ORANGE COUNTY

OCERS

EMPLOYEES RETIREMENT SYSTEM

PROGRESS

PAST | PRESENT | FUTURE

2015

COMPREHENSIVE ANNUAL FINANCIAL REPORT

For the Fiscal Year Ended December 31, 2015

ORANGE COUNTY, CALIFORNIA

OCERS "went live" with V3, a new Pension Administration System Solution (PASS), on December 14, 2015. It marked the culmination of an intense five-year effort to convert all of our member data to a new and enhanced platform, created member and employer self-service portals, and involved a collaborative effort with all of our plan sponsors to ensure they were given the ability to transmit complex, but accurate payroll data directly into the V3 system. The V3 project encompassed numerous years of planning and testing by many members of OCERS' staff that spanned different departments throughout the organization. All of these efforts have paid off to make certain the V3 system is poised to meet our mission of providing secure retirement and disability benefits with the highest standards of excellence for years to come.

ORANGE COUNTY
OCERS
EMPLOYEES RETIREMENT SYSTEM

V3

Comprehensive Annual Financial Report

For the Fiscal Year Ended December 31, 2015

Prepared by: The Finance Division of the Orange County Employees Retirement System

Issued by: Steve Delaney, Chief Executive Officer
Brenda Shott, Assistant CEO of Finance and Internal Operations

Orange County Employees Retirement System
2223 East Wellington Avenue, Suite 100
Santa Ana, CA 92701-3161

714.558.6200

www.ocers.org


1960
1970
1950
1980
1940
1990
2010
2000

Table of Contents

1940's

When considering the events of the 1940's, thoughts of World War II come to mind. The United States is brought into the war with the bombing of Pearl Harbor in 1941. The beginning of the end of the war comes when Allied troops storm the beach of Normandy in 1944. Yet during this decade, many technologies still used daily today came to life, such as the ball point pen, the microwave oven and the transitor radio.

1940	1941	1942	1943	1944
Color Television System	Konrad Zuse's Z3 Digital Computer	Electronic Digital Computer	Slinky	Ball point pens go on sale

SECTION I
INTRODUCTORY

1945	1946	1947	1948	1949
Kidney Dialysis Machine	Microwave Oven	Transistor Radio	Velcro	Crash Test Dummy

Letter of Transmittal

ORANGE COUNTY OCERS EMPLOYEES RETIREMENT SYSTEM

Serving the Active and Retired Members of:

City of San Juan Capistrano

County of Orange

Orange County Cemetery District

Orange County Children & Families Commission

Orange County Department of Education (closed to new members)

Orange County Employees Retirement System

Orange County Fire Authority

Orange County In-Home Supportive Services Public Authority

Orange County Local Agency Formation Commission

Orange County Public Law Library

Orange County Sanitation District

Orange County Transportation Authority

Superior Court of California, County of Orange

Transportation Corridor Agencies

UCI Medical Center and Campus (closed to new members)

June 10, 2016

Board of Retirement
Orange County Employees Retirement System
2223 East Wellington Avenue, Suite 100
Santa Ana, CA 92701

Dear Board Members,

I am pleased to present the Comprehensive Annual Financial Report (CAFR) of the Orange County Employees Retirement System (OCERS or System) as of and for the year ended December 31, 2015. The information contained in this report is intended to provide a detailed overview of the System's financial and investment results for the year ended December 31, 2015. It also includes information from the current actuarial valuation as of December 31, 2014.

OCERS and its Services

Established in 1945, OCERS is a public retirement system that has provided service retirement, disability, death and survivor benefits to its members for over 70 years, administered in accordance with the County Employees Retirement Law of 1937 (CERL).

Pursuant to certain provisions of CERL, OCERS is an independent governmental unit within the County of Orange, with a separate operating budget and professional staff. The California Constitution gives the Board of Retirement full authority over the administration of the system, which includes administering plan benefits and managing the System's assets. In addition to the System, OCERS' participating agencies include the County of Orange, one city, ten active special districts, and two special districts that are closed to new members (only one of which still has an active employee).

The Board of Retirement and OCERS' staff members are committed to act for the exclusive benefit of the plan and its more than 42,400 participants, manage the assets of the plan prudently and administer benefits with impartiality. To fulfill this mandate, OCERS employs a skilled professional staff and independent consultants that operate under a robust system of governance, operational and fiduciary policies and procedures. During 2015, OCERS' Board of Retirement adopted a new mission statement which succinctly articulates OCERS' purpose:

"We provide secure retirement and disability benefits with the highest standards of excellence."

Management Responsibility for Financial Reporting

OCERS' management is responsible for the complete and fair presentation of the financial information in accordance with generally accepted accounting principles (GAAP) in the United States. To the best of our knowledge, the enclosed data is accurate in all material respects and is reported in a manner designed to fairly present the financial position and operating results of OCERS.

Major Initiatives and Significant Events

The following were major initiatives and significant events in the past year:

Pension Administration System Solution

OCERS reached a major technological milestone this year with the completion of its multi-year implementation of V3, a new Pension Administration System Solution (PASS). V3 went "live" on December 14, 2015 and has enhanced operating efficiencies, as well as provided new web-based portals for our members, plan sponsors and partners. In recognition of this significant achievement, the theme for this year's CAFR is "Progress, Past | Present | Future" which pays tribute to technological advances from the 1940's, the decade that a majority of Orange County voters formed OCERS, to the 2010's and beyond.

Technology Update

OCERS made significant progress towards the implementation of its business continuity and disaster recovery plan, primarily on the development phase of the project. This included working with a consultant to create an overall business continuity plan, a business resumption approach for IT, and an annual testing and review schedule.

GASB 68

For the fiscal year ended June 30, 2015, OCERS' plan sponsors were required to implement Governmental Accounting Standards Board (GASB) Statement No. 68, *Accounting and Financial Reporting for Pensions, an amendment of GASB Statement No. 27*. The purpose of this statement is to improve the decision-making usefulness of reported pension information and to increase the transparency, consistency, and comparability of pension information across state and local governments.

OCERS worked closely with our plan sponsors, as well as our actuary and auditors, in establishing an implementation plan for GASB 68 consisting of workshops, outreach efforts, posting frequently asked questions on OCERS' website and other ongoing communication and support as they completed the implementation of GASB 68.

Board Member Election

On June 2, 2015 the Orange County Board of Supervisors certified the results of the safety member election. Mr. Roger Hilton was re-elected as OCERS' Safety Board Member and Mr. Eric Gilbert was elected as Alternate Safety Member with both serving three year terms that run July 1, 2015 through June 30, 2018. Mr. Hilton, a long-time member of the Sheriff's Department, has served on the Board since 2012 and Mr. Gilbert, a firefighter for over 28 years and currently a captain with the Orange County Fire Authority, replaced outgoing Alternate Safety Member Ray Geagan.

Accounting Systems and Reports

OCERS' management is responsible for establishing a system of internal controls to safeguard assets and for the presentation of the accompanying basic financial statements. Oversight is provided by OCERS' Audit Committee, supported by internal auditing staff. Macias Gini & O'Connell LLP (MGO) audited the accompanying basic financial statements and related disclosures. The financial audit provides reasonable assurance that OCERS' financial statements are presented in conformity with GAAP and are free from material misstatement. Internal controls are considered in assessing whether OCERS' operating policies and procedures are being adhered to and are sufficient to safeguard OCERS' assets. OCERS recognizes even sound internal controls have inherent limitations. OCERS' internal controls are designed to provide reasonable, but not absolute, assurance these objectives are met. The concept of reasonable assurance recognizes that the cost of a control should not exceed the benefits likely to be derived and that the valuation of costs and benefits requires estimates and judgment by management.

The CAFR was prepared in accordance with GAAP and reporting guidelines set forth by GASB and CERL. GAAP requires that management provide a narrative introduction, overview, and analysis to accompany the basic financial statements in the form of management's discussion and analysis (MD&A). This letter of transmittal is designed to complement the MD&A and should be read in conjunction with it. OCERS' MD&A can be found immediately following the independent auditor's report.

Letter of Transmittal

(continued)

Investment Activities

In accordance with state constitutional mandates, the OCERS' Board has adopted a strategic asset allocation policy designed to ensure diversification among asset classes and achieve OCERS' long-term investment objectives. In 2015, an asset allocation review resulted in the elimination of global fixed income, a reduction to real return and a corresponding increase to diversified credit. OCERS invests on a long-term horizon, but short-term returns are important to the portfolio's investment strategy. Although our strategy serves us well in recessionary market periods when OCERS typically suffers less than other systems, OCERS tends to lag in up-markets due to a comparatively low allocation to the equity market. As such, OCERS was impacted in 2015 as U.S. equities posted solid gains and global volatility continued.

For the year ended December 31, 2015, OCERS' investment portfolio returned 0.09%, gross of fees. This is considerably lower than the System's 7.25% long-term actuarial assumption; however, with the average years of service for a new OCERS' retiree being approximately 20, our annualized return over the last 20 years has been 7.36%, slightly exceeding our assumed earnings rate over the same period.

Pension Actuarial Funding Status

OCERS maintains a funding goal to establish contributions that fully fund the System's liabilities, and that, as a percentage of payroll, remain as level as possible for each generation of active members. It also ensures that contributions are sufficient for each generation of active members to avoid an inter-generational burden on future employees' contributions. Actuarial valuations are performed annually with actuarial experience investigations conducted triennially in accordance with state statute. The use of realistic assumptions is important in maintaining the necessary funding while paying promised benefits. Each year the actual experience of the System is compared to our assumptions and the differences are studied to determine whether changes in the contribution requirements are necessary. In addition, triennially, the actuarial experience investigation is undertaken to review the actuarial assumptions and compare the actual experience during the preceding three year period with that expected under those assumptions. The latest experience investigation was completed during 2014 for plan years ending in 2011 through 2013. The Board adopted changes in several assumptions that were incorporated into the 2014 actuarial valuation, but left the assumed rate of return at 7.25%.

As of the most current actuarial valuation for the year ended December 31, 2014, OCERS' funding status was 69.76% with an Unfunded Actuarial Accrued Liability (UAAL) of $4.96 billion. Average employer and employee contribution rates for the year ended December 31, 2014, were 39.32% and 12.87%, respectively.

Budget

The Board of Retirement approves OCERS' annual budget. The 1937 Act limits OCERS' annual administrative expenses, excluding the costs of administration for computer software and hardware and computer technology consulting services (IT costs), to twenty-one hundredths of one percent (0.21%) of OCERS' actuarial accrued liability. OCERS' 2015 administrative expense of $12.5 million was .07% of OCERS' actuarial accrued liability.

Certificate of Achievement

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to OCERS for its comprehensive annual financial report for the year ended December 31, 2014. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe that our current comprehensive annual financial report continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

OCERS was also the recipient of the Public Pension Coordinating Council (PPCC) Award in recognition of compliance with professional standards for plan design and administration for the fiscal year ended December 31, 2014. This is awarded to a retirement system who meets the professional standards for plan design and administration as set forth in the Public Pension Standards, including a Comprehensive Benefit Program, Funding Adequacy, Actuarial Valuation, Independent Audit, Investments, and Communications. A Public Pension Standards Award is valid for a period of one year.

Letter of Transmittal

(continued)

Acknowledgements

I would like to take this opportunity to thank the members of the System for their continued confidence in OCERS during the past year. Also, I would like to express my thanks to the Board of Retirement for its dedicated effort in supporting the System throughout this past year. Finally, I would like to thank the staff and consultants for their commitment to OCERS and their diligent work to assure the System's continued success.

Respectfully submitted,

Steve Delaney
Chief Executive Officer

Members of the Board of Retirement

As of December 31, 2015

Charles E. Packard
Chair Person
Appointed by the Board of Supervisors

Roger Hilton
Vice Chair Person
Elected by Safety Members

David Ball
Appointed by the Board of Supervisors

Tom Beckett
Elected by Retired Members

Frank E. Eley
Elected by General Members

Thomas E. Flanigan
Appointed by the Board of Supervisors

Shari L. Freidenrich
Ex-Officio Member
Treasurer-Tax Collector County of Orange

Wayne Lindholm
Appointed by the Board of Supervisors

Chris Prevatt
Elected by General Members

Eric W. Gilbert
Alternate elected by Safety Members

Organization of OCERS

Board of Retirement

The Board of Retirement is responsible for establishing policies governing the administration of the retirement plan, disability determinations, assuring benefit payments, establishing investment policy for the System and monitoring execution of its policies. The Board of Retirement consists of nine members and one alternate. Four members of the Board of Retirement are appointed by the Board of Supervisors of the County; four members are elected by active members of the System, including two by the general members, two by the safety members, of which one is the alternate member; one member is elected by the retirees; and the Treasurer of the County, elected by registered voters in the County, serves as an Ex-Officio member.

Executive Department

This department consists of the Chief Executive Officer (CEO) who implements and executes policies promulgated by the Board of Retirement. Two Assistant CEOs, an Internal Auditor, a Chief Investment Officer and a Chief Legal Officer assist the CEO in the daily operations of the System.

Investment Department

This department is responsible for the administration and management of the investment program, in accordance with policies, regulations, and guidelines set forth by the Board of Retirement. It is responsible for the interface with investment managers, including monitoring investment performance objectives, adherence to investment guidelines, conducting due diligence visits to investment managers' sites, and interviewing prospective investment managers. This department is also responsible for the interface with outside investment consultants in reviewing and evaluating all investment managers' performance and investment manager fees. Refer to the Investments Section on pages 79 and 80 for the Schedule of Commissions and Schedule of Investment Expenses and Investment Summary.

External Operations Department

This department is comprised of the following divisions: Member Services and Communications.

The Member Services Division is responsible for providing all benefit services to the members of the System. This includes benefit calculations, preparation of data to support applications for retirement, preparation of the retiree payroll, processing transmittals, membership counseling, and retirement seminars. The Disability section of Member Services is responsible for reviewing claims and medical records; interviewing applicants and witnesses; preparing written reports of findings and recommendations; and making presentations to the Board of Retirement regarding the disposition of cases.

The Communications Division is responsible for developing and coordinating information for members and plan sponsors through publications, newsletters, seminars and publishing content to the website.

Internal Operations Department

This department is comprised of the following divisions: Finance, Information Technology, and Administrative Services.

The Finance Division is responsible for all of the financial records and reports of OCERS. This includes the preparation of the Comprehensive Annual Financial Report, monthly and quarterly financial statements and the annual operating budget. The Finance Division also maintains OCERS' system of internal controls; processes and accounts for retirement payroll and refunds of contributions and interest to members; collects and accounts for employers' and members' contributions; reconciles investment portfolios; and pays costs incurred for goods received and services rendered.

The Information Technology Division is responsible for OCERS' network systems, personal computers, website and databases, as well as providing programming and technical support to our Benefits Administration System. In addition, this division is responsible for overseeing cyber security, business continuity/disaster recovery and administering all audio/visual services.

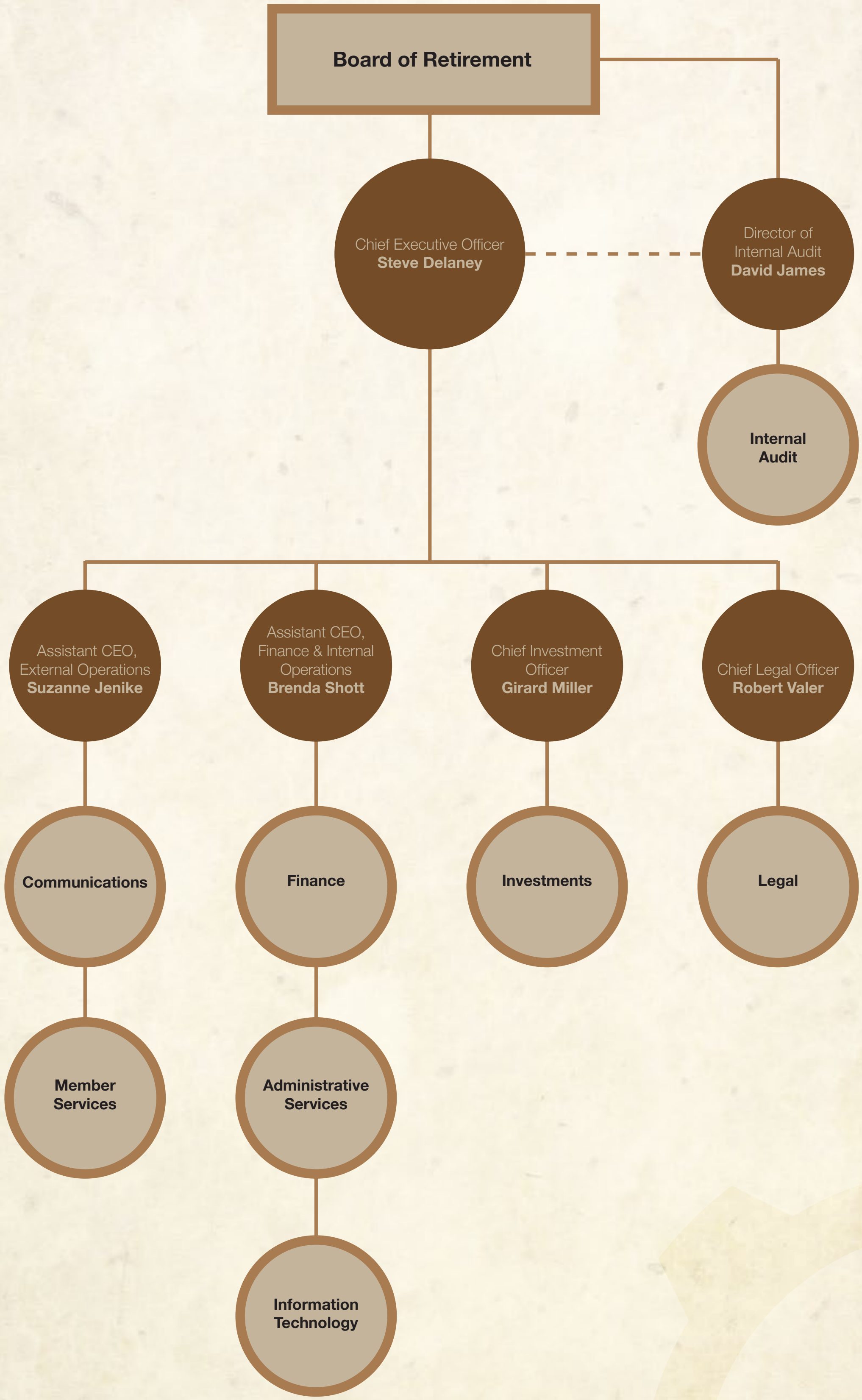
The Administrative Services Division is responsible for providing contract administration, risk management, purchasing, headquarters building administration, human resources and labor relations functions of OCERS.

Legal Department

The legal department provides legal advice and representation to the Board of Retirement and OCERS on a variety of issues, including, but not limited to, issues involving disability retirements, investments, legislation, vendor contracts and family law.

Administrative Organization Chart

As of December 31, 2015



List of Professional Consultants

As of December 31, 2015

Actuary
The Segal Company

Investment Consultant
NEPC, LLC

Hedge Fund Consultant
Aksia, LLC

Real Estate Consultant
RVK, Inc.

Risk Reporting & Portfolio Review Services
BlackRock Financial Management, Inc.

Independent Auditor
Macias Gini & O'Connell LLP

Investment Counsel
Foley and Lardner, LLP

Fiduciary Counsel
Reed Smith, LLP

Tax Counsel
Hanson Bridgett, LLP

Custodian
State Street Bank

Other Specialized Services
Institutional Shareholder Services, Inc.

Note: List of Investment Managers is located on page 82 of the Investments Section of this report.

Certificate of Achievement for Excellence in Financial Reporting

Public Pension Standards Award for Funding and Administration

Public Pension Coordinating Council

Public Pension Standards Award For Funding and Administration 2015

Presented to

Orange County Employees Retirement System

In recognition of meeting professional standards for
plan funding and administration as
set forth in the Public Pension Standards.

Presented by the Public Pension Coordinating Council, a confederation of

National Association of State Retirement Administrators (NASRA)
National Conference on Public Employee Retirement Systems (NCPERS)
National Council on Teacher Retirement (NCTR)

Alan H. Winkle

Alan H. Winkle
Program Administrator

Television REMOTE CONTROL

1950	1951	1952	1953	1954
Credit Card	Super Glue	Car Seat Belt	Radial Tires	Nonstick Teflon Pan

SECTION II

FINANCIAL

1950's

The 1950's brought the birth of the baby boomers. Consumers were confident and affluent enough to have children, and the population explosion occurred.

Consumer spending increased the number of televisions in households which changed entertainment. Elvis Presley appears on the Ed Sullivan Show to appeal to the younger audience.

The polio vaccine was developed by Jonas Salk, and the space race to the moon began with the founding of NASA and astronauts.

1955	1956	1957	1958	1959
Zenith Flash-Matic T.V. Remote Control	Black & White Portable T.V.	Fortran (Computer Language)	First Video Game	Lunar Probe Lands on the Moon

ORANGE COUNTY

OCERS

EMPLOYEES RETIREMENT SYSTEM

MGO Certified Public Accountants

Sacramento
Walnut Creek
San Francisco
Oakland
Los Angeles
Century City
Newport Beach
San Diego

Independent Auditor's Report

To the Board of Retirement of the
Orange County Employees Retirement System
Santa Ana, California

Report on the Financial Statements

We have audited the accompanying financial statements of the Orange County Employees Retirement System (the System), California, as of and for the year ended December 31, 2015, and the related notes to the financial statements, which collectively comprise the System's 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 accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

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 from 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 policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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 Orange County Employees Retirement System as of December 31, 2015, and the changes in its fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Macias Gini & O'Connell LLP
4675 MacArthur Court, Suite 600
Newport Beach, CA 92660

Independent Auditor's Report

(continued)

Emphasis of Matters

As discussed in Note 2 to the basic financial statements, the System implemented the provisions of Governmental Accounting Standards Board Statement No. 82, *Pension Issues - an amendment of GASB Statements No. 67, No. 68, and No.73*, for the year ended December 31, 2015.

As discussed in Note 10 to the basic financial statements, based on the actuarial valuation of the pension plan as of December 31, 2014 rolled forward to December 31, 2015, the total pension liability of participating employers exceeded the pension plan's fiduciary net position by $5.7 billion. The actuarial valuation is very sensitive to the underlying assumptions, including a discount rate of 7.25 percent, which represents the long-term expected rate of return.

As discussed in Note 11 to the basic financial statements, based on the most recent actuarial valuation of the Orange County Fire Authority (the Authority) health care plan as of July 1, 2014, the Authority's independent actuary determined that the actuarial accrued liability exceeded the actuarial value of its assets by $142.1 million.

Our opinion is not modified with respect to these matters.

Other Matters

Prior-Year Comparative Information

The financial statements include partial prior-year comparative information. Such information does not include all of the information required to constitute a presentation in conformity with accounting principles generally accepted in the United States of America. Accordingly, such information should be read in conjunction with the System's financial statements for the year ended December 31, 2014, from which such partial information was derived.

We have previously audited the System's 2014 financial statements, and we expressed an unmodified audit opinion on the financial statements in our report dated June 15, 2015. In our opinion, the partial comparative information presented herein as of and for the year ended December 31, 2014, is consistent, in all material respects, with the audited financial statements from which it has been derived.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, the Schedule of Changes in Net Pension Liability of Participating Employers, Schedule of Investment Returns, Schedule of Employer Contributions, Schedule of Funding Progress – OPEB Plan Orange County Fire Authority and the Schedule of Employer Contributions – OPEB Plan Orange County Fire Authority, as listed in the table of contents, 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.

Other Information

Our audit was conducted for the purpose of forming an opinion on the System's basic financial statements. The other supplementary information, introductory, investment, actuarial, and statistical sections are presented for purposes of additional analysis and are not a required part of the basic financial statements.

Independent Auditor's Report

(continued)

The other supplementary information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. 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 other supplemental information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

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 June 10, 2016, on our consideration of the System's 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 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 System's internal control over financial reporting and compliance.

Macias Gini & O'Connell LLP

Newport Beach, California
June 10, 2016

Management's Discussion and Analysis

The Management's Discussion and Analysis (MD&A) of Orange County Employees Retirement System (OCERS or System) presents the financial performance and provides a summary of OCERS' financial position and activities as of and for the year ended December 31, 2015. The narrative overview and analysis is presented in conjunction with the Chief Executive Officer's Letter of Transmittal, included in Section I – Introductory to this Comprehensive Annual Financial Report. The MD&A should be read in conjunction with OCERS' Basic Financial Statements as presented in this report. Amounts in this section have been grouped together to facilitate readability.

OCERS administers the OCERS pension plan—a cost-sharing multiple-employer defined benefit pension plan (the Plan) as well as acts as a trustee and custodian for retirement health benefit plan funds that are sponsored by participating employers. OCERS' financial information is comprised of four fiduciary funds: a defined benefit pension trust fund, two other post-employment benefit (OPEB) trust funds for retiree medical plans and an agency fund.

Financial Highlights

- The net position restricted for pension and other post-employment benefits as of December 31, 2015 and 2014 are $11.9 billion and $11.8 billion, respectively.
- The restricted fiduciary net position representing net resources available to pay current and future member pension and health care benefits, increased $0.1 billion or 1.1%. The increase in fiduciary net position during 2015 is primarily from a net positive cash flow from contributions less deductions.
- Total additions to fiduciary net position decreased 40.9% from $1.4 billion in 2014 to $0.8 billion in 2015.
  - Net investment income decreased 102.3% from $508.2 million in 2014 to a net investment loss of $11.6 million in 2015. The gross year-to-date rate of return on investments on a fair value basis was approximately 0.09% in 2015, down from 4.93% earned in 2014.
  - Contributions received from employers and employees totaled $859.8 million in 2015, a decrease of 7.1% compared to 2014 contributions received of $925.7 million.
- Total deductions from fiduciary net position increased $47.0 million from $675.1 million in 2014 to $722.1 million in 2015.
  - Member pension benefit payments increased by $45.4 million or 7.3% in 2015 from $618.2 million to $663.6 million.
  - The number of retired members and beneficiaries receiving a benefit payment increased 4.2% from 15,169 payees at the end of 2014 to 15,810 payees as of December 31, 2015.
  - The average annual benefit paid to retired members and beneficiaries during 2015 was $41,972, an increase of 3.0% over the average annual benefit payment of $40,756 in 2014.
- The net pension liability of participating employers as calculated in the December 31, 2015 Governmental Accounting Standards Board (GASB) Statement 67 Actuarial Valuation is $5.7 billion, which as a percentage of covered payroll is 375.84%. The plan fiduciary net position of $11.7 billion as a percentage of the total pension liability of $17.4 billion is 67.1%.
- Based upon the most recent actuarial valuation dated as of December 31, 2014, the date of the actuarial valuation used in the 2015 Comprehensive Annual Financial Report (CAFR), the funding status for the pension plan, as measured by the ratio of the actuarial value of assets (which smooths market gains and losses over five years) to the actuarial value of accrued liabilities was 69.76% versus 69.63% if market gains and losses were recognized immediately.

Overview of the Financial Statements

This MD&A serves as an introduction and overview of the OCERS' Basic Financial Statements. The Basic Financial Statements and required disclosures are prepared in accordance with accounting principles and reporting guidelines as set forth by the Governmental Accounting Standards Board (GASB). These pronouncements require OCERS to make certain disclosures and to report using the full accrual method of accounting.

Management's Discussion and Analysis

(continued)

OCERS' Basic Financial Statements are comprised of the following:

Statement of Fiduciary Net Position

The Statement of Fiduciary Net Position presents the major categories of assets and liabilities and their related value as of year-end. The difference between assets and liabilities is reported as "Net Position Restricted for Pension and Other Post-Employment Benefits," representing funds available to pay future benefits to plan participants. The Statement of Fiduciary Net Position includes summarized prior year-end balances for comparative purposes. Increases and decreases in Net Position Restricted for Pension and Other Post-Employment Benefits, when analyzed over time, may serve as an indicator of whether OCERS' financial position is improving or deteriorating.

The County of Orange (the County) and Orange County Fire Authority (OCFA) participate in irrevocable post-employment health care plan trusts (retiree medical plans) that are reported as other post-employment benefit trust funds in the Statement of Fiduciary Net Position as separate health care funds. OCERS serves as trustee for these trusts and assets are commingled with pension trust assets for investment purposes and are used exclusively to pay health allowances.

The Orange County Transportation Authority has revocable trust assets held by OCERS in an investment capacity and are not commingled with those of the pension plan and health care plan trusts. The assets and offsetting liabilities are reported in the Statement of Fiduciary Net Position as an agency fund.

Statement of Changes in Fiduciary Net Position

The Statement of Changes in Fiduciary Net Position provides information about the financial activities during the reporting period that increased and decreased Net Position Restricted for Pension and Other Post-Employment Benefits. The trend of additions versus deductions to the Plan indicates the strength of OCERS' financial position over time. For comparative purposes, summarized prior year-end balances are also provided.

To distinguish the activities of the health care plan trusts from the pension plan, the health care plan trusts are also reported separately in the Statement of Changes in Fiduciary Net Position as health care funds.

Notes to the Basic Financial Statements

The Notes to the Basic Financial Statements are an integral part of the basic financial statements and provide additional information that is essential to acquire a full understanding of the information provided in the two statements discussed above. The notes include further discussion and details regarding OCERS' key policies, programs, investments and activities that occurred during the year.

Required Supplementary Information

The Required Supplementary Information (RSI) presents historical trend information related to the following plans reported in the Basic Financial Statements: pension plan and OCFA's retiree medical plan (the County maintains the financial reporting responsibility of its retiree medical plan, so it is not included in OCERS' RSI schedules). With the implementation of GASB 67 in 2014, the pension plan is required to include a schedule of changes in net pension liability, schedule of money-weighted investment returns and a schedule of employer contributions. These schedules will be presented over ten years as information becomes available prospectively. While the retiree medical plan continues to be reported on a funding value basis, the funding progress schedule for the pension plan has been moved to the Actuarial section of the CAFR and replaced by GASB 67 reporting schedules. The information contained in both the pension and retiree medical plan schedules is based on separate actuarial valuations prepared for each benefit plan. The valuation reports include additional actuarial information that contributes to the understanding of the changes in the net pension liability of participating employers in the pension plan and the actuarial funding progress of the retiree medical plan as presented in the schedules. The actuarial information is based upon assumptions made regarding future events at the time the valuations were performed. Therefore, the amounts presented in the schedules are management's estimates. A summary of factors that affected the trends of the actuarial information is included in this section as well.

Other Supplementary Information

The Other Supplementary Information includes schedules pertaining to OCERS' administrative expenses, investment expenses, professional services and a statement of changes for the agency fund.

Financial Analysis

Tables 1 and 2 compare and summarize OCERS' financial activity for the current and prior fiscal years.

Table 1 : Fiduciary Net Position

As of December 31, 2015 and 2014
(Dollars in Thousands)

	12/31/2015	12/31/2014	Increase / Decrease)	Percentage Change
Assets				
Cash and Cash Equivalents	$ 367,681	$ 374,907	$ (7,226)	-1.9%
Securities Lending Collateral	108,296	201,317	(93,021)	-46.2%
Receivables	90,998	185,872	(94,874)	-51.0%
Investments at Fair Value	11,781,914	11,567,179	214,735	1.9%
Capital Assets, Net	24,935	21,482	3,453	16.1%
Total Assets	**12,373,824**	**12,350,757**	**23,067**	**0.2%**
Liabilites				
Obligations Under Securities Lending Program	108,296	201,317	(93,021)	-46.2%
Securities Purchased	51,531	87,709	(36,178)	-41.2%
Other	317,903	291,655	26,248	9.0%
Total Liabilities	**477,730**	**580,681**	**(102,951)**	**-17.7%**
Net Position Restricted for Pension and Other Post-Employment Benefits	**$ 11,896,094**	**$ 11,770,076**	**$ 126,018**	**1.1%**

As of December 31, 2015, OCERS has a net position of $11.9 billion restricted for pension and other post-employment benefits. Net position increased $0.1 billion, an increase of 1.1% over 2014. The increase in net position includes an increase in total assets of $23.1 million and a decrease in total liabilities of $103.0 million.

The increase in total assets is primarily attributed to an increase in investments at fair value, which is offset by reductions in the security lending program and receivables at year end. Investments at fair value increased $214.7 million primarily due to investment of additional funds received from plan sponsors for prepayment of contributions and the receipt of unfunded actuarial accrued liability payments. Securities lending collateral decreased $93.0 million due to a reduction in activity in the securities lending program. Receivables decreased $94.9 million from the prior year due to the timing of investments for unsettled trades, and a decrease in investment income receivable at the end of the 2015 versus the prior year. Capital assets increased $3.5 million due to the final implementation of the new Pension Administration Software System (V3). For additional information regarding capital assets, please see the accompanying notes to the basic financial statements, Note 2.

The decrease in total liabilities of $103.0 million is primarily a result of a reduction in securities lending program of $93.0 million and the timing of unsettled security purchases of $36.2 million. This decrease is offset by increases in other liabilities of unearned contributions of $19.3 million, retiree payroll payable of $3.9 million and additional liabilities of $3.0 million. Increases in unearned contributions and retiree payroll are expected as the number of participants and retirees increase.

Table 2 : Changes in Fiduciary Net Position

For the Years Ended December 31, 2015 and 2014
(Dollars in Thousands)

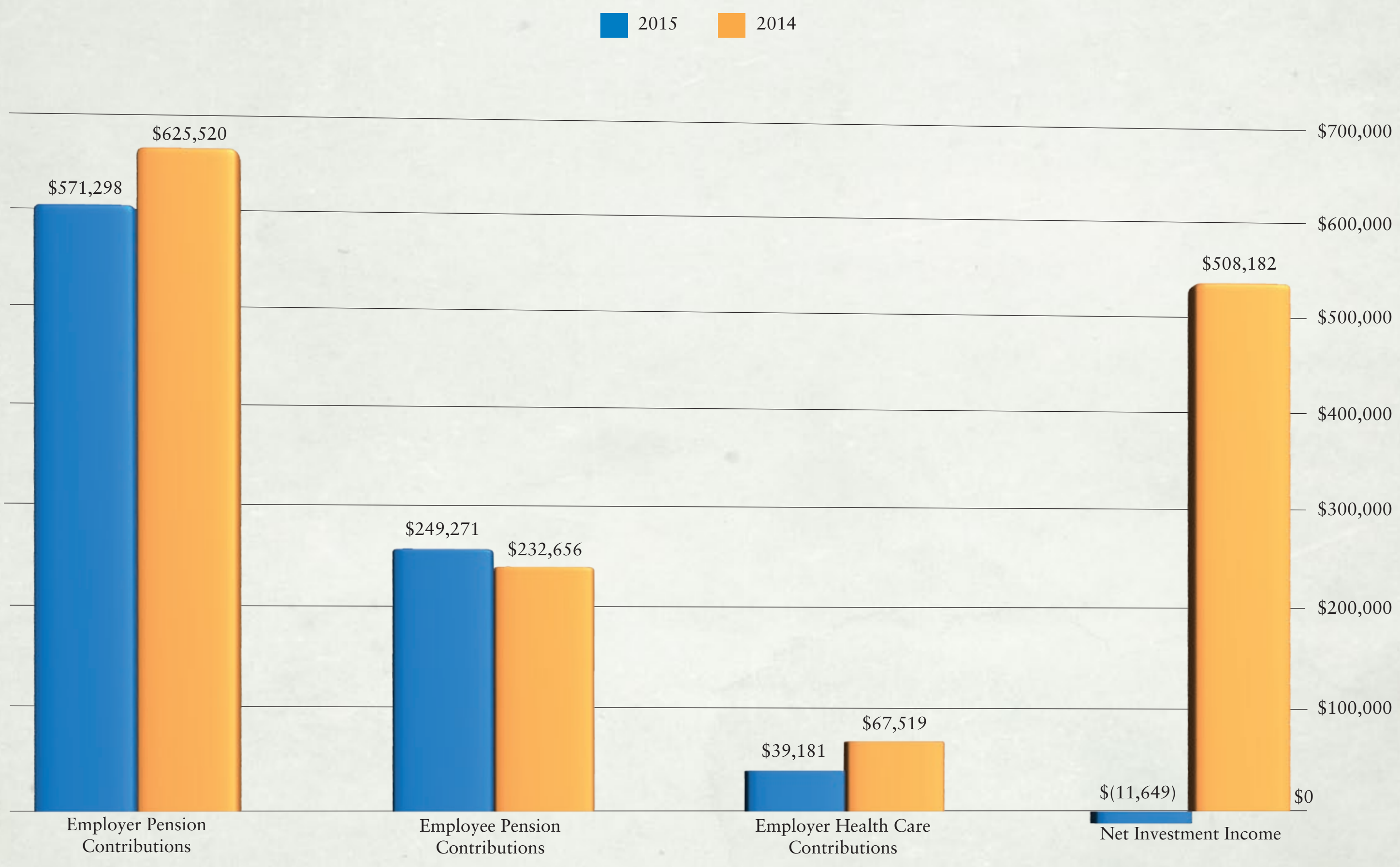
	12/31/2015	12/31/2014	Increase / (Decrease)	Percentage Change
Additions				
Employer Pension Contributions	$ 571,298	$ 625,520	$ (54,222)	-8.7%
Employer Health Care Contributions	39,181	67,519	(28,338)	-42.0%
Employee Pension Contributions	249,271	232,656	16.615	7.1%
Net Investment Income/(Loss)	(11,649)	508,182	(519,831)	-102.3%
Total Additions	**848,101**	**1,433,877**	**(585,776)**	**-40.9%**
Deductions				
Participant Benefits - Pension	663,582	618,233	45,349	7.3%
Participant Benefits - Health Care	33,555	32,437	1,118	3.4%
Death Benefits	524	715	(191)	-26.7%
Member Withdrawals and Refunds	11,857	11,730	127	1.1%
Administrative Expenses - Pension	12,521	11,905	616	5.2%
Administrative Expenses - Health Care	44	42	2	4.8%
Total Deductions	**722,083**	**675,062**	**47,021**	**7.0%**
Increase in Net Position Restricted for Pension and Other Post-Employment Benefits	**126,018**	**758,815**	**(632,797)**	**-83.4%**
Net Position Restricted for Pension and Other Post-Employment Benefits				
Beginning of the Year	11,770,076	11,011,261		
End of the Year	**$ 11,896,094**	**$ 11,770,076**		

Additions to Fiduciary Net Position

Additions to fiduciary net position decreased 40.9% in 2015. Total additions for the year ended December 31, 2015 were $0.8 billion compared to $1.4 billion for the same period in 2014. The decrease is comprised of a decrease in total contributions of $65.9 million and a decrease in investment income of $519.8 million. The decrease in contributions is primarily due to amounts received from plan sponsors for additional unfunded actuarial accrued liability payments of $68.4 million compared to $149.2 million in 2014, and an increase in employee contributions of $16.6 million due to higher salaries and a slightly higher average employee contribution rate that went into effect on July 1, 2015. In addition, 2015 included 27 bi-weekly pay periods instead of 26. The decrease in investment income is attributed to depreciation in the fair value of investments, and lower returns on the underlying investments. For 2015, approximately 50% of the investment categories in the portfolio experienced negative returns, versus 2014 when the majority of the investment categories had positive returns. Overall investment returns for the year ended December 31, 2015 were 0.09% compare to the prior year's return of 4.93%.

Additions to Fiduciary Net Position

(Dollars in Thousands)

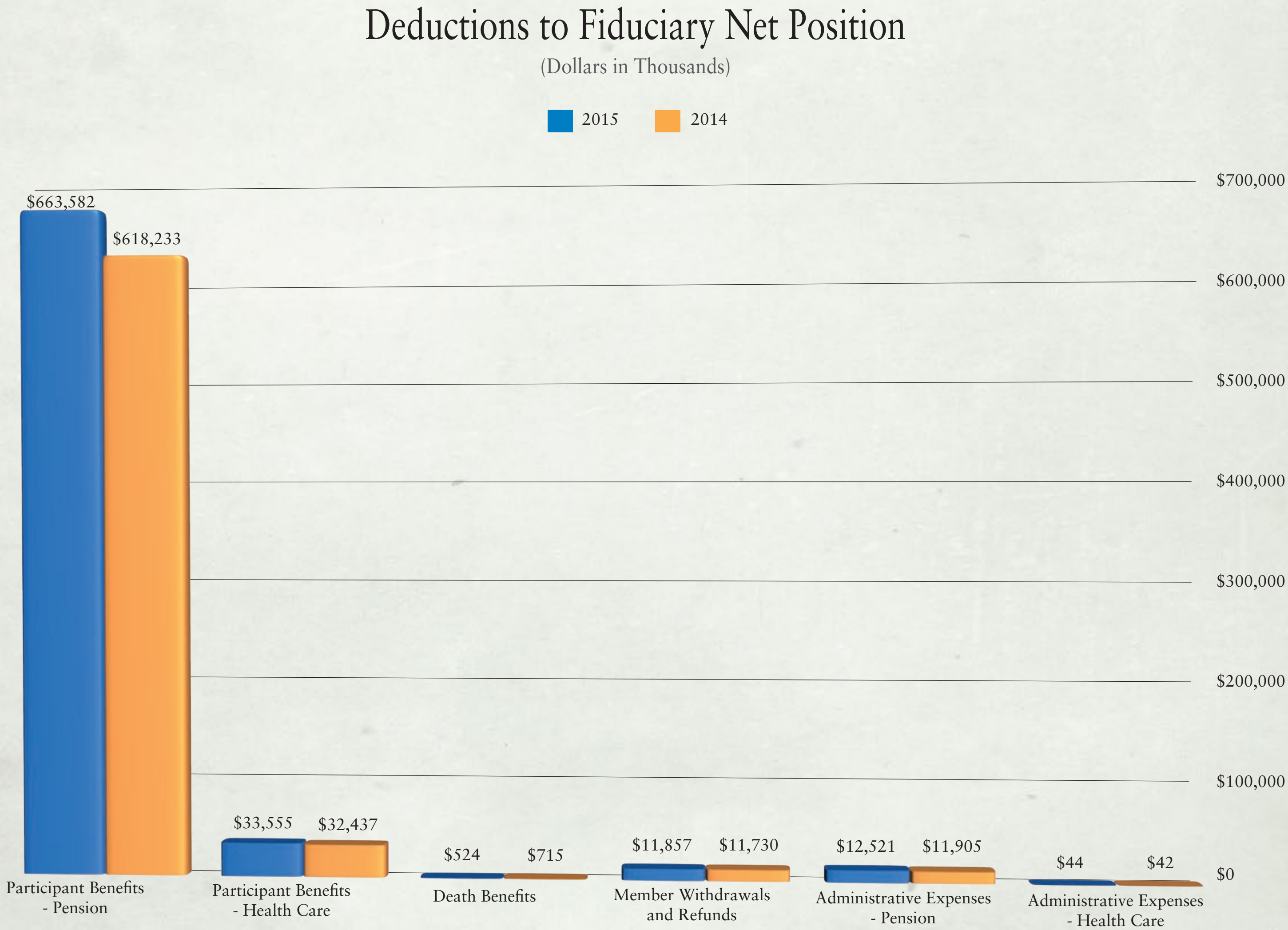


Management's Discussion and Analysis

(continued)

Deductions from Fiduciary Net Position

Deductions from fiduciary net position increased 7.0% compared to the prior year due to the continued and anticipated growth in member pension benefit payments, both in the total number of OCERS' retired members receiving a pension benefit and an increase in the average benefit received. Participant benefit payments have increased by $46.5 million. Total benefit recipients increased by 641, from 15,169 to 15,810. The average annual benefit increased from $40,756 to $41,972. Additionally, administrative expenses have increased $0.6 million. This increase is primarily due to increases in salaries and benefits for additional staff.



Management's Discussion and Analysis

(continued)

OCERS Membership

The table below provides comparative OCERS' membership data for the last two fiscal years.

Table 3 : Membership Data

As of December 31, 2015 and 2014

	12/31/2015	12/31/2014	Increase/ (Decrease)	Percentage Change
Active Members	21,525	21,460	65	0.3%
Retired Members	15,810	15,169	641	4.2%
Deferred Members	5,092*	4,789	303	6.3%
Total Membership	**42,427**	**41,418**	**1,009**	**2.4%**

* Includes one member excluded from the December 31, 2015 actuarial valuation due to timing differences in status.

Total OCERS' membership increased during 2015 with a net increase of 1,009 members. The number of active members increased by 65 or 0.3% and the number of retirees increased by 641 or 4.2% suggesting that plan sponsors are hiring employees at a higher rate of members leaving their employment for retirement or other opportunities.

Actuarial Valuations

In order to determine whether Net Position Restricted for Pension Benefits will be sufficient to meet future obligations, a calculation of the actuarial funded status is required. An actuarial valuation includes an appraisal of both the assets available to pay future benefits and the liabilities of the system, which represent the actuarial present value of all future benefits expected to be paid for each member. The purpose of the valuation is to determine the amount of future contributions by the employees (members) and employers (plan sponsors) which will be required to pay all expected future benefits. OCERS utilizes an independent actuarial firm, The Segal Company (Segal), to prepare an annual valuation. The most recent Annual Actuarial Valuation as of December 31, 2014 is included in the Actuarial Section of this report, and contains a detailed discussion of the funding requirements. This valuation is used for funding purposes and establishing employer and employee contribution rates. For the year ended December 31, 2015, Segal prepared a Governmental Accounting Standards Board (GASB) Statement 67 Actuarial Valuation as of December 31, 2015, used for financial reporting purposes.

In order to prepare the valuations, the actuary must use several assumptions with regards to OCERS' members such as their life expectancy, projected salary increases over time, and the age in which members will retire. The actuary must also utilize assumptions with regards to how the assets will perform over time. A key assumption in this regard is the expected rate of return which has remained at 7.25% since the December 31, 2012 valuation. All assumptions used by the actuary are reviewed and adjusted, as required, on a triennial basis by the Board of Retirement. The most recent triennial study was adopted by the Board on September 23, 2014 for the three-year experience period ended December 31, 2013. As a result, the following assumptions were changed: inflation was lowered from 3.25% to 3.00%; active member payroll increases were lowered from 3.75% to 3.50%; and projected salary increases for general members were lowered from a range of 4.75% to 13.75% to a range of 4.25% to 13.50% and for safety members, the range was changed from 4.75% to 17.75% to 5.00% to 17.50%. In addition, mortality rates were adjusted for after service retirement to reflect shorter life expectancies for general members and longer life expectancies for safety members and longer life expectancies for both general and safety members after disability retirement.

The GASB 67 valuation provides the calculation of the employers' total pension liability. In order to accommodate the annual reporting requirements of our plan sponsors in a timely manner, the valuation was prepared using the December 31, 2014 valuation as the basis for calculating the total pension liability (TPL) and roll forward to December 31, 2015. Based on this actuarial valuation, the TPL was $17.4 billion compared to a fiduciary net position of $11.7 billion, resulting in the employers' NPL of $5.7 billion and a fiduciary net position as a percentage of the TPL of 67.1% The NPL as a percentage of covered payroll was 375.84%.

In the actuarial valuation for the pension plan as of December 31, 2014, the funding ratio of the valuation value of assets to actuarial accrued liabilities was 69.76%. The calculation of funding status takes into account OCERS' policy to smooth the impact of market volatility by spreading each year's gains or losses over five years. Using the market value of assets as of the valuation date, the funded status of OCERS' pension plan was 69.63% in 2014.

Management's Discussion and Analysis
(continued)

Investment and Economic Summary
During 2015, the U.S. economy continued to experience modest growth. The United States unemployment rate fell to 5.0% at the end of 2015, versus 5.6% at the end of 2014, yet wage growth has been minimal since the onset of the 2007-09 Recession. Overall Gross Domestic Product (GDP) is reported to have increased at an annual rate of 1.25% over the second half of 2015, but at a slower rate than before the recession. In December 2015, the Federal Reserve Board raised the target range for the federal funds rate from .25% to .50%, after holding the rate near zero for seven years.

In 2015, OCERS no longer holds any global fixed income securities, and has increased its holdings in diversified credit investments in compliance with the adopted investment policy. OCERS' gross investment return for 2015 was .09% before investment management fees. As of December 31, 2015 the three-year and five-year returns before investment management fees were 5.29% and 5.71%, respectively. Despite fluctuations in the financial markets, and the current year rate of return, OCERS continues to be in a sound financial position to meet the obligations of the Plan participants and their beneficiaries. The current portfolio allocation provides a strong position to withstand the future market fluctuations with a more risk-balanced approach.

Request for Financial Information
This Comprehensive Annual Financial Report is designed to provide the Board of Retirement, plan members, participating employers, taxpayers, investment managers and other interested parties with a general overview of OCERS' financial condition and to demonstrate OCERS' accountability for the funds under its stewardship.

Please address any questions about this report or requests for additional information to:

Orange County Employees Retirement System
2223 East Wellington Avenue, Suite 100
Santa Ana, CA 92701

1960	1961	1962	1963	1964
Halogen lamp	Non-dairy Creamer	Telstar (First satellite to broadcast television)	Lava Lamp	Ford Mustang

SECTION II

FINANCIAL

BASIC FINANCIAL STATEMENTS

1960's

The events of the 1960's include the Cuban Missile Crisis, the assassinations of John F. Kennedy and Martin Luther King, Jr., the Civil Rights Acts of 1964 and 1968, the Vietnam war and the race to land a man on the moon. Telstar, the first communication satellite, was invented to establish satellite communications over the Atlantic Ocean. Kevlar was developed as a replacement for steel in racing tires, and is now used in protective gears. The decade ended with the successful mission of Apollo 11 astronauts, and those immortal words, "One small step for man, one giant leap for mankind."

1965	1966	1967	1968	1969
Kevlar	Electronic Fuel Injection	Discovery of First Pulsar	RAM (Random Access Memory)	Apollo 11 lands on the moon

Statement of Fiduciary Net Position

As of December 31, 2015
(with summarized comparative amounts as of December 31, 2014)
(Dollars in Thousands)

	Pension Trust Fund	Health Care Fund-County	Health Care Fund-OCFA	OPEB 115 Agency Fund	Total Fund	Comparative Totals 2014
Assets						
Cash and Short-Term Investments						
Cash and Cash Equivalents	$ 360,180	$ 6,229	$ 1,080	$ 192	$ 367,681	$ 374,907
Securities Lending Collateral	106,142	1,836	318	-	108,296	201,317
Total Cash and Short-Term Investments	466,322	8,065	1,398	192	475,977	576,224
Receivables						
Investment Income	15,520	268	47	-	15,835	20,728
Securities Sales	48,568	840	146	-	49,554	141,611
Contributions	17,730	-	-	-	17,730	17,470
Foreign Currency Forward Contracts (Net)	6,047	105	18	-	6,170	3,956
Other Receivables	1,675	29	5	-	1,709	2,107
Total Receivables	89,540	1,242	216	-	90,998	185,872
Investments at Fair Value						
Domestic Equity Securities	1,955,462	33,817	5,866	6,990	2,002,135	2,019,279
International Equity Securities	1,103,991	19,092	3,312	2,469	1,128,864	1,130,707
Global Equity Securities	565,470	9,779	1,696	-	576,945	569,481
Domestic Fixed Income	1,436,085	24,835	4,308	4,342	1,469,570	1,385,464
Global Fixed Income	-	-	-	-	-	286,217
Real Estate	1,109,260	19,183	3,327	-	1,131,770	1,112,538
Diversified Credit	1,201,090	20,771	3,603	-	1,225,464	906,263
Emerging Markets Equity	704,248	12,179	2,113	-	718,540	706,087
Emerging Markets Debt	324,532	5,612	974	-	331,118	333,421
Real Return	873,293	15,102	2,620	-	891,015	946,099
Absolute Return	1,641,699	28,391	4,925	-	1,675,015	1,629,286
Private Equity	618,918	10,703	1,857	-	631,478	542,337
Total Investments at Fair Value	11,534,048	199,464	34,601	13,801	11,781,914	11,567,179
Capital Assets, Net	24,935	-	-	-	24,935	21,482
Total Assets	**12,114,845**	**208,771**	**36,215**	**13,993**	**12,373,824**	**12,350,757**
Liabilities						
Obligations Under Securities Lending Program	106,142	1,836	318	-	108,296	201,317
Securities Purchased	50,506	873	152	-	51,531	87,709
Unearned Contributions	227,166	-	-	-	227,166	207,829
Retiree Payroll Payable	56,337	2,452	226	-	59,015	55,068
Other	17,376	299	54	-	17,729	14,706
Due to Employers	-	-	-	13,993	13,993	14,052
Total Liabilities	**457,527**	**5,460**	**750**	**13,993**	**477,730**	**580,681**
Net Position Restricted for Pension and Other Post-Employment Benefits	**$ 11,657,318**	**$ 203,311**	**$ 35,465**	**$ -**	**$ 11,896,094**	**$ 11,770,076**

The accompanying notes are an integral part of these financial statements.

Statement of Changes in Fiduciary Net Position

For the Year Ended December 31, 2015
(with summarized comparative amounts for the Year Ended December 31, 2014)
(Dollars in Thousands)

	Pension Trust Fund	Health Care Fund - County	Health Care Fund- OCFA	Total Fund	Comparative Totals 2014
Additions					
Contributions					
Employer	$ 571,298	$ 36,557	$ 2,624	$ 610,479	$ 693,039
Employee	249,271	-	-	249,271	232,656
Total Contributions	820,569	36,557	2,624	859,750	925,695
Investment Income/(Loss)					
Net Appreciation/(Depreciation)					
in Fair Value of Investments	(130,070)	(2,736)	(449)	(133,255)	317,356
Interest on:					
Domestic and Global Fixed Income	53,718	926	159	54,803	54,356
Cash with County Treasurer	2	-	-	2	1
Domestic Dividends	1,735	30	5	1,770	2,750
International Dividends	47,800	824	141	48,765	64,728
Real Estate Income	23,597	407	70	24,074	36,136
Private Equity	44,819	773	133	45,725	72,350
Less: Investment Management Fees	(38,459)	(663)	(114)	(39,236)	(30,393)
Foreign Income Tax/Other	(12,628)	(218)	(37)	(12,883)	(10,216)
Other Investment Expenses	(3,445)	(59)	(10)	(3,514)	(2,939)
Securities Lending Revenue	1,315	23	4	1,342	1,834
Less: Securities Lending Fees	(285)	(5)	(1)	(291)	(369)
Net Securities Lending Revenue	1,030	18	3	1,051	1,465
Commission Recapture-Net/Other	1,028	18	3	1,049	2,588
Net Investment Income/(Loss)	(10,873)	(680)	(96)	(11,649)	508,182
Total Additions	**809,696**	**35,877**	**2,528**	**848,101**	**1,433,877**
Deductions					
Participant Benefits	663,582	30,107	3,448	697,137	650,670
Death Benefits	524	-	-	524	715
Member Withdrawals and Refunds	11,857	-	-	11,857	11,730
Administrative Expenses	12,521	22	22	12,565	11,947
Total Deductions	**688,484**	**30,129**	**3,470**	**722,083**	**675,062**
Net Increase/(Decrease)	121,212	5,748	(942)	126,018	758,815
Net Position Restricted For Pension and Other Post-Employment Benefits, Beginning of Year	11,536,106	197,563	36,407	11,770,076	11,011,261
Ending Net Position Restricted For Pension and Other Post-Employment Benefits	**$ 11,657,318**	**$ 203,311**	**$ 35,465**	**$ 11,896,094**	**$ 11,770,076**

The accompanying notes are an integral part of these financial statements.

Notes to the Basic Financial Statements

NOTE 1 : Plan Descriptions

The Orange County Employees Retirement System (OCERS or System) was established in 1945 under the provisions of the County Employees Retirement Law of 1937 (CERL). OCERS is governed by a ten-member Board of Retirement, nine voting members and one alternate member. Board membership consists of four members appointed by the County of Orange Board of Supervisors, five members elected by the members of the System, including an alternate, two by the general members, one by the safety members, and one by the retired members. Safety members elect the alternate member. The County of Orange Treasurer Tax-Collector, elected by the voters registered in the County, serves as an Ex-Officio member.

OCERS operates as a cost-sharing multi-employer defined benefit pension plan for the County of Orange, City of San Juan Capistrano, and thirteen special districts: Orange County Cemetery District, Orange County Children and Families Commission, Orange County Department of Education, Orange County Employees Retirement System, Orange County Fire Authority, Orange County In-Home Supportive Services Public Authority, Orange County Local Agency Formation Commission (LAFCO), Orange County Public Law Library, Orange County Sanitation District, Superior Court of California, County of Orange, Orange County Transportation Authority, Transportation Corridor Agencies and the University of California, Irvine Medical Center and Campus. The Orange County Department of Education and the University of California, Irvine Medical Center and Campus are closed to new member participation and only the latter has one remaining active employee. Capistrano Beach, Cypress Recreation & Parks District, Orange County Mosquito and Vector Control and City of Rancho Santa Margarita are no longer active plan sponsors, but retired members and their beneficiaries, as well as deferred members, remain in the System. OCERS is legally and fiscally independent of the County of Orange.

Pension Plan Membership

OCERS provides retirement, disability and death benefits to general and safety members. Safety membership includes those members serving in active law enforcement, fire suppression and as probation officers. General membership applies to all other occupations. Plan retirement benefits are tiered based upon date of OCERS membership. Tier 1 members were hired prior to September 21, 1979 and use their highest one-year average salary to determine their retirement allowance while Tier II members were hired after September 21, 1979 and use their highest three-year average salary to determine their retirement allowance. Member rate groups are determined by employer, bargaining unit, and benefit plan (a description of the benefit plans can be found under Member Retirement Benefits). The benefit plan represents the benefit formula and tier that will be used in calculating a retirement benefit. All regular employees scheduled to work 20 hours or more per week become members of the plan upon commencing employment with one of OCERS' plan sponsors, with the exception of a provision adopted in 2014 that allows new members over the age of 60 to opt out of the plan if their employer has implemented the provision. Active members are categorized as vested in the table below upon accumulating five years of accredited service or attaining the age of 70. Additional information regarding the pension plan's benefit structure is included in the Summary Plan Description that is available on the web at **www.ocers.org/member_active/spd.htm**.

The following table is a summary of OCERS' general and safety membership as of December 31, 2015, consisting of active members, retired members or their beneficiaries, and deferred members who have terminated, but are not yet receiving benefits (further information regarding benefit eligibility for deferred members is described under Deferred Members Benefits):

Notes to the Basic Financial Statements

NOTE 1 : Plan Descriptions (continued)

OCERS Membership (General Members)

As of December 31, 2015

	Rate Group	Benefit Plan	Tier	Active Vested	Active Non-Vested	Retired Members & Beneficiaries	Deferred Members	Total
	1	A	I	4	-	396	2	402
	1	B	II	817	110	340	295	1,562
	1	U	II-PEPRA	-	609	-	107	716
Sub-Total				821	719	736	404	2,680
	2	A	I	-	-	3,488	27	3,515
	2	B	II	1	1	1,956	827	2,785
	2	I	I	72	-	1,112	-	1,184
	2	J	II	10,817	622	3,874	2,241	17,554
	2	P	II	46	169	4	74	293
	2	S	II	-	8	-	3	11
	2	T	II-PEPRA	13	2,095	3	263	2,374
	2	U	II-PEPRA	1	110	-	7	118
Sub-Total				10,950	3,005	10,437	3,442	27,834
	3	A	I	-	-	97	1	98
	3	B	II	4	50	69	38	161
	3	G	I	1	-	29	-	30
	3	H	II	437	15	225	57	734
	3	U	II-PEPRA	-	81	-	7	88
Sub-Total				442	146	420	103	1,111
	4	H	II	-	-	-	1	1
Sub-Total				-	-	-	1	1
	5	A	I	17	-	385	6	408
	5	B	II	1,076	245	845	537	2,703
	5	U	II-PEPRA	-	71	-	3	74
Sub-Total				1,093	316	1,230	546	3,185
	9	A	I	-	-	4	-	4
	9	B	II	-	-	9	12	21
	9	N	II	40	6	26	41	113
	9	U	II-PEPRA	-	17	1	2	20
Sub-Total				40	23	40	55	158
	10	A	I	-	-	8	-	8
	10	B	II	-	-	37	12	49
	10	I	I	-	-	17	-	17
	10	J	II	169	3	87	79	338
	10	N	II	-	28	-	5	33
	10	U	II-PEPRA	-	62	-	18	80
Sub-Total				169	93	149	114	525
	11	A	I	-	-	4	-	4
	11	B	II	-	-	3	-	3
	11	N	II	19	-	2	3	24
	11	U	II-PEPRA	-	2	-	-	2
Sub-Total				19	2	9	3	33
Total General				**13,534**	**4,304**	**13,021**	**4,668**	**35,527**

Notes to the Basic Financial Statements

NOTE 1 : Plan Descriptions (continued)

OCERS Membership (Safety Members)

As of December 31, 2015

	Rate Group	Benefit Plan	Tier	Active Vested	Active Non-Vested	Retired Members & Beneficiaries	Deferred Members	Total
	6	C	I	-	-	90	-	90
	6	D	II	-	-	45	34	79
	6	E	I	2	-	42	1	45
	6	F	II	778	22	135	176	1,111
	6	V	II-PEPRA	-	19	-	-	19
Sub-Total				780	41	312	211	1,344
	7	C	I	-	-	514	-	514
	7	D	II	-	-	231	63	294
	7	E	I	-	-	282	-	282
	7	F	II	1,391	-	837	91	2,319
	7	R	II	82	292	-	11	385
	7	V	II-PEPRA	-	139	-	7	146
Sub-Total				1,473	431	1,864	172	3,940
	8	C	I	-	-	27	-	27
	8	D	II	-	-	71	7	78
	8	E	I	-	-	17	-	17
	8	F	II	622	210	498	30	1,360
	8	R	II	-	39	-	-	39
	8	V	II-PEPRA	-	91	-	4	95
Sub-Total				622	340	613	41	1,616
Total Safety				**2,875**	**812**	**2,789**	**424**	**6,900**
Grand Total				**16,409**	**5,116**	**15,810**	**5,092***	**42,427**

* Includes one member excluded from the December 31, 2015 actuarial valuation due to timing differences in status.

Member Retirement Benefits

Members are entitled to receive a retirement allowance with ten or more years of service credit beginning at age 50 (5 years of service and age 52 for Public Employees Pension Reform Act (PEPRA) plans, for all plans except those identified as PEPRA compliant), at any age with thirty years of service credit (twenty years service credit for safety members), or if a part-time employee at age 55 or older with five or more years of service credit and at least ten years of active employment with a sponsoring agency covered by OCERS. Members attaining age 70 are eligible to retire regardless of credited service. Benefits received are determined by plan formula, age, years of service and final average salary. Member rate groups and benefit plans as of December 31, 2015 are as follows:

Notes to the Basic Financial Statements

NOTE 1 : Plan Descriptions (continued)

Rate Groups and Benefit Plans

As of December 31, 2015

Rate Group	Plan Type	Benefit Plan	Benefit Formula per Year of Service	Sponsoring Agency
1	General	A	2.0% @ 57	County of Orange; OC In-Home Supportive Services Public Authority; OC Department of Education & UCI Medical Center and Campus (Capistrano Beach Sanitary District, Cypress Recreation & Parks District, and OC Mosquito and Vector Control District are no longer active participants)
		B	1.67% @ 57.5	
		U	2.5% @ 67 PEPRA	
2	General	A	2.0% @ 57	City of San Juan Capistrano; LAFCO; OCERS; Superior Court of California, County of Orange; County of Orange; & OC Children and Families Commission
		B	1.67% @ 57.5	
		I	2.7% @ 55	
		J	2.7% @ 55	
		O	1.62% @ 65	
		P	1.62% @ 65	
		S	2.0% @ 57	
		T	1.62% @ 65 PEPRA	
		U	2.5% @ 67 PEPRA	
3	General	A	2.0% @ 57	OC Sanitation District & OC Law Library
		B	1.67% @ 57.5	
		G	2.5% @ 55	
		H	2.5% @ 55	
		U	2.5% @ 67 PEPRA	
4	General	H	2.5% @ 55	City of Rancho Santa Margarita (no longer active participant)
5	General	A	2.0% @ 57	OC Transportation Authority
		B	1.67% @ 57.5	
		U	2.5% @ 67 PEPRA	
6	Safety	C	2.0% @ 50	County of Orange (Probation)
		D	2.0% @ 50	
		E	3.0% @ 50	
		F	3.0 % @ 50	
		V	2.7% @ 57 PEPRA	
7	Safety	C	2.0% @ 50	County of Orange (Law Enforcement)
		D	2.0% @ 50	
		E	3.0% @ 50	
		F	3.0% @ 50	
		Q	3.0% @ 55	
		R	3.0% @ 55	
		V	2.7% @ 57 PEPRA	
8	Safety	C	2.0% @ 50	OC Fire Authority
		D	2.0% @ 50	
		E	3.0% @ 50	
		F	3.0% @ 50	
		Q	3.0% @ 55	
		R	3.0% @ 55	
		V	2.7% @ 57 PEPRA	
9	General	A	2.0% @ 57	Transportation Corridor Agencies
		B	1.67% @ 57.5	
		M	2.0% @ 55	
		N	2.0% @ 55	
		U	2.5% @ 67 PEPRA	

Notes to the Basic Financial Statements

NOTE 1 : Plan Descriptions (continued)

Rate Groups and Benefit Plans (continued)

As of December 31, 2015

Rate Group	Plan Type	Benefit Plan	Benefit Formula per Year of Service	Sponsoring Agency
10	General	A	2.0% @ 57	OC Fire Authority
		B	1.67% @ 57.5	
		I	2.7% @ 55	
		J	2.7% @ 55	
		M	2.0% @ 55	
		N	2.0% @ 55	
		U	2.5% @ 67 PEPRA	
11	General	A	2.0% @ 57	OC Cemetery District
		B	1.67% @ 57.5	
		M	2.0% @ 55	
		N	2.0% @ 55	
		U	2.5% @ 67 PEPRA	

Public Employees Pension Reform Act (PEPRA)

During 2012, the Public Employees Pension Reform Act (PEPRA) was signed into law, resulting in the creation of three new benefit formulas for employees entering OCERS on or after January 1, 2013: 1.62% @ 65 PEPRA - General; 2.5% @ 67 PEPRA - General; and 2.7% @ 57 PEPRA - Safety. New plan provisions include a cap on pensionable compensation at 120% of the social security taxable wage base limit, three year final average salary, and new cost sharing requirements by members to pay at least 50% of the total normal cost of the plan.

Deferred Member Benefits

If a member terminates, the member is entitled to withdraw the employee contributions made, together with accumulated interest, unless the member enters a reciprocal retirement system within 180 days and elects to leave their accumulated contributions on deposit with OCERS and receive a deferred retirement allowance when eligible. There are different deferred retirement eligibility requirements for members with less than five years of service when terminating and leaving funds on deposit. It is possible for these members to earn a deferred retirement allowance upon attaining the age of 70, or upon accumulating reciprocal service. Members who terminate and defer with five or more years of service may become eligible for a service retirement allowance when they would have accrued ten years of service and attain the age of 50 or greater (5 years of service and age 52 for PEPRA).

Disability Benefits

Members found by the Board of Retirement to be permanently incapacitated from the performance of their job are eligible for disability retirement benefits. A disability retirement benefit may either be service-connected or non-service-connected. Members applying for non-service-connected disability must have five or more years of eligible service credit. There are no service credit requirements for members applying for service-connected disability benefits, but the disabling condition must be a result of injury or disease arising out of or in the course of the member's employment.

Death Benefits

Death benefits are payable to eligible beneficiaries of OCERS members. Eligible beneficiaries of retired members may receive a percentage of a deceased member's retirement allowance based upon the retirement option selected by the member at the time of retirement. The beneficiary of a retired member will also receive a $1,000 burial allowance.

Notes to the Basic Financial Statements

NOTE 1 : Plan Descriptions (continued)

Survivor benefits for members who die prior to retirement are dependent upon a number of factors including whether or not the member was eligible for a service retirement or disability retirement at the time of death, and whether the death was job related. The eligible beneficiary of a member who is not eligible for service retirement or disability retirement is eligible to receive the member's accumulated contributions plus one month's salary for each year of creditable service, subject to a maximum of six month's salary. The eligible beneficiary of a member who is entitled to receive a service retirement or disability retirement, in lieu of the benefit described above, may elect to receive a monthly retirement allowance equal to 60% of the monthly allowance the member would have received for a non-service connected disability as of the date of death, or a monthly allowance equal to 50% of the member's monthly compensation if the death was found to be service-connected.

Cost-of-Living Adjustments

Retired member monthly allowances will be adjusted annually in accordance with changes in the cost-of-living, as determined by the average annual change in the Consumer Price Index (CPI) for the prior calendar year. The cost-of-living adjustment is limited to a maximum increase or decrease of three percent per year as established by the Board of Retirement. The 2015 cost-of-living adjustment ranged from 1.5% to 3% based on the date benefit recipients began receiving benefits.

STAR COLA

Retired members and eligible beneficiaries who have lost more than 20% of their original retirement benefit's purchasing power due to inflation are eligible to receive the STAR COLA (Supplemental Targeted Adjustment for Retirees Cost of Living Adjustment). STAR COLA benefits are reviewed annually by the Board of Retirement and as of December 31, 2015 only those members that retired on or before April 1, 1980 are eligible to receive the STAR COLA benefit.

Post-Employment Health Care Plans

OCERS serves as trustee for the County of Orange (County) and Orange County Fire Authority (OCFA) post-employment health care plan trusts established under Internal Revenue Code section 401(h), which are reported as other post-employment benefit trust funds in OCERS annual financial statements. Health care assets for the 401(h) trust are commingled with pension trust assets for investment purposes and are used exclusively to pay health allowances to eligible retired members of the County of Orange and the OCFA.

In July 2007, the County of Orange established under Internal Revenue Code both a 115 trust and a 401(h) trust as funding sources of retiree health care benefits, including grants, for the County of Orange Retiree Medical Plan (the "Plan"). The County maintains control and custody of all the 115 trust assets, which acts as a conduit for collecting contributions and passing them through to the 401(h) trust at their discretion, as well as distributing lump sum health care grant payments as part of a termination program that is being phased-out. OCERS maintains custody of the assets in the 401(h) trust and pays all primary benefits of the Plan as directed by the County. The County has taken financial reporting responsibility of the Plan including financial statement disclosures and required supplementary information regarding the plan's funded status and contributions, in accordance with GASB Statement No. 43, *Financial Reporting for Post-employment Benefit Plans Other than Pension Plans*. A publicly available financial report can be obtained from the County of Orange at 12 Civic Center Plaza, Santa Ana, California 92702 or their website at **http://ac.ocgov.com**.

In order to be eligible to receive the County of Orange Retiree Medical Grant (Grant) upon retirement, the employee must have completed at least ten years of continuous County service (although exceptions for disability retirements exist), be enrolled in a County sponsored health plan and/or Medicare, qualify as a retiree as defined by the pension plan and be able to receive a monthly benefit payment from OCERS. To qualify as a retiree as defined by the Plan, the employee upon retirement must be at least 50 years of age with a minimum of 10 years of service or have at least 20 years of service for a safety member of OCERS or at least 30 years of service for a general member of OCERS.

Employees represented by the American Federation of State, County and Municipal Employees (AFSCME) who were employed on or after September 30, 2005 are not eligible for the Grant. Employees represented by the Association of Orange County Deputy Sheriffs (AOCDS) who were hired on or after October 12, 2007 are not eligible for the Grant or lump sum payment. Law enforcement management employees who were hired on or after June 19, 2009 are not eligible for the Grant.

The monthly Grant amount is determined by a formula that multiplies a base number by the number of years of qualifying County employment up to a maximum of 25 years. The base number for calendar year 2015 is $21.13 per year of County service, and the maximum monthly Grant is $528.25. The amount of the Grant is netted against the monthly health plan premium and/or reimburses Medicare premiums paid by the retiree for retiree and dependent coverage with the retiree obligated to pay the remaining balance. Any Grant in excess of the monthly health plan and/or Medicare premium payable is forfeited.

Notes to the Basic Financial Statements

NOTE 1 : Plan Descriptions (continued)

The Grant is reduced by 50% once the retiree becomes Medicare A and B eligible. Retirees who were age 65 and/or Medicare A and B eligible on the effective date are not subject to the Medicare reduction. The Grant is also reduced by 7.5% for each year of age prior to age 60 and increased by 7.5% for each year of age after age 60 up to age 70 for employees retiring after the effective date. The effective date varies by labor agreement. Safety employees and disability retirements are exempt from the age adjustment. The base number for the Grant is adjusted annually based on a formula defined in the Plan document with a maximum increase/decrease of 3%. Surviving dependents of a deceased employee or retiree eligible for the Grant are entitled to receive 50% of the Grant that the employee/retiree was eligible to receive.

AFSCME employees are not subject to the Medicare reduction or age adjustment. In addition, the base number for the Grant is adjusted annually with a maximum increase/decrease of 5%. The base number for calendar year 2015 is $24.42 per year of County service, and the maximum monthly Grant is $610.50.

As trustee of OCFA's 401(h) OPEB trust fund, the sole source of funding for OCFA's post-employment health care plan, OCERS has taken financial reporting responsibility for this plan. All OCFA retirees and full-time employees hired prior to January 1, 2007, are eligible to participate in the OCFA health care plan. Eligible employees who are credited with at least one year of service are eligible to receive plan benefits upon retirement. Participants must be covered under a qualified health plan, Medicare or a recognized health insurance plan. In 2015, retired OCFA members received $23.17 per year of creditable service, with a maximum monthly benefit of $579.25 based upon 25 or more years of creditable service.

Post-Employment Health Care Plan Membership - OCFA

	July 1, 2015
Active Participants	641
Retired Participants and Surviving Spouses	622
Terminated Participants	3
Total Plan Participants*	**1,266**

* Membership count based upon latest actuarial valuation

Assets are allocated on the Statement of Fiduciary Net Position between the pension plan and the two 401(h) health care trusts based upon pro-rata shares after balances and transactions specific to the respective trusts are assigned. Contributions and benefit payment information for the Pension Plan and individual Health Care Trusts are readily identified; however, investment income must be allocated and is based upon the individual Health Care Trusts' pro-rata share of total fund assets.

In addition to serving as Trustee for the two 401(h) health care trusts, OCERS also provides investment advisory services to the Orange County Transportation Authority (OCTA) health care plan pursuant to an agreement established in accordance with Internal Revenue Code section 115 (115 Plan). The OCTA 115 Plan provides post-employment health care benefits to retired members with at least ten years of OCTA service. Investments in the 115 Plan are not commingled with those of the pension plan and 401(h) plan trusts, but rather are invested in separately managed index funds.

An Agency Fund is used to account for OCTA's 115 Plan assets held by OCERS in an investment capacity with the revocable trust assets reported being offset by a liability for the resources held on behalf of OCTA. Additional information regarding the OCTA 115 Plan is available by contacting OCTA at 550 S. Main Street, Orange, California 92868 or their website at **http://www.octa.net**.

Notes to the Basic Financial Statements

NOTE 2 : Summary of Significant Accounting Policies

Basis of Accounting

The accompanying financial statements have been prepared on the accrual basis and in accordance with accounting principles generally accepted in the United States (GAAP). Employee and employer contributions are recognized in the period in which contributions are due pursuant to legal requirements, and benefits and refunds are recognized when currently due and payable in accordance with plan terms. Unearned contributions represent prepaid employer contributions that will be recognized as an addition to plan net position in future periods. Investment income is recognized as revenue when earned. The net appreciation/(depreciation) in the fair value of investments is recorded as an increase/(decrease) to investment income based upon investment valuations, which includes both realized and unrealized gains and losses on investments.

Investment Policy and Valuation

State Street Bank and Trust (State Street) maintains custody of the majority of OCERS' investments held as of December 31, 2015. Investments are authorized by state statute and OCERS' Investment Policy Statement (refer to Note 3 - Investments for further information). The allocation of investment assets is approved by OCERS' Board of Retirement, as outlined in the Investment Policy Statement, and System assets are invested solely for the benefit of plan participants and beneficiaries while attempting to minimize employer contributions and investment and administration costs. The Investment Policy Statement calls for an asset allocation plan that seeks to optimize long-term returns for the level of risk that the Board of Retirement considers appropriate. The current asset allocation adopted by the Board of Retirement as of December 31, 2015 is detailed in Section III - Investments. The Board of Retirement conducts a periodic review of the asset allocation plan to maintain an optimal allocation, and may also revise the asset allocation in response to significantly changing market conditions that may affect valuations and forward-looking expected returns of asset classes.

Plan investments consist of domestic fixed income; domestic, international, and global equities; emerging markets equity and debt; private equity; real return strategies; absolute return strategies; diversified credit; and real estate. Investments are reported at fair value and the overall valuation process and information sources by major asset classification are as follows:

Cash and Short-Term Investments

Cash and short-term investments represent funds held in operating accounts with State Street, Wells Fargo Bank and deposits held in a pooled account with the County of Orange Treasurer. Short-term investments are expected to be utilized within 30-90 days and are reported at fair value. OCERS is a participant in the County Treasurer's Orange County Investment Pool (OCIP). The OCIP is an external investment pool, is not rated, and is not registered with the Securities and Exchange Commission. The County Treasury Oversight Committee conducts OCIP oversight. Cash on deposit in the OCIP is stated at fair value. The OCIP values participant shares on an amortized cost basis during the year and adjusts to fair value at year-end. Deposits held in the OCIP are invested in the Orange County Money Market Fund and the Extended Fund. At December 31, 2015 the OCIP had a weighted average maturity of 335 days. The Orange County Money Market Fund is rated AAAm by Standard & Poor's. The Extended Fund is not rated. For further information regarding the OCIP, refer to the County of Orange Comprehensive Annual Financial Report.

Equities

The majority of OCERS' domestic, international and global securities, including those traded in emerging markets, are actively traded on major security exchanges, or over-the-counter. Fair value for exchange traded securities is determined as of the close of the trading date in the primary market or agreed upon exchange. The last known price is used for listed securities that did not trade on a particular date. Fair value is obtained from third party pricing sources for securities traded over-the-counter.

Debt Securities

Actively traded debt instruments such as those securities issued by the U.S. Treasury, Federal Agencies and corporate issuers are reported at fair value as of the close of the trading date. Fair values of irregularly traded debt securities are obtained from pricing vendors who employ modeling techniques in determining security values. Inputs typically employed by pricing vendors include cash flows, maturity and credit rating.

Real Estate

OCERS holds real estate assets directly and in commingled real estate funds. Real estate investments owned directly are appraised annually by independent third party appraisers in accordance with the Uniform Standards of Professional Appraisal Practice. Properties held in commingled pools are subject to regular internal appraisals by investment management firms/general partners with independent third party appraisals accomplished at regular intervals and are supported by annual financial statements which are audited by an independent third party accountant. Primary determinants of fair value include market and property type specific information, which typically involve a degree of expert judgment.

NOTE 2 : Summary of Significant Accounting Policies (continued)

OCERS engages real estate management firms to assist in the day-to-day operations of the real estate in portfolio that is directly held by OCERS. At December 31, 2015, the estimated fair value of OCERS' real estate held directly was $52.4 million. The total real estate portfolio was $1.1 billion.

OCERS' Investment Committee has approved a maximum fifty percent (50%) leverage limit for the total real estate portfolio at the time of financing. Additionally, leverage targets are established for each investment style based on the risk/return profile of the underlying investment. Established leverage limits by investment style are as follows:

- Core Real Estate: limited to 50% of the individual asset market value at the time of financing with leverage limits at the portfolio level of 40%.

- Non-Core Real Estate: accessed through commingled funds that have pre-specified leverage limits in offering documents but will be limited to 75% of the market value of the commingled funds, at the time of financing.

Diversified Credit

Diversified credit is a global allocation that includes a number of diverse fixed-income related strategies. It represents an allocation that is diversified by region, by credit quality, and by sources of risk. The general shared characteristics of these strategies are a degree of illiquidity, and a focus on current yield as a principal source of expected return. Hedging of market and individual security risks and diversified risk-controlled tactical trading may be permitted.

Diversified credit is a combination of liquid and illiquid credit strategies and the fair value depends on the nature of the investment. The liquid strategies comprised of multi-strategies are actively traded and are generally reported at fair value as of the close of the trading date. The illiquid strategies comprised of mortgages, direct lending and energy-based credit funds are valued initially at cost as an approximation of fair value with subsequent adjustments to fair value as determined by the general partner. The factors considered include readily available market quotes, earnings-multiple analysis using comparable companies or discounted cash flow analysis.

Alternative Investments

OCERS invests in a variety of alternative strategies including private equity, real return and absolute return. The fair value of OCERS' alternative investments depends upon the nature of the investment and the underlying business. Typically, alternative investments are less liquid and subject to redemption restrictions. Fair value is determined either quarterly or semi-annually with valuations conducted by general partners, management and valuation specialists. Valuation techniques vary by investment type and involve expert judgment. Investments that are reported at net asset value (NAV) are based on audited financial statements.

Included in the real return strategy are dedicated allocations to inflation linked debt, commodities, timber, energy and agriculture resources. Fair value for inflation linked debt securities and commodities are determined by quoted market prices. Fair value for timberland is determined in a manner similar to other alternative investments and involves a degree of expert judgment.

Capital Assets

Capital assets consist of furniture, equipment, intangible assets, including computer software, and building and improvements for the portion of the OCERS' headquarters building used for plan administration. Capital assets are defined by OCERS as assets with an initial, individual cost of more than $25,000 and an estimated useful life in excess of one year. Such assets are recorded at cost. Capital assets are depreciated using the straight-line depreciation method over their estimated useful lives, ranging from five to fifteen years for furniture, equipment and building improvements; three years for purchased computer software; and sixty years for buildings.

Notes to the Basic Financial Statements

NOTE 2 : Summary of Significant Accounting Policies (continued)

Capital Assets

As of December 31, 2015
(Dollars in Thousands)

Building and Improvements	$ 5,224
Computer Software-Other	4,813
Computer Software-V3 Pension System	21,854
Furniture and Equipment	1,341
Construction in Progress	821
Total Capital Assets (at cost)	34,053
Less: Accumulated Depreciation	(9,118)
Total Capital Assets, Net of Depreciation	**$ 24,935**

GASB Statement No. 51, *Accounting and Financial Reporting for Intangible Assets,* requires OCERS to identify and capitalize costs incurred for the development of internally generated computer software, which is considered an intangible asset. According to GASB Statement No. 51, there are three stages in the development and installation of internally generated computer software: (1) Preliminary Project Stage, (2) Application and Development Stage, and (3) Post-Implementation/Operation Stage. All outlays related to the Application and Development Stage must be capitalized.

OCERS began implementing and developing a new internally generated computer software, Pension Administration Software System (V3), in 2010. Expenses related to V3 capitalized during the current fiscal year were $3.4 million. Intangible assets are included as Capital Assets in the Statement of Fiduciary Net Position. In 2016, V3 will be in the Post-Implementation/Operation Stage. All outlays will be expensed and amortization of the asset will begin over an estimated useful life of ten years.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect reported amounts of net position. Actual results could differ from those estimates.

Comparative Totals

The basic financial statements include certain prior-year summarized comparative information in total but not at the level of detail required for a presentation in conformity with GAAP. Accordingly, such information should be read in conjunction with OCERS' financial statements for the year ended December 31, 2014, from which the summarized information was derived.

Effect of New Governmental Accounting Standards Board (GASB) Pronouncements

In March 2016, GASB issued Statement No. 82, *Pension Issues, an amendment of GASB Statements No. 67, No. 68, and No. 73*. The purpose of this statement is to address certain issues that were raised with respect to Statements No. 67, *Financial Reporting for Pension Plans*, No. 68, *Accounting and Financial Reporting for Pensions*, and No. 73, *Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68*. The requirements of this statement that are applicable to OCERS are effective for reporting periods beginning after June 15, 2016. OCERS elected to implement this statement in the accompanying financial statements as of December 31, 2015, impacting the presentation of payroll-related measures in the required supplementary information.

NOTE 3 : Investments

OCERS may invest, in accordance with state statutes, in any form or type of investment deemed prudent by the Board of Retirement. Pension and 401(h) Health Care plan assets are restricted for the exclusive purposes of providing benefits to plan participants and defraying reasonable expenses of administering the plans. The Board of Retirement may invest, or delegate the authority to invest, the assets of the funds through the purchase, holding, or sale of any form or type of investment, financial instrument, or financial transaction. Agency fund assets, restricted pursuant to section 115 of the Internal Revenue Code, are separately invested in domestic equity, international equity and domestic bond index funds in accordance with the respective OCTA Third-Party Administrative and Investment Management Agreement.

In accordance with GASB Statement No. 40, *Deposit and Investment Risk Disclosures*, OCERS discloses investments that are subject to custodial credit risk, credit risk, interest rate risk, foreign currency risk and concentration of credit risk and in accordance with GASB Statement No. 67, OCERS discloses concentration of investments and the annual money-weighted rate of return.

Custodial Credit Risk

Custodial credit risk for deposits is the risk that in the event of a financial institution's failure, OCERS would not be able to recover its deposits. Deposits are exposed to custodial risk if they are not insured or not collateralized. As of December 31, 2015, OCERS' deposits with a financial institution are fully insured by Federal Deposit Insurance Corporation (FDIC) insurance up to $250,000 with the remaining balance exposed to custodial credit risk as it is not insured; however, the financial institution does collateralize the deposit of monies in excess of the FDIC insurance amount with eligible securities held by the pledging financial institution, but not in OCERS' name. Deposits held by OCERS' custodial bank are not exposed to custodial credit risk as they are held in a qualified pool trust, separate from the custodial bank assets.

For an investment, custodial credit risk is the risk that, in the event of a counterparty failure, OCERS will not be able to recover the value of its investments or collateral securities that are in the possession of counterparties. Investment securities are exposed to custodial credit risk if the securities are uninsured, are not registered in OCERS' name or by other qualified third party administrator trust accounts.

OCERS' investments and collateral received through securities lending are not exposed to custodial credit risk because all securities are held by OCERS' custodial bank in OCERS' name or by other qualified third party administrator trust accounts. OCERS does not maintain any general policies regarding custodial credit risk.

Credit Risk

By definition, credit risk measures the risk that an issuer or counterparty will not fulfill its obligations. Standard & Poor's defines investment grade as those fixed income securities with ratings between AAA and BBB. OCERS' investment policy permits, on an opportunistic basis, the investment in fixed income securities rated below investment grade. A rating of NR represents those securities that are not rated and NA represents those securities that are not subject to the GASB Statement No. 40 disclosure requirements. The credit ratings for individual OCERS' fixed income portfolios are monitored regularly.

At December 31, 2015, the Standard & Poor's credit ratings of the OCERS' fixed income portfolio were as follows:

Credit Ratings

As of December 31, 2015
(Dollars in Thousands)

Rating	Pooled	International	U.S. Treasuries	Corporates	Agencies	Mortgages	Municipals	Asset-Backed	Swaps	Total
AAA	$ -	$ 12,772	$ -	$ -	$ -	$ 6,187	$ 928	$ 15,888	$ -	$ 35,775
AA	-	12,256	-	3,098	86,305	14,653	20,914	3,766	-	140,992
A	-	13,338	-	33,956	-	6,016	6,959	135	-	60,404
BBB	-	20,593	-	147,062	-	4,313	1,399	676	-	174,043
BB	-	3,699	-	138,450	-	3,098	-	11,105	-	156,352
B	-	2,390	-	74,504	-	1,382	2,462	4,474	-	85,212
CCC	-	1,646	-	31,864	-	7,692	-	17,263	-	58,465
CC	-	-	-	-	-	1,271	-	415	-	1,686
C	-	-	-	272	-	-	-	-	-	272
D	-	-	-	104	-	6,039	-	8,812	-	14,955
NR	559,622	14,216	-	7,674	-	25,940	2,330	8,940	(5,525)	613,197
NA	-	-	128,517	-	1,281	-	-	-	-	129,798
Total	**$ 559,622**	**$ 80,910**	**$ 128,517**	**$ 436,984**	**$ 87,586**	**$ 76,591**	**$ 34,992**	**$ 71,474**	**$ (5,525)**	**$ 1,471,151**

* This schedule reflects credit ratings for OCERS' fixed income portfolio, which includes $80.9 million of international fixed income securities and excludes $(1.6) million of non-fixed income securities that are included in the domestic fixed income category on the Statement of Fiduciary Net Position.

Notes to the Basic Financial Statements

NOTE 3 : Investments (continued)

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. Duration is a measure of the price sensitivity of a fixed-income portfolio to changes in interest rates. It is calculated as the weighted average time to receive a bond's coupon and principal payments. The longer the duration of a portfolio, the greater its price sensitivity to changes in interest rates.

Interest rate risk is managed through OCERS' investment policies requiring that investment managers investing on behalf of OCERS have applicable investment guidelines and that the effective durations of fixed income portfolios remain within a defined range of the benchmark's effective duration. The primary benchmark for domestic fixed income is the Barclays Capital US Universal Index. As of December 31, 2015, the duration was 5.51 years for the Barclays Capital US Universal Index and all investment managers were in compliance within their defined range.

OCERS invests in a variety of fixed income instruments including asset-backed securities, corporate obligations and commercial mortgage backed securities. The value, liquidity and income of these securities are sensitive to changes in overall economic conditions and the fair value of these securities may be affected by changes in interest rates, default rates and the value of the underlying securities.

The interest rate risk schedule presents the duration of fixed income securities by investment category as of December 31, 2015:

Interest Rate Risk Schedule

As of December 31, 2015
(Dollars in Thousands)

Category	Amount	Duration (in Years)	Percent
Pooled	$ 559,622	3.85	38%
Corporates	408,196	5.90	28%
U.S. Treasuries	128,517	5.02	9%
International	76,834	3.81	5%
Mortgages	72,182	1.93	5%
Asset-Backed	56,794	1.58	4%
Municipals	34,992	7.67	2%
Agencies	87,583	3.55	6%
No Effective Duration:			
Corporates	28,788	N/A	2%
International	4,076	N/A	0%
Mortgages	4,409	N/A	0%
Asset-Backed	14,680	N/A	1%
Agencies	3	N/A	0%
Swaps	(5,525)	N/A	0%
Total	**$ 1,471,151**	**4.29**	**100%**

* This schedule reflects interest risk for OCERS' fixed income portfolio, which includes $80.9 million of international fixed income securities and excludes $(1.6) million of non-fixed income securities that are included in the domestic fixed income category on the Statement of Fiduciary Net Position.

Notes to the Basic Financial Statements

NOTE 3 : Investments (continued)

Foreign Currency Risk

The value of deposits or investments denominated in foreign currency may be adversely affected by changes in currency exchange rates. OCERS' investment policy permits investment in international securities that includes investments in international equity securities, global equity securities, emerging markets equity securities and debt, public real estate securities, and real return. Investment managers monitor currency exposures daily.

The following schedule represents OCERS' net exposure to foreign currency risk in U.S. dollars as of December 31, 2015:

Foreign Currency Risk Schedule

As of December 31, 2015
(Dollars in Thousands)

Currency in U.S. Dollar	Cash	Equities	Fixed Income	Options	Forwards	Swaps	Total
Austrailian Dollar	$ 112	$ 26,855	$ 6,358	$ -	$ 46	$ (11)	$ 33,360
Brazillian Real	158	1,857	7,468	-	444	(3,522)	6,405
Canadian Dollar	58	13,436	8,854	-	(228)	-	22,120
Danish Krone	7	14,094	-	-	(17)	-	14,084
Euro Currency	(28)	220,884	23,303	12	3,698	(80)	247,789
Hong Kong Dollar	26	41,279	-	-	-	-	41,305
Iceland Krona	108	-	1,548	-	-	-	1,656
Indian Rupee	-	1,080	-	-	-	-	1,080
Indonesian Rupiah	-	643	593	-	-	-	1,236
Japanese Yen	90	137,716	681	-	969	-	139,456
Mexican Peso	258	-	5,465	-	10	(150)	5,583
New Israeli Sheqel	-	2,810	-	-	(8)	-	2,802
New Taiwan Dollar	-	-	-	-	18	-	18
New Zealand Dollar	-	463	12,256	-	-	-	12,719
Norwegian Krone	-	6,303	1,835	-	64	-	8,202
Pound Sterling	418	139,418	5,891	-	1,124	(82)	146,769
Singapore Dollar	117	7,324	-	-	(29)	-	7,412
South African Rand	-	3,073	-	-	-	-	3,073
South Korean Won	-	8,545	-	-	(127)	-	8,418
Swedish Krona	83	17,157	-	-	132	-	17,372
Swiss Franc	75	66,652	-	-	(20)	-	66,707
Thailand Baht	-	1,139	-	-	-	-	1,139
Yuan Renminbi	-	-	-	-	94	-	94
Amount Exposed to Foreign Currency Risk	**$ 1,482**	**$ 710,728**	**$ 74,252**	**$ 12**	**$ 6,170**	**$ (3,845)**	**$ 788,799**

* The foreign currency amounts above are included within the cash and cash equivalents, international equity, global equity, real return and domestic fixed income allocations on the Statement of Fiduciary Net Position as of December 31, 2015. Swaps are included in the domestic fixed income investment allocation.

Notes to the Basic Financial Statements

NOTE 3 : Investments (continued)

Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of OCERS' investment in a single issuer. By policy, OCERS did not hold investments in any one issuer that represented five percent (5%) or more of plan net position and net investments. Investments issued or explicitly guaranteed by the U.S. Government and pooled investments are excluded from this policy requirement.

Concentration of Investments

As of December 31, 2015, OCERS did not hold investments in any one organization that represented five percent (5%) or more of the plan's fiduciary net position. Investments issued or explicitly guaranteed by the U.S. Government and pooled investments are excluded from this requirement.

Derivative Instruments

As of December 31, 2015, all derivative instruments held by OCERS are considered investments and not hedges for accounting purposes. Any reference to the term hedging in these financial statements references an economic activity and not an accounting method. All gains and losses associated with these activities are recognized as incurred in the Statement of Changes in Fiduciary Net Position.

The table that follows presents the related net appreciation/(depreciation) in fair value, the fair value amounts and the notional amounts of derivative instruments outstanding at December 31, 2015.

NOTE 3 : Investments (continued)

Derivative Instruments

As of December 31, 2015
(Amounts in Thousands)

Derivative Instruments	Changes in Fair Value (4)		Fair Value at December 31, 2015		Notional (3)
	Classification	Amount (1)	Classification	Amount (2)	
Commodity Futures Long	Net Appreciation / (Depreciation) in Fair Value of Investments	$ (1,624)	Cash / Real Return Investments	$ -	6,486
Commodity Futures Short	Net Appreciation / (Depreciation) in Fair Value of Investments	557	Cash / Real Return Investments	-	(1)
Credit Default Swaps Bought	Net Appreciation / (Depreciation) in Fair Value of Investments	5	Domestic Fixed Income / Real Return Investments	296	$ 2,300
Credit Default Swaps Written	Net Appreciation / (Depreciation) in Fair Value of Investments	(560)	Domestic Fixed Income / Real Return Investments	(369)	$ 38,280
Equity Swaps	Net Appreciation / (Depreciation) in Fair Value of Investments	(1)	Domestic Fixed Income / Real Return Investments	-	$ -
Fixed Income Futures Long	Net Appreciation / (Depreciation) in Fair Value of Investments	156	Cash / Domestic Fixed Income/Real Return Investments	-	71,007
Fixed Income Futures Short	Net Appreciation / (Depreciation) in Fair Value of Investments	(471)	Domestic Fixed Income/ Real Return Investments	-	(213,795)
Fixed Income Options Bought	Net Appreciation / (Depreciation) in Fair Value of Investments	(83)	Domestic Fixed Income/ Real Return Investments	743	214,600
Fixed Income Options Written	Net Appreciation / (Depreciation) in Fair Value of Investments	1,449	Domestic Fixed Income/ Real Return Investments	(735)	(272,200)
Foreign Currency Futures Long	Net Appreciation / (Depreciation) in Fair Value of Investments	(921)	Cash / International Equity Securities	-	-
Foreign Currency Futures Short	Net Appreciation / (Depreciation) in Fair Value of Investments	24,826	International Equity Securities	-	(181,943)
Foreign Currency Options Bought	Net Appreciation / (Depreciation) in Fair Value of Investments	(187)	Domestic Fixed Income	98	13,919
Foreign Currency Options Written	Net Appreciation / (Depreciation) in Fair Value of Investments	953	Domestic Fixed Income/ Real Return Investments	(327)	(23,530)
Futures Options Bought	Net Appreciation / (Depreciation) in Fair Value of Investments	(79)	Domestic Fixed Income/ Real Return Investments	-	-
Futures Options Written	Net Appreciation / (Depreciation) in Fair Value of Investments	203	Domestic Fixed Income/ Real Return Investments	-	-
FX Forwards	Net Appreciation / (Depreciation) in Fair Value of Investments	10,304	Foreign Currency Forward Contract (Net) Receivable	6,170	$ 366,375

Notes to the Basic Financial Statements

NOTE 3 : Investments (continued)

Derivative Instruments

(Continued)

Derivative Instruments	Changes in Fair Value [4] Classification	Changes in Fair Value [4] Amount [1]	Fair Value at December 31, 2015 Classification	Fair Value at December 31, 2015 Amount [2]	Notional [3]
Index Futures Long	Net Appreciation / (Depreciation) in Fair Value of Investments	$ 5,392	International Equity Securities/Cash	$ -	103
Index Futures Short	Net Appreciation / (Depreciation) in Fair Value of Investments	373	International Equity Securities / Cash	-	(347)
Index Options Written	Net Appreciation / (Depreciation) in Fair Value of Investments	43	Domestic Fixed Income	-	-
Pay Fixed Interest Rate Swaps	Net Appreciation / (Depreciation) in Fair Value of Investments	(3,313)	Domestic Fixed Income / Real Return Investments	(2,596)	$ 517,242
Receive Fixed Interest Rate Swaps	Net Appreciation / (Depreciation) in Fair Value of Investments	(3,961)	Domestic Fixed Income / Real Return Investments	(2,856)	$ 120,622
Rights	Net Appreciation / (Depreciation) in Fair Value of Investments	(180)	International Equity Securities/Global Equities	23	$ 200
Total Return Swaps Bond	Net Appreciation / (Depreciation) in Fair Value of Investments	(61)	Real Return Investments	-	$ -
Total Return Swaps Equity	Net Appreciation / (Depreciation) in Fair Value of Investments	(1,972)	Real Return Investments	-	$ -
Warrants	Net Appreciation/ (Depreciation) in Fair Value of Investments	(37)	Domestic Fixed Income / International Equity Securities	3,468	$ 161
Grand Totals		$ 30,811		$ 3,915	

[1] Negative values (in brackets) refer to losses
[2] Negative values refer to liabilities and are reported net of investments
[3] Notional may be a dollar amount or size of underlying for futures and options, negative values refer to short positions
[4] Excludes futures margin payments

Valuation of Derivative Instruments

Non-exchange traded instruments, such as swaps, are valued using similar methods as those described for debt securities.

Futures contracts are traded on exchanges and typically derive their value from underlying indices and are marked to market daily. All gains and losses associated with changes in the value of futures contracts also settle on a daily basis and result in the contracts themselves having no fair value at the end of any trading day, including December 31, 2015. Future variation margin accounts also settle daily and are recognized in the financial statements under net appreciation/(depreciation) in the fair value of the investments as incurred.

In general, option values are dependent upon a number of different factors, including the current market price of the underlying security, the strike price of the option, costs associated with holding a position in the underlying security including interest and dividends, the length of time until the option expires and an estimate of the future price volatility of the underlying security relative to the time period of the option.

Foreign currency forward contracts are agreements to buy or sell a currency at a specified exchange rate on a specified date. The fair value of a foreign currency forward is determined by the difference between the specified exchange rate and the closing exchange rate at December 31, 2015.

Notes to the Basic Financial Statements

NOTE 3 : Investments (continued)

Custodial Credit Risk – Derivative Instruments

As of December 31, 2015, all investments in derivative instruments are held in OCERS' name and are not exposed to custodial credit risk as described in the previous discussion of custodial credit risk.

Counterparty Credit Risk – Derivative Instruments

A summary of counterparty credit ratings relating to non-exchange traded derivatives in asset positions as of December 31, 2015 is as follows:

Counterparty Credit Risk Schedule for Derivative Instruments

As of December 31, 2015
(Dollars in Thousands)

Counterparty Name	S&P Rating	Foreign Currency Forward Contracts	Swaps	Total Fair Value
Bank of America, N.A.	A	$ 1,359	$ 3	$ 1,362
Barclays Bank PLC Wholesale	A-	307	-	307
BNP Paribas, S.A.	A+	43	-	43
Citibank N.A.	A	2,516	2	2,518
Credit Suisse FOB CME	A	-	785	785
Credit Suisse FOB ICE	A	-	240	240
Credit Suisse FOB LCH	A	-	8	8
Credit Suisse International	A	2	-	2
Deutsche Bank AG	BBB+	852	1	853
Goldman Sachs	BBB+	10	8	18
Goldman Sachs International	BBB+	69	97	166
HSBC Bank PLC	A	70	-	70
HSBC Bank USA	AA-	112	-	112
JPMorgan Chase Bank N.A.	A+	374	14	388
Morgan Stanley Bank and Co. International PLC	BBB+	363	-	363
Morgan Stanley Bank N.A	A	533	-	533
Morgan Stanley Capital Services Inc	BBB+	-	2	2
Morgan Stanley CME	BBB+	-	90	90
National Australia Bank Limited	AA-	1,064	-	1,064
Royal Bank of Canada (UK)	AA-	36	-	36
Societe Generale	A	13	-	13
Standard Chartered Bank, London	A+	18	-	18
UBS AG	A	11	43	54
Total Derivatives in Asset Position		**$ 7,752**	**$ 1,293**	**$ 9,045**

NOTE 3 : Investments (continued)

Interest Rate Risk – Derivatives

At December 31, 2015, OCERS is exposed to interest rate risk on its investments in various swap arrangements based on daily interest rates for LIBOR (London Interbank Offered Rate), UKRPI (UK Retail Price Index), Australian reference rate, Brazilian reference rate, European reference rates and Mexican swap rate. The following table illustrates the maturity periods of these investments.

Interest Rate Risk - Schedules for Derivative Instruments

As of December 31, 2015
(Dollars in Thousands)

Investment Type	Fair Value	Investment Maturities (in years)			
		Less Than 1	1-5	6-10	More than 10
Credit Default Swaps Bought	$ 296	$ -	$ 62	$ 234	$ -
Credit Default Swaps Written	(369)	(8)	255	-	(616)
Pay Fixed Interest Rate Swaps	(2,596)	-	(1,802)	(559)	(235)
Receive Fixed Interest Rate Swaps	(2,856)	-	(241)	(2,628)	13
Total	**$ (5,525)**	**$ (8)**	**$ (1,726)**	**$ (2,953)**	**$ (838)**

Derivative Instruments Highly Sensitive to Interest Rate Changes				
Investment Type	Receive Rate	Payable Rate	Fair Value	Notional
Pay Fixed Interest Rate Swaps	Variable 0-month HICP	Fixed 0.66%-0.99%	$ (87)	$ 15,969
Pay Fixed Interest Rate Swaps	Variable 3-month LIBOR	Fixed 1.25%-2.75%	(2,322)	490,950
Pay Fixed Interest Rate Swaps	Variable 6-month BBSW	Fixed 3.75%	(100)	1,673
Pay Fixed Interest Rate Swaps	Variable 6-month LIBOR	Fixed 1.00%-2.25%	(87)	8,650
Received Fixed Interest Rate Swaps	Fixed 8.86%-15.50%	Variable 0-month BRCDI	(2,152)	39,266
Received Fixed Interest Rate Swaps	Fixed 8.90%-12.23%	Variable 0-month CETIP	(1,369)	10,566
Received Fixed Interest Rate Swaps	Fixed 3.14%	Variable 1-month UKRPI	8	1,400
Received Fixed Interest Rate Swaps	Fixed 5.43%-7.635%	Variable 1-month TIIE	(150)	9,241
Received Fixed Interest Rate Swaps	Fixed 3.30%-3.40%	Variable 12-month UKRPI	7	1,150
Received Fixed Interest Rate Swaps	Fixed 2.00%	Variable 3-month LIBOR	712	55,400
Received Fixed Interest Rate Swaps	Fixed 3.25%	Variable 6-month BBSW	90	3,056
Received Fixed Interest Rate Swaps	Fixed 1.00%	Variable 6-month EURIB	(2)	543
Total Interest Rate Swaps			**$ (5,452)**	

Foreign Currency Risk – Derivatives

At December 31, 2015, OCERS is exposed to foreign currency risk on investments in swaps and forward currency contracts denominated in foreign currencies that may be adversely affected by changes in the currency exchange rates.

NOTE 3 : Investments (continued)

Foreign Currency Risk Schedule for Derivative Instruments

As of December 31, 2015
(Dollars in Thousands)

Currency Name	Options	Foreign Currency Forward Contracts: Net Receivables	Foreign Currency Forward Contracts: Net Payables	Swaps	Total Exposure
Austrailian Dollar	$ -	$ 55	$ (9)	$ (11)	$ 35
Brazillian Real	-	(52)	496	(3,522)	(3,078)
Canadian Dollar	-	(280)	52	-	(228)
Danish Krone	-	(13)	(4)	-	(17)
Euro Currency	12	364	3,332	(80)	3,628
Japanese Yen	-	1,271	(302)	-	969
Mexican Peso	-	-	10	(150)	(140)
New Israeli Sheqel	-	(8)	-	-	(8)
New Taiwan Dollar	-	-	18	-	18
Norwegian Krone	-	-	64	-	64
Pound Sterling	-	(153)	1,277	(82)	1,042
Singapore Dollar	-	(29)	-	-	(29)
South Korean Won	-	(140)	14	-	(126)
Swedish Krona	-	195	(63)	-	132
Swiss Franc	-	(44)	24	-	(20)
Yuan Renminbi	-	(1)	95	-	94
Total Foreign Currency	12	1,165	5,004	(3,845)	2,336
U.S. Dollar	3,259	-	-	(1,680)	1,579
Total	**$ 3,271**	**$ 1,165**	**$ 5,004**	**$ (5,525)**	**$ 3,915**

Rate of Return

For the year ended December 31, 2015, the annual money-weighted rate of return on the assets of the plan, net of investment expense, was -0.51%. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the timing of cash flows and the changing amounts actually invested.

Securities Lending

OCERS is authorized by investment policy and state law to lend its investment securities including domestic and international equities and fixed income to broker/dealers in exchange for collateral in the form of either cash or securities. Lent domestic and international securities are collateralized with an initial market value of not less than 102%, of fair value of the loaned securities. The lending agent receives cash and non-cash collateral for the securities on loan. There are no restrictions on the amount of securities that can be lent at one time. State Street Bank serves, in accordance with a Securities Lending Authorization Agreement, as OCERS' agent to loan domestic and international securities. State Street Bank does not have the ability to pledge or sell collateral securities delivered absent a borrower default.

Cash collateral received on loaned securities is invested together with the cash collateral of other qualified tax-exempt investors in a collective investment fund managed by State Street. The collective investment fund is not rated. In December 2010 the collective investment fund was divided into separate investment pools: 1) a liquidity pool and 2) a duration pool. As of December 31, 2015, the liquidity pool had an average life-final maturity of 74.2 days and a weighted average maturity (WAM) of 31.5 days. The duration pool had an average life-final maturity of 2,667.1 days and a WAM of 45.5 days. Because loans are terminable at will, the duration of the loans did not generally match the duration of the investments made with the cash collateral. The Securities Lending Authorization Agreement requires State Street to indemnify OCERS if the broker/dealer fails to return any borrowed securities. During 2015, there were no failures to return loaned securities or to pay distributions by the borrowers. Furthermore, there were no losses due to borrower defaults. The fair value of securities on loan and the total cash and non-cash collateral held as of December 31, 2015 was $121.3 million and $126.1 million, respectively. The following table shows fair values of securities on loan and cash collateral received by asset class:

NOTE 3 : Investments (continued)

Securities on Loan and Collateral Received

December 31, 2015
(Dollars in Thousands)

Security Lent for Cash Collateral	Fair Value of OCERS' Securities Lent	Cash Collateral Received	Non-Cash Collateral Received	Total Collateral Received
Domestic Fixed Income	$ 36,087	$ 25,335	$ 11,567	$ 36,902
Domestic Equities	27,026	27,562	386	27,948
Global Equities	23,383	20,784	3,659	24,443
International Equities	34,785	34,615	2,216	36,831
Total	**$ 121,281**	**$ 108,296**	**$ 17,828**	**$ 126,124**

NOTE 4 : Funding Policy - Pension Plan

Employer and employee/member pension plan contribution requirements are determined as a percentage of plan sponsor payrolls. In determining contributions, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. The projected total pensionable compensation for all OCERS' plan sponsors for the year ended December 31, 2015 was $1.6 billion. Employer contribution rates are determined using the entry age normal actuarial cost method based upon a level percentage of payroll. The employer contributions provide for both normal cost and an amount to amortize any unfunded or overfunded actuarial accrued liabilities. By definition, the normal cost is the annual contribution rate that, if paid annually from a member's first year of membership through the year of retirement, would accumulate to the amount necessary to fully fund the member's retirement benefit if all underlying assumptions are met. The actuarial report as of December 2012 established the contribution rates for the first six months of calendar year 2015 (second half of fiscal year 2014-2015), and the actuarial valuation report as of December 2013 established the contribution rates for the last six months of calendar year 2015 (first half of fiscal year 2015-2016). For the year ended December 31, 2015, employer contribution rates ranged from 21.08% of payroll to 56.35% depending upon the benefit plan type. Employer contributions were $571.3 million for the year ended December 31, 2015 of which approximately $365.9 million and $80.8 million were made by the County of Orange and the Orange County Fire Authority, respectively. Participating employers are required by Government Code sections 31453.5 and 31454 to contribute a percentage of covered salary to the Plan. The contribution requirements of participating active members and employers are established and may be amended by the OCERS' Board of Retirement. Participating employers may pay a portion of the participating active employees' contributions through negotiations and bargaining agreements. Employer contributions paid for by the employee through negotiated reverse pick-up arrangements are treated and reported as employee contributions. Employee contributions elected to be paid for by the employer under Section 31581.1 are treated and reported as employer contributions as these payments do not become part of the accumulated contributions of the employee and are immaterial. Employee contributions elected to be paid for by the employer under Section 31581.2 are treated and reported as employee contributions as these payments are credited to the employee account and become a part of their accumulated contributions.

Employee contributions are established by the OCERS' Board of Retirement and guided by state statute (Government Code sections 31621, 31621.5, 31621.8, 31639.25 and 31639.5) and vary based upon employee age at the time of entering OCERS membership. OCERS received $249.3 million in employee contributions for the year ended December 31, 2015. Average employee contribution rates for the year ended December 31, 2015 ranged between 9.08% and 15.63%.

NOTE 5 : Funding Policy - Health Care Plans

County of Orange Plan: Information pertaining to the funding policy of the County of Orange Retiree Medical Plan is included in the County's publicly available financial report and can be obtained from the County of Orange at 12 Civic Center Plaza, Santa Ana, California, 92702 or their website at **http://ac.ocgov.com/**.

Orange County Fire Authority Plan: Current, active employees received pay increases pursuant to collective bargaining agreements in order to contribute 4% of pay to the OCFA for post-employment (retirement) coverage. OCERS classifies plan contributions as being employer made due to the collective bargaining arrangement. The OCFA periodically remits plan contributions to the OCERS' administered trust in amounts authorized by the OCFA Board of Directors. Contributions totaled $2.6 million for the year ended December 31, 2015.

NOTE 6 : Plan Reserves

Employer and employee contributions are deposited into various legally-required reserve accounts established on a book value basis. Set forth below are the descriptions of OCERS' various reserve accounts:

Pension Reserve
Pension reserve represents funding set aside for retirement payments derived from employer contributions. Additions include transfers from the employer contribution reserve and interest credited. Deductions include benefit payments made to retired members.

Employee Contribution Reserve
Employee contribution reserve represents the balance of member contributions. Additions include member contributions and interest credited. Deductions include member refunds and transfers to the annuity reserve fund retirement benefits.

Employer Contribution Reserve
Employer contribution reserve represents the balance of employer contributions for active member future retirement benefits. Additions include employer contributions. Deductions include transfers to the pension reserves in order to fund retirement benefits, disability benefits and death benefits.

Annuity Reserve
Annuity reserve represents funding set aside for retirement payments derived from contributions made by members. Additions include transfers from the employee contribution reserve and interest credited. Deductions include benefit payments made to retired members.

Contra Account
A positive balance in this account represents excess earnings. A credit balance in this account represents the amount of interest credited to the reserve accounts that has not been paid for out of current or excess earnings. Additions include net increases to the fiduciary net position, which are decreased by interest credited to the reserves account.

County Investment Account (POB Proceeds) Reserve
County investment account (POB Proceeds) reserve represents the remaining proceeds from the County of Orange's 1994 Pension Obligation Bond issuance. The remaining proceeds are utilized, in accordance with a long standing agreement between OCERS and the County of Orange, to offset a portion of the annual actuarially-determined contribution rate for the County of Orange. In 2015, none of the remaining proceeds were utilized to offset the actuarially determined contributions for the County of Orange.

Total Deferred Return
The total deferred return represents the balance of deferred earnings created by a five-year smoothing of actual gains and losses compared to the assumed investment rate of return.

Health Care Plan Reserves
Health care plan reserves represent assets held to pay medical benefits for eligible retirees of the 401(h) health care plans. Additions include employer contributions and investment earnings. Deductions include medical payments.

Total Fund Reserves

As of December 31, 2015
(Dollars in Thousands)

Valuation Reserves	
Pension Reserve	$ 7,609,074
Employee Contribution Reserve	2,691,259
Employer Contribution Reserve	1,912,724
Annuity Reserve	1,119,597
Contra Account	(1,105,626)
Non-Valuation Reserves	
County Investment Account Reserve	108,789
Total Pension Fund Reserves (smoothed market actuarial value)	**12,335,817**
Total Deferred Return	(678,499)
Net Position Restricted for Pensions including Non-Valuation Reserves	**11,657,318**
Health Care Plan Reserve	238,776
Net Position-Total Fund	**$ 11,896,094**

Notes to the Basic Financial Statements

NOTE 7 : Administrative Expenses - Pension

As permitted by Government Code (Code) Section 31580.2, the Board of Retirement adopts an annual budget, financed from the System's assets, covering the entire expenses for the administration of OCERS. The Code provides that administrative expenses incurred in any year are to be charged against the earnings of the pension trust fund and are not to exceed twenty-one hundredths of one percent (0.21%) of OCERS' actuarial accrued liabilities, excluding investment related costs and expenditures for computer software, hardware and related technology consulting services. Administrative expenses incurred in calendar year 2015 were within the limits established by the Code. The administrative budget for the year ended December 31, 2015 was as follows:

Administrative Expense Compared to Actuarial Accrued Liability

For the Year Ended December 31, 2015
(Dollars in Thousands)

Actuarial Accrued Liability (AAL) as of 12/31/14	$ 16,413,124
Maximum Allowed for Administrative Expense (AAL * 0.21%)	34,468
Actual Administrative Expense for the Year Ended December 31, 2015[1]	11,824
Excess of Allowed Over Actual Expense	**$ 22,644**
Actual Administrative Expense as a Percentage of Actuarial Accrued Liability as of 12/31/14	0.07%

[1] Administrative Expense Reconciliation

Administrative Expense per Statement of Changes in Fiduciary Net Position	$ 12,521
Less Administrative Expense Not Considered per CERL Section 31596.1	(697)
Administrative Expense Allowable Under CERL Section 31580.2	**$ 11,824**

NOTE 8 : Commitments

At December 31, 2015, OCERS had outstanding commitments of $1.7 billion to various limited partnerships investment portfolios. The following table details, by asset class, the unfunded commitments:

Asset Class	**Unfunded Commitments (Dollars in Thousands)**
Private Equity*	$ 589,288
Real Return*	374,047
Diversified Credit	523,510
Real Estate	229,410
Total Unfunded Commitments	**$ 1,716,255**

* Private Equity and Real Return do not include inactive funds.

NOTE 9 : Contingencies

At December 31, 2015, OCERS was involved in various litigation matters. In management's opinion, and after consultation with legal counsel, the outcome of these matters is not expected to have a material adverse effect on OCERS' financial position.

Notes to the Basic Financial Statements

NOTE 10 : Pension Disclosures

The net pension liability was measured as of December 31, 2015. The plan assets were valued as of the measurement date while the total pension liability was determined based upon rolling forward the total pension liability from the actuarial valuation as of December 31, 2014. The components of the net pension liability as of December 31, 2015 are as follows:

Net Pension Liability

As of December 31, 2015
(Amounts in Thousands)

Total Pension Liability	$ 17,373,923
Less: Plan Fiduciary Net Position	(11,657,318)
Net Pension Liability	**$ 5,716,605**
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	**67.10%**

Actuarial Assumptions

Actuarial valuations involve estimates of the value of reported amounts and assumptions about the probability of events far into the future. Examples include future salary increases and investment earnings, expected retirement age, life expectancy and other relevant factors. Actuarially determined amounts are subject to continual revision as results are compared to past expectations and new estimates are made about the future. OCERS' actuary and Board of Retirement review the economic and demographic assumptions every three years and the actuarially determined contributions annually.

In preparing the actuarial valuation, the actuary has complied with the parameters set forth in GASB Statement No. 67 and employed generally accepted actuarial methods and assumptions to measure the total pension liability of plan sponsors. The actuary's calculations are based upon member data and financial information provided by the System. Projection of benefits for financial reporting purposes is based on all benefits estimated to be payable through the System to current active and inactive employees as a result of their past service and their expected future service.

The total pension liability at December 31, 2015 was determined by rolling forward the total pension liability from the an actuarial valuation as of December 31, 2014. The actuarial assumptions used were based on the results of an experience study for the period from January 1, 2011 through December 31, 2013. Following are the key methods and assumptions used for the total pension liability as of December 31, 2015:

Actuarial Information:	
Valuation Date	December 31, 2014
Actuarial Experience Study	Three Year Period Ending December 31, 2013
Actuarial Cost Method	Entry age normal
Actuarial Assumptions:	
Investment Rate of Return	7.25% net of pension plan investment expense, including inflation
Inflation Rate	3.00%
Projected Salary Increases	General: 4.25% to 13.50% and Safety: 5.00% to 17.50% Vary by service, including inflation
Cost of Living Adjustments	3.00% of retirement income

Notes to the Basic Financial Statements

NOTE 10 : Pension Disclosures (continued)

The actuarial assumptions used in the December 31, 2014 actuarial valuation were based on the triennial experience study and economic assumptions study completed in 2014 for the three-year experience period ending December 31, 2013.

Mortality Assumptions

The mortality assumptions used in the total pension liability at December 31, 2015 were based on the results of the actuarial experience study for the period January 1, 2011 through December 31, 2013 using the RP-2000 Combined Healthy Mortality Table projected with the Society of Actuaries Scale BB to 2020. For healthy general members, no adjustments are made. For healthy safety members, the ages are set back two years. For general members that are disabled, the ages are set forward six years for males and three years for females. For safety members that are disabled, no adjustments are made. Beneficiaries are assumed to have the same mortality as a general member of the opposite sex who is receiving a service (non-disability) retirement. The mortality assumption for all groups is then customized to account for OCERS' plan membership experience.

Long-Term Expected Real Rate of Return

The long-term expected rate of return on pension plan investments was determined using a building-block method in which expected future real rate of return (expected returns, net of inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rate of return by the target asset allocation percentage and by adding expected inflation and deducting expected investment expenses. The target allocation and projected arithmetic real rate of return for each major asset class, after deducting inflation, but before investment expenses, used in the derivation of the long-term expected investment rate of return assumption are summarized in the following table:

Long-Term Expected Real Rate of Return

For the Year Ended December 31, 2015
(Amounts in Thousands)

Asset Class	Investment Classification	Target Allocation	Weighted Average Long-Term Expected Real Rate of Return (Arithmetic)
Large Cap U.S. Equity	Domestic Equity Securities	14.90%	5.92%
Small/Mid Cap U.S. Equity	Domestic Equity Securities	2.73%	6.49%
Developed International Equity	International Equity Securities	10.88%	6.90%
Emerging International Equity	Global Equity Securities	6.49%	8.34%
Core Bonds	Domestic Fixed Income	10.00%	0.73%
Global Bonds	Global Fixed Income	2.00%	0.30%
Emerging Markets Debt	Emerging Markets Debt	3.00%	4.00%
Real Estate	Real Estate	10.00%	4.96%
Diversified Credit (U.S. Credit)	Diversified Credit	8.00%	4.97%
Diversified Credit (Non-U.S. Credit)	Diversified Credit	2.00%	6.76%
Hedge Funds	Absolute Return	7.00%	4.13%
Global Tactical Asset Allocation	Absolute Return	7.00%	4.22%
Real Return	Real Return	10.00%	5.86%
Private Equity	Private Equity	6.00%	9.60%
	Total	**100.00%**	

Notes to the Basic Financial Statements

NOTE 10 : Pension Disclosures (continued)

Discount Rate

The discount rate used to measure the total pension liability was 7.25% for the year ended December 31, 2015. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the actuarially determined contribution rates. For this purpose, only employer contributions that are intended to fund benefits for current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs for future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments for 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 as of December 31, 2015.

The following table represents the net pension liability of participating employers calculated using the discount rate of 7.25%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1.00% lower or 1.00% higher than the current rate:

Sensitivity of Net Pension Liability to Changes in the Discount Rate

As of December 31, 2015
(Amounts in Thousands)

Net Pension Liability	1% Decrease (6.25%)	Current Discount Rate (7.25%)	1% Increase (8.25%)
December 31, 2015	$ 8,135,499	$ 5,716,605	$ 3,726,283

Notes to the Basic Financial Statements

NOTE 11 : Health Care Plan Disclosures

The Schedule of Funding Progress presented in the Required Supplementary Information shows the trend information regarding the OCFA Health Care Plan's actuarial value of assets, liabilities and funding status on a multi-year basis.

Actuarial valuations involve estimates of the value of reported amounts and assumptions about the probability of events far into the future. Actuarially determined amounts are subject to continual revision as results are compared to past expectations and new estimates are made about the future. Calculations are based on the benefits provided under the terms of the substantive plan in effect at the time of each valuation on the pattern of sharing of costs between the employer and plan members to that point. Actuarial calculations reflect a long-term perspective.

Orange County Fire Authority Health Care Plan

(Dollars in Thousands)

Actuarial Valuation Date July 1	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL)	Funded Ratio	Covered Payroll	UAAL as a Percentage of Covered Payroll
2014	$ 36,945	$ 179,056	$ 142,111	20.63%	$ 66,021	215.25%

The following summarizes the actuarial assumptions and methods used in the most recent actuarial valuation of December 31, 2014, which was used to determine 2015 contributions.

Actuarial Information	2014
Valuation Date	July 1, 2014
Actuarial Cost Method	Entry age normal
Amortization Method	Level-dollar basis
Remaining Amortization Period	22 years closed (declining)
Asset Valuation Method	Market value
Actuarial Assumptions	**2014**
Investment Rate of Return	7.25%
Inflation Rate	3.25%
Projected Salary Increases	N/A, amortization method is based on level-dollar payment
Medical Cost Trend Rate	7.75% trending down to 5% over 7 years

1970
Floppy Disk
First Microprocessor
(1970-1971)

1971
Video Home System (VHS)

1972
Pong

1973
Ethernet

1974
Rubik's Cube

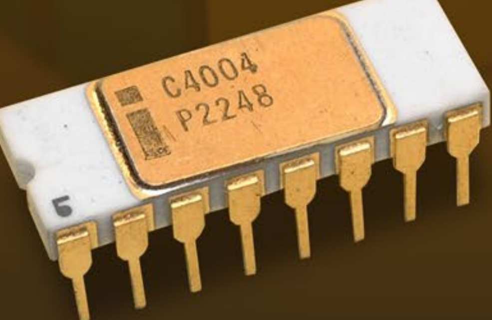
SECTION II

FINANCIAL

REQUIRED SUPPLEMENTARY INFORMATION

1970's

The 1970's began with the lowering of the voting age from 21 to 18 years old, followed by the U.S. and allied forces pulling out of Vietnam, Watergate and the resignation of President Nixon. The technological advances for the consumer included the first affordable microprocessor which in turn allowed for the introduction of the personal or home computer. Pong became the first commercially successful video game, then along came the game Space Invaders. NASA introduced the first space shuttle, and the MRI (Magnetic Resonance Imaging) Scanner is first tested.



1975	1976	1977	1978	1979
IBM Model 3800 Laser Printer	Apple Computer	Atari 2600	Artificial Insulin	Cell Phone

Schedule of Changes in Net Pension Liability of Participating Employers

For the Years Ended December 31, 2013 through 2015[1]
(Amounts in Thousands)

	2015	2014	2013
Total Pension Liability			
Service Cost	$ 439,454	$ 438,600	$ 444,838
Interest	1,197,308	1,153,352	1,109,002
Change of Benefit Terms	-	-	-
Differences Between Expected and Actual Experience	(205,463)	(327,402)	(295,483)
Changes of Assumptions	-	(127,729)	-
Benefit Payments, Including Refunds of Employee Contributions	(675,963)	(630,678)	(586,284)
Net Change in Total Pension Liability	$ 755,336	$ 506,143	$ 672,073
Total Pension Liability - Beginning	16,618,587	16,112,444	15,440,371
Total Pension Liability - Ending (a)	$ 17,373,923	$ 16,618,587	$ 16,112,444
Plan Fiduciary Net Position			
Contributions - Employer [2]	$ 571,298	$ 625,520	$ 427,095
Contributions - Employee	249,271	232,656	209,301
Net Investment Income/(Loss)	(10,873)	499,195	1,152,647
Benefit Payments, Including Refunds of Employee Contributions	(675,963)	(630,678)	(586,284)
Administrative Expense	(12,521)	(11,905)	(11,705)
Net Change in Plan Fiduciary Net Position	$ 121,212	$ 714,788	$ 1,191,054
Plan Fiduciary Net Position - Beginning	11,536,106	10,821,318	9,630,264
Plan Fiduciary Net Position - Ending (b)	$ 11,657,318	$ 11,536,106	$ 10,821,318
Net Pension Liability (a) - (b) = (c)	$ 5,716,605	$ 5,082,481	$ 5,291,126
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability (b)/(a)	67.10%	69.42%	67.16%
Covered Payroll [3] (d)	$ 1,521,036	$ 1,513,206	$ 1,494,745
Plan Net Pension Liability as a Percentage of Covered Payroll (c)/(d)	375.84%	335.88%	353.98%

[1] Data for years prior to 2013 is not available. Information will be presented over ten years as it becomes available prospectively.
[2] Reduced by discount for prepaid contributions and transfers from County Investment Account.
[3] In accordance with GASB Statement No. 82, *Pension Issues*, covered employee payroll has been restated to reflect covered payroll which represents payroll on which contributions to a pension plan are based.

Schedule of Investment Returns

For the Years Ended December 31, 2015 and 2014[1]

Years Ended December 31	Annual Money Weighted Rate of Return, Net of Investment Expense
2014	4.64%
2015	-0.51%

[1] Data for years prior to 2014 is not available. Information will be presented over ten years as it becomes available prospectively.

Schedule of Employer Contributions

For the Years Ended December 31, 2006 through 2015
(Amounts in Thousands)

Years Ended December 31	Actuarially Determined Contributions[1,2]	Actual Contributions[1,2]	Contribution Deficiency / (Excess)[4]	Covered Payroll[3]	Contributions as a % of Covered Payroll[3]
2006	$ 227,368	$ 277,368	$ -	$ 1,301,212	21.32%
2007	326,736	326,736	-	1,410,559	23.16%
2008	359,673	360,365 [4]	(692)	1,526,113	23.61%
2009	337,496	338,387 [4]	(891)	1,598,888	21.16%
2010	372,437	372,437	-	1,511,569	24.64%
2011	387,585	387,585	-	1,498,914	25.86%
2012	406,521	406,521	-	1,497,475	27.15%
2013	426,020	427,095 [4]	(1,075)	1,494,745	28.57%
2014	476,320	625,520 [4]	(149,200)	1,513,206	41.34%
2015	502,886	571,298 [4]	(68,412)	1,521,036	37.56%

[1] Excludes employer pickup of member contributions and transfers from County Investment Account (funded by pension obligation proceeds held by OCERS). Those transfers are as follows:

2009	$34,900	2013	$5,000
2010	11,000	2014	5,000
2011	11,000	2015	0
2012	5,500		

[2] Reduced by discount for prepaid contributions

[3] In accordance with GASB Statement No. 82, *Pension Issues*, covered employee payroll has been restated to reflect covered payroll which represents payroll on which contributions to a pension plan are based .

[4] Includes additional contributions made by Plan Sponsors towards the reduction of their UAAL.

Notes to the Required Supplementary Information

Actuarial Valuation Methods and Assumptions

The actuarial determined contribution rates in the schedule of employer contributions are calculated as of December 31. Rates are effective eighteen months after the valuation date for the fiscal year that begins July 1. The following actuarial methods and assumptions were used to calculate the actuarially determined contributions for the year ended December 31, 2015:

Valuation Date	Actuarially determined contribution rates for the first six months of calendar year 2015 or the second half of fiscal year 2014-2015 are calculated based on the December 31, 2012 valuation. Actuarially determined contribution rates for the last six months of calendar year 2015 or the first half of fiscal year 2015-2016 are calculated based on the December 31, 2013 valuation.
Actuarial Cost Method	Entry Age Actuarial Cost Method
Amortization Method	Level percent of payroll for total unfunded actuarial accrued liability
Remaining Amortization Period	
December 31, 2012 Valuation	22 years closed (declining) amortization of outstanding balance of December 31, 2004 UAAL. The outstanding balance of the UAAL established in the December 31, 2009 valuation as a result of including additional premium pay items as pensionable salary and the new UAAL established in the December 31, 2010 valuation as a result of reallocating contributions and benefit payments among Rate Groups are also amortized over a 22- year period in the December 31, 2012 valuation. Any increases or decreases in UAAL that arise in future years due to actuarial gains or losses will be amortized over separate 15-year periods. Any increases or decreases in UAAL due to changes in actuarial assumptions are amortized over separate 30-year periods.
December 31, 2013 Valuation	Effective December 31, 2013, the outstanding balance of the UAAL from the December 31, 2012 valuation was combined and re-amortized over a declining 20-year period. Any changes in UAAL due to actuarial gains or losses or due to changes in assumptions or methods will be amortized over separate 20-year periods. Any changes in UAAL due to plan amendments will be amortized over separate 15-year periods and any change in UAAL due to early retirement incentive programs will be amortized over a separate period of up to 5 years.
Asset Valuation Method	The Actuarial Value of Assets is determined by recognizing any difference between the actual and the expected market return over a five-year period. The Valuation Value of Assets is the Actuarial Value of Assets reduced by the value of the non-valuation reserves.
Actuarial Assumptions:	
December 31, 2012 Valuation	
Investment Rate of Return	7.25% net of pension plan investment expense, including inflation
Inflation Rate	3.25%
Real Across-the-Board Salary Increase	0.50%
Projected Salary Increases	General: 4.75% to 13.75% and Safety: 4.75% to 17.75%, vary by service, including inflation
Cost of Living Adjustments	3.00% of retirement income
Other Assumptions	Same as those used in the December 31, 2012 funding actuarial valuation (copy of report available online)
December 31, 2013 Valuation	
Investment Rate of Return	7.25% net of pension plan investment expense, including inflation
Inflation Rate	3.25%
Real Across-the-Board Salary Increase	0.50%
Projected Salary Increases	General: 4.75% to 13.75% and Safety: 4.75% to 17.75%, vary by service, including inflation
Cost of Living Adjustments	3.00% of retirement income
Other Assumptions	Same as those used in the December 31, 2013 funding actuarial valuation (copy of report available online)

Significant Factors Affecting Trends in Actuarial Information – Pension Plan

Changes in Benefit Terms

2012

- With the exception of OCTA, members with membership date on or after January 1, 2013 will be placed in PEPRA tiers: Plan T (1.62% at 65 PEPRA – General); Plan U (2.5% at 67 PEPRA – General); or Plan V (2.7% at 57 PEPRA – Safety).

2011

- Effective April 20, 2012, certain employees previously employed at the City of Santa Ana became employees of OCFA General and OCFA Safety and are eligible for benefits under Plan N (2 % at 55) and Plan F (3% at 50), respectively.
- Effective July 1, 2012, new General employees hired by the City of San Juan Capistrano will be covered under General Plan S (2% at 57).

2010

- LAFCO adopted an optional 1.62% of final average salary at age 65 for members hired on or after July 1, 2010.
- County Managers unit adopted an optional 1.62% of final average salary at age 65 for members hired on or after August 17, 2010.
- Sanitation District adopted a 1.64% of final average salary at age 57 for members within Supervisors and Professional unit hired on or after October 1, 2010.
- OCFA adopted a 3.00% of final average salary at age 55 for Safety members within the Executive Management unit hired on or after July 1, 2011 and for all Safety members hired on or after July 1, 2012.
- OCFA adopted a 2.00% of final average salary at age 55 for General members hired on or after July 1, 2011.

2009

- County and the Courts adopted optional 1.62% at 65 formula for General Member Employees entering OCERS after May 7, 2010.
- County Law Enforcement Members adopted 3% at 55 formula for Safety Members entering OCERS on or after April 9, 2010.

2007

- OC Mosquito and Vector Control District terminated their participation in OCERS effective January 4, 2007.
- Retirement formula for the Orange County Cemetery District changed to 2% at 55 effective December 7, 2007.

2006

- The City of Rancho Santa Margarita terminated their participation in OCERS effective November 26, 2006.

Significant Factors Affecting Trends in Actuarial Information – Pension Plan

(continued)

Changes in Assumptions and Methods

2014

- The inflation rate was reduced from 3.25% to 3.00%
- Total wage inflation and payroll growth was reduced from 3.75% to 3.50%.
- Inclusion of additional cash-out assumptions in developing basic member contribution rates in the legacy plans.
- Mortality rates for after service retirement were changed to reflect longer life expectancies for Safety members and shorter life expectancies for General members and longer life expectancies for both General and Safety members for after disability retirement.

2013

- The outstanding balance of the December 31, 2012 UAAL was combined and re-amortized over a 20-year period.

2012

- The investment rate of return was decreased from 7.75% to 7.25%
- The inflation rate was decreased from 3.50% to 3.25%.
- Projected salary increases for general members of 4.50% to 11.50% changed to 4.75% to 13.75% and safety members changed from 4.50% to 13.50% to 4.75% to 17.75%

2011

- Changes in mortality, disability, termination, retirement, salary scale, and annual pay-off assumptions in the December 31, 2010 triennial experience study increased the pension plan UAAL by $364 million.

2009

- Adjustments to correct the under-reporting of certain premium pay items in prior years' pensionable salary data resulted in a $228 million increase in UAAL.

2008

- Individual salary increase assumptions are changed from age based to service based.
- Annual leave payoff assumptions were increased for General members.

Schedule of Funding Progress - OPEB Plan Orange County Fire Authority

(Dollars in Thousands)

Actuarial Valuation Date July 1	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL)	Funded Ratio	Covered Payroll	UAAL as a Percentage of Covered Payroll
2010	$ 21,550	$ 147,710	$ 126,160	14.59%	$ 81,391	155.00%
2012	28,910	156,623	127,713	18.46%	75,432	169.31%
2014	36,945	179,056	142,111	20.63%	66,021	215.25%

Schedule of Employer Contributions - OPEB Plan Orange County Fire Authority

(Dollars in Thousands)

Plan Year Ended June 30	Annual Required Contributions	Actual Contributions	Percentage Contributed
2010	$ 8,878	$ 4,475	50.41%
2012	13,520	4,558	33.71%
2014	14,560	4,693	32.23%

Significant Factors Affecting Trends in Actuarial Information – OPEB Plan

2014 Changes in OPEB Plan Provisions and Actuarial Assumptions

- The July 1, 2014 OPEB: OCFA highlights include the following:
  - The 5.00% discount rate reflects a blended discount rate as OCFA is currently partially funding the annual required contribution (ARC). The blended rate reflects a short-term rate of approximately 4.25% and a long-term expected rate of return of invested assets of 7.25%.
  - The inflation rate is 3.25% based on recommendations from the actuary.
  - The valuation reflects several assumption changes including an update to the mortality and turnover tables, as well as changes to the spouse participation assumption to reflect actual experience.

2012 Changes in OPEB Plan Provisions and Actuarial Assumptions

- The July 1, 2012 OPEB: OCFA highlights include the following:
  - The 5.50% discount rate reflects a blended discount rate as OCFA is currently partially funding the ARC. The blended rate reflects a short-term rate of approximately 4.00% and a long-term expected rate of return of invested assets of 7.75%.
  - The inflation rate is 3.50% based on recommendations from the actuary.
  - The valuation reflects several assumption changes including an update to the mortality and turnover tables, as well as changes to the spouse participation assumption to reflect actual experience.

2010 Changes in OPEB Plan Provisions and Actuarial Assumptions

- The July 1, 2010 OPEB: OCFA highlights include the following:
  - For this valuation, the discount rate was based on a partially funded plan and the discount rate was lowered from 7.75% to 5.50% to reflect the fact that the plan is currently partially funded. The discount rate is a blended rate that reflects the proportionate amounts of plan and employer assets expected to be used.
  - The change in the discount rate increased the UAAL by $44 million.

1980	1981	1982	1983	1984
Pac Man Introduced	First IBM PC	Camcorder	Nintendo Entertainment System	CD-ROM

SECTION II

FINANCIAL

OTHER SUPPLEMENTARY INFORMATION

1980's

At the start of the 1980's, the world was saddened by the death of John Lennon. The following year brought happiness with the wedding of Lady Diana and Prince Charles. 1986 brought the Space Shuttle Challenger disaster, while 1989 saw the fall of the Berlin Wall and the end of the Cold War. The 1980's signaled the start of the personal computer age. As technology improved, the size grew smaller and smaller and more and more powerful. Innovation in both hardware and software, along with a reduction in cost, integrated computers into our daily lives.

1985	1986	1987	1988	1989
Windows O.S.	Disposable Camera	Disposable Soft Contact Lens	Laser Eye Surgery	Digital Camera

Schedule of Administrative Expenses

For the Year Ended December 31, 2015
(Dollars in Thousands)

Pension Fund Administrative Expenses	
Expenses Subject to the Statutory Limit	
Personnel Services	
Employee Salaries and Benefits	$ 8,812
Board Members' Allowance	13
Total Personnel Services	8,825
Office Operating Expenses	
Professional Services	1,201
Operating Expenses	1,031
Rent/Leased Real Property	624
Depreciation/Amortization	143
Total Office Operating Expenses	2,999
Total Expenses Subject to the Statutory Limit	11,824
Expenses Not Subject to the Statutory Limit	
Actuarial Fees	373
Information Technology Professional Services	233
Hardware	91
Total Expenses Not Subject to the Statutory Limit	697
Total Pension Fund Administrative Expenses	**12,521**
Health Care Fund - County Administrative Expenses	**22**
Health Care Fund - OCFA Administrative Expenses	**22**
Total Administrative Expenses	**$ 12,565**

Schedule of Investment Expenses

For the Year Ended December 31, 2015
(Dollars in Thousands)

Investment Management Fees *	
Real Estate	$ 9,407
Absolute Return	8,371
International Equity Securities	5,375
Real Return	4,192
Emerging Markets Equity	3,522
Domestic Fixed Income	3,278
Global Equity Securities	1,564
Diversified Credit	1,414
Private Equity	1,243
Domestic Equity Securities	870
Total Investment Management Fees	**39,236**
Foreign Income Tax/Other	**12,883**
Other Investment Expenses	
Investment Department Expenses	1,372
Consulting/Research Fees	1,207
Legal Services	635
Custodian Services	300
Total Other Investment Expenses	**3,514**
Security Lending Activity	
Security Lending Fees	257
Rebate Fees	34
Total Security Lending Activity	**291**
Total Investment Expenses	**$ 55,924**

* Does not include undisclosed fees deducted at source.

Schedule of Payments for Professional Services

For the Year Ended December 31, 2015
(Dollars in Thousands)

Type of Services *

Professional Expenses Subject to the Statutory Limit	
Legal Counsel	$ 332
Medical/Disability Services	244
Information Technology Services	207
Audit Services	149
Other Legal Services	90
Administrative Services	65
Finance Services	60
Other Consulting/Services	54
Total Professional Expenses Subject to the Statutory Limit	**1,201**
Professional Expenses Not Subject to the Statutory Limit	
Investment Consulting Research Fees	1,207
Legal Services	635
Actuarial Services	373
Custodian Services	300
Information Technology Consultants	233
Investment Service Providers	25
Total Professional Expenses Not Subject to the Statutory Limit	**2,773**
Total Payments for Professional Expenses	**$ 3,974**

* Detail for fees paid to investment professionals is presented in the Investments Section.

Statement of Changes in Assets and Liabilities - OPEB Agency Fund

For the Year Ended December 31, 2015
(Dollars in Thousands)

	Beginning Balance December 31, 2014	Additions	Deductions	Ending Balance December 31, 2015
Assets				
Cash and Cash Equivalents	$ 117	$ 912	$ 837	$ 192
Domestic Equity Securities	6,997	1,231	1,238	6,990
International Equity Securities	2,521	512	564	2,469
Domestic Fixed Income	4,417	173	248	4,342
Total Assets	**$ 14,052**	**$ 2,828**	**$ 2,887**	**$ 13,993**
Liabilities				
Due to Employers	$ 14,052	$ 2,828	$ 2,887	$ 13,993
Total Liabilities	**$ 14,052**	**$ 2,828**	**$ 2,887**	**$ 13,993**

1990	1991	1992	1993	1994
Hubble Telescope was launched	Internet (First web page went live)	Simon (First smart phone)	Pentium Processor	Sony Playstation Game Console was released

SECTION III

INVESTMENTS

1990's

The world became more connected in the 1990's. East and West Germany were united, the European Union was created, the Channel Tunnel was completed, the U.S. and Russia signed the Strategic Arms Reduction Treaty, and Nelson Mandela became the President of South Africa. Technological connectivity grew with the availability of the world wide web, the speed of the pentium processor, new software and search engines, such as "Ask Jeeves" and Google. By the end of the 1990's owning a mobile phone has become a fact of life, keeping everyone connected.

1995	1996	1997	1998	1999
Digital Video Disc (DVD)	Nintendo 64 Game Console	Mars Pathfinder Lands on Mars	iMac Computer	TiVo was introduced

Investment Consultant's Statement

NEPC, LLC

April 13, 2016

Dear Board Members:

This letter reviews the investment performance of the Orange County Employees Retirement System (OCERS) for the year ending December 31, 2015.

The primary objective of OCERS is to prudently and expertly invest the System's assets, to ensure the System's ability to pay promised benefits to participants and their beneficiaries, consistent with governing law and best industry practices. In pursuit of this objective, OCERS' Board periodically evaluates the System's liabilities, expected contributions and potential investment returns from differing investment allocations. The Board selects a strategic policy mix that best balances growth potential and acceptable risk. A policy benchmark index is constructed to mirror the system's strategic asset allocation policy. This policy benchmark is used to evaluate the performance of the Fund, and the contribution of managers employed by the Fund.

The System's custodian, State Street Bank and Trust Company, independently prepared the underlying performance data used in this report. The performance calculations were made in compliance with industry performance calculation standards. NEPC, LLC serves as OCERS' independent investment consultant and evaluates the performance of the fund in relation to the System's performance objectives, market benchmarks, and appropriate peer groups of other public pension funds.

Calendar Year 2015 Market Review

The S&P 500 was up 1.4% and the Barclays Aggregate Index rose 0.5%, while small-cap equities and high-yield bonds were off nearly 4.5%. Global markets suffered under the strain of a strong US dollar as the MSCI EAFE Index declined 0.8%, emerging markets equities and local debt were down nearly 15%, and commodities plunged.

US equities ended a volatile 2015 on a strong note. Despite a solid last quarter, the year saw the lowest gains for the S&P 500 since 2008 and for the Russell 2000 since 2011. Earlier in the quarter, equities rallied amid robust corporate earnings and macroeconomic data. Subsequently, stocks faltered amid plunging oil prices and concerns around the impact of a stronger US dollar as the Fed tightens monetary policy. The consumer discretionary sector led performance in large caps in 2015 while healthcare dominated small caps; energy was the worst performing sector in both. Growth bested value in large and small equities. Meanwhile, developed markets recouped a portion of their third quarter losses, gaining 4.8% in the last quarter. For the year, international developed equities were down around 0.8%. The energy and materials sectors drove losses, trading down over 16% in 2015; consumer staples and healthcare were the strongest performers, up over 8%. Emerging economies returned 0.7% during the fourth quarter as the Fed's 25 basis points rate hike—its first since 2006—drove markets lower.

At home, the Fed's well telegraphed rate hike drove government yields higher in the fourth quarter, resulting in losses for Treasuries with maturities of less than one year. Within corporate credit, the precipitous selloff in commodity-related sectors was unrelenting. Consequently, high-yield debt was the worst performer during the quarter and in 2015, losing 2.07% and 4.47%, respectively; in high yield, energy and metals and mining lost nearly 25% last year.

OCERS Portfolio

The Plan returned +0.1%, gross of fees, for the fiscal year ending December 31, 2015, which ranked in the 60th percentile of the InvestorForce Public Funds Greater than $1 Billion Universe. The recent

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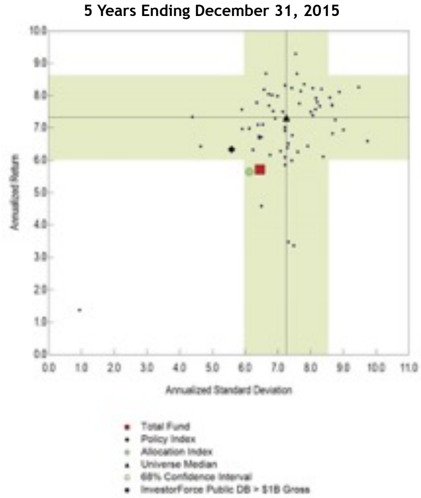
BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | SAN FRANCISCO

NEPC, LLC

underperformance relative to peers is the result of OCERS reducing the Plan's allocation to equities to protect against the downside and reduce volatility.

For the five-year period ending December 31, 2015, the Plan returned 5.7% gross of fees per annum, below the actuarial target of 7.25%. The Plan's five-year volatility, as measured by standard deviation, ranked in the 19th percentile of its peers, while the risk-adjusted return of the portfolio as measured by the Sharpe Ratio, ranks in the 77th percentile of the universe. However, longer term risk-adjusted returns rank in the top quartile versus peers.

ICC Public Funds Greater than $1 Billion Universe Risk-Return Comparison (Gross of Fees)
5 Years Ending December 31, 2015



With the majority of the global capital markets experiencing robust valuations, increasing the potential for a market correction, diversification can help protect portfolios from experiencing significant declines. Diversification aims to reduce volatility and better equalize the contribution to overall plan risk across a variety of asset classes with uncorrelated return patterns.

Sincerely,

Don Stracke
Senior Consultant, CFA, CAIA

[1]As of December 31, 2015, the InvestorForce Public Funds Greater than $1 Billion Universe was comprised of 64 total funds with approximately $503 billion in assets. Universe rankings are based on gross of fee performance.

2

Investment Returns

The table below details the annualized rates of return for the different asset categories over various time periods ended December 31, 2015. The returns for each asset class represent the composite returns of all the manager portfolios within the asset class. Returns are gross of fees except for absolute return, diversified credit, private equity, real return, emerging markets debt, and real estate, where some of the fees are deducted at source. The method of computation of investment returns is time-weighted approximation.

	1 Year	3 Year	5 Year
Domestic Equity (%)	**0.57**	**14.29**	**11.68**
Russell 3000 Index (%)	0.48	14.74	12.18
Global Equity (%)	**-3.52**	**8.14**	**7.40**
MSCI World Index (%)	-0.87	9.63	7.59
International Equity (%)	**3.25**	**6.79**	**4.99**
MSCI EAFE Index (%)	-0.81	5.01	3.60
Emerging Markets Equity (%)	**-13.88**	**-4.61**	**-3.78**
MSCI EME Index (%)	-14.92	-6.76	-4.81
Domestic Fixed (%)	**-2.80**	**0.92**	**3.48**
Barclays Capital Universal Index (%)	0.43	1.51	3.46
Emerging Markets Debt (%)	**-11.41**	**N/A**	**N/A**
Emerging Markets Debt Target Index (1) (%)	-9.53	N/A	N/A
Diversified Credit (%)	**1.39**	**5.49**	**10.44**
Diversified Credit Target Index (2) (%)	-2.49	2.12	4.32
Absolute Return (%)	**-0.19**	**3.52**	**4.29**
Absolute Return Target Index (3) (%)	5.35	5.29	5.46
Real Return (%)	**-7.94**	**-4.30**	**0.36**
Real Return Target Index (4) (%)	3.75	5.03	6.61
Short-Term Investments (%)	**0.14**	**0.36**	**0.49**
Cash Overlay (%)	**-1.53**	**4.68**	**5.86**
91-day Treasury Bill (%)	0.05	0.05	0.07
Real Estate (%)	**20.11**	**14.63**	**13.19**
Real Estate Target Index (5) (%)	13.10	12.66	12.96
Private Equity (%)	**11.91**	**13.66**	**12.01**
Cambridge Private Equity Lagged	5.92	13.65	14.26
Total Fund (%)	**0.09**	**5.29**	**5.71**
Composite Policy Benchmark (6) (%)	1.29	6.14	6.34

(1) Emerging Markets Debt Target Index = 65% JPMorgan GBI-EM Global Diversified Un-hedged + 35% JPMorgan EM Bond Index

(2) Diversified Credit Target Index = 50% Merrill Lynch HY Constrained + 50% CS Levered Loan

(3) Absolute Return Target Index = 3-month Treasury Bill + 5 5/7% through 6/30/10, 3-month Treasury Bill + 5% through 6/30/12 and LIBOR + 5% thereafter

(4) Real Return Target Index = 60% BC US TIPS Index + 40% (CPI + 5%) through 6/30/12, CPI + 5% through 6/30/14, and CPI + 3% thereafter

(5) Real Estate Target Index = 90% NCREIF Total Index + 10% FTSE EPRA/NAREIT Global Real Estate Index through 6/30/12 and 90% NCREF ODCE + 10% FTSE EPRA/NAREIT Developed Real Estate Ex-US Index thereafter

(6) Policy Benchmark = 13.0% Russell 1000 Index + 2% Russell 2000 Index + 7.0% MSCI EAFE Index + 5.0% MSCI World Index + 6.0% MSCI Emerging Markets Equity + 2% MSCI EAFE Small Cap Equity + 10.0% BC US Universal Index + 7.0% ML HY Constrained + 7.0% CS Leveraged Loan + 14% (3 month LIBOR + 5%) + 8% (CPI + 3%) + 9.0% NCREIF ODCE Index + 1.0% FTSE EPRA/NAREIT Developed Ex-US REITs Index + 6% Cambridge Private Equity Lagged + 1.95% JPMorgan GBI-EM Global Diversified Un-hedged + 1.05% JPMorgan EM Bond Index

Statement of Investment Objectives and Policies

General

The primary goal of the Orange County Employees Retirement System's investment program is to provide Plan participants with retirement benefits as required by the County Employees Retirement Law of 1937. This goal is accomplished through Plan Sponsors' and Plan participants' contributions and the implementation of a carefully planned and monitored long-term investment program. The Board of Retirement (with the participation of the Investment Committee, staff and advisors) has exclusive control of all investments of the Plan and is responsible for the establishment of investment objectives, strategies and policies.

The Board of Retirement is authorized to invest in any form or type of investment deemed prudent in the informed opinion of the Board. The Board has adopted an Investment Policy Statement that provides a frame work for the management of OCERS' investments. This purpose of the Investment Policy Statement is to assist the Investment Committee in effectively supervising, monitoring, and evaluating the investment of the System's assets.

Investment Objectives

The overall objective is to invest the assets of the System solely for the benefit of plan participants and beneficiaries while attempting to minimize employer contributions and investment and administration costs. The long-term performance objective for the portfolio is to exceed the actuarially assumed rate of return net of fees and expenses, with a secondary objective of exceeding the return on an appropriate designated balanced index mutual fund over a complete economic cycle and relevant longer periods, also net of fees and expenses.

Strategic Asset Allocation Policy and Maintenance

A pension fund's strategic asset allocation policy, implemented in a consistent and timely manner, is generally recognized to have the most impact on a fund's investment performance. The asset allocation policy determines a fund's optimal long-term asset class mix (target allocation). This policy is expected to achieve a specific set of investment goals, such as risk and return objectives. The policy also establishes ranges around the targeted levels which assets levels are permitted to fluctuate. Fluctuations outside the permitted range act as triggers for reallocating assets to ensure adherence to targeted weights.

Program Administration and Manager Structure

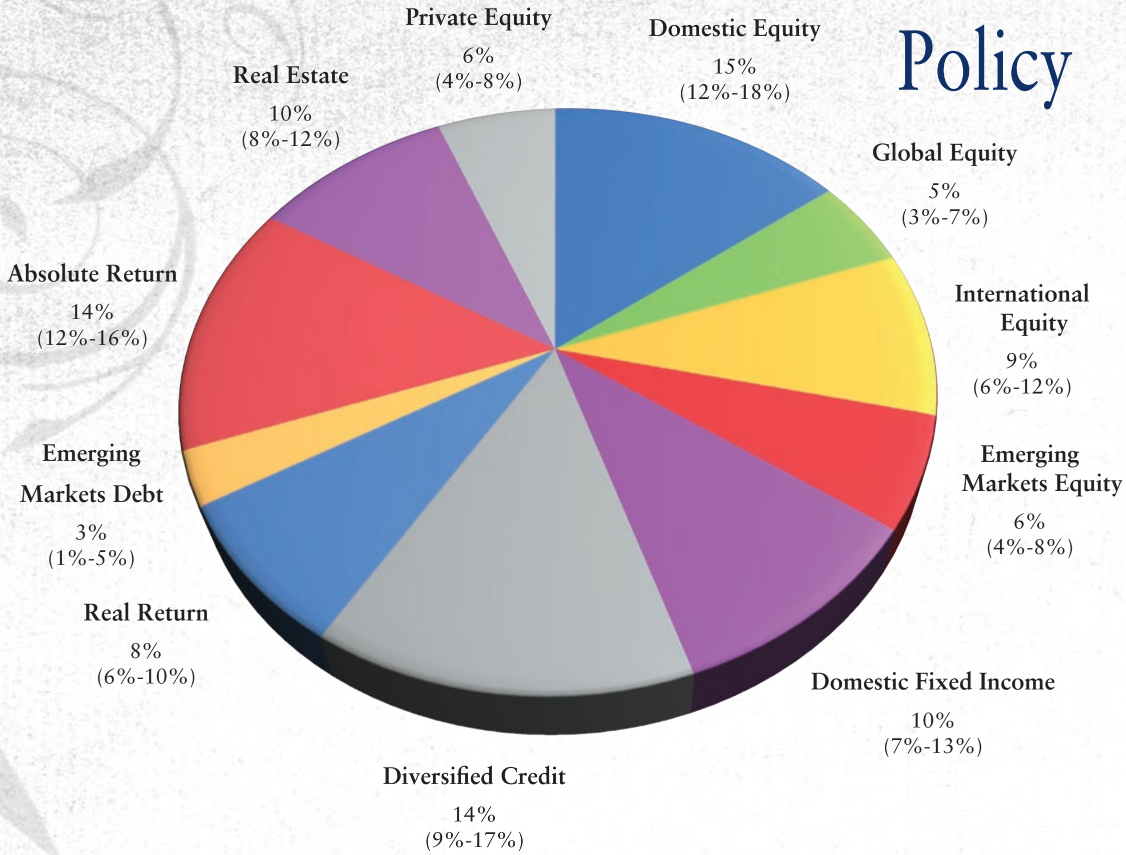
For each major asset class, the System shall diversify assets by employing managers with demonstrated skill in their particular areas of expertise. The System will retain managers who utilize varied investment approaches and allocate assets in a manner that is consistent with the overall strategic plan. For example, the sum of all domestic equity managers should exhibit characteristics that are similar, but not necessarily identical, to the overall equity market. When asset fluctuation causes the asset class to exhibit characteristics that are dissimilar from the plan, staff shall direct cash flows to or from the various managers so that actual characteristics are consistent with the plan.

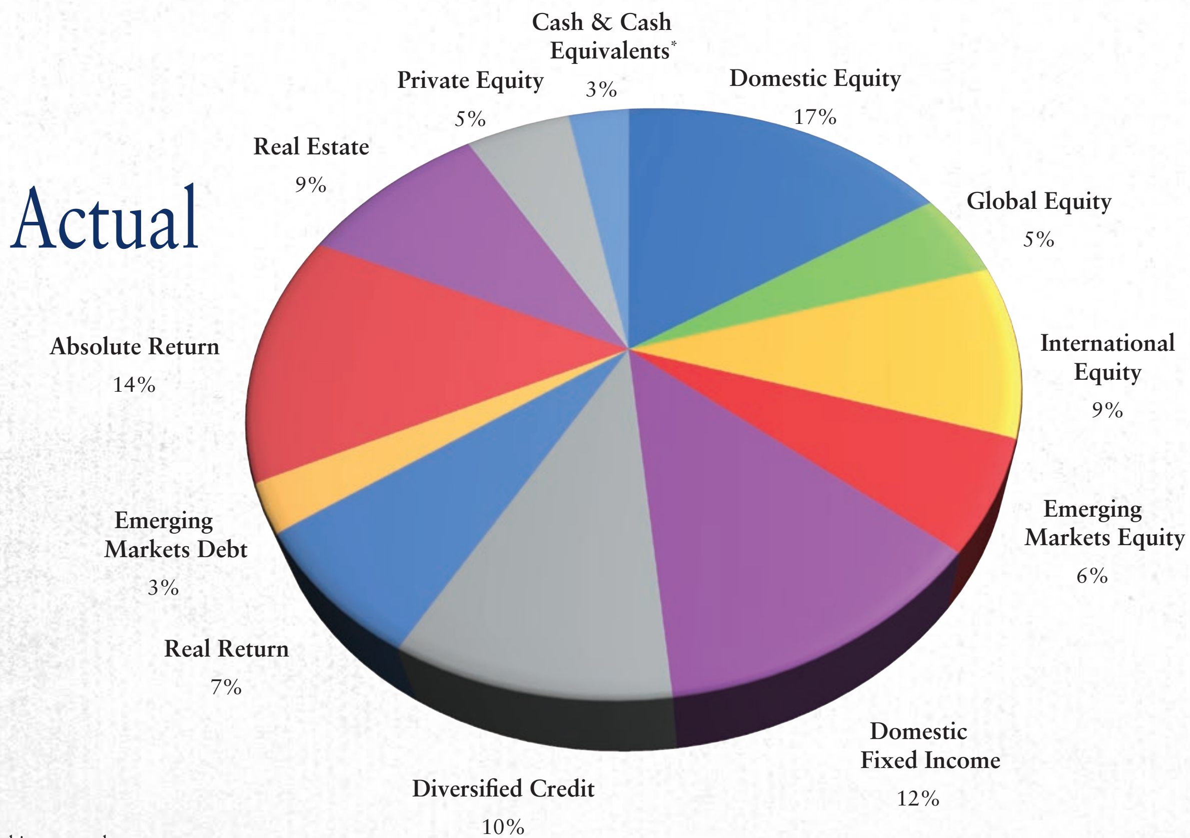
Use of Proxies

OCERS utilizes the services of Institutional Shareholder Services (ISS) to vote public equity proxies on OCERS' behalf. ISS is solely responsible for voting all proxies for securities, consistent with the ISS Benchmark Policy, as approved by the Board of Retirement. If the ISS Benchmark Policy does not contain recommended voting guidelines for the subject of the proxy vote, ISS will contact OCERS for guidance prior to casting the vote to ensure proxy votes are in accordance with OCERS' guidelines to protect and enhance returns on behalf of plan participants.

Asset Diversification

December 31, 2015

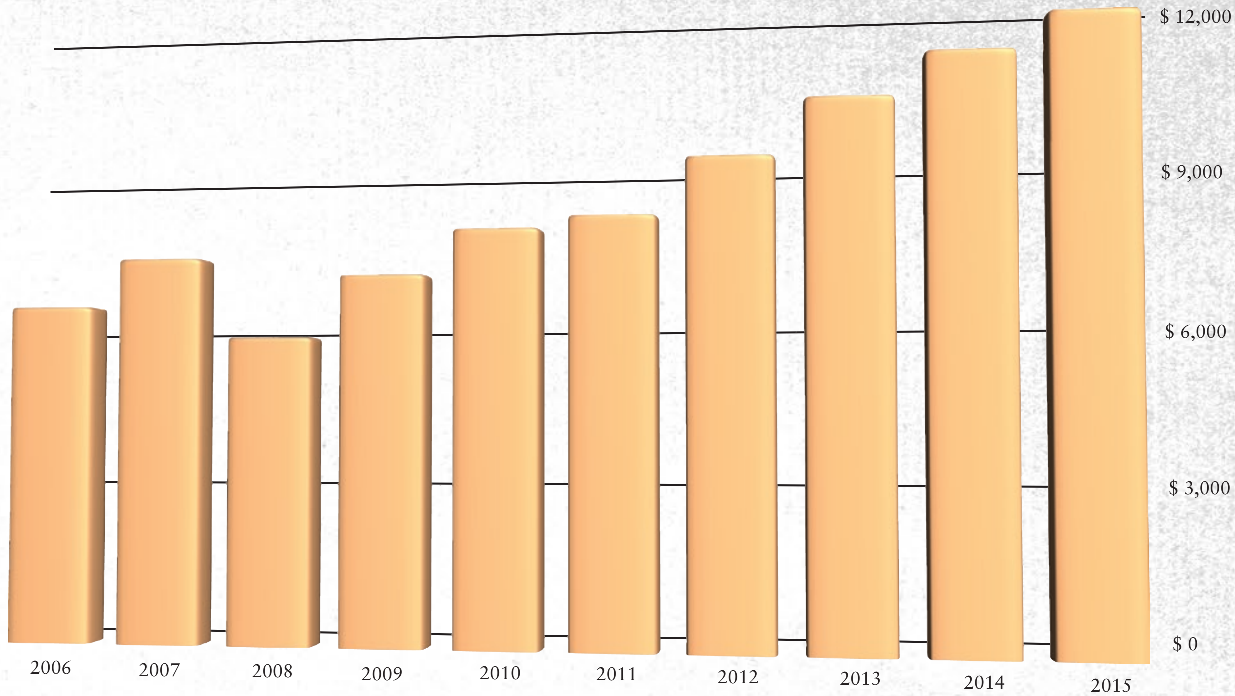




* Fund level cash is invested in an overlay strategy.

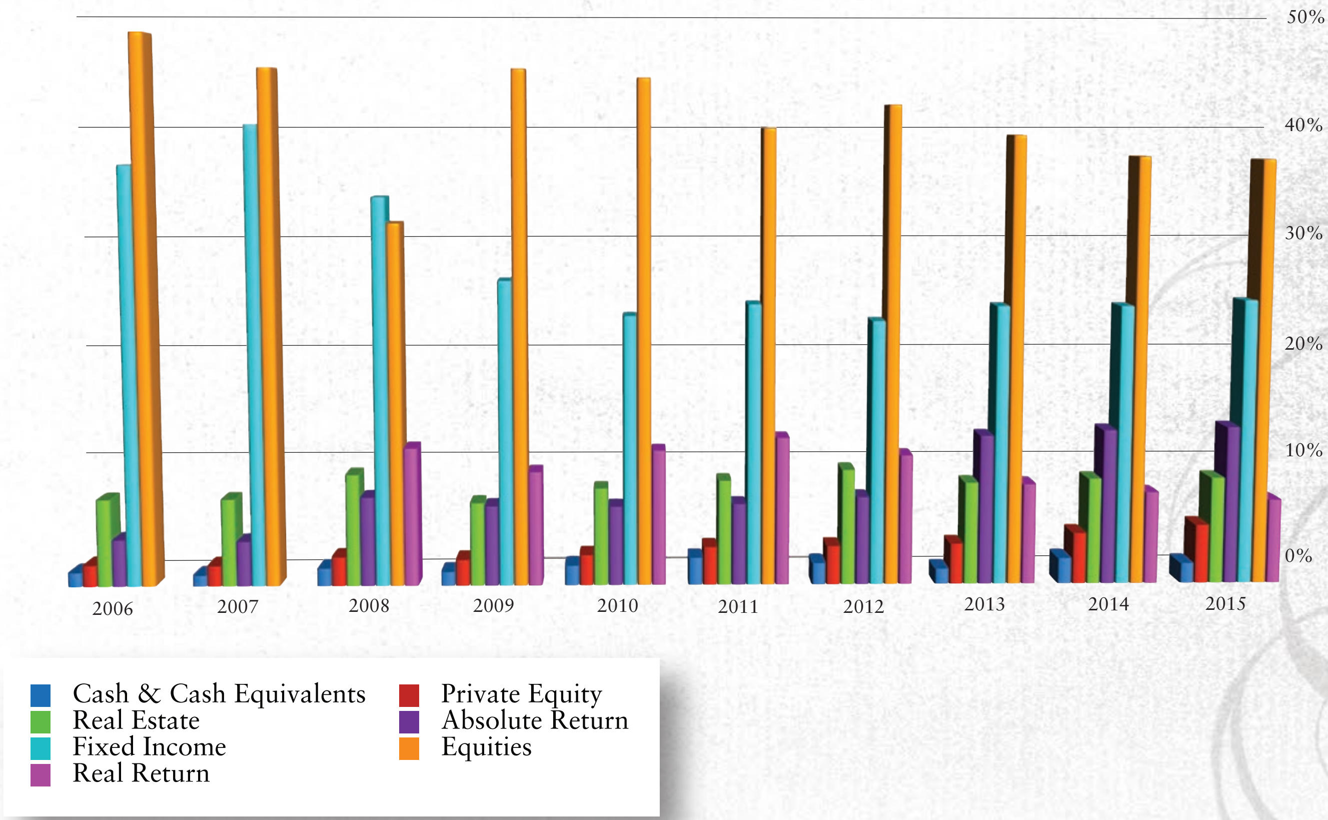
Growth of System Net Investments at Fair Value

for Ten Years Ended December 31, 2015
(in Millions of Dollars)



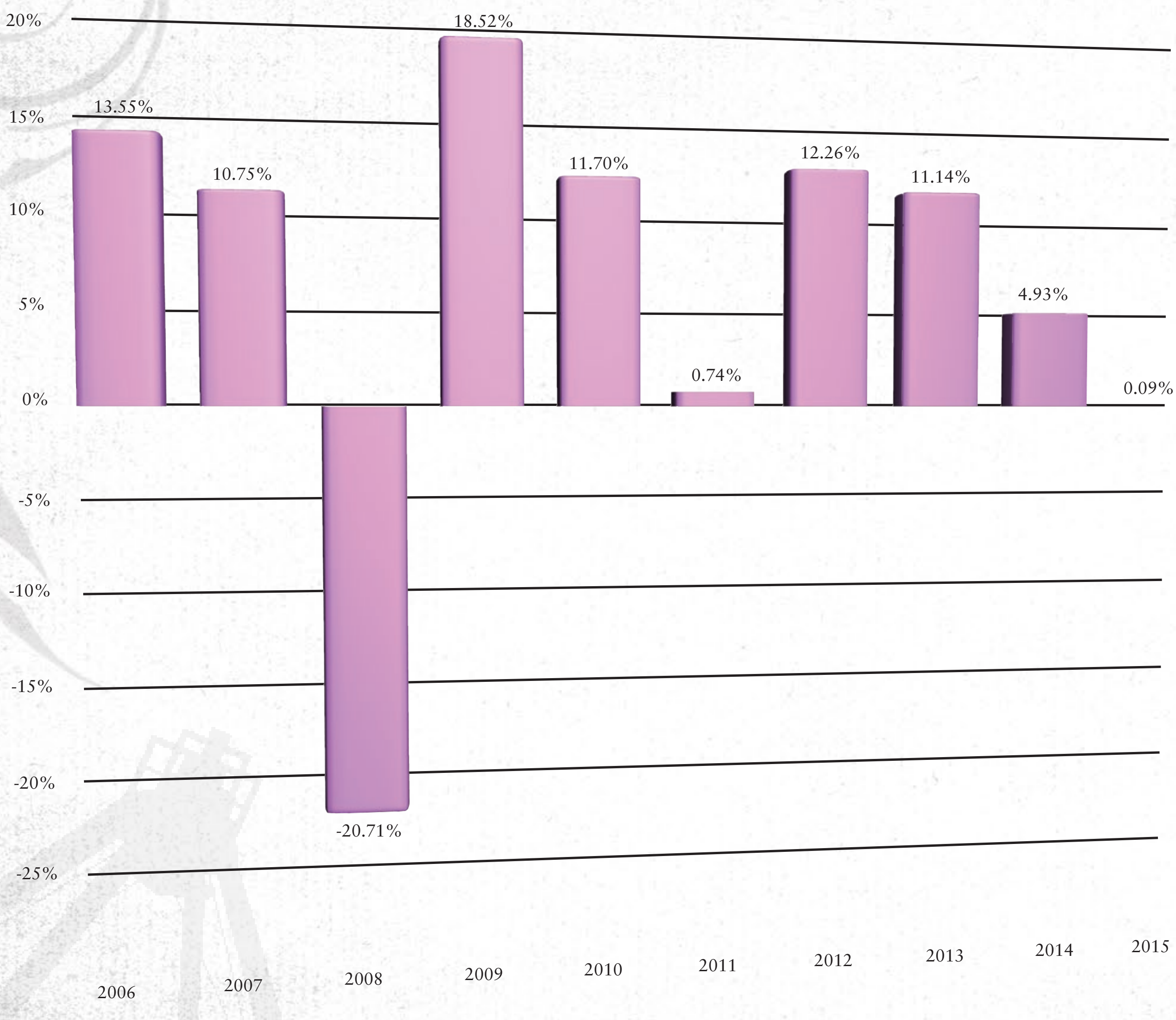
Historical Asset Allocation

December 2006 - December 2015
(Actual)



History of Performance

December 2006 - December 2015
(Actual)



Schedule of Commissions

As of December 31, 2015
(Amounts in Thousands)

Broker Name	Number of Shares Traded	Commission per Share (in cents)	Total Commission
Barclays Capital	767	1.45	$ 11
Bloomberg Tradebook, LLC	904	1.69	15
Citigroup Global Markets, Inc.	15,303	0.49	75
Credit Lyonnais Securities (Asia)	1,442	0.31	5
Credit Suisse Securities	6,179	0.62	39
Daiwa Securities	698	0.73	5
Deutsche Bank	7,782	0.34	26
Goldman Sachs	11,458	0.51	58
Hong Kong and Shanghai Banking Corp	623	0.21	1
Instinet	6,181	0.29	18
Investment Technology Group	2,367	1.33	31
J.P. Morgan Securities	1,931	1.58	31
Jefferies	1,066	1.90	20
Liquidnet	1,744	0.39	7
MacQuarie	1,737	0.65	11
Merrill Lynch & Company, Inc.	24,191	0.44	106
Morgan Stanley & Company, Inc.	24,376	0.27	67
National Financial Services Corp	563	2.69	15
Redburn Partners LLP	718	0.90	6
Sanford C. Bernstein And Co., LLC	2,484	1.09	27
UBS	12,246	0.32	39
Other*	7,214	1.48	107
Total	131,974	0.55	$ 720

* Other includes 90 additional firms that comprise approximately 15% of total commissions and 5% of the total number of shares traded. The average commission per share is 1.48 cents.

Commission Recapture Program

OCERS implemented a direct brokerage program where investment managers are encouraged to trade with specific brokerage firms for the purpose of reducing trading commissions. The brokerage firms utilized for these services are Abel Noser, Capital Institutional Services, Convergex Execution Solutions LLC, and State Street Bank.

Schedule of Investment Expenses and Investment Summary

For the Year Ended December 31, 2015
(Dollars in Thousands)

Type of Investment Expenses	Assets Under Management at Fair Value	Percentage	Fees
Investment Management Fees *			
Real Estate	$ 1,131,770	10%	$ 9,407
Absolute Return	1,675,015	14%	8,371
International Equity Securities	1,126,395	10%	5,375
Real Return	891,015	8%	4,192
Emerging Markets Equity	718,540	6%	3,522
Domestic Fixed Income	1,465,228	12%	3,278
Global Equity Securities	576,945	5%	1,564
Diversified Credit	1,225,464	10%	1,414
Private Equity	631,478	5%	1,243
Domestic Equity Securities	1,995,145	17%	870
Emerging Markets Debt	331,118	3%	-
Total Investment Management Fees	**$ 11,768,113**	**100%**	**39,236**
Foreign Income Tax/Other			**12,883**
Other Investment Expenses			
Investment Department Expenses			1,372
Consulting/Research Fees			1,207
Legal Services			635
Custodian Services			300
Total Other Investment Expenses			**3,514**
Securities Lending Activity			
Securities Lending Fees			257
Rebate Fees			34
Total Security Lending Activity			**291**
Total Investment Expenses			**$ 55,924**

* The table above does not include undisclosed fees deducted at source or the fair value of OPEB 115 Agency Funds held by OCERS in an investment capacity.

Schedule of Largest Equity Holdings

(by Fair Value) [1, 2]

As of December 31, 2015
(Amounts in Thousands)

Common Stock	Shares	Fair Value
Roche Holding AG	50	$ 13,790
Alphabet Inc. CL A	12	9,135
Microsoft Corporation	159	8,826
Novartis AG Reg	91	7,918
Novo Nordisk A/S B	121	7,022
Nestle SA Reg	93	6,936
Sanofi	77	6,611
Allergan PLC	20	6,307
BNP Paribas	110	6,250
Citigroup Inc.	119	6,142

Schedule of Largest Fixed Income Holdings

(by Fair Value) [1]

As of December 31, 2015
(Amounts in Thousands)

Asset	CPN/ Maturity	Fair Value
BWU00DRI1 IRS USD R V 03MLIBOR	1.0% / 09-28-2017	$ 230,250
BWU00D7M4 IRS USD R V 03MLIBOR	0.5% / 12-16-2017	96,700
SWU00D7N2 IRS USD R F 2.00000	2.0% / 12-16-2020	56,112
BWU00DB23 IRS USD R V 03MLIBOR	0.5% / 12-16-2020	54,700
BWU00CSO9 IRS USD R V 03MLIBOR	1.0% / 12-14-2017	47,100
US TREASURY N/B	1.9% / 10-30-2022	15,797
WI TREASURY N/B	0.4% / 02-15-2016	14,270
BWU00D991 IRS USD R V 03MLIBOR	0.5% / 12-16-2022	14,200
BWU00D7P7 IRS USD R V 03MLIBOR	0.5% / 12-16-2045	13,600
US TREASURY N/B	0.4% / 05-31-2016	11,506

[1] A complete list of portfolio holdings is available for review at the OCERS' office.
[2] The holding schedules pertain to holdings of individual securities; they do not reflect OCERS' investments in commingled funds.

List of Investment Managers

As of December 31, 2015

Absolute Return

Alphadyne Asset Management
Archer Capital Management
Beach Point Capital Management
Black River Asset Management
BlueMountain Capital Management
Bridgewater Associates, Inc.
Caspian Capital Advisors
D.E Shaw Group
Fore Research & Management
Gotham Asset Management
Grantham, Mayo, Van Otterloo & Co., LLC
Highfields Capital
Hoplite Capital Management
Ionic Capital Management
Och-Ziff Capital Management Group
Perry Capital
Pharo Global Advisors
Pacific Investment Management Company
Standard Life Investments
Venor Capital Management

Cash Overlay

Parametric

Diversified Credit

Beach Point Capital Management
BlackRock Institutional Trust Company
BlueBay Asset Management
Brigade Capital Management
Cross Ocean Partners
CQS Capital Management
Crescent Capital Group
Hayfin Capital Management
Monroe Capital
NXT Capital
OCP Asia
Park Square Capital
Pacific Investment Management Company
Tennenbaum Capital Partners, LLC
Tricadia Capital Management

Domestic Equity

BlackRock Institutional Trust Company
Eagle Asset Management

Domestic Fixed Income

BlackRock Institutional Trust Company
Dodge & Cox
Loomis, Sayles & Company
Pacific Investment Management Company

Emerging Markets Debt

BlueBay Asset Management
Pictet Asset Management

Emerging Markets Equity

Acadian Asset Management
City of London Investment Management
William Blair & Co.

Global Equity

Franklin Templeton Investments
Grantham, Mayo, Van Otterloo & Co., LLC
J.P. Morgan Asset Management

International Equity

AQR Capital Management, LLC
BlackRock Institutional Trust Company
Capital Guardian Trust Company
Fidelity Institutional Asset Management
Mercator Asset Management
Mondrian Investment Partners, Ltd.
Parametric

Private Equity

Abbott Capital
Adams Street Partners
HarbourVest Partners, LLC
Mesirow Financial Private Equity
Pantheon Ventures

Real Estate

AEW Capital Management
Angelo Gordon & Co.
ASB Capital Management
BlackRock Institutional Trust Company
CB Richard Ellis Investors
Fidelity Investments
J.P. Morgan Asset Management
Jamestown
KTR Capital Partners
Morgan Stanley
Oaktree Capital Management
True North Management Group
Waterton Associates

Real Return

AQR Capital Management, LLC
BlackRock Institutional Trust Company
BTG Pactual
EIG Global Energy Partners
EnerVest, Ltd
Galena Asset Management
Hancock Agricultural Investment Group
Hancock Timber Resource Group
Kayne Anderson Capital Advisors
Pacific Investment Management Company
UBS Farmland Investors LLC
Wellington Management

ORANGE COUNTY

OCERS

EMPLOYEES RETIREMENT SYSTEM

2000's

In 2000, the world celebrates the millenium, then it is devastated by the terrorist attacks of September 11, 2001. The war on terrorism, the global economic downturn, and natural disasters, such as Hurricane Katrina, are in the media. New technology continues at lightning speed. Wikipedia, MySpace, Facebook, YouTube, Twitter and Google Street View are all launched as the term Social Media is created. The USB drive replaces the floppy disk, and the iPod and iPhone are introduced to overwhelming enthusiasm.

YouTube

2000	2001	2002	2003	2004
Segway	iPod / iTunes	Robot Vacuum	Mars Rover Launched	Facebook

SECTION IV

ACTUARIAL

2005	2006	2007	2008	2009
YouTube	Twitter	iPhone	Hulu	First Commercially Available 3D Printer

Actuary's Certification Letter

Segal Consulting

100 Montgomery Street Suite 500 San Francisco, CA 94104-4308
T 415.263.8200 www.segalco.com

June 3, 2016

Board of Retirement
Orange County Employees Retirement System
2223 Wellington Avenue
Santa Ana, CA 92701-3101

Re: Certification for Pension Plan

Dear Members of the Board:

Segal Consulting (Segal) prepared the December 31, 2014 annual actuarial valuation of the Orange County Employees Retirement System (OCERS). We certify that the valuation was performed in accordance with generally accepted actuarial principles and practices and OCERS' funding policy that was last reviewed with the Board in 2013. In particular, it is our understanding that the assumptions and methods used for funding purposes meet the parameters set by Actuarial Standards of Practice (ASOPs). A discussion of the assumptions and methods used in the separate December 31, 2015 actuarial valuation for financial reporting purposes under Governmental Accounting Standards Board (GASB) Statement No. 67 is presented at the end of this letter.

December 31, 2014 Actuarial Valuation for Funding Purposes

Actuarial valuations are performed on an annual basis with the last valuation completed as of December 31, 2014. The actuarial calculations presented in the valuation report have been made on a basis consistent with our understanding of the historical funding methods used in determination of the liability for statutory retirement benefits.

The December 31, 2014 actuarial valuation is based on the plan of benefits verified by OCERS and on participant and financial data provided by OCERS. Segal conducted an examination of all participant data for reasonableness and we concluded that it was reasonable and consistent with the prior year's data. Summaries of the employee data used in performing the actuarial valuations over the past several years are provided in our valuation report.

We did not audit the System's financial statements. For actuarial valuation purposes, Plan assets are valued at actuarial value. Under this method, the assets used to determine employer contribution rates take into account market value by recognizing the differences between the actual and expected return on market value over a five-year period. The development of the actuarial value as of December 31, 2014 is provided in the Development of Actuarial and Valuation Value of Assets.

Actuary's Certification Letter

(Continued)

Board of Retirement
Orange County Employees Retirement System
June 3, 2016
Page 2

One funding objective of the Plan is to establish rates, which, over time, will remain level as a percentage of payroll unless Plan benefit provisions are changed. Actuarial funding is based on the Entry Age Cost Method. Under this method, the employer contribution rate provides for current cost (normal cost) plus a level percentage of payroll to amortize any unfunded actuarial accrued liability (UAAL). One of the funding objectives of the System is to reduce that UAAL to zero over a declining period. Effective December 31, 2013, the outstanding balance of the UAAL from the December 31, 2012 valuation was combined and reamortized over a declining 20-year period. Any changes in UAAL due to actuarial gains or losses or due to changes in assumptions or methods will be amortized over separate 20-year periods. Any changes in UAAL due to plan amendments will be amortized over separate 15-year periods and any change in UAAL due to early retirement incentive programs will be amortized over a separate period of up to 5 years. The progress being made toward the realization of the financing objectives through December 31, 2014 is illustrated in the History of Unfunded Actuarial Accrued Liability and the Schedule of Funding Progress.

Segal prepared all of the supporting schedules in the actuarial section of the System's Comprehensive Annual Financial Report (CAFR) based on the results of the December 31, 2014 actuarial valuation for funding purposes. A listing of the supporting schedules related to the statutory retirement plan benefits that Segal prepared for inclusion in the actuarial section of the System's CAFR is provided below. OCERS' staff prepared the remaining trend data schedules in the statistical section.

Actuarial Section

1. History of Unfunded Actuarial Accrued Liability
2. History of Employer Contribution Rates
3. Summary of Active Membership
4. Summary of Retired Membership
5. Development of Actuarial and Valuation Value of Assets
6. Short-Term Solvency Test
7. Actuarial Methods and Assumptions
8. Summary of Major Plan Provisions
9. Experience Analysis
10. Schedule of Funding Progress

Board of Retirement
Orange County Employees Retirement System
June 3, 2016
Page 3

The valuation assumptions used in this valuation were included in the Actuarial Section. The results of this valuation were prepared using the actuarial assumptions and methods developed in the triennial experience study and the economic assumptions study as of December 31, 2013. All of the assumptions recommended in those studies, including the alternative 3.00% inflation assumption discussed during subsequent presentations, were adopted by the Board. Actuarial valuations are performed on an annual basis and the experience analysis is performed every three years. The next experience analysis is due to be performed as of December 31, 2016 and any changes in assumptions that result will be reflected in the December 31, 2017 valuation.

In the December 31, 2014 valuation, the ratio of the valuation value of assets to actuarial accrued liabilities increased from 66.0% to 69.8%. The aggregate employer rate (average of the County and all special districts rates combined) has changed from 38.13% of payroll to 37.41% of payroll before the three-year phase-in for Safety Rate Groups as discussed below. The aggregate employee's rate has decreased from 12.47% of payroll to 12.42% of payroll.

Note that the Board adopted a three-year phase-in of the impact of the changes in actuarial assumptions for the employer contribution rates for Safety Rate Groups. After reflecting the three-year phase-in for Safety Rate Groups, the aggregate employer rate calculated in this valuation is 36.53% of payroll.

In the December 31, 2014 valuation, the actuarial value of assets excluded $22 million in unrecognized investment losses, which represented 0.2% of the market value of assets. If these deferred investment losses were recognized immediately in the actuarial value of assets, the funded percentage would decrease from 69.8% to 69.6% and the aggregate employer contribution rate, expressed as a percent of payroll before the three-year phase-in for Safety Rate Groups, would increase from 37.41% to about 37.5%.

To the best of our knowledge, the December 31, 2014 funding valuation report is complete and accurate and in our opinion presents the Plan's current funding information.

December 31, 2015 GASB Statement 67 Actuarial Valuation for Financial Reporting Purposes

Segal prepared the December 31, 2015 GASB Statement 67 actuarial valuation for financial reporting purposes. The valuation was performed in order to comply with GASB Statement 67 and we certify that the assumptions and methods used for financial reporting purposes meet the parameters set by ASOPs and our understanding of generally accepted accounting principles (GAAP) applicable in the United States of America as promulgated by the GASB. Statement 67 replaces Statement 25 and is for plan reporting, effective with the plan year ending December 31, 2014. The new GASB rules only redefine pension liability and expense for financial reporting purposes, and do not apply to contribution amounts for pension funding purposes.

Board of Retirement
Orange County Employees Retirement System
June 3, 2016
Page 4

When measuring pension liability, GASB uses the same actuarial cost method (Entry Age method) and the same type of discount rate (expected return on assets) as OCERS uses for funding. The Net Pension Liabilities (NPLs) measured as of December 31, 2015 and 2014 have been determined by rolling forward the Total Pension Liabilities (TPLs) for the statutory Retirement Plan benefits as of December 31, 2014 and December 31, 2013, respectively.

Note number 10 to the Basic Financial Statements and the Required Supplementary Information included in the Financial Section of the CAFR were prepared by the System based on the results of the GASB Statement No. 67 actuarial valuation as of December 31, 2015 prepared by Segal.

The undersigned are Members of the American Academy of Actuaries and meet the qualification requirements to render the actuarial opinion contained herein.

Sincerely,

Paul Angelo, FSA, MAAA, FCA, EA
Senior Vice President & Actuary

Andy Yeung, ASA, MAAA, FCA, EA
Vice President & Actuary

AW/bqb

History of Unfunded Actuarial Accrued Liability

(Dollars in Thousands)

Valuation Date	Actuarial Accrued Liability	Valuation Value of Assets	Unfunded Actuarial Accrued Liability	Ratio of Assets to Actuarial Accrued Liability	Annual Active Member Compensation	Ratio of Unfunded Actuarial Accrued Liability to Active Compensation
12/31/05	$ 8,089,627	$ 5,786,617	$ 2,303,010	71.53%	$ 1,276,764	180.38%
12/31/06	8,765,045	6,466,085	2,298,960	73.77%	1,322,952	173.78%
12/31/07	9,838,686(1)	7,288,900	2,549,786(1)	74.08%(1)	1,457,159	174.98%(1)
12/31/08	10,860,715	7,748,380	3,112,335	71.34%	1,569,764	198.27%
12/31/09	11,858,578	8,154,687	3,703,891	68.77%	1,618,491	228.85%
12/31/10	12,425,873	8,672,592	3,753,281	69.79%	1,579,239	237.66%
12/31/11	13,522,978	9,064,355	4,458,623	67.03%	1,619,474	275.31%
12/31/12	15,144,888	9,469,208	5,675,680	62.52%	1,609,600	352.55%
12/31/13	15,785,042	10,417,125	5,367,917	65.99%	1,604,496	334.55%
12/31/14	16,413,124	11,449,911	4,963,213	69.76%	1,648,160	301.14%

[1] Revised due to the Board's adoption of revised retirement rates for General plans with improved benefit formulas.

Notes:

- The 12/31/14 valuation included the following changes:

  Assumption Changes:
  Changes in inflation, mortality, disability, termination, retirement, salary scale, and additional cashout assumptions in the December 31, 2013 triennial experience study decreased the UAAL by $122 million.

  Method Change:
  The cashout assumptions are now used in developing basic member contribution rates for employees in the legacy plans (impact is only on Normal Cost).

- The 12/31/13 valuation included the following method change:
  The outstanding balance of the December 31, 2012 UAAL was combined and re-amortized over a 20-year period.

- The 12/31/12 valuation included the following changes:

  Assumption Changes:
  Changes in investment return, inflation, and across the board salary increase assumptions in the December 31, 2012 review of economic assumptions report increased the UAAL by $935 million.

  Benefit Changes:
  Members with membership date on or after January 1, 2013 will be placed in CalPEPRA tiers (1.62% of final average salary at age 65, 2.50% of final average salary at age 67 and 2.70% of final average salary at age 57).

- The 12/31/11 valuation included the following changes:

  Assumption Changes:
  Changes in mortality, disability, termination, retirement, salary scale, and additional cashout assumptions in the December 31, 2010 triennial experience study increased the UAAL by $364 million.

  Benefit Changes:
  City of San Juan Capistrano adopted a 2.0% of final average salary at age 57 for members hired on or after July 1, 2012.

History of Unfunded Actuarial Accrued Liability

(continued)

Certain employees previously employed at the City of Santa Ana became employees of OCFA General and OCFA Safety eligible for benefits under 2.0% of final average salary at age 55 and 3.0% of final average salary at age 50, respectively.

- The 12/31/10 valuation included the following benefit changes:

  LAFCO adopted an optional 1.62% of final average salary at age 65 for members hired on or after July 1, 2010.

  County Managers unit adopted an optional 1.62% of final average salary at age 65 for members hired on or after August 17, 2010.

  Sanitation District adopted a 1.64% of final average salary at age 57 for members within Supervisors and Professional unit hired on or after October 1, 2010.

  OCFA adopted a 3.00% of final average salary at age 55 for Safety members within the Executive Management unit hired on or after July 1, 2011 and for all Safety members hired on or after July 1, 2012.

  OCFA adopted a 2.00% of final average salary at age 55 for General members hired on or after July 1, 2011.

- The 12/31/09 valuation included the following benefit changes:

  General County OCEA and Superior Court adopted an optional 1.62% of final average salary at age 65 for members hired on or after May 7, 2010.

  Law Enforcement adopted a 3.0% of final average salary at age 55 for members hired on or after April 9, 2010.

- The 12/31/08 valuation included the following assumption changes:

  Changes in service retirement rates for General members with improved benefit formulas increased the UAAL by $116 million.

- The 12/31/07 valuation included the following changes:

  <u>Assumption Changes:</u>
  Changes in mortality, disability, termination, retirement, salary scale, and annual payoff assumptions in the December 31, 2007 triennial experience study increased the UAAL by $237 million.

  <u>Benefit Changes:</u>
  There is a new Rate Group #11, for Cemetery District, that adopted a 2% of final average salary at age 55 for future service only effective December 7, 2007. OC Mosquito and Vector Control District terminated its participation at OCERS as of January 4, 2007.

- The 12/31/06 valuation included the following benefit changes:

  There is a new Rate Group #10, for General members of Orange County Fire Authority (OCFA) (previously with members in Rate Group #2). City of Rancho Santa Margarita (RSM), Rate Group #4, withdrew from OCERS effective November 26, 2006.

- The 12/31/05 valuation included the following assumption changes:

  The System has provided Segal with salary, years of service and eligibility for reciprocal benefit data for terminated vested members. Their benefits are now calculated using those data elements. In the December 31, 2004 valuation, the following assumption was used to estimate their benefits.

  Liability for a current deferred vested member is estimated at 3.35 times the member's total basic plus COLA member contribution account balance.

History of Unfunded Actuarial Accrued Liability

(continued)

- Each year's assets exclude an amount as shown in the following table of the County's unamortized 1994 funding of its portion of the Unfunded Actuarial Accrued Liability, which funding for 1995 was being amortized over a 14 year period beginning July 1, 1994 and for 1996 and later was being amortized over a 28-year period beginning July 1, 1996. Beginning July 1, 2003, the County can utilize this amount at its discretion to fund any portion of the employer contribution.
- Each year since December 31, 2005 the assets also exclude prepaid employer contributions.

	Amount Excluded from Assets	
Valuation Date	County Investment Acount	Prepaid Employer Contributions
12/31/05	$ 158,219,000	$ 45,925,000
12/31/06	168,224,000	70,941,000
12/31/07	174,348,000	108,301,000
12/31/08	126,683,000	24,345,000
12/31/09	108,324,000	20,027,000
12/31/10	108,531,000	29,545,000
12/31/11	97,767,000	162,873,000
12/31/12	103,261,000	177,632,000
12/31/13	109,254,000	172,348,000
12/31/14	109,103,000	207,829,000

History of Employer Contribution Rates

Employer Contribution Rate (% of pay)

Valuation Date	General (Non-OCTA, Non-OCSD)	General (1.62% @ 65, Non-OCTA)	General (2.7% @ 55)	General (2.0% @ 57)	General (OCTA)	General (2.5% @ 55)	General (1.64% @ 57, OCSD)	General (2.0% @ 55, TCA)
12/31/05[1],[2]	NC 9.33% UAAL 5.00 **Total 14.33%**	N/A	NC 11.46% UAAL 11.10 **Total 22.56%**	N/A	NC 11.36% UAAL 3.60 **Total 14.96%**	NC 10.54% UAAL 10.33 **Total 20.87%**	N/A	NC 11.49% UAAL 5.87 **Total 17.36%**
12/31/06[2],[3]	NC 9.19% UAAL 5.31 **Total 14.50%**	N/A	NC 11.36% UAAL 10.84 **Total 22.20%**	N/A	NC 11.25% UAAL 4.77 **Total 16.02%**	NC 10.55% UAAL 10.79 **Total 21.34%**	N/A	NC 12.03% UAAL 6.01 **Total 18.04%**
12/31/07	NC 8.92% UAAL 5.25 **Total 14.17%**	N/A	NC 11.24% UAAL 10.59 **Total 21.83%**	N/A	NC 11.26% UAAL 3.76 **Total 15.02%**	NC 10.54% UAAL 11.41 **Total 21.95%**	N/A	NC 12.60% UAAL 6.13 **Total 18.73%**
12/31/08	NC 8.99% UAAL 7.06 **Total 16.05%**	N/A	NC 11.79% UAAL 13.00 **Total 24.79%**	N/A	NC 11.32% UAAL 5.94 **Total 17.26%**	NC 11.19% UAAL 13.01 **Total 24.20%**	N/A	NC 13.02% UAAL 5.72 **Total 18.74%**
12/31/09[4]	NC 8.69% UAAL 10.43 **Total 19.12%**	NC 3.69% UAAL 15.50 **Total 19.19%**	NC 11.61% UAAL 15.50 **Total 27.11%**	N/A	NC 11.11% UAAL 9.28 **Total 20.39%**	NC 10.93% UAAL 14.75 **Total 25.68%**	NC 10.14% UAAL 14.75 **Total 24.89%**	NC 12.59% UAAL 7.05 **Total 19.64%**
12/31/10[5]	NC 8.59% UAAL 8.26 **Total 16.85%**	NC 5.10% UAAL 16.84 **Total 21.94%**	NC 11.55% UAAL 16.84 **Total 28.39%**	N/A	NC 10.96% UAAL 10.00 **Total 20.96%**	NC 10.92% UAAL 16.55 **Total 27.47%**	NC 10.14% UAAL 16.55 **Total 26.69%**	NC 12.56% UAAL 8.41 **Total 20.97%**
12/31/11	NC 8.55% UAAL 10.39 **Total 18.94%**	NC 4.91% UAAL 20.98 **Total 25.89%**	NC 12.03% UAAL 20.98 **Total 33.01%**	NC 10.99% UAAL 20.98 **Total 31.97%**	NC 10.57% UAAL 13.08 **Total 23.65%**	NC 11.29% UAAL 20.66 **Total 31.95%**	NC 10.11% UAAL 20.66 **Total 30.77%**	NC 13.11% UAAL 9.11 **Total 22.22%**
12/31/12 With 2-Year Phase-In	NC 9.68% UAAL 12.91 **Total 22.59%** **21.04%**	NC 5.56% UAAL 25.85 **Total 31.41%** **29.84%**	NC 13.69% UAAL 25.85 **Total 39.54%** **37.45%**	NC 12.10% UAAL 25.85 **Total 37.95%** **35.96%**	NC 11.83% UAAL 16.48 **Total 28.31%** **26.62%**	NC 12.88% UAAL 25.60 **Total 38.48%** **36.57%**	NC 11.02% UAAL 25.60 **Total 36.62%** **34.87%**	NC 14.20% UAAL 12.97 **Total 27.17%** **25.71%**
12/31/13[6]	NC 9.82% UAAL 11.34 **Total 21.16%**	NC 5.61% UAAL 23.72 **Total 29.33%**	NC 13.66% UAAL 23.72 **Total 37.38%**	NC 12.46% UAAL 23.72 **Total 36.18%**	NC 11.81% UAAL 15.22 **Total 27.03%**	NC 12.89% UAAL[7] 21.87 **Total 34.76%**	NC 10.53% UAAL[7] 21.87 **Total 32.40%**	NC 14.13% UAAL 12.28 **Total 26.41%**
12/31/14 With 3-Year Phase-In	NC 9.67% UAAL[8] 8.62 **Total 18.29%** **N/A**	NC 5.49% UAAL 21.72 **Total 27.21%** **N/A**	NC 13.22% UAAL 21.72 **Total 34.94%** **N/A**	NC 10.54% UAAL 21.72 **Total 32.26%** **N/A**	NC 10.78% UAAL 14.40 **Total 25.18%** **N/A**	NC 12.40% UAAL[9] 6.26 **Total 18.66%** **N/A**	NC 10.30% UAAL 6.26 **Total 16.56%** **N/A**	NC 13.59% UAAL 12.78 **Total 26.37%** **N/A**

History of Employer Contribution Rates

(continued)

Employer Contribution Rate (% of pay)

Valuation Date	General (2.0% @ 55, Cemetery, future service)	General (2.7% @ 55, OCFA)	General (2.0% @ 55, OCFA)	Safety Law Enforcement (3% @ 50)	Safety Law Enforcement (3% @ 55)	Safety Fire Authority (3% @ 50)	Safety Fire Authority (3% @ 55)	Safety Probation
12/31/05[1],[2]	See General (Non-OCTA)	See General (2.7% @ 55)	N/A	NC 20.15% UAAL 17.18 **Total 37.33%**	N/A	NC 20.04% UAAL 13.98 **Total 34.02%**	N/A	NC 20.76% UAAL 11.18 **Total 31.94%**
12/31/06[2],[3]	NC 10.31% UAAL 5.00 **Total 15.31%**	NC 11.43% UAAL 12.81 **Total 24.24%**	N/A	NC 20.19% UAAL 15.86 **Total 36.05%**	N/A	NC 19.93% UAAL 13.50 **Total 33.43%**	N/A	NC 20.61% UAAL 11.64 **Total 32.25%**
12/31/07	NC 10.79% UAAL 4.36 **Total 15.15%**	NC 11.48% UAAL 11.53 **Total 23.01%**	N/A	NC 21.27% UAAL 18.25 **Total 39.52%**	N/A	NC 21.02% UAAL 17.22 **Total 38.24%**	N/A	NC 20.49% UAAL 10.90 **Total 31.39%**
12/31/08	NC 10.85% UAAL 7.05 **Total 17.90%**	NC 12.03% UAAL 12.59 **Total 24.62%**	N/A	NC 21.39% UAAL 21.95 **Total 43.34%**	N/A	NC 21.16% UAAL 21.94 **Total 43.10%**	N/A	NC 20.15% UAAL 12.03 **Total 32.18%**
12/31/09[4]	NC 11.24% UAAL 6.92 **Total 18.16%**	NC 11.98% UAAL 14.55 **Total 26.53%**	NC 11.11% UAAL 14.55 **Total 25.66%**	NC 21.13% UAAL 25.26 **Total 46.39%**	NC 20.38% UAAL 25.26 **Total 45.64%**	NC 21.31% UAAL 27.22 **Total 48.53%**	NC 18.30% UAAL 27.22 **Total 45.52%**	NC 20.17% UAAL 13.90 **Total 34.07%**
12/31/10[5]	NC 10.90% UAAL 6.86 Total 17.76%	NC 11.85% UAAL 16.14 Total 27.99%	NC 11.11% UAAL 16.14 Total 27.25%	NC 21.05% UAAL 26.40 Total 47.45%	NC 20.38% UAAL 26.40 Total 46.78%	NC 21.54% UAAL 23.92 Total 45.46%	NC 18.30% UAAL 23.92 Total 42.22%	NC 20.07% UAAL 16.22 Total 36.29%
12/31/11	NC 10.80% UAAL 8.23 **Total 19.03%**	NC 12.18% UAAL 20.43 **Total 32.61%**	NC 14.35% UAAL 20.43 **Total 34.78%**	NC 21.48% UAAL 29.38 **Total 50.86%**	NC 21.47% UAAL 29.38 **Total 50.85%**	NC 23.49% UAAL 19.66 **Total 43.15%**	NC 18.58% UAAL 19.66 **Total 38.24%**	NC 19.31% UAAL 17.26 **Total 36.57%**
12/31/12	NC 12.34% UAAL 12.28 **Total 24.62%**	NC 13.92% UAAL 24.76 **Total 38.68%**	NC 14.01% UAAL 24.76 **Total 38.77%**	NC 24.24% UAAL 36.71 **Total 60.95%**	NC 24.20% UAAL 36.71 **Total 60.91%**	NC 26.16% UAAL 26.84 **Total 53.00%**	NC 21.12% UAAL 26.84 **Total 47.96%**	NC 21.26% UAAL 21.91 **Total 43.17%**
With 2-Year Phase-In	**22.99%**	**36.70%**	**36.99%**	**57.27%**	**57.37%**	**49.83%**	**44.85%**	**40.52%**
12/31/13[6]	NC 12.33% UAAL[7] 9.87 **Total 22.20%**	NC 14.06% UAAL 23.34 **Total 37.40%**	NC 14.15% UAAL 23.34 **Total 37.49%**	NC 24.23% UAAL 32.47 **Total 56.70%**	NC 22.58% UAAL 32.47 **Total 55.05%**	NC 25.86% UAAL 24.14 **Total 50.00%**	NC 21.70% UAAL 24.14 **Total 45.84%**	NC 21.00% UAAL 19.72 **Total 40.72%**
12/31/14	NC 11.79% UAAL 0.00 **Total 11.79%**	NC 13.53% UAAL 20.28 **Total 33.81%**	NC 12.47% UAAL 20.28 **Total 32.75%**	NC 25.79% UAAL 37.46 **Total 63.25%**	NC 23.55% UAAL 37.46 **Total 61.01%**	NC 27.05% UAAL 24.42 **Total 51.47%**	NC 22.38% UAAL 24.42 **Total 46.80%**	NC 22.17% UAAL 25.01 **Total 47.18%**
With 3-Year Phase-In	**N/A**	**N/A**	**N/A**	**58.92%**	**56.88%**	**48.60%**	**43.93%**	**42.84%**

History of Employer Contribution Rates

(continued)

Employer Contribution Rate (% of pay)

Valuation Date	CalPEPRA Rate Group #1 2.5% @ 67	CalPEPRA Rate Group #2 1.62% @ 65	CalPEPRA Rate Group #2 2.5% @ 67	CalPEPRA Rate Group #3 2.5% @ 67	CalPEPRA Rate Group #5 2.5% @ 67	CalPEPRA Rate Group #9 2.5% @ 67	CalPEPRA Rate Group #10 2.5% @ 67	CalPEPRA Rate Group #11 2.5% @ 67
12/31/10	NC 7.24% UAAL 8.26 **Total 15.50%**	NC 5.78% UAAL 16.84 **Total 22.62%**	NC 7.64% UAAL 16.84 **Total 24.48%**	NC 8.34% UAAL 16.55 **Total 24.89%**		NC 9.78% UAAL 8.41 **Total 18.19%**	NC 7.36% UAAL 16.14 **Total 23.50%**	NC 7.31% UAAL 6.86 **Total 14.17%**
12/31/11	NC 8.06% UAAL 10.39 **Total 18.45%**	NC 6.20% UAAL 20.98 **Total 27.18%**	NC 8.26% UAAL 20.98 **Total 29.24%**	NC 8.70% UAAL 20.66 **Total 29.36%**		NC 10.36% UAAL 9.11 **Total 19.47%**	NC 7.84% UAAL 20.43 **Total 28.27%**	NC 7.95% UAAL 8.23 **Total 16.18%**
12/31/12	NC 8.68% UAAL 12.91 **Total 21.59%**	NC 6.78% UAAL 25.85 **Total 32.63%**	NC 7.44% UAAL 25.85 **Total 33.29%**	NC 9.38% UAAL 25.60 **Total 34.98%**		NC 10.97% UAAL 12.97 **Total 23.94%**	NC 8.50% UAAL 24.76 **Total 33.26%**	NC 8.66% UAAL 12.28 **Total 20.94%**
With 2-Year Phase-In	**20.33%**	**31.10%**	**32.05%**	**33.52%**		**22.87%**	**31.81%**	**19.63%**
12/31/13[6]	NC 9.39% UAAL 11.34 **Total 20.73%**	NC 6.70% UAAL 23.72 **Total 30.42%**	NC 8.56% UAAL 23.72 **Total 32.28%**	NC 9.66% UAAL[7] 21.87 **Total 31.53%**		NC 11.40% UAAL 12.28 **Total 23.68%**	NC 9.71% UAAL 23.34 **Total 33.05%**	NC 8.66% UAAL[7] 9.87 **Total 18.53%**
12/31/14	NC 8.87% UAAL[8] 8.62 **Total 17.49%**	NC 6.61% UAAL 21.72 **Total 28.33%**	NC 8.33% UAAL 21.72 **Total 30.05%**	NC 9.00% UAAL[9] 6.26 **Total 15.26%**	NC 10.04% UAAL 14.40 **Total 24.44%**	NC 9.85% UAAL 12.78 **Total 22.63%**	NC 9.63% UAAL 20.28 **Total 29.91%**	NC 11.81% UAAL 0.00 **Total 11.81%**
With 3-Year Phase-In	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**

History of Employer Contribution Rates

(continued)

Employer Contribution Rate (% of pay)

Valuation Date	CalPEPRA Rate Group #6 2.7% @ 57	CalPEPRA Rate Group #7 2.7% @ 57	CalPEPRA Rate Group #8 2.7% @ 57
12/31/10	NC 11.37% UAAL 16.22 **Total 27.59%**	NC 15.03% UAAL 26.40 **Total 41.43%**	NC 14.53% UAAL 23.92 **Total 38.45%**
12/31/11	NC 12.23% UAAL 17.26 **Total 29.49%**	NC 15.55% UAAL 29.38 **Total 44.93%**	NC 15.23% UAAL 19.66 **Total 34.89%**
12/31/12	NC 13.91% UAAL 12.91 **Total 26.82%**	NC 17.05% UAAL 36.71 **Total 53.76%**	NC 16.41% UAAL 26.84 **Total 43.25%**
With 2-Year Phase-In	**33.40%**	**50.61%**	**40.96%**
12/31/13[6]	NC 13.95% UAAL 19.72 **Total 33.67%**	NC 19.17% UAAL 32.47 **Total 51.64%**	NC 16.85% UAAL 24.14 **Total 40.99%**
12/31/14	NC 15.25% UAAL 25.01 **Total 40.26%**	NC 20.10% UAAL 37.46 **Total 57.56%**	NC 15.71% UAAL 24.42 **Total 40.13%**
With 3-Year Phase-In	**36.02%**	**54.01%**	**38.08%**

(1) After reflecting three-year phase-in of the total rate increase calculated in the 2004 and 2005 valuations for OCTA.

(2) Excludes contributions to the Retired Members Benefit Reserve (RMBR)/Additional Retirement Benefit Account (ARBA), if applicable.

(3) Starting 12/31/2006, General (2.7% @ 55) excludes OCFA.

(4) The UAAL established as a result of including additional premium pay items is amortized over a 25-year period.

(5) The UAAL established as a result of reallocating contributions and benefit payments among Rate Groups is amortized over a 24-year period.

(6) The outstanding balance of the December 31, 2012 UAAL has been combined and re-amortized over a period of 20 years.

(7) This rate has not been adjusted to reflect additional UAAL contributions paid subsequent to the December 31, 2013 valuation.

(8) The Board is in the process of reviewing the prior policy it has followed to pay off the UAAL. Under the prior policy, UAAL was allocated based on payroll and that was used to determine the employer's contributions. We understand that a new policy is being finalized that no longer allocates UAAL based on payroll. The new policy would reduce the UAAL rate for the County and O.C. IHSS Public Authority (i.e., excluding UCI and Department of Education) to about 5.67% as of December 31, 2014.

(9) This is the UAAL rate for O.C. Sanitation District after reflecting their additional UAAL contributions. The UAAL rate for Law Library is 20.21% (before reflecting a credit for Law Library's future service only benefit improvement).

Summary of Active Membership

Valuation Date	Number	Annual Salary	Annual Average Salary	Increase in Average Salary (%)
12/31/05				
General	18,816	$ 1,011,214,000	$ 53,742	1.41
Safety	3,651	265,550,000	72,733	2.33
Total	**22,467**	**$ 1,276,764,000**	**$ 56,828**	**1.72**
12/31/06				
General	19,129	$ 1,049,095,000	$ 54,843	2.05
Safety	3,662	273,857,000	74,783	2.82
Total	**22,791**	**$ 1,322,952,000**	**$ 58,047**	**2.15**
12/31/07				
General	19,803	$ 1,156,684,000	$ 58,410	6.50
Safety	3,815	300,475,000	78,761	5.32
Total	**23,618**	**$ 1,457,159,000**	**$ 61,697**	**6.29**
12/31/08				
General	19,795	$ 1,238,077,000	$ 62,545	7.08
Safety	3,925	331,687,000	84,506	7.29
Total	**23,720**	**$ 1,569,764,000**	**$ 66,179**	**7.26**
12/31/09				
General	18,873	$ 1,258,558,000	$ 66,686	6.62
Safety	3,760	359,933,000	95,727	13.28
Total	**22,633**	**$ 1,618,491,000**	**$ 71,510**	**8.06**
12/31/10				
General	18,155	$ 1,232,657,000	$ 67,896	1.81
Safety	3,587	346,582,000	96,622	0.93
Total	**21,742**	**$ 1,579,239,000**	**$ 72,635**	**1.57**
12/31/11				
General	17,717	$ 1,249,064,000	$ 70,501	3.84
Safety	3,704	370,410,000	100,003	3.50
Total	**21,421**	**$ 1,619,474,000**	**$ 75,602**	**4.08**
12/31/12				
General	17,529	$ 1,238,958,000	$ 70,680	0.25
Safety	3,727	370,643,000	99,448	-0.55
Total	**21,256**	**$ 1,609,601,000**	**$ 75,725**	**0.16**
12/31/13				
General	17,547	$ 1,227,153,000	$ 69,935	-1.05
Safety	3,821	377,343,000	98,755	-0.70
Total	**21,368**	**$ 1,604,496,000**	**$ 75,089**	**-0.84**
12/31/14				
General	17,705	$ 1,267,582,000	$ 71,595	2.37
Safety	3,754	380,578,000	101,379	2.66
Total	**21,459**	**$ 1,648,160,000**	**$ 76,805**	**2.29**

Excludes Deferred and Pending members.

Summary of Retired Membership

Plan Year Ending	At Beginning of Year	Added to Rolls		Removed from Rolls		At End of Year	Annual Allowance (in 000's)	% Increase in Annual Allowance	Average Monthly Allowance
		Number	Annual Allowance (in 000's)*	Number	Annual Allowance (in 000's)				
2005	9,433	1,024	$ 56,669	(239)	$ (4,081)	10,218	$ 285,449	22.58	$ 2,328
2006	10,218	965	46,950	(268)	(5,580)	10,915	326,819	14.49	2,495
2007	10,915	817	41,552	(311)	(6,596)	11,421	361,775	10.70	2,640
2008	11,421	658	38,298	(301)	(6,426)	11,778	393,647	8.81	2,785
2009	11,778	744	32,435	(279)	(6,829)	12,243	419,253	6.50	2,854
2010	12,243	851	46,736	(332)	(8,334)	12,762	457,655	9.16	2,988
2011	12,762	888	45,913	(361)	(9,371)	13,289	494,197	7.98	3,099
2012	13,289	1,026	58,344	(368)	(9,036)	13,947	543,505	9.98	3,247
2013	13,947	911	52,319	(353)	(9,958)	14,505	585,866	7.79	3,366
2014	14,505	995	52,838	(331)	(9,812)	15,169	628,892	7.34	3,455

* Includes COLA granted during the plan year.

Note: Annual allowances exclude RMBR and STAR COLA.

Development of Actuarial and Valuation Value of Assets

As of December 31, 2014

Plan Year Ending	Total Actual Market Return (net)	Expected Market Return (net)	Investment Gain/ (Loss)	Deferred Factor	Deferred Return
2011	$ 3,236,000	$ 651,782,000	$ (648,546,000)	0.2	$ (129,709,000)
2012	1,014,471,000	659,447,000	355,024,000	0.4	142,010,000
2013	1,031,118,000	696,553,000	334,565,000	0.6	200,739,000
2014	487,104,000	780,627,000	(293,523,000)	0.8	(234,818,000)

(1)	Total Deferred Return	$ (21,778,000)	
(2)	Net Market Value of Assets (Excludes $109,103,000 in County Investment Account and $207,829,000 in Prepaid Employer Contributions)	$ 11,428,223,000	*
(3)	Actuarial Value of Assets (2) – (1)	$ 11,450,001,000	**
(4)	Non-valuation Reserves		
	(a) Unclaimed member deposit	$ -	
	(b) Medicare medical insurance reserve	90,000	
	(c) Subtotal	$ 90,000	
(5)	Valuation Value of Assets (3) – (4)(c)	$ 11,449,911,000	
(6)	Deferred Return Recognized in Each of the Next 4 Years		
	(a) Amount recognized on 12/31/2015	$ (50,495,000)	
	(b) Amount recognized on 12/31/2016	79,213,000	
	(c) Amount recognized on 12/31/2017	8,209,000	
	(d) Amount recognized on 12/31/2018	(58,705,000)	
	(e) Subtotal (may not total exactly due to rounding)	$ (21,778,000)	

* Based on the unaudited financial statement provided by OCERS for the December 31, 2014 valuation.

** Ratio of Actuarial Value of Assets to Net Market Value of Assets is 100.2% ((3) / (2)).

Short-Term Solvency Test

(Dollars in Thousands)

Valuation Date	(1) Active Member Contributions	(2) Liability for Inactive Participants	(3) Liability for Active Members (Employer Financed Portion)	Valuation Value of Assets	Portion of Accrued Liability Covered by Valuation Assets (%) (1)	(2)	(3)
12/31/05	$ 1,002,279	$ 3,723,611	$ 3,363,737	$ 5,786,617	100	100	31.53
12/31/06	1,087,804	4,274,829	3,402,412	6,466,085	100	100	32.43
12/31/07	1,215,825	4,803,585	3,819,276[1]	7,288,900	100	100	33.24[1]
12/31/08	1,376,514	5,211,893	4,272,308	7,748,380	100	100	27.15
12/31/09	1,536,849	5,680,031	4,641,698	8,154,687	100	100	20.20
12/31/10	1,680,401	6,107,350	4,638,122	8,672,592	100	100	19.08
12/31/11	1,829,406	6,881,152	4,812,420	9,064,355	100	100	7.35
12/31/12	1,967,117	7,919,478	5,258,293	9,469,208	100	94.73	0.00
12/31/13	2,126,182	8,502,269	5,156,591	10,417,125	100	97.51	0.00
12/31/14	2,298,744	9,017,874	5,096,506	11,449,911	100	100	2.62

[1] Revised due to the Board's adoption of revised retirement rates for General plans with improved benefit formulas.

Actuarial Methods and Assumptions

Section 1 - Post – Retirement Mortality Rates:

Healthy: For General Members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020.

For Safety Members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020 with ages set back two years.

Disabled: For General Members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020 with ages set forward six years for males and set forward three years for females.

For Safety Members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020.

The mortality tables shown above were determined to contain sufficient provision appropriate to reasonably reflect future mortality improvement, based on a review of the mortality experience in the January 1, 2011 through December 31, 2013 Actuarial Experience Study.

Beneficiaries are assumed to have the same mortality as a General Member of the opposite sex who is receiving a service (non-disability) retirement.

Employee Contribution Rates: For General Members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020 weighted 40% male and 60% female.

For Safety Members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020 with ages set back two years weighted 80% male and 20% female.

Section 2 - Termination Rates Before Retirement:

Mortality Rate Percentages				
	General		Safety	
Age	Male	Female	Male	Female
25	0.04	0.02	0.04	0.02
30	0.04	0.02	0.04	0.02
35	0.07	0.04	0.06	0.04
40	0.10	0.07	0.09	0.06
45	0.14	0.11	0.12	0.09
50	0.20	0.16	0.18	0.14
55	0.34	0.25	0.27	0.21
60	0.59	0.41	0.48	0.33
65	1.00	0.76	0.82	0.60

All General pre-retirement deaths are assumed to be non-service connected. For Safety, 90% of pre-retirement deaths are assumed to be non-service connected. The other 10% are assumed to be service connected.

Actuarial Methods and Assumptions

(continued)

Section 2 - Termination Rates Before Retirement (Continued):

Disability Incidence Rates

Disability Incidence Rate Percentages				
	General		Safety	
Age	All Other[1]	OCTA[2]	Law & Fire[3]	Probation[3]
20	0.00	0.00	0.00	0.00
25	0.00	0.00	0.01	0.03
30	0.01	0.03	0.04	0.08
35	0.03	0.20	0.14	0.10
40	0.08	0.36	0.26	0.10
45	0.11	0.43	0.42	0.16
50	0.14	0.48	0.92	0.20
55	0.18	0.74	1.98	0.23
60	0.29	1.41	5.20	0.10

(1) 55% of General All Other disabilities are assumed to be service connected disabilities. The other 45% are assumed to be non-service connected.
(2) 65% of General - OCTA disabilities are assumed to be service connected disabilities. The other 35% are assumed to be non-service connected.
(3) 100% of Safety – Law Enforcement, Fire and Probation disabilities are assumed to be service connected disabilities.

Actuarial Methods and Assumptions

(continued)

Section 2 - Termination Rates Before Retirement (Continued):

Termination Rates

	Termination Rate Percentages			
	General		Safety	
Years of Service	All Other[(1)]	OCTA[(2)]	Law & Fire[(3)]	Probation[(4)]
0	11.00	17.50	4.00	16.00
1	8.00	13.50	3.00	13.00
2	7.00	10.50	2.00	10.00
3	5.00	10.00	1.00	6.00
4	4.00	9.00	1.00	4.00
5	3.75	7.00	1.00	3.50
6	3.50	5.00	0.95	3.00
7	3.00	5.00	0.90	2.50
8	2.75	4.00	0.85	2.25
9	2.50	3.50	0.80	2.00
10	2.25	3.50	0.75	1.75
11	2.00	3.50	0.65	1.75
12	2.00	3.00	0.60	1.50
13	1.75	3.00	0.50	1.25
14	1.75	3.00	0.50	1.00
15	1.75	3.00	0.50	1.00
16	1.50	3.00	0.50	1.00
17	1.50	2.75	0.50	0.50
18	1.50	2.75	0.50	0.50
19	1.50	2.75	0.50	0.50
20+	1.25	1.75	0.25	0.50

(1) 40% of all terminated members with less than 5 years of service and 25% of all terminated members with 5 or more years of service will choose a refund of contributions.

(2) 45% of all terminated members with less than 5 years of service and 35% of all terminated members with 5 or more years of service will choose a refund of contributions.

(3) 20% of all terminated members with less than 5 years of service and 20% of all terminated members with 5 or more years of service will choose a refund of contributions.

(4) 40% of all terminated members with less than 5 years of service and 30% of all terminated members with 5 or more years of service will choose a refund of contributions.

Actuarial Methods and Assumptions

(continued)

Retirement Rates

Rate (%) Retirement								
	General			Safety				
Age	Enhanced	Non-Enhanced(1)	SJC	Law (3% @ 50)(2)	Law (3% @ 55)(2)	Fire (3% @ 50)(2)	Fire (3% @ 55)(2)	Probation(2)
49	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
50	2.5	2.5	3.0	16.0	11.5	6.0	8.0	3.0
51	2.0	2.5	3.0	16.0	12.0	8.0	10.0	3.0
52	2.0	2.5	3.0	16.0	12.7	9.0	11.0	4.0
53	2.0	2.5	3.0	16.0	17.9	10.0	12.0	4.0
54	5.0	2.5	3.0	22.0	18.8	16.0	14.0	6.0
55	15.0	3.0	4.0	22.0	30.7	19.0	24.0	11.0
56	10.0	3.5	5.0	20.0	20.0	20.0	23.0	11.0
57	10.0	5.0	6.0	20.0	20.0	23.0	27.0	17.0
58	10.0	5.0	7.0	20.0	25.0	30.0	27.0	20.0
59	11.0	7.0	9.0	26.0	30.0	30.0	36.0	20.0
60	12.0	9.0	11.0	45.0	100.0	45.0	100.0	20.0
61	12.0	10.0	13.0	45.0	100.0	45.0	100.0	20.0
62	15.0	16.0	15.0	45.0	100.0	45.0	100.0	25.0
63	16.0	16.0	15.0	45.0	100.0	45.0	100.0	50.0
64	16.0	18.0	20.0	45.0	100.0	45.0	100.0	50.0
65	21.0	21.0	20.0	100.0	100.0	100.0	100.0	100.0
66	22.0	26.0	24.0	100.0	100.0	100.0	100.0	100.0
67	23.0	21.0	24.0	100.0	100.0	100.0	100.0	100.0
68	23.0	21.0	24.0	100.0	100.0	100.0	100.0	100.0
69	23.0	21.0	24.0	100.0	100.0	100.0	100.0	100.0
70	40.0	30.0	100.0	100.0	100.0	100.0	100.0	100.0
71	40.0	30.0	100.0	100.0	100.0	100.0	100.0	100.0
72	40.0	30.0	100.0	100.0	100.0	100.0	100.0	100.0
73	40.0	30.0	100.0	100.0	100.0	100.0	100.0	100.0
74	40.0	30.0	100.0	100.0	100.0	100.0	100.0	100.0
75	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(1) These assumptions are also used for the CalPEPRA 1.62% @ 65 formula (Plan T).

(2) Retirement rate is 100% after a member accrues a benefit of 100% of final average earnings.

Actuarial Methods and Assumptions

(continued)

Retirement Rates

(continued)

Rate (%) Retirement				
Age	CalPEPRA General Formula	CalPEPRA Safety – Probation Formula[1]	CalPEPRA Safety – Law Formula[1]	CalPEPRA Safety – Fire Formula[1]
50	0.0	2.5	11.0	6.5
51	0.0	2.5	11.5	8.0
52	4.0	3.0	12.0	9.0
53	1.5	3.0	16.0	10.0
54	1.5	5.5	17.0	12.0
55	2.5	10.0	28.0	21.0
56	3.5	10.0	18.0	20.0
57	5.5	15.0	17.5	22.0
58	7.5	20.0	22.0	25.0
59	7.5	20.0	26.0	31.5
60	7.5	100.0	100.0	100.0
61	7.5	100.0	100.0	100.0
62	14.0	100.0	100.0	100.0
63	14.0	100.0	100.0	100.0
64	14.0	100.0	100.0	100.0
65	18.0	100.0	100.0	100.0
66	22.0	100.0	100.0	100.0
67	23.0	100.0	100.0	100.0
68	23.0	100.0	100.0	100.0
69	23.0	100.0	100.0	100.0
70	30.0	100.0	100.0	100.0
71	30.0	100.0	100.0	100.0
72	30.0	100.0	100.0	100.0
73	30.0	100.0	100.0	100.0
74	30.0	100.0	100.0	100.0
75	100.0	100.0	100.0	100.0

[1] Retirement rate is 100% after a member accrues a benefit of 100% of final average earnings.

Actuarial Methods and Assumptions

(continued)

Retirement Age and Benefit for Deferred Vested Members:	For deferred vested members, we make the following retirement age assumptions: General 58 Safety 53 We assume that 20% of future General and 30% of future Safety deferred vested members are reciprocal. For reciprocals, we assume 4.25% compensation increases for General and 5.00% for Safety per annum.
Liability Calculation for Current Deferred Vested Members:	Liability for a current deferred vested member is calculated based on salary, service, and eligibility for reciprocal benefit as provided by the Retirement System. For those members without salary information that have 3 or more years of service, we used an average salary. For those members without salary information that have less than 3 years of service or for those members without service information, we assumed a refund of account balance.
Future Benefit Accruals:	1.0 year of service per year of employment. There is no assumption to anticipate conversion of unused sick leave at retirement.
Unknown Data for Members:	Same as those exhibited by members with similar known characteristics. If not specified, members are assumed to be male.
Percent Married:	75% of male members and 50% of female members are assumed to be married at retirement or time of pre-retirement death.
Age of Spouse:	Female (or male) three years younger (or older) than spouse.
Net Investment Return:	7.25%; net of investment and administrative expenses.
Employee Contribution Crediting Rate:	5.00%, compounded semi-annually.
Consumer Price Index:	Increase of 3.00% per year, retiree COLA increases due to CPI subject to a 3.0% maximum change per year.

Actuarial Methods and Assumptions

(continued)

Salary Increases

Annual Rate of Compensation Increase (%) Inflation: 3.00% per year, plus "across the board" salary increases of 0.50% per year, plus the following merit and promotion increases:		
Years of Service	General	Safety
Less than 1	10.00%	14.00%
1	7.25	10.00
2	6.00	8.50
3	4.75	6.75
4	4.00	5.25
5	3.25	4.50
6	2.25	3.50
7	2.00	3.25
8	1.50	2.25
9	1.25	2.25
10	1.25	1.75
11	1.25	1.75
12	1.25	1.75
13	1.25	1.75
14	1.25	1.75
15	1.25	1.75
16	0.75	1.50
17	0.75	1.50
18	0.75	1.50
19	0.75	1.50
20 & over	0.75	1.50

Actuarial Methods and Assumptions

(continued)

Additional Cashout Assumptions:

Non-CalPEPRA Formulas: Additional compensation amounts are expected to be received during a member's final average earnings period. The percentages used in this valuation are:

	Final One Year Salary	Final Three Year Salary
General Members	3.50%	2.80%
Safety - Probation	3.80%	2.80%
Safety - Law	5.20%	4.70%
Safety - Fire	2.00%	2.00%

The additional cashout assumptions are the same for service and disability retirements.

CalPEPRA Formulas: None

Increase in Section 7522.10 Compensation Limit: Increase of 3.00% per year from the valuation date.

Actuarial Value of Assets: Market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual and the expected return on a market value basis, and is recognized over a five-year period.

Valuation Value of Assets: The Valuation Value of Assets is the Actuarial Value of Assets reduced by the value of the non-valuation reserves.

Actuarial Cost Method: Entry Age Actuarial Cost Method. Entry Age is the current age minus Vesting Credit. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are allocated by salaries, with Normal Cost determined as a level percentage of individual salary, as if the current benefit accrual rate had always been in effect. Effective with the December 31, 2013 valuation, the outstanding balance of the December 31, 2012 Unfunded Actuarial Accrued Liability was combined and re-amortized over a declining 20-year period. Any changes in Unfunded Actuarial Accrued Liability due to actuarial gains or losses or due to changes in assumptions or methods will be amortized over separate 20-year periods. Any changes in UAAL due to plan amendments are amortized over separate 15-year periods and any change in UAAL due to early retirement incentive programs will be amortized over a separate period of up to 5 years.

Please note that for Probation members who have prior benefit service in another General OCERS plan, the normal cost rate for the current plan is calculated assuming their Entry Age is the date they entered service with their current plan.

Summary of Major Plan Provisions

This section summarizes the major provisions of OCERS included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

Membership Eligibility:	Membership with OCERS begins with the day of employment in an eligible position by the County or a participating employer.
Non-CalPEPRA General Plans:	
2.5% @ 55 Plans	(Orange County Sanitation District and Law Library[1])
Plan G	General members hired before September 21, 1979.
Plan H	General members hired on or after September 21, 1979.
	(Sanitation District members within Supervisors and Professional unit hired on or after October 1, 2010 are in Plan B)
2.7% @ 55 Plans	(City of San Juan Capistrano, Orange County Employees except bargaining unit AFSCME members, Orange County Superior Court, Orange County Local Agency Formation Commission[(1)], Orange County Employees Retirement System[(2)], Children and Family Commission[(3)] and Orange County Fire Authority)
Plan I	General members hired before September 21, 1979.
Plan J	General members hired on or after September 21, 1979.
	(1) Improvement is prospective only for service after June 23, 2005. (2) Improvement for management employees is prospective only for service after June 30, 2005. (3) Improvement is prospective only for service after December 22, 2005.
2.0% @ 55 Plans	(Transportation Corridor Agency, Cemetery District - future service effective December 7, 2007 and General OCFA employees effective July 1, 2011)
Plan M	General members hired before September 21, 1979.
Plan N	General members hired on or after September 21, 1979.
1.62% @ 65 Plans	(Orange County Employees, Orange County Superior Court, Orange County Local Agency Formation Commission and Orange County Managers Unit)
Plan O	County OCEA members and Superior Court members rehired on or after May 7, 2010, LAFCO members rehired on or after July 1, 2010 and County Managers unit members rehired on or after August 17, 2010 and not electing to rejoin Plan I.
Plan P	County OCEA members and Superior Court members hired on or after May 7, 2010, LAFCO members hired on or after July 1, 2010 and County Managers unit members hired on or after August 17, 2010 and not electing Plan J.
2.0% @ 57 Plan	(City of San Juan Capistrano)
Plan S	General members hired on or after July 1, 2012.
All Other General Employers:	
Plan A	General members hired before September 21, 1979.
Plan B	General members hired on or after September 21, 1979 and Sanitation District members within Supervisors and Professional unit hired on or after October 1, 2010.

Summary of Major Plan Provisions

(continued)

Membership Eligibility: (continued)

Non-CalPEPRA Safety Plans:

3% @ 50 Plans	(Law Enforcement, Fire Authority and Probation)
Plan E	Safety members hired before September 21, 1979.
Plan F	Safety members hired on or after September 21, 1979 and before April 9, 2010 for Law Enforcement, before July 1, 2011 for Safety employees of OCFA Executive Management, and before July 1, 2012 for other OCFA Safety employees.
3% @ 55 Plans	(Law Enforcement and Fire Authority)
Plan Q	Safety Law Enforcement members rehired on or after April 9, 2010, Safety employees of OCFA Executive Management rehired on or after July 1, 2011, and other OCFA Safety employees rehired on or after July 1, 2012 and previously in Plan E.
Plan R	Safety Law Enforcement members hired on or after April 9, 2010, Safety employees of OCFA Executive Management hired on or after July 1, 2011, and other OCFA Safety employees hired on or after July 1, 2012.

CalPEPRA General Plans:

1.62% @ 65 Plan	(Orange County Employees except County Attorneys, Orange County Employees Retirement System except Management Employees, Children and Family Commission, Local Agency Formation Commission, and Orange County Superior Court)
Plan T	General members with membership dates on or after January 1, 2013.
2.5% @ 67 Plan	(All Other General Employers, Orange County Attorneys, Orange County Employees Retirement System Management Employees)
Plan U	General Non-Orange County Transportation Authority members with membership dates on or after January 1, 2013 and Orange County Transportation Authority members with membership dates on or after January 1, 2015.

CalPEPRA Safety Plans:

2.7% @ 57 Plan	(Law Enforcement, Fire Authority and Probation Members)
Plan V	Safety members with membership dates on or after January 1, 2013.

Summary of Major Plan Provisions

(continued)

Final Compensation for Benefit Determination:

Plans A, E, G, I, M, O and Q	Highest consecutive twelve months of compensation earnable. (§31462.1) (FAS1)
Plans B, F, H, J, N, P, R and S	Highest consecutive thirty-six months of compensation earnable. (§31462) (FAS3)
Plans T, U and V	Highest consecutive thirty-six months of pensionable compensation. (§7522.10(c), §7522.32 and §7522.34) (FAS3)
Service:	Years of service. (Yrs)

Service Retirement Eligibility:

Plans A, B, G, H, I, J, M, N, O, P, S and T	Age 50 with 10 years of service, or age 70 regardless of service, or after 30 years, regardless of age. (§31672) All part time employees over age 55 with 10 years of employment may retire with 5 years of service.
Plan U	Age 52 with 5 years of service (§7522.20(a)) or age 70 regardless of service (§31672.3)
Plans E, F, Q and R	Age 50 with 10 years of service, or after 20 years, regardless of age. (§31663.25) All part-time employees over age 55 with 10 years of employment may retire with 5 years of service.
Plan V	Age 50 with 5 years of service (§7522.20(d)) or age 70 regardless of service (§31672.3).

Summary of Major Plan Provisions

(continued)

Benefit Formula: General Plans

2.5% @ 55	Retirement Age	Benefit Formula
Plan G (§31676.18)	50	(2.00% x FAS1 x Yrs)
Tier 1	55	(2.50% x FAS1 x Yrs)
	60	(2.50% x FAS1 x Yrs)
	62	(2.62% x FAS1 x Yrs)*
	65 or later	(2.62% x FAS1 x Yrs)*
Plan H (§31676.18)	50	(2.00% x FAS3 x Yrs)
Tier 2	55	(2.50% x FAS3 x Yrs)
	60	(2.50% x FAS3 x Yrs)
	62	(2.50% x FAS3 x Yrs)
	65 or later	(2.50% x FAS3 x Yrs)

* Reflects benefit factors from Plan A as they provide a better benefit than those under 2.5% @ 55.

2.7% @ 55	Retirement Age	Benefit Formula
Plan I (§31676.19)	50	(2.00% x FAS1 x Yrs)
Tier 1	55	(2.70% x FAS1 x Yrs)
	60	(2.70% x FAS1 x Yrs)
	62	(2.70% x FAS1 x Yrs)
	65 or later	(2.70% x FAS1 x Yrs)
Plan J (§31676.19)	50	(2.00% x FAS3 x Yrs)
Tier 2	55	(2.70% x FAS3 x Yrs)
	60	(2.70% x FAS3 x Yrs)
	62	(2.70% x FAS3 x Yrs)
	65 or later	(2.70% x FAS3 x Yrs)

2.0% @ 55	Retirement Age	Benefit Formula
Plan M (§31676.16)	50	(1.43% x FAS1 x Yrs)
Tier 1	55	(2.00% x FAS1 x Yrs)
	60	(2.34% x FAS1 x Yrs)**
	62	(2.62% x FAS1 x Yrs)**
	65 or later	(2.62% x FAS1 x Yrs)**
Plan N (§31676.16)	50	(1.43% x FAS3 x Yrs)
Tier 2	55	(2.00% x FAS3 x Yrs)
	60	(2.26% x FAS3 x Yrs)
	62	(2.37% x FAS3 x Yrs)
	65 or later	(2.43% x FAS3 x Yrs)***

** Reflects benefit factors from Plan A as they provide a better benefit than those under 2.0% @ 55.
*** Reflects benefit factors from Plan B as they provide a better benefit than those under 2.0% @ 55.

Summary of Major Plan Provisions

(continued)

Benefit Formula: General Plans (continued)

1.62% @ 65	Retirement Age	Benefit Formula
Plan O (§31676.01)	50	(0.79% x FAS1 x Yrs)
Tier 1	55	(0.99% x FAS1 x Yrs)
	60	(1.28% x FAS1 x Yrs)
	62	(1.39% x FAS1 x Yrs)
	65 or later	(1.62% x FAS1 x Yrs)
Plan P and Plan T	50	(0.79% x FAS3 x Yrs)
(§31676.01)	55	(0.99% x FAS3 x Yrs)
Tier 2	60	(1.28% x FAS3 x Yrs)
	62	(1.39% x FAS3 x Yrs)
	65 or later	(1.62% x FAS3 x Yrs)

2.0% @ 57	Retirement Age	Benefit Formula
Plan S (§31676.12)	50	(1.34% x FAS3 x Yrs)
Tier 2	55	(1.77% x FAS3 x Yrs)
	60	(2.34% x FAS3 x Yrs)
	62	(2.62% x FAS3 x Yrs)
	65 or later	(2.62% x FAS3 x Yrs)

All Other General Members	Retirement Age	Benefit Formula
Plan A (§31676.12)	50	(1.34% x FAS1 x Yrs)
Tier 1	55	(1.77% x FAS1 x Yrs)
	60	(2.34% x FAS1 x Yrs)
	62	(2.62% x FAS1 x Yrs)
	65 or later	(2.62% x FAS1 x Yrs)
Plan B (§31676.1)	50	(1.18% x FAS3 x Yrs)
Tier 2	55	(1.49% x FAS3 x Yrs)
	60	(1.92% x FAS3 x Yrs)
	62	(2.09% x FAS3 x Yrs)
	65 or later	(2.43% x FAS3 x Yrs)
Plan U (§7522.20(a))	52	(1.00% x FAS3 x Yrs)
	55	(1.30% x FAS3 x Yrs)
	60	(1.80% x FAS3 x Yrs)
	62	(2.00% x FAS3 x Yrs)
	65	(2.30% x FAS3 x Yrs)
	67 or later	(2.50% x FAS3 x Yrs)

Summary of Major Plan Provisions

(continued)

Benefit Formula: Safety Plans

3% @ 50	Retirement Age	Benefit Formula
Plan E (§31664.1)	50	(3.00% x FAS1 x Yrs)
Tier 1	55	(3.00% x FAS1 x Yrs)
	60 or later	(3.00% x FAS1 x Yrs)
Plan F (§31664.1)	50	(3.00% x FAS3 x Yrs)
Tier 2	55	(3.00% x FAS3 x Yrs)
	60 or later	(3.00% x FAS3 x Yrs)

3% @ 55	Retirement Age	Benefit Formula
Plan Q (§31664.2)	50	(2.29% x FAS1 x Yrs)
Tier 1	55	(3.00% x FAS1 x Yrs)
	60 or later	(3.00% x FAS1 x Yrs)
Plan R (§31664.2)	50	(2.29% x FAS3 x Yrs)
Tier 2	55	(3.00% x FAS3 x Yrs)
	60 or later	(3.00% x FAS3 x Yrs)
Plan V (§7522.25(d))	50	(2.00% x FAS3 x Yrs)
	55	(2.50% x FAS3 x Yrs)
	57 or later	(2.70% x FAS3 x Yrs)

Summary of Major Plan Provisions

(continued)

Maximum Benefit:

Plans A, B, E, F, G, H, I, J, M, N, O, P, Q, R, S and T — 100% of Highest Average Compensation.

(§31676.01, §31676.1, §31676.12, §31676.16, §31676.18, §31676.19, §31664.1, §31664.2)

Plans U and V — None

Ordinary Disability:

General Plans:

Plans A, B, G, H, I, J, M, N, O, P, S, T and U

Eligibility — Five years of service. (§31720)

Benefit Formula — Plans A, G, I, M, and O:
1.8% per year of service. If the benefit does not exceed one-third of Final Compensation, the service is projected to 62, but the total benefit cannot be more than one-third of Final Compensation. (§31727.1)

Plans B, H, J, N, P, S, T and U:
1.5% per year of service. If the benefit does not exceed one-third of Final Compensation, the service is projected to 65, but the total benefit cannot be more than one-third of Final Compensation. (§31727)

Safety Plans:

Plans E, F, Q, R and V

Eligibility — Five years of service. (§31720)

Benefit Formula — 1.8% per year of service. If the benefit does not exceed one-third of Final Compensation, the service is projected to 55, but the total benefit cannot be more than one-third of Final Compensation (§31727.2)

For all members, 100% of the service retirement benefit will be paid, if greater.

Line-of-Duty Disability:

All Members:

Eligibility — No age or service requirements. (§31720)

Benefit Formula — 50% of the Final Compensation or 100% of Service Retirement benefit, if greater. (§31727.4)

Pre-Retirement Death

All Members:

Eligibility — None

Benefit — Refund of employee contributions with interest plus one month's compensation for each year of service to a maximum of six month's compensation. (§31781) A lump sum benefit in the amount of $1,000 is payable upon death of a member (with 10 years of service) to his/her eligible beneficiary. (§31790)

Death in line of duty — 50% of Final Compensation or 100% of Service Retirement benefit, if greater, payable to spouse or minor-children. (§31787)

Or

Vested Members:

Eligibility — Five years of service.

Benefit — 60% of the greater of Service or Ordinary Disability Retirement benefit payable to eligible surviving spouse (§31765.1, §31781.1), in lieu of §31781.

Summary of Major Plan Provisions

(continued)

Death After Retirement:	
All Members:	
Service or Ordinary Disability Retirement	60% of member's unmodified allowance continued to eligible spouse. (§31760.1) A lump sum benefit in the amount of $1,000 is payable upon death of a member (with 10 years of service) to his/her eligible beneficiary. (§31790) An eligible spouse is a surviving spouse who was married to or registered with the member one year prior to the effective retirement date. Certain surviving spouses or domestic partners may also be eligible if marriage or domestic partnership was at least two years prior to the date of death and the surviving spouse or domestic partner has attained age 55. (§31760.1)
Line-of-Duty Disability	100% of member's allowance continued to eligible spouse. (§31786) A lump sum benefit in the amount of $1,000 is payable upon death of a member (with 10 years of service) to his/her eligible beneficiary. (§31790)
Withdrawal Benefits:	
Less than Five Years of Service	Refund of accumulated employee contributions with interest or earned benefit at age 70 (§31628). Effective January 1, 2003, a member may also elect to leave their contributions on deposit in the retirement fund. (§31629.5)
Five or More Years of Service	If contributions left on deposit, entitled to earned benefits commencing at any time after eligible to retire. (§31700)
Post-retirement Cost-of-Living Benefits:	Future changes based on Consumer Price Index to a maximum of 3% per year, excess "banked." (§31870.1)
Supplemental Benefit:	Non-vested supplemental COLA and medical benefits are also paid by the System to eligible retirees and survivors. These benefits have been excluded from this valuation.
Member Contributions:	
Non-CalPEPRA General Plans:	
Plan A	
Basic	Provide for an average annuity at age 60 equal to 1/200 of FAS1. (§31621.5)
Cost-of-Living	Provide for 50% of future Cost-of-Living costs.
Plan B	
Basic	Provide for an average annuity at age 60 equal to 1/120 of FAS3. (§31621)
Cost-of-Living	Provide for 50% of future Cost-of-Living costs.
Plans G, H, I and J	
Basic	Provide for an average annuity at age 55 equal to 1/100 of FAS3 (FAS1 for Plans G and I). (§31621.8)
Cost-of-Living	Provide for 50% of future Cost-of-Living costs.
Plans M, N, O and P	
Basic	Provide for an average annuity payable at age 60 equal to 1/120 of FAS3 (FAS1 for Plans M and O). (§31621)
Cost-of-Living	Provide for 50% of future Cost-of-Living costs.
Plan S	
Basic	Provide for an average annuity at age 60 equal to 1/100 of FAS3. (§31621.2)
Cost-of-Living	Provide for 50% of future Cost-of-Living costs.

Summary of Major Plan Provisions

(continued)

Member Contributions: (continued)

Non-CalPEPRA Safety Plans:

Plans E and Q	
Basic	Provide for an average annuity at age 50 equal to 1/200 FAS1. (§31639.5)
Cost-of-Living	Provide for 50% of future Cost-of-Living costs.
Plans F and R	
Basic	Provide for an average annuity at age 50 equal to 1/100 of FAS3. (§31639.25)
Cost-of-Living	Provide for 50% of future Cost-of-Living costs.
CalPEPRA Plans:	
Plans T, U and V	50% of total Normal Cost rate.

Other Information:

Non-CalPEPRA Safety members with 30 or more years of service are exempt from paying members contributions. The same applies for General members hired on or before March 7, 1973

Note: The summary of major plan provisions is designed to outline principal plan benefits as interpreted for purposes of the actuarial valuation. If the System should find the plan summary not in accordance with the actual provisions, the System should alert the actuary so that both can be sure the proper provisions are valued.

Experience Analysis

(2005 - 2009)

(Dollars in Thousands)

Gains & Losses in Actuarial Accrued Liabilities During Years Ended December 31, Resulting from Differences Between Assumed Experience & Actual Experience					
	Gains (or Losses) Per Year				
Type of Activity	2005	2006	2007	2008	2009
Retirements	$ -	$ -	$ -	$ (54,911)	$ -
Pay Increases	(16,544)	(21,679)	(136,417)	(97,561)	77,858
Investment Income	39,536	112,612	176,681	(257,752)	(322,523)
Other	(65,468)	(39,155)	(43,538)	(17,159)	(14,931)
Gain (or Loss) During Year From Experience	$ (42,476)	$ 51,778	$ (3,274)	$ (427,383)	$ (259,596)
Nonrecurring Items:					
Method and Procedure Changes	15,335	-	-	-	-
Plan Amendments and Assumption Changes	-	-	(237,147)	(115,764)	-
Correction to Include All Premium Pay Items	-	-	-	-	(228,051)
Composite Gain (or Loss) During Year	$ (27,141)	$ 51,778	$ (240,421)	$ (543,147)	$ (487,647)

(2010-2014)

(Dollars in Thousands)

Gains & Losses in Actuarial Accrued Liabilities During Years Ended December 31, Resulting from Differences Between Assumed Experience & Actual Experience					
	Gains (or Losses) Per Year				
Type of Activity	2010	2011	2012	2013	2014
Retirements	$ -	$ -	$ -	$ -	$ -
Pay Increases	215,936	154,946	244,750	294,326	125,746
COLA Increases	-	-	-	-	153,484
Investment Income	(224,044)	(388,935)	(387,808)	176,930	9,570
Other	63,174	(38,159)	(19,979)	30,354	(4,476)
Gain (or Loss) During Year From Experience	$ 55,066	$ (272,148)	$ (163,037)	$ 501,610	$ 284,324
Nonrecurring Items:					
Plan Amendments and Assumption Changes	-	(363,842)	(934,619)	-	122,171
Correction to Include All Premium Pay Items	-	-	-	-	-
Composite Gain (or Loss) During Year	$ 55,066	$ (635,990)	$ (1,097,656)	$ 501,610	$ 406,495

Schedule of Funding Progress

Actuarial Valuation Date December 31	Valuation Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded/ (Overfunded) AAL (UAAL) (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b) - (a)] / (c)
2005	$ 5,786,617,000	$ 8,089,627,000	$ 2,303,010,000	71.53%	$ 1,276,764,000	180.38%
2006	6,466,085,000	8,765,045,000	2,298,960,000	73.77%	1,322,952,000	173.78%
2007	7,288,900,000	9,838,686,000	2,549,786,000	74.08%	1,457,159,000	174.98%
2008	7,748,380,000	10,860,715,000	3,112,335,000	71.34%	1,569,764,000	198.27%
2009	8,154,687,000	11,858,578,000	3,703,891,000	68.77%	1,618,491,000	228.85%
2010	8,672,592,000	12,425,873,000	3,753,281,000	69.79%	1,579,239,000	237.66%
2011	9,064,355,000	13,522,978,000	4,458,623,000	67.03%	1,619,474,000	275.31%
2012	9,469,208,000	15,144,888,000	5,675,680,000	62.52%	1,609,600,000	352.55%
2013	10,417,125,000	15,785,042,000	5,367,917,000	65.99%	1,604,496,000	334.55%
2014	11,449,911,000	16,413,124,000	4,963,213,000	69.76%	1,648,160,000	301.14%

For informational purposes only, we have also developed the funded ratio determined using the historical market value of assets after adjustment for amounts in the County Investment Account, prepaid employer contributions, unclaimed member reserve and Medicare Medical Insurance Reserve.

Actuarial Valuation Date December 31	Funded Ratio Based on Net Market Value of Assets
2005	73.07%
2006	77.69%
2007	78.43%
2008	57.51%
2009	62.94%
2010	67.25%
2011	62.60%
2012	63.17%
2013	67.65%
2014	69.63%

Orange County Fire Authority OPEB Plan Actuarial Certification

SECTION VIII. ACTUARIAL CERTIFICATION

The results set forth in this report are based on the actuarial valuation of the retiree medical program of Orange County Fire Authority (OCFA) as of July 1, 2014.

The valuation was performed in accordance with generally accepted actuarial principles and practices and in accordance with GASB Statements No. 43 & 45. We relied on census data for active employees and retirees provided to us by OCFA. We also made use of plan information, premium information, and enrollment information provided to us by OCFA.

The assumptions used in performing the valuation, as summarized in this report, and the results based thereupon, represent our best estimate of anticipated experience and actuarial cost of the retiree medical benefits program.

I am a member of the American Academy of Actuaries and believe I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Certified by:

Marilyn K. Jones, ASA, EA, MAAA, FCCA
Consulting Actuary

Date: 10/13/2014

nyhart

Orange County Fire Authority OPEB Plan Summary of Retired Members and Beneficiaries

Plan Year Ending*	Benefit Type	Added to Rolls: Number	Added to Rolls: Annual Allowance (in 000's)	Removed from Rolls: Number	Removed from Rolls: Annual Allowance (in 000's)	Rolls at Year End: Number	Rolls at Year End: Annual Allowance (in 000's)**	Increase in Retiree Allowance (in 000's)	Average Annual Allowance	Change in Average Benefit
6/30/12	Direct Contribution	N/A	N/A	N/A	N/A	471	$ 2,483	N/A	$ 5	N/A
	Implicit Rate Subsidy	N/A	N/A	N/A	N/A	348	1,135	N/A	3	N/A
	Total					471	$ 3,618		$ 8	
6/30/14	Direct Contribution	107	$ 618	5	$ 22	573	$ 3,131	26.1%	$ 5	3.6%
	Implicit Rate Subsidy	70	140	4	3	414	823	-27.5%	2	-39.0%
	Total	107	$ 758	5	$ 25	573	$ 3,954	9.3%	$ 7	-10.2%

* Valuations are performed biennially.
** Includes increase / decrease (subsidy) for continuing retirees.

Orange County Fire Authority OPEB Plan Solvency Test

Valuation Date*	Benefit Type	Active Member Contribution	Liability for Retired Members (in 000's)	Active Members Employer Financed Portion (in 000's)	Total (in 000's)	Actuarial Value of Plan Assets (in 000's)	Active Member Contribution	Liability for Retired Members	Active Members Employer Financed Portion
6/30/12	Direct Contribution	$ -	$ 51,179	$ 79,611	$ 130,790	$ 28,910	100%	56.5%	0.0%
	Implicit Rate Subsidy	-	7,812	18,021	25,833	-	100%	0.0%	0.0%
	Total	$ -	$ 58,991	$ 97,632	$ 156,623	$ 28,910	100%	49.0%	0.0%
6/30/14	Direct Contribution	$ -	$ 70,702	$ 87,705	$ 158,407	$ 36,945	100%	52.3%	0.0%
	Implicit Rate Subsidy	-	6,839	13,810	20,649	-	100%	0.0%	0.0%
	Total	$ -	$ 77,541	$ 101,515	$ 179,056	$ 36,945	100%	47.6%	0.0%

* Valuations are performed biennially.

2010	2011	2012	2013	2014
iPad	Medical Mirror	Surface Pro	Oculus Rift	Selfie Stick

SECTION V

STATISTICAL

2010's

Halfway through the 2010's, the focus remains on technology. Apple debuts the iPad, Microsoft releases the Surface Pro, and the tablet computer takes off. Touch screens are the rage, smart phones are a necessity. Sustainability of the environment has become a topic of conversation. Hybrid cars are desireable as well as solar electricity for the home. Self driving cars and space travel to Mars are in the foreseeable future. Technological advances continue at an exponential rate, what will be next?

2015	2016	2017	2018	2019
Hoverboard Scooter	Virtual Reality Camera	First Human Head Transplant is Scheduled	Nanometre Chips Enter Mass Production	Autonomous Car Scheduled to be Available to the Public

Statistical Section Review

The Statistical Section of the Comprehensive Annual Financial Report provides additional information in order to promote a more comprehensive understanding of the financial statements, note disclosures and supplemental information.

The Governmental Accounting Standards Board (GASB) established five categories of information to be provided in the Statistical Section: Financial Trends, Revenues, Expenses, Demographic and Economic, and Operating Information.

This section provides multi-year trend information to facilitate an understanding of how OCERS as an organization has changed over time.

Information of financial trends, revenues and expenses for the last ten years is presented in the Schedules of Changes in Fiduciary Net Position, Schedule and Graph of Fiduciary Revenue by Source, and Schedule and Graph of Expenses by Type.

Schedule of Changes in Fiduciary Net Position - Pension Trust Fund

2006 – 2015
(Dollars in Thousands)

Years Ended December 31	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Additions										
Employer Contributions	$ 277,368	$ 401,037	$ 433,911	$ 377,976	$ 372,437	$ 387,585	$ 406,805	$ 427,095	$ 625,520	$ 571,298
Employee Contributions	137,582	159,476	172,291	171,928	177,929	183,820	191,215	209,301	232,656	249,271
Investment Income/ (Loss)	828,147	763,117	(1,627,177)	1,073,912	885,569	46,669	1,001,650	1,149,160	495,223	(12,931)
Net Securities Lending	1,317	3,452	6,145	3,989	1,849	1,703	2,007	1,454	1,435	1,030
Commission Recapture - Net/Other	736	1,773	1,249	2,161	1,124	2,084	1,113	2,033	2,537	1,028
Total Additions	$ 1,245,150	$1,328,855	$(1,013,581)	$1,629,966	$1,438,908	$ 621,861	$1,602,790	$1,789,043	$1,357,371	$ 809,696
Deductions										
Benefits	$ 318,666	$ 353,861	$ 419,502	$ 461,530	$ 459,383	$ 493,749	$ 541,154	$ 586,284	$ 630,678	$ 675,963
Administrative Expenses	17,145	10,381	11,006	10,947	12,368	12,828	14,209	11,705	11,905	12,521
Total Deductions	$ 335,811	$ 364,242	$ 430,508	$ 472,477	$ 471,751	$ 506,577	$ 555,363	$ 597,989	$ 642,583	$ 688,484
Changes in Fiduciary Net Position	$ 909,339	$ 964,613	$(1,444,089)	$1,157,489	$ 967,157	$ 115,284	$ 1,047,427	$ 1,191,054	$ 714,788	$ 121,212

Schedule of Changes in Fiduciary Net Position - Health Care Funds-County

2006 – 2015
(Dollars in Thousands)

Years Ended December 31	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Additions										
Employer Contributions	N/A	N/A	N/A	N/A	$ 14,582	$ 39,694	$ 27,395	$ 66,057	$ 64,852	$ 36,557
Investment Income/(Loss)	N/A	N/A	N/A	N/A	8,550	(664)	10,296	13,673	7,331	(716)
Net Securities Lending	N/A	N/A	N/A	N/A	18	18	21	20	25	18
Commission Recapture - Net/Other	N/A	N/A	N/A	N/A	11	23	12	29	43	18
Total Additions	$ -	$ -	$ -	$ -	$ 23,161	$ 39,071	$ 37,724	$ 79,779	$72,251	$35,877
Deductions										
Benefits	N/A	N/A	N/A	N/A	$ 25,514	$ 26,250	$ 27,089	$ 28,293	$29,299	$30,107
Administrative Expenses	N/A	N/A	N/A	N/A	18	18	19	20	20	22
Total Deductions	$ -	$ -	$ -	$ -	$ 25,532	$ 26,268	$ 27,108	$ 28,313	$29,319	$30,129
Changes in Fiduciary Net Position	$ -	$ -	$ -	$ -	$ (2,371)	$ 12,803	$ 10,616	$ 51,466	$42,932	$ 5,748

Schedule of Changes in Fiduciary Net Position - Health Care Funds-OCFA

2006 – 2015
(Dollars in Thousands)

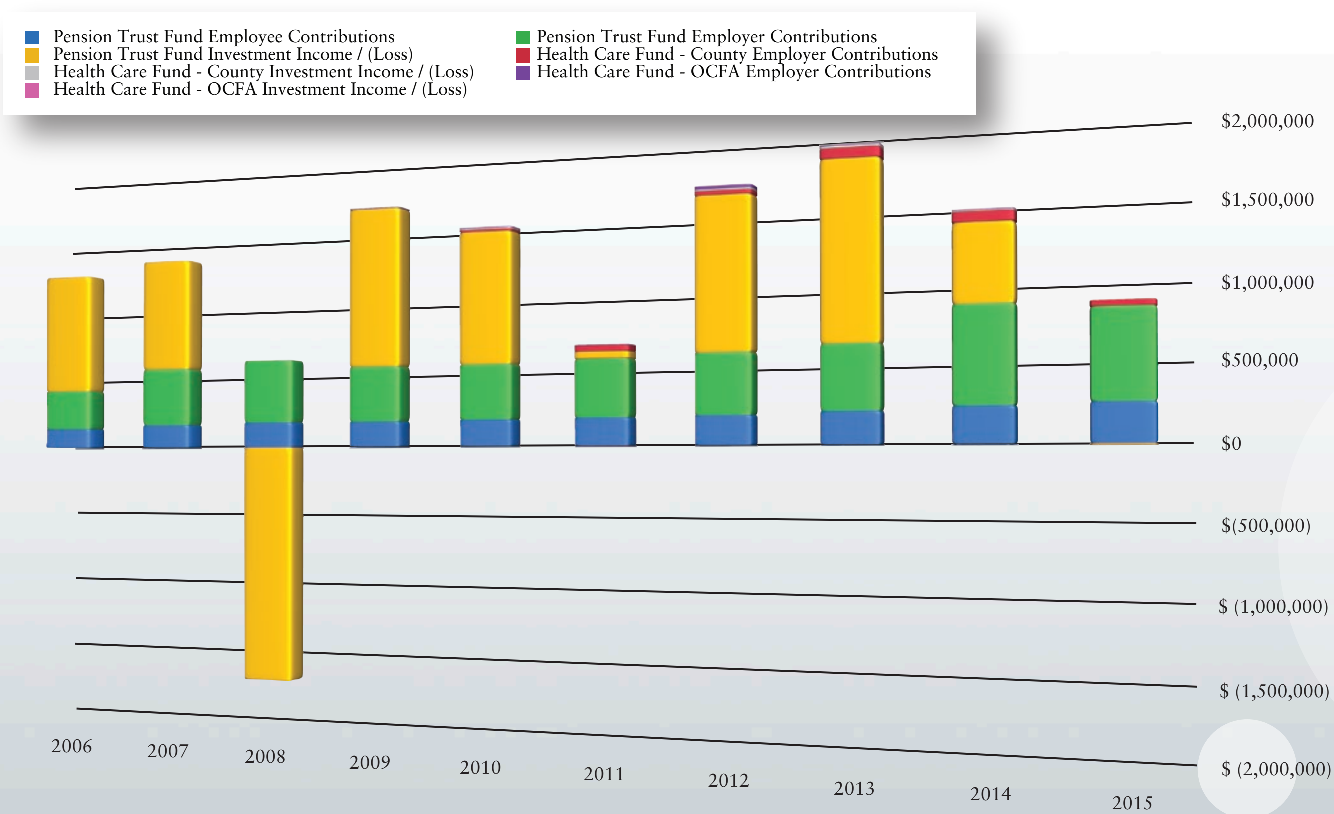
Years Ended December 31	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Additions										
Employer Contributions	N/A	N/A	N/A	N/A	$ 3,634	$ 3,660	$ 3,590	$ 18,349	$ 2,667	$ 2,624
Investment Income/(Loss)	N/A	N/A	N/A	N/A	1,356	(11)	1,734	1,956	1,575	(102)
Net Securities Lending	N/A	N/A	N/A	N/A	3	3	3	4	5	3
Commission Recapture - Net/Other	N/A	N/A	N/A	N/A	2	4	2	7	8	3
Total Additions	$ -	$ -	$ -	$ -	$ 4,995	$ 3,656	$ 5,329	$ 20,316	$ 4,255	$ 2,528
Deductions										
Benefits	N/A	N/A	N/A	N/A	$ 2,158	$ 2,649	$2,804	$ 2,550	$ 3,138	$ 3,448
Administrative Expenses	N/A	N/A	N/A	N/A	9	9	9	14	22	22
Total Deductions	$ -	$ -	$ -	$ -	$ 2,167	$ 2,658	$ 2,813	$ 2,564	$ 3,160	$ 3,470
Changes in Fiduciary Net Position	$ -	$ -	$ -	$ -	$ 2,828	$ 998	$ 2,516	$ 17,752	$ 1,095	$ (942)

N/A: Detailed information not available.

Schedule and Graph of Fiduciary Revenues by Source

2006 – 2015
(Dollars in Thousands)

Years Ended December 31	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Pension Trust Fund										
Employee Contributions	$ 137,582	$ 159,476	$ 172,291	$ 171,928	$ 177,929	$ 183,820	$ 191,215	$ 209,301	$ 232,656	$ 249,271
Employer Contributions	277,368	401,037	433,911	377,976	372,437	387,585	406,805	427,095	625,520	571,298
Investment Income /(Loss)[1, 2]	830,200	768,342	(1,619,783)	1,080,062	888,542	50,456	1,004,770	1,152,647	499,195	(10,873)
Health Care Fund - County										
Employer Contributions	N/A	N/A	N/A	N/A	14,582	39,694	27,395	66,057	64,852	36,557
Investment Income /(Loss)[1]	N/A	N/A	N/A	N/A	8,579	(623)	10,329	13,722	7,399	(680)
Health Care Fund - OCFA										
Employer Contributions	N/A	N/A	N/A	N/A	3,634	3,660	3,590	18,349	2,667	2,624
Investment Income /(Loss)[1]	N/A	N/A	N/A	N/A	1,361	(4)	1,739	1,967	1,588	(96)
Total	$ 1,245,150	$1,328,855	$ (1,013,581)	$1,629,966	$1,467,064	$ 664,588	$1,645,843	$1,889,138	$1,433,877	$848,101



N/A: Detailed information not available.

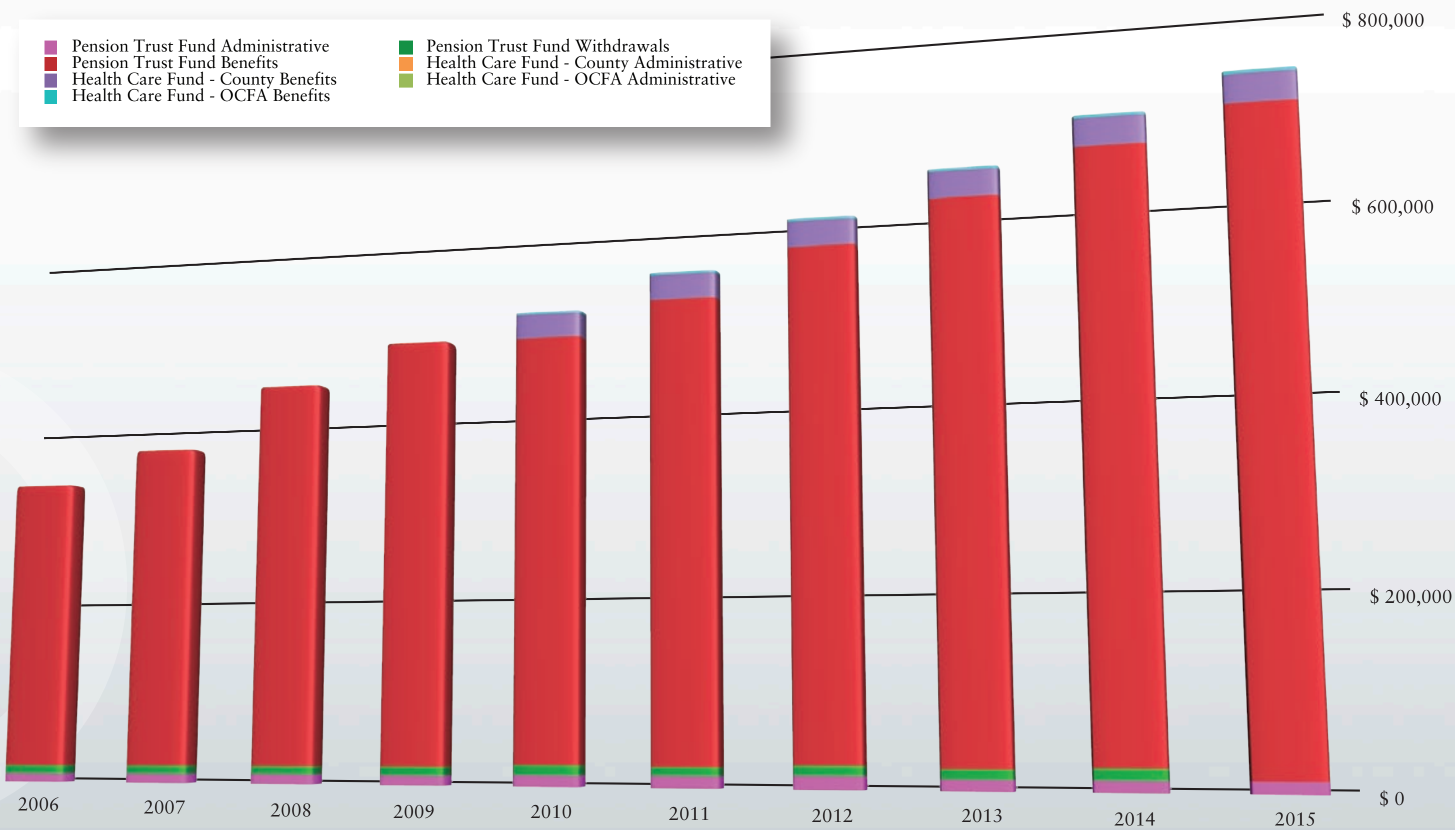
[1] Investment Income / (Loss) includes net appreciation/(depreciation) less investment manager fees, security lending fees and commission recapture.

[2] Beginning in 2013, Investment Income / (Loss) includes net appreciation/(depreciation) less investment manager fees, investment department expenses, security lending fees and commission recapture.

Schedule and Graph of Expenses by Type

2006 – 2015
(Dollars in Thousands)

Years Ended December 31	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Pension Trust Fund										
Administrative	$ 9,600	$ 10,381	$ 11,006	$ 10,947	$ 12,368	$ 12,828	$ 14,209	$ 11,705	$ 11,905	$ 12,521
Withdrawals										
Separation	8,073	8,007	7,022	7,604	8,566	6,833	8,078	7,516	9,843	10,764
Death	897	792	1,337	1,448	1,880	2,041	2,019	2,348	1,887	1,093
Benefits	309,696	345,062	411,143	452,478	448,937	484,875	531,057	576,420	618,948	664,106
Health Care Fund - County										
Administrative	N/A	N/A	N/A	N/A	18	18	19	20	20	22
Benefits	N/A	N/A	N/A	N/A	25,514	26,250	27,089	28,293	29,299	30,107
Health Care Fund - OCFA										
Administrative	N/A	N/A	N/A	N/A	9	9	9	14	22	22
Benefits	N/A	N/A	N/A	N/A	2,158	2,649	2,804	2,550	3,138	3,448
Total	$ 328,266	$ 364,242	$ 430,508	$ 472,477	$499,450	$ 535,503	$ 585,284	$ 628,866	$ 675,062	$ 722,083



N/A: Detailed information not available.

Schedule and Graph of Benefit Expenses by Type

2006 – 2015
(Dollars in Thousands)

Years Ended December 31	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Pension Trust Fund										
Retirement	$ 309,102	$ 344,321	$ 376,937	$ 411,959	$ 448,099	$ 484,012	$ 530,269	$ 575,633	$ 618,233	$ 663,582
Health Care [1]	N/A	N/A	33,480	39,858	N/A	N/A	N/A	N/A	N/A	N/A
Withdrawals	8,970	8,799	8,359	9,052	10,446	8,874	10,097	9,864	11,730	11,857
Death Benefits	594	741	726	661	838	863	788	787	715	524
Health Care Fund - County										
Health Care	N/A	N/A	N/A	N/A	25,514	26,250	27,089	28,293	29,299	30,107
Health CareFund - OCFA										
Health Care	N/A	N/A	N/A	N/A	2,158	2,649	2,804	2,550	3,138	3,448
Total	$ 318,666	$ 353,861	$ 419,502	$ 461,530	$ 487,055	$ 522,648	$ 571,047	$ 617,127	$ 663,115	$ 709,518

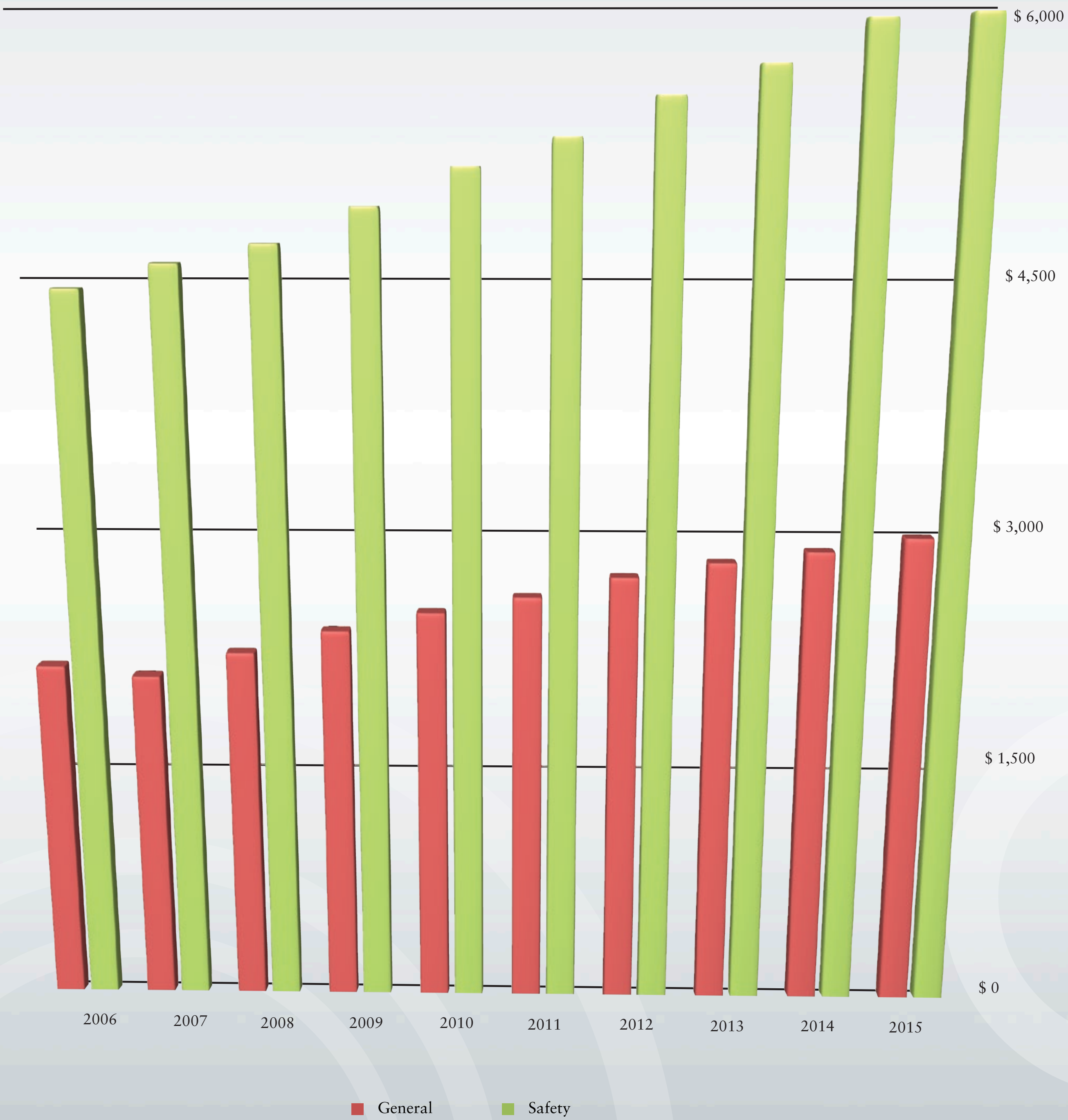
N/A: Detailed information not available.

[1] Health care benefits for 2008 and 2009 encompass all plans, including 401(h), which are reported as trust funds, and 115, which are reported as agency funds.

Schedule and Graph of Average Monthly Pension Check

2006 – 2015

Years Ended December 31	2006*	2007	2008	2009	2010	2011	2012	2013	2014	2015
General	$ 2,286	$ 2,228	$ 2,373	$ 2,508	$ 2,621	$ 2,714	$ 2,836	$ 2,924	$ 2,991	$ 3,103
Safety	$ 4,479	$ 4,618	$ 4,724	$ 4,926	$ 5,141	$ 5,297	$ 5,516	$ 5,679	$ 5,914	$ 5,974



* Year 2006 includes health grant

Source: OCERS' Pension Gold Information System and V3 Pension Administration System Solution

Schedule of Average Pension Benefit Payments by Years of Service

	Years of Service						
Service Retirement Effective Dates	0-5	5-10	10-15	15-20	20-25	25-30	30 & Over
Period 1/1/06-12/31/06							
Average Monthly Pension Benefits	$ 448	$ 788	$ 1,608	$ 2,389	$ 3,368	$ 4,898	$ 6,112
Monthly Final Average Salary	$ 3,770	$ 4,031	$ 4,952	$ 5,198	$ 5,668	$ 6,474	$ 6,789
Number of Retired Members	15	46	129	167	129	174	155
Period 1/1/07-12/31/07							
Average Monthly Pension Benefits	$ 368	$ 817	$ 1,593	$ 2,407	$ 3,366	$ 5,626	$ 6,401
Monthly Final Average Salary	$ 2,213	$ 4,206	$ 5,065	$ 5,239	$ 5,714	$ 7,219	$ 7,223
Number of Retired Members	16	45	110	111	100	145	104
Period 1/1/08-12/31/08							
Average Monthly Pension Benefits	$ 321	$ 876	$ 1,784	$ 2,451	$ 3,793	$ 5,323	$ 7,687
Monthly Final Average Salary	$ 2,539	$ 4,166	$ 5,512	$ 5,330	$ 6,484	$ 6,864	$ 8,424
Number of Retired Members	19	31	83	90	78	91	97
Period 1/1/09-12/31/09							
Average Monthly Pension Benefits	$ 381	$ 950	$ 1,821	$ 2,716	$ 3,711	$ 5,852	$ 7,467
Monthly Final Average Salary	$ 3,766	$ 4,228	$ 5,564	$ 6,006	$ 6,417	$ 7,669	$ 8,378
Number of Retired Members	26	45	102	87	110	106	124
Period 1/1/10-12/31/10							
Average Monthly Pension Benefits	$ 587	$ 986	$ 1,855	$ 2,929	$ 4,046	$ 5,922	$ 6,856
Monthly Final Average Salary	$ 3,666	$ 4,800	$ 5,537	$ 6,291	$ 6,962	$ 7,764	$ 7,741
Number of Retired Members	23	45	108	106	130	127	129
Period 1/1/11-12/31/11							
Average Monthly Pension Benefits	$ 678	$ 1,057	$ 1,689	$ 3,054	$ 4,257	$ 5,910	$ 6,766
Monthly Final Average Salary	$ 4,843	$ 5,825	$ 5,475	$ 6,497	$ 7,314	$ 7,874	$ 7,650
Number of Retired Members	16	55	111	86	120	123	155
Period 1/1/12-12/31/12							
Average Monthly Pension Benefits	$ 647	$ 1,142	$ 1,701	$ 2,957	$ 4,058	$ 5,802	$ 7,015
Monthly Final Average Salary	$ 5,988	$ 5,398	$ 5,672	$ 6,347	$ 6,759	$ 7,702	$ 7,750
Number of Retired Members	20	71	128	88	187	145	172
Period 1/1/13-12/31/13							
Average Monthly Pension Benefits	$ 435	$ 1,166	$ 2,039	$ 2,946	$ 3,794	$ 6,409	$ 7,732
Monthly Final Average Salary	$ 8,199	$ 6,347	$ 6,458	$ 6,492	$ 6,431	$ 8,432	$ 8,482
Number of Retired Members	29	55	139	82	161	147	131
Period 1/1/14-12/31/14							
Average Monthly Pension Benefits	$ 421	$ 1,152	$ 1,925	$ 3,188	$ 4,117	$ 6,444	$ 6,719
Monthly Final Average Salary	$ 8,176	$ 6,955	$ 6,301	$ 6,961	$ 7,003	$ 8,463	$ 7,349
Number of Retired Members	23	45	146	96	143	192	138
Period 1/1/15-12/31/15							
Average Monthly Pension Benefits	$ 582	$ 1,263	$ 1,755	$ 2,850	$ 3,895	$ 5,679	$ 7,235
Monthly Final Average Salary	$ 8,802	$ 6,888	$ 5,970	$ 6,673	$ 6,800	$ 7,893	$ 8,352
Number of Retired Members	22	63	128	119	110	200	182

Source: OCERS' Pension Gold Information System and V3 Pension Administration System Solution

Schedule of Pension Benefit Recipients by Type of Benefit

December 31, 2015

Monthly Benefit	1	2	3	4	5	6	7	Total
$1-500	596	129	3	5	13	71	14	831
$501-1,000	1,113	237	-	38	41	83	109	1,621
$1,001-1,500	1,318	212	13	90	28	78	85	1,824
$1,501-2,000	1,091	148	101	69	23	53	38	1,523
$2,001-2,500	1,118	101	232	23	30	46	17	1,567
$2,501-3,000	898	118	202	20	33	25	13	1,309
$3,001-3,500	756	62	108	8	14	18	5	971
$3,501-4,000	683	46	98	7	18	10	6	868
$4,001-4,500	581	33	118	4	9	5	7	757
$4,501-5,000	573	30	37	1	10	6	6	663
$5,001-5,500	473	14	42	2	3	3	1	538
$5,501-6,000	452	13	25	2	2	1	3	498
$6,001-6,500	378	14	13	1	2	-	-	408
$6,501-7,000	364	6	20	-	4	-	2	396
Over $7,000	1,884	19	119	1	11	-	2	2,036
Total	12,278	1,182	1,131	271	241	399	308	15,810

Definition of Terms

Eligible Spouse: A member's spouse is considered eligible if the member has been legally married for at least one year at the time of retirement and remains married throughout the member's retirement. Eligible Spouse also includes Qualified Domestic Partner registered in accordance with applicable Family Law provisions.

Eligible Child: An eligible child is an unmarried child under the age of 18, or under the age of 22 if a full-time student. This includes adopted children. Eligible Child can also include a stepchild living or domiciled with the member at the time of the member's death for purposes of an active member Nonservice-connected or Service-connected death benefit only.

Types of Retirement Benefit

1. Normal Retirement for Age and Service
2. Survivor Payment - Normal Retirement
3. Service-Connected Disability Retirement
4. Nonservice-Connected Disability Retirement
5. Survivor Payment - Disability Retirement
6. DRO (Domestic Relations Order Payees)
7. Active Deaths

Source: OCERS' Pension Gold Information System and V3 Pension Administration System Solution

Schedule of Pension Benefit Recipients by Option Selected

December 31, 2015

Monthly Benefit	UM	OP1	OP2	OP3	OP4	DB	UMC	O2C	O3C	O4C	SCDC	NSCDC	LSRC	AN	Total
$1-500	565	1	26	2	2	71	122	12	8	-	1	12	1	8	831
$501-1,000	1,101	-	48	1	1	83	263	13	3	-	22	71	15	-	1,621
$1,001-1,500	1,376	1	40	4	-	78	227	11	2	-	5	72	8	-	1,824
$1,501-2,000	1,223	1	32	4	1	53	158	13	1	1	3	29	4	-	1,523
$2,001-2,500	1,340	-	30	1	2	46	124	8	-	-	1	14	1	-	1,567
$2,501-3,000	1,093	-	18	5	3	25	143	8	1	-	3	8	1	1	1,309
$3,001-3,500	852	1	15	2	2	18	65	12	-	-	1	3	-	-	971
$3,501-4,000	771	-	12	2	4	10	61	5	-	-	1	1	1	-	868
$4,001-4,500	682	-	17	3	-	5	45	2	-	-	1	2	-	-	757
$4,501-5,000	592	-	17	-	2	6	38	5	-	-	-	3	-	-	663
$5,001-5,500	506	-	8	1	2	3	15	3	-	-	-	-	-	-	538
$5,501-6,000	470	1	6	-	2	1	13	3	-	-	1	1	-	-	498
$6,001-6,500	382	-	6	1	3	-	14	1	1	-	-	-	-	-	408
$6,501-7,000	374	1	5	-	4	-	9	2	-	-	-	1	-	-	396
Over $7,000	1,968	1	16	2	17	-	26	5	-	-	-	-	1	-	2,036
Total	13,295	7	296	28	45	399	1,323	103	16	1	39	217	32	9	15,810

Definition of Options:

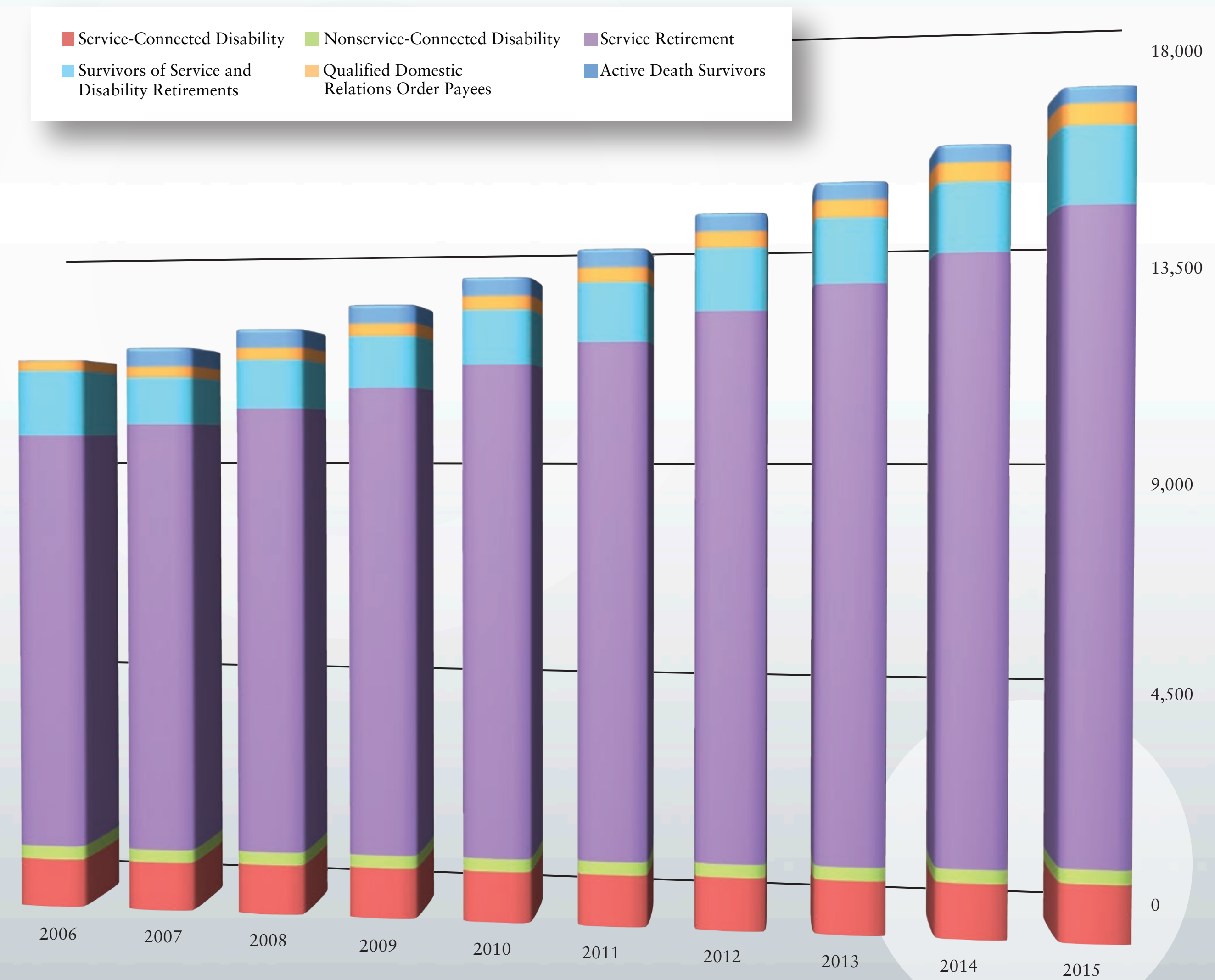
UM: Unmodified - Maximum retirement allowance
OP1: Option 1 - Reduced retirement allowance, at death of retiree beneficiary receives remaining balance on account.
OP2: Option 2 - Reduced retirement allowance
OP3: Option 3 - Reduced retirement allowance
OP4: Option 4 - Reduced retirement allowance
DB: DRO benefit - Benefit as provided in Domestic Relations Order
UMC: Unmodified continuance - Beneficiary receives 60% of maximum retirement allowance
O2C: Option 2 continuance - Beneficiary receives same monthly allowance
O3C: Option 3 continuance - Beneficiary receives 50% of monthly allowance
O4C: Option 4 continuance - Multiple beneficiaries receive allowance as previously approved
SCDC: SCD continuance - Service-Connected Disability
NSCDC: NSCD continuance - Nonservice-Connected Disability
LSRC: Lump sum and reduced continuance
AN: Annuity

Source: OCERS' Pension Gold Information System and V3 Pension Administration System Solution

Schedule and Graph of Pension Benefit Recipients

2006 – 2015

Years Ended December 31	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Service-Connected Disability	986	986	1,009	1,022	1,027	1,032	1,059	1,072	1,098	1,131
Nonservice-Connected Disability	269	257	258	252	254	259	260	263	265	271
Service Retirement	8,403	8,636	8,924	9,322	9,767	10,189	10,739	11,226	11,760	12,278
Survivors of Service and Disability Retirements	1,310	946	978	1,031	1,079	1,160	1,221	1,261	1,336	1,423
Qualified Domestic Relations Order Payees	203	221	238	248	272	289	314	340	366	399
Active Death Survivors	11	374	371	368	363	360	354	343	344	308
Total	**11,182**	**11,420**	**11,778**	**12,243**	**12,762**	**13,289**	**13,947**	**14,505**	**15,169**	**15,810**



Source: OCERS' Pension Gold Information System and V3 Pension Administration System Solution

Schedule of Average Retirement Age

2006 – 2015

Years Ended December 31	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
General	59.83	60.07	59.82	60.31	60.55	60.65	60.42	61.32	60.79	59.37
Safety	54.12	54.47	54.03	54.98	54.18	54.56	54.33	54.80	54.06	53.51

Schedule of Average Years of Service at Retirement

2006 – 2015

Years Ended December 31	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
General	21.17	20.04	20.44	20.79	20.53	20.82	20.88	20.00	21.13	18.22
Safety	23.09	24.66	23.77	22.63	23.91	25.27	24.41	24.25	24.47	24.18

Schedule of Beneficiaries Receiving a Pension

2006 – 2015

Years Ended December 31	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
General	1,200	1,190	1,214	1,253	1,286	1,352	1,398	1,503	1,457	1,498
Safety	121	130	135	146	156	168	177	187	223	233
Total	1,321	1,320	1,349	1,399	1,442	1,520	1,575	1,690	1,680	1,731

Schedule of Active and Deferred Members

2006 – 2015

Years Ended December 31	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
General										
Active	19,101	19,803	19,795	18,873	18,155	17,717	17,559	17,637	17,873	17,838
Deferred	2,911	3,353	3,560	3,707	3,905	3,998	3,980	4,205	4,380	4,668
Safety										
Active	3,649	3,815	3,925	3,760	3,587	3,704	3,730	3,731	3,587	3,687
Deferred	267	293	321	387	403	408	402	408	409	424
Total	25,928	27,264	27,601	26,727	26,050	25,827	25,671	25,981	26,249	26,617

Source: OCERS' Pension Gold Information System and V3 Pension Administration System Solution

Schedule of Participating Employers Pension Plan

2006 – 2015

Years Ended December 31		Total	Orange County	OCTA	Superior Court	Fire Authority	OC Sanitation District	City of San Juan Capistrano	TCA	All Other Sponsors
2006	Number of Covered Employees	22,750	16,971	1,940	1,726	1,092	603	91	86	241
	Percentage to Total System	100%	74.60%	8.53%	7.59%	4.80%	2.65%	0.40%	0.38%	1.06%
2007	Number of Covered Employees	23,618	17,702	2,012	1,845	1,116	598	93	86	166
	Percentage to Total System	100%	74.95%	8.52%	7.81%	4.73%	2.53%	0.39%	0.36%	0.70%
2008	Number of Covered Employees	23,720	17,798	2,022	1,812	1,121	615	93	93	166
	Percentage to Total System	100%	75.03%	8.52%	7.64%	4.73%	2.59%	0.39%	0.39%	0.70%
2009	Number of Covered Employees	22,633	17,021	1,836	1,711	1,114	611	88	92	160
	Percentage to Total System	100%	75.20%	8.11%	7.56%	4.92%	2.70%	0.39%	0.41%	0.71%
2010	Number of Covered Employees	21,742	16,486	1,639	1,635	1,064	594	87	79	158
	Percentage to Total System	100%	75.83%	7.54%	7.52%	4.89%	2.73%	0.40%	0.36%	0.73%
2011	Number of Covered Employees	21,421	16,084	1,549	1,638	1,244	596	80	80	150
	Percentage to Total System	100%	75.09%	7.23%	7.65%	5.81%	2.78%	0.37%	0.37%	0.70%
2012	Number of Covered Employees	21,289	16,118	1,509	1,569	1,195	596	80	74	148
	Percentage to Total System	100%	75.70%	7.09%	7.37%	5.61%	2.80%	0.38%	0.35%	0.70%
2013	Number of Covered Employees	21,368	16,281	1,519	1,492	1,185	587	81	77	146
	Percentage to Total System	100%	76.19%	7.11%	6.98%	5.55%	2.75%	0.38%	0.36%	0.68%
2014	Number of Covered Employees	21,460	16,453	1,454	1,460	1,213	594	80	65	141
	Percentage to Total System	100%	76.67%	6.78%	6.80%	5.65%	2.77%	0.37%	0.30%	0.66%
2015	Number of Covered Employees	21,525	16,574	1,409	1,462	1,224	572	75	63	146
	Percentage to Total System	100%	77.00%	6.55%	6.79%	5.69%	2.66%	0.35%	0.29%	0.68%

Source: OCERS' Pension Gold Information System and V3 Pension Administration System Solution

History of Actuarial Assumption Rate

For the Period January 1945 - December 2015

The table shown below is a comprehensive history of the change in interest rate assumption and the salary assumption rates corresponding to the Orange County Employees Retirement System since the inception of the System. These rates are adopted by the Retirement Board and used by the consulting actuary in the creation of the actuarial valuation of the System.

Specifically, the interest rate assumption estimates the rate at which the funds of the System's investment portfolio will realize earnings over many years into the future. The salary assumption rate estimates the relative increases in the salary of a member from the date of the valuation to the estimated date of separation of the member from active service.

Effective Date	Interest Rate	Salary Assumption Rate
1/1/1945	2.50%	0.00%
7/1/1962	3.50%	0.00%
12/31/1965	4.00%	0.00%
7/1/1969	4.50%	0.00%
6/30/1970	5.00%	0.00%
8/31/1973	5.75%	0.00%
7/1/1975	6.00%	0.00%
7/1/1981	7.25%	5.00%
7/1/1989	7.50%	5.50%
7/1/1991	8.00%	6.00%
7/1/1996	8.00%	3.50%
7/1/2000	8.00%	5.50%
7/1/2003	7.50%	4.50%
12/31/2004	7.75%	3.50%[1]
12/31/2007	7.75%	3.50%[2]
12/31/2011	7.75%	3.50%[3]
12/31/2012	7.25%	3.00%[4]

[1] Inflation per year plus merit and promotion increases ranging from 0.6% to 0.7%
[2] Inflation per year plus merit and promotion increases ranging from 1% to 10%
[3] Inflation per year plus 0.25% across-the-board real salary increases plus merit and promotion increases ranging from 1% to 14%
[4] Inflation per year plus 0.50% across-the-board real salary increase

Source: The Segal Company

ORANGE COUNTY

OCERS

EMPLOYEES RETIREMENT SYSTEM


2020
2021
2022
2023
2024

SECTION VI

GLOSSARY OF TERMS

The best way to predict the future is to invent it.

– Alan Kay

2025 2026 2027 2028 2029

Glossary of Terms

Accrual Basis
The recording of the financial effects on a government of transactions and other events and circumstances that have financial consequences for the government in the periods in which those transactions, events and circumstances occur, rather than only in the periods in which cash is received or paid by the government.

Accumulated Plan Benefits
Benefits attributable under the provisions of a pension plan to employees for services rendered to the benefit information date.

Actuarial Accrued Liability
The actuarial accrued liability, as determined by a particular cost method, equals the total present value of benefits that is attributable to past service credit.

Actuarial Assumptions
Assumptions used in the actuarial valuation process as to the occurrence of future events affecting pension costs, such as mortality, withdrawal, disablement and retirement; changes in compensation and national pension benefits; rates of investments earnings and asset appreciation or depreciation: procedures used to determine the actuarial value of assets; characteristics of future entrants for open group actuarial cost methods and other relevant items.

Actuarial Determined Contribution
A target or recommended contribution to a defined benefit pension plan for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.

Actuarial Gain (Loss)
A measure of the difference between actuarial and expected experience based upon a set of actuarial assumptions. Examples include higher than expected salaries increases (loss) and a higher return on fund assets than anticipated (gain).

Actuarial Present Value
The discounted value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of actuarial assumptions.

Amortization
1. The portion of the cost of a limited-life or intangible asset charged as an expense during a particular period.

2. The reduction of debt by regular payments of principal and interest sufficient to retire the debt by maturity.

Comprehensive Annual Financial Report (CAFR)
The CAFR is the official annual report of a governmental entity. It includes the basic financial statements and their related notes prepared in conformity with GAAP. It also includes supporting schedules necessary to demonstrate compliance with finance-related legal and contractual provisions, required supplementary information, extensive introductory material and a detailed statistical section.

Cost-sharing Multiple-employer Defined Benefit Pension Plan (cost-sharing pension plan)
A multiple-employer defined benefit pension plan in which the pension obligations to the employees of more than one employer are pooled and pension plan assets can be used to pay the benefits of the employees of any employer that provides pensions through the pension plan.

Glossary of Terms

(Continued)

Discount Rate

The single rate of return that, when applied to all projected benefit payments, results in an actuarial present value of projected benefit payments equal to the total of the following:

1. The actuarial present value of benefit payments projected to be made in future periods in which (a) the amount of the pension plan's fiduciary net position is projected (under the requirements of Statement 67) to be greater than the benefit payments that are projected to be made in that period and (b) pension plan assets up to that point are expected to be invested using a strategy to achieve the long-term expected rate of return, calculated using the long-term expected rate of return on pension plan investments.

2. The actuarial present value of projected benefit payments not included in (1), calculated using the municipal bond rate.

Entry Age Actuarial Cost Method

A method under which the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on the level basis over the earnings or services of the individual between entry age and assumed exit age(s).

Independent Auditor's Report

In the context of a financial audit, a statement by the auditor describing the scope of the audit and the auditing standards applied in the examination, and setting forth the auditor's opinion on the fairness of presentation of the basic financial statements in conformity with generally accepted accounting principles (GAAP).

Money-weighted Rate of Return

A method of calculating period-by-period returns on pension plan investments that adjusts for the changing amounts actually invested. For purposes of Statement 67, money-weighted rate of return is calculated as the internal rate of return on pension plan investments, net of pension plan investment expense.

Net Pension Liability

The liability of employers and non-employer contributing entities to plan members for benefits provided through a defined benefit pension plan.

Normal Cost

The ongoing annual cost allocated to the system by a particular actuarial cost method for providing benefits (future cost). Normal cost payments are made during the working lifetime of the member.

Pension Contribution

The amount paid into a pension plan by an employer (and/or employee), pursuant to the terms of the plan, state law, actuarial calculations or some other basis for determinations.

Pension Trust Fund

A fund used to account for public employee retirement benefits. Pension trust funds use the accrual basis of accounting and have a capital maintenance focus.

Total Pension Liability

The portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service in conformity with the requirements of Statement 67.

Unfunded Actuarial Accrued Liability (UAAL)

The excess of the actuarial accrued liability over the actuarial value of assets represents the unfunded actuarial accrued liability.

UAAL Amortization Payment

The UAAL amortization payment is the portion of pension contributions, which is designed to pay off (amortize) the UAAL in a systematic fashion. Equivalently, it is a series of periodic payments required to pay off a debt.

ORANGE COUNTY

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EMPLOYEES RETIREMENT SYSTEM

ORANGE COUNTY OCERS EMPLOYEES RETIREMENT SYSTEM

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