON	9,678,237	52,122,451	44,723	0.005
HSBC JAMES CAPEL, SEOUL	1,027,258	35,759,138	26,465	0.026
HSBC MEXICO, S.A. INST DE BANCA,MEXICO	1,997,400	6,084,203	3,576	0.002
HSBC SECS INC, NEW YORK	98,214,615	96,338,162	116,273	0.001
HSBC SECS, TAIPEI	29,706,480	32,381,057	22,890	0.001
HSBC SECURITIES (USA) INC, NEW YORK	1,095,190	17,722,384	13,691	0.013
INSTINET AUSTRALIA CLEARING SERV, SYDNEY	82,440	1,029,908	1,535	0.019
INSTINET CORP, NEW YORK	984,329	67,193,075	5,668	0.006
INSTINET EUROPE LIMITED, LONDON	283,803	5,173,790	7,133	0.025
INSTINET PACIFIC LTD, HONG KONG	200,000	164,253	65	0.000
INSTINET, SINGAPORE	373,600	230,768	238	0.001
INTERMONTE SIM S.P.A., MILANO	741,712	5,650,022	2,111	0.003
INVESTEC SECURITIES (331), LONDON	89,600	1,240,662	3,681	0.041
INVESTMENT TECHNOLOGY GROUP LTD,DUBLIN	6,047,687	111,434,711	152,696	0.025
INVESTMENT TECHNOLOGY GROUP, NEW YORK	7,193,645	317,099,591	107,488	0.015
ISI GROUP INC, NY	186,843	7,005,472	5,078	0.027
ITAU USA SECURITIES INC, NEW YORK	14,235	95,877	459	0.032
ITG AUSTRALIA LTD, MELBOURNE	134,983	1,936,545	8,690	0.064
ITG CANADA CORP, TORONTO	55,100	3,517,876	2,900	0.053
ITG HONG KONG LIMITED, HONG KONG	358,200	600,388	740	0.002
ITG INC, NEW YORK	414,805	26,148,665	13,899	0.034
IVY SECURITIES INC, GREAT NECK	500	43,647	9	0.018
J P MORGAN SEC, SYDNEY	822,937	3,720,194	8,338	0.010
J P MORGAN SECS LTD, LONDON	10,796,064	50,579,614	34,858	0.003
Amounts carried forward	538,268,883	3,233,411,122	2,071,667	

Investment Schedules (continued)

Schedule of Broker Commissions (continued)

Brokerage Firms	Shares Traded	Dollar Volume of Trades	Commission Dollar Amount	Commission Per Share
Amounts brought forward	538,268,883	$ 3,233,411,122	$ 2,071,667	
J P MORGAN SECURITIES INC, BROOKLYN	833,566	22,453,412	17,903	$ 0.021
J.P. MORGAN CLEARING CORP, NEW YORK	4,409,710	121,814,396	56,674	0.013
JANNEY MONTGOMERY SCOTT, PHILADELPHIA	58,195	2,013,769	2,386	0.041
JEFFERIES & CO INC, NEW YORK	1,030,757	43,766,273	31,710	0.031
JEFFERIES & CO LTD, LONDON	92,012	3,195,190	4,707	0.051
JMP SECURITIES, SAN FRANCISCO	49,552	640,827	1,087	0.022
JONESTRADING INSTL SVCS LLC, WESTLAKE	73,092	1,258,472	613	0.008
JP MORGAN SECS (FAR EAST) LTD, SEOUL	316,788	23,859,605	6,848	0.022
JP MORGAN SECS (TAIWAN) LTD, TAIWAN	8,384,000	12,452,942	4,047	0.000
JP MORGAN SECS ASIA PACIFIC, HONG KONG	31,647,380	24,532,533	12,344	0.000
JP MORGAN SECS, SINGAPORE	11,940,800	1,849,035	113	0.000
JPMORGAN SECURITIES INC, NEW YORK	2,230,778	10,033,626	4,982	0.002
KAS BANK NV, AMSTERDAM	28,485	253,845	2,824	0.099
KEB SALOMON SMITH BARNEY SECS, SEOUL	3,829	930,541	109	0.028
KEEFE BRUYETTE AND WOODS, JERSEY CITY	346,902	8,164,306	8,030	0.023
KEPLER EQUITIES, PARIS	82,579	3,383,608	6,630	0.080
KEYBANC CAPITAL MARKETS INC, NEW YORK	38,030	1,289,735	1,217	0.032
KGI SECURITIES (HK) LTD, HONG KONG	947,700	1,350,218	3,665	0.004
KING (CL) & ASSOCIATES, ALBANY	100	3,342	3	0.030
KNIGHT CAPITAL EUROPE LTD, LONDON	114,950	156,371	398	0.003
KNIGHT EQUITY MARKETS L.P.,JERSEY CITY	3,195,896	135,559,459	74,979	0.023
LADENBURG THALMAN & CO, WEEHAWKEN	18,964	723,180	57	0.003
LARRAIN VIAL, SANTIAGO	2,724,370	3,080,615	1,953	0.001
LAZARD CAPITAL MARKETS LLC, JERSEY CITY	1,275,795	53,765,323	3,003	0.002
LEERINK SWANN & CO, JERSEY CITY	54,546	2,429,711	1,229	0.023
LIQUIDNET ASIA LTD, HONG KONG	336,400	1,202,714	612	0.002
LIQUIDNET INC, BROOKLYN	815,349	42,380,358	25,331	0.031
LONGBOW SECURITIES LLC, JERSEY CITY	31,400	1,674,117	1,016	0.032
LOOP CAPITAL MARKETS LLC, JERSEY CITY	99,500	4,306,430	1,098	0.011
MACQUARIE BANK LIMITED, SYDNEY	121,175	2,924,673	4,510	0.037
MACQUARIE BANK LTD, HONG KONG	19,214,396	22,351,484	17,598	0.001
MACQUARIE CAPITAL (USA) INC., NEW YORK	967,708	20,115,488	5,860	0.006
MACQUARIE SECS (SINGAPORE), SINGAPORE	144,764	775,459	1,380	0.010
MACQUARIE SECURITIES LTD, SEOUL	11,518	1,874,246	1,725	0.150
MACQUARIE SECURITIES(USA)INC JERSEY CITY	57,974	3,364,034	1,008	0.017
MAINFIRST BANK AG,FRANKFURT AM MAIN	139,519	14,812,644	22,471	0.161
MAXIM GROUP, JERSEY CITY	9,757,588	500,672,798	44,289	0.005
MERRILL LYNCH CANADA (MLCT), TORONTO	16,890	747,749	2,270	0.134
MERRILL LYNCH GILTS LTD, LONDON	1,638,894	9,541,155	10,260	0.006
MERRILL LYNCH INTL LONDON EQUITIES	172,569,146	285,040,870	156,970	0.001
MERRILL LYNCH PIERCE FENNER SMITH INC NY	5,219,966	221,222,656	80,385	0.015
Amounts carried forward	819,309,846	4,845,378,331	2,695,961	

Investment Schedules (continued)

Schedule of Broker Commissions (continued)

Brokerage Firms	Shares Traded	Dollar Volume of Trades	Commission Dollar Amount	Commission Per Share
Amounts brought forward	819,309,846	$ 4,845,378,331	$ 2,695,961	
MERRILL LYNCH PIERCE FENNER, WILMINGTON	17,687,085	37,295,995	19,059	$ 0.001
MERRILL LYNCH PROFESSIONAL CLRG, PURCHAS	16,071	109,008	1,092	0.068
MITSUBISHI UFJ SECURITIES LTD,HONG KONG	9,300	623,431	276	0.030
MITSUBISHI UFJ SECURITIES, NEW YORK	873,998	4,282,708	2,141	0.002
MIZUHO SECURITIES ASIA, HONG KONG	46,100	576,134	48	0.001
MIZUHO SECURITIES USA INC. NEW YORK	2,332,469	15,379,465	16,915	0.007
MKM PARTNERS LLC, GREENWICH	10,876	370,083	611	0.056
ML PROFESSIONAL CLRNG CP, JERSEY CITY	12,515	84,742	540	0.043
MONNESS CRESPI HARDT & CO INC, JERSEY	8,397	56,639	654	0.078
MORGAN STANLEY & CO INC, NY	86,059,271	234,827,361	120,907	0.001
MORGAN STANLEY & CO INTL LTD, SEOUL	516,479	19,466,930	5,733	0.011
MORGAN STANLEY & CO, LONDON (MSLNGB2X)	26,870,896	30,120,059	10,652	0.000
NATIONAL FINL SVCS CORP, NEW YORK	401,295	6,539,260	4,128	0.010
NATIXIS SECURITIES AMERICAS LLC,NEW YORK	2,700	21,492	47	0.017
NBCN CLEARING INC, MONTREAL	410,221	10,595,523	11,993	0.029
NEEDHAM & CO, NEW YORK	20,405	683,129	1,759	0.086
NESBITT BURNS, TORONTO (NTDT)	40,000	1,984,143	946	0.024
NOMURA SECS INTL INC, NEW YORK	221,893	6,234,117	710	0.003
OPPENHEIMER & CO INC, NEW YORK	238,255	6,192,561	4,206	0.018
OTR GLOBAL TRADING LLC, NEW YORK	8,500	391,982	155	0.018
PACIFIC CREST SECURITIES, PORTLAND	12,900	859,986	242	0.019
PANMURE GORDON & CO LTD, LONDON	61,351	420,455	338	0.006
PAREL, PARIS	1,614,361	20,775,722	26,436	0.016
PARETO FONDS AS, OSLO	283,544	3,419,036	5,019	0.018
PENSERRA SECURITIES, NEW YORK	6,650	805,857	285	0.043
PERSHING LLC, JERSEY CITY	1,619,022	16,329,620	12,073	0.007
PERSHING SECURITIES LTD, LONDON	616,686	23,648,077	33,128	0.054
PICKERING ENERGY PARTNERS, HOUSTON	17,417	1,362,219	335	0.019
PIPER JAFFRAY & CO, MINNEAPOLIS	206,488	6,585,881	5,573	0.027
RAFFERTY CAPITAL MARKETS LLC, GARGEN CIT	700	48,705	8	0.011
RAYMOND JAMES & ASSOC INC, ST PETERSBURG	200,274	10,001,920	4,903	0.024
RAYMOND JAMES LTD, TORONTO (MSLT)	1,500	35,631	8	0.005
RBC CAPITAL MARKETS LLC, NEW YORK	1,051,678	42,448,009	25,600	0.024
RBC DOMINION SECS INC, TORONTO (DOMA)	130,460	9,681,446	7,366	0.056
REDBURN PARTNERS LLP, LONDON	4,188,523	14,304,413	13,006	0.003
ROYAL BANK OF CANADA EUROPE LTD, LONDON	221,342	2,506,104	1,844	0.008
S G WARBURG, SEOUL	275,696	13,860,378	15,067	0.055
SANDLER O'NEILL & PARTNERS, NEW YORK	5,100	76,500	6	0.001
SANFORD C BERNSTEIN & CO INC, LONDON	2,028,739	20,894,554	20,581	0.010
SANFORD C. BERNSTEIN & CO, WHITE PLAINS	1,792,611	5,274,977	6,876	0.004
SBC WARBURG DILLON READ, THAILAND	820,500	975,038	956	0.001
Amounts carried forward	970,252,114	5,415,527,621	3,078,183	

Investment Schedules (continued)

Schedule of Broker Commissions (continued)

Brokerage Firms	Shares Traded	Dollar Volume of Trades	Commission Dollar Amount	Commission Per Share
Amounts brought forward	970,252,114	$ 5,415,527,621	$ 3,078,183	
SCOTIA CAPITAL (USA) INC, NEW YORK	13,400	495,707	39	$ 0.038
SG AMERICAS SECURITIES LLC, NEW YORK	13,155,118	33,969,384	15,782	0.001
SG SEC (LONDON) LTD, LONDON	13,645,638	75,210,558	68,345	0.005
SG SECURITIES, HONG KONG	107,858,249	127,143,242	63,641	0.001
SIDOTI & CO LLC, NEW YORK	80,100	4,058,152	2,664	0.033
SJ LEVINSON & SONS LLC, JERSEY CITY	148,851	15,131,041	1,831	0.012
SKANDINAVISKA ENSKILDA BANKEN, LONDON	400,000	4,301,870	6,832	0.017
SMBC NIKKO SECURITIES LTD, WAN CHAI	44,300	1,025,284	3,058	0.069
SMBC SECURITIES, INC NEW YORK	754,625	7,349,470	7,768	0.010
STATE STREET BROKERAGE SVCS, BOSTON	616,389	17,439,860	26,561	0.043
STATE STREET GLOBAL MARKETS LLC, BOSTON	38,463	1,560,493	1,083	0.028
STEPHENS INC, LITTLE ROCK	46,136	1,749,726	729	0.016
STERNE AGEE & LEACH INC	51,962	1,667,403	2,444	0.047
STIFEL NICOLAUS	3,703,134	169,678,487	47,728	0.013
STRATEGAS SECURITIES LLC, NEW YORK	45,300	1,493,055	2,933	0.065
STUART FRANKEL & CO. INC, JERSEY CITY	144,900	3,690,188	2	0.000
SUNTRUST CAPITAL MARKETS INC, ATLANTA	97,401	4,798,164	1,501	0.015
SVENSKA HANDELSBANKEN, NEW YORK	56,250	711,315	865	0.015
SVENSKA HANDELSBANKEN, STOCKHOLM	225,850	3,450,665	5,337	0.024
TD WATERHOUSE SEC, TORONTO (GIST)	372,600	13,185,573	7,789	0.021
TELSEY ADVISORY GROUP LLC, DALLAS	72,586	1,341,158	1,042	0.014
THEMIS TRADING LLC, JERSEY CITY	2,185,620	96,419,387	6,103	0.003
THINKEQUITY PARTNERS LLC, MINNEAPOLIS	8,800	430,787	1,108	0.126
UBS AG LONDON INTL GILTS, LONDON	299	16,079	53	0.177
UBS SECURITIES CANADA, TORONTO (BWIT)	4,100	294,974	710	0.173
UBS SECURITIES LLC, STAMFORD	1,591,483	49,834,200	28,674	0.018
UBS WARBURG ASIA LTD, HONG KONG	48,438,920	11,168,935	10,468	0.000
UBS WARBURG AUSTRALIA EQUITIES, SYDNEY	1,129,460	3,299,839	4,163	0.004
UBS WARBURG SEC,TAIWAN	13,082,785	13,224,809	12,746	0.001
UBS WARBURG, LONDON	179,224,516	35,268,275	38,742	0.000
WEDBUSH MORGAN SECS INC, LOS ANGELES	37,390	582,579	2,801	0.075
WEEDEN & CO, NEW YORK	827,356	42,406,548	18,517	0.022
WELLS FARGO SECURITIES LLC, CHARLOTTE	384,188	12,238,407	29,065	0.076
WILLIAM BLAIR & CO, CHICAGO	120,748	3,492,992	2,673	0.022
WILLIAMS CAPITAL GROUP LP, JERSEY CITY	1,200	31,114	10	0.008
WOLFE TRAHAN SECURITIES, NEW YORK	8,400	662,596	2,303	0.274
WUNDERLICH SECURITIES INC, MEMPHIS	3,000	233,597	62	0.021
XP INVESTIMENTOS CCTVM SA,RIO DE JANEIRO	971,600	8,433,556	5,821	0.006
Total trades	1,359,843,231	6,183,017,090	3,510,176	0.003
			$ (327,685)	
	1,359,843,231	$ 6,183,017,090	$ 3,182,491	$ 0.002

Employees' Retirement System

of the State of Hawaii

ACTUARIAL SECTION

GASB STATEMENT NO. 67 REPORT

GRS

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March 7, 2016

Board of Trustees
Employees' Retirement System of
the State of Hawaii
City Financial Tower
201 Merchant St., Ste. 1400
Honolulu, HI 96813-2980

Dear Trustees:

This report provides information required by the Employees' Retirement System of the State of Hawaii ("ERS") in connection with the Governmental Accounting Standards Board (GASB) Statement No. 67 "Financial Reporting for Pension Plans."

Our calculation of the liability associated with the benefits described in this report was performed for the purpose of satisfying the requirements of GASB Statement Nos. 67. These calculations have been made on a basis that is consistent with our understanding of this Statement. The calculation of the plan's liability for this report may not be applicable for funding purposes of the plan. A calculation of the plan's liability for purposes other than satisfying the requirements of GASB No. 67 may produce significantly different results. This report may be provided to parties other than the ERS only in its entirety and only with the permission of ERS.

This report is based upon information, furnished to us by ERS, concerning retirement and ancillary benefits, active members, deferred vested members, retirees and beneficiaries, and financial data. This information was checked for internal consistency, but it was not otherwise audited.

GRS provided the following information for the ERS to fulfill the GASB 67 reporting requirements that are included in the notes to the financial statements and the Required Supplementary Information located in the Financial Section of this CAFR.

- Single Discount Rate
- Required Discount Rate Sensitivity Information for the ERS providing the ratio of the Fiduciary Net Position to Total Pension Liability and the Net Pension Liability at a discount rate that is one percentage point lower and one percentage point higher that the discount rate at Meaturement Date
- Service Cost; Interest; Changes of Benefit Terms; Differences between Expected and Actual Experience; Changes in Assumptions.
- Required Supplementary Information – Schedule of Changes in Net Pension Liability.
- Required Supplementary Information – Schedule of Net Pension Liability.
- Required Supplementary Information – Schedule of Employer Contributions
- Actuarial components of Governmental Accounting and Standards Board (GASB) 67 requirements.

GASB STATEMENT NO. 67 REPORT (continued)

Certain tables included in the Required Supplementary Information should include a 10-year history of information. As provided for in GASB No. 67, this historical information is only presented for the years in which the information was measured in conformity with the requirements of GASB No. 67. The historical information in this report will begin with the information presented for the fiscal year ending June 30, 2014.

This report complements the actuarial valuation report, issued on March 7, 2015, that was provided to ERS and should be considered in conjunction with that report. Please see the significant actuarial valuation report information as of June 30, 2015 (located later in this section of the ERS' CAFR) for additional discussion of the nature of actuarial calculations and more information related to participant data, economic and demographic assumptions, and benefit provisions. (The entire actuarial valuation report, as of June 30, 2015, is available on the ERS' website at ers.ehawaii.gov.)

To the best of our knowledge, this report is complete, accurate, and in accordance with generally recognized actuarial methods. One or more of the undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the Academy of Actuaries to render the actuarial opinion herein.

The signing actuaries are independent of the plan sponsor.

Respectfully submitted,

By Lewis Ward

Lewis Ward
Consultant

By

Joseph P. Newton
FSA, EA, MAAA

GASB STATEMENT NO. 67 REPORT (continued)

EXECUTIVE SUMMARY ***
as of June 30, 2015

	2015	2014
Actuarial Valuation Date	June 30, 2015	June 30, 2014
Pension Plan's Fiscal Year Ending Date (Measurement Date & Reporting Date)	June 30, 2015	June 30, 2014
Membership		
Number of		
- Retirees and beneficiaries	44,283	43,087
- Inactive, nonretired members **	21,253	19,352
- Active members	67,310	67,206
- Total	132,846	129,645
Reported Payroll for Fiscal Year	$3,995,447,345	$3,829,002,983
Net Pension Liability		
Total Pension Liability	$23,238,395,386	$22,220,097,547
Plan Fiduciary Net Position	14,505,464,556	14,203,015,303
Net Pension Liability	$8,732,930,830	$8,017,082,244
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	62.42%	63.92%
Net Pension Liability as a Percentage of Covered Payroll	218.57%	209.38%
Development of the Single Discount Rate		
Single Discount Rate	7.65%	7.75%
Long-Term Expected Rate of Return	7.65%	7.75%
Long-Term Municipal Bond Rate*	3.80%	4.29%
Last year ending June 30 in the 2015 to 2114 projection period for which projected benefit payments are fully funded (and 2014 to 2113)	None	None

*Source: "State and Local Bonds" rate from Federal Reserve statistical release (H.15) as of June 26, 2015 and June 26, 2014. The statistical release describes this rate as the "Bond Buyer Index, general obligation, 20 years to maturity, mixed quality." In describing this index, the Bond Buyer notes that the bonds' average credit quality is roughly equivalent to Moody's Investor Service's Aa2 rating and Standard & Poor's Corp AA.

** Inactive, nonretired members for GASB 68 reporting includes terminated vested members entitled to benefits but not yet receiving benefits plus inactive members (that while currently not vested for benefits may become vested in the future should they return to service and fulfill the additional service and contribution requirements applicable to their respective membership). The inactive membership counts used in the previous reporting method under GASB Statement No. 25 only included terminated vested members.

*** This information should be considered with the June 30, 2015 Actuarial Valuation Report information that follows this section beginning on page 109.

GASB STATEMENT NO. 67 REPORT (continued)

Discussion on GASB Statement No. 67.

Accounting Standard

For pension plans that are administered through trusts or equivalent arrangements, Governmental Accounting Standards Board (GASB) Statement No. 67, "Financial Reporting for Pension Plans," replaces the requirements of GASB Statement No. 25, "Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans," and GASB Statement No. 50, "Pension Disclosures." GASB Statement No. 67 establishes standards of financial reporting for separately issued financial reports and specifies the required approach for measuring the pension liability of employers and non-employer contributing entities for benefits provided through the pension plan.

The following discussion provides a summary of the information that is required to be disclosed under these accounting standards. A number of these disclosure items are incorporated in the Financial Section of this CAFR. However, certain information, such as notes regarding accounting policies and investments, are not provided by GRS since the retirement system is responsible for preparing and disclosing that information to comply with these accounting standards.

Financial Statements

GASB Statement No. 67 requires defined benefit pension plans to present two financial statements, notes of the plan's financial statements and required supplementary information (RSI):

- The *statement of fiduciary net position* presents the following items as of the end of the pension plan's reporting period, such as: assets; deferred inflows and outflows of resources; liabilities; and fiduciary net position (assets, plus deferred outflows, minus liabilities, minus deferred inflows).
- The *statement of changes in fiduciary net position* presents the following for the plan's reporting period: additions, such as contributions and investment income; deductions, such as benefit payments and expenses; and net increase or decrease in the fiduciary net position (the difference between additions and deductions).
- The notes of the plan's financial statements include: a description of the types of benefits provided by the plan, as well as automatic or ad hoc COLAs; the number and classes of employees covered by the benefit terms; the composition of the pension plan's Board and the authority under which benefit terms may be amended; a description of the plan's funding policy, which includes member and employer contribution requirements; the pension plan's investment policies; a description of how fair value is determined; concentrations of investments greater than or equal to 5%; annual money-weighted rate of return on pension plan investments; the portion of the present value of benefits to be provided through the pension plan to current active and inactive plan members; the pension plan's fiduciary net position; the net pension liability; the pension plan's fiduciary net position as a percentage of the total pension liability; significant assumptions and methods used to calculate the total pension liability; inputs to the discount rates; and certain information about mortality assumptions and the dates of experience studies.
- The RSI requires a 10-year fiscal history of: sources of changes in the net pension liability; information about the components of the net pension liability and related ratios, including the pension plan's fiduciary net position as a percentage of the total pension liability, and the net pension liability as a percent of covered-employee payroll; a comparison of the actual employer contributions to the actuarially determined contributions based on the plan's funding policy; and the annual money-weighted rate of return on pension plan investments for each year.

Measurement of the Net Pension Liability

The net pension liability is to be measured as the total pension liability, less the amount of the pension plan's fiduciary net position. In actuarial terms, this will be the accrued liability less the market value of assets (not the smoothed actuarial value of assets that is often encountered in actuarial valuations performed to determine the employer's contribution requirement).

Timing of the Valuation

An actuarial valuation to determine the total pension liability is required to be performed at least every two years. The net pension liability and pension expense should be measured as of the pension plan's fiscal year end (measurement date) on a date that is within the employer's prior fiscal year. If the actuarial valuation used to determine the total pension liability is not calculated as of the measurement date, the total pension liability is required to be rolled forward from the actuarial valuation date to the measurement date.

The total pension liability shown in this report is based on an actuarial valuation performed as of June 30, 2015 and a measurement date of June 30, 2015.

Single Discount Rate

Projected benefit payments are required to be discounted to their actuarial present values using a single discount rate that reflects (1) a long-term expected rate of return on pension plan investments (to the extent that the plan's fiduciary net position is projected to be sufficient to pay benefits) and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating (which is published by the Federal Reserve) as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is 7.65% the municipal bond rate is 3.80% (based on the weekly rate closest to but not later than the measurement date of the 20-Year Bond Buyer Index as published by the Federal Reserve); and the resulting single discount rate is 7.65%.

Letter from the Actuary

GRS
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January 21, 2016

Board of Trustees
Employees' Retirement System of
the State of Hawaii
City Financial Tower
201 Merchant St., Ste. 1400
Honolulu, HI 96813-2980

Dear Trustees:

Subject: Actuarial Valuation as of June 30, 2015

We certify that the information contained in the 2015 actuarial valuation report is accurate and fairly presents the actuarial position of the Employees' Retirement System of the State of Hawaii (ERS) as of June 30, 2015. There have been no adjustments for events which occurred after this date.

All calculations have been made in conformity with generally accepted actuarial principles and practices and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, the results presented comply with the requirements of the Hawaii statutes and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board. The undersigned are independent actuaries. One or more of them are an Enrolled Actuary and/or a Member of the American Academy of Actuaries. All are experienced in performing valuations for large public retirement systems.

Actuarial valuations

The primary purpose of the valuation report is to determine the adequacy of the current employer contribution rate through measuring the resulting funding period, to describe the current financial condition of ERS, and to analyze changes in ERS's condition. In addition, the report provides various summaries of the data. This report may not be appropriate for other purposes. The information required by ERS in connection with Governmental Accounting Standards Board Statement No. 67(GASB No.67) will be provided in a separate report. (A summary of the GASB Statement No. 67 is presented immediately before this section.

Valuations are prepared annually, as of June 30th of each year, the last day of ERS's plan year and fiscal year.

Letter from the Actuary (continued)

Board of Trustees
January 21, 2016
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Financing objectives

Contribution rates are established by Law that, over time, are intended to remain level as a percent of payroll. The employee and employer contribution rates have been set by Law and are intended to provide for the normal cost plus the level percentage of payroll required to amortize the unfunded actuarial accrued liability (UAAL) over a period not in excess of 30 years.

Progress toward realization of financing objectives

The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) is a standard measure of a plan's funded status. The funded status alone is not appropriate for assessing the need for future contributions nor assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations. However, the trend (historical and projected) of the funded ratio is a strong metric to use for assessing the dependability of the current funding policy and its ability to accumulate assets to pay benefits when due. The funded ratio is currently 62.2% and this is higher than the funded ratio from the previous valuation. In fact, the funded ratio has now increased for three straight valuations.

The 2011 Legislature made significant changes to the future employer contribution rates. The employer contribution rate for Police and Fire employees will increase to 25.00% in FY2016, and the employer contribution rate for All Other Employees will increase to 17.00% in FY2016. The contribution rates are then expected to stay at those levels until the System is fully funded. The Legislature also made changes to the benefits and member contribution rates for employees hired after June 30, 2012. Because these changes result in significantly higher contributions towards the unfunded liability in the future than in the current year, we believe it is more appropriate to determine the funding period using an open group projection rather than a static mathematical formula, which assumes that all amortization payments in the future will be the same percentage of pay as in the current year.

We have determined that the funding period for paying off the UAAL of the System (in aggregate) is 26 years. Because this period does not exceed 30 years, the financing objectives of ERS are currently being realized. (Hawaii Revised Statutes §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 accrued liability, the unfunded actuarial accrued liability (UAAL), and the determination of the resulting funding period illustrate the progress toward the realization of financing objectives. The System's UAAL was expected to increase from the prior year based on the three-year phase-in into the 7.5% investment return assumption beginning with this valuation. In addition, the System had a liability experience gain which was caused by favorable experience compared to the assumptions. However, the gains were offset by the losses due to change in actuarial assumptions. As a result, the UAAL grew based on this actuarial valuation as of June 30, 2015, ERS's underfunded status as measured by the UAAL is now $8.775 billion.

Because of the less favorable investment performance in FY2015, the System is now deferring only $42 million in investment gains (compared with $561 million in deferred gains last year). If there are no significant investment gains or other actuarial gains over the next two years, the funded status of the System would be expected to decrease, as the remaining phase-in to the lower investment return assumption continues. Thereafter, the funded status would be expected to improve.

Gabriel Roeder Smith & Company

Letter from the Actuary (continued)

Board of Trustees
January 21, 2016
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Thus, given the plan's contribution allocation procedure and the new tier of benefits, if all actuarial assumptions are met (including the assumption of the plan earning 7.65% on the actuarial valuation of assets), it is expected that:

1. The employer normal cost as a percentage of pay will decrease to the level of the newest tier as the old tier population declines and is replaced by new tier members,
2. The employer contribution will remain level throughout the amortization period,
3. Thus, the net amount available to amortize the UAAL will increase over time,
4. The unfunded actuarial accrued liability will increase in nominal dollars until the net amount for amortization is large enough to cover the interest charges, or approximately 2023, and then begin to decrease
5. The unfunded actuarial accrued liability will be fully amortized after 26 years, and
6. In the absence of benefit improvements, the funded ratio should increase over time, until it reaches 100%.

Benefit provisions and Legislative changes

This is the third valuation with members covered under the new benefit tier.

There have been no changes in the benefit provisions since the prior valuation. See the *Summary of Retirement Benefit Plan Provisions* in the Introductory Section of this CAFR for more details on the benefit provisions for members of the System.

Assumptions and methods

The actuarial assumptions used were adopted by the Board in December of 2010 based on the recommendations provided by an Experience Study performed by GRS.

There have been no changes to the assumptions or methods since the prior valuation. There have been no changes to the assumptions or methods since the prior valuation other than the investment return assumption. This is the first year of the three-year phase-in of the investment return assumption. The investment return rate decreased beginning in fiscal year 2016 to 7.65% and will continue to decrease to 7.55% in fiscal year 2017 and to 7.50% in fiscal year 2018 and remain at 7.5% thereafter. Further detail on the assumptions and methods may be found in the *Summary of Actuarial Methods and Assumptions* in this section of this CAFR.

The actuarial assumptions represent estimates of future experience and are not market measures. The results of the actuarial valuation are dependent on the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rates and funding periods. Based on the scope of this engagement, we have not performed analysis on the potential range of future measurements based on other factors. The actuarial calculations are intended to provide information for rational decision making.

In our opinion, the assumptions are internally consistent and are reasonably based on the actual experience of ERS.

Gabriel Roeder Smith & Company

Letter from the Actuary (continued)

Board of Trustees
January 21, 2016
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Data

Member data for retired, active, and inactive participants was supplied as of March 31, 2015, by ERS's staff. We have not subjected this data to any auditing procedures, but have examined the data for reasonableness and consistency with the prior year's data. Asset information was supplied by ERS's staff.

Responsibility for Tables and Schedules

The actuary is responsible for the information with respect to years after 1999 in the Required Supplementary Information, the Schedule of Employer Contributions, and the Notes to Required Supplementary Information in the Financial Section of the ERS's Comprehensive Annual Financial Report (CAFR). Information with respect to years prior to 2000 was supplied by ERS.

Tables and schedules in the Actuarial Section of the CAFR were generally prepared directly by the Actuary. However, certain of these tables were prepared by ERS utilizing information from this report. When the tables were prepared by ERS from our report, they are so noted.

The undersigned are independent actuaries and consultants. Mr. Newton is an Enrolled Actuary, a Member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries. Finally, all of the undersigned are experienced in performing valuations for large public retirement systems.

Sincerely,

Joe Newton, FSA, EA	Lewis Ward	Linna Ye, ASA, MAAA
Senior Consultant & Actuary	Consultant	Actuary

Executive Summary

The following table summarizes the key results of the June 30, 2015 actuarial valuation of the Employees' Retirement System of the State of Hawaii (ERS).

Item	2015	2014
Membership		
• Number of		
- Active members	67,310	67,206
- Retirees and beneficiaries	44,283	43,087
- Inactive, vested	7,413	8,105
- Total	119,006	118,398
• Covered payroll for active members	$3,952.6 million	$3,871.0 million
• Actual benefit payments and refunds	$1,181.3 million	$1,130.9 million
Assets		
• Actuarial (smoothed) value	$14,463.7 million	$13,641.8 million
• Market value	$14,505.5 million	$14,203.0 million
• Return on actuarial value	7.9%	9.2%
• Return on market value	3.9%	17.8%
• Employer contributions during fiscal year	$717,792,981	$653,127,697
• External cash flow %	(1.8%)	(2.0%)
Actuarial Information		
• Total normal cost % (employee + employer)	11.66%	10.96%
• Unfunded actuarial accrued liability (UAAL)	$8,774.7 million	$8,578.3 million
• Funded ratio (based on smoothed assets)	62.2%	61.4%
• Funded ratio (based on market assets)	62.4%	63.9%
• Funding period (years) *	26.0	26.0
• Employer contribution rate % of projected payroll ** For FY beginning July 1	17.89%	17.28%

* Funding Period based on actuarial value of assets, scheduled increases in employer contribution rates, and an open group projection reflecting changes in benefits and future member contribution rates.

** Weighted average of 25.00% Contribution Rate for Police and Firefighters and 17.0% Contribution Rate for All Other Employees for FY 2016, 24.0% and 16.5% respectively for FY 2015.

Actuarial Certification Statement

	Police and Firefighters June 30, 2015	All Other Employees June 30, 2015	All Employees June 30, 2015
1. Gross normal cost as a percentage of pay	20.39%	10.53%	11.66%
2. Present value of future benefits			
a. Active employees			
b. Inactive members	$ 2,805,781,787	$ 11,326,967,582	$ 14,132,749,369
c. Pensioners and beneficiaries	53,622,806	531,915,906	585,538,712
d. Total	2,117,830,633	10,203,961,015	12,321,791,648
	$ 4,977,235,226	$ 22,062,844,503	$ 27,040,079,729
3. Present value of future employee and employer contributions			
a. Present value of future normal costs	$ 834,940,773	$ 2,966,743,570	$ 3,801,684,343
b. Present value of future employee contributions	516,410,798	1,416,550,868	1,932,961,666
c. Present value of future employer normal cost (Item 3a - Item 3b)	$ 318,529,975	$ 1,550,192,702	$ 1,868,722,677
4. Actuarial accrued liability (Item 2d - Item 3a)	$ 4,142,294,453	$ 19,096,100,933	$ 23,238,395,386
5. Actuarial value of assets			
a. Annuity Savings Fund	$ 870,346,670	$ 1,423,193,000	$ 2,293,539,670
b. Pension Accumulation Fund	1,904,990,632	10,265,139,975	12,170,130,607
c. Total	$ 2,775,337,302	$ 11,688,332,975	$ 14,463,670,277
6. Unfunded actuarial accrued liability	$ 1,366,957,151	$ 7,407,767,958	$ 8,774,725,109
7. Adequacy of contribution rates			
a. Statutory Contribution Rate for Fiscal Year 2016	25.00%	17.00%	17.89%
B. Funding period in years as of June 30, 2015 *	27	25	26

*The Funding Period is calculated using an open group projection which reflects the impact of both the new employer contribution rates schedule and the benefits and member contribution rates for employees hired after June 30, 2012.

Gabriel Roeder Smith & Company

Actuarial Certification Statement (continued)

The actuarial valuation as of June 30, 2015 is based on the provisions of Chapter 88 of the Hawaii Revised Statutes, as amended. The assumptions used in the cost calculations were those adopted by the Board of Trustees on December 20, 2010 based on the actuary's actuarial experience investigation report covering the five-year period July 1, 2005 – June 30, 2010. The investment return assumption is formally adopted by the Board effective with the June 30, 2012 actuarial valuation (this assumption was previously prescribed by statute). The actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures.

In our opinion, the contributions required to meet ERS's liabilities were calculated in accordance with the provisions of Chapter 88 regarding the funding of the Employees' Retirement System on an actuarial reserve basis.

All of our work conforms with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of state law and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board. The undersigned is an independent actuary and consultant. Mr. Newton is an Enrolled Actuary, a Member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries. Finally, he is experienced in performing valuations for large public retirement systems.

Joe Newton

Joseph P Newton,, FSA, EA, MAAA
Senior Consultant & Actuary

Gabriel Roeder Smith & Company

Summary of 2015 Actuarial Valuation

Exhibit 1
Development of Employer Cost

	Police and Firefighters June 30, 2015	All Other Employees June 30, 2015	All Employees June 30, 2015
1. Projected FY 2016 payroll for contributions purposes	$ 463,302,817	$ 3,708,099,091	$ 4,171,401,908
2. Gross normal cost (Exhibit 3)	20.39%	10.53%	11.66%
3. Employer normal cost rate (Exhibit 3)	8.04%	5.76%	6.02%
4. Present value future benefits (Exhibit 2)	$ 4,977,235,226	$ 22,062,844,503	$ 27,040,079,729
5. Present value future employer normal cost	$ 318,529,975	$ 1,550,192,702	$ 1,868,722,677
6. Present value future employee contributions	$ 516,410,798	$ 1,416,550,868	$ 1,932,961,666
7. Actuarial accrued liability (Item 4 - Item 5 - Item 6)	$ 4,142,294,453	$ 19,096,100,933	$ 23,238,395,386
8. Actuarial value of assets	$ 2,775,337,302	$ 11,688,332,975	$ 14,463,670,277
9. Unfunded actuarial accrued liability (UAAL)			
(Item 7 - Item 8)	$ 1,366,957,151	$ 7,407,767,958	$ 8,774,725,109
10. Funding period *	27	25	26

	Police and Firefighters June 30, 2014	All Other Employees June 30, 2014	All Employees June 30, 2014
1. Projected FY 2015 payroll for contribution purposes	$ 414,605,839	$ 3,577,034,439	$ 3,991,640,278
2. Gross normal cost (Exhibit 3)	19.47%	9.92%	10.96%
3. Employer normal cost rate (Exhibit 3)	7.17%	5.34%	5.54%
4. Present value future benefits (Exhibit 2)	$ 4,585,596,643	$ 21,138,433,912	$ 25,724,030,555
5. Present value future employer normal cost	$ 270,414,698	$ 1,432,965,174	$ 1,703,379,872
6. Present value future employee contributions	$ 480,241,601	$ 1,320,311,535	$ 1,800,553,136
7. Actuarial accrued liability (Item 4 - Item 5 - Item 6)	$ 3,834,940,344	$ 18,385,157,203	$ 22,220,097,547
8. Actuarial value of assets	$ 2,584,963,114	$ 11,056,792,186	$ 13,641,755,300
9. Unfunded actuarial accrued liability (UAAL)			
(Item 7 - Item 8)	$ 1,249,977,230	$ 7,328,365,017	$ 8,578,342,247
10. Funding period *	29	26	26

*The Funding Period is calculated using an open group projection which reflects the impact of both the new employer contribution rates schedule and the benefits and member contribution rates for employees hired after June 30, 2012.
Please refer to Exhibit 7 for the full projection.

Summary of 2015 Actuarial Valuation (continued)

Exhibit 2
Actuarial Present Value of Future Benefits

	Police and Firefighters June 30, 2015	All Other Employees June 30, 2015	All Employees June 30, 2015
1. Active members			
a. Service retirement benefits	$ 2,665,186,345	$ 10,240,759,922	$ 12,905,946,267
b. Termination benefits	85,772,444	731,959,892	817,732,336
c. Survivor benefits	42,053,042	255,744,079	297,797,121
d. Disability retirement benefits	12,769,956	98,503,689	111,273,645
e. Total	$ 2,805,781,787	$ 11,326,967,582	$ 14,132,749,369
2. Retired members			
a. Service retirement	$ 1,987,033,692	$ 9,516,257,391	$ 11,503,291,083
b. Disability retirement	29,157,877	180,700,290	209,858,167
c. Beneficiaries	101,639,064	507,003,334	608,642,398
d. Total	$ 2,117,830,633	$ 10,203,961,015	$ 12,321,791,648
3. Inactive members			
a. Vested terminations	$ 49,917,185	$ 471,817,363	$ 521,734,548
b. Nonvested terminations	3,705,621	60,098,543	63,804,164
c. Total	$ 53,622,806	$ 531,915,906	$ 585,538,712
4. Total actuarial present value of future benefits	$ 4,977,235,226	$ 22,062,844,503	$ 27,040,079,729

	Police and Firefighters June 30, 2014	All Other Employees June 30, 2014	All Employees June 30, 2014
1. Active members			
a. Service retirement benefits	$ 2,414,882,084	$ 10,014,902,083	$ 12,429,784,167
b. Termination benefits	80,450,842	705,704,501	786,155,343
c. Survivor benefits	38,550,200	246,300,570	284,850,770
d. Disability retirement benefits	11,625,004	94,535,318	106,160,322
e. Total	$ 2,545,508,130	$ 11,061,442,472	$ 13,606,950,602
2. Retired members			
a. Service retirement	$ 1,889,621,754	$ 9,032,484,732	$ 10,922,106,486
b. Disability retirement	29,733,132	171,580,522	201,313,654
c. Beneficiaries	90,093,421	459,474,185	549,567,606
d. Total	$ 2,009,448,307	$ 9,663,539,439	$ 11,672,987,746
3. Inactive members			
a. Vested terminations	$ 28,085,050	$ 369,301,164	$ 397,386,214
b. Nonvested terminations	2,555,156	44,150,837	46,705,993
c. Total	$ 30,640,206	$ 413,452,001	$ 444,092,207
4. Total actuarial present value of future benefits	$ 4,585,596,643	$ 21,138,433,912	$ 25,724,030,555

Gabriel Roeder Smith & Company

Summary of 2015 Actuarial Valuation (continued)

Exhibit 3
Analysis of Normal Cost

	Police and Firefighters June 30, 2015	All Other Employees June 30, 2015	All Employees June 30, 2015
1. Normal cost as a percent of pay			
a. Service retirement benefits	17.56%	8.00%	9.10%
b. Deferred termination benefits	0.84%	0.69%	0.71%
c. Refunds	1.32%	1.36%	1.35%
d. Disability retirement benefits	0.18%	0.17%	0.17%
e. Survivor benefits	0.49%	0.31%	0.33%
f. Total	20.39%	10.53%	11.66%
2. Employee contribution rate	12.35%	4.77%	5.64%
3. Effective employer normal cost rate (Item 1f – Item 2)	8.04%	5.76%	6.02%

	Police and Firefighters June 30, 2014	All Other Employees June 30, 2014	All Employees June 30, 2014
1. Normal cost as a percent of pay			
a. Service retirement benefits	16.66%	7.43%	8.43%
b. Deferred termination benefits	0.78%	0.67%	0.68%
c. Refunds	1.39%	1.36%	1.37%
d. Disability retirement benefits	0.17%	0.16%	0.16%
e. Survivor benefits	0.47%	0.30%	0.32%
f. Total	19.47%	9.92%	10.96%
2. Employee contribution rate	12.30%	4.58%	5.42%
3. Effective employer normal cost rate (Item 1f – Item 2)	7.17%	5.34%	5.54%

Summary of 2015 Actuarial Valuation (continued)

Exhibit 4
Development of Actuarial Value of Assets

			Year Ending June 30, 2015		Year Ending June 30, 2014
1.	Actuarial value of assets at beginning of year	$	13,641,755,300	$	12,748,828,110
2.	Net new investments				
	a. Contributions	$	941,298,400	$	859,255,034
	b. Benefits paid		(1,170,744,770)		(1,122,445,642)
	c. Refunds		(10,507,888)		(8,475,969)
	d. Subtotal		(239,954,258)		(271,666,577)
3.	Market value of assets at end of year	$	14,505,464,556	$	14,203,015,303
4.	Expected return	$	1,047,937,808	$	977,507,099
5.	Expected actuarial value of assets, end of year	$	14,449,738,850	$	13,454,668,632
6.	Excess/(shortfall) return (Item 3-Item 5)	$	55,725,706	$	748,346,671
7.	Excess / (shortfall) recognized (25% of Item 6)	$	13,931,427	$	187,086,668
8.	Actuarial value of assets as of June 30, 2013 (Item 5 + Item 7)	$	14,463,670,277	$	13,641,755,300
9.	Ratio of actuarial value to market value		99.7%		96.0%
10.	Remaining deferred Excess/(Shortfall) (Item 6 - Item 7)	$	41,794,279	$	561,260,003

Summary of 2015 Actuarial Valuation (continued)

Exhibit 5
Total Experience Gain or Loss

Item		Police and Firefighters		All Other Employees		All Employees
A. Calculation of total actuarial gain or loss						
1. Unfunded actuarial accured liability (UAAL), as of June 30, 2014	$	1,249,977,230	$	7,328,365,017	$	8,578,342,247
2. Normal cost for the year (employer and employee)	$	87,074,377	$	359,502,404	$	446,576,781
3. Less: contributions and assessments for the year	$	(167,976,588)	$	(773,321,812)	$	(941,298,400)
4. Interest at 7.75%		-		-		
a. On UAAL	$	96,873,235	$	567,948,289	$	664,821,524
b. On normal cost		3,374,132		13,930,718		17,304,850
c. On contributions		(6,509,093)		(29,966,220)		(36,475,313)
d. Total	$	93,738,274	$	551,912,787	$	645,651,061
5. Expected UAAL as of June 30, 2015 (Sum of Items 1– 4)	$	1,262,813,293	$	7,466,458,396	$	8,729,271,689
6. Actual UAAL as of June 30, 2015	$	1,366,957,151	$	7,407,767,958	$	8,774,725,109
7. Total gain (loss) for the year (Item 5 – Item 6)	$	(104,143,858)	$	58,690,438	$	(45,453,420)
B. Source of gains and losses						
8. Asset gain (loss) for the year (Exhibit 6)	$	2,673,209	$	11,258,218	$	13,931,427
9. Gain (loss) due to change in actuarial assumptions		(48,547,003)		(212,666,538)		(261,213,541)
10 Gain (loss) due to change in actuarial method		-		-		-
11 Other liability gain (loss)	$	(58,270,064)	$	260,098,758	$	201,828,694
12 Change in benefit provisions		-		-		-
13 Total gain (loss) for the year	$	(104,143,858)	$	58,690,438	$	(45,453,420)

Summary of 2015 Actuarial Valuation (continued)

Exhibit 6
Investment Experience Gain or Loss

Item	June 30, 2015	June 30, 2014
1. Actuarial assets, beginning of year	$ 13,641,755,300	$ 12,748,828,110
2. Total contributions during year	$ 941,298,400	$ 859,255,034
3. Benefits and refunds paid	$ (1,181,252,658)	$ (1,130,921,611)
4. Assumed net investment income at 7.75%		
a. Beginning of year assets	$ 1,057,236,035	$ 988,034,178
b. Contributions	$ 36,475,313	$ 33,296,133
c. Benefits and refunds paid	$ (45,773,540)	$ (43,823,212)
d. Total	$ 1,047,937,808	$ 977,507,099
5. Expected actuarial assets, end of year (Sum of Items 1 through 4)	$ 14,449,738,850	$ 13,454,668,632
6. Actual actuarial assets, end of year	$ 14,463,670,277	$ 13,641,755,300
7. Asset gain (loss) for year (Item 6 – Item 5)	$ 13,931,427	$ 187,086,668
8. Asset gain (loss) as a percent of actuarial value of assets, end of year (Item 7 / Item 6)	0.10%	1.37%

Summary of 2015 Actuarial Valuation (continued)

Exhibit 7
Projection Results Based on June 30, 2015 Actuarial Valuation

Valuation as of June 30,	Employer Contribution Rate for Fiscal Year Following Valuation Date	Compensation (in Millions)	Employer Contributions (in Millions)	Actuarial Accrued Liability (AAL, in Millions)	Actuarial Value of Assets (AVA, in Millions)	Unfunded Actuarial Accrued Liability (UAAL, in Millions)	Funded Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2015	17.89%	4,171.4	746	23,238	14,464	8,775	62.2%
2016	17.89%	4,263.9	763	24,142	15,226	8,916	63.1%
2017	17.89%	4,371.9	782	25,085	16,037	9,048	63.9%
2018	17.89%	4,489.1	803	26,023	16,856	9,167	64.8%
2019	17.89%	4,616.3	826	26,953	17,684	9,269	65.6%
2020	17.89%	4,752.4	850	27,878	18,526	9,353	66.5%
2021	17.89%	4,896.3	876	28,797	19,383	9,414	67.3%
2022	17.89%	5,048.5	903	29,708	20,258	9,450	68.2%
2023	17.89%	5,210.4	932	30,613	21,155	9,458	69.1%
2024	17.88%	5,380.7	962	31,512	22,078	9,433	70.1%
2025	17.88%	5,560.0	994	32,405	23,032	9,373	71.1%
2026	17.88%	5,747.6	1,027	33,292	24,020	9,272	72.1%
2027	17.87%	5,944.2	1,062	34,172	25,046	9,126	73.3%
2028	17.87%	6,150.4	1,099	35,047	26,116	8,931	74.5%
2029	17.87%	6,367.2	1,138	35,917	27,238	8,679	75.8%
2030	17.87%	6,594.1	1,178	36,786	28,420	8,366	77.3%
2031	17.87%	6,831.7	1,221	37,654	29,670	7,984	78.8%
2032	17.86%	7,079.9	1,265	38,524	30,997	7,526	80.5%
2033	17.86%	7,339.3	1,311	39,397	32,412	6,986	82.3%
2034	17.86%	7,611.4	1,360	40,279	33,925	6,354	84.2%
2035	17.87%	7,896.3	1,411	41,173	35,552	5,621	86.3%
2036	17.87%	8,193.4	1,464	42,082	37,305	4,777	88.6%
2037	17.87%	8,504.4	1,520	43,013	39,200	3,813	91.1%
2038	17.87%	8,830.4	1,578	43,969	41,253	2,715	93.8%
2039	17.87%	9,171.0	1,639	44,956	43,483	1,473	96.7%
2040	17.87%	9,526.7	1,703	45,980	45,908	72	99.8%
2041	17.88%	9,897.4	1,769	47,047	48,550	(1,503)	103.2%
2042	17.88%	10,284.2	1,839	48,163	51,429	(3,266)	106.8%
2043	17.88%	10,687.3	1,911	49,333	54,569	(5,236)	110.6%
2044	17.88%	11,107.5	1,986	50,565	57,994	(7,429)	114.7%

Projection assumes all assumptoins exactly met, including a 7.65% annual return on the current actuarial value of assets.

Summary of 2014 Actuarial Valuation (continued)

Exhibit 8
Highlights of Last Five Annual Actuarial Valuations
2011 through 2015

Item	Valuation Date: June 30				
	2011	2012	2013	2014	2015
Number of active members	65,310	65,599	66,226	67,206	67,310
Number of inactive members	6,649	6,909	7,312	8,105	7,413
Number of pensioners	36,871	37,830	38,741	39,680	40,657
Number of beneficiaries	2,818	2,944	3,071	3,407	3,626
Average monthly contributory plan pension amount	$ 2,221	$ 2,315	$ 2,414	$ 2,508	$ 2,621
Average monthly noncontributory plan pension amount	$ 1,509	$ 1,538	$ 1,562	$ 1,585	$ 1,611
Average monthly hybrid plan pension amount	$ 2,055	$ 2,090	$ 2,092	$ 2,088	$ 2,114
Average monthly beneficiary amount	$ 1,181	$ 1,219	$ 1,247	$ 1,304	$ 1,361
Total actuarial value of assets ($millions)	$ 11,943	$ 12,242	$ 12,749	$ 13,642	$ 14,464
Unfunded actuarial accrued liability ($millions)	$ 8,154.2	$ 8,440,9	$ 8,494.9	$ 8,578.3	$ 8,774.7
Funding Period (in years) [1]	25.0	30.0	28.0	26.0	26.0

Item	Fiscal Year				
(Dollar amounts in millions[2])	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015
Employers contributions[2]	$ 534.9	$ 548.4	$ 581.4	$ 653.1	$ 717.8

(1) Beginning with the 2011 valuation, the funding period was determined using and open group projection. Prior valuations determined the remaining amortization based on the assumption that the amortization payment would remain constant as a percentage of pay.

(2) Beginning with the fiscal year beginning July 1, 2005, a dollar contribution amount is not determined under the provisions of Act 181/2004. Instead a fixed percentage of payroll is contributed (15.75% for Police and Fire, 13.75% for All Others).
Beginning July 1, 2008, the percentages increased to 19.70% for Police and Fire, 15.00% for All Others.
Beginning July 1, 2012, the percentages increased to 22.0% for Police and Fire, 15.5% for All Others.
Beginning July 1, 2013, the percentages increased to 23.0% for Police and Fire, 16.0% for All Others.
Beginning July 1, 2014, the percentages increased to 24.0% for Police and Fire, 16.5% for All Others

Summary of Actuarial Methods and Assumptions
(Adopted on June 30, 2007, and December 20, 2010)

I. Valuation Date

The valuation date is June 30th of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

II. Actuarial Cost Method

The normal cost and actuarial accrued liability are determined using the Entry Age Actuarial Cost Method. The actuarial accrued liability is assigned to years prior to the valuation, and the normal cost is assigned to the year following the valuation. The remaining costs are assigned to future years. The normal cost and accrued liability are determined on an individual basis.

The normal cost is the level percentage of payroll contribution required to accumulate the needed funds to pay all expected benefits. This percentage of payroll is then applied to the total compensation for the prior year for all active members, and is then adjusted for the payroll growth assumption.

The actuarial accrued liability is the difference between the total present value of future benefits and the actuarial present value of future normal costs. The unfunded actuarial accrued liability (UAAL) is the excess of the actuarial accrued liability over the actuarial value of assets.

III. Funding of Unfunded Actuarial Accrued Liability

Since the State statutes governing the System establish the employee and employer contribution rates, the actuarial valuation determines the number of years required to amortize (or fund) the UAAL. Because of the legislated increases in future employer contribution rates and the new tier of benefits for employees hired after June 30, 2012, an open group projection of liabilities and assets was used to determine the length of time until the UAAL is eliminated. The open group projection assumed that the number of active members would remain static (i.e. each active employee who leaves employment due to termination, retirement, death or disability, would be replaced by exactly one new employee.

Because of this methodology for determining the funding period, any change in the unfunded actuarial accrued liability due to (i) actuarial gains and losses, (ii) changes in actuarial assumptions, or (iii) amendments, affects the funding period.

Please see Section VIII of these *Assumptions* for a description of the new entrant profile used in the open group projection.

Summary of Actuarial Methods and Assumptions (continued)
(Adopted on June 30, 2007, and December 20, 2010)

IV. *Actuarial Value of Assets*

The actuarial value of assets is equal to the expected actuarial value of assets plus 25% of the difference between the actual market value of assets and the expected actuarial value of assets. The expected actuarial value of assets is calculated net of investment and administrative expenses, and the expected investment return is equal to the assumed investment return rate multiplied by the prior year's actuarial value of assets, adjusted for contributions, benefits paid, and refunds.

V. *Actuarial Assumptions*

A. Economic Assumptions

1. Investment return: 7.65% per year, compounded annually, composed of an assumed 3.00% inflation rate and a 4.65% net real rate of return **(effective June 30, 2015).**
2. Payroll growth rate: 3.50% per annum **(effective June 30, 2006)**.
3. Salary increase rate **(effective June 30, 2011)**: As shown below

	General Employees		Teachers	
Years of Service	Service-related Component	Total Annual Rate of Increase Including 3.00% Inflation Component and 1.00% General Increase Rate	Service-Related Component	Total Annual Rate of Increase Including 3.00% Inflation Component and 1.50% General Increase Rate
1	4.00%	8.00%	4.00%	8.50%
2	3.00%	7.00%	3.25%	7.75%
3	2.00%	6.00%	2.50%	7.00%
4	1.25%	5.25%	2.00%	6.50%
5	1.00%	5.00%	1.50%	6.00%
6	0.75%	4.75%	1.00%	5.50%
7	0.50%	4.50%	1.00%	5.50%
8	0.50%	4.50%	0.75%	5.25%
9	0.50%	4.50%	0.75%	5.25%
10	0.25%	4.25%	0.75%	5.25%
11	0.25%	4.25%	0.50%	5.00%
12	0.25%	4.25%	0.50%	5.00%
13	0.25%	4.25%	0.50%	5.00%
14	0.25%	4.25%	0.50%	5.00%
15 or more	0.00%	4.00%	0.00%	4.50%

Summary of Actuarial Methods and Assumptions (continued)
(Adopted on June 30, 2007, and December 20, 2010)

	Police & Firefighters	
Years of Service	Service-related Component	Total Annual Rate of Increase Including 3.00%Inflation Component and 2.00% General Increase Rate
0	14.00%	19.00%
1	12.00%	17.00%
2 or more	0.00%	5.00%

Salary increases are assumed to occur once a year on July 1. Therefore, the pay used for the period between the valuation date and the first anniversary of the valuation date is equal to the reported pay for the prior year, annualized if necessary, and then increased by the salary increase assumption.

B. Demographic Assumptions

1. Post-Retirement Mortality rates

General Employees **(effective June 30, 2011)**

a. Healthy males – Client Specific Table for males, 89% multiplier.

b. Healthy females - Client Specific Table for females, 89% multiplier.

c. Disabled males - 1994 US Group Annuity Mortality Static Table for males, set forward nine years.

d. Disabled females - 1994 US Group Annuity Mortality Static Table for females, set forward nine years.

Teachers

a. Healthy males – Client Specific Table for male teachers, 65% multiplier **(effective June 30, 2011)**.

b. Healthy females - Client Specific Table for female teachers, 67% multiplier **(effective June 30, 2011)**.

c. Disabled males - 1994 US Group Annuity Mortality Static Table for males, set forward five years **(effective June 30, 2011)**.

d. Disabled females - 1994 US Group Annuity Mortality Static Table for females, set forward six years **(effective June 30, 2006)**.

Summary of Actuarial Methods and Assumptions (continued)
(Adopted on June 30, 2007, and December 20, 2010)

Police and Fire

a. Healthy males – 1994 US Group Annuity Mortality Static Table for males, 85% multiplier **(effective June 30, 2006)**.

b. Healthy females - 1994 US Group Annuity Mortality Static Table for females, 85% multiplier **(effective June 30, 2006)**.

c. Disabled males - 1994 US Group Annuity Mortality Static Table for males, set forward three years **(effective June 30, 2011)**.

d. Disabled females - 1994 US Group Annuity Mortality Static Table for females, set forward three years **(effective June 30, 2011)**.

Mortality Improvement: To account for future mortality improvement, the healthy mortality rates were chosen so that the assumed mortality rates are smaller than the rates observed in the most recent experience study (dated 12-20-2010). The margin at the time of the study was at least 7% for all groups (i.e. 7% more actual male deaths than expected). No future mortality improvement after the measurement date is assumed except as described above.

2. Pre-retirement Mortality Rates **(effective June 30, 2011)**

The male pre-retirement mortality rates are multiples of a table that has the RP-2000 Male Employee rates for ages 1 to 70 and the RP-2000 Combined Male rates for ages above 70. Similarly, the female pre-retirement rates are multiples of a table that has the RP-2000 Female Employee rates for ages 1 to 70 and the RP-2000 Combined Female rates for ages above 70. The following table shows the factors that are used in conjunction with the tables described above to derive the final ordinary and accidental death rates.

	General Employees		Teachers		Police and Fire	
Type	Males	Females	Males	Females	Males	Females
Ordinary	64%	48%	50%	40%	15%	15%
Accidental	16%	12%	10%	5%	35%	35%

Summary of Actuarial Methods and Assumptions (continued)
(Adopted on June 30, 2007, and December 20, 2010)

3. Disability rates (**effective June 30, 2011**) – The assumed total disability rates for employees covered by the contributory plan, hybrid plan, and the noncontributory plan at select ages are multiples of the client specific table that follows:

Age	Male & Female
25	0.000%
30	0.001%
35	0.008%
40	0.026%
45	0.064%
50	0.146%
55	0.198%
60	0.217%

Note: The disability rates project the percentage of employees at each age that is assumed to become disabled before retiring. Multiples of the rates above are assumed to be ordinary disability or accidental disability, and vary by employee group as follows:

	General Employees		Teachers		Police and Fire
Type	Male	Female	Male	Female	Male & Female
Ordinary	135%	85%	50%	50%	70%
Duty	30%	7%	5%	5%	35%

Summary of Actuarial Methods and Assumptions (continued)
(Adopted on June 30, 2007, and December 20, 2010)

4. Termination Rates (**effective June 30, 2011**) - Separate male and female rates, based on both age and service, developed from 2010 Experience Study. Rates reflect terminations for causes other than death, disability or retirement. Employees eligible for retirement are assumed to have no probability of termination. Sample rates are shown below:

   For first 6 years of service

Expected Terminations per 100 Lives

Years of Service	General Employees		Teachers		Police and Fire	
	Male	Female	Male	Female	Male	Female
0	15.5	18.5	33.0	28.0	12.0	12.0
1	12.5	16.5	23.0	23.0	9.0	9.0
2	10.5	12.5	15.0	16.0	4.0	4.0
3	9.0	10.0	13.0	14.0	4.0	4.0
4	7.0	8.0	11.0	12.0	4.0	4.0
5	6.0	7.0	9.0	8.0	4.0	4.0

   After first 6 years of service

Expected Terminations per 100 lives

Age	General Employees		Teachers		Police and Fire
	Male	Female	Male	Female	Male & Female
20	7.15	8.12	6.22	7.12	2.03
25	6.50	7.83	4.98	6.72	1.91
30	5.46	5.84	4.12	6.15	2.53
35	4.40	4.04	3.95	4.99	2.75
40	3.60	3.30	3.60	3.70	2.01
45	3.02	2.65	2.88	2.88	1.18
50	2.54	2.41	2.34	2.36	0.79
55	2.52	2.41	2.34	2.36	0.24
60	2.52	2.41	2.34	2.36	0.00

Summary of Actuarial Methods and Assumptions (continued)
(Adopted on June 30, 2007, and December 20, 2010)

5. Retirement rates (**effective June 30, 2011**) - Separate male and female rates, based on age, developed from the 2010 Experience Study. Sample rates are shown below:

Contributory Plan and Hybrid Plan

Expected Retirements per 100 Lives

	General Employees		Teachers		Police and Fire
Age	Male	Female	Male	Female	Male & Female
45	2	1	0	0	13
46	2	1	0	0	13
47	2	1	0	0	13
48	2	1	0	0	13
49	2	1	0	0	13
50	2	1	1	0	15
51	2	1	1	1	15
52	2	1	1	1	15
53	2	2	2	2	15
54	3	3	3	3	15
55	16	13	20	18	20
56	14	13	15	16	20
57	14	13	15	16	20
58	14	13	15	16	20
59	14	13	15	16	20
60	14	15	14	18	30
61	15	15	14	18	30
62	25	25	14	25	30
63	20	20	14	20	30
64	20	20	14	15	30
65	25	25	20	25	100
66	25	25	15	25	100
67	20	20	15	20	100
68	20	20	15	20	100
69	20	20	15	20	100
70	20	20	15	20	100
71	20	20	15	20	100
72	20	20	15	20	100
73	20	20	15	20	100
74	20	20	15	20	100
75	100	100	100	100	100

Retirement rates for 25 & out group ages 50-54 are 10% for both males and females

Summary of Actuarial Methods and Assumptions (continued)
(Adopted on June 30, 2007, and December 20, 2010)

Noncontributory Plan

Expected Retirements per 100 Lives

	General Employees				Teachers			
	Unreduced Retirement		Reduced Retirement		Unreduced Retirement		Reduced Retirement	
Age	Male	Female	Male	Female	Male	Female	Male	Female
55	13	12	2	2	10	13	2	3
56	13	12	2	2	10	13	2	3
57	13	12	2	2	10	14	2	3
58	13	12	2	2	10	15	2	3
59	13	12	3	3	10	16	3	3
60	14	15	4	4	10	17	5	5
61	14	18	5	5	10	18	10	5
62	25	25			16	25		
63	25	25			12	20		
64	20	20			10	18		
65	25	22			20	30		
66	25	22			15	25		
67	25	22			15	25		
68	25	22			15	25		
69	25	22			15	25		
70	20	20			15	25		
71	20	20			15	25		
72	20	20			15	25		
73	20	20			15	25		
74	20	20			15	25		
75	100	100			100	100		

Retirement rates for the 25 & out group ages 50-54 are 10% for both males and females

For Hybrid plan, early retirement rates are reduced by a factor of 10% for each year prior to age 65 (if hired after June 30, 2012) or 62 (if hired before July 1, 2012) for a maximum of 10 years.

Normal retirement rates for those hired after June 30, 2012 are increased by a factor of 10% for each year the member's first eligible normal retirement age is beyond the first eligible normal retirement age if he is hired before July 1, 2012. For Police/Fire, this factor will be 20% each year.

Summary of Actuarial Methods and Assumptions (continued)
(Adopted on June 30, 2007, and December 20, 2010)

C. Other Assumptions

1. Projected payroll for Contribution Purposes (**effective June 30, 2014**): The aggregate projected payroll for each fiscal year following the valuation date is calculated by increasing the actual payroll paid during the previous fiscal year by the payroll growth rate and multiplying by the ratio of current active members to the average number of active members during the previous fiscal year.

2. Percent married (**effective June 30, 2006**): 77% of male employees and 57.6% of female employees are assumed to be married.

3. Age difference (**effective June 30, 2006**): Male members are assumed to be four years older than their spouses, and female members are assumed to be four years younger than their spouses.

4. Percent electing annuity on death for contributory participants (when eligible): All of the spouses of married participants who die after becoming eligible for a retirement benefit are assumed to elect an annuity or a refund, whichever is more valuable at time of participant's death.

5. Percent electing deferred termination benefit: vested terminating members are assumed to elect a refund or a deferred benefit, whichever is more valuable at the time of termination.

6. Assumed age for commencement of deferred benefits: Members electing to receive a deferred benefit are assumed to commence receipt when eligible for early retirement.

7. Administrative expenses (**effective June 30, 2011**): The assumed investment return rate represents the anticipated net return after payment of all investment and administrative expenses. For purposes of determining the investment return assumption administrative expenses are assumed to be equal to 40 basis points of each year's investment return.

8. Reemployment, purchase of service, transfers: No recognition is made of (i) future member reimbursements upon reemployment, (ii) future purchase of additional service, or (iii) special transfer provisions.

9. Sick Leave: It is assumed that all members will have their benefit service increased by sick leave and the following loads will be applied by group:

General Employees	3.75%
Teachers	4.25%
Police and Fire	5.00%

10. COLA delay: It is assumed that the first COLA will be received 9 months after retirement. Teachers are assumed to receive the first COLA 12 months after retirement.

Summary of Actuarial Methods and Assumptions (continued)
(Adopted on June 30, 2007, and December 20, 2010)

11. There will be no recoveries once disabled.

12. No surviving spouse will remarry and there will be no children's benefit.

13. Pay increase timing: Beginning of (fiscal) year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.

14. Decrement timing: Retirements and terminations of Teachers are assumed to occur at the beginning of the year. All other decrements are assumed to occur mid-year.

15. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.

16. Decrement relativity: Decrement rates are used directly from the Experience Study, without adjustment for multiple decrement table effects.

17. Incidence of Contributions: Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.

18. Benefit Service: All members are assumed to accrue 1 year of service each year. Exact fractional service is used to determine the amount of benefit payable.

19. Police officers, firefighters, investigators of the Department of the Prosecuting Attorney and Attorney General, narcotic enforcement investigators, and public safety investigators hired prior to June 30, 2012 are not assumed to retire at age 55 unless they have 10 years of service.

VI. Participant Data

Participant data was supplied for (i) active members, (ii) inactive vested members, who are entitled to a future deferred benefit, (iii) members and beneficiaries receiving benefits.

Salary supplied for the current year was based on the earnings for the March preceding the valuation date. This salary was compared to March base pay plus a twelve-month average of overtime, with the greater of the two being used for valuation pay.

VII. Dates of Adoption of Assumptions and Methods

Generally, actuarial assumptions and methods were adopted by the Board of Trustees on December 20, 2010 as recommended by Gabriel, Roeder, Smith & Company (GRS). The legislature set the investment return assumption for the 2011 valuation to the assumption recommended by GRS. The ERS Board has adopted the assumption beginning with the 2012 valuation.

Summary of Actuarial Methods and Assumptions (continued)
(Adopted on June 30, 2007, and December 20, 2010)

VIII. New Entrant Profile

For the purposes of determining the funding period, an open group projection is used which replaces on a one-to-one basis each active member who leaves employment with an average new hire. The average new hire is determined based on a new entrant profile, which is created from the valuation data by determining the entry age and entry pay for anyone with seven or less years of service. The new entrant profile for the Police and Fire Employees and the All Other Employees are shown in the table below.

New Entrant Profile for Police and Fire Employees

Entry Age	# of Employees	Average Salary
20-24	199	$42,080
25-29	421	41,841
30-34	286	41,807
35-39	136	42,273
40-44	47	42,310
45-49	17	43,503
50-54	6	45,708
55-59	1	40,632
Total	1,113	41,993

It is assumed that 92.7% of new hires will be male.

Each group of new hires' salaries is assumed to grow 4.00% over the salaries of the previous year's group.

New Entrant Profile for All Other Employees

Entry Age	# of Employees	Average Salary
15-19	19	$26,410
20-24	1,433	37,250
25-29	3,459	40,108
30-34	2,759	42,208
35-39	2,388	43,097
40-44	1,954	41,537
45-49	1,785	40,980
50-54	1,449	42,278
55-59	1,169	45,146
60-64	484	46,511
65-69	41	47,971
Total	16,951	41,610

It is assumed that 40.0% of new hires will be male.

Summary of Plan Changes

Act 65, effective July 1, 1999

Requires judges who enter or re-enter service after June 30, 1999 to be at least 55 years old and five years of service or have 25 years of service to retire.

Act 100, effective June 30, 1999

Uses actuarial investment earnings in excess of a ten percent (10%) actuarial investment yield rate to reduce the employer's contribution requirements by $147.0 million and $50.6 million for fiscal years ending June 30, 2000 and 2001, respectively.

Act 284, effective June 30, 2001

Provide an increase in pension benefits for current retirees with military service who retired prior to July 2, 1989. A retirant who rendered honorable active military service could be granted up to 4 years of military service credits based upon his/her years of credited service under the ERS, not to exceed his/her actual years of military service. The years of military service credits granted are based on the following schedule:

- 0 years for retirants with less than 8 years of credited service
- Up to 2 years of retirants with 8 years or more of credited service
- Up to 3 years of retirants with 20 years or more of credited service
- Up to 4 years of retirants with 25 years or more of credited service

For each year of military service credits granted on the schedule above, the retirant will be provided a $36.00 increase is his/her monthly pension or retirement allowance.

Act 199, effective June 30, 2003

Emergency Medical Technicians (EMTs) are allowed to retire with an unreduced benefit after 25 years of service regardless of age, of which the last five or more years prior to retirement must be in that capacity. This feature is phased in one year at a time, July 1, 2003 through June 30, 2008.

Act 177, effective July 1, 2004

This Act allows police officers with a permanent service-connected disability to retain the 2-1/2% benefit multiplier for each year of service as a police officer.

Act 179, effective July 1, 2004

This Act increased the Noncontributory service-connected disability formula to 35% of average final compensation. The Act also changed the methodology for crediting interest on contributions for terminated members so that interest continues to accrue until the date of refund. The Act adds a "pop-up" feature to the joint & survivor benefit options if the beneficiary pre-deceases the retiree.

This Act also created the new Hybrid Plan which became effective July 1, 2006.

Summary of Plan Changes (continued)

Act 181, effective July 1, 2004

This Act establishes fixed employer contribution rates as a percentage of compensation effective July 1, 2005. Employers will contribute 15.75% for their police officers and firefighters and 13.75% for other employees.

Act 183, effective July 1, 2004

This Act amends the ERS statutes to comply with the federal tax limits on compensation retroactive to July 1, 1996.

Act 56, effective December 1, 2004

This Act amends the ERS statutes to allow the automatic cost-of-living-adjustment to be reflected when determining actuarial equivalent optional forms of payment.

Act 256, effective July 5, 2007

Legislation was enacted to remove the statutory salary increase assumption from the statutes and to grant the System's Board of Trustees the authority to set the salary increase assumption. As a result of that legislation, the Board has adopted effective with this valuation the salary increase assumption recommended by GRS as a result of the Experience Study performed in 2006.

Legislation was also enacted to increase the employer contribution rates to the System. Effective July 1, 2008, the employer contribution rate for Police and Fire employees will increase from 15.75% to 19.70% and the rate for All Other employees will increase from 13.75% to 15.00%

Act 163, effective June 23, 2011

Legislation was enacted that increased the future employer contribution rates to ERS. Employers of Police and Fire employees will contribute 22.0% of pay in FY 2013, 23.0% in FY 2014, 24.0% in FY 2015, and 25.0% in FY 2016 and beyond. Employers of All Other Employees will contribute 15.5% of pay in FY 2013, 16.0% in FY 2014, 16.5% in FY 2015, and 17.0% in FY 2016 and beyond.

Act 163 continued on next page

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Summary of Plan Changes (continued)

Act 163, effective June 23, 2011 (continued)

Legislation was enacted that made numerous changes to the benefits and member contribution rates for employees hired after June 30, 2012. Key changes are shown below:

Benefit Provision	Police & Fire Employees	All Other Employees
Benefit Multiplier	2.25%	1.75%
Normal Retirement	Age 55 with 25 years of service, or age 60 with 10 years of service	Age 60 with 30 years of service, or age 65 with 10years of service
Post-Retirement Increase	1.5%	1.5%
Hybrid Match	N/A	120%
Average Final Compensation	Highest 5 annual base salaries	Highest 5 annual base salaries
Eligibility for Deferred Benefit	10 years of service	10 years of service
Member Contribution Rate	14.20%	8.00%

Similar changes were also made to the benefits of Judges, Legislative Officers, etc.

Similar changes were also made to those employees in the All Other Employees group who are eligible to retire at 25 years of service including the addition of a minimum age requirement (55).

Finally, legislation was enacted that set the investment return assumption for the June 30, 2011 valuation at 7.75% (the rate recommended in the Experience Study presented to the Board in December of 2010). In addition, the legislation granted ERS's Board the authority to set this assumption for valuations after 2011.

Act 152, effective June 26, 2012

Legislation was enacted to require 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.

Act 153, effective June 26, 2012

Legislation was enacted to eliminate most types of non-base pay from the definition of compensation for employees hired after June 30, 2012. For the impacted employees, non-base pay compensation will be excluded in determining both the contributions made by and on behalf of these employees and the benefits they will earn in the System.

Ten Year Actuarial Schedules
2006 to 2015

- Retirement System Membership **
  - 2014 Membership Data *
- Historical Summary of Active Member Data *
- Pensioners, Average Annual Pension and Active Member/Pensioner Comparison **
- Number of Retirants and Beneficiaries **
- Solvency Test **
- Employer Contribution Rates as a Percentage of Payroll **
- Employer Appropriations to Pension Accumulation Fund, Appropriation Years 2005-2006 to 2014-2015 **

Note: * Prepared by Gabriel, Roeder, Smith & Company
** Compiled by ERS Staff from actuary reports, or other data.

Retirement System Membership **
2006 to 2015

March 31,	Active Members	Terminated Vested Members	Inactive Nonvested Members (a)	Pensioners & Beneficiaries	Total Membership
2006	64,069	5,164	n/a	34,304	103,537
2007	65,251	5,554	n/a	35,324	106,129
2008	66,589	5,847	n/a	36,260	108,696
2009	67,912	6,016	n/a	36,999	110,927
2010	65,890	6,895	n/a	38,441	111,226
2011	65,310	6,649	n/a	39,689	111,648
2012	,65,599	6,909	n/a	40,774	113,282
2013	66,226	7,312	n/a	41,812	115,350
2014	67,206	8,105	11,247	43,087	129,645
2015	67,310	7,413	13,840	44,283	132,846

** Schedule compiled by ERS Staff from actuary reports.
(a) Number not reported in prior years, included in counts for GASB Statement No. 68 reporting.
n/a = not available

Ten-Year Actuarial Schedules (continued)

2015 Membership Data

	Police and Firefighters		All Other Employees		All Employees	
	June 30, 2015	June 30, 2014	June 30, 2015	June 30, 2014	June 30, 2015	June 30, 2014
1. Active members						
a. Number	5,044	5,006	62,266	62,200	67,310	67,206
b. Total payroll	$ 438,156,112	$ 406,427,272	$3,514,476,920	$3,464,608,815	$3,952,633,032	$3,871,036,087
c. Average salary	$ 86,867	$ 81,118	$ 56,443	$ 55,701	$ 58,723	$ 57,600
d. Average age	42.3	42.0	48.3	48.2	47.8	47.8
e. Average service	14.2	14.1	13.1	13.5	13.2	13.5
2. Terminated vested members (a)						
a. Number	361	245	7,052	7,860	7,413	8,105
b. Total annual deferred benefits	$ 5,620,538	$ 3,886,865	$ 67,095,426	$ 57,116,099	$ 72,715,964	$ 61,002,964
c. Average annual deferred benefit	$ 15,569	$ 15,865	$ 9,514	$ 7,267	$ 9,809	$ 7,527
3. Service retirees						
a. Number	3,267	3,238	35,796	34,866	39,063	38,104
b. Total annual benefits	$ 164,846,594	$ 157,342,660	$ 898,802,303	$ 855,752,432	$1,063,648,897	$1,013,095,092
c. Average annual benefit	$ 50,458	$ 48,593	$ 25,109	$ 24,544	$ 27,229	$ 26,588
4. Disabled retirees						
a. Number	135	146	1,459	1,430	1,594	1,576
b. Total annual benefits	$ 2,780,590	$ 2,859,902	$ 17,951,655	$ 16,975,618	$ 20,732,245	$ 19,835,520
c. Average annual benefit	$ 20,597	$ 19,588	$ 12,304	$ 11,871	$ 13,006	$ 12,586
5. Beneficiaries						
a. Number	270	248	3,356	3,159	3,626	3,407
b. Total annual benefits	$ 9,105,407	$ 8,015,198	$50,132,644	$ 45,309,54	$ 59,238,051	$ 53,324,252
c. Average annual benefit	$ 33,724	$ 32,319	$ 14,938	$ 14,343	$ 16,337	$ 15,651

(a) As of June 30, 2014 - Terminated vested members does not include 11, 247 Inactive members that may return to service and earn additional service credits to become vested (612 Police and firefighters plus 10,635 All other employees). As of June 30, 2015, there were 13,840 (568 Police and firefighters plus 13,272 All other employees)

Historical Summary of Active Member Data

Year Ending June 30,	Active Members		Covered Payroll		Average Salary			
	Number	Percent Increase	Amount in $ Millions	Percent Increase	$ Amount	Percent Increase	Average Age	Average Service
2006	64,069	1.6%	3,113.7	6.5%	48,599	4.8%	46.4	13.0
2007	65,251	1.8%	3,340.5	7.3%	51,194	5.3%	46.5	13.0
2008	66,589	2.1%	3,601.7	7.8%	54,089	5.7%	46.6	12.9
2009	67,912	2.0%	3,838.0	6.6%	56,514	4.5%	46.8	12.9
2010	65,890	-3.0%	3,713.6	-3.2%	56,360	-0.3%	47.1	13.2
2011	65,310	-0.9%	3,731.4	0.5%	57,133	1.4%	47.4	13.4
2012	65,599	0.4%	3,706.1	-0.7%	56,497	-1.1%	47.6	13.5
2013	66,226	1.0%	3,720.8	0.4%	56,184	-0.6%	47.7	13.5
2014	67,206	1.5%	3,871.0	4.0%	57,600	2.5%	47.8	13.5
2015	67,310	0.2%	3,952.6	2.1%	58,723	1.9%	47.8	13.2

Ten-Year Actuarial Schedules (continued)

Pensioners, Average Annual Pension and Active Member/Pensioner Comparison**

2006 to 2015

March 31,	Number of Pensioners	Average Annual Pension (1)	Ratio of Active Members per Pensioner
2006	32,199	$20,052	1.9
2007	33,117	$21,161	1.8
2008	33,893	$21,734	1.9
2009	34,429	$22,337	1.9
2010	35,763	$23,173	1.8
2011	36,871	$24,160	1.8
2012	37,830	$24,853	1.7
2013	38,741	$25,485	1.7
2014	39,680	$26,032	1.7
2015	40,657	$26,671	1.7

** Schedule compiled by ERS Staff from actuary reports.

(1) Pension amount includes base pension plus 2.5% post-retirement increases (excludes other bonuses and cost-of-living adjustments).

Number of Retirants and Beneficiaries**

2006 to 2015

As of Mar 31,	Added	Average Added to Rolls	Removed	Average Removed from Rolls	Total	Average Pension	% Chg
Retirants							
2006	1,664	$20,562	809	$14,032	32,199	$20,583	3.02%
2007	1,785	$20,782	873	$14,697	33,117	$21,161	2.81%
2008	1,712	$20,715	936	$15,396	33,893	$21,734	2.71%
2009	1,531	$20,861	995	$16,053	34,429	$22,337	2.77%
2010	2,316	$25,153	982	$16,362	35,763	$23,173	3.74%
2011	2,056	$27,808	948	$18,154	36,871	$24,160	4.26%
2012	1,987	$24,680	1028	$17,958	37,830	$24,853	2.87%
2013	1,994	$23,503	1083	$18,144	38,741	$25,485	2.54%
2014	2,027	$22,585	1088	$19,456	39,680	$26,032	2.15%
2015	2,229	$22,997	1252	$19,820	40,657	$26,671	2.45%
Beneficiaries							
2006	214	$11,819	66	$10,455	2,105	$11,862	2.37%
2007	179	$14,161	71	$10,132	2,213	$12,305	3.74%
2008	229	$14,244	75	$10,659	2,367	$12,749	3.61%
2009	298	$14,518	95	$9,772	2,570	$13,308	4.38%
2010	214	$14,803	106	$9,713	2,678	$13,814	3.80%
2011	212	$15,843	72	$12,107	2,818	$14,256	3.20%
2012	225	$14,798	99	$11,882	2,944	$14,628	2.61%
2013	238	$14,515	111	$11,790	3,071	$14,962	2.28%
2014	442	$17,964	106	$12,439	3,407	$15,651	4.60%
2015	310	$19,597	91	$12,530	3,626	$16,337	4.38%

** Schedule compiled by ERS staff from actuary reports.

Ten-Year Actuarial Schedules (continued)

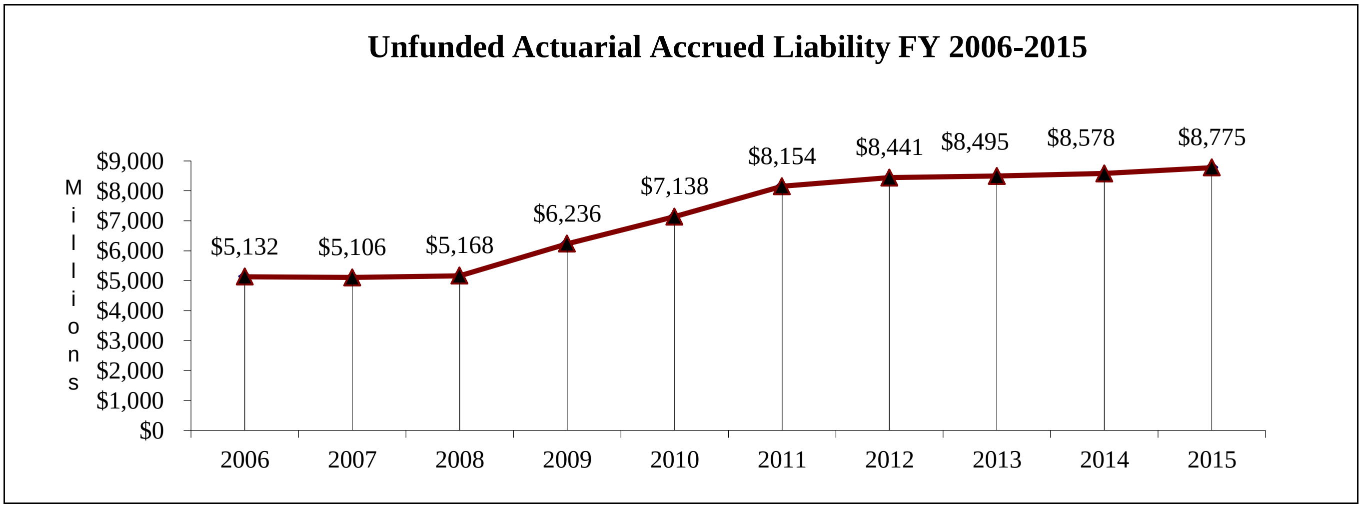
Solvency Test**

2006 to 2015

June 30,	Actuarial Accrued Liabilities (AAL) Active Member Contributions	Retirees, Beneficiaries, and Inactive Vested Members	Active and Inactive Members Employer Financed Portion	Actuarial Value of Assets	Cumulative Portion of Actuarial Accrued Liabilities Covered by Assets Column (1)	Column (2)	Column (3)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
2006	844.0	7,458.4	6,359.0	9,529.4	100%	100%	19.3%
2007	914.1	7,856.1	6,926.4	10,589.8	100%	100%	26.3%
2008	1,029.5	8,230.3	7,289.2	11,381.0	100%	100%	29.1%
2009	1,168.9	8,584.0	7,883.4	11,400.1	100%	100%	20.9%
2010	1,265.0	9,259.4	7,959.2	11,345.6	100%	100%	10.3%
2011	1,364.2	10,183.7	8,549.0	11,942.8	100%	100%	4.6%
2012	1,485.1	10,707.2	8,491.1	12,242.5	100%	100%	0.6%
2013	1,658.2	11,182.5	8,403.0	12,748.8	100%	99%	0.0%
2014	1,812.9	11,673.0	8,734.2	13,641.8	100%	100%	1.8%
2015	1,981.8	12,321.8	8,934.8	14,463.7	100%	100%	1.8%

(Amounts in $millions)

** Schedule compiled by ERS Staff from actuary reports



Ten-Year Actuarial Schedules (continued)

Employer Contribution Rates as a Percentage of Payroll **
2006 to 2015

Actuarial Valuation as of June 30,	Police and Firefighters			All Other Employees			All Active Employees		
	Normal Cost Rate	Amortization Percent	Total Employer Rate	Normal Cost Rate	Amortization Percent	Total Employer Rate	Normal Cost Rate	Amortization Percent	Total Employer Rate
2006	4.36%	11.39%	15.75%	5.76%	7.99%	13.75%	5.55%	8.40%	13.95%
2007	4.69%	11.06%	15.75%	5.16%	8.59%	13.75%	5.11%	8.84%	13.95%
2008	6.56%	9.19%	15.75%	5.75%	8.00%	13.75%	5.85%	8.10%	13.95%
2009	6.58%	13.12%	19.70%	5.79%	9.21%	15.00%	5.89%	9.57%	15.46%
2010	6.59%	13.11%	19.70%	5.78%	9.22%	15.00%	5.88%	9.59%	15.47%
2011	6.60%	13.10%	19.70%	5.79%	9.21%	15.00%	5.90%	9.59%	15.49%
2012	8.09%	11.01%	19.70%	5.78%	9.22%	15.00%	6.06%	9.46%	15.52%
2013	7.98%	14.02%	22.00%	5.69%	9.81%	15.50%	5.97%	10.14%	16.11%
2014 *	7.17%	14.83%	23.00%	5.34%	10.66%	16.00%	5.54%	11.22%	16.76%
2015 *	8.04%	15.96%	24.0%	5.76%	10.74%	16.50%	6.02%	11.26%	17.28%

Note: Effective with the June 30, 2004 valuation, the employer contribution rate is statutorily changed to a percentage of pay of 15.75% of actual pay for Police and Fire and 13.75% of actual pay for All Other Employees, per Act 181/2004 SLH. Effective July 1, 2008, the employer contribution rate increased to 19.70% of actual pay for Police and Fire and 15.00% of actual pay for All Other Employees, per Act 256/2006 SLH.

Per Act 163/2011 SLH, the statutory employer contribution rate for Police and Fire employees will be 22.00% in FY 2013, 23.00% in FY 2014, 24.00% in FY 2015 and 25.00% in FY 2016 and thereafter, and the rate for All Other Employees will be 15.50% in FY 2013, 16.00% in FY 2014, 16.50% in FY 2015 and 17.00% in FY 2016 and thereafter.

* This chart does not include the effects of GASB Statement No 67 (implemented by the ERS only for FY 2014) that requires member contributions "picked up" as employer contributions pursuant to IRC section 414(h)(2) to be reported as Employer Contributions. ERS implemented GASB Statement No. 82 in FY 2015 that excludes these amounts from Employer Contributions.

** Schedule compiled by ERS Staff from actuary reports.

Ten-Year Actuarial Schedules (continued)

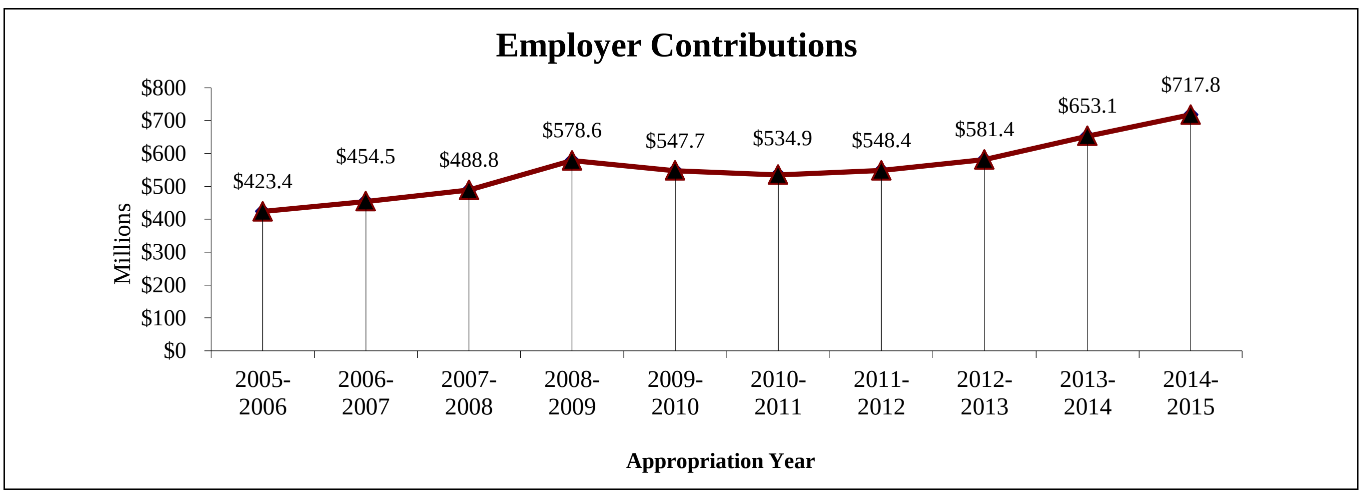
Employer Appropriations to Pension Accumulation Fund**

	Investment Yield Rate	
Fiscal Year	Assumed for Actuarial Valuation	Actuarial Investment Return
2005-2006	8.0%	9.76%
2006-2007	8.0%	12.98%
2007-2008	8.0%	8.89%
2008-2009	8.0%	0.87%
2009-2010	8.0%	(0.42)%
2010-2011	7.75%	7.10%
2011-2012	7.75%	5.05%
2012-2013	7.75%	6.67%
2013-2014	7.75%	9.23%
2014-2015	7.65%	7.85%

Notes: (1). Beginning with the valuation for fiscal year 1996-97 (appropriation fiscal year 1999-2000), the actuarial investment income is the sum of the expected net investment income based on the actuarial assumption of 8% and a four-year smoothing of the difference between the market value of assets at year-end and the expected actuarial value of assets. In prior years, the actuarial investment income was the sum of interest, dividends, and net realized gains less net realized losses and investment expenses.

(2) Beginning fiscal year 2005/2006 employers will contribute 15.75% of actual payroll for Police and Fire and 13.75% for All Other Employees, per Act 181/2004 SLH. Effective July 1, 2008, the employer contribution rate increased to 19.70% of actual pay for Police and Fire and 15.00% of actual pay for All Other Employees, per Act 256/2006 SLH. Pursuant to Act 163,/2012 SLH, the employer rates will increase over a four-year phase in period. The employer contribution rates for Police and Fire employees will increase according to the following schedule: 22.00% in FY2014, 23.00% in FY 2015, and 24.00% in FY 2016, and 25.00% in FY 2017 and beyond. The employer contribution rates for All Other Employees will increase according to the following schedule: 15.50% in FY2014, 16.00% in FY 2015, and 16.50% in FY 2016, and 17.00% in FY 2017 and beyond.

** Schedule compiled by ERS Staff from actuary reports.



*** This chart of Employer Contributions does not include Member contributions picked up as employer contributions per IRC section 414(h)(2) and Chapter 88, HRS (as required by GASB Statement No. 68 in FY 2014).

Funded Ratio		Number of General State Retirement Systems (excluding separate systems for teachers, school employees, or municipal employees)			
100% or more	7	Oregon PERS	110.5%	Delaware SEPP	103.7%
		North Carolina TSERS	106.1%	Utah URS	100.8%
		Florida FRS	105.6%	Vermont VSRS	100.8%
		Idaho PERS	105.5%		
90% to 99%	15	Wisconsin WRS	99.5%	Wyoming WRS	94.0%
		Indiana PERF	97.6%	North Dakota PERS	93.4%
		Pennsylvania PSERS	97.1%	New Mexico PERA	92.8%
		South Dakota SDRS	97.1%	Ohio PERS	92.6%
		West Virginia PERS	97.0%	Minnesota MSRS	92.5%
		Tennessee SETHEEPP	96.2%	Montana PERS	91.1%
		Texas ERS	95.6%	Iowa PERS	90.2%
		Georgia ERS	94.5%		
80% to 89%	8	Arkansas PERS	89.1%	Michigan MSERS	85.1%
		California PERS	87.2%	Arizona ASRS	83.3%
		Missouri MOSERS	86.8%	Alabama ERS	81.1%
		Massachusetts SERS	85.1%	Virgina VRS	80.8%
70% to 79%	9	Nevada PERS	78.8%	Colorado PERA	73.3%
		Alaska PERS	78.2%	Washington PERS	73.1%
		New Jersey PERS	76.6%	Oklahoma PERS	72.6%
		Maryland MSRPS	74.7%	Maine MSRS	71.1%
		Mississippi PERS	73.7%		
Less than 70%	9	South Carolina SCRS	69.6%	Kentuucky KERS	58.4%
		Kansas PERS	69.4%	Illinois SERS	54.2%
		Hawaii ERS *	**68.8%**	Rhode Island ERSRI	53.4%
		Louisiana LASERS	67.2%	Connecticut SERS	53.3%
		New Hampshire NHRS	67.0%		

Compiled from various sources by Gabriel, Roeder, Smith & Company

Note: GASB 25 funded ratios are shown for 48 general state retirement systems for valuation year(s) through January 1, 2008. A funded ratio is not shown for the Nebraska System because it is a defined contribution plan. A funded ratio for the New York System does not exist because of the use of the Aggregate Cost Method.

*** Hawaii's GASB 25 funded ratio for the fiscal year ended June 30, 2015 was 62.4%.**

Employees' Retirement System
of the State of Hawaii

STATISTICAL SECTION

Summary

This section contains various statistical and historical data considered useful in evaluating the condition of the ERS. All non-accounting data is taken from ERS' internal sources except for that information which is derived from the actuarial valuations.

Changes in Fiduciary Net Position

Last Ten Fiscal Years

Fiscal Year Ended June 30,:	2006	2007	2008	2009	2010
Additions					
Employer Contributions	$ 423,445,597	$ 454,494,286	$ 488,770,028	$ 578,672,058	$ 547,669,675
Member contributions	56,257,953	144,658,185	163,375,639	177,781,610	360,047,068
Investment income (net of expense)	988,347,837	1,704,957,268	(461,063,080)	(1,937,317,469)	1,026,461,210
Total additions to plan net assets	1,468,051,387	2,304,109,739	191,082,587	(1,180,863,801)	1,934,177,953
Deductions					
Benefits	720,542,990	761,004,748	792,312,830	833,691,245	905,315,348
Refunds	2,487,279	3,497,590	3,668,857	3,937,464	7,573,619
Administrative expenses	8,477,837	9,601,756	10,728,801	13,011,283	12,406,339
Total deductions from plan net assets	731,508,106	774,104,094	806,710,488	850,639,992	925,295,306
Net increase (decrease) in net position	736,543,281	1,530,005,645	(615,627,901)	(2,031,503,793)	1,008,882,647
Net position restricted for pension benefits					
Beginning of year	9,195,867,940	9,932,411,221	11,462,416,866	10,846,788,965	8,815,285,172
End of year	$ 9,932,411,221	$ 11,462,416,866	$ 10,846,788,965	$ 8,815,285,172	$9,824,167,819

Fiscal Year Ended June 30,:	2011	2012	2013	2014 **	2015
Additions					
Employer Contributions	$ 538,692,849	$ 548,353,394	$ 581,447,213	$ 857,948,707	$ 717,792,981
Member contributions	232,880,063	182,401,324	185,837,186	1,306,327	223,505,419
Investment income (net of expense)	2,040,061,555	(57,798,410)	1,331,208,154	2,175,479,961	556,436,475
Total additions to plan net assets	2,811,634,467	672,956,308	2,098,492,553	3,034,734,995	1,497,734,875
Deductions					
Benefits	960,219,432	1,015,447,668	1,060,561,148	1,122,445,642	1,170,744,770
Refunds	7,901,509	7,187,606	7,204,411	8,475,969	10,507,888
Administrative expenses	13,325,781	11,634,197	11,941,446	12,626,030	14,032,964
Total deductions from plan net assets	981,446,722	1,034,269,471	1,079,707,005	1,143,547,641	1,195,285,622
Net increase (decrease) in net position	1,830,187,745	(361,313,163)	1,018,785,548	1,891,187,354	302,449,253
Net position restricted for pension benefits					
Beginning of year	$ 9,824,167,819	$ 11,654,355,564	$ 11,293,042,401	12,311,827,949	14,203,015,303
End of year	$ 11,654,355,564	$ 11,293,042,401	$ 12,311,827,949	$ 14,203,015,303	$ 14,505,464,556

GASB Statement No. 68 - Employer contributions		2014
Employer contributions (statutory)	a	$ 653,127,697
Member contributions (picked up by employer)	b	$ 204,821,010
Member contributions (other)	c	$ 1,306,327
For Valuation Reporting		$ 859,255,034

** For FYE June 30, 2014, ERS implemented GASB Statement No. 67 that requires Member Contributions "picked up" per Internal Revenue Code section 414(h)(2) as employer contributions to be classified for financial statement purposes as "Employer Contributions". This was subsequently changed effective with FYE June 30, 2015 with the implementation of GASB Statement No. 82.

Contributions

Employer Contribution Rates as a Percentage of Payroll **

Fiscal Year	Police & Firefighters	All Other Employees	Composite Rate
2006	15.75%	13.75%	13.95%
2007	15.75%	13.75%	13.95%
2008	15.75%	13.75%	13.95%
2009	19.70%	15.00%	15.46%
2010	19.70%	15.00%	15.47%
2011	19.70%	15.00%	15.49%
2012	19.70%	15.00%	15.52%
2013	22.00%	15.50%	16.11%
2014	23.00%	16.00%	16.76%
2015	24.00%	16.50%	17.28%

** Excludes member contributions picked up as employer contributions per IRC section 414(h)(2) and Chapter 88, HRS.

Contributions **

*** Member contributions picked up as employer contributions per IRC section 414(h)(2) and Chapter 88, HRS are included in the Member Contributions for this chart, they are not included in Employer Contributions.

Deductions from Fiduciary Net Position for Benefit Payments by Type

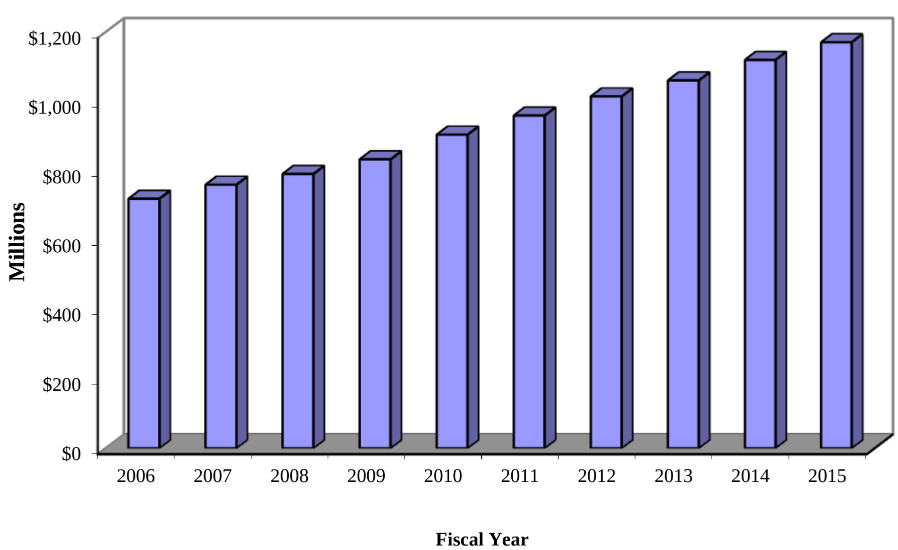
Last Ten Fiscal Years

Fiscal Year Ended June 30,:	2006	2007	2008	2009 **	2010
Recurring benefit payments					
Service	$ 673,165,361	$ 712,580,450	$ 748,158,330	$ 754,432,615	$ 807,662,216
Disability	12,666,891	13,432,834	13,707,170	15,619,011	16,470,042
Death	3,875,024	2,794,068	2,293,557	34,201,206	36,993,685
subtotal	689,707,276	728,807,352	764,159,057	804,252,832	861,125,943
Refund Option payments (one-time)	30,835,714	32,197,396	28,153,773	29,438,413	44,189,405
Total benefit payments	$ 720,542,990	$ 761,004,748	$ 792,312,830	$ 833,691,245	$ 905,315,348

Fiscal Year Ended June 30,:	2011	2012	2013	2014	2015
Recurring benefit payments					
Service	$ 859,915,959	$ 917,840,937	$ 963,894,245	$ 1,016,912,124	$ 1,058,688,356
Disability	17,355,973	17,877,572	18,987,509	19,835,520	20,732,259
Death	40,173,678	43,053,039	45,948,656	53,324,252	59,238,051
subtotal	917,445,610	978,771,548	1,028,830,410	1,090,071,896	1,138,658,666
Refund Option payments (one-time)	42,773,822	36,676,120	31,730,738	32,373,746	32,086,104
Total benefit payments	$ 960,219,432	$1,015,447,668	$ 1,060,561,148	$ 1,122,445,642	$ 1,170,744,770

** From FYE 6/30/2009, death benefits includes payments to continuing beneficiaries.

Benefit Payments

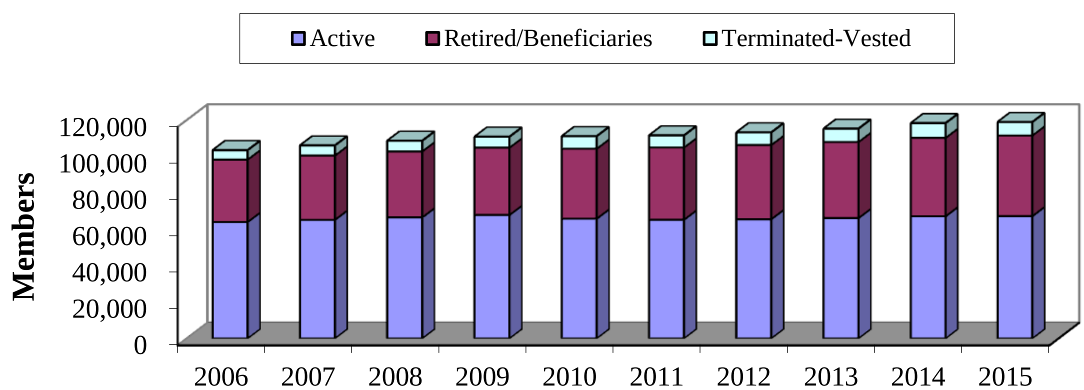


Participating Employers and Membership in ERS
Last Ten Fiscal Years

ERS Membership

As of March 31,:	Active	Retired/ Beneficiaries	Terminated- Vested	Inactive- Non-Vested	Totals
2006	64,069		5,164	na	103,537
2007	65,251	35,324	5,554	na	106,129
2008	66,589	36,260	5,847	na	108,696
2009	67,912	36,999	6,016	na	110,927
2010	65,890	38,441	6,895	na	111,226
2011	65,310	39,689	6,649	na	111,648
2012	65,599	40,774	6,909	na	113,282
2013	66,226	41,812	7,312	na	115,350
2014	67,206	43,087	8,105	11,247	129,645
2015	67,310	44,283	7,413	13,840	132,846

ERS Membership



Participating Employers and Active Members

As of March 31,:	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
State of Hawaii	49,973	50,756	51,719	52,704	50,789	50,268	50,604	51,176	51,875	51,791
City & County of Honlulu	8,167	8,363	8,512	8,640	8,519	8,485	8,451	8,457	8,625	8,727
- Board of Water Supply	560	556	526	554	526	516	505	532	551	558
Hawaii County	2,223	2,315	2,459	2,527	2,501	2,459	2,427	2,446	2,489	2,550
Kauai County	1,088	1,109	1,125	1,160	1,129	1,158	1,201	1,227	1,244	1,234
Maui County	2,055	2,152	2,248	2,327	2,426	2,424	2,411	2,388	2,422	2,450
Total	64,066	65,251	66,589	67,912	65,890	65,310	65,599	66,226	67,206	67,310

Benefit Payments by Retirement Type and Option

As of March 31, 2015

Retired Contributory Members

Monthly Benefit	Number of Recipients	Type of Retirement * 1	2	3	4	5	Retirement Option Max	Opt. 1	Opt. 2	Opt. 3	Opt. 4	Opt. 5	Other
$ 1 - 400	1,186	918	19	13	1	235	256	255	172	65	178	259	1
401 - 800	1,963	1,559	84	26	8	286	216	156	149	45	658	737	2
801 - 1,200	2,058	1,660	46	55	13	284	220	128	139	53	821	693	4
1,201 - 1,600	2,132	1,804	28	73	8	219	207	104	123	56	946	694	2
1,601 - 2,000	2,120	1,870	15	41	7	187	181	74	131	51	966	711	6
2,001 - 2,400	2,023	1,875	3	33	5	107	147	72	99	31	860	811	3
2,401 - 2,800	2,214	2,070	4	17	7	116	175	48	88	48	947	902	6
2,801 - 3,200	2,135	2,023	3	10	7	92	179	62	103	51	979	756	5
3,201 - 3,600	1,735	1,663	-	8	2	62	189	43	76	48	981	396	2
3,601 - 4,000	1,408	1,342	-	8	1	57	164	45	71	50	810	268	-
4,001	3,941	3,813	-	4	8	116	546	110	309	196	2,325	455	-
	22,915	20,597	202	288	67	1,761	2,480	1,097	1,460	694	10,471	6,682	31

Retired Hybrid Members

Monthly Benefit	Number of Recipients	Type of Retirement * 1	2	3	4	5	Retirement Option Max	Opt. 1	Opt. 2	Opt. 3	Opt. 4	Opt. 5	Other
$ 1 - 400	297	271	-	-	13	13	146	30	67	26	9	19	-
401 - 800	925	800	50	2	39	34	376	70	241	121	61	56	-
801 - 1,200	941	798	72	12	18	41	355	53	211	119	109	94	-
1,201 - 1,600	763	666	39	15	10	33	265	56	213	93	77	58	1
1,601 - 2,000	599	548	30	2	6	13	193	33	166	91	78	38	-
2,001 - 2,400	552	520	15	1	3	13	189	35	139	93	63	32	1
2,401 - 2,800	496	482	6	-	2	6	199	26	95	85	62	29	-
2,801 - 3,200	383	366	3	-	6	8	145	20	92	66	44	16	-
3,201 - 3,600	348	346	-	-	2		135	27	56	75	29	26	-
3,601 - 4,000	241	240	-	-	-	1	108	17	38	46	22	10	-
4,001	647	637	1	-	4	5	228	39	139	147	67	27	-
	6,192	5,674	216	32	103	167	2,339	406	1,457	962	621	405	2

Retired Noncontributory Members

Monthly Benefit	Number of Recipients	Type of Retirement * 1	2	3	4	5	Retirement Option Max	Opt. A	Opt. B	Opt. C	Other
$ 1 - 400	1,636	1,066	89	42	126	313	630	352	454	79	121
401 - 800	3,497	2,692	287	49	86	383	1,727	611	923	158	78
801 - 1,200	2,407	1,967	155	49	36	200	1,206	471	592	111	27
1,201 - 1,600	1,664	1,441	91	12	6	114	817	324	440	79	4
1,601 - 2,000	1,278	1,135	46	3	5	89	612	258	334	74	-
2,001 - 2,400	1,186	1,113	16	3	6	48	617	227	259	82	1
2,401 - 2,800	1,271	1,220	7	1	2	41	767	232	169	103	-
2,801 - 3,200	909	880	4	-	2	23	595	147	123	44	-
3,201 - 3,600	550	535	1	1	2	11	337	118	76	19	-
3,601 - 4,000	306	291	-	-	1	14	184	63	48	11	-
4,001	472	452	-	-	5	15	281	101	76	14	-
	15,176	12,792	696	160	277	1,251	7,773	2,904	3,494	774	231

* Type of Retirement
1 – Normal retirement for age & service
2 – Ordinary disability retirement
3 – Occupational disability retirement
4 – Survivor payment – death in service
5 – Survivor payment – normal or disability retirement

Note: Refer to Plan Summary in the Introductory Section for descriptions of the types of retirements and benefit options selected by the members.

Average Monthly Service Pensions
by Years of Credited Service

As of March 31,		0-9	10-14	15-19	20-24	25-29	30-34	35+	All
		Years of Credited Service							
2006	Average Monthly Benefit	$261	$489	$843	$1,210	$2,007	$2,446	$2,679	$1,719
	Number of Active Retirants	1,149	3,790	3,330	3,813	7,346	8,083	3,313	30,824
2007	Average Monthly Benefit	$272	$504	$865	$1,240	$2,064	$2,509	$2,765	$1,773
	Number of Active Retirants	1,126	3,907	3,393	3,918	7,470	8,315	3,536	31,665
2008	Average Monthly Benefit	$291	$518	$882	$1,266	$2,119	$2,574	$2,853	$1,824
	Number of Active Retirants	1,137	3,981	3,481	4,034	7,560	8,511	3,737	32,441
2009	Average Monthly Benefit	$368	$548	$925	$1,319	$2,218	$2,672	$2,997	$1,906
	Number of Active Retirants	1,184	3,987	3,555	4,173	7,570	8,615	3,859	32,943
2010	Average Monthly Benefit	$336	$563	$948	$1,356	$2,289	$2,750	$3,097	$1,975
	Number of Active Retirants	1,143	4,062	3,719	4,373	7,775	8,926	4,268	34,266
2011	Average Monthly Benefit	$364	$583	$984	$1,397	$2,374	$2,849	$3,261	$2,059
	Number of Active Retirants	1,221	4,106	3,843	4,526	7,920	9,176	4,567	35,359
2012	Average Monthly Benefit	$388	$603	$1,012	$1,424	$2,446	$2,934	$3,361	$2,117
	Number of Active Retirants	1,292	4,222	3,929	4,705	8,030	9,361	4,769	36,308
2013	Average Monthly Benefit	$429	$622	$1,038	$1,449	$2,521	$3,009	$3,454	$2,171
	Number of Active Retirants	1,371	4,303	4,018	4,906	8,134	9,544	4,902	37,178
2014	Average Monthly Benefit	$451	$642	$1,061	$1,473	$2,574	$3,082	$3,531	$2,216
	Number of Active Retirants	1,478	4,430	4,080	5,092	8,216	9,675	5,133	38,104
2015	Average Monthly Benefit	$485	$650	$1,081	$1,487	$2,623	$3,141	$3,619	$2,269
	Number of Active Retirants	1,305	4,547	4,221	5,319	8,344	10,009	5,318	39,063

Retirees and Beneficiaries

(Recurring Benefit Payments)

Tabulated by Fiscal Year that Payments Started as of March 31, 2014

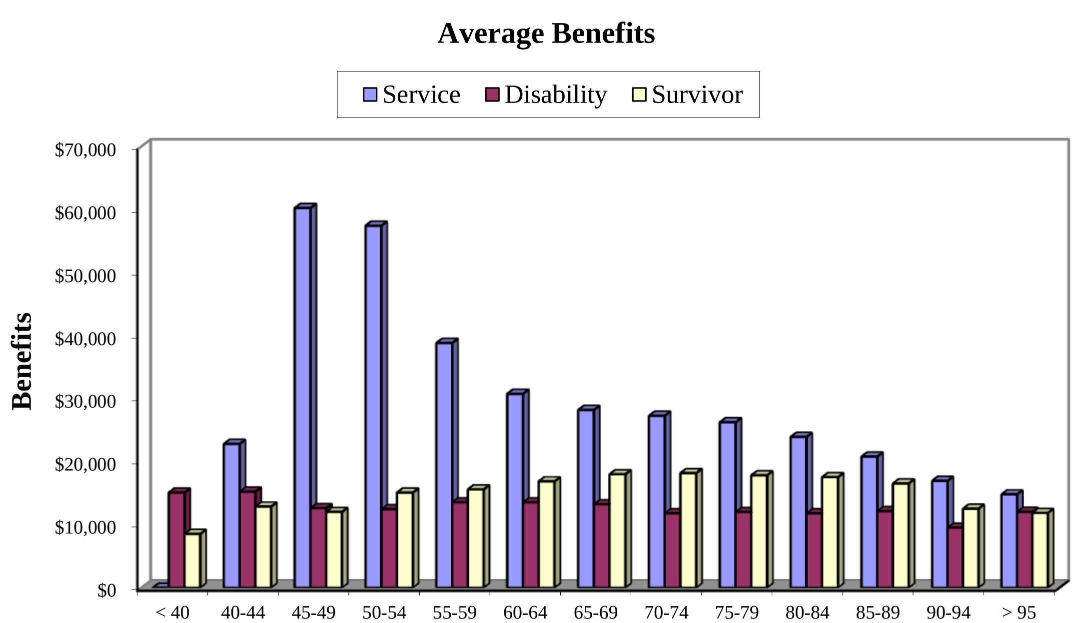
Valuation Year	Number	Total Annual Benefits	Monthly Average Benefit	Valuation Year	Number	Total Annual Benefits	Monthly Average Benefit
1944	1	$ 379	$ 379	1986	562	$ 12,075,916	$ 21,487
1955	1	4,629	4,629	1987	876	19,633,669	22,413
1958	2	15,112	7,556	1988	525	10,014,040	19,074
1959	1	4,379	4,379	1989	683	14,215,118	20,813
1960	1	699	699	1990	730	16,915,445	23,172
1961	2	1,317	659	1991	870	20,583,565	23,659
1962	1	5,822	5,822	1992	818	20,894,307	25,543
1963	1	14,174	14,174	1993	856	23,855,909	27,869
1964	4	34,438	8,610	1994	904	24,721,162	27,346
1965	1	15,732	15,732	1995	1,731	55,635,655	32,141
1966	4	20,585	5,146	1996	1,714	53,134,229	31,000
1967	5	45,502	9,100	1997	681	15,722,617	23,088
1968	5	53,314	10,663	1998	698	16,239,856	23,266
1969	6	57,649	9,608	1999	988	25,236,448	25,543
1970	5	47,985	9,597	2000	1,230	32,836,820	26,697
1971	8	64,024	8,003	2001	1,444	38,103,298	26,387
1972	22	261,915	11,905	2002	1,210	32,343,156	26,730
1973	24	271,434	11,310	2003	1,588	46,405,848	29,223
1974	30	334,989	11,166	2004	1,569	42,894,883	27,339
1975	43	563,578	13,106	2005	1,643	45,714,160	27,824
1976	60	883,649	14,727	2006	1,624	43,484,223	26,776
1977	81	1,089,189	13,447	2007	1,771	46,118,285	26,041
1978	106	1,632,048	15,397	2008	1,760	44,224,442	25,128
1979	142	2,236,709	15,751	2009	1,674	41,746,295	24,938
1980	182	3,088,593	16,970	2010	2,406	71,380,843	29,668
1981	245	3,774,291	15,405	2011	2,196	66,195,300	30,144
1982	306	5,132,844	16,774	2012	2,140	56,635,257	26,465
1983	339	6,350,948	18,734	2013	2,172	53,590,949	24,674
1984	400	7,465,448	18,664	2014	2,245	54,303,121	24,188
1985	469	9,161,908	19,535	2015	2,478	56,131,090	22,652
				Total	44,283	$ 1,143,619,189	$ 2,152

Total Benefits Payable

(Recurring Benefit Payments)

Tabulated by Attained Ages of Benefit Recipients as of March 31, 2015

	Service Retirement		Disability Retirement		Survivors and Beneficiaries		Total	
Attained Ages	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 20	-	-	-	-	51	$ 148,449	51	$ 148,449
20-24	-	-	-	-	12	133,393	12	133,393
25-29	-	-	-	-	28	315,075	28	315,075
30-34	-	-	-	-	49	568,031	49	568,031
35-39	-	-	1	$ 15,213	56	522,479	57	537,692
40-44	3	$ 69,038	14	215,168	95	1,232,564	112	1,516,770
45-49	48	2,893,392	42	534,856	126	1,528,013	216	4,956,261
50-54	225	12,935,767	128	1,607,582	187	2,846,678	540	17,390,027
55-59	1,496	58,275,692	251	3,427,594	269	4,231,298	2,016	65,934,584
60-64	4,927	152,370,545	395	5,393,706	339	5,766,090	5,661	163,530,341
65-69	9,472	268,659,175	323	4,310,217	512	9,295,123	10,307	282,264,515
70-74	7,964	218,656,108	203	2,417,285	523	9,587,765	8,690	230,661,158
75-79	5,561	146,918,129	101	1,223,590	408	7,334,242	6,070	155,475,961
80-84	4,531	109,230,505	61	726,128	402	7,109,292	4,994	117,065,925
85-89	3,041	63,790,754	47	576,441	361	6,023,140	3,449	70,390,335
90-94	1,408	24,070,589	22	211,660	161	2,034,218	1,591	26,316,467
95-99	346	5,263,681	6	72,805	41	539,791	393	5,876,277
100 & over	41	515,522	-	-	6	22,406	47	537,928
Total	39,063	$ 1,063,648,897	1,594	$ 20,732,245	3,626	$ 59,238,047	44,283	$ 1,143,619,189



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