# STATE OF CONNECTICUT OFFICE OF THE TREASURER 

## 2015



COMBINED INVESTMENT FUNDS COMPREHENSIVE ANNUAL FINANCIAL REPORT

For the fiscal year ended June 30, 2015

## STATE OF CONNECTICUT Office of the State Treasurer



The State Motto, "Qui Transtulit Sustinet" (He Who Transplanted Still Sustains), has been associated with various versions of the state seal from the creation of the Saybrook Colony Seal.

# STATE OF CONNECTICUT OFFICE OF THE TREASURER 

## 2015



# COMBINED INVESTMENT FUNDS COMPREHENSIVE ANNUAL FINANCIAL REPORT 

For the fiscal year ended June 30, 2015

Prepared by: State of Connecticut
Office of the Treasurer
55 Elm Street
Hartford, CT 06106-1773

STATE OF CONNECTICUT
Office of the State Treasurer


## Combined Investment Funds

## Comprehensive Annual Financial Report

## For The Fiscal Year Ended June 30, 2015

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©

December 31, 2015

To the State of Connecticut Combined Investment Funds
Fellow Beneficiaries,

I am pleased to submit this Comprehensive Annual Financial Report for the State of Connecticut Combined Investment Funds (CIF) for the fiscal year ended June 30, 2015. The CIF's performance for Fiscal Year 2015 added $\$ 910.2$ million of market value to pension assets. After net withdrawals of $\$ 686.2$ million, the CIF ended the fiscal year with assets of $\$ 29.7$ billion, a $\$ 224.0$ million increase from the previous year. The 1-year net investment returns of the two largest retirement plans - the Teachers' Retirement Fund (TERF) and the State Employees' Retirement Fund (SERF) - were 2.79 percent and 2.84 percent. The 5 -year net returns were 9.72 percent for TERF and 9.82 percent for SERF.

Responsibility for both the accuracy of the data and the completeness and fairness of this report rests with Treasury management. All disclosures necessary and required to enable fellow beneficiaries and the financial community to gain an understanding of CIF's financial activities are contained within this report.

The enclosed financial statements and data are presented fairly in all material respects and are reported in a manner designed to present the financial position and results of CIF's operations accurately.

CIF was established pursuant to Connecticut General Statutes Section 3-31b as a means to invest pension and trust fund assets entrusted to the Treasurer in a variety of investment classes. CIF is comprised of separate pooled investment funds: Liquidity Fund, Alternative Investment Fund, Mutual Equity Fund, Core Fixed Income Fund, Inflation Linked Bond Fund, Emerging Market Debt Fund, High Yield Debt Fund, Developed Markets International Stock Fund, Emerging Markets International Stock Fund, Real Estate Fund, Commercial Mortgage Fund, and Private Investment Fund.

The units of CIF are owned by six pension funds: Teachers' Retirement Fund; State Employees' Retirement Fund; Connecticut Municipal Employees' Retirement Fund; State Judges' Retirement Fund; Probate Court Retirement Fund; and State's Attorneys' Retirement Fund. In addition, CIF is owned by nine trust funds: Soldiers' Sailors' and Marines' Fund; Police and Fireman' Survivors' Benefit Fund; Connecticut Arts Endowment Fund; School Fund; Ida Eaton Cotton Fund; Hopemead State Park Fund; Andrew C. Clark Fund; Agricultural College Fund and State of Connecticut Other Post-Employment Benefits Trust Fund.

## Financial Information

The consolidated CIF assets at the close of Fiscal Year 2015 were $\$ 29.7$ billion based on fair value and CIF was in full compliance with the standards of the Governmental Accounting Standards Board. CIF are invested across global public and private market equity, fixed income and alternative asset classes. Additional information on CIF can be found in the Notes to the Financial Statements.

For Fiscal Year 2015, the strongest returns were achieved in the Private Investment Fund and the Real Estate Fund.

## LETTER FROM THE TREASURER

## Internal Control Structure

Management is responsible for maintaining a system of adequate internal accounting controls designed to provide reasonable assurance that transactions are (i) executed in accordance with management's general or specific authorization, and (ii) recorded as necessary to maintain accountability for assets and to permit preparation of financial statements consistent with generally accepted accounting principles. We believe the internal controls in effect during Fiscal Year 2015 adequately safeguarded CIF's assets and provided reasonable assurance regarding the proper recording of financial transactions. 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 judgments by management.

## Independent Audit

The State of Connecticut's independent Auditors of Public Accounts conducted an annual audit of this Comprehensive Annual Financial Report in accordance with generally accepted auditing standards. The auditors' report on the basic financial statements is included in the Financial Section of this report.

## Management Discussion and Analysis

The Government Accounting Standards Board requires a narrative introduction, overview and analysis to accompany the basic financial statements in the form of a Management's Discussion and Analysis (MD\&A). This letter of transmittal is designed to complement and be read in conjunction with the MD\&A. The MD\&A can be found in the Financial Section immediately following the report of the independent auditors.

## Awards

The Government Finance Officers Association of the United States and Canada awarded the Combined Investment Funds a Certificate of Achievement for Excellence in Financial Reporting for its Comprehensive Annual Financial Report for the fiscal year ended June 30, 2014. The Certificate is a prestigious national award recognizing conformance with the highest standards for preparation of state and local government financial reports.

## Requests for Information

This Comprehensive Annual Financial Report is designed to provide a general overview of CIF investment activities. We hope this report will prove both informative and useful. Questions concerning any of the information contained in this report or requests for additional financial information should be addressed to the Office of the Treasurer, 55 Elm Street, Hartford, Connecticut 06106-1773, or by telephone to (860) 702-3000. Copies of the Report will also be available on the Internet at www.ott.ct.gov.

Sincerely,


Denise L. Nappier
Treasurer
State of Connecticut

Denise L. Nappier
TREASURER
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$\mathbb{B}$ ffice of the $\mathbb{T r}$ easurer

December 31, 2015

This Comprehensive Annual Financial Report was prepared by the Office of the Treasurer, which is responsible for the accuracy of the data contained herein, the completeness and fairness of the presentation, and all disclosures. We present the financial statements and data as being accurate in all material respects and prepared in conformity with generally accepted accounting principles. Such financial statements are audited annually by the State Auditors of Public Accounts.

To carry out this responsibility, the Office of the Treasurer maintains financial policies, procedures, accounting systems and internal controls that management believes provide reasonable, but not absolute, assurance that accurate financial records are maintained and investments and other assets are safeguarded.

It is our belief that the contents of this Comprehensive Annual Financial Report make evident the Treasury's commitment to the safe custody and conscientious stewardship of the Combined Investment Funds.

In management's opinion, the internal control structure of the Office of the Treasurer is adequate to ensure that the financial information in this report fairly presents the financial condition and results of operations of the funds that follow.

Sincerely,


Richard D. Gray
Deputy Treasurer State of Connecticut

Government Finance Officers Association

# Certificate of <br> Achievement for Excellence in Financial Reporting 

# Presented to <br> Connecticut State Treasurer's Combined Investment Funds 

For its Comprehensive Annual<br>Financial Report<br>for the Fiscal Year Ended

June 30, 2014


Executive Director/CEO

## Mission Statement

To serve as the premier State Treasurer's Office in the nation through effective management of public resources, high standards of professionalism and integrity, and expansion of opportunity for the citizens and businesses of Connecticut.

## Constitutional and Statutory Responsibilities

The Office of the Treasurer was established following the adoption of the fundamental orders of Connecticut in 1638. The Treasurer shall receive all funds belonging to the State and disburse the same only as may be directed by law, as described in Article Fourth, Section 22 of the Connecticut Constitution and in Title 3 of the Connecticut General Statutes.

The Treasurer, as Chief Elected Financial Officer for the State, oversees the prudent preservation and management of State funds, including the investment of a $\$ 29.7$ billion portfolio of pension assets, $\$ 5.0$ billion in total State and local short-term and other investments, and $\$ 2.7$ billion of assets in the Connecticut Higher Education Trust. The Treasurer maintains an accurate account of all funds through sophisticated security measures and procedures.

## Public Service

The Office of the Treasurer includes an Executive Office as well as five distinct divisions, each with specific responsibilities: Pension Funds Management, Cash Management, Debt Management, Unclaimed Property, and the Second Injury Fund.



As of December 31, 2015

COMBINED INVESTMENT FUNDS
55 Elm Street, 6th Floor
Hartford, CT. 06106-2773
Telephone: (860) 702-3155
Facsimile: (860) 702-3042
World Wide Web: www.ott.ct.gov
Treasurer, State of Connecticut
DENISE L. NAPPIER (860) 702-3010
Deputy Treasurer, State of Connecticut
RICHARD D. GRAY (860) 702-3070

Chief Investment Officer
DEBORAH SPALDING, CFA (860) 702-3101

Assistant Treasurer
GREGORY D. FRANKLIN, CFA (860) 702-3162
Principal Investment Officer
JOANNE B. DOMBROSKY, CFA (860) 702-3066
Investment Officer
MICHELLE R. B. HALE, CPA (860) 702-3275
Investment Officer
RONNIE RODRIGUEZ (860) 702-3167

## General Counsel

CATHERINE E. LAMARR (860) 702-3018
Chief Compliance Officer CHRISTINE SHAW (860) 702-3211

As of December 31, 2015

The Investment Advisory Council (IAC) consists of the State Treasurer and the Secretary of the Office of Policy and Management (as ex-officio members of the Council); five public members, all of whom shall be experienced in matters relating to investments, appointed by the Governor and legislative leadership; three representatives of the State Teachers' unions and two representatives of the State Employees' unions (CGS Sec. 3-13b).

Pursuant to C.G.S. Sec.3-13b, the IAC annually reviews the Investment Policy Statement (IPS), recommended by the Treasurer, which outlines the standards governing investment of the Connecticut Retirement Plans and Trust Funds ("CRPTF") assets by the Treasurer. The IPS includes, with respect to each plan and trust fund, (A) investment objectives; (B) asset allocation policy and risk tolerance; (C) asset class definitions, including specific types of permissible investments within each asset class and any specific limitations or other considerations governing the investment of any funds; (D) investment and money manager guidelines; (E) investment performance evaluation guidelines; (F) guidelines for the selection and termination of providers of investment related services which shall include, but not be limited to, external investment and money managers, investment consultants, custodians, broker-dealers, legal counsel, and similar investment industry professionals; and (G) proxy voting guidelines. The Treasurer shall thereafter adopt the IPS, including any such changes recommended by the IAC the Treasurer deems appropriate, with the approval of a majority of the members appointed to the IAC. The IPS was adopted by the Treasurer and approved by the IAC in August 2012, reflecting revisions including the projected capital market returns, the liquidity needs of each plan and trust fund and other financial scenarios for the CRPTF, emanating from the 2012 Asset Liability Study that the Treasurer led, with the assistance of IAC members.

All plan and trust funds investments by the State Treasurer shall be reviewed by the IAC along with all information regarding such investments provided to the IAC which the Treasurer deems relevant to the Council's review and such other information as may be requested by the Council. The IAC shall also review the report provided by the Treasurer at each regularly scheduled meeting of the IAC as to the status of the plan and trust funds and any significant changes which may have occurred or which may be pending with regard to the funds. The Council shall promptly notify the Auditors of Public Accounts and the Comptroller of any unauthorized, illegal, irregular or unsafe handling or expenditure of plan and trust funds or breakdown in the safekeeping of plan and trust funds or contemplated action to do the same within their knowledge.

At the close of the fiscal year, the IAC shall make a complete examination of the security investments of the State and determine as of June thirtieth, the value of such investments in the custody of the Treasurer and report thereon to the Governor, the General Assembly and beneficiaries of plan and trust fund assets administered, held or invested by the Treasurer (CGS Sec. 3-13b(c)(2)).

Council members who contributed their time and knowledge to the IAC during Fiscal Year 2015 include:

CAROL M. THOMAS, Interim Chairperson, as appointed by the Governor; Representative of State Employees' unions; Retiree, Department of Developmental Services
BENJAMIN B. BARNES, Secretary, State Office of Policy and Management (Ex officio member)
JANICE CARPENTER, Independent Financial Consultant
LAURENCE HALE, Managing Partner, Weiss and Hale Financial
JOSHUA HALL, Representative of State Teachers' unions; Hartford Federation of Teachers
DAVID HIMMELREICH, Principal, Hynes, Himmelreich, Glennon \& Company
STEVEN MUENCH, Representative of State Teachers' unions; Conn. Education Association
WILLIAM MURRAY, Representative of State Teachers' unions; NEA, Danbury
DENISE L. NAPPIER, Treasurer, State of Connecticut (Ex officio member) and Council secretary
PETER THOR, Representative of State Employees' unions; Coordinator, Policy \& Planning, AFSCME Council 4

## CONSULTANTS

Cliffwater Associates - Marina del Rey, California Franklin Park Associates - Conshohocken, Pennsylvania Hewitt EnnisKnupp Inc. - Chicago, Illinois Hudepohl \& Associates - Dublin, Ohio The Townsend Group - Cleveland, Ohio

MASTER CUSTODIAN
Bank of New York Mellon - New York, New York

## AUDITORS

Auditors of Public Accounts - Hartford, Connecticut
INVESTMENT ADVISORS

## LIQUIDITY FUND

Ambassador Capital Management - Detroit, Michigan
Colchester Global Investors Ltd. - London, England Lazard Asset Management LLC - New York, New York Payden \& Rygel - Los Angeles, California Pacific Investment Management Company - Newport Beach, California State Street Global Advisors - Boston, Massachusetts

MUTUAL EQUITY FUND
Large Cap
State Street Global Advisors - Boston, Massachusetts
T. Rowe Price Associates - Baltimore, Maryland

All Cap
Capital Prospects, LLC - Stamford, Connecticut
FIS Group, Inc. - Philadelphia, Pennsylvania

Small/Mid Cap Active
Bivium Capital Partners - San Francisco, California
Frontier Capital Management Company, LLC - Boston, Massachusetts
CORE FIXED INCOME FUND
Passive
State Street Global Advisors - Boston, Massachusetts
Active
BlackRock Financial Management, Inc. - New York, New York
Conning-Goodwin Capital Advisers Inc. - Hartford, Connecticut
Progress Investment Management Company - San Francisco, California
Prudence Crandall Fund III Opportunistic (Rock Creek)- Washington, District of Columbia
Prudence Crandall Fund IV Opportunistic (K2 Advisors) - Stamford, Connecticut
Wellington - Boston, Massachusetts

## INFLATION LINKED BOND FUND

BlackRock Financial Management, Inc. - New York, New York
Colchester Global Investors Ltd. - London, England
New Century Advisors, LLC - Chevy Chase, Maryland
EMERGING MARKET DEBT FUND
Ashmore Emerging Markets Debt Fund - London, England
Pyramis Global Investors - Boston, Massachusetts
Stone Harbor Investment Partners - New York, New York

## LIST OF EXTERNAL ADVISORS

## HIGH YIELD DEBT FUND

Carlyle GMS Finance, Inc.- - Washington D.C.
Carlyle NF Investment Copr.- New York, New York
Loomis Sayles \& Co., Inc. - Boston, Massachusetts Oaktree Capital Management, L.L.C. - Los Angeles, California

Shenkman Capital Management - Stamford, Connecticut
Stone Harbor Investment Partners - New York, New York
DEVELOPED MARKET INTERNATIONAL STOCK FUND ${ }^{(1)}$ Index
State Street Global Advisors - Boston, Massachusetts
Core
Acadian Asset Management - Boston, Massachusetts AQR Capital Management - Greenwich, Connecticut
Progress Investment Management Company - San Francisco, California
Active - Growth
MFS Institutional Advisors, Inc. - Boston, Massachusetts
Active - Value
Grantham, Mayo, Van Otterloo \& Co. - Boston, Massachusetts
Small Cap
Dimensional Fund Advisors - Austin, Texas
Schroder Investment Management - New York, New York
William Blair \& Company - Chicago, Illinois

EMERGING MARKET INTERNATIONAL STOCK FUND ${ }^{(1)}$
Aberdeen Asset Management, Inc. - Philadelphia, Pennsylvania Grantham, Mayo, Van Otterloo \& Co. - Boston, Massachusetts Schroder Investment Management - New York, New York

REAL ESTATE FUND
AEW Capital Management, LP - Boston, Massachusetts
American Realty Advisors - Glendale, California Apollo Real Estate Investment Fund - New York, New York Blackstone Real Estate Advisors - New York, New York Canyon Johnson Urban Funds - Beverly Hills, California Capri Capital Advisors - Chicago, Illinois Colony Realty Partners II - Los Angeles, California Cornerstone Real Estate Advisors - Hartford, Connecticut Covenant Apartment Funds - Nashville, Tennessee Cypress Acquisition Partners - Dallas, Texas Gerding Edlen Green Cities II, LP- Portland, Oregon Hart Realty Advisors - Simsbury, Connecticut IL \& FS India Realty Fund II, LLC - Ebene, Mauritius JP Morgan Investment Management, New York, New York Landmark Real Estate Partners, Simsbury, Connecticut Lone Star Global Acquisitions Ltd - dallas, Texas MacFarlane Urban Real Estate Fund - San Francisco, California New Boston Urban Strategy America Fund - Boston, Massachusetts Prime Property Fund - New York, New York Rockwood Capital - Greenwich, Connecticut Starwood Global Opportunity Fund - Greenwich, Connecticut UBS Trumbull Property - Hartford, Connecticut Inc. - Westport, Connecticut.

Urban Strategy America Fund - Boston, Massachusetts USAA EAgle Fund - San Antonio, Texas Walton Street Real Estate Fund II- Chicago, Illinois WLR Recovery Associates IV LLC - New York, New York COMMERCIAL MORTGAGE FUND<br>AEW Capital Management, LP - Boston, Massachusetts PRIVATE INVESTMENT FUND<br>Corporate Buyouts<br>AIG Healthcare Partners LP - New York, New York<br>AIG Altaris Health Partners II LP - New York, New York<br>AIG Altaris Health Partners III LP - New York, New York<br>Boston Ventures VII - Boston, Massachusetts<br>Candover 2008 Fund - St Peter Port, Channel Islands Charterhouse Equity Partners IV - New York, New York Court Square Capital Partners II - New York, New York Court Square Capital Partners III - New York, New York DLJ Merchant Banking Fund II- New York, New York Ethos Private Equity Fund V - Jersey, Channel Islands FS Equity Partners V - Los Angeles, California FS Equity Partners VI - Los Angeles, California GENNX360 Capital Partners II - New York, New York Green Equity Investors III - Los Angeles, California Hicks Muse Tate \& Furst Equity Fund III - Dallas, Texas<br>ICV Capital Partners II LLC - New York, New York<br>JFL Equity Investors III, LP - Wilmington, Deleware KKR 2006 Fund - New York, New York KKR Millenium Fund - New York, New York Leeds Equity Partners V LP - New York, New York<br>Nogales Investors Fund II - Los Angeles, California<br>RFE Investment Partners VII - New Canaan, Connecticut RFE Investment Partners VIII - New Canaan, Connecticut TA XI - Boston, Massachusetts<br>Thomas H. Lee Equity Fund VI-Boston, Massachusetts<br>Wellspring Capital Partners V - New York, New York<br>Welsh, Carson, Anderson \& Stowe X - New York, New York<br>Welsh, Carson, Anderson \& Stowe XI - New York, New York<br>Vista Equity Partners Fund III - San Francisco, California<br>Vista Equity Partners Fund IV - San Francisco, California<br>Yucaipa American Alliance Fund II LP - Los Angeles, California<br>Venture Capital<br>Crescendo III - Minneapolis, Minnesota<br>Syndicated Communications Venture Partners V - Silver Spring, Maryland<br>Mezzanine<br>Audax Mezzanine III Limited Partnership - New York, New York<br>GarMark Partners II LP - Stamford, Connecticut<br>SW Pelham Fund II LP - Hartford, Connecticut<br>International<br>Carlyle Asia Partners- Washington D.C.<br>Compass European Partners - New York, New York<br>Gilbert Global Equity Partners - Tacoma, Washington<br>Pinebridge Global Emerging Markets Fund - New York, New York

Fund of Funds
CS/CT Cleantech Opportunities Fund - New York, New York $\mathrm{M}^{2}$ CT Emerging Private Equity - Chicago, Illinois $\mathrm{M}^{2}$ CT Horizon Legacy Fund - Wilmington, Deleware Fairview Constitution II LP - Farmington, Connecticut Fairview Constitution III LP - Farmington, Connecticut Fairview Constitution IV LP - Farmington, Connecticut Goldman Sachs Private Equity Fund - New York, New York JP Morgan Nutmeg Opportunity Fund - New York, New York Landmark Private Equity Fund VIII - Simsbury, Connecticut Landmark Private Equity Fund XIV - Simsbury, Connecticut Landmark Private Equity Fund XV - Simsbury, Connecticut Lexington Capital Partners II - New York, New York Stepstone Pioneer Capital I LLP - Chapel Hill, North Carolina Stepstone Pioneer Capital Fund II - Chapel Hill, North Carolina The Constitution Liquidiating Fund - Farmington, Connecticut

## Special Situations

Apollo Investment Fund VIII LP - New York, New York
Castlelake II LP - MInneapolis, Minnesota
Clearlake Capital Partners III - Santa Monica, California KPS Special Situations Fund - New York, New York Levine Leichtman Capital Partners IV LP - Beverly Hills, California Levine Leichtman Capital Partners V LP - Beverly Hills, California

Pegasus Partners IV - Cos Cob, Connecticut
Pegasus Partners V - Cos Cob, Connecticut
Welsh, Carson, Anderson \& Stowe Capital Partners III - New York, New York WLR Recovery Fund IV - New York, New York

## ALTERNATIVE INVESTMENT FUND

Arclight Energy Partners Fund - Boston, Massachusetts Energy Fund XV Limited Partnership - Washington D.C. Marathon European Credit Opportunity - New York, New York Prudence Crandall I Permal Limited Partnership - New York, New York Prudence Crandall II Prisma Limited Partnership - New York, New York Prudence Crandall III Rock Creek Limited Partnership - Washington D.C. Prudence Crandall IV K2 Limited Partnership - Stamford, Connecticut

Thomas Welles Fund I - New York, New York
Thomas Welles Fund II - New York, New York
$\frac{\text { Financial }}{\text { Section }}$
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AUDITORS OF PUBLIC ACCOUNTS
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## INDEPENDENT AUDITORS' REPORT

Governor Dannel P. Malloy
Members of the General Assembly:

## Report on the Financial Statements

We have audited the accompanying financial statements of the Combined Investment Funds, which comprise the statement of net position as of June 30, 2015, the statements of changes in net position for the fiscal years ended June 30, 2015 and 2014, and the related notes to the financial statements.

## 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.

## Auditors' 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 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 opínion.

## Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Combined Investment Funds as of June 30, 2015, and the statements of changes in financial position for the fiscal years ended June 30, 2015 and 2014, in conformity with accounting principles generally accepted in the United States of America.

## Emphasis of Matter - Cash Adjusted Fair Values

As explained in Note 1B to the financial statements of the combined investment funds, the real estate, private investment, alternative investment, core fixed income, and high yield debt funds include investments that are presented at the cash adjusted fair values, which estimate fair value for financial statement purposes. The State Treasurer utilizes the investment advisors' estimated fair values at the end of March or April and adjusts for cash transactions occurring before the end of the fiscal year. We reviewed the documentation and procedures used by the Treasury to determine the cash adjusted fair values, and found them to be appropriate and reasonable; however, because of the inherent uncertainty in valuing these investments, determination of the estimated fair value market values may differ from the actual values had a ready market existed for these investments. Our opinion is not modified with respect to this matter.

## Emphasis of Matter-Reclassification

As explained in Note 1 K to the financial statements of the combined investment funds, certain amounts for the fiscal year ended June 30, 2014 have been reclassified to correct a prior period misstatement. Dividend income has been reclassified to realized gain/loss for the alternative investment fund, private investment fund and real estate funds. Our opinion is not modified with respect to this matter.

## Other Matters

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

## Supplementary Information

Our audit was made for the purpose of forming an opinion on the financial statements of the Combined Investment Funds as a whole. Certain other financial information, which includes the Schedule of Net Position by Investment Fund, Schedules of Changes in Net Position by Investment Fund, Total Net Position Value by Pension Plans and Trust Funds and the Schedules of Investment Activity by Pension Plan and by Trust contained within the investment section of this document, is presented for purposes of additional analysis and is not a required part of the financial statements of the combined investment funds. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements
of the combined investment funds and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is presented fairly in all material respects in relation to the financial statements taken as a whole.

## Other Information

The introductory, investment and statistical sections include information other than the schedules noted within the investment section that is presented for purposes of additional analysis and is not a required part of the basic financial statements. Such information other than the schedules specifically noted within the investment section, has not been subjected to the auditing procedures applied in the audit of the basic financial statement and, accordingly, we do not express an opinion or provide any assurance on it.

## Other Reporting Required by Government Auditing Standards

In accordance with Government Auditing Standards, we have also issued our report dated December 31, 2015, on our consideration of the State Treasury'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 the internal control over financial reporting or on compliance. That report will be issued under separate cover in the Independent Auditors' Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with Government Auditing Standards for the Fiscal Year Ended June 30, 2015, and is an integral part of an audit performed in accordance with Government Auditing Standards and should be considered in assessing the results of our audit.


John C. Geragosian
Auditor of Public Accounts


Robert M. Ward Auditor of Public Accounts

December 31, 2015
State Capitol
Hartford, Connecticut


This section presents Management's Discussion and Analysis (MD\&A) of the Comprehensive Annual Financial Report (CAFR) of the State of Connecticut's Office of the Treasurer Combined Investment Funds (CIF) financial position and performance for the fiscal year ended June 30, 2015. It is presented as a narrative overview and analysis. Management of the State of Connecticut's Office of the Treasurer encourage readers to review it in conjunction with the transmittal letter included in the Introductory Section at the front of this report and the financial statements in the Financial Section that follow.

The Combined Investment Funds serve as an investment vehicle for the six State pension plans and nine trust funds collectively known as the Connecticut Retirement Plans and Trust Funds representing the pension funds of the State teachers and State and municipal employees, as well as non-retirement trust funds that support academic programs, grants and initiatives throughout the State and are managed for the sole benefit of the participants. CIF investments range in investment diversity from domestic and international stocks to fixed income, real estate and private investment equity. Investments of the pension plans and trust funds are combined in a commingled investment pool as authorized by state statute. Each pension plan and trust fund owns an equity position in the CIF and receives proportionate investment income from the CIF in accordance with each respective ownership percentage. The pension plan and trust fund's allocated share of each type of investment in the CIF is shown in the Schedule of Changes in Net. Investment gains or losses are also reported in the Statement of Changes in Net Position of each pension plan and trust. The Market Value per share is therefore approximately the same for each of the pension plans and trust funds investments in the CIF.

The CIF financial statements reported by the Treasurer's Office for which the Treasurer has fiduciary responsibility for the investment thereof begin on page 22 and provide detailed information about individual funds.

## FINANCIAL HIGHLIGHTS <br> Condensed Financial Information

## Combined Investment Funds

## Net Position and Changes in Net Position

The net position of the Combined Investment Funds at the close of the 2015 fiscal year was $\$ 29.7$ billion, an increase of $\$ 0.3$ billion from the previous year. The change in net position resulted from a $\$ 0.8$ billion increase from operations (realized and unrealized gains and investment income) partly offset by $\$ 0.5$ billion of net cash withdrawals from the Combined Investment Funds comprised of net beneficiary distributions.

The net position of the Combined Investment Funds at the close of the 2014 fiscal year was $\$ 29.4$ billion, an increase of $\$ 3.5$ billion from the previous year. The change in net position resulted from a $\$ 4.0$ billion increase from operations (realized gains and investment income) partly offset by $\$ 0.6$ billion of net cash outflows to the Connecticut Retirement Plans and Trust Funds comprised of net beneficiary distributions.

## Assets held in trust for Participants

A summary of the net position of assets held in trust for participants is presented below.

# Condensed Statement of Net Position <br> Fiscal Year Ended June 30, 

| Assets | $\mathbf{2 0 1 5}$ |  | Increase (Decrease) | $\mathbf{2 0 1 4}$ | Increase (Decrease) |
| :--- | :---: | :---: | ---: | ---: | ---: |
| Investments at Fair Value | $\$ 29,755,256,851$ | $\$ 272,922,474$ | $\$ 29,482,334,377$ | $\$ 3,569,830,591$ | $\$ 25,912,503,786$ |
| Cash, Receivables and Other | $10,608,786,265$ | $4,512,501,589$ | $6,096,284,676$ | $(3,379,529,605)$ | $9,475,814,281$ |
| Total Assets | $40,364,043,116$ | $4,785,424,063$ | $35,578,619,053$ | $190,300,986$ | $35,388,318,067$ |
| Liabilities | $(10,712,066,600)$ | $(4,561,378,713)$ | $(6,150,687,887)$ | $3,296,821,140$ | $(9,447,509,027)$ |
| Net Position | $\$ 29,651,976,516$ | $\$ 224,045,350$ | $\$ 29,427,931,166$ | $\$ 3,487,122,126$ | $\$ 25,940,809,040$ |


| Condensed Statement of Changes in Net Position Fiscal Year Ended June 30, |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Additions | 2015 | Increase (Decrease) | 2014 | Increase (Decrease) | 2013 |
| Dividends | \$502,913,948 | \$28,292,279 | 474,621,673 | \$(273,254,808) | \$747,876,481 |
| Interest | 262,010,228 | $(8,513,172)$ | 270,523,400 | 88,731,101 | 181,792,299 |
| Securities Lending \& Other Income | e 22,756,489 | 6,236,401 | 16,520,088 | $(12,630,364)$ | 29,150,452 |
| Total Investment Income | 787,680,665 | 26,015,504 | 761,665,161 | $(197,154,071)$ | 958,819,232 |
| Total Investment Expenses | 87,498,427 | 3,186,367 | 84,312,060 | 2,558,622 | 86,870,682 |
| Net Investment Income | 700,182,238 | 22,829,137 | 677,353,101 | $(194,595,449)$ | 871,948,550 |
| Net Realized Gain/(Loss) | 1,332,698,224 | 448,116,457 | 884,581,807 | $(395,427,509)$ | 1,280,009,316 |
| Net Change in Unrealized Gains on Investments | $(1,208,557,860)$ | $(3,653,573,575)$ | 2,445,015,715 | 1,819,187,170 | 625,828,545 |
| Net Increase (Decrease) in Net Position resulting from operations | 824,322,602 | $(3,182,628,021)$ | 4,006,950,623 | 1,229,164,212 | 2,777,786,411 |
| Purchase of Units by Participants | 3,010,406,666 | 55,117,743 | 2,955,288,923 | $(2,026,160,180)$ | 4,981,449,103 |
| Total Additions | 3,834,729,268 | $(3,127,510,278)$ | 6,962,239,546 | $(796,995,968)$ | 7,759,235,514 |
| Deductions |  |  |  |  |  |
| Administrative Expense | 4,622,045 | $(318,436)$ | 4,940,481 | 679,161 | 4,261,320 |
| Distribution of Income to Unit Owners | 9,463,119 | $(180,962,860)$ | 190,425,979 | (622,760,273) | 813,186,252 |
| Redemption of Units by Participants | 3,596,598,754 | 316,847,794 | 3,279,750,960 | $(1,697,989,840)$ | 4,977,740,800 |
| Total Deductions | 3,610,683,918 | 135,566,498 | 3,475,117,420 | (2,320,070,952) | 5,795,188,372 |
| Change in Net Position | 224,045,350 | $(3,263,076,776)$ | 3,487,122,126 | 1,523,074,984 | 1,964,047,142 |
| Net Position - Beginning of year | 29,427,931,166 | 3,487,122,126 | 25,940,809,040 | 1,964,047,142 | 23,976,761,898 |
| Net Position - End of year | \$29,651,976,516 | \$224,045,350 | \$29,427,931,166 | \$3,487,122,126 | \$25,940,809,040 |

## OVERVIEW OF THE FINANCIAL STATEMENTS

This discussion and analysis is an introduction to the Office of the Treasurer's Combined Investment Funds basic financial statements, which are comprised of: 1) Statement of Net Position, 2) Statement of Changes in Net Position and 3) Notes to the Financial Statements.

The Statements of Net Position and Changes in Net Position are two financial statements that report information about the Combined Investment Funds. These statements include all assets and liabilities using the accrual basis of accounting. The current year's revenues and expenses are taken into account regardless of when cash is received or paid.

The Statement of Net Position presents all of the Combined Investment Funds assets and liabilities, with the difference between the two reported as "net position". Over time, increases and decreases in net position measure whether the Combined Investment Funds financial position is improving or deteriorating.

The Statement of Changes in Net Position presents information showing how the Combined Investment Funds net assets changed during the most recent year. All changes in net assets are reported as soon as the underlying events giving rise to the change occurs, regardless of the timing of related cash flows. Therefore, revenues and expenses are reported in this statement for some items that will only result in cash flows in future fiscal periods (e. g . security lending rebates and dividend and interest income).

The Notes to the Financial Statements provide additional information that is essential to a full understanding of the data provided in the Combined Investment Funds financial statements.

## ECONOMIC CONDITIONS AND OUTLOOK

Domestic growth, as measured by Gross Domestic Product (GDP), increased during the fiscal year, averaging a rate of 2.7 percent, up 0.1 percent from Fiscal Year 2014. As the economy grew, over 2.9 million people were added to payrolls, helping the unemployment rate fall to 5.3 percent, down from 6.2 percent at the end of Fiscal

Year 2014. Domestic inflation (as measured by the year-over-year change in the consumer price index) averaged 0.7 percent during the fiscal year, down from 1.6 percent in Fiscal Year 2014.

Due to the improvement in the labor market and the underlying strength of the broader economy, the FOMC concluded its asset purchase program at its October 2014 meeting and began discussing the timing of a tightening (an increase in the Fed Funds rate).

Connecticut's unemployment rate has continued to decline from a high of 9.5 percent in October 2010 to 5.4 percent in July 2015, compared to the national unemployment rate of 5.3 percent. The State Comptroller reported on September 30, 2015 that the State's General Fund ended the 2015 Fiscal Year with a pre-audited $\$ 113.2$ million deficit which will be eliminated through a transfer from the Budget Reserve Fund.

## CONTACTING THE OFFICE OF THE TREASURER

This Comprehensive Annual Financial Report is designed to provide a general overview of the CIF and to show the Office of the Treasurer's accountability for its stewardship of CIF assets. Questions about this report or requests for additional information should be addressed to:

Connecticut State Treasury
55 Elm Street
Hartford, CT 06106-1773
Telephone (860) 702-3000
www.ott.ct.gov

## STATEMENT OF NET POSITION

JUNE 30, 2015

ASSETS
Investments in Securities, at Fair Value

Liquidity Fund
Cash Equivalents
Asset Backed Securities
Government Securities
Government Agency Securities
Mortgage Backed Securities
Corporate Debt
Convertible Securities
Common Stock
Preferred Stock
Real Estate Investment Trust
Business Development Corportation
Mutual Fund
Limited Liability Corporation
Trusts
Limited Partnerships
Total Investments in Securities, at Fair Value
Cash
Receivables
Foreign Exchange Contracts
Interest Receivable
Dividends Receivable
Due from Brokers
Foreign Taxes
Securities Lending Receivable
Reserve for Doubtful Receivables
Total Receivables

Invested Securities Lending Collateral
Other Funds on Deposit
Prepaid Expenses
Total Assets

## LIABILITIES

Payables
Foreign Exchange Contracts
Due to Brokers
Income Distribution
Other Payable
Total Payables
Securities Lending Collateral
Accrued Expenses
Total Liabilities
NET POSITION HELD IN TRUST FOR PARTICIPANTS

TOTAL
\$
198,783,958
191,411,557
2,746,046,826
725,993,171
377,929,268
3,068,332,134
34,542,342
14,406,676,062
124,879,510
309,746,511
80,600,464
820,291,108
1,156,486
582,960
6,668,284,494
29,755,256,851
30,801,210
8,376,124,442
59,210,799
39,445,940
230,283,391
6,652,757
1,170,679
$(4,122,489)$
8,708,765,519
1,867,789,514
$1,430,022$
$40,364,043,116$

8,336,793,682 487,140,200

992,232
773,382
8,825,699,496
1,867,789,514
18,577,590

| $10,712,066,600$ <br> $29,651,976,516$ |
| :--- |

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

STATEMENT OF CHANGES IN NET POSITION

## FOR THE FISCAL YEAR ENDED JUNE 30, 2015

## ADDITIONS

## OPERATIONS

Investment Income

Dividends
Interest
Other Income
Securities Lending
Total Income

## Expenses

Investment Advisory Fees
Custody and Transfer Agent Fees
Professional Fees
Security Lending Fees
Security Lending Rebates
Investment Expenses
Total Expenses
Net Investment Income
Net Realized Gain (Loss)
Net Change in Unrealized Gain/(Loss)
on Investments and Foreign Currency
Net Increase (Decrease) in Net Position
Resulting from Operations
Unit Transactions
Purchase of Units by Participants

## TOTAL ADDITIONS

$3,010,406,666$

## DEDUCTIONS

Administrative Expenses:
Salary and Fringe Benefits
Distributions to Unit Owners:
Income Distributed
Unit Transactions
Redemption of Units by Participants

## TOTAL DEDUCTIONS

Change in Net Position Held in Trust for Participants
Net Position- Beginning of Period
Net Position- End of Period
\$ 502,913,948
262,010,228
7,323,567
$\begin{array}{r}15,432,922 \\ \hline 787,680,665\end{array}$

75,901,384
3,752,963
2,882,621
1,450,844
924,473
2,586,142
87,498,427
$\qquad$
1,332,698,224
$(1,208,557,860)$

824,322,602

3,834,729,268

TOTAL

STATEMENT OF CHANGES IN NET POSITION FOR THE FISCAL YEAR ENDED JUNE 30, 2014

| ADDITIONS | TOTAL |  |
| :---: | :---: | :---: |
| OPERATIONS |  |  |
| Investment Income |  |  |
| Dividends | \$ | 474,621,673 |
| Interest |  | 270,523,400 |
| Other Income |  | 3,218,262 |
| Securities Lending |  | 13,301,826 |
| Total Income |  | 761,665,161 |
| Expenses |  |  |
| Investment Advisory Fees |  | 71,869,948 |
| Custody and Transfer Agent Fees |  | 3,006,303 |
| Professional Fees |  | 3,175,665 |
| Security Lending Fees |  | 1,472,596 |
| Security Lending Rebates |  | 552,547 |
| Investment Expenses |  | 4,235,001 |
| Total Expenses |  | 84,312,060 |
| Net Investment Income |  | 677,353,101 |
| Net Realized Gain (Loss) |  | 884,581,807 |
| Net Change in Unrealized Gain/(Loss) on Investments and Foreign Currency |  | 2,445,015,715 |
| Net Increase (Decrease) in Net Position |  |  |
| Resulting from Operations |  | 4,006,950,623 |
| Unit Transactions |  |  |
| Purchase of Units by Participants |  | 2,955,288,923 |
| TOTAL ADDITIONS |  | 6,962,239,546 |
| DEDUCTIONS |  |  |
| Administrative Expenses: |  |  |
| Salary and Fringe Benefits |  | $(4,940,481)$ |
| Distributions to Unit Owners: |  |  |
| Income Distributed |  | $(190,425,979)$ |
| Unit Transactions |  |  |
| Redemption of Units by Participants |  | $(3,279,750,960)$ |
| TOTAL DEDUCTIONS |  | (3,475,117,420) |
| Change in Net Position Held in Trust for Participants |  | 3,487,122,126 |
| Net Position- Beginning of Period |  | 25,940,809,040 |
| Net Position- End of Period | \$ | 29,427,931,166 |

The accompanying notes are an integral part of these financial statements

## NOTES TO FINANCIAL STATEMENTS

## NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The Combined Investment Funds ("CIFs") are separate legally defined funds, which have been created by the Treasurer of the State of Connecticut (the "Treasurer") under the authority of the Connecticut General Statutes (CGS) Section 3-31b. The CIFs are open-end, unitized portfolios consisting of the Liquidity Fund, Alternative Investment Fund, Mutual Equity Fund, Core Fixed Income Fund, Inflation Linked Bond Fund, Emerging Market Debt Fund, High Yield Debt Fund, Developed Market International Stock Fund, Emerging Market International Stock Fund, Real Estate Fund, Commercial Mortgage Fund and the Private Investment Fund. The CIFs were established to provide a means for investing pension and other trust fund assets entrusted to the Treasurer in a variety of investment classes. The units of the CIFs are owned by these pension and trust funds. For financial reporting purposes of the State of Connecticut, the CIFs are considered to be external investment pools and are not reported in the State's combined financial statements. Instead, each fund type's investment in the CIF is reported as "equity in combined investment funds" in the State's combined balance sheet.

The Treasurer, as sole fiduciary of the CIFs, is authorized to invest in a broad range of fixed income and equity securities, as well as real estate properties, mortgages and private equity. This authority is restricted only by statute. Such limitations include prohibitions against investment in companies doing business in Iran and those doing business in Northern Ireland, but who have failed to implement the MacBride Principles (CGS Section 3-13h). Other legislation restricts the maximum aggregate investment in equity securities to $60 \%$ of the fair value of the Trust Funds.

The CIFs are not subject to regulatory oversight and are not registered with the Securities and Exchange Commission as an investment company.

The following is a summary of significant accounting policies consistently followed by the CIFs in the preparation of their financial statements.

## A. NEW PRONOUNCEMENTS

There were no new pronouncements for the fiscal year ending June 30, 2015.

## B. SECURITY VALUATION

Investments are stated at fair value for each of the CIFs as described below. For the Commercial Mortgage Fund, the investments listed on the Statement of Net Position, other than the amounts invested in the Liquidity Fund, are shown at fair values provided to the CIF by the investment advisor, and adjusted, when appropriate, by the Treasurer's staff.

For the Alternative Investment, Real Estate and Private Investment Funds substantially all of the investments, other than those in the Liquidity Fund, are shown at values that are estimated by the Treasurer's staff. The Core Fixed Income Fund and the High Yield Debt Fund also include investments that are shown at values that are estimated by the Treasurer's staff. Such estimations utilize the investment advisors' estimated fair value, plus or minus the appropriate related cash flows as described later in this section. The CIF's assets are fair valued quarterly by the General Partner and at such other times as determined by the General Partner and are based on Accounting Standards Codification ("ASC") 820 "Fair Value Measurements and Disclosures". The fair value the General Partner assigned to these investments is based upon available information and does not represent necessarily the amount that ultimately might be realized upon sale or maturity. Because of the inherent uncertainty of the fair valuation process, this estimated fair value presented by the General Partner may differ significantly from the fair value that would have been used had a ready market for the security existed, and the difference could be material. The General Partner is responsible for coordination and oversight of all investment valuations.

The Treasurer's staff reviews the valuations for all investments in these alternative asset classes to see that they are reasonable and consistent. Due to the inherent uncertainty of valuation, those estimated values may differ significantly from the values that would have been used had a ready market for the securities existed and the differences could be material.

## Liquidity Fund

Existing money market vehicles are valued at amortized cost on a daily basis, which approximates fair value. A standard price hierarchy is utilized in the daily valuation of the Liquidity Fund.

## NOTES TO FINANCIAL STATEMENTS (Continued)

The Liquidity Fund at times may utilize foreign currency contracts to facilitate transactions in foreign securities and to manage the CIFs' currency exposure. Contracts to buy are used to acquire exposure to foreign currencies, while contracts to sell are used to hedge the CIFs' investments against currency fluctuations. Also, a contract to buy or sell can offset a previous contract. Losses may arise from changes in the value of the foreign currency or failure of the counterparties to perform under the contracts' terms.

Investing in forward currency contracts may increase the volatility of the CIFs' performance. Price movements of currency contracts are influenced by, among other things, international trade, fiscal, monetary, and exchange control programs and policies; national and international political and economic events; and changes in worldwide interest rates. Governments from time to time intervene in the currency markets with the specific intent of influencing currency prices. Such intervention may cause certain currency prices to move rapidly. Additionally, the currency markets may be particularly sensitive to interest rate fluctuations.

The U. S. dollar value of forward foreign currency contracts is determined using forward currency exchange rates supplied by a quotation service.

Investments are valued based on quoted market prices when available. For securities that have no quoted market value, fair value is estimated based on yields currently available on comparable securities of issuers with similar credit ratings and maturities.
"When-issued" securities held in the fund are fully collateralized by U.S Government securities and such collateral is in the possession of the CIF's custodial bank. The collateral is evaluated daily to ensure its market value exceeds the current market value of the instruments including accrued interest

The Liquidity Fund invests in Mortgage Backed Securities (MBSs) and Asset Backed Securities (ABSs), which are included in the Statement of Net Position. These are bonds issued by a special purpose trust that collects payments on an underlying collateral pool of mortgage or other loans and remits payments to bondholders. The bonds are structured in a series of classes or tranches, each with a different coupon rate and stated maturity date. Interest payments to the bondholders are made in accordance with the trust indentures and amounts received from borrowers in excess of interest payments and expenses are used to amortize the principal on the bonds. Such principal payments are made to retire the tranches of bonds in order of their stated maturity. Because mortgage prepayments are largely dependent on market interest rates, the ultimate maturity date of the bonds is unpredictable and is sensitive to changes in market interest rates, but is generally prior to the stated maturity date. At June 30, 2015, the Fund held MBSs of \$89,187,074 and ABSs of $\$ 134,891,562$.

Repurchase agreements held in the fund are collateralized at 100 percent of the securities' value. Such transactions are only entered into with primary government securities dealers who report directly to the Federal Reserve Bank of New York. The collateral is evaluated daily to ensure its fair value exceeds the current fair value of the repurchase agreements including accrued interest.

## Alternative Investment Fund

Investments in securities not listed on security exchanges and investments in limited partnerships, which comprise substantially all of the CIF's investments, are carried at the cash adjusted fair value. For investments in the Absolute Return Strategy category, the cash adjusted fair value utilizes the prior two month end period fair value as estimated by the investment advisor, (i) plus cash flows relating to capitalized expenses and principal contributions disbursed from and (ii) minus amounts received by the Alternative Investment Fund, to estimate the current fair value. For investments in the Real Asset category, the cash adjusted fair value utilizes the prior calendar quarter end fair value as estimated by the investment advisor, (i) plus cash flows relating to capitalized expenses and principal contributions disbursed from and (ii) minus amounts received by the Alternative Investment Fund, to estimate the current fair value. The Treasurer's staff reviews the estimated fair values provided by the investment advisors for reasonableness. In those instances where an advisor's value appears to be overstated, this estimated fair value is adjusted accordingly. Additionally, the staff monitors the estimated cash adjusted fair values against the estimated values subsequently reported by the investment advisors. In the event of significant total CIF-level differences between the cash adjusted estimates and the investment advisors' estimated values, adjustments to the reported cash adjusted fair values are made to prevent overstatement. At June 30, 2015, the estimated investment values provided by the investment advisors, net of the adjustments noted above, was lower than the cash adjusted fair values reported on the Statement of Net Position by approximately $\$ 17$ million. Consistent with the cash adjusted fair value presentation this decrease will be considered for the next period adjustment.

## NOTES TO FINANCIAL STATEMENTS (Continued)

## Mutual Equity Fund

Securities traded on securities exchanges are valued at the last reported sales price on the last business day of the fiscal year. Corporate bonds and certain over-the-counter stocks are valued at the mean of bid and asked prices as furnished by broker-dealers.

## Core Fixed Income Fund

Investments are valued based on quoted market prices when available. For securities that have no quoted market value, fair value is estimated based on yields currently available on comparable securities of issuers with similar credit ratings and maturities.
"When-issued" securities held in the CIF are fully collateralized by U.S Government securities and such collateral is in the possession of the CIF's custodial bank. The collateral is evaluated daily to ensure its market value exceeds the current market value of the instruments including accrued interest.

The Core Fixed Income Fund invests in Mortgage Backed Securities (MBSs) and Asset Backed Securities (ABSs), which are included in the Statement of Net Position. These are bonds issued by a special purpose trust that collects payments on an underlying collateral pool of mortgage or other loans and remits payments to bondholders. The bonds are structured in a series of classes or tranches, each with a different coupon rate and stated maturity date. Interest payments to the bondholders are made in accordance with the trust indentures and amounts received from borrowers in excess of interest payments and expenses are used to amortize the principal on the bonds. Such principal payments are made to retire the tranches of bonds in order of their stated maturity. Because mortgage prepayments are largely dependent on market interest rates, the ultimate maturity date of the bonds is unpredictable and is sensitive to changes in market interest rates, but is generally prior to the stated maturity date. At June 30, 2015, the CIF held MBSs of $\$ 288,723,995$ and ABSs of $\$ 56,606,274$.

Interest-only stripped mortgage backed securities (IOs), a specialized type of Collateralized Mortgage Obligation (CMO), are included as Mortgage Backed Securities on the Statement of Net Position. The cash flow on these investments is derived from the interest payments on the underlying mortgage loans. Prepayments on the underlying loans curtail these interest payments, reducing the value of the IOs and, as such, these instruments are extremely sensitive to changes in interest rates, which encourage or discourage such prepayments. At June 30, 2015 the CIF's holdings had a fair value of $\$ 739,767$ and a cost of $\$ 1,254,041$. The valuations were provided by the custodian.

Investments in non-U.S. fixed income securities are utilized on an opportunistic basis. Certain advisors within the Core Fixed Income Fund are authorized to invest in global fixed income securities.

Investments in securities not listed on security exchanges and investments in limited partnerships are carried at the cash adjusted fair value. For investments in the Absolute Return Strategy category, the cash adjusted fair value utilizes the prior two month end period fair value as estimated by the investment advisor, (i) plus cash flows relating to capitalized expenses and principal contributions disbursed from and (ii) minus amounts received by the Core Fixed Income Fund, to estimate the current fair value. The Treasurer's staff reviews the estimated fair values provided by the investment advisors for reasonableness. In those instances where an advisor's value appears to be overstated, this estimated fair value is adjusted accordingly. Additionally, the staff monitors the estimated cash adjusted fair values against the estimated values subsequently reported by the investment advisors. In the event of significant total CIF-level differences between the cash adjusted estimates and the investment advisors' estimated values, adjustments to the reported cash adjusted fair values are made to prevent overstatement. At June 30, 2015, the estimated investment values provided by the investment advisors, net of the adjustments noted above, was lower than the cash adjusted fair values reported on the Statement of Net Position by approximately $\$ 6$ million. Consistent with the cash adjusted fair value presentation this decrease will be considered for the next period adjustment.

## Inflation Linked Bond Fund

Investments are valued based on quoted market prices when available. For securities that have no quoted market value, fair value is estimated based on yields currently available on comparable securities of issuers with similar credit ratings and maturities.
"When-issued" securities held in the CIF are fully collateralized by U.S Government securities and such collateral is in the possession of the CIF's custodial bank. The collateral is evaluated daily to ensure its market value exceeds the current market value of the instruments including accrued interest.

## NOTES TO FINANCIAL STATEMENTS (Continued)

Investments in non-U.S. fixed income securities are utilized on an opportunistic basis. Certain advisors within the Inflation Linked Bond Fund are authorized to invest in global fixed income securities.

## Emerging Market Debt Fund

Investments are valued based on quoted market prices when available. For securities that have no quoted market value, fair value is estimated based on yields currently available on comparable securities of issuers with similar credit ratings.

The Emerging Market Debt Fund invests in securities in emerging market countries that are either U.S. dollardenominated or issued in the local currency of the country. In addition to bond interest rate sensitivity, the local currency bonds' values will fluctuate with exchange rates.
"When-issued" securities held are fully collateralized by U.S Government securities and such collateral is in the possession of the CIF's custodian. The collateral is evaluated daily to ensure its market value exceeds the current market value of the instruments including accrued interest.

## High Yield Debt Fund

Investments are valued based on quoted market prices when available. For securities that have no quoted market value, fair value is estimated based on yields currently available on comparable securities of issuers with similar credit ratings and maturities.
"When-issued" securities held in the fund are fully collateralized by U.S Government securities and such collateral is in the possession of the CIF's custodial bank. The collateral is evaluated daily to ensure its market value exceeds the current market value of the instruments including accrued interest.

Investments in non-U.S. fixed income securities are utilized on an opportunistic basis. Certain advisors within the High Yield Debt Fund are authorized to invest in global fixed income securities.

Investments in securities not listed on security exchanges and investments in Business Development Corporations are carried at the cash adjusted fair value. For investments in the Business Development Corporation category, the cash adjusted fair value utilizes the prior calendar quarter end fair value as estimated by the investment advisor, (i) plus cash flows relating to capitalized expenses and principal contributions disbursed from and (ii) minus amounts received by the High Yield Debt Fund, to estimate the current fair value. The Treasurer's staff reviews the estimated fair values provided by the investment advisors for reasonableness. In those instances where an advisor's value appears to be overstated, this estimated fair value is adjusted accordingly. Additionally, the staff monitors the estimated cash adjusted fair values against the estimated values subsequently reported by the investment advisors. In the event of significant total CIF-level differences between the cash adjusted estimates and the investment advisors' estimated values, adjustments to the reported cash adjusted fair values are made to prevent overstatement. At June 30, 2015, the estimated investment values provided by the investment advisors, net of the adjustments noted above, exceeded the cash adjusted fair values reported on the Statement of Net Position by approximately $\$ 1$ million Consistent with the cash adjusted fair value presentation this increase will be considered for the next period adjustment.

## Developed Market International Stock Fund

The Developed Market International Stock Fund at times may utilize foreign currency contracts to facilitate transactions in foreign securities and to manage the CIF's currency exposure. Contracts to buy are used to acquire exposure to foreign currencies, while contracts to sell are used to hedge the CIFs' investments against currency fluctuations. Also, a contract to buy or sell can offset a previous contract. Losses may arise from changes in the value of the foreign currency or failure of the counterparties to perform under the contracts' terms.

Investing in forward currency contracts may increase the volatility of the CIFs' performance. Price movements of currency contracts are influenced by, among other things, international trade, fiscal, monetary, and exchange control programs and policies; national and international political and economic events; and changes in worldwide interest rates. Governments from time to time intervene in the currency markets with the specific intent of influencing currency prices. Such intervention may cause certain currency prices to move rapidly. Additionally, the currency markets may be particularly sensitive to interest rate fluctuations.

The U. S. dollar value of forward foreign currency contracts is determined using forward currency exchange rates supplied by a quotation service

## NOTES TO FINANCIAL STATEMENTS (Continued)


#### Abstract

Investments in securities listed on security exchanges are valued at the last reported sales price on the last business day of the fiscal year; securities traded in the over-the-counter market and listed securities for which no sale was reported on that date are valued at the mean of the last reported bid and asked prices.


Certain cash held in non-U.S. dollar denominated trading accounts is non-interest bearing.

## Emerging Market International Stock Fund

The Emerging Market International Stock Fund at times may utilize foreign currency contracts to facilitate transactions in foreign securities and to manage the CIFs' currency exposure. Contracts to buy are used to acquire exposure to foreign currencies, while contracts to sell are used to hedge the CIFs' investments against currency fluctuations. Also, a contract to buy or sell can offset a previous contract. Losses may arise from changes in the value of the foreign currency or failure of the counterparties to perform under the contracts' terms.

Investing in forward currency contracts may increase the volatility of the CIFs' performance. Price movements of currency contracts are influenced by, among other things, international trade, fiscal, monetary, and exchange control programs and policies; national and international political and economic events; and changes in worldwide interest rates. Governments from time to time intervene in the currency markets with the specific intent of influencing currency prices. Such intervention may cause certain currency prices to move rapidly. Additionally, the currency markets may be particularly sensitive to interest rate fluctuations.

The U. S. dollar value of forward foreign currency contracts is determined using forward currency exchange rates supplied by a quotation service

Investments in securities listed on security exchanges are valued at the last reported sales price on the last business day of the fiscal year; securities traded in the over-the-counter market and listed securities for which no sale was reported on that date are valued at the mean of the last reported bid and asked prices.

Certain cash held in non-U.S. dollar denominated trading accounts is non-interest bearing.

## Real Estate Fund

Investments in securities not listed on security exchanges and investments in trusts, limited partnerships, and annuities, which comprise substantially all of the CIF's investments, are carried at the cash adjusted fair value. The cash adjusted fair value utilizes the prior calendar quarter end fair value as estimated by the investment advisor, (i) plus cash flows relating to capitalized expenses and principal contributions disbursed from and (ii) minus amounts received by the Real Estate Fund, to estimate the current fair value. The Treasurer's staff reviews the prior quarter estimated fair values provided by the investment advisors for reasonableness. In those instances where an advisor's value appears to be overstated, this estimated fair value is adjusted accordingly. Additionally, the staff monitors the estimated cash adjusted fair values against the estimated values subsequently reported by the investment advisors. In the event of significant total CIF-level differences between the cash adjusted estimates and the investment advisors' estimated values, adjustments to the reported cash adjusted fair values are made to prevent overstatement. At June 30,2015 , the estimated investment values provided by the investment advisors, net of the adjustments noted above, exceeded cash adjusted fair values reported on the Statement of Net Position by approximately $\$ 70$ million. Consistent with the cash adjusted fair value presentation this increase will be considered for the next quarter's adjustment.

## Commercial Mortgage Fund

This CIF invests in commercial mortgage loans and mortgage backed securities (MBS) generally through indirect ownership vehicles such as trusts and corporations. At June 30, 2015, the CIF held MBS of $\$ 18,199$. The value of the CIF's interest in these entities is based on the fair value of the underlying commercial loan portfolio or securities held. Fair value for the mortgage portfolio is computed by discounting the expected cash flows of the loans at a rate commensurate with the risk inherent in the loans. The discount rate is determined using the yield on U.S. Treasury securities of comparable remaining maturities plus an appropriate market spread for credit and liquidity risk. The CIF does not record fair values in excess of amounts at which the borrower could settle the obligation, giving effect to any prepayment premiums. In the event that the fair value of the loan collateral, based on an appraisal, is less than the outstanding principal balance, the collateral value is used as fair value. These calculations are performed by the investment advisor and reviewed by Treasury personnel.

## NOTES TO FINANCIAL STATEMENTS (Continued)

## Private Investment Fund

The Private Investment Fund is comprised of investments in various limited partnerships, limited liability companies and securities. The general partner or managing member is the investment advisor and is compensated on a fee basis for management services in addition to its participation in partnership profits and losses. These investments are carried at their cash adjusted fair values. The cash adjusted fair value utilizes the prior quarter fair value as estimated by the investment advisor, (i) plus cash flows relating to capitalized expenses and principal contributions disbursed from and (ii) minus amounts received by the Private Investment Fund, to estimate the current fair value. The Treasurer's staff reviews the prior quarter estimated fair values provided by the investment advisors for reasonableness. In those instances where an advisor's value appears to be overstated, the estimated fair value is adjusted accordingly. Additionally, the staff monitors the estimated cash adjusted fair values against the estimated values subsequently reported by the investment advisors. In the event of significant total CIF-level differences between the cash adjusted estimates and the investment advisors' estimated values, adjustments of reported cash adjusted values are made to prevent overstatement. At June 30, 2015, the estimated investment values provided by the investment advisors, net of the adjustments noted above, exceeded cash adjusted fair values reported on the Statement of Net Position by approximately $\$ 121$ million. Consistent with the cash adjusted fair value presentation this increase will be considered for the next quarter's adjustment. Securities traded on securities exchanges are valued at the last reported sales price on the last business day of the fiscal year.

Fair values of the underlying investments are generally represented by cost unless there has been an additional arms-length indication of value, such as a public offering or a new investment by a third party.

## C. INVESTMENT TRANSACTIONS AND RELATED INCOME

Investment transactions are accounted for on a trade date basis. Dividend income is recognized as earned on the ex-dividend date. Interest income is recorded on the accrual basis as earned. Realized gains and losses are computed on the basis of the average cost of investments sold. Such amounts are calculated independent of and are presented separately from the Net Change in Unrealized Gains and Losses on the Statement of Changes in Net Position. Realized gains and losses on investments held more than one fiscal year and sold in the current year were included as a change in the fair value of investments reported in the prior year(s) and the current year. Unrealized gains and losses represent the difference between the fair value and the cost of investments. The increase (decrease) in such difference is accounted for as a change in unrealized gain (loss). In the CIFs' cost basis records, premiums are amortized using the straight-line method that approximates the interest method.

Dividends earned by the Private Investment, Real Estate, Alternative Investment and Commercial Mortgage Funds relate to investments that are not listed on security exchanges. Such dividends are recognized as income when received, generally net of advisory fees.

## D. FOREIGN CURRENCY TRANSLATION

The value of investments, assets and liabilities denominated in currencies other than U.S. dollars are translated into U.S. dollars based upon appropriate fiscal year end foreign exchange rates. Purchases and sales of foreign investments and income and expenses are converted into U.S. dollars based on currency exchange rates prevailing on the respective dates of such transactions. The CIFs do not isolate that portion of the results of operations arising from changes in the exchange rates from that portion arising from changes in the market prices of securities.

## E. SHARE TRANSACTIONS AND PRICING

All unit prices are determined at the end of each month based on the net asset value of each CIF divided by the number of units outstanding. Purchases and redemptions of units are based on the prior month end price and are generally processed on the first business day of the month.

## F. EXPENSES

Expenses of the CIFs, excluding certain management fees as discussed in more detail in note 1 J , are recognized on the accrual basis and are deducted in calculating net investment income and net asset value on a monthly basis. Each

## NOTES TO FINANCIAL STATEMENTS (Continued)

of the CIFs bears its direct expenses, such as investment advisory fees, and, in addition, each of the CIFs is allocated a portion of the overhead expenses of the Pension Funds Management Division of the Office of the State Treasurer, which services the CIFs. These expenses include salary and fringe benefit costs and other administrative expenses. Certain of these costs are allocated among the CIFs based on relative net asset values. Other costs are charged directly based on the specific duties of personnel.

## G. DISTRIBUTIONS

Distributions to unit holders of the CIFs were discontinued after September 30, 2013.

## H. DERIVATIVE FINANCIAL INSTRUMENTS

GASB Statement Number 53 Accounting and Financial Reporting for Derivative Instruments, requires that the fair value of financial arrangements called derivatives or derivative instruments be reported in the financial statements. GASB defines a derivative instrument as a financial instrument or other contract with all of the following characteristics: a) It has one or more reference rates and (2) one or more notional amounts or payment provisions or both. b) It requires no initial net investment or an initial net investment that is smaller than would be required for other types of contracts that would be expected to have a similar response to changes in market factors. c) Its terms require or permit net settlement, it can readily be settled net by a means outside the contract, or it provides for delivery of an asset that puts the recipient in a position not substantially different from net settlement.

For the fiscal year ended June 30, 2015, the CIFs maintained positions in a variety of such securities that are all reported at fair value on the Statement of Net Position. The following is a listing of such securities:

## Adjustable Rate Securities:

| CIF | Cost | Fair Value |
| :--- | ---: | ---: |
| Liquidity | $\$ 279,438,082$ | $\$ 278,069,612$ |
| Core Fixed Income | $197,374,593$ | $195,092,525$ |
| Inflation Linked Bond | $2,243,965$ | $2,117,471$ |
| Emerging Market Debt | $3,641,476$ | $2,394,326$ |
| High Yield Debt | $28,732,164$ | $28,196,141$ |

## Asset Backed Securities:

| CIF | Cost | Fair Value |
| :--- | ---: | ---: |
| Liquidity | $\$ 135,255,603$ | $\$ 134,891,562$ |
| Core Fixed Income | $56,504,635$ | $56,606,274$ |


| Mortgage Backed Securities, <br> CIF | Net of CMO's: <br> Cost | Fair Value |
| :--- | :---: | ---: |
| Liquidity | $\$ 79,814,151$ | $\$ 78,957,361$ |
| Core Fixed Income | $198,911,255$ | $198,330,627$ |
| CMO's: |  |  |
| CIF | Cost | Fair Value |
| Liquidity | $\$ 10,236,032$ | $\$ 10,229,713$ |
| Core Fixed Income | $89,649,800$ | $90,393,367$ |


| TBA's: |  |  |
| :--- | :---: | :---: |
| CIF | Cost | Fair Value |
| Core Fixed Income | $\$ 189,772,469$ | $\$ 190,180,797$ |


| Interest Only: | Cost | Fair Value |
| :--- | :---: | ---: |
| CIF | $\$ 1,254,041$ | $\$ 739,767$ |
| Core Fixed Income |  |  |
| Options: | Cost | Fair Value |
| CIF | $\$(102,393)$ | $\$(305,642)$ |

The Inflation Linked Bond Fund held futures with a negative notional cost of $(\$ 77,197,567)$ and an unrealized gain of $\$ 402,147$ reported in the Due from Brokers in the Statement of Net Position. The Developed Market International

## NOTES TO FINANCIAL STATEMENTS (Continued)

Stock also held futures with a notional cost of $\$ 65,624,975$ and an unrealized loss of $\$ 502,234$ reported in the Due from Brokers in the Statement of Net Position.

The Liquidity, Core Fixed Income, Inflation Linked, Emerging Market Debt, High Yield Debt, Developed Market International Stock and Emerging Market International Stock Funds were invested in foreign exchange contracts. The specific nature of these investments is discussed more fully in the foreign exchange contract note for each respective fund, where appropriate. These financial instruments are utilized for trading and other purposes. Those that are used for other than trading purposes are foreign exchange contracts, which can be used to facilitate trade settlements, and may serve as foreign currency hedges. The credit exposure resulting from such contracts is limited to the recorded fair value of the contracts on the Statement of Net Position.

The remaining such securities are utilized for trading purposes and are intended to enhance investment returns. All positions are reported at fair value and changes in fair value are reflected in income as they occur. The CIFs' credit exposure resulting from such investments is limited to the recorded fair value of the derivative financial instruments.

The Liquidity, Mutual Equity, Emerging Market Debt, and the Emerging Market International Stock Funds also utilize derivatives indirectly through participation in mutual funds. These mutual funds may hold derivatives from time to time. Such derivatives may be used for hedging, investment and risk management purposes. These transactions subject the investor to credit and market risk.

## I. COMBINATION/ELIMINATION ENTRY

The financial statements depict a full presentation of each of the CIFs. However, one of these funds, the Liquidity Fund, is owned both directly by the pension plans and trust funds which have accounts in the Liquidity Fund, and also indirectly because each of the other CIFs has an account with the Liquidity Fund. As a result, elimination entries are presented for the purpose of netting out balances and transactions relating to the ownership of the Liquidity Fund by the other CIFs. The combined presentation totals to the overall net assets owned by the pension plans and trust funds. In order to help the Liquidity Fund managers better manage their cash balances, realized gains (losses) are no longer included in the Liquidity Fund income sweep.

## J. FEES AND REALIZED GAINS

Investment advisory fees incurred for certain investments in the Alternative Investment, Core Fixed Income, Private Investment and Real Estate Funds are generally charged to the entity in which the CIF has been invested. In such cases, these amounts are either capitalized in the cost basis of the investment on a cash basis and become a component of unrealized gain (loss) or are netted against the corresponding income generated. Certain other fees are incurred directly by the CIFs and are expensed. These expensed amounts are accrued and the expense is reflected as Investment Advisory Fees on the Statement of Changes in Net Position. The appropriate treatment is determined depending on the terms of the investment agreement. Capitalized fees are not separately presented on the Statement of Changes in Net Position. These fees are borne by the partners in their respective shares. The following is a listing of the Funds total fees for the fiscal year ended June 30, 2015:

| CIF | Netted | Capitalized | Expensed | Total |
| :--- | ---: | ---: | ---: | ---: |
| Alternative Investment | $\$ 7,477,674$ | $\$ 3398,131$ | $\$$ | - |
| Core Fixed Income | $1,877,094$ | - | $2,986,694$ | $\$, 875,805$ |
| Private Investment | $1,828,335$ | $15,659,325$ | 2,888 |  |
| Real Estate | $10,575,119$ | $1,544,666$ | $5,429,276$ | $3,366,936$ |
|  |  |  |  |  |

Periodically the Private Investment and Real Estate Funds may receive security distributions in lieu of cash. These securities are included as Common Stock and Real Estate Investment Trust, respectively on the Statement of Net Position. When one of these individual securities is sold the realized gain or loss is presented on the Statement of Changes in Net Position. The Private Investment Fund incurred realized gain of \$ 3,547,342 for such transactions for the fiscal year ended June 30, 2015.

The Liquidity, Mutual Equity, Emerging Market Debt and the Emerging Market International Stock funds include investments in a limited partnership and investments in mutual funds. Fees incurred from these investments are deducted

## NOTES TO FINANCIAL STATEMENTS (Continued)

from the operations of the CIF and are not separately presented on the Statement of Changes in Net Position. The following is a listing of the corresponding fees incurred for the fiscal year ended June 30, 2015:

| CIF | Amount |
| :--- | ---: |
| Liquidity | $\$ 333,728$ |
| Mutual Equity | 2,514 |
| Emerging Market Debt | $4,388,755$ |
| Emerging Market International Stock | 975,559 |

Investment advisory fees for the Liquidity, Mutual Equity, Core Fixed Income, Inflation Linked Bond, Emerging Market Debt, High Yield Debt, Developed Market International Stock and the Emerging Market International Stock Funds, except those noted above are estimated monthly based on periodic reviews of asset values. Accordingly, the amounts listed as Investment Advisory Fees on the Statement of Changes in Net Position represent estimates of annual management fee expenses.

## K. RECLASSIFICATIONS

Certain prior year amounts have been reclassified to correct a misstatement and conform to the current year presentation. Prior year Dividend Income has been reclassed to Realized Gain/Loss. The amounts are as follows:

| CIF | Net Realized Gain/(Loss) |
| :--- | :---: |
| Alternative Investment | $\$ 95,419$ |
| Private Investment | $237,174,480$ |
| Real Estate | $33,484,845$ |

## L. RELATED PARTY AND OTHER TRANSACTIONS

There were no related party transactions during the fiscal year. Additionally, there were no "soft dollar" transactions. Soft dollar transactions result from arrangements whereby firms doing business with organizations such as the Treasury arrange for third parties to provide other services in lieu of cash payment. These arrangements tend to obscure the true cost of operations and can result in potential overpayment for services. Such transactions have been prohibited by the Treasurer.

## M. ESTIMATES

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

## NOTE 2: DEPOSITS, INVESTMENTS AND SECURITIES LENDING PROGRAM

## Deposits:

The CIFs minimize custodial credit risk by maintaining certain restrictions set forth in the Investment Policy Statement. Custodial credit risk is risk associated with the failure of a depository financial institution. In the event of a depository financial institution's failure the CIFs would not be able to recover its deposits or collateralized securities that are in the possession of the outside parties. The CIFs utilize a Liquidity Account that is a cash management pool investing primarily in highly liquid money market securities such as commercial paper, certificates of deposit, bank notes and other cash equivalents, asset backed securities, and floating rate corporate bonds. Deposits shall consist of cash instruments generally maturing in less than one year and having a quality rating, by at least one widely recognized rating agency, of A-1 or P-1 and earn interest at a rate equal to or better than the International Business Communications ("IBC") First Tier Institutions-Only Rated Money Fund Report Index.

At June 30, 2015, the reported amount of Funds deposits were $\$ 30,801,210$ and the bank balance was $\$ 30,801,210$. Of the bank amount, $\$ 30,801,210$ was uncollateralized and uninsured. Through the Securities Lending Program $\$ 1,867,386,090$ was collateralized with securities held by the counterparty's trust department or agent but not in the State's name.

## NOTES TO FINANCIAL STATEMENTS (Continued)

## Investments:

Pursuant to the Connecticut General Statutes, the Treasurer is the principal fiduciary of the plans and trusts, authorized to invest in a broad range of equity and fixed income securities, as well as real estate properties, mortgages and private equity. The CIFs minimizes credit risk, the risk of loss due to the failure of the security issuer or backer, in accordance with a comprehensive Investment Policy Statement (IPS), as developed by The Office of the Treasurer and the State's Investment Advisory Council (IAC), that provides policy guidelines for the plans and trusts and CIFs and includes an asset allocation plan. The asset allocation plan's main objective is to maximize investment returns over the long term at an acceptable level of risk. There have been no violations of these investment restrictions during the 2015 fiscal year.

The CIF's concentration of credit risk, the risk attributed to the magnitude of an investment in a single issuer. There are no restrictions in the amount that can be invested in Government Securities and Government Agency Securities. However, there can be no more than $5 \%$ of the total portfolio market value invested in 144a or similar securities.

The following table provides average credit quality and exposure levels information on the credit ratings associated with Funds investments in debt securities.

|  | Fair <br> Value | Percentage <br> of Fair Value |
| :--- | ---: | ---: |
|  | $\$ 2,235,451,566$ | $30.45 \%$ |
| Aa | $492,202,153$ | 6.70 |
| A | $641,372,172$ | 8.73 |
| Baa | $799,566,739$ | 10.89 |
| Ba | $520,267,823$ | 7.09 |
| B | $840,171,469$ | 11.44 |
| Caa | $261,361,459$ | 3.56 |
| Ca | $12,769,348$ | 0.17 |
| C | 940,000 | 0.01 |
| Prime 1 | $493,855,050$ | 6.73 |
| Prime 2 | $30,391,223$ | 0.41 |
| U.S. Government fixed income securities (not rated) | $202,428,757$ | 2.76 |
| Non US Government fixed income securities (not rated) $187,169,703$ | 2.55 |  |
| Not Rated | $625,091,794$ | 8.51 |
|  | $\$ 7,343,039,256$ | $100.00 \%$ |

The investments in the Private Equity, Real Estate, Alternative Investment and Commercial Mortgage Funds generally utilize investment vehicles such as annuity contracts, common stocks, limited partnerships and trusts to comply with investment guidelines against direct ownership of such investment assets.

The investments of the Liquidity, Mutual Equity, Core Fixed Income, Inflation Linked Bond, Emerging Market Debt, High Yield Debt, Developed Market International Stock and the Emerging Market International Stock Funds have securities registered under the Bank of New York Mellon's nominee name MAC \& Co. and held by a designated agency of the Pension Plans and Trust Funds of the State of Connecticut, or bearer and held by a designated agency of the Pension Plans and Trust Funds of the State of Connecticut.

Investments of cash collateral received and invested under securities lending arrangements are registered and maintained by a third party administrator exclusively for the CIFs. In circumstances where securities or letters of credit are received as collateral under securities lending arrangements, the collateral is held by the master custodian in a commingled pool in the third party administrator's name as trustee. Securities Lending collateral of $\$ 1,867,386,090$ is invested in various short term repurchase agreements classified which is classified as cash equivalents.

The following table provides information about the interest rate risks associated with the CIF investments. Interest rate risk is the risk that the value of fixed income securities will decline because of rising interest rates. The prices of fixed income securities with a longer time to maturity tend to be more sensitive to changes in interest rates and therefore, more volatile than those with shorter maturities. Investment Managers that manage the CRPTF portfolio are given full discretion to manage their portion of CRPTF assets within their respective guidelines and constraints. The guidelines and constraints require each manager to maintain a diversified portfolio at all times. In addition, each core manager is required to maintain a target duration that is similar to its respective benchmark which is typically the Barclay's Aggregate - an intermediate duration index.

The investments include certain short-term cash equivalents which include certificate of deposits and collateral, various long term items, and restricted assets by maturity in years.

NOTES TO FINANCIAL STATEMENTS (Continued)

| Investment Type | Fair Value | Investment Maturities (in Years) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Less Than 1 | 1-5 | 6-10 | More Than 10 |
| Cash Equivalents | \$ 198,783,958 | \$ 198,783,958 | \$ 65,362 | \$ | \$ - |
| Asset Backed Securities | 191,411,557 | 3,902,259 | 161,552,045 | 15,533,169 | 10,424,084 |
| Government Securities | 2,746,046,826 | 149,877,932 | 1,086,901,701 | 617,616,317 | 891,650,876 |
| Government Agency Securities | 725,993,171 | 122,431,164 | 56,503,126 | 6,194,215 | 540,864,666 |
| Mortgage Backed Securities | 377,929,268 | 10,097,648 | 61,451,820 | 73,194,940 | 233,184,860 |
| Corporate Debt | 3,068,332,134 | 803,147,386 | 998,896,379 | 1,005,420,994 | 260,867,375 |
| Convertible Debt | 34,542,342 | 1,644,086 | 13,962,939 | - | 18,935,317 |
|  | \$7,343,039,256 | \$1,289,884,433 | \$2,379,268,010 | \$1,717,959,635 | \$1,955,927,178 |

Exposure to foreign currency risk results from investments in foreign currency-denominated equity or fixed income securities. As a means of limiting its exposure, the CIF utilizes a strategic hedge ratio of $50 \%$ for the Developed Market International Stock Fund ("DMISF"). This strategic hedge ratio represents the neutral stance or desired long-term exposure to currency for the DMISF. To implement this policy, currency specialists actively manage the currency portfolio as an overlay strategy to the equity investment managers. These specialists may manage the portfolio passively or actively depending on opportunities in the market place. While managers within the fixed income portion of the portfolio are allowed to invest in non-U.S. dollar denominated securities, managers are required to limit that investment to a portion of their respective portfolios. The following table provides information on deposits and investments held in various foreign currencies, which are stated in U.S. dollars. Negative amounts are reflective of short positions.

| Foreign Currency | Total | Cash | Fixed Income Securities |  |  |  |  | Equities |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Cash Equiv Collateral | Government Securities | Corporate Debt | Asset Backed | Mortgage Backed | $\begin{gathered} \text { Common } \\ \text { Stock } \end{gathered}$ | $\begin{gathered} \text { Preferred } \\ \text { Stock } \end{gathered}$ | Real Estate Investment Trust |
| Argentine Peso | \$80,777 | \$80,777 | \$ | \$ | \$ | \$ | \$ | \$ | \$ - | \$ |
| Australian Dollar | 410,837,351 | 999,294 | 112,907 | 89,265,582 | 13,019,571 | - | - | 288,175,104 | - | 19,264,893 |
| Brazilian Real | 279,996,601 | 2,491,661 | - | 111,327,719 | 1,437,238 | - | - | 128,964,841 | 35,775,142 | - |
| Canadian Dollar | 84,909,682 | 144,810 | 42,927 | 15,549,670 | - | - | - | 66,765,330 | - | 2,406,945 |
| Chilean Peso | 2,761,798 | - | - | 1,660,483 | - | - | - | 1,101,315 | - | - |
| Colombian Peso | 31,643,855 | 41,850 | - | 26,265,821 | 4,683,614 | - | - | 652,570 | - | - |
| Croatian Kuna | 85,911 | - | - | - | - | - | - | 85,911 | - | - |
| Czech Koruna | 4,158,157 | 74,085 | - | - | - | - | - | 4,084,072 | - | - |
| Danish Krone | 88,349,629 | 686,057 | - | 1,241,346 | - | - | - | 86,422,226 | - | - |
| Egyptian Pound | 6,662,257 | 207,256 | - | - | - | - | - | 6,455,001 | - | - |
| Euro Currency | 1,964,781,952 | $(1,610,470)$ | - | 189,222,111 | 6,257,077 | $(535,468)$ | - | 1,727,991,703 | 29,649,448 | 13,807,551 |
| Hong Kong Dollar | 633,515,136 | 1,575,939 | - | - | - | - | - | 627,956,983 | - | 3,982,214 |
| Hungarian Forint | 24,324,498 | 88 | - | 6,341,287 | - | - | - | 17,983,123 | - | - |
| Iceland Krona | 1,803 | 1,803 | - | - | - | - | - | - | - | - |
| Indian Rupee | 3,299,913 | - | - | 1,612,410 | 1,687,503 | - | - | - | - | - |
| Indonesian Rupiah | 96,094,602 | 20,076 | - | 42,289,102 | 6,442,211 | - | - | 47,343,213 | - | - |
| Israeli Shekel | 17,564,610 | 403,689 | - | - | - | - | - | 17,160,921 | - | - |
| Japanese Yen | 1,339,030,010 | 4,395,255 | - | 58,668,525 | - | - | - | 1,270,734,992 | - | 5,231,238 |
| Malaysian Ringgit | 84,281,709 | 450,840 | - | 63,041,874 | - | - | - | 20,788,995 | - | - |
| Mexican Peso | 198,235,997 | 1,980,094 | - | 159,361,055 | 4,268,390 | - | - | 29,454,098 | - | 3,172,360 |
| Moroccan Dirham | 62,496 | - | - | - | - | - | - | 62,496 | - | - |
| New Turkish Lira | 201,272,109 | 11,338 | - | 41,199,057 | - | - | - | 159,453,648 | - | 608,066 |
| New Zealand Dollar | 110,083,607 | 928,703 | - | 96,223,128 | - | - | - | 12,931,776 | - | - |
| Nigerian Naira | 2,697,536 | - | - | 2,697,536 | - | - | - | - | - | - |
| Norwegian Krone | 60,801,157 | 1,324,564 | - | 14,123,691 | - | - | - | 45,352,902 | - | - |
| Peruvian Nouveau Sol | 1,864,172 | - | - | 1,864,172 | - | - | - | - | - | - |
| Philippine Peso | 65,375,725 | 17,478 | - | 3,443,779 | - | - | - | 61,914,468 | - | - |
| Polish Zloty | 105,748,115 | 80,993 | - | 65,665,682 | - | - | - | 40,001,440 | - | - |
| Pound Sterling | 1,387,030,784 | 1,764,385 | 222,859 | 200,831,202 | 11,297,864 | - | 5,804,842 | 1,151,938,121 | - | 15,171,511 |
| Romanian Leu | 6,293,096 | - | - | 6,293,096 | - | - | - | - | - | - |
| Russian Ruble | 26,938,604 | - | - | 26,609,644 | 328,960 | - | - | - | - | - |
| Singapore Dollar | 91,253,610 | 1,343,924 | - | - | - | - | - | 83,945,432 | - | 5,964,254 |
| South African Rand | 179,453,322 | 7,559 | - | 80,083,766 | - | - | - | 99,361,997 | - | - |
| South Korean Won | 299,881,266 | 148,435 | - | - | - | - | - | 289,596,337 | 10,136,494 | - |
| Sri Lanka Rupee | 77,772 | - | - | - | - | - | - | 77,772 | - | - |
| Swedish Krona | 183,097,762 | 941,590 | - | 6,746,141 | - | - | - | 175,410,031 | - | - |
| Swiss Franc | 452,524,225 | $(554,368)$ | - | - | - | - | - | 453,078,593 | - | - |
| Thailand Baht | 114,854,510 | 235,533 | - | 13,615,355 | - | - | - | 101,003,622 | - | - |
| Uganda Shilling | 2,158,692 | - | - | 2,158,692 | - | - | - | - | - | - |
| Uruguayan Peso | 3,357,109 | - | - | 3,357,109 | - | - | - | - | - | - |
|  | \$8,565,441,917 | \$18,193,238 | \$378,693 \$ | \$1,330,759,035 | \$49,422,428\$ | $(535,468)$ | \$5,804,842 | \$7,016,249,033 | \$75,561,084 | \$69,609,032 |

## Securities Lending:

Certain of the CIFs engage in securities lending transactions to provide incremental returns. The CIFs are permitted to enter into securities lending transactions pursuant to Section 3-13d of the Connecticut General Statutes and the Custodial Contract. The CIFs' third party securities lending administrator is authorized to lend available securities to authorized broker-dealers and banks subject to a formal loan agreement.

During the period ended June 30, 2015, the Agent lent certain securities and received cash or other collateral as indicated on the Agency Securities Lending Agreement. The Agent did not have the ability to pledge or sell collateral securities delivered therefore absent a borrower default. Borrowers were required to deliver collateral for each loan equal to at least $102 \%$ of the market value of domestic loaned securities or $105 \%$ of the market value of foreign loaned securities.

Pursuant to the Agency Securities Lending Agreement, the Agent has an obligation to indemnify the CIFs in the event any borrower failed to return the loaned securities or pay distributions thereon. There were no such failures by any borrowers to return loaned securities or pay distributions thereon during the fiscal year that resulted in a declaration or notice of default by a borrower. During the fiscal year, the CIFs and the borrowers maintained the right to terminate all securities lending transactions upon notice. The cash collateral received on each loan is eligible for investment in cash, securities guaranteed by the U. S. government or any agency of the U. S. government, securities guaranteed by a sovereign government that participates in the General Arrangements to Borrow (Group of 10 or G10) and rated AA or better, or reverse transactions on an overnight or term basis. On June 30, 2015, the CIFs had no credit risk exposure to borrowers. The fair value of collateral held for the CIFs as of June 30,2015 was $\$ 1,866,831,932$ as cash. The fair value of securities on loan for the CIFs as of June 30,2015 was $\$ 1,825,986,908$ as cash.

Under ordinary circumstances, the net weighted average maturity (weighted average maturity of assets less the weighted average maturities of liabilities) will not exceed 60 days. As of June 30, 2015 the cash collateral investment pool had an average duration of 23.22 days and an average weighted final maturity 44.83 days.

The fair value of collateral held and the fair value of securities on loan including pending loans (to be collateralized) are as follows for the CIFs as of June 30, 2015:

| CIF | Fair Value of <br> Collateral | Fair Value of <br> Securities Lent |
| :--- | ---: | ---: |
| Mutual Equity | $\$ 817,379,529$ | $\$ 797,833,236$ |
| Core Fixed Income | $150,438,378$ | $148,017,151$ |
| Inflation Linked Bond | $154,819,343$ | $152,644,156$ |
| Emerging Market Debt | $45,348,163$ | $44,401,858$ |
| High Yield Investment | $361,558,742$ | $353,551,043$ |
| Developed Market International Stock | $143,911,336$ | $138,984,218$ |
| Emerging Market International Stock | $194,334,023$ | $192,594,566$ |
| Total | $\$ 1,867,789,514$ | $\$ 1,828,026,228$ |
|  |  |  |

Investments made using the cash collateral received from security loans were included in the Statement of Net Position. The fair value of these amounts is as follows:

| CIF | Cash <br> Equivalents |
| :--- | ---: |
| Mutual Equity | $\$ 817,622,135$ |
| Core Fixed Income | $150,483,039$ |
| Inflation Linked Bond | $154,865,295$ |
| Emerging Market Debt | $45,361,628$ |
| High Yield Investment | $361,666,069$ |
| Developed Market International Stock | $142,996,218$ |
| Emerging Market International Stock | $194,391,706$ |
| Total | $\underline{\$ 1,867,386,090}$ |

These investments are held in a separate accounting consisting of individual securities custodied by the Agent in the name of the CIFs. The above total amounts were included on the Statement of Net Position in "Invested Securities Lending Collateral".

## NOTES TO FINANCIAL STATEMENTS (Continued)

## NOTE 3: PURCHASES AND SALES OF INVESTMENT SECURITIES

For the period ended June 30, 2015, the aggregate cost of purchases and proceeds from sales of investment securities were as follows:

| CIF | Purchases | Sales |
| :--- | :---: | ---: |
| Alternative Investment | $\$ 960,387,427$ | $\$ 557,061,996$ |
| Mutual Equity | $3,289,024,562$ | $3,922,545,145$ |
| Core Fixed Income | $9,775,385,853$ | $9,715,433,313$ |
| Inflation Linked Bond | $5,493,538,000$ | $5,345,602,653$ |
| Emerging Market Debt | $1,417,260,893$ | $1,312,122,495$ |
| High Yield Investment | $1,703,737,312$ | $1,403,558,094$ |
| Developed Market International Stock | $3,527,632,658$ | $3,406,521,275$ |
| Emerging Market International Stock | $1,735,199,302$ | $1,681,016,177$ |
| Real Estate | $1,735,175,720$ | $1,449,419,000$ |
| Commercial Mortgage | 44,691 | 81,567 |
| Private Investment | $2,236,097,480$ | $2,397,111,633$ |

The above amounts include the effect of cost adjustments processed during the year.

## NOTE 4: UNREALIZED APPRECIATION AND DEPRECIATION ON INVESTMENTS AND FOREIGN EXCHANGE CONTRACTS

At June 30, 2015, the gross appreciation of investment securities in which there was an excess of fair value over cost, the gross depreciation of investment securities in which there was an excess of cost over fair value and the resulting net appreciation (depreciation) by CIF were as follows:

| CIF | Gross <br> Appreciation | Gross <br> Depreciation | Net Appreciation <br> (Depreciation) |
| :--- | ---: | ---: | :---: |
| Liquidity Investment Fund | $\$ 788,886$ | $\$ 47,063,882$ | $\$(46,274,996)$ |
| Alternative Investment Fund | $195,566,144$ | $2,205,031$ | $193,361,113$ |
| Mutual Equity | $2,358,798,008$ | $159,216,483$ | $2,199,581,525$ |
| Core Fixed Income | $52,421,282$ | $28,579,145$ | $23,842,137$ |
| Inflation Linked Bond | $8,263,865$ | $77,417,047$ | $(69,153,186)$ |
| Emerging Market Debt | $9,095,560$ | $132,438,355$ | $(123,342,795)$ |
| High Yield Investment | $40,282,896$ | $92,344,780$ | $(52,061,884)$ |
| Developed Market International Stock | $1,156,231,527$ | $329,063,478$ | $827,168,049$ |
| Emerging Market International Stock | $398,659,969$ | $249,261,546$ | $149,398,423$ |
| Real Estate | $205,361,358$ | $120,326,498$ | $85,034,860$ |
| Commercial Mortgage | - | 35 | $(35)$ |
| Private Investment Fund | $629,850,506$ | $143,344,878$ | $486,505,628$ |

## NOTE 5: FOREIGN EXCHANGE CONTRACTS

From time to time the Liquidity, Core Fixed Income, Inflation Linked Bond Fund, Emerging Market Debt, High Yield Debt Fund, Developed Market International Stock, Emerging Market International Funds utilize foreign currency contracts to facilitate transactions in foreign securities and to manage the CIFs' currency exposure. Contracts to buy are used to acquire exposure to foreign currencies, while contracts to sell are used to hedge the CIFs' investments against currency fluctuations. Also, a contract to buy or sell can offset a previous contract. Losses may arise from changes in the value of the foreign currency or failure of the counterparties to perform under the contracts' terms.

The U. S. dollar value of forward foreign currency contracts is determined using forward currency exchange rates supplied by a quotation service.

Investing in forward currency contracts may increase the volatility of the CIFs' performance. Price movements of currency contracts are influenced by, among other things, international trade, fiscal, monetary, and exchange control programs and policies; national and international political and economic events; and changes in worldwide interest rates. Governments from time to time intervene in the currency markets with the specific intent of influencing currency prices. Such intervention may cause certain currency prices to move rapidly. Additionally, the currency markets may be particularly sensitive to interest rate fluctuations.

At June 30, 2015, the CIFs had recorded unrealized gains (losses) from open forward currency contracts as follows:

## NOTES TO FINANCIAL STATEMENTS (Continued)

Liquidity Funds:

| Local Currency Name | Value | Unrealized Gain/(Loss) |
| :--- | ---: | ---: |
| Contracts to Buy: |  |  |
| Australian Dollar | $\$ 9,265,679$ | $\$(315,595)$ |
| Brazil Real | $3,529,011$ | $(61,170)$ |
| Canadian Dollar | $12,891,307$ | $(407,716)$ |
| Chilean Peso | $9,093,000$ | $(149,644)$ |
| Chinese R Yuan Hk | $7,030,000$ | 76,730 |
| Chinese Yuan Renminbi | $9,107,000$ | 257,749 |
| Colombian Peso | $3,620,000$ | $(62,322)$ |
| Dominican Rep Peso | $8,101,083$ | 288,212 |
| Egyptian Pound | $2,103,000$ | $(10,500)$ |
| Euro Currency Unit | $20,250,150$ | $(200,833)$ |
| Hungarian Forint | $8,065,653$ | $(69,842)$ |
| Indian Rupee | $13,164,000$ | 55,848 |
| Indonesian Rupiah | $2,731,589$ | $(13,788)$ |
| Japanese Yen | $9,701,044$ | $(187,841)$ |
| Kenyan Shilling | $2,512,000$ | $(32,731)$ |
| Kuwaiti Dinar | $6,344,000$ | $(329,438)$ |
| Malaysian Ringgit | $8,569,123$ | $(14,935)$ |
| Mexican New Peso | 401,446 | $(7,38)$ |
| New Turkish Lira | $8,241,000$ | 73,215 |
| New Zealand Dollar | $8,026,153$ | $(733,007)$ |
| Philippines Peso | $7,611,000$ | $(20,312)$ |
| Polish Zloty | $4,124,000$ | $(56,974)$ |
| Romanian Leu | $2,119,154$ | 37,974 |
| South African Rand | $8,590,926$ | 62,050 |
| Serbian Dinar | $5,890,496$ | 84,325 |
| Singapore Dollar | $4,545,556$ | $(62,544)$ |
| South Korean Won | $8,607,650$ | $(14,462)$ |
| Thailand Baht | $4,022,744$ | $(12,941)$ |
| Uganda Shilling | 10938,797 | $(1,089,442)$ |
| Uruguayan Peso | $1,727,026$ | 4,484 |
| Zambia Kwacha | $6,064,000$ | $(48,782)$ |
|  | $216,987,587$ | $(3,061,590)$ |
|  |  |  |

Contracts to Sell:

| Australian Dollar | $50,453,499$ | $1,330,450$ |
| :--- | ---: | ---: |
| Brazil Real | $34,240,762$ | $1,107,074$ |
| Chinese Yuan Renminbi | $3,300,000$ | $(11,368)$ |
| Dominican Rep Peso | $1,558,480$ | $(3,471)$ |
| Euro Currency Unit | $28,307,675$ | 628,984 |
| Japanese Yen | $38,872,035$ | 595,866 |
| Kenyan Shilling | $1,000,767$ | 2,256 |
| Kuwaiti Dinar | $6,216,043$ | 201,480 |
| Malaysian Ringgit | $15,688,537$ | 664,946 |
| Mexican New Peso | $27,247,753$ | 796,566 |
| New Turkish Lira | $1,205,000$ | $(30,597)$ |
| New Zealand Dollar | $49,692,297$ | $3,926,556$ |
| Norwegian Krone | $5,373,025$ | 202,488 |
| Polish Zloty | $23,107,245$ | 657,111 |
| Pound Sterling | $10,432,411$ | $(123,082)$ |
| Romanian Leu | $4,040,000$ | 7,724 |
| South African Rand | $12,639,905$ | 48,624 |
| Serbian Dinar |  | - |
| Singapore Dollar | $4,521,219$ | 227,615 |
| Uganda Shilling | $8,630,510$ | 38,207 |
|  | $326,527,163$ | 445,042 |
| Total | $\$ 543,514,750$ | $\$ 0,712,471$ |

Financial Statement Amounts:

|  | Receivable | Payable | Net |
| :--- | :---: | ---: | ---: |
| FX Value | $\$ 543,514,750$ | $\$ 543,514,750$ | $\$$ |
| Unrealized Gain/Loss | $(3,061,590)$ | $10,712,471$ | $7,650,881$ |
| Net | $\$ 540,453,160$ | $\$ 532,802,279$ | $\$ 7,650,881$ |

## NOTES TO FINANCIAL STATEMENTS (Continued)

Core Fixed Income Fund:
Local Currency Name $\quad$ Value $\quad$ Unrealized Gain/(Loss) Contracts to Buy:
Euro Currency Unit

| $\$ 26,772$ | $\$(25)$ |
| ---: | ---: |
| 26,772 | $(25)$ |

Contracts to Sell:
Euro Currency Unit
Grand total

| 167,007 | $(5,736)$ |
| ---: | ---: |
| $\$ 193,779$ | $\$(5,761)$ |

Financial Statement Amounts:

|  | Receivable | Payable | Net |
| :--- | ---: | ---: | ---: |
| FX Value | $\$ 193,779$ | $\$ 193,779$ | $\$(576-$ |
| Unrealized Gain/Loss | $(25)$ | $(5,736)$ | $(5761)$ |
| Net | $\$ 193,754$ | $\$ 199,515$ | $\$(5761)$ |

Inflation Linked Bond Fund:

| Local Currency Name | Value | Unrealized Gain/(Loss) |
| :--- | ---: | ---: |
| Contracts to Buy: |  |  |
| Australian Dollar | \$ $, 987,873$ | $\$(11,055)$ |
| Canadian Dollar | $54,135,068$ | $(1,358,208)$ |
| Euro Currency Unit | $9,610,038$ | $(29,987)$ |
| Japanese Yen | $33,158,065$ | $(422,957)$ |
| Malaysian Ringgit | $18,471,390$ | $(782,895)$ |
| Mexican New Peso | $2,480,387$ | $(50,079)$ |
| New Zealand Dollar | $3,019,573$ | $(185,502)$ |
| Norwegian Krone | $35,102,781$ | $(1,322,881)$ |
| Polish Zloty | 613,621 | $(3,060)$ |
| Pound Sterling | $93,847,823$ | $1,49,973$ |
| Swedish Krona | $8,261,030$ | 10,278 |
|  | $265,687,649$ | $(2,736,373)$ |
|  |  |  |


| Contracts to Sell: |  |  |
| :--- | ---: | ---: |
| Australian Dollar | $54,200,912$ | $1,316,798$ |
| Brazil Real | $23,084,771$ | 421,418 |
| Canadian Dollar | $11,351,102$ | 205,410 |
| Danish Krone | 29,919 | $(724)$ |
| Euro Currency Unit | $3,30,967$ | 3,225 |
| Japanese Yen | $4,647,921$ | $(19,810)$ |
| Mexican New Peso | $40,739,014$ | $1,238,090$ |
| New Zealand Dollar | $61,457,428$ | $4,766,747$ |
| Polish Zloty | $15,770,032$ | 377,436 |
| Pound Sterling | $20,630,096$ | $(245,856)$ |
| Swedish Krona | $1,486,901$ | $(64,325)$ |
|  | $236,704,063$ | $7,998,409$ |
| Grand total | $\$ 502,391,712$ | $\$ 5,262,036$ |

Financial Statement Amounts:

|  | Receivable | Payable | Net |
| :---: | :---: | :---: | :---: |
| FX Value | \$ 502,391,712 | \$ 502,391,712 | \$ |
| Unrealized Gain/Loss | $(2,736,373)$ | 7,998,409 | 5,262,036 |
| Net | \$ 499,655,339 | \$ 494,393,303 | \$ 5,262,036 |


| Emerging Market Debt Fund: |  |  |
| :--- | ---: | ---: |
| Local Currency Name | Value | Unrealized Gain/(Loss) |
| Contracts to Buy: |  |  |
| Brazil Real | $\$ 12,409,462$ | $\$ 156,198$ |
| Chilean Peso | $3,907,635$ | $(33,014)$ |
| Colombian Peso | $1,402,799$ | 18,689 |
| Indian Rupee | $2,429,437$ | $(19,087)$ |
| Indonesian Rupiah | 899,000 | $(2,550)$ |
| Philippines Peso | $1,197,298$ | $(14,572)$ |
| Polish Zloty | $17,336,310$ | $(321,834)$ |
| Romanian Leu | $7,649,407$ | $(5,507)$ |
| South African Rand | $1,190,663$ | 25,757 |
|  | $48,422,011$ | $(195,920)$ |

## NOTES TO FINANCIAL STATEMENTS (Continued)

| Contracts to Sell: |  |  |
| :--- | ---: | ---: |
| Brazil Real | $25,775,824$ | 54,074 |
| Colombian Peso | $4,673,216$ | $(62,258)$ |
| Euro Currency Unit | 183,432 | $(4,879)$ |
| Indian Rupee | $2,362,128$ | $(8,222)$ |
| Indonesian Rupiah | $1,324,490$ | $(2,712)$ |
| New Turkish Lira | $4,266,086$ | $(70,719)$ |
| Polish Zloty | $6,237,876$ | 65,498 |
| Pound Sterling | 221,495 | $(7,482)$ |
| Russian Ruble (New) | $6,445,033$ | 231,081 |
|  | $51,489,580$ | 155,381 |
|  | $\$ 99,911,591$ | $\$(40,539)$ |

Financial Statement Amounts:

|  | Receivable | Payable | Net |
| :--- | ---: | ---: | ---: |
| FX Value | $\$ 99,911,591$ | $\$ 99,911,591$ | $\$(40,539)$ |
| Unrealized Gain/Loss | $(195,920)$ | 155,381 | - |
| Net | $\$ 99,715,671$ | $\$ 99,756,210$ | $\$(40,539)$ |

High Yield Debt Fund:

| Local Currency Name | Value | Unrealized Gain/(Loss) |
| :--- | ---: | :---: |
| Contracts to Buy: |  |  |
| Euro Currency Unit | $\$ 1,896,412$ | $\$(21,760)$ |
| Pound Sterling | 172,018 | 1,430 |
|  | $2,068,430$ | $(20,330)$ |

Contracts to Sell:
Euro Currency Unit
Pound Sterling

| $5,565,955$ | $(110,761)$ |
| ---: | ---: |
| $4,867,424$ | $(159,420)$ |
| $10,433,379$ | $(270,181)$ |
| $\$ 12,501,809$ | $\$(290,511)$ |

Financial Statement Amounts:

|  | Receivable | Payable | Net |  |
| :--- | ---: | ---: | ---: | ---: |
| FX Value | $\$ 12,501,809$ | $\$ 12,501,809$ | $\$$ | - |
| Unrealized Gain/Loss | $(20,330)$ | $(270,181)$ | $(290,511)$ |  |
| Net | $\$ 12,481,479$ | $\$ 12,771,990$ | $\$(290,511)$ |  |

## Developed Market International Stock Fund:

| Local Currency Name | Value | Unrealized Gain/(Loss) |
| :--- | ---: | ---: |
| Contracts to Buy: |  |  |
| Australian Dollar | $\$ 466,983,483$ | $\$(623,420)$ |
| Brazil Real | 295,565 | 670 |
| Canadian Dollar | $78,120,229$ | $(267,455)$ |
| Danish Krone | $7,191,329$ | $(115,042)$ |
| Euro Currency Unit | $533,587,607$ | $(5,078,411)$ |
| Hong Kong Dollar | $8,506,836$ | $(13)$ |
| Israeli Shekel | $7,678,098$ | 137,371 |
| Japanese Yen | $361,199,949$ | $5,086,805$ |
| New Zealand Dollar | $167,891,471$ | $(7,137,223)$ |
| Norwegian Krone | $382,179,942$ | $(2,873,549)$ |
| Pound Sterling | $215,203,080$ | $2,007,172$ |
| Singapore Dollar | $327,614,317$ | 990,995 |
| Swedish Krona | $75,418,643$ | $(382,991)$ |
| Swiss Franc | $94,477,569$ | $(62,248)$ |
|  | $2,726,348,118$ | $(8,317,339)$ |
|  |  |  |
| Contracts to Sell: |  |  |
| Australian Dollar | $263,979,284$ | $1,031,342$ |
| Canadian Dollar | $385,555,873$ | 960,619 |
| Danish Krone | $40,609,830$ | 364,614 |
| Euro Currency Unit | $770,542,056$ | $9,125,798$ |
| Hong Kong Dollar | $70,792,325$ | $(2,558)$ |
| Israeli Shekel | $2,616,335$ | $(39,167)$ |
| Japanese Yen | $343,827,602$ | $(4,659,069)$ |
| New Zealand Dollar | $513,304,244$ | $23,930,756$ |
| Norwegian Krone | $85,810,783$ | 552,232 |
| Philippines Peso | 333,337 | $(337)$ |

## NOTES TO FINANCIAL STATEMENTS (Continued)

| Pound Sterling | $1,229,461,899$ | $(27,170,010)$ |
| :--- | ---: | ---: |
| Singapore Dollar | $732,942,390$ | $(4,048,226)$ |
| Swedish Krona | $215,237,585$ | 209,265 |
| Swiss Franc | $345,975,871$ | $1,056,616$ |
|  | Total | $\$ 7,000,989,414$ |

Financial Statement Amounts:

|  | Receivable |  | Payable |  | Net |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FX Value | \$ | 7,727,337,532 | \$ | 7,727,337,532 | \$ | - |
| Unrealized Gain/Loss |  | $(8,317,339)$ |  | 1,311,875 |  | $(7,005,464)$ |
| Net | \$ | 7,719,020,193 | \$ | 7,726,025,657 |  | $(7,005,464)$ |

Emerging Market International Stock Fund:

| Local Currency Name | Value | Unrealized Gain/(Loss) |
| :--- | ---: | :---: |
| Contracts to Buy: |  |  |
| Brazil Real | $\$ 237,924$ | $\$ 538$ |
| Indonesian Rupiah | 276,136 | $(281)$ |
| Philippines Peso | 121,361 | 2 |
| South Korean Won | $1,653,605$ | $(857)$ |
|  | $2,289,026$ | $(598)$ |


| Contracts to Sell: |  |  |
| :--- | ---: | ---: |
| Brazil Real | 191,141 | $(669)$ |
| Hong Kong Dollar | 209,887 | 8 |
| Indonesian Rupiah | 159,265 | 170 |
| Philippines Peso | 6,966 | $(5)$ |
| Singapore Dollar | 2,798 | - |
| South Korean Won | 689,891 | 167 |
| Thailand Baht | 97,619 | $(85)$ |
|  | $1,35,567$ | $(414)$ |
|  | $\$ 3,646,593$ | $(1,012)$ |

Financial Statement Amounts:

|  | Receivable | Payable | Net |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
| FX Value | $\$ 3,646,593$ | $\$ 3,646,593$ | $\$$ |  | - |
| Unrealized Gain/Loss | $(598)$ | $(414)$ |  | $(1,012)$ |  |
| Net | $\$ 3,645,995$ | $\$ 3,647,007$ | $\$$ | $(1,012)$ |  |

The net unrealized gain has been included in the Statement of Changes in Net Assets as a component of Net Change in Unrealized Gain (Loss) on Investments and Foreign Currency.

## NOTE 6: COMMITMENTS

In accordance with the terms of the individual investment agreements, the Private Investment, Real Estate, Alternative Investment Funds, Core Fixed Income Fund and High Yield Investment Fund have outstanding commitments to make additional investments. These commitments will be fulfilled as suitable investment opportunities become available. Commitments at June 30, 2015, were as follows:

|  | Total | $\begin{array}{c}\text { Cumulative } \\ \text { Amounts }\end{array}$ | $\begin{array}{c}\text { Unfunded } \\ \text { Commitment }\end{array}$ |
| :--- | ---: | ---: | ---: |
| CIF | Funded |  |  |$)$

Certain Private Investment Funds allow the General Partner to recycle distributions without a reduction in unfunded commitments and accordingly have no impact upon the above amounts. Capital recycling is a tool frequently used by investment managers to fully invest the committed capital in portfolio investments. Since fees and expenses are a component of a General Partner's total capital commitments, capital recycling generally allows managers to: (i)

## NOTES TO FINANCIAL STATEMENTS (Continued)

mitigate the impact of fees and expenses and (ii) increase the possibility that limited partner capital is invested in portfolio companies. Recycling provisions allow managers to recall capital distributions if certain criteria are met. The use of recycling provisions varies by manager but generally limits capital recycling to a range between 0\% and $20 \%$ of total commitments. As a result the actual commitment could be as much as $120 \%$ of the stated commitment amount.

## NOTE 7: CONTINGENCY

The Office of the Treasurer has worked diligently with other investors and investment partners to recover assets lost due to the malfeasance of others. The Limited Partners of an investment in the Private Investment Fund ("PIF"), received final distribution of a small reserve established when the limited partnership was dissolved. The majority of the proceeds from the aggregate $\$ 6.8$ million settlement were distributed. A liquidating trustee was appointed in 2007 to dissolve the partnership and wind up its business activities. The remaining reserve was scheduled to be distributed, on a pro rata basis, in December 2008. The Limited Partners have received distribution of disgorged assets from the Securities and Exchange Commission ("SEC") arising from the SEC's. Action alleging misappropriation of more than $\$ 9$ million from a private venture capital fund and its investors, including the State of Connecticut's Private Investment Fund. The State of Connecticut received a pro rata distribution of \$179,448.

Additionally, another limited partnership in the PIF invested $\$ 15$ million in a portfolio company that reported double digit revenue growth. In 2005, the General Partner initiated a sales process expecting to realize significant gain. Lack of cooperation from management challenged the sale process, resulting in legal action from the partnership and other investors in the portfolio company to force a sale. This process uncovered serious financial irregularities in the portfolio company, resulting in the removal and criminal investigation of the CEO and other senior managers. The portfolio company is currently in bankruptcy. In July 2008, the Bankruptcy Court approved the portfolio company's

## NOTE 9: COST BASIS OF INVESTMENTS

The aggregate cost values of investments in the Funds are as follows at June 30, 2015:

|  | LIQUIDITY FUND | ALTERNATIVE INVESTMENT FUND | MUTUAL EQUITY FUND | CORE FIXED INCOME FUND | INFLATION LINKED BOND FUND |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Investments in Securities, at Cost |  |  |  |  |  |
| Liquidity Fund | \$ | \$41,865,931 | \$76,954,267 | \$190,192,609 | \$26,730,531 |
| Cash Equivalents | 191,292,119 | - | - | - | 1,656,580 |
| Asset Backed Securities | 135,255,603 | - | - | 56,504,636 | $(425,496)$ |
| Government Securities | 542,095,000 | - | - | 440,621,648 | 1,157,658,832 |
| Government Agency Securities | 202,734,531 | - | - | 514,430,242 | - |
| Mortgage Backed Securities | 909,891,934 | - | - | 288,561,057 | - |
| Corporate Debt | 582,228,122 | - | - | 536,720,272 | 3,897,922 |
| Convertible Securities | - | - | - | - | - |
| Common Stock | - | - | 4,344,017,395 | - | - |
| Preferred Stock | - | - | - | 4,837,988 | - |
| Real Estate Investment Trust | - | - | 158,635,819 | 21,540,037 | - |
| Business Development Corp | - | - | - | - | - |
| Mutual Fund | 158,918,499 | - | 1,145,933 | - | - |
| Limited Liability Corporation | - | - | - | - | - |
| Trusts | - | - | - | - | - |
| Limited Partnerships | - | 1,569,260,702 | 3,693,632 | 550,000,000 | - |
| Partnerships | - | - | - | - | - |
| Annuities | - | - | - | - | - |
| Total Investments in Securities, at cost | \$2,230,237,871 | \$1,611,126,633 | \$ 4,584,447,046 | \$ 2,603,408,489 | \$1,189,518,369 |

## NOTES TO FINANCIAL STATEMENTS (Continued)

plan of liquidation. A liquidation trustee was appointed to oversee further liquidation efforts, including investigation and pursuit of potential litigation claims. The liquidation trustee has filed law suits or arbitration proceedings against certain parties, including the bank that issued the credit facility, the investment bank, an equipment manufacturer, accounting firms, and a law firm, among others. In January 2009, the liquidation trustee entered into a settlement agreement with the General Partner, exchanging mutual releases for the GP, the fund and its investors. Additionally, the settlement agreement provides for a sharing of recovery from further prosecution of the matter, including any settlement reached with the insurance carrier. Recoveries are anticipated to be quite modest, if at all. In 2009, the bank has filed a motion under seal which, if granted, may permit the bank to reduce any liability to the liquidation trustee by the proportionate amount that it can attribute to either the minority shareholders (including the fund). The liquidating trustee has prepared a motion to close out the bankruptcy case, which is scheduled to be heard on November 19, 2015. We have not yet been notified of the court's ruling on said motion.

## NOTE 8: SUBSEQUENT EVENT

The CRPTF has performed an evaluation of subsequent events through December 31, 2015, the date the basic financial statements were available to be issued. No material events were identified.

| EMERGING | HIGH YIELD |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| MARKET DEBT |  |
| FUND |  |



## Investment Section

©

## pension fuids management division

## Division Overview

## Introduction

As principal fiduciary of six state pension funds and nine trust funds, (known collectively as the "Connecticut Retirement Plans and Trust Funds" or "CRPTF"), the Treasurer is responsible for managing $\$ 29.7$ billion of investment assets for retirement plans serving approximately 210,000 state and municipal employees, teachers, retirees and survivorships, as well as trust funds that support academic programs, grants, and initiatives throughout the state.

Prudent investment management requires the proper safeguard of the CRPTF assets to ensure the retirement security of the beneficiaries and to support the spending policies of the trust funds. Funding of the pension benefit liability is dependent upon investment returns, state contributions and the contributions of eligible retirement plan participants. The spending requirements of the trust funds are met through the generation of investment income and capital gains with a focus on the preservation of capital.

The Combined Investment Funds ("CIF") was established pursuant to Connecticut General Statutes Section $3-31 \mathrm{~b}$ as a means to invest pension and other trust fund assets in a variety of investment classes. The CIF is comprised of the following separate pooled investment funds: Liquidity Fund; Mutual Equity Fund; Core Fixed Income Fund; Emerging Market Debt Fund; High Yield Debt Fund; Inflation Linked Bond Fund; Developed Markets International Stock Fund; Emerging Markets International Stock Fund; Real Estate Fund; Commercial Mortgage Fund; Private Investment Fund; and Alternative Investment Fund.

Over the last ten years, the value of the CRPTF's investments under Treasury management has grown from approximately $\$ 21.3$ billion to approximately $\$ 29.7$ billion. The Teachers' Retirement Fund ("TERF"), with approximately $\$ 16.1$ billion of assets under management at June 30, 2015, is the largest participating plan. The State Employees' Retirement Fund ("SERF") and the Connecticut Municipal Employees' Retirement Fund ("CMERF") have approximately $\$ 10.7$ billion and $\$ 2.2$ billion of assets, respectively. For the fiscal year ended June 30, 2015, total investment income (comprised of interest income, dividends, securities lending income, and net realized and unrealized capital gains, net of operating expenses) before allocation of administrative expenses, was approximately $\$ 3.8$ billion (See Figure 1-3).

CRPTF's total investment in the CIF at fair value as of June 30, 2015 was:

| INVESTMENT SUMMARY AT JUNE 30, 2015 |  |  |
| :---: | :---: | :---: |
|  | $\begin{gathered} \text { Fair } \\ \text { Value }{ }^{(1)} \end{gathered}$ | \% of Total Fund Fair Value |
| Liquidity Fund (LF)(2) | \$ 1,282,270,968 | 4.31\% |
| Mutual Equity Fund (MEF) | 6,784,028,571 | 22.80\% |
| Developed Markets International Stock Fund (DMISF) | 5,879,680,883 | 19.76\% |
| Emerging Markets International Stock Fund (EMISF) | 2,463,358,430 | 8.28\% |
| Real Estate Fund (REF) | 1,848,291,148 | 6.21\% |
| Core Fixed Income Fund (CFIF) | 2,627,250,626 | 8.83\% |
| Inflation Linked Bond Fund (ILBF) | 1,120,365,183 | 3.77\% |
| Emerging Market Debt Fund (EMDF) | 1,399,864,819 | 4.70\% |
| High Yield Debt Fund (HYDF) | 1,772,254,243 | 5.96\% |
| Commercial Mortgage Fund (CMF) | 29,799 | 0.00\% |
| Alternative Investment Fund (AIF) | 1,804,487,746 | 6.06\% |
| Private Investment Fund (PIF) | 2,773,374,435 | 9.32\% |
| Total Fund | \$29,755,256,851 | 100.00\% |

(1) Fair Value" includes securities and cash invested in the Liquidity Fund (LF), and excludes receivables (FX contracts, interest, dividends due from brokers, foreign tax, securities lending receivables, reserve for doubtful accounts, invested securities lending collateral and prepaid expenses), payables (FX contracts, due to brokers, income distribution, securities lending collateral and accrued expenses), and cash not invested in the LF.
(2) The fair value of the LF represents the pension and trust assets allocated to the LF (excluding receivables and payables); the LF balances of the other combined investment funds are shown in the fair value of each fund.

## Fund Management

Under the supervision of a Chief Investment Officer, appointed by the Treasurer with the approval of the Investment Advisory Council ("IAC"), Pension Funds Management ("PFM") executes and manages the investment programs of the pension and trust funds with a 15-member professional staff. Internal resources are augmented by several outside consulting firms that provide research and analytical expertise to the Treasurer, the Chief Investment Officer and PFM professionals. During Fiscal Year 2015, The Bank of New York Mellon ("BNY Mellon") served as the custodian of record for the CRPTF, maintaining physical custody of and safeguarding plan assets. BNY MelIon also provided record keeping services under the supervision of PFM, and Deutsche Bank was the provider of Securities Lending services.

The Treasurer employs external money and investment managers to manage the portfolios underlying each CIF. Money and investment managers are selected based upon asset class expertise, investment performance and style. Investment and money managers are expected to comply with the parameters, guidelines, and restrictions set forth in the CRPTF's Investment Policy Statement ("IPS"). As of June 30, 2015, 153 external money and investment managers were employed by the Treasury to invest the pension and trust assets, an increase of 5 managers from June 30, 2014 (See Figure 1-5).

All operating overhead is allocated directly to the earnings of the pension and trust fund assets under management. The Office of the Treasurer manages assets in a cost-effective manner, consistent with the maximization of long-term returns.

## Investment Policy

One of the immutable principles of investment management is that asset allocation decisions are responsible for as much as $90 \%$ of investment returns. In September 2012, the IAC approved the Treasurer's adopted IPS, including the asset allocation plan, which governs the CRPTF investment portfolios and each of the CIF. Subsequently, in December 2012, January 2013, April 2013, and July 2013, the IAC approved the Treasurer’s adopted modifications.

The asset allocation plan is customized for each plan and trust with the main objective being the maximization of investment returns over the long term at an acceptable level of risk, primarily through asset diversification. Risk, in this context, is defined as volatility of investment returns. (See Understanding Investment Performance under Supplemental Information.)

Diversification across asset classes is a critical component in structuring portfolios to maximize return at a given level of risk. In developing an asset allocation strategy, there is thorough analysis of the expected risk/return tradeoffs under different economic scenarios predicated on established correlations of investment returns and the diversification benefits of the available asset classes (i.e., those not restricted by statute).

As shown in Figure 1-4, the number and complexity of asset classes comprising the asset allocation policy have fluctuated during the last ten years. As of June 30, 2015, multiple asset classes were included in the IPS, including global public market equities and fixed income, and alternative investments such as real estate, private investments, hedge fund and real asset investment strategies.

At fiscal year-end, global developed and emerging markets equities (stocks) comprised the largest percentage of the total CRPTF, at approximately $51 \%$. Publicly traded equities have an established record of maximizing investment returns over the long term. Fixed income and alternative investments were also included to enhance portfolio returns during highly inflationary or deflationary environments, to mitigate the effects of volatility in the stock market and to provide current income.

## Asset Classes

To realize the asset allocations set forth in the IPS for each plan and trust, the Treasurer administers the CIF as a series of mutual funds in which the various retirement plans and trusts may invest through the purchase of ownership interests. The asset mix for each of the 15 plans and trusts is established by the Treasurer, with approval of the independent IAC, based upon (1) capital market theory, (2) financial and fiduciary requirements, and (3) liquidity needs. However, there are instances in which the asset mix for a trust is set by the trust's governing document. A broad array of asset classes is considered for inclusion in a potential asset allocation structure. Each asset class
has its own distinct characteristics, as well as expectations for long-term return and risk behavior.
The asset classes which make up the CRPTF's portfolio include:

## Domestic Equity

The Mutual Equity Fund (MEF) assets are allocated across the broad U.S. stock market to ensure diversification by market capitalization and investment style, such as value and growth. The MEF may opportunistically invest up to $30 \%$ of assets to take advantage of shifts in the investment landscape or opportunities that offer diversification and/or risk-return benefits, and may include investments in any market capitalization and/or investment style as well as an allocation to stocks outside the US. As of June 30, 2015, the MEF structure was approximately $82.55 \%$ invested in large-cap stocks, $9.19 \%$ in small/midcap stocks, $8.09 \%$ in all-cap, and $0.17 \%$ in cash equivalents and other net assets. The MEF's ten largest holdings, aggregating $13.52 \%$ of Fund investments, included a variety of blue chip companies and were broadly diversified, with the largest holding of $3.05 \%$ in Apple Inc. Performance of the MEF is measured against the Russell 3000 Index (R3000).

Management of the MEF includes the use of pure indexing, enhanced indexing, active management, and opportunistic strategies executed by external money managers. Index and enhanced index strategies are referred to as passive strategies since their investment portfolios are similar to the index. The goal of enhanced indexing is to generate a return slightly in excess of the selected index. Indexing is particularly appropriate for the "large-cap" segment of the equity markets, which is defined as the securities of the largest capitalized public companies. Given the overall efficiency of the domestic equity market, approximately $83 \%$ of the portfolio is invested in passive strategies. The balance of the portfolio is activity managed, primarily in the less efficient "small- and mid-cap" sectors of the equity markets. Small- and mid-cap securities are issued by companies that are smaller and not as closely monitored, researched or analyzed as the larger capitalization companies. As a result of this relative inefficiency, active money managers have the potential to outperform these markets over the long term, while earning an acceptable level of return per unit of risk.

## International Equity

Exposure to international equities is provided through two funds: the Developed Markets International Stock Fund (DMISF) and the Emerging Markets International Stock Fund (EMISF), each of which has distinct risk/return profiles. Stocks from developed market countries tend to offer lower risk and return potential compared to emerging market securities as a result of generally more stable economic and political environments and the depth and liquidity of their financial markets. The foreign currency exposure in the DMISF is partially hedged back to the U.S. dollar. DMISF and EMISF assets are allocated across foreign markets so that there is diversification by country, sector, capitalization and style, in a mix that is structured to replicate the characteristics of the comparable non-U.S. developed and emerging stock market indices to which each combined investment fund is benchmarked.

External money managers invest DMISF assets primarily in common stocks issued by companies in developed market countries domiciled outside of the U.S. The benchmark for DMISF is the Morgan Stanley Capital International Europe Australasia and Far East Investable Market Index (MSCI EAFE IMI). The DMISF is comprised of passive indexing, core developed markets and opportunistic strategies. As of June 30, 2015, the DMISF structure was approximately 85.30 \% invested in large-cap stocks, $14.43 \%$ in small-cap stocks, and $0.27 \%$ in cash equivalents and other net assets. Mandates for active growth/value and small cap developed market strategies represent roughly $22.03 \%$ and $14.43 \%$ of the DMISF, respectively. The currency exposure of the DMISF investments is managed through a currency hedging overlay strategy.

The EMISF invests primarily in the common stocks of non-U.S. corporations domiciled in countries included in the EMISF benchmark, which is the Morgan Stanley Capital International Emerging Markets Investable Market Index (MSCI EM IMI). EMISF investments are made through portfolios managed by external money managers. The EMISF is invested $100 \%$ in active, unhedged emerging markets strategies.

## Fixed Income Investments

Fixed income assets are diversified across four types of funds: the Core Fixed Income Fund (CFIF), the Inflation Linked Bond Fund (ILBF), the Emerging Markets Debt Fund (EMDF), and the High Yield Debt

Fund (HYDF). Investments in the various fixed income CIF serve to reduce the overall volatility of CRPTF returns under various economic scenarios. Further, the fixed income CIF provide cash flow to the CRPTF in the form of interest and principal payments.

The CFIF consists of externally managed, primarily investment grade, fixed income portfolios that include debt instruments issued by the U.S. Government and its agencies, quasi-government agencies, U.S. corporations and any other public or private U.S. corporation whose debt security is regulated by the Securities and Exchange Commission (including Eurobonds and quasi or sovereign debt). Assets are diversified across sectors, industries, credit quality and duration, and up to $30 \%$ may be opportunistically invested based on changes in the investment landscape that may improve diversification, reduce risk or enhance return. As of June 30, 2015, the CFIF structure approximated 23.00\% invested in treasury/agency securities, $29.40 \%$ in corporate securities, $27.30 \%$ in mortgage-backed securities, $10.80 \%$ in asset-backed securities, and $9.50 \%$ in cash equivalents and other net assets. The benchmark for CFIF is the Barclays U. S. Aggregate Bond Index.

The ILBF consists of externally managed fixed income portfolios containing domestic and foreign developed market sovereign bonds. These government bonds are primarily inflation-linked securities. Inflation linked bonds offer protection against inflation and contribute to overall portfolio diversification. As of June 30, 2015, the ILBF structure was comprised of securities from the following countries or regions: $41.0 \%$ in the U.S., $18.5 \%$ in the U.K., $16.3 \%$ in the Eurozone, $10.2 \%$ in Australia and New Zealand, $4.5 \%$ in Mexico and $9.5 \%$ in other countries and cash equivalents. The benchmark for ILBF is the Barclays World Government Inflation Linked Bond Index.

The EMDF consists of externally managed fixed income portfolios that contain debt instruments issued by governments and companies located in emerging countries as defined by the benchmark and The World Bank. The benchmark for EMDF is the J.P. Morgan Emerging Markets Bond Index Global Diversified/J.P. Morgan Government Bond Index - Emerging Markets Global Diversified (50\%/50\%). As of June 30, 2015, the EMDF structure approximated $32.30 \%$ invested in Latin America, 30.10\% in Europe, 19.20\% in Asia, $7.30 \%$ in Africa, $6.70 \%$ in the Middle East and $4.40 \%$ in cash equivalents and other net assets. The benchmark accounts for U.S. dollar-denominated debt and for debt issued in local currencies. The local currency debt is not hedged as the foreign currency is considered an additional source of alpha.

The HYDF consists of externally managed fixed income portfolios that include debt instruments rated below investment grade by a nationally recognized rating agency service. The assets are diversified by sector, industry, credit quality and duration. The majority of the bonds are U.S. dollar-denominated. As of June 30, 2015, the HYDF structure approximated $94.00 \%$ invested in corporate securities, $1.50 \%$ in treasury securities, and $4.50 \%$ in cash equivalents and other net assets. The benchmark for HYDF is the Citigroup U. S. High Yield Market Capped Index.

## Liquidity Fund

The Liquidity Fund (LF) consists of externally managed fixed income portfolios intended to provide a liquid source of funds for investment operations and earn a return greater than money market instruments, with minimal exposure to risk of principal. The LF structure enables each of the CIF to remain fully invested. While the majority of the LF is invested in money market instruments, there are allocations to intermediate maturities, developed market sovereign bonds and emerging market currencies. As of June 30, 2015, the LF structure approximated $48.10 \%$ invested in money market securities, $34.60 \%$ in short duration bond securities, and $17.30 \%$ in international sovereign bonds and currencies. The benchmark for the LF is the one month London Interbank Offered Rate (LIBOR) Index.

## Real Estate

The Real Estate Fund (REF) is the vehicle by which the CRPTF invests in the real estate asset class and may consist of a number of different investment strategies and investment vehicles, including externally managed commingled funds, open-end funds, separate accounts and/or publicly traded real estate securities. The REF invests in real estate properties and mortgages and is designed to dampen the volatility of overall returns through diversification and to generate attractive risk-adjusted rates of return.

The REF will invest in the following: core strategies; value added strategies (investments involving efforts to increase property value through repositioning, development and redevelopment); opportunistic strategies (strategies that target niche opportunities, market inefficiencies, or special purpose markets); and publicly traded securities (primarily Real Estate Investment Trusts and Real Estate Operating Companies). Leverage at the aggregate of the REF is limited to $60 \%$ of REF's total valuation. These investments also adhere to the Responsible Contractor Policy. As of June 30, 2015, the REF structure was approximately $60.30 \%$ invested in Core, $11.50 \%$ in Value-Added, $21.90 \%$ in Opportunistic and $6.30 \%$ in cash equivalents and other net assets. The benchmark for REF is the National Council of Real Estate Investment Fiduciaries National Property Index (NCREIF-NPI), lagged by one quarter.

## Private Investments

The Private Investment Fund (PIF) is the vehicle used to invest in private equity. PIF investments generally are made in externally managed limited partnerships or through separate accounts that focus on private investments. These vehicles include investments in both venture capital and corporate finance investment strategies. Venture capital typically involves equity capital invested in young or development stage companies, and may include start-up, early, mid or late-stage companies. Corporate finance typically involves equity and debt capital invested in growth, mature or distressed stage companies, often through the financing of acquisitions, spin-offs, mergers or changes in capitalization. As of June 30, 2015, the PIF structure was approximately $76.16 \%$ invested in Corporate Finance, $17.77 \%$ in Venture, and $6.07 \%$ in cash equivalents and other net assets. The benchmark for PIF is the Standard \& Poor's 500 Index (S\&P 500).

## Alternative Investments

The Alternative Investment Fund (AIF) invests in strategies that offer the potential to enhance return and/or reduce risk. The AIF provides a vehicle for investment in portfolio strategies which are not easily classified, categorized, or described in other CIF. Hybrid strategies which contain multiple asset classes are also considered part of the opportunity set. As of June 30, 2015, the AIF structure was approximately 91.89\% invested in Hedge fund of funds, 4.50\% in Real Assets, $1.31 \%$ in Opportunistic, and $2.30 \%$ in cash equivalents and other net assets. AIF's benchmark is the 90 -day Treasury Bill.

## Securities Lending

The CRPTF maintains securities lending program designed to provide incremental risk adjusted returns. This program involves the lending of portfolio securities to broker/dealers in return for payment. Each loan is secured by collateral valued slightly in excess of the market value of the loaned securities. To further mitigate the risks of securities lending transactions, the CRPTF's securities lending bank carefully monitors the credit ratings of each counter-party and overall collateral levels.

Deutsche Bank was responsible for marketing the program, lending the securities, and obtaining adequate collateral during Fiscal Year 2015. As of June 30, 2015, securities with a market value of approximately $\$ 1.83$ billion had been loaned against collateral of approximately $\$ 1.87$ billion. Income generated by securities lending totaled $\$ 13.1$ million for the fiscal year.

## The Year in Review <br> Total Fund Performance

For the fiscal year ending June 30, 2015, the CRPTF achieved an annual total return of $2.79 \%$, net of expenses. The three largest pension plans, the Teachers' Retirement Fund, the State Employees' Retirement Fund and the Connecticut Municipal Employees' Retirement Fund - which represent 98\% of total assets - returned $2.79 \%, 2.84 \%$ and $2.57 \%$, respectively. During the fiscal year, the value of the CRPTF's net position increased from approximately $\$ 29.43$ billion to $\$ 29.65$ billion. The $\$ 220$ million increase was primarily due to an increase in assets from operations of $\$ 3.83$ billion partially offset by net withdrawals of $\$ 3.61$ billion.

Although the first half of the year was generally weak and characterized by periods of volatility, as investors became increasingly concerned that the long period of accommodative monetary policy was about to end, a steady stream of positive data on US economic growth gave investors comfort, particularly in contrast
to weakness in Europe and Asia. By the end of the fiscal year, the US markets had fully recovered and ended the year in positive territory.

The MEF exceeded its benchmark, the Russell 3000, with a fiscal year return of $7.32 \%$. The U.S. equity markets notably outperformed non-US markets as corporate earnings continued to exceed forecasts and as economic data pointed to a healthy but not overheated US economy. The broad Russell 3000 index was up $7.29 \%$ during the fiscal year; within the asset class, small cap stocks outperformed large cap by returning $8.06 \%$ and $7.51 \%$ respectively. In terms of investment style, growth stocks outperformed value stocks across the capitalization spectrum. Most sectors performed well with the exception of energy and materials, which were significantly weighed down by weak commodity prices.

International equity, which is comprised of both DMISF and EMISF, returned 0.67\% and negative 6.93\% respectively. The international developed markets posted weak results in large part due to a surge in the US dollar which overshadowed strong local performance in the Eurozone and in Japan. European markets gave back a portion of their gains toward the end of the year as the Greek debt crisis escalated, leading to speculation that Greece would exit the euro. Approximately half of the foreign currencies in the international equity portfolio are hedged back to the U.S. dollar to dampen the impact of currency volatility. This helped to partially offset the impact of a strong dollar during the year. EMISF portfolio returns trailed its benchmark, the MSCI EM IMI, by 252 basis points. Emerging markets were weaker than developed international markets as falling commodity prices created significant headwinds for energy producing and commodity dependent economies, particularly Russia and Brazil.

Using the Teachers' Retirement Fund as a proxy, the fixed income portfolios (CFIF, ILBF, and HYDF) returned approximately negative $0.05 \%$ for the fiscal year versus the Barclay's Aggregate Index's negative $0.69 \%$. Core fixed income was the fiscal year's strongest performer, led by US agencies and asset-backed securities. Positive performance in the core fixed income markets helped to offset negative performance in high yield, inflation linked, and emerging market debt markets. This is in contrast to the returns for Fiscal Year 2014 in which high yield and emerging market debt outperformed. This demonstrates the role of diversification in helping to provide steady long term returns with reduced volatility.

The Private Investment Fund returned a strong 14.04\% \% for Fiscal Year 2015, outperforming its public market equivalent benchmark, the S\&P 500 return of $7.42 \%$. Fundraising activity remained robust, particularly in US buyout markets and in venture capital. Investment activity continued to increase while purchase prices also rose. Buyout exits and venture-backed IPO activity slowed, however, from prior year's record levels although they still remained strong. The fund continues to evaluate new potential commitments across private equity but did not make any new investments during the fiscal year.

The Real Estate Fund modestly outperformed its NCREIF benchmark, returning 12.93\% versus the NCREIF return of $12.72 \%$, driven by strong performance in open-ended core and core plus funds and new value-added strategies. Over the three and five years, the Real Estate Fund returned $11.28 \%$ and 11.39\%, indicating continued healthy fundamentals and rising property valuations across the market. The fund remains well diversified, with strong income generation versus the current low yield environment, and a lower volatility than the benchmark.

The Alternative Investment Fund, which invests in hedge funds, real assets and other opportunistic investments, returned $3.98 \%$, outperforming its 90 -day T-Bill by 396 basis points. The Alternative Investment Fund was designed to reallocate funds into the most promising, risk adjusted market opportunities. Given the strong equity markets, hedge funds with exposure to equity-related strategies led the market in strong performance while credit and distressed strategies were weighed down by widening credit spreads and weakness in the energy sector.

## 2015 Management Initiatives

The continued implementation in fiscal year 2015 of the CRPTF investment pacing plans established for real estate, alternative investment and private equity opportunities led to five investment commitments totaling $\$ 370$ million awarded to Real Estate Fund managers. Additionally, in the Alternative Investment Fund, $\$ 85$ million was committed to an opportunistic investment focused on energy infrastructure. In fiscal year 2015, Treasurer Nappier presented an in-state opportunistic investment mandate for the Private Investment Fund with a commitment of $\$ 145$ million. The initiative will invest directly in Connecticut
firms, offering capital to both newly formed companies and more mature endeavors, generating positive macro-economic impact on the State of Connecticut. In the CRPTF public market portfolios, investment management services were contracted for the Global Inflation-Linked Bond mandate and, separately, for the Currency Overlay mandate in the Developed Markets International Stock Fund.

During Fiscal Year 2015, three Requests for Proposals were issued for a Private Investment Consultant, Emerging Markets Debt and High Yield Debt managers. At fiscal year end, due diligence continued for the manager searches and a hiring decision for the Private Investment Consultant was pending.

The Connecticut Horizon Fund, created in 2004, is an aggregate of public and private market funds. The CHF is a $\$ 1$ billion fund-of-funds public market program and additionally includes a $\$ 155$ million private equity allocation and a $\$ 170$ million alternative investment allocation designed to provide the Office of the State Treasurer access to a wider number of women-owned, minority-owned, Connecticut-based and emerging firms. In Fiscal Year 2015, public market managers totaled 42 CHF sub-managers; emerging firms represent the largest allocation of total assets at $85 \%$; women-owned firms and minority-owned firms each represent $40 \%$ and Connecticut-based firms at $22 \%$ of total assets. As many investment firms are owned by individuals that represent more than one demographic category, the aggregate percentages exceed $100 \%$. Additionally, there were 19 private equity sub-managers; including 8 minority-owned, 3 emerging strategies, 1 women-owned and 7 Connecticut-based. Finally, there were 24 alternative investment submanagers; the breakdown includes 21 emerging strategies, 14 minority-owned, 7 Connecticut-based and 4 women-owned firms.

Expansion of the diversity of firms with which PFM does business continued during Fiscal Year 2015; overall, 37 minority-owned, women-owned, Connecticut-based and emerging firms, comprised $29 \%$ of the firms doing business with the division. These firms earned fees of $\$ 37.3$ million, representing nearly $37 \%$ of all fees paid by the division.

## Corporate Governance

In conformance with state law, the Treasurer considers the financial implications of a portfolio company's social, economic and environmental corporate governance structure and practices in carrying out her fiduciary responsibility. The primary method the Treasurer's Office utilizes to address corporate governance at companies in which the CRPTF invests is through proxy voting. Publicly traded companies hold annual general meetings at which shareholders vote to approve or reject proposals presented by the company's management or by shareholders on significant transactions or activities at a company. The Treasurer's Office uses comprehensive guidelines approved by the independent Investment Advisory Council when casting thousands of proxy votes at these meetings. The guidelines, available on the Treasury's website, incorporate best practices on corporations' structure, administration, and control to reduce risk and increase opportunities for growth.

In Fiscal Year 2015, the Office of the Treasurer filed shareholder resolutions at 25 companies. It held discussions with corporate leaders of more than 30 companies about shareholder concerns. To support its efforts, the Office worked with a wide cross-section of investors representing public pension funds, investment firms, labor funds, and faith-based investors. Board Diversity was among the key issues of focus for the Office during Fiscal Year 2015. The Treasurer supported, and the CRPTF voted in favor of, shareholder resolutions requesting a report on companies' efforts to increase gender and racial diversity on their board. In September 2015, the Office of the Treasurer and the University of Connecticut also held a Forum, "Women in the Corporate Boardroom: A Business Imperative for AmericanCompanies," where experts discussed how increased representation of women on corporate boards helps create long term shareholder value.

Where appropriate, the Treasurer's Office engages company leadership directly on issues that affect the bottom line through letters, conversations, and by filing shareholder resolutions. It broadly protects shareholder rights by advocating with the Securities and Exchange Commission (SEC), the U.S. Congress and stock exchanges. The Treasurer's Office also asks investment managers with which it does business to respond to a corporate governance questionnaire and will discuss any concerns with such entities.

In the area of climate change and related energy issues, the Office continued to take a leading role in the Investor Network on Climate Risk (INCR). The Treasurer requested that a number of companies take
steps to set greenhouse gas emission goals, target energy use reductions and report to shareholders on progress made on these goals. These measures support a portfolio company's sustainability, which is important to Connecticut as a long-term investor.

The Treasurer's Office is charged with administering three laws which authorize investment restrictions on companies doing business in Northern Ireland, Sudan and Iran. Connecticut's MacBride law, set forth in Section 3-13h of the Connecticut General Statutes, is based on the MacBride Principles, which are a corporate code of conduct for companies doing business in Northern Ireland designed to address religious discrimination in the workplace. During Fiscal Year 2015, no companies were added or removed from the "MacBride Prohibited List." As of the end of Fiscal Year 2015, two companies remain on the MacBride Prohibited List due to their failure to implement the MacBride Principles, and the Treasurer has directed CRPTF's investment managers to refrain from purchasing the following companies: Domino's Pizza, Inc. and Yum Brands.

The Treasurer's Office monitored companies doing business in Sudan pursuant to Section 3-21e of the Connecticut General Statutes. The Sudan law, adopted in 2006, authorizes the Treasurer to engage companies doing business in Sudan and potentially divest holdings in those companies if their business is contributing to the government's perpetuation of genocide in Sudan. As of the end of Fiscal Year 2015, the Office of the Treasurer prohibits direct investment in 22 companies: AviChina Industry \& Technology and subsidiaries Harbin Dongan Auto Engine Co. and Hafei Aviation Industry Co.; Bharat Heavy Electricals Ltd. (BHEL); China North Industries Group and subsidiaries China North Industries Corp. (a.k.a. Norinco), Norinco International Corporation Ltd., Liaoning Huajin Tongda Chemicals Co. Ltd., Sichuan Nitrocell Co. Ltd., China North Optical-Electrical Technology Co. Ltd., and AKM Industrial Co. Ltd.; China Petroleum and Chemical Corp; CNPC (Hong Kong); Dongfeng Motor Corporation; Jiangxi Hongdu Aviation Industry Ltd.; MISC Bhd; Oil and Natural Gas Corp (ONGC); PetroChina Co. Ltd.; Petronas Capital Ltd.; Sinopec Shanghai Petrochemical Corp.; Sudan Telecom (Sudatel); and Wartsila Oyj. The value of CRPTF's combined investments in those companies at the time of divestment was approximately $\$ 15$ million.

Connecticut's Iran law, Connecticut General Statutes Section 3-13g, authorizes the Treasurer to engage with companies doing business in Iran, and potentially divest holdings in such companies if she determines such companies, by their business activities, may be contributing to the Iranian government's development of its nuclear program and its support of global terrorism. As of the end of Fiscal Year 2015, the Office of the Treasurer prohibits direct investment in 14 companies: China National Offshore Oil Corporation and its subsidiaries China Oilfield Services Ltd., China Bluechemical, Offshore Oil Engineering Co., and CNOOC; Daelim Industrial Co. Ltd.; Indian Oil Corporation Ltd. And its subsidiaries IBP Co. Ltd., Chennai Petroleum Corp. Ltd., Lanka loc plc, and Bongaigaon Refinery \& Petrochemicals; Oil India Ltd.; and Petroleos de Venezuela S.A. and its subsidiary Ca La Electricidad de Caracas.

Copies of the Connecticut pension fund's proxy voting policies and a report of proxy votes cast are available for review and download at the Treasury web site: http://www.ott.ct.gov/pension_guidelines.html.

## Asset Recovery and Loss Prevention

The Treasurer's Legal and Compliance Units work to manage risk by limiting opportunities for loss due to the malfeasance of others. Extensive pre-contracting due diligence helps the Office of the Treasurer select the best available vendors and suitable products to meet the needs of the Office. Careful contract negotiation, coupled with periodic review, development and implementation of best practice contract language, helps to ensure clarity with respect to the obligations of the Office of the Treasurer and of the vendors of the Office. The Office maintains regular contact with other similar governmental offices and institutional investors, sharing ideas for enhancement of contract language, frequently sharing advice with counterparts in other states.

The Office of the Treasurer deters malfeasance with its reputation for active and diligent pursuit of all opportunities to recover assets lost due to the misfeasance or malfeasance of others.

The Office of the Treasurer believes that most disputes can be resolved through dialogue designed to clarify misunderstanding. The Office is, however, prepared, when necessary, to pursue judicial solutions where negotiation is unsuccessful. Although very limited as a percentage of all investments, the Office, like all other investors, experiences losses due to corporate malfeasance. In these instances, the Office believes
that litigation managed by investors is more effectively negotiated, efficiently litigated and achieves larger settlements for the benefit of all investors. As such, the Office is committed to taking on its fair share of the management responsibility of such litigation and will consider making application to serve as lead plaintiff in class action litigation where appropriate. From time to time, the Office has used litigation to encourage corporate governance enhancements. Although rare, the Office has filed individual and group actions to pursue specific rights where disputing parties are unwilling or unable to reach an extra-judicial conclusion. Given the challenges arising from the U.S. Supreme Court's 2010 decision in Morrison v. National Australia Bank, the Office has experienced an increase in its participation in group actions as a means of seeking recovery of lost assets. The Office provides leadership nationally in efforts by institutional investors to address Morrison-related matters.

## Class Action Securities Litigation

The Combined Investment Funds recovered $\$ 1.9$ million from class action settlements in the fiscal year ended June 30, 2015. The Office continues to closely monitor opportunities to recover lost assets through participation in class action litigation.

The Office of the Treasurer, as the Trustee for the CRPTF, is currently the lead plaintiff in the matter known as In Re Amgen, Inc. Securities Litigation, filed in the federal district court for the Southern District of California. The court in Amgen approved the class certification motion. Following significant procedural proceedings, including a Supreme Court opinion in favor of the plaintiffs, the matter has been remanded to the trial. The case is scheduled for trial in the Spring of 2016.

## Corporate Governance Related Litigation

Litigation has not been required for corporate governance matters in the 2015 fiscal year. The Office of the Treasurer has focused on engagement of companies to promote good corporate citizenship. The Office is sagacious in its consideration of the merits of litigation.

## Other Litigation

The Office of the Treasurer continues its participation in group action in Belgium adverse Fortis, N.A., France adverse Vivendi, S.A., Japan adverse Olympus and in Texas' state court adverse BP. The Office has evaluated the merits of joining other foreign group action during the fiscal year. Participation in such group action became necessary as the Supreme Court's decision in Morrison foreclosed all other avenues of recovery in matters of securities fraud.

The Office of the Treasurer has received distribution from the Securities and Exchange Commission of amounts disgorged from the Managing Partners and Michael Liberty, allowing for the final distribution of limited remaining assets from an investment in Keystone Venture V L.P.

Figure 1-1
PENSION AND TRUST FUNDS ASSET ALLOCATION
Actual vs. Policy at June 30, 2015

|  | TERF |  |  |  | SERF |  |  |  | CMERF |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Actual | Target Policy | Lower Range | $\begin{aligned} & \hline \text { U Upper } \\ & \text { e Range } \\ & \hline \end{aligned}$ | Actual | Target Lower Policy Range |  | Upper Range | Target Lower UpperActualPolicy Range Range |  |  |  |
| U.S. EQUITY |  |  |  |  |  |  |  |  |  |  |  |  |
| Mutual Equity Fund (MEF) | 23.6\% | 21.0\% | 17.0\% | 25.0\% | 23.4\% | 21.0\% | 17.0\% | 25.0\% | 16.0\% | 16.0\% | 13.0\% | 19.0\% |
| INTERNATIONAL EQUITY |  |  |  |  |  |  |  |  |  |  |  |  |
| Developed Market Intl Stock Fund (DMISF) | ) $20.8 \%$ | 18.0\% | 14.0\% | 22.0\% | 20.4\% | 18.0\% | 14.0\% | 22.0\% | 13.7\% | 14.0\% | 11.0\% | 17.0\% |
| Emerging Market Intl Stock Fund (EMISF) | 8.6\% | 9.0\% | 7.0\% | 11.0\% | 8.5\% | 9.0\% | 7.0\% | 11.0\% | 6.6\% | 7.0\% | 6.0\% | 8.0\% |
| REAL ESTATE |  |  |  |  |  |  |  |  |  |  |  |  |
| Real Estate Fund (REF) | 6.3\% | 7.0\% | 5.0\% | 9.0\% | 5.9\% | 7.0\% | 5.0\% | 9.0\% | 7.3\% | 7.0\% | 5.0\% | 9.0\% |
| FIXED INCOME |  |  |  |  |  |  |  |  |  |  |  |  |
| Core Fixed Income Fund (CFIF) | 7.2\% | 7.0\% | 6.0\% | 8.0\% | 8.8\% | 8.0\% | 6.0\% | 10.0\% | 8.0\% | 8.0\% | 6.0\% | 10.0\% |
| Inflation Linked Bond Fund (ILBF) | 3.0\% | 3.0\% | 2.0\% | 4.0\% | 4.9\% | 5.0\% | 4.0\% | 6.0\% | 4.9\% | 5.0\% | 4.0\% | 6.0\% |
| Emerging Market Debt Fund (EMDF) | ) $4.9 \%$ | 5.0\% | 4.0\% | 6.0\% | 3.9\% | 4.0\% | 3.0\% | 5.0\% | 7.8\% | 8.0\% | 6.0\% | 10.0\% |
| High Yield Debt Fund (HYDF) | 5.3\% | 5.0\% | 4.0\% | 6.0\% | 5.2\% | 5.0\% | 4.0\% | 6.0\% | 13.9\% | 14.0\% | 11.0\% | 17.0\% |
| Liquidity Fund (LF) | 5.1\% | 6.0\% | 5.0\% | 7.0\% | 3.9\% | 4.0\% | 3.0\% | 5.0\% | 2.9\% | 3.0\% | 2.0\% | 4.0\% |
| Commercial Mortgage Fund (CMF) | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% |
| PRIVATE EQUITY |  |  |  |  |  |  |  |  |  |  |  |  |
| Private Investment Fund (PIF) | 9.3\% | 11.0\% | 8.0\% | 14.0\% | 9.2\% | 11.0\% | 8.0\% | 14.0\% | 10.8\% | 10.0\% | 7.0\% | 13.0\% |
| ALTERNATIVE INVESTMENT <br> Alternative Investment Fund (AIF) | 5.9\% | 8.0\% | 6.0\% | 10.0\% | 5.9\% | 8.0\% | 6.0\% | 10.0\% | 8.1\% | 8.0\% | 6.0\% | 10.0\% |
| TOTAL 100 | 100.0\% 1 | 100.0\% |  |  | 100.0\% | 100.0\% |  |  | 100.0\%1 | 100.0\% |  |  |

Figure 1-2
PENSION AND TRUST FUNDS
Growth in Assets (\$ in millions)


TERF - Teachers' Retirement Fund
SERF - State Employees' Retirement Fund
CMERF - Connecticut Municipal Employees' Retirement Fund

Figure 1-3
PENSION AND TRUST FUNDS Investment Returns (\$ in millions)


TERF - Teachers' Retirement Fund
SERF - State Employees' Retirement Fund
CMERF - Connecticut Municipal Employees' Retirement Fund

Figure 1-4
PENSION AND TRUST FUNDS
Asset Class Diversification

(1) Prior to November 1, 2007 CFIF, ILBF EMDF and HYDF were included in a Combined Investment Fund titled Mutual Fixed Income Fund.
(2) Prior to November 1, 2007 DMISF and EMISF were included in a Combined Investment Fund titled International Stock Fund.

Figure 1-5
PENSION AND TRUST FUNDS
Advisor Breakdown

|  | June 30, | June 30, |
| :--- | :---: | :---: |
| Fund | 2015 | 2014 |
| MEF | 6 | 6 |
| DMISF $^{(1)}$ | 9 | 9 |
| EMISF | 3 | 3 |
| PIF | 63 | 65 |
| CFIF | 7 | 7 |
| ILBF | 3 | 2 |
| EMDF | 3 | 4 |
| HYDF | 6 | 6 |
| CMF | 0 | 0 |
| REF | 38 | 33 |
| LF | 6 | 6 |
| AIF | 9 | 7 |
| Total |  |  |
|  | 153 | 148 |

(1) Does not include the Currency Overlay Manager.
(2) Actual total advisors was 144 and 141, respectively when factoring in advisors across multiple funds. Private Investment partnerships with nonmaterial balances are not included.

Figure 1-6
PENSION AND TRUST FUNDS
Annual Returns at June 30, $2015{ }^{(1)}$


Figure 1-7
PENSION AND TRUST FUNDS
Annual Fund Returns vs. Benchmarks at June 30, 2015

(1) Each Plan benchmark composite represents the Plan's policy allocation weights times each investment Fund's return.

## CONNECTICUT STATE TREASURER'S COMBINED INVESTMENT FUNDS

Combined Investment Funds Total Return Analysis (\%)

|  | Fiscal Years Ended June 30, |  |  |  |  | Annualized |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2015 | 2014 | 2013 | 2012 | 2011 | $\begin{gathered} 3 \\ \text { Years } \end{gathered}$ | $\begin{gathered} 5 \\ \text { Years } \end{gathered}$ | $\begin{gathered} 10 \\ \text { Years } \end{gathered}$ |
| (Investment performance is calculated using a time-weighted rate of return based on the market rate of return.) |  |  |  |  |  |  |  |  |
| PLANS |  |  |  |  |  |  |  |  |
| Teachers' Retirement Fund (TERF) | 2.79 | 15.67 | 11.83 | (0.96) | 20.77 | 9.96 | 9.72 | 6.30 |
| TERF Custom Benchmark | 3.20 | 15.25 | 12.05 | 0.97 | 20.65 | 10.03 | 10.17 | 6.37 |
| State Employees' Retirement Fund (SERF) | 2.84 | 15.62 | 11.90 | (0.90) | 21.15 | 9.99 | 9.82 | 6.18 |
| SERF Custom Benchmark | 3.23 | 15.41 | 12.05 | 1.04 | 21.30 | 10.08 | 10.33 | 6.39 |
| Municipal Employees' Retirement Fund (MERF) | 2.57 | 13.58 | 9.60 | 0.47 | 17.87 | 8.48 | 8.62 | 5.96 |
| MERF Custom Benchmark | 2.31 | 14.10 | 10.49 | 2.72 | 18.82 | 8.82 | 9.48 | 6.43 |
| U.S. Stocks |  |  |  |  |  |  |  |  |
| Mutual Equity Fund | 7.32 | 25.28 | 21.15 | 3.38 | 31.92 | 17.66 | 17.30 | 7.49 |
| Russell 3000 Index | 7.29 | 25.22 | 21.46 | 3.84 | 32.37 | 17.73 | 17.54 | 8.15 |
| International Stocks |  |  |  |  |  |  |  |  |
| Developed Markets International Stock Fund | 0.67 | 22.31 | 22.56 | (12.48) | 26.30 | 14.73 | 10.84 | 5.95 |
| MSCI EAFE IMI 50\% Hedged | 3.79 | 21.24 | 21.31 | (11.25) | 23.20 | 15.14 | 10.79 | 6.18 |
| Emerging Markets International Stock Fund | (6.93) | 11.50 | 3.29 | (14.16) | 28.55 | 2.36 | 3.45 | 7.07 |
| MSCI Emerging Market Investable Market Index | (4.41) | 14.31 | 3.66 | (16.29) | 27.53 | 4.24 | 3.87 | 8.40 |
| Equity Commercial Real Estate |  |  |  |  |  |  |  |  |
| Real Estate Fund | 12.93 | 10.66 | 10.26 | 7.19 | 16.12 | 11.28 | 11.39 | 2.37 |
| NCREIF (1 Qtr. Lag) | 12.72 | 11.18 | 10.52 | 13.41 | 16.03 | 11.47 | 12.75 | 8.39 |
| $\underline{\text { U.S. Fixed Income }}$ |  |  |  |  |  |  |  |  |
| Core Fixed Income Fund | 1.85 | 4.28 | (0.24) | 7.63 | 4.49 | 1.96 | 3.61 | 4.31 |
| Barclays Aggregate Bond Index | 1.86 | 4.37 | (0.69) | 7.47 | 3.90 | 1.83 | 3.35 | 4.44 |
| Emerging Market Debt | (7.57) | 6.99 | 1.69 | 4.78 | 16.06 | 0.19 | 4.12 | 6.91 |
| 50\% JP Morgan EMBI/50\% JPM GBI EMBI | (7.72) | 7.61 | 2.82 | 10.90 | 11.74 | 0.70 | 4.82 | 6.48 |
| High Yield Debt | (1.31) | 12.24 | 8.46 | 6.23 | 15.96 | 6.35 | 8.23 | 7.24 |
| Citigroup High Yield Market Capped Index | (0.80) | 11.25 | 9.05 | 7.66 | 15.26 | 6.35 | 8.31 | 7.39 |
| Inflation Linked Bonds | (2.85) | 4.17 | (4.33) | 11.91 | 7.23 | (1.05) | 3.11 | 4.18 |
| BC World Gov't Inflation Linked Bond Index | (3.35) | 9.27 | (1.85) | 11.66 | 7.74 | 0.57 | 4.12 | 4.55 |
| Commercial Mortgage Fund | 0.25 | 10.17 | 0.88 | (6.48) | 4.61 | 3.67 | 1.74 | 4.11 |
| Barclays Aggregate Bond Index | 1.86 | 4.37 | (0.69) | 7.47 | 3.90 | 1.83 | 3.35 | 4.44 |
| Alternative Assets |  |  |  |  |  |  |  |  |
| Private Investment Fund | 14.04 | 16.06 | 9.50 | 5.92 | 19.89 | 13.17 | 12.97 | 10.59 |
| S \& P 500 | 7.42 | 24.61 | 20.60 | 5.45 | 30.69 | 17.31 | 17.34 | 7.89 |
| Liquidity Fund |  |  |  |  |  |  |  |  |
| ${ }^{(1)}$ Liquidity Fund | (1.07) | 0.54 | 0.66 | (0.14) | 1.20 | 0.04 | 0.23 | 1.82 |
| LIBOR 1 Month Index | 0.17 | 0.17 | 0.21 | 0.25 | 0.25 | 0.18 | 0.21 | 1.64 |
| Alternative Investment Fund | 3.98 | 6.63 | 6.39 | (1.62) | N/A | 5.66 | N/A | N/A |
| 90-Day T-Bill | 0.02 | 0.05 | 0.11 | 0.05 | N/A | 0.06 | N/A | N/A |

(1) The Liquidity Fund includes all cash balances, including manager cash. However all fund returns still reflect cash balances.

## Fund Facts at June 30, 2015

Investment Strategy/Goals: The purpose of the Liquidity Fund (LF) is to: (1) provide a liquid source of funds for investment operations and (2) earn a return greater than that of money market investments.

Date of Inception: November 1, 2007
Performance Objective: A net return that matches the benchmark, over rolling 3 to 5 year periods.

Benchmark: One Month London Interbank Offered Rate (LIBOR)

Number of Advisors: 5 external

Total Net Position: \$2,193,554,383

Management Fees: $\$ 4,742,508$

Operating Expenses: \$709,091
Expense Ratio: 0.25\%

## Description of the Fund

The Liquidity Fund is structured into three distinct tiers to balance the need for liquidity with the need for positive investment returns.

1. The first tier is the most active portion of the LF and requires the highest liquidity. Tier I funds are invested in high quality money-market instruments, which are considered the most liquid short-term assets.
2. The second tier slightly extends duration and credit quality for a higher expected return than Tier I. Investments include money market instruments, Government and agency paper and high quality corporate and other short duration fixed income securities.
3. Global exposure in the third tier of the LF provides diversification. Short-to-medium term high quality foreign government bonds are held in this tier, in addition to foreign currencies.

## Portfolio Characteristics

The Liquidity Fund investments include U.S. Treasury and government agency securities, commercial paper, certificates of deposit, repurchase agreements, asset-backed securities, mortgage-backed securities, domestic and foreign corporate bonds, foreign sovereign debt and currencies. (See Figure 2-6.) As of June 30, 2015, the average maturity of the LF was 347 days and the average quality rating was AA-2. (See Figure 2-7.)

## Market Review

The yield curve flattened during fiscal year 2015 with the short end of the curve rising slightly and the longer end falling. After the Federal Reserve Bank ended quantitative easing in the second fiscal quarter, investors anticipated the first interest rate hike only to have market and geopolitical events cause the datadependent Federal Reserve Bank to wait to initiate action. Persistent low inflation and weakness in Europe and Japan, along with plummeting energy prices led to a flight to quality and flattening of the U.S. Treasury yield curve. Corporate and asset-backed securities performed best. Fundamentals for corporate issuers were strong and asset-backed instruments were in demand as a diversifier to corporate bonds, offering high quality yield to investors. Treasury securities remained in high demand as investors sought safety from global market volatility and foreign investors contributed to pushing yields lower. U.S. Treasury bills with maturities less than three months traded barely above 0\% for the entire fiscal year.

## Performance Summary

For the fiscal year ended June 30, 2015, the LF generated a return of $-1.07 \%$, underperforming one month LIBOR's return of 17 basis points. For the three and five year periods ending June 30th, the Fund
returned 4 basis points and 23 basis points, versus 18 basis points and 21 basis points for one month LIBOR. The cumulative total returns of the LF for the three, five and ten year periods were $.11 \%, 1.17 \%$ and 19.75\%. (See Figure 2-9.)

## Risk Profile

Given the LF's investment policies and objectives, the Fund is exposed some risks. Interest rate risk is somewhat mitigated by the Fund's short average maturity and credit risk is moderated by investments being concentrated in high quality. Other potential risks include currency risk, reinvestment risk and inflation risk. Counter party risk is managed by dealing only with reputable, high quality firms.

Figure 2-1

## LIQUIDITY FUND

Ownership Analysis at June 30, 2015 (\$ in millions)


TERF - Teachers' Retirement Fund
SERF - State Employees' Retirement Fund
CMERF - Connecticut Municipal Employees' Retirement Fund CIF - Combined Investment Funds
Figure 2-3

## LIQUIDITY FUND

Security Maturity ${ }^{(1)}$ Analysis at June 30, 2015

(1) Or Interest Rate Reset Period.

Figure 2-2

## LIQUIDITY FUND

Risk Profile at June 30, $2015{ }^{(1)}$

| Relative Volatility | 107.00 |
| :--- | ---: |
| Standard Deviation | 1.07 |
| R2 | 0.05 |
| Beta | 0.08 |
| Alpha | 0.02 |

(1) Based upon returns over the last five years.

Figure 2-4

## LIQUIDITY FUND

Distribution by Security Type at June 30, 2015

(1) Includes Commercial Paper, Certificates of Deposit and Repurchase Agreements.

Figure 2-5
LIQUIDITY FUND
Comprehensive Profile

|  | Number |  | Average | Average |
| :---: | :---: | :---: | :---: | :---: |
| Date | of Issues | Yield ${ }^{(1)}$ | Maturity | Quality |
| 2015 | 742 | $-1.07 \%$ | 347 days | AA-2 |
| 2014 | 767 | $0.54 \%$ | 343 days | AA-2 |
| 2013 | 495 | $0.66 \%$ | 631 days | AA+ |
| 2012 | 329 | $-0.14 \%$ | 482 days | AA-2 |
| 2011 | 337 | $1.20 \%$ | 321 days | AA-1 |
| 2010 | 244 | $0.98 \%$ | 202 days | AA-1 |
| 2009 | 162 | $1.54 \%$ | 36 days | AA-2 |
| 2008 | 71 | $4.59 \%$ | 39 days | $\mathrm{A}-1+/ A A+$ |
| 2007 | 97 | $5.61 \%$ | 87 days | $\mathrm{A}-1+/ A A+$ |
| 2006 | 69 | $4.51 \%$ | 54 days | $\mathrm{A}-1+/ A A+$ |

(1) Represents annual total return of the Fund for year ended June 30.

Figure 2-7

## LIQUIDITY FUND

Annual Total Return


Figure 2-9
LIQUIDITY FUND
Investment Advisors at June 30, 2015

| Investment Advisor | Net Asset <br> Value | Fund of |
| :--- | ---: | ---: |
| State Street Global Advisors | $988,662,597$ | $45.07 \%$ |
| Payden \& Rygel | $405,745,556$ | $18.50 \%$ |
| PIMCO | $295,470,927$ | $13.47 \%$ |
| Ambassador Capital Management | 539,753 | $0.02 \%$ |
| Lazard | $200,650,000$ | $9.15 \%$ |
| Colchester Global Investors Ltd. | $302,485,550$ | $13.79 \%$ |
| Total LF | $\mathbf{2 , 1 9 3 , 5 5 4 , 3 8 3}$ | $\mathbf{1 0 0 . 0 0 \%}$ |
|  |  |  |

Figure 2-6

| LIQUIDITY FUND <br> Periods ending June 30, 2015 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 1 YR | 3 YRS | 5 YRS | 10 YRS |
| Compounded, Annual Total Return (\%) |  |  |  |  |
| LF | -1.07 | 0.04 | 0.23 | 1.82 |
| LIBOR 1 MONTH INDEX | 0.17 | 0.18 | 0.21 | 1.64 |
| CPI-URBAN | 0.12 | 1.31 | 1.83 | 2.07 |
| Cumulative Total Return (\%) |  |  |  |  |
| LF | -1.07 | 0.11 | 1.17 | 19.75 |
| LIBOR 1 MONTH INDEX | 0.17 | 0.55 | 1.05 | 17.69 |
| CPI-URBAN | 0.12 | 3.99 | 9.48 | 22.69 |

Figure 2-8

## LIQUIDITY FUND

Investment Advisor Tiers at June 30, 2015

| Investments | Net Asset <br> Value | \% of <br> Fund |
| :--- | ---: | ---: |
| Tier I | $\$ 988,662,598$ | $45.07 \%$ |
| Tier II | $701,756,235$ | $31.99 \%$ |
| Tier III | $503,135,550$ | $22.94 \%$ |
| Total LF | $\mathbf{\$ 2 , 1 9 3 , 5 5 4 , 3 8 3}$ | $\mathbf{1 0 0 . 0 0 \%}$ |

Figure 2-10

| LIQUIDITY FUND <br> Ten Largest Holdings* at June 30, 2015 |  |  |
| :---: | :---: | :---: |
| Security Name Maturity Date | Market Value | \% |
| BNP PARIBAS CAT 1 REPO 7/01/2015 | 70,000,000 | 3.21\% |
| M L (COR) REPO REPO 7/01/2015 | 35,951,000 | 1.65\% |
| BANK OF AMERICA N/A 7/20/2015 | 35,000,665 | 1.60\% |
| CAISSE DES DEPOTS DISC 7/31/2015 | 34,973,906 | 1.60\% |
| CITIBANK NA REPO 7/01/2015 | 34,000,000 | 1.56\% |
| FEDERAL HOME LN BK CONS DISC 7/06/2015 | 32,597,256 | 1.49\% |
| US TREASURY NOTE 4/30/2017 | 30,150,442 | 1.38\% |
| BNP PARIBAS NY BRH INSTL C/D 9/14/2015 | 30,000,000 | 1.37\% |
| CREDIT AGRICOLE CORP INSTL C/D 7/01/2015 | 30,000,000 | 1.37\% |
| US TREASURY NOTE 2/15/2018 | 28,986,860 | 1.33\% |
| Top Ten | 361,660,129 | 16.56\% |

[^0]
## alternative-investment fund


#### Abstract

Fund Facts at June 30, 2015 Investment Strategy/Goals: The purpose of the Alternative Investment Fund (AIF) is to invest CRPTF assets in investment strategies that offer the potential to enhance overall portfolio expected returns, reduce risk, or a combination of both in a variety of market conditions. Additionally, the AIF is expected to provide diversification benefits and a degree of inflation protection. The AIF serves as a vehicle for strategies that are not easily classified, categorized, or described in the other Combined Investment Funds. Hybrid strategies that cut across multiple asset classes are also considered part of the opportunity set.


Date of Inception: February 1, 2011
Performance Objective: To outperform the 90 day T-Bill Rate ("T-Bills") by 300 basis points net of all expenses.

Benchmark: 90 Day T-Bills
Number of Partnerships: 9 external

Total Net Position: $\$ 1,804,434,443$
Expensed Management Fees: $\$ 0$
Capitalized and Netted Fees: $\$ 7,875,805$

Operating Expenses: \$1,215,294
Expense Ratio: 0.08\%

## Description of the Fund

The AIF represents a unique investment exposure that differs from traditional, long-only funds. The strategies employed within the AIF represent a broad set of investment styles, mandates and products that focus primarily on the liquid equity, fixed income and derivatives markets, and may also include allocations to non-traditional investments, including illiquid securities and investments. AIF strategies may target absolute returns without reference to a traditional benchmark using a wide range of investment tools such as short-selling, leverage, derivatives and complex securities.

The AIF may invest in strategies that do not fit the constraints of existing Combined Investment Funds. Such strategies could include, but are not limited to, absolute return strategies, managed futures strategies, commodities, real assets and other alternative asset strategies.

The AIF mandate will be executed through external investment advisors and money managers who actively manage a fund of funds portfolio or through direct investments in single manager funds.

## Portfolio Characteristics

As of June 30, 2015, the AIF was invested in six absolute return oriented fund of hedge funds, including two fund of funds participating in the Connecticut Horizon Fund program, with a combined market value of $\$ 1.66$ billion. The portfolio also includes two real asset oriented private equity style funds which invest in energy infrastructure with a combined market value of $\$ 101.23$ million and European distressed credit partnership with a market value of $\$ 21$ million.

## Market Review

Fiscal year 2015 was a year dominated by macroeconomic forces, notably the decline in energy prices as oil fell over $40 \%$, from $\$ 97$ to $\$ 57$ during the period, and as natural gas fell over $30 \%$, from $\$ 4.11$ to $\$ 2.78$. At the same time, concerns over weakening global economic growth weighed on markets in the second half of the year, particularly following slower manufacturing output out of China and rumors of a Greek exit from the euro as the country struggled to meet its creditor obligations. In addition, global geopolitical risks edged higher following Russian intervention in Crimea and the Ukraine, which let to US sanctions and contributed to overall market uncertainty. Despite volatility during the period, markets generally stayed in positive territory, led by the US equity market and buoyed by a continued accommodative monetary policy at the US Federal Reserve.

During the year, hedge fund strategies generated modest returns, led by equity long/short managers with exposure to strong US equity markets. Structured products, particularly those tied to the mortgage market and asset backed securities, also outperformed. Credit and distressed categories lagged due to a widening in credit spreads and declines in the high yield market in response to energy sector weakness. Macro strategies were mixed as outperformers generally were long equities and the US dollar while laggards suffered from reduced volatility in foreign exchange and interest rates.

## Performance Summary

For the fiscal year ended June 30, 2015, the AIF generated a return of $3.98 \%$, net of all expenses, which outperformed the 90 -day Treasury Bill return of $0.02 \%$ by 3.96 basis points. As of June 30, 2015, the trailing three-year net annualized return of the AIF was $5.66 \%$. This return outperformed the compounded 90-day Treasury bill return of $0.06 \%$ by 5.60 basis points annually. This performance is relatively short-term, as the portfolio launched in 2011 and has not yet reached its anticipated diversification targets. Fuller evaluation will come with a more seasoned portfolio.

Within the AIF, the fund of hedge funds portfolio gained $4.48 \%$ as of June 30, 2015. The consolidated hedge fund portfolios outperformed their fund of funds peer group (Hedge Fund Research, Inc. Fund of Funds Composite Index) which increased by $3.84 \%$ over the same period. It also significantly outperformed the broader Hedge Fund Research, Inc. Fund Weighted Composite Index, which rose 2.36\%.

## Risk Profile

Given AIF's investment policy and objectives, the Fund is exposed to several forms of risk. These include, but are not limited to, risks attendant with alternative investments, such as management, operations and product risk, overall liquidity risk, leverage, short selling, derivative use, and transparency. Assuming these risks as part of a prudent, total portfolio strategy assists the AIF in achieving its investment objectives.

Figure 3-1


TERF - Teachers' Retirement Fund SERF - State Employees' Retirement Fund CMERF - Connecticut Municipal Employees' Retirement Fund

Figure 3-3
ALTERNATIVE INVESTMENT FUND Annual Total Return


Figure 3-5

| ALTERNATIVE INVESTMENT FUND Investment Advisors at June 30, 2015 |  |  |
| :---: | :---: | :---: |
| Investment Advisor | Net Asset Value | \% of Fund |
| Arclight Energy Partners Fund | \$37,798,741 | 2.10\% |
| Energy Fund XV Limited Partnership | 43,343,847 | 2.40\% |
| Marathon European Credit Opportunity | 23,726,333 | 1.31\% |
| Prudence Crandall I Permal LP | 572,217,624 | 31.71\% |
| Prudence Crandall II Prisma LP | 323,232,586 | 17.91\% |
| Prudence Crandall III Rock Creek LP | 299,120,008 | 16.58\% |
| Prudence Crandall IV K2 LP | 291,741,711 | 16.17\% |
| Thomas Welles Fund II | 86,448,422 | 4.79\% |
| Thomas Welles Fund I | 85,349,111 | 4.73\% |
| Other ${ }^{(3)}$ | 41,456,060 | 2.30\% |
| Total | \$1,804,434,443 | 100.00\% |

(1) Other represents cash equivalents and other net assets.

Figure 3-2

## ALTERNATIVE INVESTMENT FUND

Periods ending June 30, 2015

|  | 1 YR | 3 YRS | 5 YRS | 10 YRS |
| :---: | :---: | :---: | :---: | :---: |
| Compounded, Annual Total Return (\%) |  |  |  |  |
| AIF | 3.98 | 5.66 | - | - |
| 90 Day T-Bill | 0.02 | 0.06 | - | - |
| Cumulative Total Return (\%) |  |  |  |  |
| AIF | 3.98 | 17.95 | - | - |
| 90 Day T-Bill | 0.02 | 0.19 | - | - |

Figure 3-4


Figure 3-6
ALTERNATIVE INVESTMENT FUND
Nine Largest Holdings* at June 30, 2015

| Partnership Name | Type | Market Value |  |
| :--- | :--- | ---: | :--- |
| PC I Permal LP | Hedge F-o-F | $\$ 572,217,624$ | $31.71 \%$ |
| PC II Prisma LP | Hedge F-o-F | $323,232,586$ | $17.91 \%$ |
| PC III Rock Creek LP | Hedge F-o-F | $299,120,008$ | $16.58 \%$ |
| PC IV K2 LP | Hedge F-o-F | $291,741,711$ | $16.17 \%$ |
| Thomas Welles Fund II Hedge F-o-F | $86,448,422$ | $4.79 \%$ |  |
| Thomas Welles Fund I Hedge F-o-F | $85,349,111$ | $4.73 \%$ |  |
| EIG Energy Fund XV LP Real Assets | $43,343,847$ | $2.40 \%$ |  |
| Arclight Energy Prtnrs V Real Assets | $37,798,741$ | $2.10 \%$ |  |
| Marathon Euro Credit OppOpportunistic | $23,726,333$ | $1.31 \%$ |  |
| Top Nine | $\$ 1,762,978,383$ | $\mathbf{9 7 . 7 0 \%}$ |  |

* A complete list of portfolio holdings is available upon request from the Office of the Treasurer, in accordance with the Connecticut Freedom of Information Act.


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#### Abstract

Fund Facts at June 30, 2015 Investment Strategy/Goals: The purpose of the Mutual Equity Fund (MEF) is to 1) achieve a long term, real rate of return significantly above the inflation rate; and 2) provide a source of diversification from other asset classes within the CRPTF during different economic environments.

Date of Inception: July 1, 1972 Performance Objective: A net return that, at a minimum, matches the benchmark over rolling three- to five-year periods.

Benchmark: Russell 3000 Index Number of Advisors: 6

Total Net Position: $\$ 6,770,865,716$ Management Fees: $\$ 13,224,485$

Operating Expenses: $\$ 2,913,720$ Expense Ratio: 0.23\%


## Description of the Fund

The MEF assets are allocated across the US stock market to ensure diversification by market capitalization and investment style, such as value and growth. The MEF may opportunistically invest up to $30 \%$ of assets to take advantage of shifts in the investment landscape or opportunities that offer diversification and/or risk-return benefits, and may include investments in any market capitalization and/or investment style as well as an allocation to stocks outside the US.

## Portfolio Characteristics

The MEF invests primarily in the common stock of US corporations. The largest industry weightings at June 30, 2015 were financials (18.5\%), followed by information technology (17.3\%) and health care ( $15.1 \%$ ) (See Figure 4-3).

The MEF's ten largest holdings, aggregating $13.52 \%$ of Fund investments, included a variety of blue chip companies and were broadly diversified, with the largest holding of $3.05 \%$ in Apple Inc. (See Figure 4-9).

## Market Review

Despite increasing uncertainty over a global economic slowdown, Fiscal Year 2015 was another strong year for US equities although it did not appear to be so promising at the start of the fiscal year. Volatility dominated both the S\&P 500 and the Russell 3000 during the first half of the year as both indexes fell over $7 \%$ from mid-September to mid-October. Much of this was driven by market fears of an economic slowdown as the US Federal Reserve signaled an end to quantitative easing and a potential tightening of monetary policy. Markets bounced back, however, as economic data confirmed a strong and steadily growing US economy that was in sharp contrast to economic weakness in both Europe and Asia. By the end of the fiscal year, global economic data had improved, and US equity markets continued to rise, driven by the Federal Reserve's cautious approach to potential rate rises and a corporate earnings season in which results generally exceeded analyst forecasts.

Performance across the US equity markets was more mixed, however, as large capitalization stocks generally outperformed small cap stocks, with the exception of small cap growth which was the strongest segment of the market. Across the capitalization spectrum, growth stocks outperformed value quite significantly, as measured by the various Russell indices. Based upon the Russell sector indices, the best performing sectors were health care, consumer discretionary, and information technology. Not surprisingly, with the sharp drop in commodity prices, and oil in particular, both the energy and materials sectors were negative for fiscal year 2015. Utilities also underperformed.

## CONNECTICUT STATE TREASURER'S COMBINED INVESTMENT FUNDS

## Performance Summary

For the fiscal year ended June 30, 2015, the MEF generated a return of $7.32 \%$, net of all expenses, which was in line with the Russell 3000 Index return of $7.29 \%$ (See Figure 4-4). As of June 30, 2015, the MEF compounded net annualized total returns, for the trailing three, five and ten year periods were 17.66\%, $17.30 \%$, and $7.49 \%$, respectively. These results slightly underperformed the MEF's benchmark for the time periods listed.

The cumulative returns of the MEF for the three, five, and ten year periods were $62.87 \%, 122.11 \%$, and $105.83 \%$, respectively.

## Risk Profile

Based on returns over the last five years, the Fund has exhibited a similar degree of risk as that of its benchmark, the Russell 3000 Index. With a relative volatility of 1.02 , the MEF's volatility is approximately the same as the market. The Fund's active return, or its excess returns over the last five years, adjusted for risk, has been a negative 0.24 (see Figure 4-2).

Figure 4-1


TERF - Teachers' Retirement Fund
SERF - State Employees' Retirement Fund CMERF - Connecticut Municipal Employees' Retirement Fund

Figure 4-3

## MUTUAL EQUITY FUND

Fiscal 2015 Industrial Sector vs. Index (\%) Based on Investments in Securities, at Value ${ }^{(1)}$

| At 6/30/2015: | MEF <br> \% of Mrkt <br> Value | Russel 3000 <br> \%of Mrkt <br> Value |
| :--- | ---: | ---: |
| Energy | 7.0 | 7.2 |
| Materials | 4.9 | 4.1 |
| Producer Durables | 11.0 | 10.9 |
| Consumer Discretionary | 14.6 | 14.8 |
| Consumer Staples | 7.0 | 7.3 |
| Health Care | 15.1 | 15.1 |
| Financials | 18.5 | 19.7 |
| Information Technology | 17.3 | 16.1 |
| Utilities | 4.6 | 4.8 |
|  | 100.0 | 100.0 |

(1) Excludes the Liquidity Fund.

Figure 4-5

## MUTUAL EQUITY FUND

Annual Total Return


Figure 4-2
MUTUAL EQUITY FUND
Risk Profile at June 30, $2015{ }^{(1)}$

| Relative Volatility | 1.02 |
| :--- | ---: |
| Standard Deviation | 12.56 |
| R2 | 1.00 |
| Beta | 1.01 |
| Alpha | -0.24 |

(1) Based upon returns over the last five years.

Figure 4-4

## MUTUAL EQUITY FUND

Periods ending June 30, 2015


Figure 4-6


Figure 4-7
MUTUAL EQUITY FUND
Comprehensive Profile for the Fiscal Years ending June 30,

|  |  |  |  |  |  |  |  |  |  | 11 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | MEF | Russell | MEF | Russell | MEF | Russell | MEF | Russell | MEF | Russell |
| \# of Issues | 1,807 | 3,000 | 1,806 | 3,000 | 1,721 | 3,000 | 1,629 | 3,000 | 1.665 | 3,000 |
| Cap (\$ Bil) | \$108.1 | \$108.9 | \$102.1 | \$101.7 | \$85.5 | \$85.8 | \$96.9 | \$89.2 | \$81.5 | \$73.2 |
| P/E | 22.0 | 21.7 | 21.2 | 20.8 | 19.3 | 19.2 | 18.0 | 18.3 | 19.4 | 20.2 |
| Div Yield | 1.81\% | 1.93\% | 1.74\% | 1.84\% | 1.90\% | 2.10\% | 1.99\% | 2.05\% | 1.80\% | 1.80\% |
| ROE | 17.7\% | 17.5\% | 16.9\% | 17.0\% | 17.3\% | 17.8\% | 21.1\% | 20.5\% | 18.7\% | 18.2\% |
| P/B | 2.8 | 2.8 | 2.8 | 2.7 | 3.8 | 3.7 | 3.7 | 3.7 | 3.5 | 3.5 |
| Cash \& Equiv. | 1.1\% | 0.0\% | 0.9\% | 0.0\% | 0.8\% | 0.0\% | 0.6\% | 0.0\% | 0.6\% | 0.0\% |
| Source: Custodian Bank |  |  |  |  |  |  |  |  |  |  |

Figure 4-8

| MUTUAL EQUITY FUND |
| :--- |
| Investment Advisors at June 30, 2015 |
|  Net Asset <br> Value \% of <br> Fund <br> Investment Advisor $\mathbf{5 , 5 8 9 , 6 1 3 , 6 9 9}$ $\mathbf{8 2 . 5 5 \%}$ <br> Large Cap $1,810,761,116$ $26.74 \%$ <br> T. Rowe Price Associates $3,778,852,583$ $55.81 \%$ <br> State Street Global Advisors $\mathbf{5 4 7 , 6 2 8 , 5 7 4}$ $\mathbf{8 . 0 9 \%}$ <br> All Cap $283,029,157$ $4.18 \%$ <br> Capital Prospects $264,599,417$ $3.91 \%$ <br> FIS Group, Inc. $\mathbf{6 2 1 , 9 6 4 , 8 1 6}$ $\mathbf{9 . 1 9 \%}$ <br> Small/Mid Cap $345,267,731$ $5.10 \%$ <br> Frontier Capital Mgmt Co $276,697,085$ $4.09 \%$ <br> Bivium $\mathbf{1 1 , 6 5 8 , 6 2 7}$ $\mathbf{0 . 1 7 \%}$ <br> Other ${ }^{\text {(1) }}$ $\mathbf{6 , 7 7 0 , 8 6 5 , 7 1 6}$ $\mathbf{1 0 0 . 0 0 \%}$ <br> TOTAL MEF   |

(1) Other represents cash equivalents and other net assets.

Figure 4-9

| MUTUAL EQUITY FUND <br> Ten Largest Holdings* at June 30, 2015 |  |  |
| :---: | :---: | :---: |
| Security Name S | Sector Market Value | \% |
| Apple Inc In | Information Tech \$207,029,515 | 3.05\% |
| Microsoft Corp In | Information Tech 113,242,322 | 1.67\% |
| Exxon Mobil Corp E | Energy 103,912,474 | 1.53\% |
| JP Morgan Chase \& Co F | Financials 86,529,113 | 1.28\% |
| General Electric Co P | Producer Durables 84,227,431 | 1.24\% |
| Johnson \& Johnson H | Health Care 75,414,840 | 1.11\% |
| Wells Fargo \& Co Fion | Financials 68,547,112 | 1.01\% |
| CitiGroup Inc F | Financials 60,486,585 | 0.89\% |
| Facebook Inc In | Information Tech 59,755,220 | 0.88\% |
| Procter \& Gamble Co | Consumer Staples 57,962,304 | 0.86\% |
| Top Ten | \$917,106,916 | 13.52\% |

* A complete list of portfolio holdings is available upon request from the Office of the Treasurer, in accordance with the Connecticut Freedom of Information Act.


## 2radeet Eome tund

Fund Facts at June 30, 2015<br>Investment Strategy/Goals: The purpose of the Core Fixed Income Fund (CFIF) is to: (1) achieve a long-term real rate of return above the inflation rate; (2) generate a stream of income and (3) provide a source of diversification from other asset classes within the CRPTF during different economic environments.<br>Date of Inception: November 1, 2007<br>Performance Objective: A net return that matches its benchmark, over rolling three- to five-year periods.<br>Benchmark: Barclays U.S. Aggregate Bond Index<br>Number of Advisors: 7 external<br>Total Net Position: $\$ 2,430,967,176$<br>Expensed Management Fees: $\$ 2,986,694$<br>Capitalized and Netted Fees: $\$ 1,877,094$<br>Operating Expenses: \$967,344<br>Expense Ratio: 0.16\%

## Description of the Fund

The CFIF assets are invested across debt instruments issued by the U.S. Government and its agencies, U.S. corporations, Euro bonds, high quality quasi or sovereign debt and any other public or private U.S. regulated debt securities. The CFIF may invest up to $30 \%$ of its assets opportunistically to take advantage of shifts in the investment landscape or opportunities which offer diversification and/or risk-return benefits.

## Portfolio Characteristics

The composition of the CFIF is: corporate bonds $29.4 \%$; mortgage-backed securities $27.3 \%$; U.S. Treasury securities $21.9 \%$; asset-backed securities $10.8 \%$ and Government agency securities $1.1 \%$. The remaining $9.5 \%$ was invested in the Liquidity Fund and other assets, excluding two opportunistic funds. As of June 30, 2015, the CFIF was underweight U.S. Treasury, agency and mortgage-backed securities and overweight corporate bonds and asset-backed securities versus the Barclays U.S. Aggregate Bond Index. (See Figure 5-4.) The duration of the CFIF was 6.15 years compared to its benchmark duration of 5.72 years. (See Figure 5-3.)

## Market Review

Fiscal Year 2015 was a volatile time for fixed income markets, with noticeable changes in the steepness of the yield between the first and second halves of the fiscal year. During the first half of the year, the yield curve flattened significantly. Longer term U.S. interest rates declined in an environment of global rate cuts and increased demand for higher yielding high-quality sovereign bonds by foreign investors. Meanwhile, yields on the shorter end of the yield curve rose in anticipation of interest rate hikes by the Federal Reserve Bank. The crisis in Ukraine, the threat of a Greek exit from the Eurozone, and violence in the Middle East contributed to a reduction in investor risk appetite, and a precipitous decline in oil prices and slower growth in China pushed inflation lower across the globe, stirring up fears of deflation. The European and many Asian central banks eased monetary policies to counteract economic weakness leading the U.S. dollar to appreciate against all currencies. In the final quarter of fiscal year 2015, government bond yields moved sharply higher as economic outlooks brightened in the U.S. and in the Eurozone, global deflation fears eased with a rebound in oil prices, and the Federal Reserve Bank appeared on track to raise rates later in 2015 as part of its plan to normalize interest rates. The U.S. Barclays Aggregate Bond Index returned 1.9\% for fiscal year 2015. U.S. agencies and asset-backed securities outperformed Treasuries, while all other spread sectors underperformed Treasuries.

## Performance Summary

For the fiscal year ended June 30, 2015, the CFIF generated a total return of 1.9\%, net of all expenses, equal to the Barclays U.S. Aggregate Bond Index return of 1.9\%. As of June 30, 2015, the CFIF's compounded net annualized total returns for the trailing three and five year periods were $2.0 \%$ and $3.6 \%$, respectively, outperforming the benchmark over both time periods. (See Figure 5-8.) The cumulative returns for the CFIF for the three and five year periods were $6.0 \%$ and $19.4 \%$, outperforming the Barclays U.S. Aggregate Bond Index that returned $5.6 \%$ and $17.9 \%$, respectively.

## Risk Profile

Given the CFIF's investment policies and objectives, the Fund is exposed to several forms of risk, such as credit default risk, interest rate risk, liquidity risk, inflation risk, reinvestment risk and counter party risk. These risks are monitored on an ongoing basis, and actions are taken to mitigate identified risks. External rating agencies assign credit ratings to individual securities reflecting their views of the underlying firm's credit worthiness or the underlying assets in the case of securitized debt. As of fiscal year end, 53.1\% of the CFIF was rated AAA. (See Figure 5-5.)

Figure 5-1

## CORE FIXED INCOME FUND

Ownership Analysis at June 30, 2015 (\$ in millions)


TERF - Teachers' Retirement Fund
SERF - State Employees' Retirement Fund
CMERF - Connecticut Municipal Employees' Retirement Fund
Figure 5-3

(1) Computed without the effect of Cash and other Net Assets.

Figure 5-5
CORE FIXED INCOME FUND
Distribution by Quality Rating at June 30, 2015
Based on Investments in Securities, at Value

| AAA | $53.1 \%$ |
| :--- | ---: |
| AA-1 to AA3 | $5.8 \%$ |
| A-1 to A-3 | $12.9 \%$ |
| BAA-1 to BAA-3 | $17.0 \%$ |
| Less than BAA-3 $^{\text {Not Rated }}{ }^{1}$ | $0.8 \%$ |
| Total | $10.4 \%$ |

(1) Represents securities for which ratings are unavailable.

Figure 5-2

(1) Based upon returns over the last five years.

Figure 5-4
CORE FIXED INCOME FUND ${ }^{(1)}$
Distribution by Sector at June 30, 2015
Based on Investments in Securities, at Value

|  | CFIF | Barclays <br> Aggregate | Variance |
| :--- | ---: | :---: | ---: |
| Treasury | $21.9 \%$ | $38.7 \%$ | $-16.8 \%$ |
| Agency | $1.1 \%$ | $3.4 \%$ | $-2.3 \%$ |
| Corporate | $29.4 \%$ | $24.3 \%$ | $5.1 \%$ |
| Mortgage-Backed | $27.3 \%$ | $28.1 \%$ | $-0.9 \%$ |
| Asset-Backed | $10.8 \%$ | $0.6 \%$ | $10.3 \%$ |
| Other $^{1}$ | $\underline{9.5 \%}$ | $\underline{4.9 \%}$ | $4.6 \%$ |
| TOTAL $^{\mathbf{1 0 0 . 0 \%}}$ | $\mathbf{1 0 0 . 0 \%}$ |  |  |

(1) Excludes holdings in two opportunistic funds.
(2) Other category includes Liquidity Fund and other assets.

Figure 5-6

## CORE FIXED INCOME FUND

Distribution by Coupon at June 30, 2015
Based on Investments in Securities, at Value

(1) Other category includes other assets

Figure 5-7

## CORE FIXED INCOME FUND

Duration Distribution at June 30, 2015
Based on Investments in Securities, at Value

| $0-3$ Years | $31.3 \%$ |
| :--- | ---: |
| $3-5$ Years | $26.7 \%$ |
| $5-7$ Years | $14.4 \%$ |
| $7-10$ Years | $12.2 \%$ |
| $10+$ Years | $10.6 \%$ |
| Unknown ${ }^{(1)}$ | $\frac{4.8 \%}{100.0 \%}$ |
| Total |  |

Figure 5-9

CORE FIXED INCOME FUND
Annual Total Return


Figure 5-8

| CORE FIXED INCOME FUND <br> Periods ending June 30, 2015 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 1 YR | 3 YRS | 5 YRS | 10 YRS |
| Compounded, Annual Total Return (\%) |  |  |  |  |
| CFIF | 1.85 | 1.96 | 3.61 | 4.31* |
| Barclays Aggregate | 1.86 | 1.83 | 3.35 | 4.44 |
| Cumulative Total Return (\%) |  |  |  |  |
| CFIF | 1.85 | 6.00 | 19.38 | 52.55* |
| Barclays Aggregate | 1.86 | 5.58 | 17.90 | 54.38 |

*Represents historical returns at the portfolio composite level.

Figure 5-10

| CORE FIXED INCOME FUND |  |  |  |
| :--- | :--- | :---: | :---: |
| Investment Advisors at June 30, 2015 |  |  |  |
| Investment Advisor Net Asset $\%$ of <br> Value Fund  <br> State Street Global Advisors $\$ 238,483,565$ $9.81 \%$ <br> BlackRock Financial Mgmt, Inc. $567,938,753$ $23.36 \%$ <br> Wellington $556,246,683$ $22.88 \%$ <br> Conning-Goodwin Capital $352,593,821$ $14.50 \%$ <br> Progress $111,235,351$ $4.58 \%$ <br> Prudence Crandall Fund III Opp. $281,466,396$ $11.58 \%$ <br> Prudence Crandall Fund IV Opp. $282,511,247$ $11.62 \%$ <br> Other ${ }^{(1)}$ $\underline{40,491,360}$ $1.67 \%$ <br> TOTAL CFIF $\mathbf{\$ 2 , 4 3 0 , 9 6 7 , 1 7 6}$ $\mathbf{1 0 0 . 0 0 \%}$ |  |  |  |

(1) Other represents Liquidity Fund, other assets and terminated advisor balances.

Figure 5-11

## CORE FIXED INCOME FUND

Comprehensive Profile
for the Fiscal Year ending June 30,

|  | 2015 |  | 2014 |  | 2013 |  | 2012 |  | 2011 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | CFIF | BC AGG* | CFIF | BC AGG* | CFIF | BC AGG* | CFIF | BC AGG* | CFIF | LBAI* |
| Number of Issues | 3,448 | 9,496 | 3,080 | 8,818 | 3,227 | 8,382 | 3,732 | 7,664 | 3,661 | 7,627 |
| Average Coupon | 3.54\% | 3.31\% | 3.47\% | 3.41\% | 3.60\% | 3.50\% | 4.20\% | 3.90\% | 4.50\% | 4.30\% |
| Yield Maturity | 2.59\% | 2.29\% | 2.31\% | 2.10\% | 2.30\% | 2.30\% | 2.20\% | 1.80\% | 3.10\% | 2.80\% |
| Average Maturity | 8.73 | 7.57 | 8.05 | 7.29 | 7.20 | 6.90 | 7.10 | 6.70 | 7.10 | 7.00 |
| Modified Duration | 6.15 | 5.72 | 5.85 | 5.58 | 5.50 | 5.20 | 4.90 | 4.60 | 5.10 | 4.90 |
| Average Quality | AA-2 | AA-2 | AA-2 | AA-2 | AA-2 | AA-2 | AA-2 | AA-1 | AA-1 | AAA |
| Liquidity Fund* | 7.2\% | 0.0\% | 6.5\% | 0.0\% | 8.4\% | 0.0\% | 7.4\% | 0.0\% | 9.6\% | 0.00\% |

* Note: Index changed from LBAI to Barclays Aggregate

Figure 5-12

## CORE FIXED INCOME FUND

Ten Largest Holdings* at June 30, 2015

| Security Name | Maturity | Market <br> Value | $\%$ |
| :--- | :--- | :--- | :--- |
| FNMA TBA | $7 / 1 / 2045$ | $66,315,893$ | $2.52 \%$ |
| FNMA TBA | $7 / 1 / 2045$ | $29,294,622$ | $1.12 \%$ |
| U S TREASURY NOTE | $6 / 30 / 2022$ | $19,808,240$ | $0.75 \%$ |
| U S TREASURY BOND | $5 / 15 / 2045$ | $17,979,080$ | $0.68 \%$ |
| US TREAS-CPI INFLAT | $1 / 15 / 2025$ | $17,708,833$ | $0.67 \%$ |
| US TREAS-CPI INFLAT | $7 / 15 / 2024$ | $17,548,720$ | $0.67 \%$ |
| U S TREASURY NOTE | $5 / 31 / 2022$ | $17,488,873$ | $0.67 \%$ |
| U S TREASURY NOTE | $6 / 30 / 2017$ | $14,184,466$ | $0.54 \%$ |
| FNMA TBA | $7 / 1 / 2045$ | $14,162,279$ | $0.54 \%$ |
| U S TREASURY BOND | $11 / 15 / 2027$ | $12,343,855$ | $0.47 \%$ |
| Top Ten |  | $\mathbf{2 2 6 , 8 3 4 , 8 6 1}$ | $\mathbf{8 . 6 3 \%}$ |

[^1]Figure 5-13

| CORE FIXED INCOME FUND <br> Quarterly Current Yield ${ }^{(1)}$ vs. Indices (\%) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 6/30/15 | 3/31/15 | 12/31/14 | 9/30/14 | 6/30/14 |
| CORE FIXED INCOME | 3.40 | 3.48 | 3.39 | 3.42 | 3.27 |
| Barclays Aggregate | 3.09 | 3.03 | 3.08 | 3.13 | 3.12 |
| Citigroup 3 Month T-Bill | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Barclays Treasury | 2.01 | 1.97 | 1.98 | 2.02 | 1.98 |
| Barclays Agency | 2.30 | 2.31 | 2.36 | 2.37 | 2.34 |
| Barclays Mortgage | 3.58 | 3.56 | 3.60 | 3.66 | 3.64 |
| Barclays Corporate | 4.02 | 3.89 | 3.99 | 4.03 | 4.01 |
| Barclays Asset Backed | 1.83 | 1.80 | 1.82 | 1.81 | 1.79 |

(1) Current Yield represents annual coupon interest divided by the market value of securities.

Fund Facts at June 30, 2015<br>Investment Strategy/Goals: The purpose of the Inflation Linked Bond Fund (ILBF) is to (1) achieve a longterm, real rate of return above the inflation rate; (2) provide protection against rampant inflation; and (3) offer a source of diversification relative to other asset classes within the CRPTF during different economic environments.<br>Date of Inception: November 1, 2007<br>Performance Objective: A net return, which matches the benchmark, over rolling three-to five-year periods.<br>Benchmark: Barclays World Government Inflation-Linked Bond Index<br>Number of Advisors: 3 external<br>Total Net Position: \$1,130,779,585<br>Management Fees: $\$ 1,847,122$<br>Operating Expenses: $\$ 1,182,417$<br>Expense Ratio: 0.27\%

## Description of the Fund

Inflation-linked bonds are high quality securities issued primarily by governments in their home country currencies. While the benchmark for this Fund is unhedged, investment managers have discretion to hedge foreign currency exposure back to the U.S. dollar. Inflation-linked bonds carry a fixed interest rate and the principal of the bonds is adjusted semi-annually for any rise or decline in the inflation rate. During the second quarter of fiscal year 2015, three firms were hired to invest in global inflation-linked bonds, replacing the firms who previously managed U.S. inflation-linked bonds.

## Portfolio Characteristics

At June 30, 2015, the ILBF was well diversified with 418 issues of inflation-linked and nominal sovereign bonds from nine countries plus the Eurozone. (See Figure 6-3.) The average coupon of this Fund was 2.08\% compared to $1.35 \%$ for the benchmark. Duration of the ILBF at 11.32 years was shorter than the 12.07 years of the benchmark. Credit quality of this Fund was AA-2 on June 30, 2015. (See Figure 6-9.)

## Market Review

Global inflation-linked bond markets as represented by the Barclays World Government Inflation-Linked Bond Index declined 3.4\% in U.S. dollar terms, but were up 3.7\% in local currency terms. A primary driver of returns was the divergent monetary policies between the Federal Reserve Bank and the European Central Bank and other central banks of commodity-driven economies. The U.S. dollar appreciated nearly $20 \%$ on a trade-weighted basis, which had a negative impact on unhedged benchmark returns for U.S. investors. Real yield curves flattened during the fiscal year, leading to outperformance of longer maturity bonds over short-dated issues. While there was a decline in inflation expectations in the U.S. and the U.K., increased demand for inflation-linked exchange traded funds and ultra-long U.K. linkers helped offset the impact of lower inflation outlooks. Finally, Italian and Spanish inflation-linked bonds entered the benchmark during the fiscal year, enhancing country diversification within the index as well as increasing the yield.

## Performance Summary

For the fiscal year ended June 30, 2015 the ILBF outperformed the Barclays World Government InflationLinked Bond Index by 50 basis points, generating a $-2.85 \%$ net return compared to a $-3.35 \%$ return for the benchmark. During the three and five year periods ending June 30th, assets were invested primarily in U.S.

## CONNECTICUT STATE TREASURER'S COMBINED INVESTMENT FUNDS

inflation-linked bonds and underperformed when measured against the current global benchmark. Global inflation-linked bond managers were hired in September 2014. The cumulative total returns of the Fund were $-3.13 \%$ over the past three years and $16.57 \%$ for the five year period ending June 30th. (See Figure 6-7.)

## Risk Profile

Given the ILBF's investment policies and objectives, the Fund is exposed to various risks such as interest rate risk, deflation risk, currency risk, geopolitical risk, and credit risk.

Figure 6-1
INFLATION LINKED BOND FUND
Ownership Analysis at June 30, 2015 (\$ in millions)


TERF - Teachers' Retirement Fund
SERF - State Employees' Retirement Fund
CMERF - Connecticut Municipal Employees' Retirement Fund
Figure 6-3
INFLATION LINKED BOND FUND
Distribution by Country at June 30, 2015 Based on Investments in Securities, at Value

|  | BC World Gov't |  |  |
| :--- | ---: | ---: | ---: |
|  | ILBF | Infl Linked | Variance |
| U.S. | $41.0 \%$ | $42.8 \%$ | $-1.8 \%$ |
| U.K. | $18.5 \%$ | $30.5 \%$ | $-12.0 \%$ |
| E.U. Euro Currency | $16.3 \%$ | $20.0 \%$ | $-3.7 \%$ |
| Mexico | $4.5 \%$ | $0.0 \%$ | $4.5 \%$ |
| Brazil | $3.1 \%$ | $0.0 \%$ | $3.1 \%$ |
| Canada | $1.4 \%$ | $2.2 \%$ | $-0.8 \%$ |
| South Africa | $1.3 \%$ | $0.0 \%$ | $1.3 \%$ |
| Poland | $1.3 \%$ | $0.0 \%$ | $1.3 \%$ |
| Australia | $5.0 \%$ | $1.1 \%$ | $3.9 \%$ |
| New Zealand | $5.2 \%$ | $0.3 \%$ | $4.9 \%$ |
| Other | $0.0 \%$ | $3.1 \%$ | $-3.1 \%$ |
| Liquidity Fund | $\mathbf{2 . 4 \%}$ | $\underline{0.0 \%}$ | $2.4 \%$ |
| TOTAL | $\mathbf{1 0 0 . 0 \%}$ | $\mathbf{1 0 0 . 0 \%}$ |  |

Figure 6-5

*Note: Ending weights

Figure 6-2
INFLATION LINKED BOND FUND
Modified Duration vs. Index ${ }^{(1)}$ (in Years)

(1) Computed without the effect of Cash and other Net Assets.

Figure 6-4
INFLATION LINKED BOND FUND
Distribution by Quality Rating at June 30, 2015 Based on Investments in Securities, at Value

| AAA | $50.2 \%$ |
| :--- | ---: |
| AA-1 to AA-3 | $30.0 \%$ |
| A-1 to A-3 | $7.3 \%$ |
| BAA-1 to BAA-3 | $9.5 \%$ |
| Less than BAA-1 | $0.6 \%$ |
| Liquidity Fund $^{(1)}$ | $2.4 \%$ |
|  | $100.0 \%$ |

(1) Represents monies invested in the Cash Equivalents at the end of the quarter.
Figure 6-6

## INFLATION LINKED BOND FUND

Duration Distribution at June 30, 2015
Based on Investments in Securities, at Value

| $\underline{0}-3$ Years | $15.4 \%$ |
| :--- | ---: |
| $3-5$ Years | $13.7 \%$ |
| $5-7$ Years | $9.5 \%$ |
| $7-10$ Years | $26.6 \%$ |
| $10+$ Years | $32.4 \%$ |
| Liquidity Fund ${ }^{(1)}$ | $\underline{2.4 \%}$ |
| Total | $100.0 \%$ |

(1) Represents monies invested in the Cash Equivalents at the end of the quarter.

Figure 6-7

## INFLATION LINKED BOND FUND

Periods ending June 30, 2015

|  | 1 YR | 3 YRS | 5 YRS | 10YRS |
| :--- | :--- | :--- | :--- | :--- |
| Compounded, Annual Total Return (\%) <br> ILBF | -2.85 | -1.05 | 3.11 | $4.18^{*}$ |
| BC World Gov't Infl Linked <br> Bond Index |  |  |  |  |
|  | -3.35 | 0.57 | 4.12 | 4.55 |
| Cumulative Total Return (\%) <br> ILBF | -2.85 | -3.13 | 16.57 | $50.63^{*}$ |
| BC World Gov't Infl Linked <br> Bond Index |  |  |  |  |

(1) The benchmark was changed during Fiscal Year 2013 from BC U.S. Treasury TIPS to BC World Government Inflation Linked Bond Index.

Figure 6-9

Figure 6-8
INFLATION LINKED BOND FUND Annual Total Return

*Note: 2013 Benchmark is BC World Government Inflation Linked Bond Index; prior years the benchmark is BC U.S. Treasury TIPS Index.

INFLATION LINKED BOND FUND
Comprehensive Profile for the Fiscal Year ending June 30,

|  | 2015 |  | 2014 |  | 2013 |  | $\underline{2012}$ |  | 2011 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | ILBF | BC World Gov't Infl | ILBF | BC World Gov't Infl | ILBF | Barclays US TIPS | ILBF | Barclays US TIPS | ILBF | Barclays US TIPS |
| Number of Issues | 418 | 131 | 37 | 35 | 33 | 34 | 29 | 33 | 31 | 31 |
| Average Coupon | 2.08\% | 1.35\% | 1.53\% | 1.22\% | 1.45\% | 1.39\% | 1.69\% | 1.70\% | 1.97\% | 1.99\% |
| Average Maturity | 12.63 | 13.40 | 8.68 | 8.57 | 8.79 | 8.70 | 9.32 | 9.27 | 9.07 | 9.09 |
| Modified Duration | 11.32 | 12.07 | 7.31 | 7.72 | 8.20 | 7.96 | 8.28 | 8.17 | 7.70 | 7.64 |
| Average Quality | AA-2 | AA-1 | AAA | AAA | AAA | AAA | AAA | AAA | AAA | AAA |
| Liquidity Fund ${ }^{(1)}$ | 2.4\% | 0.0\% | 5.6\% | 0.0\% | 3.6\% | 0.0\% | 1.0\% | 0.0\% | 3.9\% | 0.00\% |

(1) Ending Weights

Figure 6-10
INFLATION LINKED BOND FUND
Investment Advisors at June 30, 2015

| Investment Advisor | Net Asset <br> Value | $\%$ of <br> Fund |
| :--- | ---: | ---: |
| BlackRock | $500,347,178$ | $44.25 \%$ |
| Colchester | $490,877,441$ | $43.41 \%$ |
| New Century | $122,033,487$ | $10.79 \%$ |
| Other ${ }^{(1)}$ | $17,521,479$ | $1.55 \%$ |
| TOTAL ILBF | $\mathbf{1 , 1 3 0 , 7 7 9 , 5 8 5}$ | $\mathbf{1 0 0 . 0 0 \%}$ |

(1) Other represents Liquidity Fund, other assets and terminated advisor balances.

Figure 6-11

| INFLATION LINKED BOND FUND <br> Ten Largest Holdings${ }^{(1)}$ at June 30, 2015 |
| :--- | :--- | :--- | :--- |
|   Market  <br> Security Name Maturity Value $\%$ <br> U.S. Treasury Notes $4 / 15 / 2029$ $\$ 60,797,262$ $5.43 \%$ <br> U.S. Treasury Notes $7 / 15 / 2022$ $43,596,349$ $3.89 \%$ <br> U.S. Treasury Notes $1 / 15 / 2027$ $43,092,071$ $3.85 \%$ <br> France Government Bond $7 / 25 / 2040$ $37,258,449$ $3.33 \%$  <br> U.S. Treasury Notes $2 / 15 / 2042$ $37,221,982$ $3.32 \%$ <br> New Zealand Government Bond $9 / 20 / 2030$ $30,905,962$ $2.76 \%$ <br> U.S. Treasury Notes $1 / 15 / 2017$ $29,099,786$ $2.60 \%$ <br> United Kingdom Bond $11 / 22 / 2022$ $26,836,099$ $2.39 \%$ <br> New Zealand Government Bond $9 / 20 / 2025$ $26,229,062$ $2.34 \%$ <br> United Kingdom Bond $11 / 22 / 2027$ $22,710,001$ $2.02 \%$ <br> Top Ten $\$ 357,747,023$ $31.93 \%$     |

(1) A complete list of portfolio holdings is available upon request from the Office of the Treasurer, in accordance with the Connecticut Freedom of Information Act.

## emerging market debt fund

## Fund Facts at June 30, 2015

Investment Strategy/Goals: The purpose of the Emerging Market Debt Fund (EMDF) is to (1) achieve longterm, real rate of return above the inflation rate and (2) provide some diversification relative to other asset classes within CRPTF given the different global economic environments.

Date of Inception: November 1, 2007
Performance Objective: A net return that matches the benchmark, over rolling three- to five-year periods.

Total Net Position: \$1,414,578,861
Management Fees: \$4,292,272
Operating Expenses: \$582,791

Benchmark: J.P. Morgan Emerging Markets Bond Index Global Diversified (JPM EMBI GD) (50\%) J.P. Morgan Government Bond Index Emerging Markets Global Diversified (JPM GBI EM GD) (50\%)

Number of Advisors: 3
Expense Ratio: 0.33\%

## Description of the Fund

The EMDF invests primarily in debt instruments issued by governments and companies operating in developing countries as identified by the benchmark and/or The World Bank. The EMDF is generally weighted $50 \%$ to U.S. dollar-denominated securities and $50 \%$ to securities issued in local currencies. For performance measurement purposes, the dollar-denominated securities are benchmarked to the JPM EMBI GD and the local currency securities are benchmarked to the JPM GBI EM GD.

## Portfolio Characteristics

The EMDF is well diversified with broad geographic and currency exposures. Latin America and Europe have the highest representation while the Middle East and Africa have the lowest exposure, relatively consistent with the benchmark. (See Figure 7-3.) Fifty three percent of the holdings were in U.S. dollardenominated sovereign investments, $30 \%$ were in local currency sovereign securities and $11 \%$ were in U.S. dollar-denominated corporate bonds. The balance included cash and equivalents, local currency corporate bonds and quasi-government issues. The Fund had an overall yield to maturity of $8.54 \%$ compared to the benchmark yield of $6.68 \%$. The average quality of EMDF was BA-1 versus the benchmark average of BAA-2. The duration of the EMDF was 6.17 years versus 5.87 years for the benchmark. (See Figure 7-2.)

## Market Review

The twelve months ended June 30, 2015 was a volatile period for emerging markets in general and a particularly difficult period for emerging local markets. While strong technicals, improved market sentiment stemming from prospective European Central Bank policy actions, and reduced levels of geopolitical risks served as the backdrop to a relatively benign market environment at the beginning of the fiscal year, several vital macro-economic themes dominated the latter half of 2014 and into 2015. The market dynamics produced divergent results across emerging market asset classes as falling core fixed income yield supported returns for hard currency debt, while a strong US dollar and falling oil prices, combined with a continuation of weak global growth outside the US, weighed against returns of local currency bonds and local currencies. The US dollar-denominated emerging market index returned $-1.6 \%$, driven by the underperformance of sub-investment grade issuers, primarily in oil, metals and resources. In local currency markets, total return was starkly different depending on the currency of measurement. The local currency benchmark returned 5.0\%, driven mostly by coupon income, with some principal loss from higher local interest rates. However, in US dollar
terms, the total return was -15.4\% due to the strength of the US dollar and relative weakness of emerging market local currencies. Emerging market corporate debt delivered the best performance at 2.35\%, of the three emerging market asset classes, aided by lower duration and strong demand from investors.

## Performance Summary

For the fiscal year ended June 30 2015, the EMDF generated a return of $-7.57 \%$ net of all expenses, outperforming the benchmark return of $-7.72 \%$ by 15 basis points. As of June 30, 2015, the EMDF compounded net annualized returns for the three and five year periods were $.19 \%$, and $4.12 \%$, respectively, versus $.70 \%$ and $4.82 \%$ for the blended benchmark. (See Figure 7-8.) The cumulative returns of the EMDF for the three and five year periods were $0.58 \%$ and $22.36 \%$, respectively, ecompared to the benchmark returns of $2.11 \%$ and $26.53 \%$. (See Figure 7-7).

## Risk Profile

Given the EMDF's investment policies and objectives, the Fund is exposed to multiple types of risk. These risks include, but are not limited to, credit risk, currency risk, interest rate risk, liquidity risk, inflation risk and geopolitical risk. Over two thirds of the Fund is rated as investment grade.

Figure 7-1


TERF - Teachers' Retirement Fund
SERF - State Employees' Retirement Fund
CMERF - Connecticut Municipal Employees' Retirement Fund
Figure 7-3
EMERGING MARKET DEBT FUND
Distribution by Region at June 30, 2015

|  | JP Morgan |  |  |
| :--- | ---: | :---: | :---: |
|  | EMDF | EMBI | Variance |
| Asia | $19.2 \%$ | $20.0 \%$ | $-0.8 \%$ |
| Africa | $7.3 \%$ | $7.8 \%$ | $-0.5 \%$ |
| Europe | $30.1 \%$ | $33.6 \%$ | $-3.6 \%$ |
| Latin America | $32.3 \%$ | $32.4 \%$ | $-0.1 \%$ |
| Middle East | $6.7 \%$ | $6.2 \%$ | $0.5 \%$ |
| United States ${ }^{(1)}$ | $\underline{4.4 \%}$ | $\underline{0.0 \%}$ | $4.4 \%$ |
| TOTAL | $\mathbf{1 0 0 . 0 \%}$ | $\mathbf{1 0 0 . 0 \%}$ |  |
|  |  |  |  |

(1) Holdings comprised mainly of Liquidity Fund Exposure.

Figure 7-5
EMERGING MARKET DEBT FUND
Distribution by Coupon at June 30, 2015
Based on Investments in Securities, at Value


Figure 7-2

(1) Computed without the effect of Cash and other Net Assets.

Figure 7-4

## EMERGING MARKET DEBT FUND

Distribution by Quality Rating at June 30, 2015
Based on Investments in Securities, at Value

| Aaa | $1.8 \%$ |
| :--- | ---: |
| AA-1 to AA3 | $0.8 \%$ |
| A-1 to A-3 | $13.4 \%$ |
| BAA-1 to BAA3 | $42.6 \%$ |
| Less than BAA-3 | $40.4 \%$ |
| Not Rated1 | $1.0 \%$ |
|  | $100.0 \%$ |

(1) Represents securities for which ratings are unavailable.

Figure 7-6

## EMERGING MARKET DEBT FUND

Duration Distribution at June 30, 2015
Based on Investments in Securities, at Value

| $0-3$ Years | $19.1 \%$ |
| :--- | ---: |
| $3-5$ Years | $23.5 \%$ |
| $5-7$ Years | $24.0 \%$ |
| $7-10$ Years | $12.2 \%$ |
| $10+$ Years | $16.0 \%$ |
| Unknown |  |
| Liquidity Fund | $(2)$ |
| Total | $0.8 \%$ |

(1) Represents securities for which the duration could not be calculated by the custodian.
(2) Represents monies invested in the Liquidity Fund and other net assets at the end of the quarter.

* Includes Liquidity Fund and other assets. Note: Ending weights.

Figure 7-7

| EMERGING MARKET DEBT FUND <br> Periods ending June 30, 2015 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 1 YR | 3 YRS | 5YRS | 10 YRS |
| Compounded, Annual Total Return (\%) |  |  |  |  |
| EMDF | -7.57 | 0.19 | 4.12 | 6.91* |
| 50\% JP Morgan EMBI/ 50\% JPM GBI EMBI |  | 0.70 | 4.82 | 6.48 |
| Cumulative Total Return (\%) |  |  |  |  |
| EMDF | -7.57 | 0.58 | 22.36 | 95.12* |
| 50\% JPM GBI EMBI | -7.72 | 2.11 | 26.53 | 87.28 |

Figure 7-9

(1) Other represents Liquidity Fund, other assets and terminated advisor balances.

Figure 7-8
EMERGING MARKET DEBT FUND Annual Total Return


Figure 7-10
EMERGING MARKET DEBT FUND
Ten Largest Holdings* at June 30, 2015

| Security Name | Maturity |  |  |  | Market <br> Value | $\%$ |
| :--- | :---: | ---: | :---: | :---: | :---: | :---: |
| South Africa Gvmt Bond 12/21/2026 | $14,770,388$ | $1.05 \%$ |  |  |  |  |
| Brazil Notas Do Tesouro | $1 / 1 / 2017$ | $13,368,603$ | $0.95 \%$ |  |  |  |
| Venezuela Gvmt Bond | $2 / 26 / 2016$ | $11,952,533$ | $0.85 \%$ |  |  |  |
| Argentina Gvmt Bond | $4 / 17 / 2017$ | $11,694,548$ | $0.84 \%$ |  |  |  |
| Mexican Bonds | $12 / 5 / 2024$ | $10,646,497$ | $0.76 \%$ |  |  |  |
| Indonesia Treasury Bond 3/15/2029 | $9,428,211$ | $0.67 \%$ |  |  |  |  |
| Malaysia Gvmt Bond | $10 / 31 / 2017$ | $8,979,318$ | $0.64 \%$ |  |  |  |
| Indonesia Treasury Bond 5/15/2022 | $8,893,658$ | $0.64 \%$ |  |  |  |  |
| Indonesia Treasury Bond 3/15/2024 | $8,077,374$ | $0.58 \%$ |  |  |  |  |
| Colombia Gvmt Bond | $6 / 28 / 2027$ | $7,803,986$ | $0.56 \%$ |  |  |  |
| Top Ten |  | $105,615,116$ | $7.54 \%$ |  |  |  |

* A complete list of portfolio holdings is available upon request from the Office of the Treasurer, in accordance with the Connecticut Freedom of Information Act..

Figure 7-11

## EMERGING MARKET DEBT FUND

Comprehensive Profile for the Fiscal Year ending June 30,

|  | 2015 |  | 2014 |  | 2013 |  | 2012 |  | 2011 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | EMDF | EMBI | EMDF | EMBI | EMDF | EMBI | EMDF | EMBI | EMDF | EMBI |
| Number of Issues | 968 | 686 | 880 | 631 | 866 | 368 | 724 | 307 | 656 | 273 |
| Yield to Maturity | 8.54\% | 6.68\% | 5.32\% | 5.86\% | 6.66\% | 5.82\% | 6.57\% | 4.98\% | 6.65\% | 7.36\% |
| Average Maturity | 9.23\% | 9.23\% | 7.57\% | 8.60\% | 10.31\% | 12.52\% | 10.88\% | 12.40\% | 11.05\% | 12.03\% |
| Modified Duration | 6.17 | 5.87 | 5.69 | 5.74 | 6.06 | 7.10 | 7.00 | 7.30 | 7.13 | 6.96 |
| Average Quality | Ba-1 | Baa-2 | Baa-3 | Baa-2 | Baa-2 | Baa-2 | Baa-3 | Baa-2 | Baa-3 | Baa-3 |
| *Other | 4.4\% | 0.0\% | 3.2\% | 0.00\% | 2.0\% | 0.0\% | 4.5\% | 0.0\% | 4.5\% | 0.0\% |

[^2]
## high yield debt fund


#### Abstract

Fund Facts at June 30, 2015 Investment Strategy/Goals: The purpose of the High Yield Debt Fund (HYDF) is to (1) achieve a long-term, real rate of return above the inflation rate; and (2) provide diversification to other asset classes within the CRPTF under different economic environments.


Date of Inception: November 1, 2007
Performance Objective: A net return that matches
its benchmark, over rolling three- to five-year periods.

Benchmark: Citigroup U.S. High Yield Market Capped Index
Number of Advisors: 6 external

Total Net Position: \$1,773,265,680

Management Fees: $\$ 5,034,481$

Operating Expenses: \$720,749
Expense Ratio: 0.34\%

## Description of the Fund

The HYDF invests primarily in debt instruments rated below-investment grade by one or more nationally recognized rating agencies.

## Portfolio Characteristics

The HYDF is well diversified across a range of corporate high yield bonds and bank loans. These securities are predominantly U.S. based. The Fund's average quality rating was B-1 on June 30, 2015, matching the average quality of the benchmark and had a yield to maturity of $6.34 \%$. As of June 30, 2015, the duration of the HYDF was 5.36 years, compared to the benchmark duration of 4.95 years. (See Figure 8-10.)

## Market Review

The High Yield market began the fiscal year with spreads at the tightest levels since 2007 and yields at record lows. The first half of the fiscal year generated losses that were partially recovered during the second half of the year. Macro-economic factors such as the drop in commodity prices, U.S. dollar strength and weak market technicals adversely affected this market. With concerns surrounding slowing economic growth, uncertainty about the timing of the Federal Reserve's initial interest rate increase and ongoing geopolitical risk, investors embraced the highest quality segment of the high yield market. BB-rated bonds earned $1.4 \%$, in sharp contrast to CCC-rated bonds that lost $7.7 \%$ during the same period. Longer maturity bonds were also beneficiaries of a decline in interest rates. Food and drug retailers and restaurants were the best performing sectors. Energy and metals and mining sectors came under significant selling pressure. The trailing one year default rate was $2.0 \%$, well below the $3.9 \%$ long-term average. For the twelve months ending June 30 , 2015, the U.S. high yield bond market declined $.8 \%$.

## Performance Summary

For the fiscal year ended June 30, 2015, the HYDF generated a return of $-1.31 \%$, net of all expenses, versus the Citigroup U.S. High Yield Market Capped Index return of $-.80 \%$. Cumulative net total returns over the three year and five year periods ending June 30 the were $20.27 \%$ and $48.49 \%$, respectively, for the Fund, and $20.30 \%$ and $49.04 \%$, respectively for the benchmark. (See Figure $8-8$. )

## Risk Profile

Given the HYDF's investment policies and objective, the Fund is exposed to several forms of risk. These risks include, but are not limited to, credit default risk, interest rate risk, liquidity risk, pre-payment risk, reinvestment risk and inflation risk. In addition, the Fund is occasionally exposed to political, economic and currency risk resulting from investments in international high yield securities. The average quality of the Fund is $\mathrm{B}-1$, which matches the benchmark.

Figure 8-1

## HIGH YIELD DEBT FUND

Ownership Analysis at June 30, 2015 (\$ in millions)


TERF - Teachers' Retirement Fund
SERF - State Employees' Retirement Fund
CMERF - Connecticut Municipal Employees' Retirement Fund
Figure 8-3
HIGH YIELD DEBT FUND
Modified Duration vs. Index ${ }^{(1)}$ (in Years)

(1) Computed without the effect of Cash and other Net Assets.

Figure 8-2

(1) Based upon returns over the last five years.

Figure 8-4

## HIGH YIELD DEBT FUND

Distribution by Sector at June 30, 2015
Based on Investments in Securities, at Value

|  | HYDF | Citigroup | Variance |
| :--- | ---: | ---: | ---: |
| Treasury | $1.5 \%$ | $0.0 \%$ | $1.5 \%$ |
| Agency | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ |
| Corporate | $94.0 \%$ | $100.0 \%$ | $-6.0 \%$ |
| Mortgage-Backed | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ |
| Asset-Backed | $0.0 \%$ | $0.0 \%$ | $0.0 \%$ |
| Other $^{1}$ | $\underline{4.5 \%}$ | $\underline{0.0 \%}$ | $4.5 \%$ |
| TOTAL $^{100.0 \%}$ | $100.0 \%$ |  |  |

(1) Other category includes non fixed-income securities such as common and preferred stock and convertible securities, Real Estate Investment Trust, Business Development Corporation, Liquidity Fund and other net assets.

Figure 8-5

## HIGH YIELD DEBT FUND

Distribution by Quality Rating at June 30, 2015
Based on Investments in Securities, at Value

| AAA to A3 | $1.3 \%$ |
| :--- | ---: |
| BAA1 to BAA3 | $3.2 \%$ |
| BA1 to BA3 | $29.5 \%$ |
| B1 to B3 | $46.0 \%$ |
| CAA1 to CAA3 | $14.4 \%$ |
| CA to C | $0.1 \%$ |
| Not Rated1 | $\frac{5.5 \%}{100.0 \%}$ |
| Total |  |

(1) Represents securities for which ratings are unavailable.

Figure 8-7

## HIGH YIELD DEBT FUND

Duration Distribution at June 30, 2015
Based on Investments in Securities, at Value

| $0-3$ Years | $14.2 \%$ |
| :--- | ---: |
| $3-5$ Years | $35.2 \%$ |
| $5-7$ Years | $26.4 \%$ |
| $7-10$ Years | $8.3 \%$ |
| $10+$ Years | $2.1 \%$ |
| Unknown ${ }^{(1)}$ | $9.2 \%$ |
| Liquidity Fund ${ }^{(2)}$ | $4.6 \%$ |
| Total | $100.0 \%$ |

(1) Represents securities for which the duration could not be calculated by the custodian.
(2) Represents monies invested in the Liquidity Fund at the end of quarter.
Figure 8-9

## HIGH YIELD DEBT FUND

Annual Total Return


Figure 8-6


* Note: Ending weights.

Figure 8-8
HIGH YIELD DEBT FUND
Periods ending June 30, 2015

|  | 1 YR | 3 YRS | 5 YRS | 10 YRS |
| :--- | :--- | :--- | :--- | :--- |
| Compounded, Annual Total Return (\%) <br> HYDF <br> Citigroup High Yield <br> Market Capped Index | -1.31 | 6.35 | 8.23 | $7.24^{*}$ |
| Mumulative Total Return (\%) <br> HYDF <br> Citigroup High Yield <br> Market Capped Index | -1.31 | 20.27 | 48.49 | $101.24^{*}$ |

*Represents historical returns at the portfolio composite level.


Figure 8-10

*Note: Ending Weights

Figure 8-11
HIGH YIELD DEBT FUND
Investment Advisors at June 30, 2015

|  | Net Asset <br> Value | \% of <br> Fund |
| :--- | ---: | ---: |
| Investment Advisor | $\$ 603,811,470$ | $34.05 \%$ |
| Loomis Sayles \& Co., Inc. | $300,166,165$ | $16.93 \%$ |
| Stone Harbor Investment Partners | $422,221,718$ | $23.81 \%$ |
| Shenkman Capital Management | $32,631,552$ | $1.84 \%$ |
| Oaktree Capital Management, L.L.C. $347,995,961$ | $19.62 \%$ |  |
| Carlyle GMS Finance, Inc. | $47,968,916$ | $2.71 \%$ |
| Carlyle NF Investment Corp. | $18,469,898$ | $1.04 \%$ |
| Other ${ }^{(1)}$ | $\mathbf{\$ 1 , 7 7 3 , 2 6 5 , 6 8 0}$ | $\mathbf{1 0 0 . 0 0 \%}$ |
| TOTAL HYDF |  |  |

(1) Other represents Liquidity Fund, other assets and terminated advisor balances.

Figure 8-12

## HIGH YIELD DEBT FUND

Ten Largest Holdings* at June 30, 2015

| Security Name | Maturity |  |  |  | Market <br> Value | $\%$ |
| :--- | :--- | :--- | :--- | :---: | :---: | :---: |
| Republic of Indonesia 144A | $1 / 15 / 2024$ | $9,503,000$ | $0.54 \%$ |  |  |  |
| Sprint Capital Corp | $11 / 15 / 2028$ | $9,133,200$ | $0.51 \%$ |  |  |  |
| Seadrill Partners 2/14 TL | $2 / 21 / 2021$ | $9,087,455$ | $0.51 \%$ |  |  |  |
| CCO Holdings LLC | $1 / 15 / 2024$ | $9,075,150$ | $0.51 \%$ |  |  |  |
| Dish DBS Corp | $3 / 15 / 2023$ | $8,454,500$ | $0.48 \%$ |  |  |  |
| Albertson's 8/14 Cov-Lite TLB4 | $8 / 25 / 2021$ | $8,115,272$ | $0.46 \%$ |  |  |  |
| Morgan Stanley | $11 / 16 / 2018$ | $7,941,267$ | $0.45 \%$ |  |  |  |
| Tribune Media Co 144A | $7 / 15 / 2022$ | $7,611,663$ | $0.43 \%$ |  |  |  |
| Qwest Capital Funding Inc 7/15/2028 | $7,250,850$ | $0.41 \%$ |  |  |  |  |
| California Resources Corp 11/15/2024 | $7,073,500$ | $0.40 \%$ |  |  |  |  |
| Top Ten | $\mathbf{8 3 , 2 4 5 , 8 5 7}$ | $\mathbf{4 . 7 0 \%}$ |  |  |  |  |

* A complete list of portfolio holdings is available upon request from the Office of the Treasurer, in accordance with the Connecticut Freedom of Information Act.


## developedmarket international stock fund

## Fund Facts at June 30, 2015 <br> Investment Strategy/Goals: The purpose of the Developed Markets International Stock Fund (DMISF) is to 1) achieve a long-term, real rate of return above the US inflation rate; and 2) provide additional measures of diversification to other asset classes within the CRPTF under different economic scenarios.

Date of Inception: November 1, 2007
Performance Objective: A net return that matches the benchmark, over rolling three- to five-year periods.

Benchmark: Morgan Stanley Capital International Europe, Australasia and Far East Investable Market Index (MSCI EAFE IMI) ${ }^{(1)}$
Number of Advisors: 9 external

Total Net Position: \$5,909,244,803

Management Fees: $\$ 21,897,221$

Operating Expenses: $\$ 2,588,304$
Expense Ratio: 0.41\%

## Description of the Fund

DMISF assets are allocated across foreign developed equity markets to provide diversification by country, market capitalization and style. Non-US equities are issued by companies domiciled outside of the United States. The DMISF may invest up to $30 \%$ of assets opportunistically to take advantage of shifts in the investment landscape, or opportunities that offer diversification and/or risk-return benefits within non-US equity markets.

## Portfolio Characteristics

At fiscal year-end, the DMISF was invested in the developed markets across Europe, Asia and Australia, with the two largest allocations in Japan (21.7\%) and the United Kingdom (17.9\%) (see Figure 9-5). The portfolio's largest country overweight positions relative to the benchmark were Canada ( $1.7 \%$ vs. the benchmark's $0.0 \%$ ) and the Netherlands ( $4.0 \%$ vs. the benchmark's $2.6 \%$ ). The largest underweights were the United Kingdom ( $17.9 \%$ vs. the benchmark's $20.5 \%$ ) and Japan ( $21.7 \%$ vs. the benchmark's $23.8 \%$ ).

## Market Review

Equities in developed international markets posted negative returns for the fiscal year in dollar terms, largely due to significant weakness in the euro and the yen during the period. While markets produced strong returns in local currencies, bolstered by quantitative easing in the Eurozone and a continuation of loose monetary policy and structural reforms in Japan, Eurozone and UK equities came under pressure toward the end of the fiscal year as the Greek crisis escalated and concerns grew about a possible Greek exit from the euro. At the same time, the Australian dollar also underperformed, driven by falling commodity prices and the impact of interest rate cuts by the central bank. Hong Kong was a notable outperformer for the fiscal year, returning $12.4 \%$, as a result of supportive monetary policy in China and the launch in November, 2014 of the Shanghai-Hong Kong Stock Connect, which relaxed restrictions for equity investors in the historically bifurcated Chinese equity market.

Overall, the MSCI EAFE index returned -4.2\% in US dollar terms, while gaining $11.8 \%$ in local currency terms, with growth stocks outperforming value stocks during the period. In addition, small capitalization stocks, as measured by the MSCI EAFE Small Cap Index, outperformed the broader index by 340 basis points ( $-0.8 \%$ vs. $-4.2 \%$ ). On a sector basis, the strongest performer was Information Technology, which returned $4.9 \%$ for the year. Healthcare, consumer discretionary, telecommunication services, financials and
consumer staples also outperformed. In contrast, the biggest underperformer was the energy sector (-29.7\%) in response to a nearly $50 \%$ drop in oil prices during the first half of the fiscal year. Materials, utilities and industrials also underperformed.

## Performance Summary

For the fiscal year ended June 30, 2015, the DMISF generated a return of $0.67 \%$, net of all expenses, which underperformed the benchmark ${ }^{(1)}$ return of $3.79 \%$ by 312 basis points (See Figure 9-3). As of June 30, 2015, the DMISF compounded net annualized total returns, for the trailing three, five and ten year periods were $14.73 \%, 10.84 \%$, and $5.95 \%$, respectively. The returns outperformed the DMISF's benchmark for the five year period and underperformed for the three and ten year period.

The cumulative returns of the DMISF for the three, five, and ten year periods were $51.03 \%, 67.31 \%$, and $78.18 \%$, respectively.

## Risk Profile

Given the DMISF's investment policies and objectives, the Fund is exposed to several forms of risk. These include, but are not limited to, political and economic risk, currency risk, market risk, and individual company risk. A $50 \%$ currency hedging strategy is employed to reduce the portfolio's currency risk over time. The Fund's volatility over a five year period is only slightly higher than the market at 1.04. On a risk adjusted basis, the Fund has generated excess return of 1.05 , which indicates that it is producing a higher risk adjusted return than the benchmark.

Figure 9-1
DEVELOPED MARKETS INTERNATIONAL STOCK FUND Ownership Analysis at June 30, 2015 (\$ in millions)


TERF - Teachers' Retirement Fund SERF - State Employees' Retirement Fund
CMERF - Connecticut Municipal Employees' Retirement Fund
Figure 9-3
DEVELOPED MARKETS INTERNATIONAL STOCK FUND Periods ending June 30, 2015

|  | 1 YR | 3 YRS | 5YRS | 10YRS |
| :---: | :---: | :---: | :---: | :---: |
| Compounded, Annual Total Return (\%) |  |  |  |  |
| DMISF | 0.67 | 14.73 | 10.84 | 5.95* |
| MSCI EAFE |  |  |  |  |
| IMI 50\% Hedged | 3.79 | 15.14 | 10.79 | 6.18 |
| Cumulative Total Return (\%) |  |  |  |  |
| DMISF | 0.67 | 51.03 | 67.31 | 78.18* |
| MSCI EAFE |  |  |  |  |
| IMI 50\% Hedged | 3.79 | 52.65 | 66.90 | 82.08 |

*Represents historical returns at the portfolio composite level.

Figure 9-2

DEVELOPED MARKETS INTERNATIONAL STOCK FUND Risk Profile at June 30, $2015{ }^{(1)}$

(1) Based upon returns over the last five years.

Figure 9-4
DEVELOPED MARKETS INTERNATIONAL STOCK FUND Annual Total Return


Figure 9-5

| DEVELOPED MARKETS INTERNATIONAL STOCK FUND Diversification by Benchmark Country at June 30, 2015 ${ }^{(1)}$ |  |  |  |
| :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { DMISF } \\ \% \text { of } \\ \text { Net Assets } \\ \text { 6/30/15 } \\ \hline \end{gathered}$ | $\begin{gathered} \text { Benchmark } \\ \% \text { of } \\ \text { Net Assets } \\ 6 / 30 / 15 \\ \hline \end{gathered}$ | Variance |
| Japan | 21.7 | 23.8 | -2.1 |
| United Kingdom | 17.9 | 20.5 | -2.6 |
| Korea | 0.1 | 0.0 | 0.1 |
| Hong Kong | 2.8 | 3.2 | -0.5 |
| United States | 0.1 | 0.0 | 0.1 |
| France | 9.2 | 9.0 | 0.3 |
| Germany | 9.0 | 8.4 | 0.5 |
| Switzerland | 8.0 | 8.6 | -0.6 |
| Australia | 5.3 | 6.7 | -1.4 |
| China | 0.3 | 0.0 | 0.3 |
| Netherlands | 4.0 | 2.6 | 1.4 |
| Italy | 2.6 | 2.6 | 0.0 |
| Spain | 2.5 | 3.4 | -0.9 |
| Sweden | 3.0 | 3.1 | -0.1 |
| Singapore | 1.4 | 1.5 | -0.1 |
| Canada | 1.7 | 0.0 | 1.7 |
| Turkey | 0.1 | 0.0 | 0.1 |
| Other | 10.3 | 6.6 | 3.7 |
| Total | 100.0 | 100.0 |  |

(1) Based upon currency exposures of the underlying securities.

Figure 9-6

| DEVELOPED MARKETS INTERNATIONAL STOCK FUND Investment Advisors at June 30, 2015 |  |  |
| :---: | :---: | :---: |
| Investment Advisor | Net Asset Value | \% of Fund |
| Index | \$2,166,740,222 | 36.67\% |
| State Street Global Advisors | 2,166,740,222 | 36.67\% |
| Core | 1,571,756,979 | 26.60\% |
| AQR Capital Management | 835,876,337 | 14.15\% |
| Acadian Asset Management | 602,937,239 | 10.20\% |
| Progress | 132,943,403 | 2.25\% |
| Active-Growth | 826,746,692 | 13.99\% |
| MFS Institutional Advisors, Inc. | 826,746,692 | 13.99\% |
| Active-Value | 475,361,675 | 8.04\% |
| Grantham, Mayo, Van Otterloo | 475,361,675 | 8.04\% |
| Small Cap | 852,916,296 | 14.43\% |
| Schroder Investment Mgmt. | 300,104,520 | 5.08\% |
| DFA | 265,615,087 | 4.49\% |
| William Blair \& Company | 287,196,689 | 4.86\% |
| Other (1) | 15,722,939 | 0.27\% |
| TOTAL DMISF | \$5,909,244,803 | 100.00\% |

(1) Other represents Liquidity Fund, other assets and terminated advisor balances, as well as, currency overlay balances for the DMISF (managed by Pareto).

Figure 9-7

## DEVELOPED MARKETS INTERNATIONAL STOCK FUND Ten Largest Holdings* at June 30, 2015

| Security Name | Country | Market Value | $\%$ |
| :--- | :--- | ---: | :--- |
| Nestle SA REG | Switzerland | $\$ 78,862,434$ | $1.34 \%$ |
| Novartis AG REG | Switzerland | $70,601,267$ | $1.20 \%$ |
| HSBC Holdings PLC | United Kingdom | $69,092,489$ | $1.18 \%$ |
| Roche Holding AG Genusschein | Switzerland | $67,929,643$ | $1.16 \%$ |
| Bayer AG REG | Germany | $55,840,276$ | $0.95 \%$ |
| BP PLC | United Kingdom | $43,658,184$ | $0.74 \%$ |
| Astrazeneca ORD USD 0.25 | United Kingdom | $42,832,982$ | $0.73 \%$ |
| Toyota Motor Corp | Japan | $41,536,211$ | $0.71 \%$ |
| Total SA | France | $41,418,652$ | $0.70 \%$ |
| Royal Dutch Shell PLC A SHS | Netherlands | $40,169,119$ | $0.68 \%$ |
| Top Ten |  | $\$ 551,941,257$ | $9.39 \%$ |

* A complete list of portfolio holdings is available upon request from the Office of the

Treasurer, in accordance with the Connecticut Freedom of Information Act.

## emerging markets international stock fund


#### Abstract

Fund Facts at June 30, 2015 Investment Strategy/Goals: The purpose of the Emerging Markets International Stock Fund (EMISF) is to 1) achieve a long-term, real rate of return above the US inflation rate; and 2) provide additional measures of diversification within the CRPTF under different economic scenarios.


Date of Inception: November 1, 2007
Performance Objective: A net return that matches
the benchmark, over rolling three- to five-year periods.

Benchmark: Morgan Stanley Capital International Emerging Markets Investable Market Index (MSCI EM IMI) ${ }^{(1)}$

Number of Advisors: 3 external Expense Ratio: 0.71\%

## Description of the Fund

EMISF assets are allocated across foreign emerging equity markets and are diversified by market, capitalization and style. Emerging market equities are defined as common stocks issued by companies domiciled in developing countries, including the 21 companies in the MSCI EM IMI.

## Portfolio Characteristics

At fiscal year-end, the EMISF's portfolio holdings were diversified over a number of emerging market countries (see Figure 10-6). Notable overweight country positions versus the benchmark include Turkey ( $6.3 \%$ versus the benchmark's $1.4 \%$ ), and Brazil ( $10.1 \%$ versus the benchmark's $6.9 \%$ ). Underweight positions include South Africa ( $3.0 \%$ versus the benchmark's $7.6 \%$ ), Malaysia ( $0.8 \%$ versus the benchmark's $3.2 \%$ ), and Taiwan (11.3\% versus the benchmark's 13.3\%) (See Figure 10-6).

## Market Review

Emerging equity markets remained volatile throughout the fiscal year. Several factors, including concerns over US monetary tightening, a surge in the US dollar in anticipation of higher rates, slowing growth in major developing economies, a precipitous fall in commodity prices, along with ongoing political uncertainty, fueled investor anxiety and dampened investor risk appetite. As markets assessed the impact of weaker Chinese demand, and as Greece teetered on the brink of a debt default and an exit from the Eurozone, investors remained jittery, even as central banks across the globe remained committed to accommodative monetary policies. Lower energy prices, notably the $50 \%$ drop in oil in the first six months, were strong headwinds for energy producing countries, particularly Russia, which saw sharp losses in the ruble while at the same time suffering from the effects of international sanctions from the Ukrainian conflict.

Emerging Europe was the weakest performing region, driven by Greece, Russia, Poland and Turkey. While Greece suffered from uncertainty surrounding its debt crisis, and while the Russian economy weakened and consumer spending fell, markets in Poland and Turkey were held back by political uncertainty following opposition victories in local elections. Latin America also ended the year in negative territory, driven by political tensions in Brazil and economic slowdown following commodity price weakness. Although fears of slower growth in China had a dampening effect on investors across the globe, the Chinese market still ended the year in positive territory as investors remained hopeful that the government was open to more stimulus to boost the decelerating economy.

## Performance Summary

For the fiscal year ended June 30, 2015, the EMISF generated a return of $-6.93 \%$, net of all expenses, which underperformed the benchmark return of $-4.41 \%$ by 252 basis points (See Figure 10-4). As of June 30, 2015, the EMISF compounded net annualized total returns, for the trailing three, five and ten year periods were $2.36 \%, 3.45 \%$, and $7.07 \%$, respectively. The returns underperformed the EMISF's benchmark for the same time periods.

The cumulative returns of the EMISF for the three, five, and ten year periods were $7.24 \%, 18.51 \%$, and 97.99\%, respectively.

## Risk Profile

Given the EMISF's investment policies and objectives, the Fund is exposed to several forms of risk. These include, but are not limited to, political and economic risk, currency risk, market risk, and individual company risk. Based on returns over the last five years, the Fund's risk profile is slightly lower than that of the benchmark as evidenced by a relative volatility of 0.99. The EMISF's annualized alpha over the five year period was -0.42 , indicating that the fund modestly underperformed the benchmark for the five years on a risk adjusted basis (see Figure 10-2).

Figure 10-1


TERF - Teachers' Retirement Fund
SERF - State Employees' Retirement Fund
CMERF - Connecticut Municipal Employees' Retirement Fund
Figure 10-3
EMERGING MARKETS INTERNATIONAL STOCK FUND Fiscal Year 2015 Economic Sector vs. Index (\%)

|  | EM <br> ISF | MSCI <br> Index | Vari- <br> ance |
| :--- | ---: | ---: | ---: |
| Energy | 7.7 | 7.4 | 0.3 |
| Materials | 4.5 | 7.6 | -3.1 |
| Industrials | 3.7 | 8.1 | -4.4 |
| Consumer Discretionary | 9.8 | 10.1 | -0.3 |
| Consumer Staples | 6.2 | 8.2 | -1.9 |
| Health Care | 2.1 | 3.3 | -1.2 |
| Financials | 31.7 | 28.2 | 3.5 |
| Information Technology | 20.2 | 17.4 | 2.8 |
| Telecommunication Services | 7.7 | 6.4 | 1.2 |
| Utilities | 3.9 | 3.3 | 0.6 |
| Commingled Fund | 0.0 | 0.0 | 0.0 |
| Preferred Stock | 0.0 | 0.0 | 0.0 |
| Private Placement | 0.0 | 0.0 | 0.0 |
| Other | 0.0 | 0.0 | 0.0 |
| Liquidity Fund | $\underline{0.5}$ | $\underline{0.0}$ | 2.5 |
|  | 100.0 | 100.0 |  |

Figure 10-2
EMERGING MARKETS INTERNATIONAL STOCK FUND Risk Profile at June 30, $2015{ }^{(1)}$

(1) Based upon returns over the last five years.

Figure 10-4

| EMERGING MARKETS INTERNATIONAL STOCK FUND Periods ending June 30, 2015 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 1 YR | 3 YRS | 5 YRS | 10 YRS |
| Compounded, Annual Total Return (\%) |  |  |  |  |
| EMISF | -6.93 | 2.36 | 3.45 | 7.07* |
| MSCI Emerging |  |  |  |  |
| Markets IMI Index | -4.41 | 4.24 | 3.87 | 8.40 |
| Cumulative Total Return (\%) |  |  |  |  |
| EMISF | -6.93 | 7.24 | 18.51 | 97.99* |
| MSCI Emerging |  |  |  |  |
| Markets IMI Index | -4.41 | 13.26 | 20.91 | 123.99 |

*Represents historical returns at the portfolio composite level.

Figure 10-5


Figure 10-6


Diversification by Benchmark Country at June 30, $2015{ }^{(1)}$

|  | EMISF <br> Percent of <br> Net Assets | Benchmark <br> Percent of <br> Net Assets |
| :--- | :---: | :---: |
|  | $6 / 30 / 15$ | $6 / 30 / 15$ |
| Brazil | $10.1 \%$ | $6.9 \%$ |
| Korea | 13.2 | 15.0 |
| Hong Kong | 8.2 | 0.0 |
| Russia | 6.1 | 3.3 |
| China | 11.4 | 24.7 |
| Taiwan | 11.3 | 13.3 |
| United States | 2.3 | 0.0 |
| Mexico | 2.5 | 4.3 |
| Thailand | 3.9 | 2.5 |
| South Africa | 3.0 | 7.6 |
| Turkey | 6.3 | 1.4 |
| Indonesia | 1.9 | 2.4 |
| Malaysia | 0.8 | 3.2 |
| India | 10.7 | 8.0 |
| Philippines | 2.3 | 1.4 |
| United Kingdom | 1.4 | 0.0 |
| Other Countries | 4.6 | 6.0 |
| Total | $\mathbf{1 0 0 . 0} \%$ | $\mathbf{1 0 0 . 0} \%$ |

(1) Includes Liquidity Fund and cash equivalents at each country level.
Figure 10-8
EMERGING MARKETS INTERNATIONAL STOCK FUND Ten Largest Holdings* at June 30, 2015

| Security Name | Country | Market Value | \% |
| :---: | :---: | :---: | :---: |
| Taiwan Semiconductor |  |  |  |
| Manufacture | Taiwan | \$80,464,232 | 3.27\% |
| Samsung Electronic Co Ltd | Republic of Korea | a $74,726,103$ | 3.03\% |
| China Construction |  |  |  |
| Bank Corp | China | 69,228,894 | 2.81\% |
| China Mobile LTD | Hong Kong | 65,194,136 | 2.65\% |
| AIA Group Ltd | Hong Kong | 51,894,609 | 2.11\% |
| Tencent HIdgs LIMI |  |  |  |
| HKD 0.00002 | China | 45,925,799 | 1.86\% |
| Infosys Ltd | India | 44,182,034 | 1.79\% |
| HDFC Band Ltd | India | 43,690,978 | 1.77\% |
| Industrial \& Commercial Bank | China | 43,376,756 | 1.76\% |
| Samsung Electronics |  |  |  |
| Co Ltd 144A | Republic of Korea | a 32,447,791 | 1.32\% |
| Top Ten |  | \$551,131,332 | 22.37\% |

* A complete list of portfolio holdings is available upon request from the Office of the Treasurer, in accordance with the Connecticut Freedom of Information Act.

Figure 10-7

| EMERGING MARKETS INTERNATIONAL STOCK FUND Investment Advisors at June 30, 2015 |  |  |
| :---: | :---: | :---: |
| Investment Advisor | Net Asset Value | $\begin{aligned} & \hline \% \text { of } \\ & \text { Fund } \end{aligned}$ |
| Grantham, Mayo, Van Otterloo | \$889,860,048 | 35.98\% |
| Aberdeen Asset Management | 664,832,507 | 26.88\% |
| Schroders Investment Mgt | 897,692,176 | 36.30\% |
| Other ${ }^{(1)}$ | 20,903.021 | 0.84\% |
| TOTAL EMISF | \$2,473,287,752 | 100.00\% |

(1) Other represents Liquidity Fund, other assets and terminated advisor balances, as well as, currency overlay balances for the DMISF.

## 2rin

## Fund Facts at June 30, 2015

Investment Strategy/Goals: The purpose of the Real Estate Fund (REF) is to 1) provide diversification to the overall CRPTF investment program, 2) preserve investment capital, 3) generate attractive risk-adjusted rates of return, 4) provide consistent current income and 5) act as a hedge against inflation under different economic scenarios.

Date of Inception: July 1, 1982
Performance Objective: A net return that matches the benchmark over rolling three-to-five year periods.

Benchmark: National Council of Real Estate Investment Fiduciaries - National Properties Index ("NCREIF-NPI")

Total Net Position: \$1,848,236,645
Management Fees ${ }^{(1)}$ : $\$ 5,429,945$
Capitalized and Netted Fees: $\$ 12,119,785$
Operating Expenses: $\$ 1,102,528$
Expense Ratio: 0.39\%

Number of Investment Partnerships: 38
(1) See note 1 to the Financial Statements for a discussion of similar fees incurred at the investment level.

## Description of the Fund

The REF is the vehicle by which the CRPTF makes investments in the real estate asset class. The REF may invest in real estate properties, real estate related equity investments, or real estate related debt and mortgages. The REF consists of a number of investment strategies and vehicles including externally managed commingled funds, open-end funds, separate accounts, publically traded real estate securities, limited partnerships and/or other indirect ownership structures managed by professional real estate investment managers.

## Portfolio Characteristics

As of June 30, 2015, the portfolio was approximately 31.6\% invested in Close-End fund vehicles, 54.7\% in Open-End funds, and $13.8 \%$ held in two Separate Accounts, in which the REF holds $100 \%$ ownership interest in properties within the portfolio. These Separate Account vehicles are managed by external managers and employ a Core investment strategy. The majority of investments in the REF are comprised of co-mingled private equity funds vehicles in which the CRPTF holds limited partnership interests. These commingled funds employ three main real estate investment sub-asset classes: Core, Value-Add, and Opportunistic strategies. In accordance with the Investment Policy Statement, leverage levels in the REF shall not exceed $60 \%$, and are diversified across geography and property types, with approximately $85.81 \%$ located in the markets within the United States and 14.19\% to real estate markets abroad.

As of June 30, 2015, the REF allocation to sub-strategies was $60.3 \%$ to Core, $11.5 \%$ to Value-Add and $21.9 \%$ to Opportunistic. The portfolio is well diversified geographically. While the National Properties Index (NPI) remains the tracked real estate investments benchmark, the CRPTF at any given time may be tactically under- or over-weight in specific property types, regions, vintage years or other characteristics of the Index.

## Market Review

The real estate market continued its upward pace in fiscal year 2015 as moderate economic growth, coupled with loose monetary policies, fueled improvements in fundamentals in early every segment. While the potential for interest rate rises created some minor headwinds, investor sentiment remained strong with fundraising activity in the closed end market reaching $\$ 113$ billion at the end of the year, primarily in North America.

Foreign capital investment in the US continued to increase, representing $14.8 \%$ of total transaction activity in the first half of the fiscal year, exceeding 2014 year-end figures and nearing 2007 peak levels. Vacancies declined across the board and are now below its 20 year average for all property types. Conditions have supported above-inflation rent growth with Net Operating Income for properties in the benchmark up 4.4\% on a year over year basis. This was led by office and apartments in central business districts. With strong competition in the top tier sectors, many investors are now migrating into secondary and tertiary property markets in search of higher yields in more risky strategies.

Although the composition of buyers and sellers has been stabilized for more than a year, recent transaction trends show listed funds/REITs consistently built up positions in real estate ( $\$ 28.9$ billion) while Institutional/Equity Funds have been net sellers of real estate ( $\$ 24.8$ billion). Transaction capitalization rates, defined as Net Operating Income to property asset value, continued to decline during the year although fundamentals remained healthy as tenants sought more space than was being completed.

## Performance Summary

For fiscal year 2015, the Fund generated a total fiscal year to date return of 12.93\%, net of all expenses, modestly outperforming its benchmark NCREIF-NPI, which posted a gross return of $12.72 \%$. The one-year return reflects an ongoing positive trend in the REF portfolio, which can be attributed to recent accretive commitments to open-ended core and core-plus funds, as well as a number of new value-add strategies in the Fund, all of which feature strong current income and overall increases in property valuations across all funds and a partial recovery in vintage year 2007 real estate fund investments, which were negatively impacted by the Great Recession.

For the trailing three, five and ten year periods, the REF's compounded annual returns, net of all expenses, were $11.28 \%, 11.39 \%$, and $2.37 \%$, respectively (See Figure 11-8), greatly improving its over fiscal year 2014. Longer-term portfolio returns continue to lag the benchmark, with five and ten year returns underperforming by 136 basis points and 602 basis points, respectively. The Fund has been actively investing through the recent real estate cycle, with new commitments in open end vehicles in Core during the fiscal year, as well as new partnerships in Opportunistic and Value-Add strategies, which has helped to maintain diversification in the fund.

## Risk Profile

The REF takes both a total portfolio and asset class specific approach to risk management. Risk is managed at the portfolio level through diversification and strategic asset allocation and the implementation of strategy. Risks attendant to alternative investments, such as management, operations, local/regional property markets, and liquidity risk, are managed at the asset class level with additional risk management focused on financing, geography, and property type risks specific to a fund manager's portfolio investments.

The REF has lower volatility than NPI, as expected (See Figure 11-2) largely due to allocations to core funds, which generally have lower leverage than value-add and opportunistic strategies. Also, the REF's core sub-portfolio, which most closely tracks NPI, has a leveraged amount of approximately $35.81 \%$. NPI is comprised of a portfolio of $6,000+$ properties, many of which are levered, but for purposes of constructing the NPI benchmark, are de-levered for the index. The REF volatility is typical and not excessive relative to a benchmark comprised of unlevered core properties.

Figure 11-1
REAL ESTATE FUND
Ownership Analysis at June 30, 2015 (\$ in millions)


TERF - Teachers' Retirement Fund
SERF - State Employees' Retirement Fund
CMERF - Connecticut Municipal Employees' Retirement Fund
Figure 11-3
REAL ESTATE FUND
Investments Analysis ${ }^{(1)}$

| At | No. of REF <br> Investments | REF <br> Book Value | REF <br> Market Value |
| :--- | :---: | :---: | ---: |
| $6 / 30 / 2015$ | 38 | $\$ 1,646,736,485$ | $\$ 1,732,052,523$ |
| $6 / 30 / 2014$ | 33 | $1,398,172,794$ | $1,429,069,066$ |
| $6 / 30 / 2013$ | 30 | $1,366,354,620$ | $1,227,275,238$ |
| $6 / 30 / 2012$ | 36 | $1,376,611,668$ | $1,180,717,977$ |
| $6 / 30 / 2011$ | 36 | $1,310,614,926$ | $1,057,213,580$ |
| $6 / 30 / 2010$ | 35 | $1,097,439,251$ | $715,310,010$ |
| $6 / 30 / 2009$ | 34 | $996,474,812$ | $745,643,849$ |
| $6 / 30 / 2008$ | 31 | $920,921,272$ | $968,885,960$ |
| $6 / 30 / 2007$ | 23 | $485,341,324$ | $531,570,750$ |
| $6 / 30 / 2006$ | 12 | $259,551,191$ | $330,169,779$ |

(1) Number of investments in annuities, partnerships, corporations, and trusts, excluding the Liquidity Fund.

Figure 11-5

## REAL ESTATE FUND

Distribution by Investment Type at June 30, 2015
Based on Investments in Securities, at Value


Figure 11-2

## REAL ESTATE FUND

Risk Profile at June 30, $2015{ }^{(1)}$

| Relative Volatility | 0.90 |
| :--- | :---: |
| Standard Deviation | 4.61 |
| R2 | 0.18 |
| Beta | -0.38 |
| Alpha | -1.36 |

(1) Based upon returns over the last five years.

Figure 11-4

(1) Liquidity Fund and Other Net Assets

Figure 11-6
REAL ESTATE FUND
Distribution by Geographic Location at June 30, 2015 Based on Investments in Securities, at Value

|  | REF | NCREIF | Variance |
| :--- | ---: | ---: | ---: |
| East | $31.1 \%$ | $34.2 \%$ | $-3.1 \%$ |
| Midwest | $5.2 \%$ | $8.0 \%$ | $-2.8 \%$ |
| South | $20.2 \%$ | $20.3 \%$ | $-0.1 \%$ |
| West | $29.1 \%$ | $37.5 \%$ | $-8.4 \%$ |
| International | $8.1 \%$ | $0.0 \%$ | $8.1 \%$ |
| Liquidity Fund \& other net assets $\underline{6.3 \%}$ | $\underline{0.0 \%}$ | $6.3 \%$ |  |
|  | $100.0 \%$ | $100.0 \%$ |  |

## CONNECTICUT STATE TREASURER'S COMBINED INVESTMENT FUNDS

Figure 11-7

| REAL ESTATE FUND <br> Diversification by Property Type at June 30, 2015 Based on Investments in Securities, at Value |  |  |  |
| :---: | :---: | :---: | :---: |
|  | REF | NCREIF | Variance |
| Apartment | 26.0\% | 24.1\% | 1.9\% |
| Industrial | 13.1\% | 13.2\% | -0.1\% |
| Office | 28.9\% | 38.1\% | -9.2\% |
| Retail | 17.7\% | 23.3\% | -5.6\% |
| Hotel | 8.0\% | 1.3\% | 6.7\% |
| Liquidity Fund \& Other Net Assets ${ }^{(1)}$ | 6.3\% | 0.0\% | 6.3\% |
|  | 1000\% | 100.0\% |  |

Figure 11-8

| REAL ESTATE FUND <br> Periods ending June 30, 2015 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 1 YR | 3 YRS | 5 YRS | 10 YRS |
| Compounded, Annual Total Return (\%) |  |  |  |  |
| REF | 12.93 | 11.28 | 11.39 | 2.37 |
| NCREIF Property | 12.72 | 11.47 | 12.75 | 8.39 |
| Cumulative Total Return (\%) |  |  |  |  |
| REF | 12.93 | 37.79 | 71.51 | 26.40 |
| NCREIF Property | 12.72 | 38.50 | 82.25 | 123.79 |

(1) Includes senior living, real estate/mixed use, land, and cash.

Figure 11-9
REAL ESTATE FUND
Annual Total Return


Figure 11-10


Figure 11-11

| REAL ESTATE FUND |  |  |
| :---: | :---: | :---: |
| Funds at June 30, 2015 |  |  |
| Fund | Net Asset Value | \% of Fund |
| AEW Partners III | \$5,896,095 | 0.32\% |
| American Realty Advisors | 76,044,800 | 4.11\% |
| Apollo Real Estate | 2,281,821 | 0.12\% |
| Blackstone Real Estate Partner Europe III | LP 40,409,568 | 2.19\% |
| Blackstone Real Estate Spec Sit II LP | 5,323,282 | 0.29\% |
| Blackstone Real Estate VI LP | 83,989,075 | 4.54\% |
| Canyon Johnson Urban Fund II | 13,796,478 | 0.75\% |
| Canyon Johnson Urban Fund III | 32,033,471 | 1.73\% |
| Capri Select Income II LLC | 96,473 | 0.00\% |
| Colony Realty Partners II LP | 18,850,800 | 1.02\% |
| Cornerstone Patriot Fund LP | 253,741,522 | 13.73\% |
| Covenant Apartment Fund V LP | 6,385,510 | 0.34\% |
| Covenant Apartment Fund VI | 4,926,979 | 0.27\% |
| Cypress Acquisition Prtnrs Retail FD LP | 26,620,637 | 1.44\% |
| Gerding Edlen Green Cities II | 27,575,494 | 1.49\% |
| Hart Realty Advisors | 153,032,945 | 8.28\% |
| IL \& FS India Realty Fund II LLC | 37,661,210 | 2.04\% |
| JP Morgan Strategic Property | 75,000,000 | 4.06\% |
| Landmark RE Partners VII LP | 2,577,854 | 0.14\% |
| Lone Star Real Estate Part II LP | 18,231,320 | 0.99\% |
| Macfarlane Urban Real Estate Fund II LP | 14,406,271 | 0.78\% |
| New Boston IV | 582,960 | 0.03\% |
| Prime Property Fund LLC | 263,282,799 | 14.24\% |
| PRISA | 100,531,981 | 5.44\% |
| Rockwood Capital Fund V | 1,199,820 | 0.06\% |
| Rockwood Capital VI Limited Partnership | 8,630,734 | 0.47\% |
| Rockwood Capital VII Limited Partnership | 24,007,702 | 1.30\% |
| Starwood Opportunity Fund VII | 24,637,761 | 1.33\% |
| Starwood Opportunity Fund VIII | 31,903,903 | 1.73\% |
| Starwood Opportunity Fund IX | 37,270,876 | 2.02\% |
| Starwood Opportunity Fund X | 706,210 | 0.04\% |
| UBS-Trumbull Property Income | 52,839,651 | 2.86\% |
| UBS-Trumbull Property G\&I (TPG) | 42,766,951 | 2.31\% |
| UBS-Trumbull Property Fund LP | 78,041,475 | 4.22\% |
| Urban Strategy America Fund LP | 37,262,184 | 2.02\% |
| USAA Eagle RE Fund | 88,350,410 | 4.78\% |
| Walton Street Real Estate | 2,142,298 | 0.12\% |
| WLR IV PPIP Co Invest LP | 39,013,203 | 2.11\% |
| Other ${ }^{(1)}$ | 116,184,122 | 6.29\% |
| TOTAL REF | \$1,848,236,645 | 100.00\% |

(1) Other represents moneys earmarked for distribution to participants, reinvestment, and expenses as well as terminated advisor balances.

Figure 11-12
REAL ESTATE FUND
Ten Largest Holdings* at June 30, 2015

|  | Market |  |  |
| :--- | :--- | :--- | :--- |
| Property Name | Type | Value | $\%$ |
| Prime Property Fund LLC | Core | $\$ 263,282,799$ | $14.25 \%$ |
| Cornerstone Patriot Fund LP | Core | $253,741,522$ | $13.73 \%$ |
| Hart Realty Advisors | Core | $153,032,945$ | $8.28 \%$ |
| PRISA | Core | $100,531,981$ | $5.44 \%$ |
| USAA Eagle RE Fund | Core | $88,350,410$ | $4.78 \%$ |
| Blackstone Real Estate VI LP | Opportunistic $83,989,075$ | $4.54 \%$ |  |
| UBS-Trumbull Property Fund LP Core | $78,041,475$ | $4.22 \%$ |  |
| American Realty Advisors | Core | $76,044,800$ | $4.11 \%$ |
| JP Morgan Strategic Property | Core | $75,000,000$ | $4.06 \%$ |
| UBS-Trumbull Property Income | Core | $52,839,651$ | $2.86 \%$ |
| Top Ten |  | $\$ 1,224,854,658$ | $66.27 \%$ |
|  |  |  |  |

* A complete list of portfolio holdings is available upon request from the Office of the Treasurer, in accordance with the Connecticut Freedom of Information Act.

Figure 11-13
REAL ESTATE FUND
New Investments Made in Fiscal Year 2015 (in Excess of \$3 Million)

| Partnership Name | Commitment Amount | Investment Type |
| :--- | :---: | :--- |
| Landmark VII | $\$ 40$ million | Opportunistic |
| Starwood Opportunity Fund X | 100 million | Opportunistic |
| Blackstone Real Estate Oartners VIII, L.P. | 100 million | Opportunistic |
| Clarion (LIT) | $\underline{100 \text { million }}$ | Value-Add |
| Total | $\$ 340$ million |  |

## commercialmortgage fund

## Fund Facts at June 30, 2015

Investment Strategy/Goals: The Commercial Mortgage Fund (CMF) provides an alternate source of domestic fixed income investment for the retirement funds. It was the vehicle for investing CRPTF's assets in mortgages on income-producing commercial property for expected yields superior to Treasury and corporate fixed income securities, in exchange for reduced liquidity. Commercial mortgages were expected to perform similarly to other domestic fixed income securities that are driven by U.S. interest rate changes.

Date of Inception: November 2, 1987
Performance Objective: A net return equal to the
Barclays U.S. Aggregate Bond Index plus 100 basis points.

Benchmark: Barclays U.S. Aggregate Bond Index
Number of Advisors: 1 external

Total Net Position: \$32,637
Management Fees: \$0

Operating Expenses: \$0
Expense Ratio: 0.00\%

## Description of the Fund

CMF is a "sinking" portfolio that is no longer making new investments. There are only two remaining securitized Yankee Mac Residential Mortgage-Backed Securities (RMBS) in this Fund. The assets are externally managed by a professional real estate investment management firm. Most of the loans in the portfolio are conservative in nature, with high coupon rates and debt service coverage, with respect to loan underwriting standards. The commercial whole loan portfolio was paid off at maturity in 2012.

This asset class is no longer a part of the most recent asset allocation structure of the CRPTF, adopted in July, 2013, and the balance in the Fund will be allowed to amortize and mature. No new investments will be added to this Fund.

## Portfolio Characteristics

The portfolio consists of two residential mortgage pools having a balance of less than $\$ 33,000$.

## Performance Summary

For the fiscal year ended June 30, 2015, the CMF generated a return of $.25 \%$, net of all expenses, underperforming the benchmark return of $1.86 \% \%$ by 161 basis points. Because of its small relative size, the performance of CMF was not material to the reported performance for CRPTF.

For the trailing three-, five-, and ten-year periods, CMF's total compounded annual portfolio returns were $3.67 \%, 1.74 \%$ and $4.11 \%$, respectively, net of all expenses. The comparative three-, five- and ten-year period benchmark returns were $1.83 \%, 3.35 \%$ and $4.44 \%$, respectively.

## Risk Profile

Given CMF's investment policies and objectives, the Fund is exposed to default risk, purchasing power risk, and market risk. The total net asset value at June 30, 2015 was approximately $\$ 33,000$ and is not material to the overall performance of the CRPTF.

## private investment fund

## Fund Facts at June 30, 2015

Investment Strategy/Goals: The purpose of the Private Investment Fund (PIF) is to: 1) earn returns in excess of the public equity markets, 2) generate attractive risk-adjusted rates of return, and 3) provide diversification for the CRPTF under different economic environments.

Date of Inception: July 1, 1987
Performance Objective: A net return that outperforms the Standard \& Poor Index (S\&P 500) over rolling ten year periods.

Benchmark: S\&P 500
Number of Partnerships: 63

Total Net Position: \$2,774,091,648
Management Fees ${ }^{(1)}: \$ 2,879,276$

Capitalized and Netted Fees: $\$ 28,487,660$
Operating Expenses: \$2,036,265
Expense Ratio: 0.17\%

1) See Note 1 to the Financial Statements for a discussion of similar fees incurred at the investment level.

## Description of the Fund

The PIF is an externally managed fund whose strategic focus is divided into two sub-asset classes: venture capital and corporate finance. Venture capital invests equity into young or development stage companies. Corporate finance encompasses several underlying strategies, including leveraged buyout, mezzanine debt, and special situations.

## Portfolio Characteristics

The PIF invests in private equity funds either directly as a Limited Partner to a specific fund or indirectly as a Limited Partner to a fund of funds vehicle. Fund-of-funds (FOF) invest in multiple private equity partnerships that invest in underlying companies and are typically used to execute a strategic objective within the PIF. Private equity investments include two general areas of strategic focus.

## Corporate Finance

- Buyout focused investments are defined as controlling or majority investments in private equity or equitylike securities of more established companies on the basis of the company's asset values and/or cash flow.
- Mezzanine Debt focused investments are defined as investments in securities located between equity and senior debt in the company's capital structure. Mezzanine debt investments offer higher current income than senior debt securities and often offer equity participation features that may take the form of warrants or contingent equity interests.
- Special Situation focused investments are defined as investments in a variety of securities (Debt, Preferred Equity and/or Common Equity) in portfolio companies at a variety of stages of development (Seed, Early Stage, Later Stage).
- International Private Equity focused investments are defined as investments in private equity or equitylike securities in companies located outside the continental United States. International Private Equity investments often offer higher return potential, with higher risk, as a result of the above average rates of growth available in select international economies.


## Venture Capital

- Venture Capital focused investments can be narrowly defined as investments in private equity or equitylike securities of developing companies in need of growth or expansion capital. These investments can range from early-stage financing, where a company has little more than a marketable idea, to expansion financing, where a company has a marketable product but requires additional capital to bring the product to market.

Excluding commitments made under the Connecticut Horizon Fund program, the PIF had 63 active funds and aggregate capital commitments totaling $\$ 7.4$ billion as of June 30,2015 . Approximately 90 percent, or $\$ 6.7$ billion, has been "drawn down" for investment purposes as of that date while the balance of approximately $\$ 800$ million, or 10 percent, is committed but not "drawn" (See Figure 12-6).

## Market Review

The private equity industry continued to be strong through fiscal year end 2015. Both buyout funds and venture capital strategies continued to experience strong returns and remained largely immune to public equity market volatility which began to increase during the latter part of the fiscal year.

More than $\$ 118$ billion was committed to US buyout funds during fiscal year 2015, according to data published by Thomson One. US buyout investment activity also increased with $\$ 52$ billion invested during the fiscal year, which represented an $11 \%$ increase from the same prior year period. Purchase prices for leveraged buyouts also rose as multiples grew to a peak of 9.7 x during the final quarter of the fiscal year, according to data published by S\&P LCD. However, buyout-backed exits declined modestly year over year, with 338 exits for the fiscal year, compared to 341 in fiscal year 2014.

Similarly, the US venture capital market also remained strong during the year. Venture fundraising accelerated to $\$ 30$ billion, representing the highest annual total since the global financial crisis. Investment activity also reached a ten year high during the fiscal year with $\$ 54$ billion invested during the year, a 40\% rise over the prior year. Similar to buyout exits, venture-backed IPO activity slowed slightly from a record level in 2014. In fiscal year 2015, there were 97 venture-backed IPOs, down from 113 in the prior year.

## Performance Summary

For the fiscal year ended June 30, 2015, PIF generated a net compounded annual rate of return of $14.04 \%$ (See Figure 12-5). This return was measured using a Time Weighted Return (TWR) calculation methodology.

While short-term returns are evaluated, longer term (e.g., 10 years) returns are more meaningful in evaluating private equity portfolio performance. Long-term horizons better reflect the illiquid nature of PIF's holdings and the time it takes for investments to realize their potential. PIF's performance is benchmarked against the S\&P 500. Over the last 10 years through June 30, 2015, PIF's performance has exceeded that of the S\&P 500 by 270 basis points on a compounded annual basis (See Figure 12-5).

The institutional standard for measuring private equity performance is the Internal Rate of Return (IRR). IRR is a dollar-weighted annualized return that considers both cash flows and time. Since its inception in 1987, PIF has generated a $9.1 \%$ IRR. A tool commonly used by institutional investors to benchmark IRR performance is the public market equivalent (PME). From inception through June 30, 2015, PIF has generated 270 basis points of annual performance in excess of its S\&P 500 PME.

During Fiscal Year 2015, no new partnerships were funded (See Figure 12-10).

## Risk Profile

Given PIF's investment policy and objectives, the Fund is exposed to several forms of risk. These include, but are not limited to, the risks attendant with alternative investments, such as management, operations, and product risk, as well as overall liquidity risk. Assuming these risks as part of a prudent, total portfolio strategy enables PIF to participate in the possibility of substantial long-term investment returns.

PIF's risk profile is complex given the valuation judgments and liquidity constraints placed on it consistent with an alternative investment strategy. Over the last five years, PIF's volatility relative to its benchmark has been 0.45 with a correlation of 0.01 . Over the last five years, the Fund has returned an annual alpha, or return relative to that predicted by its benchmark, of -4.37 (See Figure 12.2)..

Figure 13-1


TERF - Teachers' Retirement Fund
SERF - State Employees' Retirement Fund
CMERF - Connecticut Municipal Employees' Retirement Fund
Figure 13-3

(1) Includes the Liquidity Fund and other assets at the partnership level.
Figure 13-5

## PRIVATE INVESTMENT FUND

Periods ending June 30, 2015

| 1 YR |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| 3 YRS | 5 YRS | 10 YRS |  |  |
| Compounded, Annual Total Return (\%) |  |  |  |  |
| PIF | 14.04 | 13.17 | 12.97 | 10.59 |
| S \& P 500 | 7.42 | 17.31 | 17.34 | 7.89 |
|  |  |  |  |  |
| Cumulative Total Return (\%) |  |  |  |  |
| PIF | 14.04 | 44.93 | 84.03 | 173.55 |
| S \& P 500 | 7.42 | 61.43 | 122.47 | 113.77 |
|  |  |  |  |  |
|  |  |  |  |  |

Figure 13-2

## PRIVATE INVESTMENT FUND

Risk Profile at June 30, $2015{ }^{(1)}$

| Relative Volatility | 0.45 |
| :--- | :---: |
| Standard Deviation | 5.32 |
| R2 | 0.01 |
| Beta | -0.04 |
| Alpha | -4.37 |

(1) Based upon quarterly returns over the last five years.

Figure 13-4

## PRIVATE INVESTMENT FUND

Distribution by Geographic Location at June 30, 2015
Based on Investments in Securities, at Value

| Region | $\%$ |
| :--- | ---: |
| Northeast (Excludes Connecticut) | $16.8 \%$ |
| International | $9.7 \%$ |
| West Coast | $21.6 \%$ |
| Liquidity Fund/Other Assets \& Liabilities ${ }^{(1)}$ | $6.0 \%$ |
| Southeast | $14.8 \%$ |
| Mid-Atlantic | $10.1 \%$ |
| MidWest | $7.2 \%$ |
| Southwest | $8.5 \%$ |
| Connecticut | $4.4 \%$ |
| Northwest | $0.9 \%$ |
| TOTAL | $100.00 \%$ |

(1) Includes the Liquidity Fund and other assets at the partnership level.
Figure 13-6

## PRIVATE INVESTMENT FUND

Distribution by Committed and Invested Capital As of June 30, 2015 (\$ in millions)


Figure 13-7


Figure 13-8


Figure 13-9

## PRIVATE INVESTMENT FUND

Ten Largest Holdings* at June 30, 2015

|  |  | Market |  |
| :--- | :--- | :--- | ---: |
| Partnership Name | Partnership Type | Value | $\%$ |
| FAIRVIEW CONSTITUTION III LP | Fund of Funds | $\$ 327,362,530$ | $11.80 \%$ |
| FAIRVIEW CONSTITUTION II LP | Fund of Funds | $146,774,529$ | $5.29 \%$ |
| STEPSTONE PIONEER CAPITAL II LP | Fund of Funds | $125,316,910$ | $4.52 \%$ |
| YUPAICA AMERICAN ALLIANCE FUND II LP | Buyout | $98,306,067$ | $3.55 \%$ |
| KKR 2006 FUND | Buyout | $96,483,216$ | $3.48 \%$ |
| FS EQUITY PARTNERS VI | Buyout | $89,653,148$ | $3.23 \%$ |
| WELSH,CARSON,ANDERSON + STOWE XI | Buyout | $80,513,106$ | $2.90 \%$ |
| FAIRVIEW CONSTITUTION IV LP | Fund of Funds | $75,076,266$ | $2.71 \%$ |
| CT EMERGING PRIVATE EQUITY | Fund of Funds | $74,483,436$ | $2.69 \%$ |
| THOMAS H LEE EQUITY FUND VI LP | Buyout | $\mathbf{7 3 , 6 0 9 , 1 1 1}$ | $2.65 \%$ |
| Top Ten |  | $\mathbf{\$ 1 , 1 8 7 , 5 7 8 , 3 1 9}$ | $\mathbf{4 2 . 8 2 \%}$ |

* A complete list of portfolio holdings is available upon request from the Office of the Treasurer, in accordance with the Connecticut Freedom of Information Act.

Figure 13-11
PRIVATE INVESTMENT FUND
Investment Advisors at June 30, 2015

| Investment Advisor | Net Asset Value | \% of <br> Fund | Investment Advisor | Net Asset Value | \% of Fund |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Buyout | \$1,166,370,582 | 42.05\% | International | 41,071,137 | 1.48\% |
| KKR Millennium Fund | 30,383,731 | 1.10\% | Compass Partners European Equity Fund | 658,564 | 0.02\% |
| Yucaipa American Alliance Fund II LP | 98,306,067 | 3.55\% | Gilbert Global Equity Partners | 38,190,064 | 1.38\% |
| Hicks, Muse Tate \& Furst Equity Fund III | 10,637,089 | 0.38\% | Pinebridge Global Emerging Markets Fund | 1,865,993 | 0.07\% |
| Thomas H. Lee Equity Fund VI | 73,609,111 | 2.65\% | Carlyle Asia Partners | 356,516 | 0.01\% |
| GENNX360 Capital Partners II | 6,153,687 | 0.22\% | Fund of Funds | 998,816,159 | 36.01\% |
| TA XI, L.P. | 68,540,156 | 2.47\% | The Constitution Liquidating Fund | 52,391,834 | 1.89\% |
| Charterhouse Equity Partners IV | 25,261,265 | 0.91\% | Landmark Private Equity Fund VIII | 12,313,008 | 0.44\% |
| DLJ Merchant Banking Fund II | 259,607 | 0.01\% | Landmark Equity Partners XV LP | 20,030,646 | 0.72\% |
| FS Equity Partners V | 23,069,976 | 0.83\% | CS/CT Cleantech Opp Fund | 12,931,899 | 0.47\% |
| FS Equity Partners VI | 89,653,148 | 3.23\% | CT Emerging Pvt Equity | 74,483,436 | 2.69\% |
| JFL Equity Investors III, LP | 30,442,771 | 1.10\% | Fairview Constitution III | 327,362,530 | 11.80\% |
| Wellspring Capital Partners V | 47,313,462 | 1.71\% | Lexington Capital Partners II | 619,154 | 0.02\% |
| Candover 2008 Fund | 8,668,840 | 0.31\% | Stepstone Pioneer Capital I LP | 31,944,225 | 1.15\% |
| Leeds Equity Partners V LP | 26,682,696 | 0.96\% | Stepstone Pioneer Capital II LP | 125,316,910 | 4.52\% |
| Welsh Carson Anderson \& Stowe XI | 80,513,106 | 2.90\% | Fairview Constitution II LP | 146,774,529 | 5.29\% |
| AIG Healthcare Partners LP | 6,315,146 | 0.23\% | Fairview Constitution IV LP | 75,076,266 | 2.71\% |
| AIG Altaris Health Partners II | 30,619,140 | 1.11\% | Connecticut Horizon Legacy | 8,348,763 | 0.30\% |
| AIG Altaris Health Partners III | 8,949,698 | 0.32\% | Landmark Equity Partners XIV LP | 56,562,505 | 2.04\% |
| Welsh Carson Anderson \& Stowe X LP | 53,050,806 | 1.91\% | JP Morgan Nutmeg I | 54,660,454 | 1.97\% |
| Court Square Capital Partners II | 69,229,554 | 2.50\% | Special Situations | 319,131,886 | 11.50\% |
| Ethos Private Equity Fund V | 21,416,854 | 0.77\% | Welsh Carson Anderson \& Stowe Capital Partners II | III 8,793,688 | 0.32\% |
| Boston Ventures VII | 52,223,901 | 1.88\% | Levine Leichtman Capital Partners | 25,051,874 | 0.90\% |
| KKR 2006 Fund | 96,483,216 | 3.48\% | Levine Leichtman Capital Partners IV LP | 35,835,153 | 1.29\% |
| Nogales Investors Fund II | 6,871,023 | 0.25\% | Pegasus Partners IV | 50,373,739 | 1.82\% |
| ICV Partners II LP | 28,322,690 | 1.02\% | Pegasus Partners V | 36,585,615 | 1.32\% |
| Vista Equity Partners Fund III | 21,525,653 | 0.78\% | WLR Recovery Fund IV | 30,570,958 | 1.10\% |
| Vista Equity Partners Fund IV | 73,567,483 | 2.65\% | KPS Special Situations Fund II | 484,536 | 0.01\% |
| RFE Investments Partners VIII | 22,030,848 | 0.79\% | Clearlake Capital Partners III LP | 34,064,577 | 1.23\% |
| RFE Investment Partners VII | 40,612,924 | 1.46\% | Castlelake II LP | 71,638,307 | 2.58\% |
| Court Square Capital Partners III LP | 15,656,934 | 0.57\% | Apollo Investment Fund VIII LP | 25,733,439 | 0.93\% |
| Venture Capital | 10,796,528 | 0.39\% | Other ${ }^{(1)}$ | 168,484,003 | 6.07\% |
| Crescendo III | 1,156,486 | 0.04\% | TOTAL PIF \$2, | 2,774,091,648 | 100.00\% |
| Syndicated Communications | 9,640,042 | 0.35\% |  |  |  |
| Mezzanine | 69,421,353 | 2.50\% |  |  |  |
| SW Pelham Fund | 998,289 | 0.04\% |  |  |  |
| Audax Mezzanine III Limited Partnership | 39,735,041 | 1.43\% |  |  |  |
| GarMark Partners II LP | 28,688,023 | 1.03\% |  |  |  |

(1) Other includes partnerships with nonmaterial balances, as well as moneys earmarked for distribution to participants, reinvestment, expenses and other net assets.

CONNECTICUT STATE TREASURER'S COMBINED INVESTMENT FUNDS

## SCHEDULE OF INVESTMENT ADVISORS AND FEES IN EXCESS OF \$5,000 ${ }^{(1)}$ FOR PERIODS ENDED JUNE 30

| Name of Firm | Description of Services | Aggregate Compensation Paid in Fiscal Year: |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 2015 | 2014 | 2013 | 2012 | 2011 |
| INVESTMENT ADVISORY SERVICES |  |  |  |  |  |  |
| Domestic Equity Investment Advisory Services |  |  |  |  |  |  |
| AXA Rosenberg Institutional Equity Mgmt | Equity Advisor | - | - | - |  | 279,285 |
| Barclay's Global Investors | Equity Advisor | - | - | - | - | 222,037 |
| Bivium Capital Partners, LLC | Equity Advisor | 2,694,595 | 2,516,721 | 2,018,418 | 1,883,917 | 1,653,052 |
| Capital Prospects LLC | Equity Advisor | 1,614,485 | 1,394,404 | 1,168,860 | 1,084,308 | 986,297 |
| FIS Group Inc. | Equity Advisor | 1,404,121 | 1,235,726 | 1,057,530 | 979,549 | 909,156 |
| Frontier Capital Management Co., LLC | Equity Advisor | 2,375,113 | 2,503,435 | 1,932,133 | 1,794,233 | 363,922 |
| State Street Global Advisors | Equity Advisor | 290,981 | 277,284 | 241,823 | 232,397 | 162,753 |
| T. Rowe Price Associates | Equity Advisor | 4,639,030 | 4,159,025 | 2,803,150 | 2,609,349 | 2,397,474 |
| Total Equity Advisor Compensation |  | \$13,018,325 | \$12,086,595 | \$9,221,914 | \$8,583,753 | \$6,973,976 |


| Core Fixed Income Investment Advisory Services |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | ---: | ---: | ---: |
| Blackrock Financial Management | Core Income Advisor | 937,708 | 883,078 | $1,491,702$ | 543,090 | $1,082,785$ |
| Blackrock Investment(Transition) Management | Core Income Advisor | - | - | - | - | 218,818 |
| Goodwin Capital Advisors (Phoenix) | Core Income Advisor | 528,174 | 541,242 | 553,002 | 568,276 | 561,182 |
| Progress Investment Management | Core Income Advisor | 702,682 | 884,470 | 931,821 | 903,128 | 856,501 |
| State Street Global Advisors | Core Income Advisor | 69,745 | 112,242 | 214,871 | 244,219 | 254,916 |
| Wellington Asset Management | Core Income Advisor | 710,691 | 690,810 | 667,881 | 642,278 | 783,754 |
| Total Fixed Income Advisor Compensation |  | $\$ 2,949,000$ | $\$ 3,111,842$ | $\$ 3,859,277$ | $\$ 2,900,991$ | $\$ 3,757,956$ |

Inflation Linked Bond Investment Advisory Services

| Blackrock Financial Management | Inflation Income Advisor | 118,909 | - | - |  | - |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Brown Brothers Harriman \& Co. | Inflation Income Advisor | 431,260 | 305,547 | 523,710 | 368,991 | 544,320 |
| Colchester Global Investors Limited | Inflation Income Advisor | 506,922 | - | - |  | - |
| Hartford Investment Management Co. | Inflation Income Advisor | 108,467 | 544,511 | 350,428 | 528,760 | 425,952 |
| New Century Advisors, LLC | Inflation Income Advisor | 139,971 | - |  |  |  |
| Total Fixed Income Advisor Compensation |  | \$1,305,529 | \$850,058 | \$874,138 | \$897,751 | \$970,272 |
|  |  |  |  |  |  |  |
| Emerging Market Debt Investment Advisory Services |  |  |  |  |  |  |
| Blackrock Institutional Trust Co. | Transition Manager | 52,003 | 56,855 | - | - | - |
| ING Investment Management Co. | Emerging Market Advisor | - | 268,795 | 927,229 | 1,468,565 | 1,144,741 |
| Pyramis Global Advisors | Emerging Market Advisor | 680,028 | 879,258 | 864,929 | 783,732 | 1,014,829 |
| Stone Harbor Investment Partners | Emerging Market Advisor | 2,447,830 | 3,163,978 | 1,079,389 | 1,307,511 | 1,244,074 |
| UBS Global Asset Management Co. | Emerging Market Advisor | 1,282,723 | 1,090,999 | 1,076,458 | 959,189 | 1,164,501 |
| Total Fixed Income Advisor Compensation |  | \$4,462,584 | \$5,459,885 | \$3,948,005 | \$4,518,997 | \$4,568,145 |


| High Yield Debt Investment Advisory Services |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | ---: | ---: | ---: | ---: |
| Loomis Sayles \& Co., Inc. | High Yield Income Advisor | $1,209,408$ | 988,610 | 539,133 | 449,946 | 451,485 |  |
| Oaktree Capital Management | High Yield Income Advisor | $1,449,222$ | $1,374,108$ | 902,744 | 700,256 | 692,218 |  |
| Shenkman Capital Management | High Yield Income Advisor | $1,177,774$ | $1,119,296$ | 956,125 | 909,998 | 903,707 |  |
| Stone Harbor Investment Partners | High Yield Income Advisor | $1,180,281$ | 949,575 | 335,754 | 447,972 | 446,607 |  |
| Total Fixed Income Advisor Compensation |  | $\$ 5,016,685$ | $\$ 4,431,589$ | $\$ 2,733,756$ | $\$ 2,508,172$ | $\$ 2,494,017$ |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Liquidity Fund Advisory Services |  |  |  |  |  |  |  |
| Ambassador Capital Management | Liquidity Fund Advisor | 120,951 | 278,995 | 281,069 | 253,147 | 149,891 |  |
| Colchester Global Investors | Liquidity Fund Advisor | 723,758 | 732,857 | 744,008 | 665,944 | 453,695 |  |
| Lazard Asset Management | Liquidity Fund Advisor | $2,327,952$ | $3,168,731$ | $3,477,697$ | $3,315,579$ | $2,102,854$ |  |
| Pacific Investment Management | Liquidity Fund Advisor | 493,516 | 405,103 | 405,694 | 389,382 | 351,078 |  |
| Payden \& Rygel | Liquidity Fund Advisor | 302,587 | 212,808 | 216,555 | 201,520 | 150,388 |  |
| State Street Global Advisors | Liquidity Fund Advisor | 198,034 | 239,185 | 126,595 | 130,640 | 264,981 |  |
| Total Liquidity Fund Advisor Compensation |  | $\$ 4,166,798$ | $\$ 5,037,679$ | $\$ 5,251,618$ | $\$ 4,956,212$ | $\$ 3,472,887$ |  |

## SCHEDULE OF INVESTMENT ADVISORS AND FEES IN EXCESS OF \$5,000 ${ }^{(1)}$ FOR PERIODS ENDED JUNE 30 (Continued)

| Name of Firm | Description of Services | 2015 | Aggregate Compensation Paid in Fiscal Year: |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 2014 | 2013 | 2012 | 2011 |
| Developed Market International Equity Investment Advisory Services |  |  |  |  |  |  |
| Acadian Asset Management | Intrntl Equity Advisor | 2,248,085 | 2,000,815 | 1,415,573 | 1,117,423 | 1,084,538 |
| AQR Capital Management, LLC | Intrntl Equity Advisor | 3,376,598 | 3,241,015 | 2,803,762 | 2,926,336 | 2,938,960 |
| Artio Global Asset Management | Intrntl Equity Advisor |  | - |  | 1,192,928 | 2,198,991 |
| Blackrock Financial Management (Merrill Lynch) | )Intrntl Equity Advisor |  | - | 595,887 | 948,327 | 661,189 |
| Dimensional Fund Advisors | Intrntl Equity Advisor | 1,761,874 | 1,790,174 | 1,571,559 | 1,623,569 | 1,593,995 |
| First Quadrant LP | Intrntl Equity Advisor | 2,686,199 | - | - |  |  |
| Grantham, Mayo, Van Otterloo \& Co. | Intrntl Equity Advisor | 2,521,994 | 2,516,179 | 2,783,996 | 2,863,396 | 2,779,799 |
| Invesco Global Asset Management | Intrntl Equity Advisor |  | - | 301,479 | 898,034 | 692,071 |
| MFS Institutional Advisors | Intrntl Equity Advisor | 2,535,266 | 2,401,538 | 2,137,031 | 2,053,695 | 1,990,305 |
| Pareto Partners (Bank of New York) | Intrntl Equity Advisor | 931,828 | 2,729,445 | 2,481,860 | 2,491,470 | 2,452,593 |
| Progress Investment Management | Intrntl Equity Advisor | 861,246 | 805,075 | 709,924 | 718,391 | 748,782 |
| Pyramis Invtmnt Global Adv Trust (Fidelity) | Intrntl Equity Advisor | - | - | 561,305 | 1,301,082 | 1,595,583 |
| Schroder Investment Management | Intrntl Equity Advisor | 1,652,005 | 1,652,004 | 1,498,612 | 1,550,463 | 1,475,062 |
| State Street Global Advisors | Intrntl Equity Advisor | 1,102,818 | 1,036,286 | 777,213 | 479,389 | 439,594 |
| William Blair \& Comapny | Intrntl Equity Advisor | 2,077,967 | 2,694,182 | 2,284,387 | 2,205,475 | 2,032,604 |
| Total International Equity Advisor Compensation |  | \$21,755,880 | \$20,866,713 | \$19,922,588 | \$22,369,978\$ | 22,684,066 |

Emerging Market International Equity Investment Advisory Services

|  | IntrntI Equity Advisor | $3,887,575$ | $3,845,010$ | $3,796,552$ | $3,477,681$ | $3,380,056$ |
| :--- | :--- | ---: | ---: | ---: | ---: | ---: |
| Aberdeen Asset Management | - | 635,018 | $4,392,678$ | $4,524,091$ | $4,106,071$ |  |
| Ashmore Emerging Markets Management LLC | IntrntI Equity Advisor |  | $-9,4,462$ | $5,787,770$ | $4,937,959$ | $4,953,038$ |
| Grantham, Mayo, Van Otterloo \& Co. | IntrntI Equity Advisor | $5,9045,690$ |  |  |  |  |
| Schroder Investment Management | IntrntI Equity Advisor | $5,862,278$ | $5,227,618$ | $3,231,449$ | $3,021,727$ | $3,034,520$ |
| Total International Equity Advisor Compensation | $\$ 15,654,315$ | $\$ 15,495,416$ | $\$ 16,358,638$ | $\$ 15,976,537 \$ 15,456,337$ |  |  |


| Alternative Investment Advisory Services ${ }^{(2)}$ |  |  |  |  |  |  |
| :--- | :--- | ---: | ---: | ---: | ---: | ---: |
| ArcLight Energy Partner Fund V | Alternative Inv Advisor | 220,687 | 723,344 | 728,883 | $1,076,537$ | - |
| Energy Fund XV | Alternative Inv Advisor | - | - | 154,341 | 533,629 | - |
| TCW-EIG Alternative Investment | Alternative Inv Advisor | - | - | - | - | 666,725 |
| Total Alternative Investment Advisor Compensation | $\$ 220,687$ | $\$ 723,344$ | $\$ 883,224$ | $\$ 1,610,166$ | $\$ 666,725$ |  |

## Real Estate Investment Advisory Services ${ }^{(2)}$

| AEW Capital Management, L.P. | Real Estate Advisor | - | - | - | 914,325 | 1,132,993 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| American Realty Advisors | Real Estate Advisor | 471,063 | 240,685 | 125,606 | - | - |
| Apollo Real Estate Investment Fund III | Real Estate Advisor | - | - |  |  | 29,749 |
| Blackstone Real Estate Partners VI | Real Estate Advisor | 946,984 | 1,173,852 | 1,278,613 | 1,367,098 | 1,499,801 |
| Blackstone Real Estate Partners Europe III | Real Estate Advisor | 532,577 | 654,338 | 750,000 | 750,000 | 750,000 |
| Blackstone Real Estate Special Situations Fund II | Real Estate Advisor | 255,352 | 574,361 | 550,595 | - |  |
| Canyon Johnson Urban Fund III, LP | Real Estate Advisor | 318,809 | 608,590 | 675,658 | 921,875 | 1,437,500 |
| Cornerstone Patriot Fund LP | Real Estate Advisor | 1,611,267 | 881,306 | - |  |  |
| Cypress Realty Fund LP | Real Estate Advisor | 874,521 | 573,424 | - | - |  |
| Gerding Elden Fund Management LP | Real Estate Advisor | 337,500 | 725,548 | - | - |  |
| Hart Realty Advisors, Inc. | Real Estate Advisor | 864,000 | 947,345 | 1,111,617 | 276,300 |  |
| MacFarlane Urban Real Estate | Real Estate Advisor | - | - | 1,543,436 | 802,421 | 1,849,589 |
| RLJ Urban Lodging Fund III, LP | Real Estate Advisor |  |  | - |  | 426,176 |
| Rockwood Capital Partners V | Real Estate Advisor | - | - | - | - | 100,000 |
| Rockwood Capital Partners VII | Real Estate Advisor |  | 23,469 | 9,388 | 113,731 | 171,250 |
| Rockwood Capital Partners VIII | Real Estate Advisor | 18,775 | - | - | - |  |
| UBS Trumbull Property Growth \& Income Fund LP | Real Estate Advisor | 194,657 | - | - | - |  |
| UBS Trumbull Property Fund LP | Real Estate Advisor | 688,195 | - | - | - |  |
| UBS Trumbull Property Income Fund LP | Real Estate Advisor | 378,483 | - | - | - |  |
| Total Real Estate Advisor Compensation |  | \$7,192,183 | \$6,402,918 | \$6,044,913 | \$5,145,750 | \$7,397,058 |

CONNECTICUT STATE TREASURER'S COMBINED INVESTMENT FUNDS

## SCHEDULE OF INVESTMENT ADVISORS AND FEES IN EXCESS OF \$5,000 ${ }^{(1)}$ FOR PERIODS ENDED JUNE 30 (Continued)

| Name of Firm Description of Services | Aggregate Compensation Paid in Fiscal Year: |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2015 | 2014 | 2013 | 2012 | 2011 |
| Commercial Mortgage Investment Advisory Services ${ }^{(2)}$ |  |  |  |  |  |
| AEW Capital Management, L.P. Comm Mortgage Advisor | - | - | 6,250 | 25,000 | 25,000 |
| Total Commercial Mortgage Advisor Compensation | \$- | \$- | \$6,250 | \$25,000 | \$25,000 |

Private Investment Advisory Services ${ }^{(2)}$
Altaris Health Partners, LP (AIG Altaris) Altaris Healthcare Partners II, LP (AIG Altaris) Altaris Healthcare Partners III, LP (AIG Altaris) AIG Global Emerging Mkts Fund LP Apollo Advisors VIII, LP Audax Mezzanine Fund III, LP Boston Venture Capital Partners VII, LP Carlyle Asia Partners LP
Clearlake Capital Partners III, LP Compass Partners European Equity Fund LP Constitution Liquidating Fund LP (Crossroads) Courthouse Square Capital II Partners Courthouse Square Capital III Partners
CT Horizon Legacy Fund, LP
Ethos Capital Fund V, LP
Fairview Constitution II, LP
Fairview Constitution III, LP
Fairview Constitution IV, LP
FS Equity Partners V LP
FS Equity Partners VI LP
Garmark Partners, II LP
GCM Grosverno-CT\Cleantech Opp. Fund LP GenNx360 II LP
Goldman Sachs Private Equity Fund LP
Greenwich Street Capital Partners II LP
ICV Associates II LP
JFL Investors III, LP
KKR 1996 Fund LP
KKR Millenium Fund LP
KKR 2006 Fund LP
Leeds Equity Associates V LP
Levine Leichtman Capital Partners IV, LP
Levine Leichtman Capital Partners V, LP
Muller \& Monroe - CT Emerging

## Private Equity Funds-of-Funds

Nogales Investors II, LP
Nutmeg Opportunities Fund, LP
Pegasus Investors IV, LP
Pegasus Investors V, LP
REF Associates VII, LP
REF Associates VIII, LP
Snycom Partners V, LP
Stepstone Pioneer Capital Buyout Fund III, LP SW Pelham Fund II, LP
Thayer Equity Investors IV LP
Thomas H. Lee Equity Fund VI LP
Vista Equity Partners III, LP
Vista Equity Partners IV, LP
Wellspring Capital Partners III LP
Wellspring Capital Partners IV LP

Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor

Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor Private Inv Advisor

| 244,617 | 297,539 | 329,934 | 270,860 | 582,712 |
| :---: | :---: | :---: | :---: | :---: |
| 228,058 | 426,671 | 492,146 | 478,337 | 494,565 |
| 637,422 | 187,438 | - | - | - |
| - | - | - | 51,468 | 279,708 |
| 1,395,443 | 1,255,435 | - | - | - |
| 910,911 | 429,352 | 743,313 | 904,984 | 527,283 |
|  | - | 719,424 | 750,000 | 750,000 |
| 319,977 | - | - | - | - |
| 327,653 | 262,189 | 534,459 | - | - |
| - | - | - | 379,517 | - |
| 225,385 | 178,022 | 182,005 | 389,972 | 354,945 |
| 215,650 | 323,776 | 258,832 | 555,244 | 904,094 |
| 400,330 | - |  |  |  |
| 50,000 | 50,000 | 50,000 | 50,000 | 50,000 |
| 304,550 | 489,108 | 370,980 | 525,989 | 1,292,704 |
| 1,050,000 | 700,000 | 650,000 | 1,950,000 | 1,300,000 |
| 2,475,000 | 1,950,000 | 975,000 | 2,925,000 | 2,400,000 |
| 1,800,000 | 1,200,000 | 1,200,000 | 600,000 | - |
| 72,093 | 69,592 | 77,240 | 128,464 | 198,323 |
| 244,2049 | 1,125,000 | 919,953 | 1,031,121 | 286,657 |
| 160,927 | 829,234 | 423,463 | 655,133 | 719,617 |
| 103,523 | 143,070 | 163,500 | 176,253 | 180,208 |
| 563,884 | 1,164,613 | - | - | - |
| - | 16,208 | - | 59,416 | 411,767 |
| - | - | 11,344 | - | - |
| - | - | - | 317,377 | 628,189 |
| 786,849 | 681,529 | 613,404 | 935,830 | - |
| - | 6,111 | - | - | - |
| - | - | - | - | 80,291 |
| 188,852 | 411,425 | - | 691,109 | 1,348,975 |
| 197,849 | 240,716 | 426,756 | 209,214 | 466,100 |
| 454,848 | 711,376 | 720,979 | 832,609 | 897,095 |
| 1,187,307 | 1,528,336 |  |  |  |
| 672,514 | 777,514 | 882,514 | 987,514 | 1,050,000 |
| 129,468 | 183,759 | 182,826 | 167,243 | 145,585 |
| 507,082 | 385,249 | 310,022 | 169,747 | 103,945 |
| 761,100 | 801,045 | 846,071 | 685,535 | 1,009,618 |
| 951,916 | 845,016 | 854,445 | 1,128,263 | - |
| - | 201,644 | 906,173 | 602,195 | 531,021 |
| 201,644 | 800,000 | 837,366 | 585,928 | - |
| 267,829 | 267,585 | 346,079 | 594,154 | 586,345 |
| 212,273 | - | - | - | - |
| - | - | - | 46,036 | 189,585 |
| - | - | - | - | 165,897 |
| - | - | 178,333 | 1,014,946 | 521,870 |
| - | 378,300 | 339,658 | 462,644 | 570,546 |
| 1,130,190 | 601,380 | 879,810 | 1,027,294 | - |
| - | - | - | - | 227,752 |
| - | - | - | 1,620,773 | - |

CONNECTICUT STATE TREASURER'S COMBINED INVESTMENT FUNDS
SCHEDULE OF INVESTMENT ADVISORS AND FEES IN EXCESS OF \$5,000 ${ }^{(1)}$ FOR PERIODS ENDED JUNE 30 (Continued)

| Name of Firm | Description of Services | Aggregate Compensation Paid in Fiscal Year: |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 2015 | 2014 | 2013 | 2012 | 2011 |
| Wellspring Capital Partners V LP | Private Inv Advisor | 1,058,343 | 1,153,261 | 1,096,538 |  | -- |
| WLR Recovery Associates IV, LP | Private Inv Advisor |  | - | - | - | 733,935 |
| Yucaipa American Alliance Fund LP | Private Inv Advisor | 493,989 | 1,216,979 | 609,788 | 958,484 | 968,697 |
| Total Private Investment Advisor Compensation |  | \$20,931,685 | \$22,288,472 | \$18,132,355 | \$24,918,653\$ | ,958,029 |
| TOTAL COMPENSATION TO INVESTMENT ADVISORS |  | \$96,673,671 | \$96,754,511 | \$87,236,676 | \$96,534,108\$ | ,424,468 |

## CUSTODY SERVICES

| Bank of New York Mellon | Custody of Assets | $3,378,513$ | 621,250 | - | - |  |
| :--- | :--- | ---: | ---: | ---: | ---: | ---: |
| State Street Bank \& Trust | Custody of Assets | - | $4,677,364$ | $2,216,866$ | $2,122,148$ | $2,222,533$ |
| TOTAL CUSTODY SERVICES COMPENSATION | $\$ 3,378,513$ | $\$ 5,295,614$ | $\$ 2,216,866$ | $\$ 2,122,148$ | $\$ 2,222,533$ |  |

(2) Investment management fees for the Alternative Investment Fund, the Private Investment Fund and the Real Estate Fund include capitalized fees and expensed fees. Capitalized fees are part of the cost of the investment and become a component of unrealized gain (loss). Capitalized fees are disclosed in Note 1 of the Combined Investment Funds Financial Statements. Expensed fees which are not part of the cost of the investment are recorded in the Statement of Operations. Not Included in the above amounts are those amounts that are netted. Netted amounts include credits and fees paid out of cash on hand at the partnership level. Netted amounts are disclosed in Note 1 of the Combined Investment Funds Financial Statements.

SCHEDULE OF BROKERAGE COMMISSIONS FOR THE FISCAL YEAR ENDED JUNE 30, 2015

| Broker Name | $\$$ Commission | Shares/ Par Value | Avg Comm | Broker Name | $\begin{gathered} \$ \\ \text { Commission } \end{gathered}$ | Shares/ <br> n Par Value | Avg Comm |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ABEL NOSER CORP, NEW YORK | 2,204.40 | 244,531.00 | 0.01 | CARNEGIE BANK AS, COPENHAGEN | 2,832.76 | 54,953.00 | 0.05 |
| ABG SEC AS (NORGE), FILIAL, STOCKHOLM | 1,063.52 | 22,343.00 | 0.05 | CARNEGIE SECS LTD, HELSINKI (CASFFIH1) | 963.31 | 27,175.00 | 0.04 |
| ABG SECS, OSLO | 4,394.83 | 192,260.00 | 0.02 | CASTLEOAK SEC/CANTOR FITZGERALD \& CO, NY | 160.80 | 5,360.00 | 0.03 |
| ABG SUNDAL COLLIER NORGE ASA, OSLO | 43.55 | 7,000.00 | 0.01 | CENTRAL DEPOSITORY, SINGAPORE | 1,336.76 | 1,227,600.00 | 0.00 |
| ABN AMRO ASIA LTD, HONG KONG | 1,210.81 | 710,000.00 | 0.00 | CHASE BK, LONDON | 1,025.64 | 40,199.00 | 0.03 |
| ABN AMRO CLEARING BANK N.V, AMSTERDAM | 264.91 | 16,500.00 | 0.02 | CHEEVERS \& CO. INC., CHICAGO | 9,035.80 | 360,463.00 | 0.03 |
| ABN AMRO MORGANS, BRISBANE | 52.51 | 119,017.00 | 0.00 | CHINA INTL CAP CORP HK SECS, HONG KONG | 8,657.36 | 4,756,544.00 | . 00 |
| AEGIS CAPITAL CORP, NEW YORK | 575.45 | 67,700.00 | 0.01 | CHINA INTL CAP CORP LTD, BEIJING | 618.66 | 207,000.00 | 0.00 |
| AGORA CTVM, RIO DE JANEIRO | 213.63 | 32,526.00 | 0.01 | CIBC WORLD MKTS INC, TORONTO | 5,194.11 | 148,511.00 | 0.03 |
| ALLEN \& COMPANY LLC, JERSEY CITY | 651.00 | 21,700.00 | 0.03 | CIBC WORLD MKTS INC, TORONTO (WGDB) | 622.34 | 36,900.00 | 0.02 |
| ANCORA SECURITIES INC, JERSEY CITY | 476.00 | 11,900.00 | 0.04 | CIMB GK SECURITIES PTE LTD, SINGAPORE | 239.87 | 9,000.00 | 0.03 |
| AUTONOMOUS RESEARCH US LP,NEW YORK | 688.00 | 17,200.00 | 0.04 | CIMB INVESTMENT BK BERHAD, KUALA LUMPUR | 6,831.91 | 16,725,242.00 | 0.00 |
| AVONDALE PARTNERS LLC, NASHVILLE | 762.56 | 24,289.00 | 0.03 | CIMB SECURITIES (AUSTRALIA) LTD, SYDNEY | 4,369.25 | 828,768.00 | 0.01 |
| B.RILEY \& CO.,LLC, LOS ANGELES | 2,577.22 | 85,774.00 | 0.03 | CIMB SECURITIES (USA), INC, NEW YORK | 9,019.55 | 1,311,631.00 | 0.01 |
| BAADER WERTPAPIERHANDELSBANK, UNTERSCHLE | 1,181.04 | 19,971.00 | 0.06 | CIMB SECURITIES LTD., KOREA BRANCH | 2,430.96 | 90,245.00 | 0.03 |
| BAIRD, ROBERT W \& CO INC, MILWAUKEE | 27,319.24 | 779,557.00 | 0.04 | CITIBANK (COR), NEW YORK | 5,245.17 | 234,503.00 | 0.02 |
| BANCO BTG PACTUAL SA, RIO DE JANEIRO | 4,856.65 | 573,350.00 | 0.01 | CITIBANK BUDAPEST RT, BUDAPEST | 1,594.49 | 41,646.00 | 0.04 |
| BANCO DE INVESTIMENTUS GARATIA | 6,264.23 | 657,859.00 | 0.01 | CITIBANK LTD, MELBOURNE | 1,026.38 | 172,030.00 | 0.01 |
| BANCO ITAU S.A., NEW YORK | 6,557.10 | 368,061.00 | 0.02 | CITIBANK NA, LONDON | 362.74 | 19,490.00 | 0.02 |
| BANCO ITAU, SAO PAULO | 7,877.11 | 632,878.00 | 0.01 | CITIBANK NY (MER) | 8,119.96 | 866,121.00 | 0.01 |
| BANCO SANTANDER MEXICANO, MEXICIO | 345.06 | 52,700.00 | 0.01 | CITIBANK, BUDAPEST | 223.95 | 9,266.00 | 0.02 |
| BANCO SANTANDER, NEW YORK | 43,260.76 | 29,157,136.00 | 0.00 | CITIBANK, NY | 646.96 | 639,300,000.00 | 0.00 |
| BANK J VONTOBEL \& CO LTD, ZURICH | 5,258.73 | 60,685.00 | 0.09 | CITIC CAPITAL SEC, HONG KONG | 1,722.68 | 1,227,500.00 | 0.00 |
| BANK OF CHINA GROUP SECS LTD, HONG KONG | 631.44 | 769,000.00 | 0.00 | CITIGROUP GBL MKTS INC, NEW YORK | 98,479.43 | 5,131,685.00 | 0.02 |
| BANQUE PARIBAS, FRANKFURT | 677.92 | 22,593.00 | 0.03 | CITIGROUP GBL MKTS SINGAPORE SEC PVT LTD | 362.98 | 352,100.00 | 0.00 |
| BANQUE PARIBAS, PARIS | 886.28 | 7,260.00 | 0.12 | CITIGROUP GBL MKTS/SALOMON, NEW YORK | 58,610.64 | 19,791,097.00 | 0.00 |
| BARCLAYS BK PLC, NEW YORK | 14,341.51 | 595,396.00 | 0.02 | CITIGROUP GLOBAL MARKETS LTD, LONDON | 238,435.88 | 20,044,134.00 | 0.01 |
| BARCLAYS CAPITAL INC./LE, NEW JERSEY | 809.00 | 70,300.00 | 0.01 | CLEARSTREAM BK, LUXEMBOURG (CEDELULL) | 1,054.00 | 82,429.00 | 0.01 |
| BARCLAYS CAPITAL INC, JERSEY CITY | 526.05 | 20,410.00 | 0.03 | CLSA AUSTRALIA PTY LTD, SYDNEY | 865.30 | 358,985.00 | 0.00 |
| BARCLAYS CAPITAL INC, NEW YORK | 1,429.89 | 32,769.00 | 0.04 | COMMERZBANK AG, LONDON | 2,604.73 | 46,216.00 | 0.06 |
| BARCLAYS CAPITAL LE, JERSEY CITY | 26,259.31 | 1,083,939.00 | 0.02 | COMMERZBANK CAPITAL MARKETS CORP, NY | 180.00 | 6,000.00 | 0.03 |
| BARCLAYS CAPITAL SEC LTD, SEOUL BRANCH | 1,344.38 | 19,332.00 | 0.07 | COMPASS POINT RESEARCH \& TR, JERSEY CITY | 4,192.46 | 122,443.00 | 0.03 |
| BARCLAYS CAPITAL, LONDON (BARCGB33) | 100,124.31 | 24,823,492.00 | 0.00 | CORMARK SECURITIES INC./CDS, TORONTO | 3,054.16 | 90,556.00 | 0.03 |
| BARCLAYS CAPITAL, NEW YORK | 2,793.45 | 181,920.00 | 0.02 | CORNERSTONE MACRO LLC, NEW YORK | 4,576.58 | 141,872.00 | 0.03 |
| BARRINGTON RESEARCH ASSOCIATES, BROOKLYN | 26.25 | 750.00 | 0.04 | COWEN AND COMPANY LLC, NEW YORK | 9,768.97 | 474,482.00 | 0.02 |
| BB\&T SECURITIES, LLC, RICHMOND | 2,041.89 | 60,083.00 | 0.03 | CRAIG HALLUM, MINNEAPOLIS | 13,711.46 | 569,410.00 | 0.02 |
| BENCHMARK COMPANY LLC, BROOKLYN | 289.68 | 9,656.00 | 0.03 | CREDIT AGRICOLE SECS USA INC, NEW YORK | 192.86 | 1,113,519.00 | 0.00 |
| BENCHMARK COMPANY, LLC, NEW YORK | 327.82 | 11,793.00 | 0.03 | CREDIT AGRICOLE USA, NEW YORK | 80.00 | 2,000.00 | 0.04 |
| BERENBERG GOSSLER \& CIE, HAMBURG | 15,882.60 | 305,302.00 | 0.05 | CREDIT LYONNAIS SEC, SEOUL | 1,116.13 | 12,502.00 | 0.09 |
| BERNSTEIN SANFORD C \& CO, NEW YORK | 35,173.21 | 2,772,078.00 | 0.01 | CREDIT LYONNAIS SECS (ASIA), HONG KONG | 32,919.77 | 23,071,216.00 | 0.00 |
| BLAYLOCK \& CO INC, JERSEY CITY | 1,570.96 | 52,174.00 | 0.03 | CREDIT LYONNAIS SECS, SINGAPORE | 15,512.58 | 6,834,599.00 | 0.00 |
| BLEY INVESTMENT GROUP, JERSEY CITY | 135.00 | 4,500.00 | 0.03 | CREDIT LYONNAIS SECURITIES ASIA,GUERNSEY | 462.28 | 415,200.00 | 0.00 |
| BLOOMBERG TRADEBOOK LLC, NEW YORK | 4,752.11 | 185,176.00 | 0.03 | CREDIT MUTUEL-CIC BANQUES, PARIS | 40.02 | 535.00 | 0.07 |
| BLOOMBERG TRADEBOOK, LONDON | 3,109.70 | 662,156.00 | 0.00 | CREDIT RESEARCH \& TRADING LLC, JERSEY | 17,041.69 | 536,971.00 | 0.03 |
| BLOOMBERG TRADEBOOK,NEW YORK | 14,467.23 | 367,629.00 | 0.04 | CREDIT SUISSE (EUROPE), LONDON | 53,002.33 | 3,576,276.00 | 0.01 |
| BMO CAPITAL MARKETS CORP, NEW YORK | 10,153.33 | 350,603.00 | 0.03 | CREDIT SUISSE (EUROPE), SEOUL | 42,306.55 | 515,404.00 | 0.08 |
| BNP PARIBAS PEREGRINE SEC LTD, HONG KONG | 30,978.93 | 26,876,996.00 | 0.00 | CREDIT SUISSE (HK) LIMITED, HONG KONG | 57,558.46 | 20,315,139.00 | 0.00 |
| BNP PARIBAS PRIME BROKERAGE, JERSEY CITY | 1,558.82 | 133,052.00 | 0.01 | CREDIT SUISSE EUROPE LTD, JERSEY CITY | 445.00 | 8,900.00 | 0.05 |
| BNP PARIBAS PRIME BROKERAGE,INC,NEW YORK | 548.00 | 17,500.00 | 0.03 | CREDIT SUISSE SECURITIES (USA) LLC, NY | 2,278.72 | 56,968.00 | 0.04 |
| BNP PARIBAS SEC SERVICES, MILANO | 64.21 | 7,125.00 | 0.01 | CREDIT SUISSE, NEW YORK (CSUS) | 198,388.01 | 62,973,764.00 | 0.00 |
| BNP PARIBAS SEC SVCS, LONDON (PARBGB2L) | 1,774.07 | 143,795.00 | 0.01 | CREDIT SUISSE, SAO PAULO | 11,352.92 | 1,604,795.00 | 0.01 |
| BNP PARIBAS SECURITIES SVCS, HONG KONG | 650.77 | 326,500.00 | 0.00 | CSI US INSTITUTIONAL DESK,NEW YORK | 5,036.00 | 157,200.00 | 0.03 |
| BNY BROKERAGE, NEW YORK | 1,247.97 | 41,599.00 | 0.03 | CUTTONE \& CO., INC., NEW YORK | 397.22 | 19,861.00 | 0.02 |
| BNY CONVERGEX EXECUTION SOL, NEW YORK | 7,024.64 | 592,539.00 | 0.01 | CUTTONE \& CO, JERSEY CITY | 98.00 | 4,900.00 | 0.02 |
| BNY CONVERGEX, NEW YORK | 17,515.12 | 531,579.00 | 0.03 | D CARNEGIEAB, STOCKHOLM | 14,245.25 | 755,381.00 | 0.02 |
| BOCI SECURITIES LIMITED, HONG KONG | 3,271.57 | 2,093,000.00 | 0.00 | DAEWOO SECURITIES CO LTD, SEOUL | 20,017.07 | 151,464.00 | 0.13 |
| BOE SECURITIES/BROADCORT, JERSEY CITY | 768.00 | 19,200.00 | 0.04 | DAIWA SECS (HK) LTD, HONG KONG | 14,169.02 | 5,266,649.00 | 0.00 |
| BRADESCO S/A CTVM, SAO PAULO | 2,355.10 | 168,600.00 | 0.01 | DAIWA SECS AMER INC, NEW YORK | 29,190.39 | 4,813,891.00 | 0.01 |
| BREAN CAPITAL LLC, JERSEY CITY | 4,602.68 | 385,296.00 | 0.01 | DAVIDSON(D A) \& CO INC, NEW YORK | 4,474.47 | 142,849.00 | 0.03 |
| BROCKHOUSE AND COOPER, MONTREAL | 880.59 | 74,441.00 | 0.01 | DAVY STOCKBROKERS, DUBLIN | 2,043.53 | 272,876.00 | 0.01 |
| BT SECURITIES COMPANY LTD, BANGKOK | 2,426.03 | 503,100.00 | 0.00 | DBS VICKERS (HONG KONG) LTD, HONG KONG | 5,347.78 | 1,517,100.00 | 0.00 |
| BTIG HONG KONG LTD, HONG KONG | 2,950.00 | 693,894.00 | 0.00 | DBS VICKERS SEC PTE LTD, SINGAPORE | 64.25 | 288,500.00 | 0.00 |
| BTIG LLC, SAN FRANCISCO | 10,288.15 | 694,886.00 | 0.01 | DEN DANSKE BANK, COPENHAGEN | 1,483.66 | 43,126.00 | 0.03 |
| BUCKINGHAM RESEARCH GRP INC, BROOKLYN | 244.00 | 6,100.00 | 0.04 | DEN NORSKE CREDITBANK, OSLO | 445.56 | 153,117.00 | 0.00 |
| CABRERA CAPITAL MARKETS, CHICAGO | 14,842.94 | 1,066,293.00 | 0.01 | DEUTSCHE BK ALEX BROWN, JERSEY CITY | 10.00 | 200.00 | 0.05 |
| CACEIS BANK DEUTSCHLAND, GERMANY | 1,603.30 | 9,014.00 | 0.18 | DEUTSCHE BK INTL EQ, LONDN (DEUTGB22EEQ) | 63,811.27 | 4,867,051.00 | 0.01 |
| CALYON SECURITIES, NEW YORK | 4,757.04 | 119,320.00 | 0.04 | DEUTSCHE BK SECS INC, NY (NWSCUS33) | 117,773.55 | 47,063,076.00 | 0.00 |
| CAMARA DE LEQUIDACAO E CUSTODIA, RIO | 210.09 | 19,700.00 | 0.01 | DEUTSCHE SEC ASIA LTD, HONG KONG | 18,868.38 | 4,444,473.00 | 0.00 |
| CANACCORD GENUITY CORP, MONTREAL (CCAM) | 3,048.97 | 85,688.00 | 0.04 | DEUTSCHE SEC ASIA LTD, SEOUL | 1.95 | 20.00 | 0.10 |
| CANACCORD GENUITY INC. NEY YORK | 7,397.43 | 206,756.00 | 0.04 | DNB NOR MARKETS CUSTODY, OSLO | 596.11 | 20,448.00 | 0.03 |
| CANACCORD GENUITY LTD, LONDON | 272.24 | 20,455.00 | 0.01 | DONGWON SECS, SEOUL | 0.61 | 7.00 | 0.09 |
| CANTOR CLEARING SERV, NEW YORK | 1,268.10 | 75,100.00 | 0.02 | DOUGHERTY COMPANY, BROOKLYN | 9,415.74 | 288,979.00 | 0.03 |
| CANTOR FITZGERALD \& CO INC, NEW YORK | 12,212.12 | 601,455.00 | 0.02 | DOWLING \& PARTNERS, JERSEY CITY | 18,613.00 | 584,300.00 | 0.03 |
| CANTOR FITZGERALD EUROPE, LONDON | 783.50 | 240,045.00 | 0.00 | DREXEL HAMILTON LLC, JERSEY CITY | 7,964.39 | 286,839.00 | 0.03 |
| CAP INSTL SVCS INC-EQUITIES, DALLAS | 1,051.07 | 32,813.00 | 0.03 | DUNDAS UNLU SECURITIES INC, ISTANBUL | 14,895.17 | 3,085,116.00 | 0.00 |
| CAPITAL ONE SOUTHCOAST INC, NEW ORLEANS | 525.00 | 17,500.00 | 0.03 | ERB EUROBANK SECURITIES S.A., ATHENS | 711.59 | 279,883.00 | 0.00 |
| CARNEGIE ASA, OSLO | 1,061.13 | 51,649.00 | 0.02 | ERSTE BK BEFEKTETESI RT, BUDAPEST | 2,869.43 | 155,580.00 | 0.02 |

## SCHEDULE OF BROKERAGE COMMISSIONS (Continued) FOR THE FISCAL YEAR ENDED JUNE 30, 2015

| Broker Name | $\$$ Commission | Shares/ Par Value | Avg Comm | Broker Name | $\$$ Commission | Shares/ <br> n Par Value | Avg Comm |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ERSTE BK SPARKASSEN, PRAGUE | 1,738.73 | 6,602.00 | 0.26 | JEFFERIES \& CO INC, NEW YORK | 86,308.74 | 18,544,946.00 | 0.00 |
| EUROCLEAR BANK SANV, BRUSSELS | 82.97 | 2,900.00 | 0.03 | JEFFERIES \& CO LTD, LONDON | 23,666.35 | 15,446,639.00 | 0.00 |
| EVERCORE GROUP LLC, JERSEY CITY | 65.00 | 1,300.00 | 0.05 | JMP SECURITIES, SAN FRANCISCO | 4,799.91 | 131,301.00 | 0.04 |
| EVERCORE, PITTSBURGH | 2,362.00 | 88,100.00 | 0.03 | JOHNSON RICE \& CO, NEW ORLEANS | 1,368.12 | 36,881.00 | 0.04 |
| EXANE, PARIS (EXANFRPP) | 18,018.99 | 1,681,598.00 | 0.01 | JONESTRADING INSTL SVCS LLC, WESTLAKE | 12,874.48 | 593,729.00 | 0.02 |
| FBR CAPITAL MARKETS \& CO, ARLINGTON | 2,725.61 | 79,264.00 | 0.03 | JP MORGAN CHASE BANK NA (GST), LONDON | 3,062.43 | 748,369.00 | 0.00 |
| FIDELITY CAP MKTS (DIV OF NFSC), BOSTON | 46.00 | 2,300.00 | 0.02 | JP MORGAN SECS (FAR EAST) LTD, SEOUL | 2,134.09 | 71,503.00 | 0.03 |
| FIDELITY CLEARING CANADA ULC, TOR (FIDC) | 2,317.26 | 78,431.00 | 0.03 | JP MORGAN SECS ASIA PACIFIC, HONG KONG | 26,349.12 | 24,016,534.00 | 0.00 |
| FIG PARTNERS LLC, ATLANTA | 2,951.19 | 111,252.00 | 0.03 | JP MORGAN SECS, SINGAPORE | 3,986.37 | 609,100.00 | 0.01 |
| FINANCIAL BROKERAGE GROUP (FBG), CAIRO | 1,157.85 | 97,751.00 | 0.01 | JPMORGAN SECURITIES INC, NEW YORK | 51,188.57 | 7,555,984.00 | 0.01 |
| FIRST ANALYSIS SECS CORP, CHICAGO | 1,419.82 | 45,694.00 | 0.03 | KAS BANK NV, AMSTERDAM | 360.47 | 21,529.00 | 0.02 |
| FIRST SOUTHWEST CO, DALLAS | 2,325.60 | 61,200.00 | 0.04 | KB SEC NV, ANTWERPEN | 23.31 | 1,772.00 | 0.01 |
| FLOW CORRETORA DE MERCADORIAS, SAO PAULO | 562.56 | 27,200.00 | 0.02 | KEB SALOMON SMITH BARNEY SECS, SEOUL | 1,551.85 | 31,735.00 | 0.05 |
| FOKUS BANK, TRONDHEIM | 55.63 | 51,177.00 | 0.00 | KEEFE BRUYETTE AND WOODS, JERSEY CITY | 10,035.14 | 286,128.00 | 0.04 |
| FORSYTH BARR, DUNEDIN | 39.75 | 7,377.00 | 0.01 | KEPLER EQUITIES, PARIS | 1,628.37 | 53,586.00 | 0.03 |
| FOX RIVER EXECUTION TECH,LLC,JERSEY CITY | 2,337.09 | 154,653.00 | 0.02 | KEYBANC CAPITAL MARKETS INC, JERSEY CITY | 11,462.40 | 330,233.00 | 0.03 |
| FRANK RUSSELL SEC INC, NEW YORK | 267.65 | 9,775.00 | 0.03 | KEYBANC CAPITAL MARKETS INC, NEW YORK | 5,201.64 | 148,339.00 | 0.04 |
| FREIMARK BLAIR \& CO INC/BCC CLRG, NJ | 3,114.14 | 197,616.00 | 0.02 | KIM ENG SEC LTD, HONG KONG | 410.09 | 93,175.00 | 0.00 |
| G K GOH OMETRACO, JAKARTA | 496.19 | 1,294,900.00 | 0.00 | KING (CL) \& ASSOCIATES, ALBANY | 26,873.57 | 808,771.00 | 0.03 |
| G-TRADE SERVICES LTD, HAMILTON | 8,643.04 | 717,125.00 | 0.01 | KNIGHT CLEARING SERVICES LLC, JERSEY CIT | 1,283.40 | 96,800.00 | 0.01 |
| GABELLI \& COMPANY, JERSEY CITY | 372.00 | 12,400.00 | 0.03 | KNIGHT DIRECT LLC, JERSEY CITY | 71.88 | 28,752.00 | 0.00 |
| GARBAN CORPORATES, INC, JERSEY CITY | 86.00 | 4,300.00 | 0.02 | KNIGHT EQUITY MARKETS L.P.,JERSEY CITY | 8,754.41 | 523,139.00 | 0.02 |
| GK GOH SECURITIES | 10,611.74 | 4,626,713.00 | 0.00 | KOREA INVESTMENT AND SEC CO.LTD,SEOUL | 9,624.67 | 95,293.00 | 0.10 |
| GLOBAL HUNTER SEC. LLC, NEW ORLEANS | 27.30 | 780.00 | 0.04 | LADENBURG THALMAN \& CO, WEEHAWKEN | 203.35 | 5,810.00 | 0.04 |
| GLOBAL HUNTER SECURITIES LTD,JERSEY | 553.99 | 48,049.00 | 0.01 | LARRAIN VIAL, SANTIAGO | 75.92 | 901.00 | 0.08 |
| GMP SECURITIES, LLC, NEW YORK | 1,395.00 | 46,500.00 | 0.03 | LAZARD CAPITAL MARKETS LLC, JERSEY CITY | 36.00 | 1,800.00 | 0.02 |
| GOLDMAN SACHS \& CO, NY | 261,090.70 | 61,893,446.00 | 0.00 | LEERINK SWANN \& CO, JERSEY CITY | 2,030.04 | 61,851.00 | 0.03 |
| GOLDMAN SACHS ASIA SEC LTD, HONG KONG | 1,363.59 | 1,624,749.00 | 0.00 | LIBERUM CAPITAL INC, NEW YORK | 753.62 | 127,844.00 | 0.01 |
| GOLDMAN SACHS DO BRASIL, SAO PAULO | 13,037.93 | 2,143,020.00 | 0.01 | LIQUIDNET ASIA LTD, HONG KONG | 2,479.41 | 1,622,700.00 | 0.00 |
| GOLDMAN SACHS EXECUTION \& CLEARING, NY | 37,468.69 | 1,886,482.00 | 0.02 | LIQUIDNET AUSTRALIA PTY LTD, SYDNEY | 247.75 | 81,660.00 | 0.00 |
| GOLDMAN SACHS INTL, LONDON (GSILGB2X) | 66,716.39 | 9,853,192.00 | 0.01 | LIQUIDNET CANADA INC, TORONTO | 3,503.01 | 201,459.00 | 0.02 |
| GOLDMAN SACHS INTL, TORONTO (GSCI) | 46.77 | 1,300.00 | 0.04 | LIQUIDNET INC, BROOKLYN | 24,748.17 | 1,612,103.00 | 0.02 |
| GOODBODY STOCKBROKERS, DUBLIN | 2,487.73 | 1,077,630.04 | 0.00 | LONGBOW SECURITIES LLC, JERSEY CITY | 1,017.78 | 28,426.00 | 0.04 |
| GORDON HASKETT CAP CORP, NJ | 44.00 | 2,200.00 | 0.02 | LOOP CAP MKTS LLC, CHICAGO | 71.12 | 10,745.00 | 0.01 |
| GREAT PACIFIC SECS INC, CALIFORNIA | 6,953.56 | 319,855.00 | 0.02 | LOOP CAPITAL MARKETS LLC, JERSEY CITY | 809.51 | 69,580.00 | 0.01 |
| GREEN STREET ADVISORS, JERSEY CITY | 40.00 | 1,000.00 | 0.04 | LOOP CAPITAL MARKETS, JERSEY CITY | 53,954.96 | 2,950,341.00 | 0.02 |
| GUGGENHEIM CAPITAL MKT LLC, JERSEY CITY | 5,444.65 | 173,855.00 | 0.03 | M RAMSEY KING SECURITIES INC, BROOKLYN | 21,747.58 | 749,998.00 | 0.03 |
| GUZMAN \& COMPANY, CORAL GABLES | 1,846.00 | 66,100.00 | 0.03 | MACQUARIE BANK LIMITED, SYDNEY | 755.47 | 555,266.00 | 0.00 |
| HANWHA SECS CO LTD, SEOUL | 759.68 | 33,312.00 | 0.02 | MACQUARIE BANK LTD, HONG KONG | 37,537.26 | 31,868,796.00 | 0.00 |
| HC ISTANBUL MENKUL DEGERLER, ISTANBUL | 19,812.70 | 3,080,223.00 | 0.01 | MACQUARIE CAPITAL (USA) INC., NEW YORK | 10,839.35 | 1,409,228.00 | 0.01 |
| HONG KONG \& SHANGHAI BKG CORP, HONG KONG | 6,225.28 | 3,486,800.00 | 0.00 | MACQUARIE CAPITAL LTD, LONDON | 1,443.30 | 377,628.00 | 0.00 |
| HSBC BANK PLC (MIDLAND BK)(JAC), LONDON | 71,698.18 | 8,183,401.00 | 0.01 | MACQUARIE EQUITIES LTD, SYDNEY | 1,178.68 | 68,259.00 | 0.02 |
| HSBC BROKERAGE (USA) INC., NEW YORK | 6,118.25 | 227,300.00 | 0.03 | MACQUARIE SECS (SINGAPORE), SINGAPORE | 1,569.25 | 556,000.00 | 0.00 |
| HSBC JAMES CAPEL, SEOUL | 2,168.62 | 21,449.00 | 0.10 | MACQUARIE SECURITIES LIMITED, HONG KONG | 16.99 | 16,600.00 | 0.00 |
| HSBC SECS INC, NEW YORK | 32,915.05 | 4,443,974.00 | 0.01 | MACQUARIE SECURITIES LTD, AUCKLAND | 1,241.11 | 252,568.00 | 0.00 |
| HSBC SECURITIES (USA) INC, NEW YORK | 141.00 | 4,700.00 | 0.03 | MACQUARIE SECURITIES LTD, SEOUL | 9,534.87 | 62,473.00 | 0.15 |
| HSBC, (ALL HK OFFICES \& HEAD OFFICE), HK | 2,618.32 | 2,738,400.00 | 0.00 | MACQUARIE SECURITIES(USA)INC JERSEY CITY | 3,489.88 | 160,943.00 | 0.02 |
| ICBC FINCL SVCS, NEW YORK | 107.95 | 12,700.00 | 0.01 | MAINFIRST BANK AG,FRANKFURT AM MAIN | 4,035.69 | 30,555.00 | 0.13 |
| ICHIYOSHI SEC CO LTD, TOKYO | 604.34 | 27,600.00 | 0.02 | MAXIM GROUP, JERSEY CITY | 10.00 | 200.00 | 0.05 |
| INSTINET AUSTRALIA CLEARING SERV, SYDNEY | 2,616.72 | 4,300,541.00 | 0.00 | MEDIOBANCA SPA, MILANO | 44.16 | 1,817.00 | 0.02 |
| INSTINET CANADA, TORONTO | 58.10 | 9,500.00 | 0.01 | MERIDIAN EQUITY PARTNERS, NEW YORK | 1,723.59 | 114,769.00 | 0.02 |
| INSTINET CORP, NEW YORK | 3,793.88 | 1,147,186.00 | 0.00 | MERLIN SECURITIES LLC, JERSEY CITY | 1,899.68 | 243,703.00 | 0.01 |
| Instinet Corp, NY | 45,657.23 | 3,114,562.00 | 0.01 | MERRILL LYNCH (SINGAPORE) PTE LTD | 208.82 | 237,000.00 | 0.00 |
| INSTINET EUROPE LIMITED, LONDON | 117,332.35 | 42,185,763.00 | 0.00 | MERRILL LYNCH \& CO INC ATLAS GLOBAL, NY | 6,737.55 | 405,714.00 | 0.02 |
| INSTINET PACIFIC LTD, HONG KONG | 73,916.83 | 35,541,930.00 | 0.00 | MERRILL LYNCH GILTS LTD, LONDON | 43,573.96 | 12,051,027.00 | 0.00 |
| INSTINET, SINGAPORE | 1,021.81 | 1,698,226.00 | 0.00 | MERRILL LYNCH INTL LONDON EQUITIES | 314,827.43 201 | 201,212,165.00 | 0.00 |
| INTERMONTE SIM S.P.A., MILANO | 360.74 | 31,780.00 | 0.01 | MERRILL LYNCH PIERCE FENNER \& SMITH, NY | 0.04 | 400.00 | 0.00 |
| INVESTEC HENDERSON CROSTHWAITE,LONDON | 6,328.73 | 410,223.00 | 0.02 | MERRILL LYNCH PIERCE FENNER SMITH INC NY | 72,142.46 | 3,450,081.00 | 0.02 |
| INVESTEC SECURITIES (331), LONDON | 4,453.40 | 1,656,442.00 | 0.00 | MERRILL LYNCH PIERCE FENNER, WILMINGTON | 55,832.28 | 7,658,997.00 | 0.01 |
| INVESTMENT TECHNOLOGY GROUP LTD,DUBLIN | 46,007.92 | 11,528,964.00 | 0.00 | MERRILL LYNCH PROFESSIONAL CLRG, PURCHAS | 647.80 | 24,795.00 | 0.03 |
| INVESTMENT TECHNOLOGY GROUP, NEW YORK | 45,825.15 | 3,669,747.00 | 0.01 | MERRILL LYNCH SA CVTM, SAO PAULO | 2,422.00 | 264,193.00 | 0.01 |
| IPOPEMA SECURITIES S.A., WARSZAWA | 869.40 | 86,813.00 | 0.01 | MIRAE ASSET SECURITIES, SEOUL | 774.28 | 15,565.00 | 0.05 |
| ISI GROUP INC, NY | 20,451.85 | 614,689.00 | 0.03 | MISCHLER FINL/EQUITIES, CORONA DELMAR | 15,188.50 | 648,017.00 | 0.02 |
| ITAU USA SECURITIES INC, NEW YORK | 3,388.61 | 244,367.00 | 0.01 | MITSUBISHI UFJ SEC (USA), NEW YORK | 6,481.29 | 144,400.00 | 0.04 |
| ITG AUSTRALIA LTD, MELBOURNE | 1,745.25 | 2,378,385.00 | 0.00 | MITSUBISHI UFJ SECS INTL PLC, LONDON | 1,888.67 | 130,200.00 | 0.01 |
| ITG CANADA CORP, TORONTO | 411.71 | 23,600.00 | 0.02 | MITSUBISHI UFJ SECURITIES, NEW YORK | 5,840.37 | 389,100.00 | 0.02 |
| ITG HONG KONG LIMITED, HONG KONG | 18,021.17 | 8,431,123.00 | 0.00 | MIZUHO SECURITIES ASIA, HONG KONG | 6,211.57 | 354,700.00 | 0.02 |
| ITG INC, NEW YORK | 7,168.28 | 848,610.00 | 0.01 | MIZUHO SECURITIES USA INC. NEW YORK | 19,334.01 | 1,100,160.00 | 0.02 |
| ITG INC, NY | 2,006.45 | 476,494.00 | 0.00 | MKM PARTNERS LLC, GREENWICH | 21,106.09 | 669,348.00 | 0.03 |
| IXIS SECURITIES, PARIS | 2,342.88 | 77,914.00 | 0.03 | MONTROSE SECURITIES EQ, SAN FRANCISCO | 8,550.28 | 332,062.00 | 0.03 |
| $J$ \& E DAVY, DUBLIN | 5,281.47 | 539,493.00 | 0.01 | MORGAN J P SECS INC, NEW YORK | 28,222.18 | 1,137,149.00 | 0.02 |
| J P MORGAN SEC LTD/STOCK LENDING, LONDON | 3,117.72 | 543,310.00 | 0.01 | MORGAN STANLEY \& CO INC, NY | 277,684.23 | 71,936,273.00 | 0.00 |
| J P MORGAN SEC, SYDNEY | 5,350.78 | 2,092,329.00 | 0.00 | MORGAN STANLEY \& CO INTL LTD, SEOUL | 8,283.80 | 215,186.00 | 0.04 |
| J P MORGAN SECS LTD, LONDON | 106,991.25 | 11,705,544.00 | 0.01 | MORGAN STANLEY \& CO, LONDON (MSLNGB2X) | 49,422.39 | 6,524,829.00 | 0.01 |
| J P MORGAN SECURITIES INC, BROOKLYN | 50,553.85 | 4,289,946.00 | 0.01 | MORGAN STANLEY DW INC, JERSEY CITY | 1,626.00 | 54,200.00 | 0.03 |
| J.P. MORGAN CLEARING CORP, NEW YORK | 154,345.86 | 18,728,970.00 | 0.01 | MS SECS SVCS INC INTL, BROOKLYN | 15.58 | 17,376.00 | 0.00 |
| JANNEY MONTGOMERY SCOTT, PHILADELPHIA | 4,093.70 | 117,185.00 | 0.03 | NATIONAL FINL SVCS CORP, NEW YORK | 92,436.45 780, | 780,794,774.36 | 0.00 |

CONNECTICUT STATE TREASURER'S COMBINED INVESTMENT FUNDS

## SCHEDULE OF BROKERAGE COMMISSIONS (Continued) FOR THE FISCAL YEAR ENDED JUNE 30, 2015

| Broker Name | $\begin{gathered} \$ \\ \text { Commission } \end{gathered}$ | Shares/ Par Value | Avg Comm | Broker Name | $\begin{gathered} \$ \\ \text { Commission } \end{gathered}$ | Shares/ Par Value | Avg Comm |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NATIONAL SECS CO LTD, BANGKOK | 5,704.50 | 5,806,100.00 | 0.00 | STANDARD CHARTERED BANK LTD, HONG KONG | 1,406.58 | 472,000.00 | 0.00 |
| NBCN INC, TORONTO (NBCS) | 629.63 | 18,000.00 | 0.03 | STANDARD CHARTERED BANK, HONG KONG | 7,444.72 | 6,553,900.00 | 0.00 |
| NEEDHAM \& CO, NEW YORK | 9,994.61 | 308,923.00 | 0.03 | STATE STREET BK \& TR CO (SEC), LONDON | 39,608.43 | 7,859,420.00 | 0.01 |
| NESBITT BURNS, TORONTO (NTDT) | 1,524.17 | 108,940.00 | 0.01 | STATE STREET BROKERAGE SVCS, BOSTON | 30,293.75 | 1,457,976.00 | 0.02 |
| NOBLE INTL INVESTMENTS INC, JERSEY CITY | 2,844.15 | 136,305.00 | 0.02 | STATE STREET GLOBAL ADVISORS, BOSTON | 47.23 | 5,200.00 | 0.01 |
| NOMURA FINANCIAL \& INVESTMENT, SEOUL | 4,536.11 | 243,003.00 | 0.02 | StATE STREET GLOBAL MARKETS LLC, BOSTON | 2,013.11 | 201,311.00 | 0.01 |
| NOMURA SECS INTL, LONDON | 3,627.16 | 159,400.00 | 0.02 | STEPHENS INC, LITTLE ROCK | 12,535.47 | 403,874.00 | 0.03 |
| NORDEA BK PLC, HELSINKI (NDEAFIHH030) | 352.45 | 6,963.00 | 0.05 | STERNE AGEE \& LEACH INC | 4,276.03 | 142,376.00 | 0.03 |
| NORTH SOUTH CAPITAL LLC, JERSEY CITY | 14,647.66 | 582,091.00 | 0.03 | STIFEL NICOLAUS | 24,489.04 | 911,532.00 | 0.03 |
| NORTHERN TR CO INC, CHICAGO | 29,510.34 | 209,085,000.00 | 0.00 | STRATEGAS SECURITIES LLC, NEW YORK | 212.68 | 5,656.00 | 0.04 |
| NORTHERN TR SECS, CHICAGO | 7,543.06 | 69,621,485.44 | 0.00 | STURDIVANT \& CO INC, BROOKLYN | 546.00 | 27,300.00 | 0.02 |
| NORTHLAND SECS INC, JERSEY CITY | 2,517.27 | 115,997.00 | 0.02 | SUNTRUST CAPITAL MARKETS INC, ATLANTA | 7,999.11 | 235,112.00 | 0.03 |
| NUMIS SECURITIES INC., NEW YORK | 7,947.16 | 1,111,078.00 | 0.01 | SUSQUEHANNA FINL GROUP LLLP, NEW YORK | 620.00 | 20,000.00 | 0.03 |
| NUMIS SECURITIES LTD, LONDON | 1,651.32 | 108,858.00 | 0.02 | SVENSKA HANDELSBANKEN, STOCKHOLM | 6,003.75 | 116,996.00 | 0.05 |
| ODDO ET CIE, PARIS | 2,340.03 | 109,579.00 | 0.02 | TD SECURITIES (USA) LLC, NEW YORK | 180.00 | 4,500.00 | 0.04 |
| OPPENHEIMER \& CO INC, NEW YORK | 22,215.98 | 666,527.00 | 0.03 | TEB YATIRIM MENKUL DEGERLER AS, ISTANBUL | 15,851.47 | 4,106,029.00 | 0.00 |
| ORIEL SECURITIES LTD, LONDON | 326.62 | 59,128.00 | 0.01 | TELSEY ADVISORY GROUP LLC, DALLAS | 7,313.07 | 253,213.00 | 0.03 |
| OTR GLOBAL TRADING LLC, NEW YORK | 1,489.00 | 42,000.00 | 0.04 | THEMIS TRADING LLC, JERSEY CITY | 882.00 | 33,600.00 | 0.03 |
| PACIFIC CREST SECURITIES, PORTLAND | 16,219.85 | 578,340.00 | 0.03 | THINKEQUITY PARTNERS LLC, MINNEAPOLIS | 1,604.00 | 40,100.00 | 0.04 |
| PANMURE GORDON \& CO LTD, LONDON | 433.72 | 17,079.00 | 0.03 | TONG YANG SECURITIES INC, SEOUL | 6,299.29 | 103,356.00 | 0.06 |
| PAREL, PARIS | 16,871.46 | 704,906.00 | 0.02 | TOPEKA CAPITAL MARKETS INC., NEW YORK | 25,953.05 | 1,557,604.00 | 0.02 |
| PATERSONS SECS LTD, PERTH | 315.58 | 556,985.00 | 0.00 | TOPEKA CAPITAL MARKETS INC, JERSEY CITY | 12,954.27 | 727,157.00 | 0.02 |
| PEEL HUNT LLP, LONDON | 3,833.74 | 334,875.00 | 0.01 | TOURMALINE PARTNERS LLC, NEW YORK | 28,826.41 | 1,181,709.00 | 0.02 |
| PENSERRA SECURITIES, NEW YORK | 9,545.61 | 776,809.00 | 0.01 | UBS EQUITIES, LONDON | 13,652.98 | 23,130,964.00 | 0.00 |
| PERCIVAL FINL PARTNERS LTD,LAKE SUCCESS | 4,468.80 | 117,600.00 | 0.04 | UBS SECS SINGAPORE PTE LTD | 202.78 | 235,800.00 | 0.00 |
| PEREGRINE SECS PHILIPPINES INC, MANILA | 77.01 | 36,270.00 | 0.00 | UBS SECURITIES CANADA, TORONTO (BWIT) | 4,392.88 | 176,222.00 | 0.02 |
| PERSHING LLC, JERSEY CITY | 21,052.48 | 7,368,359.00 | 0.00 | UBS SECURITIES HONG KONG LTD, HONG KONG | 64.77 | 144,800.00 | 0.00 |
| PERSHING SECURITIES LTD, LONDON | 10,776.32 | 1,314,424.00 | 0.01 | UBS SECURITIES LLC, STAMFORD | 77,951.42 | 17,253,619.00 | 0.00 |
| PETERCAM SA, BRUSSELLS | 344.69 | 9,660.00 | 0.04 | UBS WARBURG ASIA LTD, HONG KONG | 143,484.96 | 47,135,732.00 | 0.00 |
| PICKERING ENERGY PARTNERS, HOUSTON | 591.00 | 19,700.00 | 0.03 | UBS WARBURG AUSTRALIA EQUITIES, SYDNEY | 2,327.34 | 624,628.00 | 0.00 |
| PIPER JAFFRAY \& CO, MINNEAPOLIS | 14,854.02 | 401,010.00 | 0.04 | UBS WARBURG LLC, STAMFORD | 799.72 | 82,600.00 | 0.01 |
| PT. MANDIRI SEKURITAS,JAKARTA | 4,962.91 | 5,190,397.00 | 0.00 | UBS WARBURG, LONDON | 118,173.05 | 25,568,336.00 | 0.00 |
| PULSE TRADING LLC, BOSTON | 75.80 | 3,032.00 | 0.03 | UNION GAMING ADVISORS LLC, JERSEY CITY | 170.40 | 5,680.00 | 0.03 |
| RABOBANK NEDERLAND, UTRECHT | 5,305.49 | 77,876.00 | 0.07 | UOB KAY HIAN PRIVATE LTD, SINGAPORE | 120.00 | 400,000.00 | 0.00 |
| RAFFERTY CAPITAL MARKETS LLC, GARGEN CIT | 881.89 | 29,419.00 | 0.03 | UOB KAY HIAN PTE LTD, HONG KONG | 180.30 | 41,000.00 | 0.00 |
| RAIFFEISEN CENTROBANK AG, VIENNA | 178.00 | 8,727.00 | 0.02 | VANDHAM SECURITIES CORP, NEW YORK | 2,481.54 | 126,826.00 | 0.02 |
| RAYMOND JAMES \& ASSOC INC, ST PETERSBURG | 26,605.46 | 756,087.00 | 0.04 | VTB BANK EUROPE PLC, LONDON | 2,692.42 | 188,832.00 | 0.01 |
| RAYMOND JAMES LTD, TORONTO (MSLT) | 180.00 | 4,500.00 | 0.04 | WEDBUSH MORGAN SECS INC, LOS ANGELES | 8,174.40 | 334,149.00 | 0.02 |
| RBC CAPITAL MARKETS LLC, NEW YORK | 31,600.83 | 1,677,653.00 | 0.02 | WEEDEN \& CO LP, JERSEY CITY | 390.22 | 41,762.00 | 0.01 |
| RBC DOMINION SECS INC, TORONTO (DOMA) | 3,385.00 | 119,800.00 | 0.03 | WEEDEN \& CO, NEW YORK | 76,003.72 | 3,800,853.00 | 0.02 |
| REDBURN PARTNERS LLP, LONDON | 200.98 | 56,557.00 | 0.00 | WELLS FARGO SECURITIES LLC, CHARLOTTE | 18,589.83 | 688,728.00 | 0.03 |
| RENAISSANCE CAPITAL LTD, LONDON | 13,367.96 | 959,959.00 | 0.01 | WILLIAM BLAIR \& CO, CHICAGO | 28,201.85 | 803,860.00 | 0.04 |
| RENAISSANCE MACRO SEC, LLC, NEW YORK, NY | 76.74 | 2,558.00 | 0.03 | WILLIAMS CAPITAL GROUP LP, JERSEY CITY | 15,413.10 | 634,707.00 | 0.02 |
| ROTH CAPITAL PARTNERS LLC, IRVINE | 230.60 | 6,640.00 | 0.03 | WILSON HTM LTD, BRISBANE | 115.77 | 39,016.00 | 0.00 |
| ROYAL BANK OF CANADA EUROPE LTD, LONDON | 4,290.44 | 534,104.00 | 0.01 | WM SMITH \& CO, JERSEY | 1,019.25 | 32,860.00 | 0.03 |
| ROYAL BANK OF CANADA, TORONTO (RBCT) | 123.80 | 3,301.00 | 0.04 | WOLFE TRAHAN SECURITIES, NEW YORK | 1,519.20 | 41,240.00 | 0.04 |
| ROYAL TR CORP OF CDA/GBL CUSTODY, LONDON | 1,360.31 | 96,214.00 | 0.01 | WOOD \& COMPANY, PRAGUE | 368.17 | 3,790.00 | 0.10 |
| S G WARBURG, SEOUL | 4,046.80 | 291,211.00 | 0.01 | WOORI INVESTMENT \& SECURITIES, SEOUL | 67.45 | 14,052.00 | 0.00 |
| SALISBURY BKT SECURITIES CORPORATION | 395.15 | 198,480.00 | 0.00 | WUNDERLICH SECURITIES INC, MEMPHIS | 1,510.48 | 58,198.00 | 0.03 |
| SAMSUNG SECS, SEOUL | 12,746.59 | 128,741.00 | 0.10 | XP INVESTIMENTOS CCTVM SA,RIO DE JANEIRO | 26.72 | 1,200.00 | 0.02 |
| SAMUEL A RAMIREZ \& COMPANY, BROOKLYN | 3,742.70 | 244,799.00 | 0.02 | YAMNER \& COMPANY INC, JERSEY CITY | 3,786.96 | 378,696.00 | 0.01 |
| SANDLER O'NEILL \& PARTNERS, NEW YORK | 5,593.19 | 170,433.00 | 0.03 |  |  |  |  |
| SANFORD C BERNSTEIN \& CO INC, LONDON | 19,814.55 | 2,243,086.00 | 0.01 | TOTAL | ,932,805.99 |  |  |
| SANFORD C. BERNSTEIN \& CO, WHITE PLAINS | 22,061.05 | 22,409,989.00 | 0.00 | TOTAL | ,932,805.99 |  |  |
| SANTANDER CENTRAL HISPANO INVT, MADRID | 2,204.03 | 746,173.00 | 0.00 |  |  |  |  |
| SANTANDER INVESTMENT SECS, JERSEY CITY | 360.46 | 122,600.00 | 0.00 |  |  |  |  |
| SCB SECURITIES CO LTD, BANGKOK | 18,736.23 | 5,665,800.00 | 0.00 |  |  |  |  |
| SCOTIA CAPITAL (USA) INC, NEW YORK | 3,472.21 | 312,141.00 | 0.01 |  |  |  |  |
| SCOTIA CAPITAL INC, NEW YORK | 627.61 | 38,359.00 | 0.02 |  |  |  |  |
| SCOTIA CAPITAL MKTS, TORONTO | 4,450.54 | 126,750.00 | 0.04 |  |  |  |  |
| SEAGROTT \& CAMPBELL SDN, KUALA LUMPUR | 4,816.96 | 1,349,488.00 | 0.00 |  |  |  |  |
| SEAPORT GROUP SECS LLC, NEW YORK | 892.28 | 83,678.00 | 0.01 |  |  |  |  |
| SG AMERICAS SECURITIES LLC, NEW YORK | 279.92 | 20,347.00 | 0.01 |  |  |  |  |
| SG SEC (LONDON) LTD, LONDON | 42,188.18 | 5,467,484.00 | 0.01 |  |  |  |  |
| SG SECURITIES, HONG KONG | 10,843.07 | 10,039,339.00 | 0.00 |  |  |  |  |
| SHANGHAI SECS CENTRAL, SHANGHAI | 17.76 | 16,000.00 | 0.00 |  |  |  |  |
| SHENYIN WANGUO SECS LTD, HONG KONG | 13,944.46 | 10,146,500.00 | 0.00 |  |  |  |  |
| SIDCO / CONVERGEX, NEW YORK | 1,771.77 | 50,620.00 | 0.04 |  |  |  |  |
| SIDOTI \& CO LLC, NEW YORK | 9,517.47 | 298,412.00 | 0.03 |  |  |  |  |
| SIMMONS \& CO INTL, HOUSTON | 1,963.04 | 53,276.00 | 0.04 |  |  |  |  |
| SKANDINAVISKA ENSKILDA BANKEN, LONDON | 7,200.66 | 338,941.00 | 0.02 |  |  |  |  |
| SKANDINAVISKA ENSKILDA BANKEN, STOCKHOLM | 2,412.28 | 115,737.00 | 0.02 |  |  |  |  |
| SMBC NIKKO SECURITIES LTD, WAN CHAI | 2,534.24 | 166,900.00 | 0.02 |  |  |  |  |
| SMBC SECURITIES, INC NEW YORK | 7,535.23 | 522,028.00 | 0.01 |  |  |  |  |
| SOCIETE GENERALE (ACC), ZURICH | 575.12 | 10,774.00 | 0.05 |  |  |  |  |
| SOCIETE GENERALE BK, ZURICH | 334.45 | 4,923.00 | 0.07 |  |  |  |  |
| STANDARD BANK, LONDON | 12,952.74 | 535,046.00 | 0.02 |  |  |  |  |

## COMBINED INVESTMENT FUNDS

total net position value by pension plans and trust funds JUNE 30, 2015

| Retirement Funds | Net Position Value |
| :--- | ---: |
| Teachers' Retirement Fund | $\$ 16,109,803,388$ |
| State Employees' Retirement Fund | $10,662,216,815$ |
| Municipal Employees' Retirement Fund | $2,200,631,780$ |
| State Judges' Retirement Fund | $189,522,843$ |
| The Probate Court Retirement Fund | $89,151,598$ |
| State's Attorneys Retirement Fund | $1,522,000$ |
|  |  |
| Non-retirement Trust Funds | $72,909,969$ |
| Soldiers' Sailors' \& Marines' Fund | $28,097,189$ |
| Police \& Firemans' Survivors' Benefit Fund | $19,011,465$ |
| Connecticut Arts Endowment Fund | $11,070,841$ |
| School Fund | $2,453,021$ |
| Ida Eaton Cotton Fund | $3,469,476$ |
| Hopemead State Park Fund | $1,153,721$ |
| Andrew C. Clark Fund | 652,123 |
| Agricultural College Fund | $260,310,287$ |
| OPEB Fund | $\$ 29,651,976,516$ |
| TOTAL |  |



|  | LIQUIDITY FUND | ALTERNATIVE INVESTMENT FUND | MUTUAL <br> EQUITY <br> FUND | $\qquad$ | INFLATION LINKED BOND FUND | EMERGING MARKET DEBT FUND |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ASSETS |  |  |  |  |  |  |
| Investments in Securities, at Fair Value |  |  |  |  |  |  |
| Liquidity Fund | \$ | \$41,509,363 | \$76,638,545 | \$189,300,889 | \$26,476,615 | \$42,063,204 |
| Cash Equivalents | 191,292,119 | - |  | - | 1,220,606 | $(30,000)$ |
| Asset Backed Securities | 134,891,562 | - | - | 56,606,274 | $(310,932)$ | 224,653 |
| Government Securities | 499,442,681 | - | - | 444,939,066 | 1,089,213,411 | 687,288,264 |
| Government Agency Securities | 202,472,206 | - | - | 523,520,965 | - | - |
| Mortgage Backed Securities | 89,187,074 | - | - | 288,723,995 | - ${ }^{-}$ | - |
| Corporate Debt | 907,758,734 | - | - | 532,953,786 | 3,765,483 | 121,149,165 |
| Convertible Securities |  | - | -513, ${ }^{-}$ | - | - | - |
| Common Stock | - | - | 6,513,356,423 | - | - | - |
| Preferred Stock |  | - |  | 5,096,087 | - | 328,820 |
| Real Estate Investment Trust |  | - | 187,921,023 | 22,131,921 | - | - |
| Business Development Corportation | n | - | - | - |  | - |
| Mutual Fund | 158,918,499 | - | 1,261,890 | - | - | 548,840,713 |
| Limited Liability Corporation |  | - | - | - | - | - |
| Trusts |  | - | - | - | - |  |
| Limited Partnerships | - | 1,762,978,383 | 4,850,690 | 563,977,643 | - | - |
| Total Investments in Securities, at Fair Value | 2,183,962,875 | 1,804,487,746 | 6,784,028,571 | 2,627,250,626 | 1,120,365,183 | 1,399,864,819 |
| Cash | 3,775,147 | - | - | 97,981 | 2,226,930 | 113,679 |
| Receivables |  |  |  |  |  |  |
| Foreign Exchange Contracts | 540,453,160 | - | - ${ }^{-}$ | 193,754 | 499,655,339 | 99,715,671 |
| Interest Receivable | 5,747,055 | 28,505 | 47,017 | 11,360,262 | 5,661,386 | 15,600,767 |
| Dividends Receivable |  | - | 6,964,649 |  | - |  |
| Due from Brokers | 2,498,396 | - | 63,719,763 | 134,191,957 | 14,555,400 | 8,157,928 |
| Foreign Taxes |  | - | - | 9 | 104,199 | 368,983 |
| Securities Lending Receivable | - | - | 347,342 | 48,505 | 29,463 | 24,732 |
| Reserve for Doubtful Receivables | - - | - | $(8,251)$ | $(1,131,492)$ | - | $(232,299)$ |
| Total Receivables | 548,698,611 | 28,505 | 71,070,520 | 144,662,995 | 520,005,787 | 123,635,782 |
| Invested Securities Lending Collateral | - | - | 817,379,529 | 150,438,378 | 154,819,343 | 45,348,163 |
| Other Funds on Deposit | - | - | - | - | - | - |
| Prepaid Expenses | - | - | - | - | - - | - |
| Total Assets | 2,736,436,633 | 1,804,516,251 | 7,672,478,620 | 2,922,449,980 | 1,797,417,243 | 1,568,962,443 |
| LIABILITIES |  |  |  |  |  |  |
| Payables |  |  |  |  |  |  |
| Foreign Exchange Contracts | 532,802,279 | - | - ${ }^{-}$ | 199,515 | 494,393,303 | 99,756,210 |
| Due to Brokers | 7,276,916 | - | 80,102,747 | 340,093,321 | 16,052,512 | 8,305,563 |
| Income Distribution | 1,594,013 | - | -773, | - | - | - |
| Other Payable | - | - | 773,377 | - - | - | - |
| Total Payables | 541,673,208 | - | 80,876,124 | 340,292,836 | 510,445,815 | 108,061,773 |
| Securities Lending Collateral | - - | - | 817,379,529 | 150,438,378 | 154,819,343 | 45,348,163 |
| Accrued Expenses | 1,209,042 | 81,808 | 3,357,251 | 751,590 | 1,372,500 | 973,646 |
| Total Liabilities | 542,882,250 | 81,808 | 901,612,904 | 491,482,804 | 666,637,658 | 154,383,582 |
| NET POSITION HELD IN TRUST FOR PARTICIPANTS | \$2,193,554,383 | \$1,804,434,443 | \$6,770,865,716 | \$2,430,967,176 | \$1,130,779,585 | \$1,414,578,861 |
| Units Outstanding | 2,235,610,328 | 1,532,870,379 | 4,441,228 | 19,469,726 | 7,462,375 | 9,390,967 |
| Net Position Value and Redemption Price per Unit | \$0.98 | \$1.18 | \$1,524.55 | \$124.86 | \$151.53 | \$150.63 |

CONNECTICUT STATE TREASURER'S COMBINED INVESTMENT FUNDS

## SCHEDULE OF NET POSITION BY INVESTMENT FUND

JUNE 30, 2015

| HIGH YIELDDEBT <br> FUND | DEVELOPED MARKET INTERNATIONAL STOCK FUND | EMERGING MARKET INTERNATIONAL STOCK FUND | $\begin{aligned} & \text { REAL } \\ & \text { ESTATE } \\ & \text { FUND } \\ & \hline \end{aligned}$ | COMMERCIAL MORTGAGE FUND | PRIVATE INVESTMENT FUND | ELIMINATION ENTRY | TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \$81,314,849 | \$100,542,436 | \$60,386,047 | \$116,238,624 | \$11,600 | \$167,209,735 | \$(901,691,907) | \$ |
| 290,000 | 6,011,233 | - | - | - | - | ) | 198,783,958 |
| - | - | - | - | - | - | - | 191,411,557 |
| 25,163,404 | - | - | - | - | - | - | 2,746,046,826 |
| - | - | - | - | - | - | - | 725,993,171 |
| - | - | - | - | 18,199 | - | - | 377,929,268 |
| 1,502,704,966 | - | - | - | - | - | - | 3,068,332,134 |
| 34,542,342 | - | - | - | - | - | - | 34,542,342 |
| 6,107,954 | 5,675,750,970 | 2,211,460,715 | - | - | - | - | 14,406,676,062 |
| 11,445,729 | 29,796,060 | 78,212,814 | - | - | - | - | 124,879,510 |
| 30,084,535 | 67,580,184 | 2,028,848 | - | - | - | - | 309,746,511 |
| 80,600,464 | , | 2,028,848 | - | - | - | - | 80,600,464 |
| 80,600,464 | - | 111,270,006 | - | - | - | - | 820,291,108 |
| - | - | - | - | - | 1,156,486 | - | 1,156,486 |
| - | - | - | 582,960 | - | 1,156,486 | - | 582,960 |
| - | - | - | 1,731,469,564 | - | 2,605,008,214 | - | 6,668,284,494 |
| $1,772,254,243$ | $5,879,680,883$ | 2,463,358,430 | 1,848,291,148 | 29,799 | 2,773,374,435 | $(901,691,907)$ | $29,755,256,851$ |
| $847,642$ | $25,579,690$ | 1,935,288 | - | - | , | $(3,775,147)$ | $30,801,250$ |
| 12,481,479 | 7,719,020,193 | 3,645,995 | - ${ }^{-}$ | - | - ${ }^{-}$ | $(499,041,149)$ | $8,376,124,442$ |
| $26,223,581$ | $88,438$ | $42,015$ | 62,739 | 1 | 96,088 | $(5,747,055)$ | $59,210,799$ |
| $41,705$ | 15,422,914 | 17,016,672 | - | - | - |  | 39,445,940 |
| 1,210,833 | 7,197,851 | 1,249,659 | - | - | - | $(2,498,396)$ | 230,283,391 |
| - | 5,571,493 | 608,073 | - | - | - | - | 6,652,757 |
| 175,643 | $376,054$ | 168,940 | - | - | - | - | $1,170,679$ |
| $(1,489,331)$ | $(602,574)$ | $(658,542)$ | - | - | - | - | $(4,122,489)$ |
| 38,643,910 | 7,747,074,369 | 22,072,812 | 62,739 | 1 | 96,088 | $(507,286,600)$ | 8,708,765,519 |
| 361,558,742 | 143,911,336 | 194,334,023 | - | - | - | - | 1,867,789,514 |
| - | - | - | - | - | - | - | - |
| - | - | - | - | 2,837 | 1,427,185 | - | 1,430,022 |
| 2,173,304,537 | 13,796,246,278 | 2,681,700,553 | 1,848,353,887 | 32,637 | 2,774,897,708 | $(1,412,753,654)$ | 40,364,043,116 |


| 12,771,990 | 7,726,025,657 | 3,647,007 | - | - | - | $(532,802,279)$ | 8,336,793,682 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 24,441,811 | 11,604,981 | 6,539,265 | - | - | - | $(7,276,916)$ | 487,140,200 |
| - | - | - | - | - | - | $(601,781)$ | 992,232 |
| - | - | - | - | - | 5 | - | 773,382 |
| 37,213,801 | 7,737,630,638 | 10,186,272 | - | - | 5 | (540,680,976) | 8,825,699,496 |
| 361,558,742 | 143,911,336 | 194,334,023 | - | - | - | - | 1,867,789,514 |
| 1,266,314 | 5,459,501 | 3,892,506 | 117,242 | - | 806,055 | $(709,865)$ | 18,577,590 |
| 400,038,857 | 7,887,001,475 | 208,412,801 | 117,242 | - | 806,060 | $(541,390,841)$ | 10,712,066,600 |
| \$1,773,265,680 | \$5,909,244,803 | \$2,473,287,752 | \$1,848,236,645 | \$32,637 | \$2,774,091,648 | \$(871,362,813) | \$29,651,976,516 |
| 12,852,611 | 12,756,818 | 6,691,705 | 41,461,447 | 973 | 44,453,077 |  |  |


| $\$ 137.97$ | $\$ 463.22$ | $\$ 369.61$ | $\$ 44.58$ | $\$ 33.54$ | $\$ 62.40$ |
| :--- | :--- | :--- | :--- | :--- | :--- |

## SCHEDULE OF CHANGES IN NET POSITION BY INVESTMENT FUND FOR THE FISCAL YEAR ENDED JUNE 30, 2015

|  | LIQUIDITY FUND | ALTERNATIVE INVESTMENT FUND | MUTUAL EQUITY FUND | CORE FIXED INCOME FUND | INFLATION LINKED BOND FUND | EMERGING MARKET DEBT FUND |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ADDITIONS |  |  |  |  |  |  |
| OPERATIONS |  |  |  |  |  |  |
| Investment Income |  |  |  |  |  |  |
| Dividends | \$2,798 | \$3,667,951 | \$122,875,650 | \$5,451 | \$ | \$787 |
| Interest | 23,532,283 | 581,175 | 852,018 | 53,613,840 | $(3,420,391)$ | 94,663,964 |
| Other Income | 38 | - | 1,748,415 | 922,828 | - | 4,394,655 |
| Securities Lending | - | - | 4,677,391 | 845,802 | 974,411 | 199,223 |
| Total Income | 23,535,119 | 4,249,126 | 130,153,474 | 55,387,921 | $(2,445,980)$ | 99,258,629 |
| Expenses |  |  |  |  |  |  |
| Investment Advisory Fees | 4,742,508 | - | 13,224,485 | 2,986,694 | 1,847,122 | 4,292,272 |
| Custody and Transfer Agent Fees | 221,920 | 176,102 | 824,968 | 294,557 | 139,186 | 182,246 |
| Professional Fees | 67,525 | 696,311 | 240,242 | 54,533 | 25,584 | 32,771 |
| Security Lending Fees | - | - | 443,096 | 68,345 | 57,082 | 19,440 |
| Security Lending Rebates | - | - | 246,428 | 162,353 | 403,590 | 4,818 |
| Investment Expenses | 16,686 | 14,123 | 74,007 | 36,192 | 389,953 | 134,774 |
| Total Expenses | 5,048,639 | 886,536 | 15,053,226 | 3,602,674 | 2,862,517 | 4,666,321 |
| Net Investment Income | 18,486,480 | 3,362,590 | 115,100,248 | 51,785,247 | $(5,308,497)$ | 94,592,308 |
| Net Realized Gain (Loss) | $(4,602,089)$ | ) $5,028,776$ | 605,914,006 | 14,841,191 | 54,193,275 | $(55,603,561)$ |
| Net Change in Unrealized Gain/(Loss) on Investments and Foreign Curre | ncy $(39,899,693)$ | ) $53,463,829$ | $(242,461,952)$ | $(21,371,772)$ | $(81,615,640)$ | $(153,532,525)$ |
| Net Increase (Decrease) in Net Position |  |  |  |  |  |  |
| Resulting from Operations | $(26,015,302)$ | 61,855,195 | 478,552,302 | 45,254,666 | $(32,730,862)$ | $(114,543,778)$ |
| Unit Transactions |  |  |  |  |  |  |
| Purchase of Units by Participants | 11,042,574,984 | 396,438,171 | 13,796,284 | 30,270,065 | 98,295,890 | 18,192,697 |
| TOTAL ADDITIONS | 11,016,559,682 | 458,293,366 | 492,348,586 | 75,524,731 | 65,565,028 | $(96,351,081)$ |
| DEDUCTIONS |  |  |  |  |  |  |
| Administrative Expenses: |  |  |  |  |  |  |
| Salary and Fringe Benefits | $(402,960)$ | $(328,758)$ | $(1,084,979)$ | $(351,364)$ | $(167,022)$ | $(208,742)$ |
| Distributions to Unit Owners: Income Distributed | $(16,968,808)$ |  | - | - | - | - |
| Unit Transactions |  |  |  |  |  |  |
| Redemption of Units by Participants | $(10,993,810,556)$ | ) $(3,420,717)$ | $(778,881,605)$ | $(58,894,010)$ | $(13,299,326)$ | $(2,538,296)$ |
| TOTAL DEDUCTIONS | $(11,011,182,324)$ | ) $(3,749,475)$ | $(779,966,584)$ | $(59,245,374)$ | $(13,466,348)$ | $(2,747,038)$ |
| Change in Net Position Held in Trust for Participants | 5,377,358 | 454,543,891 | $(287,617,998)$ | 16,279,357 | 52,098,680 | $(99,098,119)$ |
| Net Position- Beginning of Period | 2,188,177,025 | 1,349,890,552 | 7,058,483,714 | 2,414,687,819 | 1,078,680,905 | 1,513,676,980 |
| Net Position- End of Period | \$2,193,554,383 | \$1,804,434,443 | \$6,770,865,716 | \$2,430,967,176 | \$1,130,779,585 | \$1,414,578,861 |
| Other Information: |  |  |  |  |  |  |
| Units |  |  |  |  |  |  |
| Purchased | 11,149,973,287 | 343,475,978 | 9,102 | 241,766 | 632,427 | 118,893 |
| Redeemed | (11,105,662,561) | $(2,950,614)$ | $(536,556)$ | $(468,554)$ | $(85,967)$ | $(15,637)$ |
| Net Increase (Decrease) | 44,310,726 | 340,525,364 | $(527,454)$ | $(226,788)$ | 546,460 | 103,256 |

## SCHEDULE OF CHANGES IN NET POSITION BY INVESTMENT FUND (Continued) FOR THE FISCAL YEAR ENDED JUNE 30, 2015

| HIGH YIELDDEBT <br> FUND | DEVELOPED MARKET INTERNATIONAL STOCK FUND | EMERGING MARKET INTERNATIONAL STOCK FUND | REAL ESTATE FUND | COMMERCIAL MORTGAGE FUND | PRIVATE INVESTMENT FUND | ELIMINATION ENTRY | TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \$4,058,514 | \$166,649,666 | \$68,371,751 | \$69,270,904 | \$ | \$68,011,714 | \$(1,238) | \$502,913,948 |
| 97,162,199 | 1,003,799 | 2,872,048 | 578,558 | 1,097 | 978,504 | $(10,408,866)$ | 262,010,228 |
| 248,005 | 9,643 | - | - | - | - | (17) | 7,323,567 |
| 1,839,648 | 4,955,071 | 1,941,376 | - | - | - - | - | 15,432,922 |
| 103,308,366 | 172,618,179 | 73,185,175 | 69,849,462 | 1,097 | 68,990,218 | $(10,410,121)$ | 787,680,665 |
| 5,034,481 | 21,897,221 | 15,665,100 | 5,429,945 | - | 2,879,276 | $(2,097,720)$ | 75,901,384 |
| 199,991 | 799,001 | 351,360 | 233,310 | 4 | 428,478 | $(98,160)$ | 3,752,963 |
| 36,105 | 147,711 | 69,546 | 401,061 | - | 1,141,100 | $(29,868)$ | 2,882,621 |
| 178,163 | 494,817 | 189,901 | - | - | - | - | 1,450,844 |
| 58,022 | 6,897 | 42,365 | - | - | - | - | 924,473 |
| 14,723 | 350,912 | 1,521,928 | 14,740 | - | 25,485 | $(7,381)$ | 2,586,142 |
| 5,521,485 | 23,696,559 | 17,840,200 | 6,079,056 | 4 | 4,474,339 | $(2,233,129)$ | 87,498,427 |
| 97,786,881 | 148,921,620 | 55,344,975 | 63,770,406 | 1,093 | 64,515,879 | $(8,176,992)$ | 700,182,238 |
| 6,900,522 | 357,166,341 | $(20,301,641)$ | 92,810,550 | $(1,013)$ | 274,316,258 | 2,035,609 | 1,332,698,224 |
| $(124,987,761)$ | $(467,803,648)$ | $(218,071,430)$ | 54,162,966 | 79 | 16,636,808 | 16,922,879 | $(1,208,557,860)$ |
| $(20,300,358)$ | 38,284,313 | $(183,028,096)$ | 210,743,922 | 159 | 355,468,945 | 10,781,496 | 824,322,602 |
| 205,508,562 | 26,626,714 | 17,921,069 | 232,332,363 | - | 11,511,397 | (9,083,061,530) | 3,010,406,666 |
| 185,208,204 | 64,911,027 | $(165,107,027)$ | 443,076,285 | 159 | 366,980,342 | (9,072,280,034) | 3,834,729,268 |
| $(233,745)$ | $(788,966)$ | $(339,128)$ | $(453,417)$ | - | $(441,202)$ | 178,238 | $(4,622,045)$ |
| - | - | - | - | - | - | 7,505,689 | $(9,463,119)$ |
| $(128,699)$ | $(290,021,999)$ | $(16,342,897)$ | $(104,701,423)$ | $(38,000)$ | $(511,529,663)$ | 9,177,008,437 | $(3,596,598,754)$ |
| $(362,444)$ | $(290,810,965)$ | $(16,682,025)$ | $(105,154,840)$ | $(38,000)$ | $(511,970,865)$ | 9,184,692,364 | $(3,610,683,918)$ |
| 184,845,760 | $(225,899,938)$ | $(181,789,052)$ | 337,921,445 | $(37,841)$ | $(144,990,523)$ | 112,412,330 | 224,045,350 |
| 1,588,419,920 | 6,135,144,741 | 2,655,076,804 | 1,510,315,200 | 70,478 | 2,919,082,171 | $(983,775,143)$ | 29,427,931,166 |
| \$1,773,265,680 | \$5,909,244,803 | \$2,473,287,752 \$ | \$1,848,236,645 | \$32,637 \$ | \$2,774,091,648 | \$(871,362,813) | \$29,651,976,516 |


| $1,491,397$ | 59,074 | 46,796 | $5,748,603$ | - | 191,536 |
| ---: | ---: | ---: | ---: | ---: | ---: |
| $(933)$ | $(635,370)$ | $(40,963)$ | $(2,546,553)$ | $(1,134)$ | $(9,085,165)$ |
| $1,490,464$ | $(576,296)$ | 5,833 | $3,202,050$ | $(1,134)$ | $(8,893,629)$ |

## SCHEDULE OF CHANGES IN NET POSITION BY INVESTMENT FUND FOR THE FISCAL YEAR ENDED JUNE 30, 2014



OPERATIONS
Investment Income

| $\quad$ Dividends | $\$$ | - | $\$ 2,104,495$ | $\$ 125,184,182$ | $\$ 6,729$ | $\$$ | - | $\$$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Interest | $18,816,809$ | 44,441 | 331,657 | $58,010,424$ | $29,631,872$ | $83,505,075$ |  |  |
| Other Income | - | 220,000 | 81,808 | 597,256 | - | 810,763 |  |  |
| Securities Lending | - | - | $3,638,849$ | 492,637 | $1,338,774$ | 45,080 |  |  |
| Income | $18,816,809$ | $2,771,936$ | $129,974,496$ | $59,107,046$ | $30,970,646$ | $84,360,918$ |  |  |

## Expenses

| Investment Advisory Fees | 4,798,276 | - | 12,510,828 | 3,050,708 | 838,217 | 3,507,531 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Custody and Transfer Agent Fees | 210,905 | 131,364 | 767,971 | 233,745 | 98,058 | 157,090 |
| Professional Fees | 73,503 | 563,169 | 264,059 | 89,412 | 24,027 | 58,048 |
| Security Lending Fees |  |  | 438,822 | 61,858 | 101,545 | 5,023 |
| Security Lending Rebates | - | - | - | 16,987 | 535,560 | - |
| Investment Expenses | 8,340 | 8,845 | 52,412 | 14,727 | 6,599 | 21,367 |
| al Expenses | 5,091,024 | 703,378 | 14,034,092 | 3,467,437 | 1,604,006 | 3,749,059 |
| Investment Income | 13,725,785 | 2,068,558 | 115,940,404 | 55,639,609 | 29,366,640 | 80,611,859 |
| Realized Gain (Loss) | $(18,903,264)$ | $(953,401)$ | 535,767,392 | 12,751,725 | $(9,358,335)$ | $(39,115,576)$ |
| Change in Unrealized Gain/(Loss) on Investments and Foreign Currency | y $17,711,734$ | 82,997,657 | 870,318,388 | 30,847,839 | 24,148,870 | 57,473,346 |
| Increase (Decrease) in Net Position |  |  |  |  |  |  |
| Resulting from Operations | 12,534,255 | 84,112,814 | 1,522,026,184 | 99,239,173 | 44,157,175 | 98,969,629 |
| it Transactions |  |  |  |  |  |  |
| Purchase of Units by Participants 8, | 8,135,794,153 | 26,209,304 | 16,366,810 | 430,265,810 | 151,546,883 | 15,049,838 |
| AL ADDITIONS | 8,148,328,408 | 110,322,118 | ,538,392,994 | 529,504,983 | 195,704,058 | 14,019 |

DEDUCTIONS
Administrative Expenses:

| Salary and Fringe Benefits | $(402,253)$ | $(322,962)$ | $(1,208,807)$ | $(340,299)$ | $(149,690)$ | $(229,370)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ributions to Unit Owners: Income Distributed | $(13,491,715)$ | - | $(26,264,941)$ | $(10,325,564)$ | $(4,502,138)$ | - |
| Transactions <br> Redemption of Units by Participants | (8,409,775,257) | $(7,871,503)$ | $(689,566,099)$ | $(9,135,394)$ | $(1,517)$ | $(10,177,992)$ |
| AL DEDUCTIONS | (8,423,669,225) | $(8,194,465)$ | $(717,039,847)$ | $(19,801,257)$ | $(4,653,345)$ | $(10,407,362)$ |
| nge in Net Position Held in Trust for Participants | $(275,340,817)$ | 102,127,653 | 821,353,147 | 509,703,726 | 191,050,713 | 103,612,105 |
| Position- Beginning of Period | 2,463,517,842 | 1,247,762,899 | 6,237,130,567 | 1,904,984,093 | 887,630,192 | 1,410,064,875 |
| Position- End of Period | \$2,188,177,025 | \$1,349,890,552 | \$7,058,483,714 | \$2,414,687,819 | \$1,078,680,905 | \$1,513,676,980 |

Other Information:
Units
Purchased
Redeemed
Net Increase (Decrease)

| $10,252,526,101$ | $24,180,337$ | 12,856 | $3,657,164$ | $1,019,579$ | 98,662 |
| ---: | ---: | ---: | ---: | ---: | ---: |
| $(10,527,798,584)$ | $(7,015,144)$ | $(521,802)$ | $(77,084)$ | $(10)$ | $(66,751)$ |
| $(275,272,483)$ | $17,165,193$ | $(508,946)$ | $3,580,080$ | $1,019,569$ | 31,911 |


| HIGH YIELD- DEBT FUND | DEVELOPED MARKET INTERNATIONAL STOCK FUND | EMERGING MARKET INTERNATIONAL STOCK FUND | $\begin{aligned} & \text { REAL } \\ & \text { ESTATE } \\ & \text { FUND } \end{aligned}$ | COMMERCIAL MORTGAGE FUND | PRIVATE INVESTMENT FUND | ELIMINATION ENTRY | TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |


| $\$ 1,504,044$ | $\$ 201,573,440$ | $\$ 61,037,452$ | $\$ 38,623,838$ | $\$$ | - | $\$ 44,587,493$ | $\$$ |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| $85,656,159$ | 547,006 | 369,151 | 898,481 | 11,772 | 962,565 | - | $(8,665,012)$ |
| 737,860 | 31,824 | 695 | 56 | - | $270,523,400$ |  |  |
| $1,109,354$ | $5,136,108$ | $1,541,024$ | - | - | - | $-218,262$ |  |
| $89,007,417$ | $207,288,378$ | $62,948,322$ | $39,522,375$ | 11,772 | $45,550,058$ | $(8,665,012)$ | $761,665,161$ |


| 4,560,637 | 20,995,938 | 15,463,550 | 4,423,275 | - | 3,930,562 | (2,209,574) | 71,869,948 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 143,713 | 652,903 | 278,940 | 147,602 | 3 | 281,129 | $(97,120)$ | 3,006,303 |
| 57,238 | 164,120 | 70,307 | 547,289 | - | 1,298,341 | $(33,848)$ | 3,175,665 |
| 127,696 | 562,657 | 174,995 | - | - | - | - | 1,472,596 |
| - | - |  | - | - | - | - | 552,547 |
| 17,262 | 184,763 | 1,219,618 | 2,685,655 | - | 19,254 | $(3,841)$ | 4,235,001 |
| 4,906,546 | 22,560,381 | 17,207,410 | 7,803,821 | 3 | 5,529,286 | (2,344,383) | 84,312,060 |
| 84,100,871 | 184,727,997 | 45,740,912 | 31,718,554 | 11,769 | 40,020,772 | $(6,320,629)$ | 677,353,101 |
| 12,760,793 | 234,545,230 | $(12,506,978)$ | $(53,363,922)$ | $(5,263)$ | 214,258,580 | 8,704,826 | 884,581,807 |
| 66,429,494 | 738,821,187 | 241,455,083 | 170,958,293 | 27 | 151,689,656 | $(7,835,859)$ | 2,445,015,715 |


| $163,291,158$ | $1,158,094,414$ | $274,689,017$ | $149,312,925$ | 6,533 | $405,969,008$ | $(5,451,662)$ | $4,006,950,623$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $193,554,573$ | $25,507,891$ | $41,025,376$ | $21,890,972$ |  | - | $26,682,693$ | $(6,128,605,380)$ |
| $356,845,731$ | $1,183,602,305$ | $315,714,393$ | $171,203,897$ | 6,533 | $432,651,701$ | $(6,134,057,042)$ | $6,962,239,546$ |


| $(230,256)$ | $(879,581)$ | $(366,978)$ | $(473,333)$ | - | $(522,187)$ | 185,235 | $(4,940,481)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $(10,537,291)$ | $(31,961,398)$ | $(16,848,886)$ | $(33,005,079)$ | - | $(49,701,809)$ | 6,212,842 | $(190,425,979)$ |
| $(5,876,555)$ | $(463,003,951)$ | $(12,509,128)$ | $(109,400,565)$ | $(9,000)$ | $(13,746,503)$ | 6,451,322,504 | (3,279,750,960) |
| $(16,644,102)$ | $(495,844,930)$ | $(29,724,992)$ | $(142,878,977)$ | $(9,000)$ | $(63,970,499)$ | 6,457,720,581 | $(3,475,117,420)$ |
| 340,201,629 | 687,757,375 | 285,989,401 | 28,324,920 | $(2,467)$ | 368,681,202 | 323,663,539 | 3,487,122,126 |
| 1,248,218,291 | 5,447,387,366 | 2,369,087,403 | 1,481,990,280 | 72,945 | 2,550,400,969 | $(1,307,438,682)$ | 25,940,809,040 |
| \$1,588,419,920 | \$6,135,144,741 | \$2,655,076,804 | \$1,510,315,200 | \$70,478 | \$2,919,082,171 | \$(983,775,143) | \$29,427,931,166 |


| $1,469,869$ | 63,582 | 114,735 | 591,909 | - | 547,824 |
| ---: | ---: | ---: | ---: | ---: | ---: |
| $(43,271)$ | $(1,129,389)$ | $(32,403)$ | $(2,977,233)$ | $(295)$ | $(263,759)$ |
| $1,426,598$ | $(1,065,807)$ | 82,332 | $(2,385,324)$ | $(295)$ | 284,065 |

CONNECTICUT STATE TREASURER'S COMBINED INVESTMENT FUNDS
COMBINED INVESTMENT FUNDS
SCHEDULE OF INVESTMENT ACTIVITY BY PENSION PLAN
FOR THE FISCAL YEAR ENDED JUNE 30, 2015

|  | LIQUIDITY <br> FUND | ALTERNATIVE INVESTMENT FUND | MUTUAL EQUITY FUND | CORE FIXED INCOME FUND | INFLATION LINKED BOND FUND | EMERGING MARKET DEBT FUND |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Teachers' Retirement Fund |  |  |  |  |  |  |
| Book Value at June 30, 2014 | \$843,776,469 | \$629,868,000 | \$612,712,078 | \$1,031,965,547 | \$406,712,626 | \$651,600,289 |
| Market Value at June 30, 2014 | \$843,880,605 | \$706,998,910 | \$3,923,249,087 | \$1,170,977,473 | \$496,329,212 | \$857,988,402 |
| Shares Purchased | 1,542,201,847 | 215,000,000 |  |  | 5,000,000 |  |
| Shares Redeemed | $(1,552,732,735)$ | - | $(386,000,000)$ | $(30,000,000)$ | $(10,000,000)$ | - |
| Returns of Capital |  | - | - |  | - |  |
| Gain/(Loss) on Shares Redeemed | $(8,657,105)$ | - | 327,686,133 | 4,225,726 | 1,735,155 |  |
| Net Investment Income Earned | 6,838,436 | - |  |  | - |  |
| Net Investment Income Distributed | $(6,838,436)$ | - |  |  | - |  |
| Changes in Market Value of Fund Shares | $(7,448,762)$ | 32,760,118 | $(55,310,874)$ | 17,614,253 | $(15,694,881)$ | $(64,987,360)$ |
| Market Value at June 30, 2015 | \$817,243,850 | \$954,759,028 | \$3,809,624,346 | \$1,162,817,452 | \$477,369,486 | \$793,001,042 |
| Book Value at June 30, 2015 | \$824,588,476 | \$844,868,000 | \$554,398,211 | \$1,006,191,273 | \$403,447,781 | \$651,600,289 |
| Shares Outstanding | 832,912,466 | 811,069,252 | 2,498,855 | 9,313,058 | 3,150,314 | 5,264,498 |

Market Value per Share
State Employees' Retirement Fund Book Value at June 30, 2014
Market Value at June 30, 2014
Shares Purchased

| $\$ 0.98$ | $\$ 1.18$ | $\$ 1,524.55$ | $\$ 124.86$ | $\$ 151.53$ | $\$ 150.63$ |
| :--- | :--- | :--- | :--- | :--- | :--- |

Shares Redeemed

| \$286,316,253 | \$393,420,000 | \$374,628,883 | \$838,729,373 | \$389,055,068 | \$318,201,035 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| \$285,113,763 | \$441,599,883 | \$2,684,734,975 | \$938,380,757 | \$456,510,284 | \$451,794,393 |
| 283,582,065 | 165,000,000 | - | - - | 85,000,000 |  |
| $(146,850,613)$ | - | $(360,000,000)$ | $(20,000,000)$ |  |  |
|  |  |  |  |  |  |
| $(1,544,445)$ |  | 310,071,498 | 2,573,054 | - |  |
| 2,816,807 | - |  |  |  |  |
| $(2,816,807)$ | - | - | - | - | - |
| $(5,808,538)$ | 20,658,994 | $(137,603,420)$ | 14,899,960 | $(15,302,787)$ | $(34,220,650)$ |
| \$414,492,232 | \$627,258,877 | \$2,497,203,053 | \$935,853,771 | \$526,207,497 | \$417,573,743 |
| \$421,503,260 | \$558,420,000 | \$324,700,381 | \$821,302,427 | \$474,055,068 | \$318,201,035 |
| 422,439,090 | 532,857,790 | 1,637,996 | 7,495,295 | 3,472,611 | 2,772,148 |
| \$0.98 | \$1.18 | \$1,524.55 | \$124.86 | \$151.53 | \$150.63 |

Municipal Employees' Retirement Fund
Book Value at June 30, 2014


## COMBINED INVESTMENT FUNDS

SCHEDULE OF INVESTMENT ACTIVITY BY PENSION PLAN (Continued) FOR THE FISCAL YEAR ENDED JUNE 30, 2015

| HIGH YIELD DEBT FUND | DEVELOPED MARKET INTERNATIONAL STOCK FUND | EMERGING MARKET INTERNATIONAL STOCK FUND | REAL ESTATE FUND | COMMERCIAL MORTGAGE FUND | PRIVATE INVESTMENT FUND | TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \$592,399,049 | \$1,825,694,497 | \$835,417,118 | \$927,851,481 | \$85,823 | \$1,992,352,371 | \$10,350,435,348 |
| \$734,534,900 | \$3,535,029,747 | \$1,495,974,324 | \$810,217,501 | \$38,345 | \$1,644,888,781 | \$16,220,107,287 |
| 123,000,000 |  |  | 135,000,000 |  |  | 2,020,201,847 |
|  | (208,000,000) |  | $(51,000,000)$ | $(20,675)$ | $(339,000,000)$ | (2,576,753,410) |
|  | 98,813 |  | $(4,611,323)$ | $(25,505)$ | (59,663 347) | 359,503,727 |
|  |  | - |  |  |  | 6,838,436 |
|  |  | - | - | - | - | $(6,838,436)$ |
| $(9,376,974)$ | $(79,987,006)$ | $(103,641,786)$ | 118,454,058 | 25,593 | 254,337,558 | 86,743,937 |
| \$848,157,926 | \$3,345,856,734 | \$1,392,332,538 | \$1,008,060,236 | \$17,758 | \$1,500,562,992 | \$16,109,803,388 |
| \$715,399,049 | \$1,716,508,490 | \$835,417,118 | \$1,007,240,158 | \$39,643 | \$1,593,689,024 | \$10,153,387,512 |
| 6,147,440 | 7,223,002 | 3,767,082 | 22,613,791 | 530 | 24,045,580 | 1,728,005,867 |
| \$137.97 | \$463.22 | \$369.61 | \$44.58 | \$33.54 | \$62.40 |  |
| \$414,458,589 | \$1,077,999,346 | \$536,857,122 | \$598,902,630 | \$60,476 | \$1,266,957,799 | \$6,495,586,574 |
| \$496,929,212 | \$2,217,762,858 | \$968,932,930 | \$515,640,986 | \$27,165 | \$1,011,924,749 | \$10,469,351,955 |
| 65,000,000 | -21, - | - | 88,000,000 | - | - - | 686,582,065 |
|  | $(60,000,000)$ | - | $(42,000,000)$ | $(14,646)$ | $(157,000,000)$ | $(785,865,259)$ |
| - | - - | - |  | - | (34,860, - | -2, |
| - | 31,006,124 | - | $(4,388,092)$ | $(17,893)$ | $(34,860,369)$ | 302,839,877 |
| - | - | - | - | - | - | 2,816,807 |
| (0,375,807) | (10,213,984) | (07,128,110) | 77,152,561 | - | 159,232,00- | $(2,816,807)$ |
| $(6,375,807)$ | $(16,213,984)$ | $(67,128,116)$ | 77,152,561 | 17,955 | 159,232,009 | $(10,691,823)$ |
| \$555,553,405 | \$2,172,554,998 | \$901,804,814 | \$634,405,455 | \$12,581 | \$979,296,389 | \$10,662,216,815 |
| \$479,458,589 | \$1,049,005,470 | \$536,857,122 | \$640,514,538 | \$27,937 | \$1,075,097,430 | \$6,699,143,257 |
| 4,026,645 | 4,690,090 | 2,439,915 | 14,231,602 | 375 | 15,692,610 | 1,011,756,168 |
| \$137.97 | \$463.22 | \$369.61 | \$44.58 | \$33.54 | \$62.40 |  |


| \$268,431,212 | \$136,427,815 | \$96,008,434 | \$159,661,201 | \$9,315 | \$249,559,959 | \$1,576,575,989 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \$301,382,426 | \$303,716,702 | \$156,602,257 | \$149,413,819 | \$4,215 | \$217,143,110 | \$2,161,258,170 |
| 9,128,519 | 12,935,315 | 12,414,416 | 1,977,348 |  | 3,694,926 | 102,408,708 |
| - | $(18,305,888)$ | $(13,762,965)$ | $(10,113,303)$ | $(2,272)$ | $(13,310,809)$ | $(117,981,484)$ |
|  | - | - | - |  |  |  |
|  | 9,965,255 | 5,205,517 | 96,301 | $(2,740)$ | $(1,220,842)$ | 37,898,780 |
|  |  |  |  |  |  | 427,221 |
| (4,005,518) |  | (15,468,237) | -837,051 | ${ }^{-}$ | 30,610-348 | $(427,221)$ |
| $(4,005,518)$ | $(6,955,793)$ | $(15,468,237)$ | 18,837,051 | 2,750 | 30,610,348 | 17,047,606 |
| \$306,505,427 | \$301,355,591 | \$144,990,988 | \$160,211,216 | \$1,953 | \$236,916,733 | \$2,200,631,780 |
| \$277,559,731 | \$141,022,497 | \$99,865,402 | \$151,621,547 | \$4,303 | \$238,723,234 | \$1,598,901,993 |
| 2,221,548 | 650,563 | 392,286 | 3,594,014 | 58 | 3,796,442 | 230,914,632 |
| \$137.97 | \$463.22 | \$369.61 | \$44.58 | \$33.54 | \$62.40 |  |

# CONNECTICUT STATE TREASURER'S COMBINED INVESTMENT FUNDS <br> COMBINED INVESTMENT FUNDS <br> SCHEDULE OF INVESTMENT ACTIVITY BY PENSION PLAN (Continued) FOR THE FISCAL YEAR ENDED JUNE 30, 2015 

|  | LIQUIDITY <br> FUND | ALTERNATIVE INVESTMENT FUND | MUTUAL EQUITY FUND | CORE FIXED INCOME FUND | INFLATION LINKED BOND FUND | EMERGING MARKET DEBT FUND |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Probate Court Retirement Fund |  |  |  |  |  |  |
| Book Value at June 30, 2014 | \$2,262,142 | \$3,901,015 | \$1,883,391 | \$6,928,944 | \$3,781,594 | \$6,062,564 |
| Market Value at June 30, 2014 | \$2,262,047 | \$4,350,920 | \$14,800,329 | \$8,034,160 | \$4,504,986 | \$7,303,668 |
| Shares Purchased | 4,768,768 | 138,624 | - | 251,709 | 171,862 | 439,243 |
| Shares Redeemed | $(4,665,000)$ | $(148,794)$ | $(1,516,379)$ | $(407,858)$ | $(175,975)$ | $(169,589)$ |
| Returns of Capital | - | - | - | - | - | - |
| Gain/(Loss) on Shares Redeemed | $(26,224)$ | 18,251 | 1,334,095 | 63,589 | 27,164 | 26,594 |
| Net Investment Income Earned | 16,894 | - | - | - | - | - |
| Net Investment Income Distributed | $(16,894)$ | - ${ }^{-}$ | - ${ }^{-}$ | - ${ }^{-}$ | - ${ }^{-}$ | (573,866) |
| Changes in Market Value of Fund Shares | $(15,780)$ | 153,502 | $(271,953)$ | 84,344 | $(153,492)$ | $(573,866)$ |
| Market Value at June 30, 2015 | \$2,323,811 | \$4,512,503 | \$14,346,092 | \$8,025,944 | \$4,374,545 | \$7,026,050 |
| Book Value at June 30, 2015 | \$2,339,686 | \$3,909,096 | \$1,701,107 | \$6,836,384 | \$3,804,645 | \$6,358,812 |
| Shares Outstanding | 2,368,361 | 3,833,381 | 9,410 | 64,280 | 28,869 | 46,644 |
| Market Value per Share | \$0.98 | \$1.18 | \$1,524.55 | \$124.86 | \$151.53 | \$150.63 |
| Judges' Retirement Fund |  |  |  |  |  |  |
| Book Value at June 30, 2014 | \$5,163,204 | \$13,122,872 | \$6,053,167 | \$13,329,165 | \$7,833,899 | \$12,733,712 |
| Market Value at June 30, 2014 | \$5,152,335 | \$14,465,280 | \$30,752,995 | \$14,839,154 | \$9,360,802 | \$15,175,964 |
| Shares Purchased | 3,422,203 | 590,709 | - | 597,839 | 452,347 | 1,085,835 |
| Shares Redeemed | $(3,043,000)$ | $(331,743)$ | $(2,570,110)$ | $(592,930)$ | $(276,515)$ | $(226,352)$ |
| Returns of Capital | - | - | - | - | - | - |
| Gain/(Loss) on Shares Redeemed | $(30,970)$ | 37,133 | 2,092,128 | 71,583 | 42,884 | 35,533 |
| Net Investment Income Earned | 36,307 | - | - | - | - | - |
| Net Investment Income Distributed | $(36,307)$ | - | - | - | - | - |
| Changes in Market Value of Fund Shares | $(62,333)$ | 537,448 | 122,276 | 201,541 | $(309,228)$ | $(1,182,433)$ |
| Market Value at June 30, 2015 | \$5,438,235 | \$15,298,827 | \$30,397,289 | \$15,117,187 | \$9,270,290 | \$14,888,547 |
| Book Value at June 30, 2015 | \$5,511,437 | \$13,418,971 | \$5,575,185 | \$13,405,657 | \$8,052,615 | \$13,628,728 |
| Shares Outstanding | 5,542,497 | 12,996,387 | 19,939 | 121,074 | 61,178 | 98,841 |
| Market Value per Share | \$0.98 | \$1.18 | \$1,524.55 | \$124.86 | \$151.53 | \$150.63 |
| State's Attorneys' Retirement Fund |  |  |  |  |  |  |
| Book Value at June 30, 2014 | \$20,040 | \$- | \$151,082 | \$300,304 | \$20,996 | \$63,498 |
| Market Value at June 30, 2014 | \$20,037 | \$- | \$432,355 | \$330,949 | \$29,047 | \$88,283 |
| Shares Purchased | 25,486 | - | 677 | 22,334 | 2,309 | 9,230 |
| Shares Redeemed | $(23,634)$ | - | $(19,030)$ | $(8,013)$ | (518) | (442) |
| Returns of Capital | - | - | - | - | - | - |
| Gain/(Loss) on Shares Redeemed | (151) | - | 12,717 | 899 | 136 | 123 |
| Net Investment Income Earned | 130 | - | - | - | - | - |
| Net Investment Income Distributed | (130) | - | - ${ }^{-}$ | - ${ }^{-}$ | - | - |
| Changes in Market Value of Fund Shares | (151) | - | 18,563 | 5,176 | (988) | $(6,914)$ |
| Market Value at June 30, 2015 | \$21,587 | \$- | \$445,282 | \$351,345 | \$29,986 | \$90,280 |
| Book Value at June 30, 2015 | \$21,741 | \$- | \$145,446 | \$315,524 | \$22,923 | \$72,409 |
| Shares Outstanding | 21,999 | - | 292 | 2,814 | 198 | 599 |
| Market Value per Share | \$0.98 | \$- | \$1,524.55 | \$124.86 | \$151.53 | \$150.63 |

CONNECTICUT STATE TREASURER'S COMBINED INVESTMENT FUNDS
COMBINED INVESTMENT FUNDS
SCHEDULE OF INVESTMENT ACTIVITY BY PENSION PLAN (Continued) FOR THE FISCAL YEAR ENDED JUNE 30, 2015

| HIGH YIELD DEBT FUND | DEVELOPED MARKET INTERNATIONAL STOCK FUND | EMERGING MARKET INTERNATIONAL STOCK FUND | REAL ESTATE FUND | COMMERCIAL MORTGAGE FUND | PRIVATE INVESTMENT FUND | TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \$11,962,980 | \$5,466,685 | \$3,783,988 | \$6,904,350 | \$562 | \$9,959,938 | \$62,898,153 |
| \$13,501,495 | \$13,606,725 | \$6,548,680 | \$6,247,498 | \$250 | \$9,079,316 | \$90,240,074 |
| 154,333 | 344,348 | 409,397 | 10,899 | - | 112,893 | 6,802,076 |
| $(120,648)$ | $(946,552)$ | $(641,872)$ | $(523,750)$ | (135) | $(762,763)$ | $(10,079,315)$ |
| - | - | - |  | - | - | - |
| 12,162 | 564,692 | 266,460 | $(13,257)$ | (168) | $(34,190)$ | 2,239,168 |
| - | - | - |  | - | - | 16,894 |
| (100,045) | - | - | ${ }^{-}$ | - | - | $(16,894)$ |
| $(190,045)$ | $(436,374)$ | $(686,472)$ | 795,897 | 167 | 1,243,667 | $(50,405)$ |
| \$13,357,297 | \$13,132,839 | \$5,896,193 | \$6,517,287 | \$114 | \$9,638,923 | \$89,151,598 |
| \$12,008,827 | \$5,429,173 | \$3,817,973 | \$6,378,242 | \$259 | \$9,275,878 | \$61,860,082 |
| 96,814 | 28,351 | 15,953 | 146,202 | 3 | 154,458 | 6,792,726 |
| \$137.97 | \$463.22 | \$369.61 | \$44.58 | \$33.54 | \$62.40 |  |


| \$23,279,944 | \$12,104,474 | \$8,053,403 | \$14,523,566 | \$980 | \$22,591,451 | \$138,789,837 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \$26,184,217 | \$26,388,077 | \$13,607,155 | \$12,981,497 | \$444 | \$18,865,716 | \$187,773,636 |
| 587,878 | 944,468 | 1,003,464 | 135,206 | - | 312,372 | 9,132,321 |
| $(8,051)$ | $(1,615,282)$ | $(1,229,265)$ | $(946,997)$ | (239) | $(1,298,529)$ | $(12,139,013)$ |
|  | - |  |  | - | - | - |
| 738 | 869,933 | 492,004 | $(35,524)$ | (287) | $(180,506)$ | 3,394,649 |
|  | - | - | - |  |  | 36,307 |
|  | (014,636) | (1,377,393) | 1,73,8- | $\stackrel{-}{-}$ | ,720, ${ }^{-}$ | $(36,307)$ |
| $(348,377)$ | $(614,636)$ | $(1,377,393)$ | 1,673,886 | 286 | 2,720,213 | 1,361,250 |
| \$26,416,405 | \$25,972,560 | \$12,495,965 | \$13,808,068 | \$204 | \$20,419,266 | \$189,522,843 |
| \$23,860,509 | \$12,303,593 | \$8,319,606 | \$13,676,251 | \$454 | \$21,424,788 | \$139,177,794 |
| 191,466 | 56,069 | 33,809 | 309,756 | 6 | 327,206 | 19,758,227 |
| \$137.97 | \$463.22 | \$369.61 | \$44.58 | \$33.54 | \$62.40 |  |
| \$123,126 | \$276,700 | \$96,149 | \$- | \$- | \$- | \$1,051,895 |
| \$145,091 | \$321,657 | \$105,537 | \$- | \$- | \$- | \$1,472,956 |
| 9,410 | 17,610 | 9,554 | - | - | - | 96,610 |
|  | $(12,503)$ | $(6,937)$ | - | - | - | $(71,077)$ |
| - | - | - | - | - | - | - |
| - | 2,058 | 692 | - | - | - | 16,474 |
| - | - | - | - | - | - | 130 |
|  | - | - ${ }^{-}$ | - | - | - | (130) |
| $(1,978)$ | 1,093 | $(7,764)$ | - | - | - | 7,037 |
| \$152,523 | \$329,915 | \$101,082 | \$- | \$- | \$- | \$1,522,000 |
| \$132,536 | \$283,865 | \$99,458 | \$- | \$- | \$- | \$1,093,902 |
| 1,105 | 712 | 273 | - | - | - | 27,993 |
| \$137.97 | \$463.22 | \$369.61 | \$- | \$- | \$- |  |

COMBINED INVESTMENT FUNDS
SCHEDULE OF INVESTMENT ACTIVITY BY TRUST
FOR THE FISCAL YEAR ENDED JUNE 30, 2015

|  | LIQUIDITY <br> FUND | ALTERNATIVE INVESTMENT FUND | MUTUAL EQUITY FUND | CORE FIXED INCOME FUND | INFLATION LINKED BOND FUND | $\begin{aligned} & \text { EMERGING } \\ & \text { MARKET DEBT } \\ & \text { FUND } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Soldiers' Sailors' \& Marines' Fund Book Value at June 30, 2014 | \$1,475,892 | \$- | \$3,924,597 | \$41,704,671 | \$- | \$- |
| Market Value at June 30, 2014 | \$1,472,893 | \$- | \$11,252,811 | \$48,495,062 | \$- | \$- |
| Shares Purchased | 2,996,634 | - | 68,185 | 710,526 | - | - |
| Shares Redeemed | $(2,000,000)$ | - | $(1,132,684)$ | $(1,251,200)$ | - | - |
| Returns of Capital | - | - | - | - | - | - |
| Gain/(Loss) on Shares Redeemed | $(16,966)$ | - | 758,522 | 197,136 | - | - |
| Net Investment Income Earned | 11,678 | - | - |  | - | - |
| Net Investment Income Distributed | $(11,678)$ | - | - | ${ }^{-}$ | - | - |
| Changes in Market Value of Fund Shares | $(15,642)$ | - | 51,429 | 696,317 | - | - |
| Market Value at June 30, 2015 | \$2,436,919 | \$- | \$10,998,263 | \$48,847,841 | \$- | \$- |
| Book Value at June 30, 2015 | \$2,455,560 | \$- | \$3,618,620 | \$41,361,133 | \$- | \$- |
| Shares Outstanding | 2,483,642 | - | 7,214 | 391,225 | - | - |
| Market Value per Share | \$0.98 | \$- | \$1,524.55 | \$124.86 | \$- | \$- |
| Endowment for the Arts |  |  |  |  |  |  |
| Book Value at June 30, 2014 | \$561,455 | \$- | \$2,058,666 | \$11,375,905 | \$- | \$- |
| Market Value at June 30, 2014 | \$560,057 | \$- | \$2,934,893 | \$12,649,138 | \$- | \$- |
| Shares Purchased | 472,394 | - | - - | 336,311 | - | - |
| Shares Redeemed | $(446,607)$ | - | $(270,764)$ | $(441,794)$ | - | - |
| Returns of Capital |  | - | - | - | - | - |
| Gain/(Loss) on Shares Redeemed | $(6,430)$ | - | 92,439 | 53,632 | - | - |
| Net Investment Income Earned | 3,356 | - | - | - | - | - |
| Net Investment Income Distributed | $(3,356)$ | - | - | - | - | - |
| Changes in Market Value of Fund Shares | $(3,221)$ | - | 120,261 | 181,064 | - | - |
| Market Value at June 30, 2015 | \$576,193 | \$- | \$2,876,829 | \$12,778,351 | \$- | \$- |
| Book Value at June 30, 2015 | \$580,812 | \$- | \$1,880,341 | \$11,324,054 | \$- | \$- |
| Shares Outstanding | 587,242 | - | 1,887 | 102,342 | - | - |
| Market Value per Share | \$0.98 | \$- | \$1,524.55 | \$124.86 | \$- | \$- |
| Agricultural College Fund |  |  |  |  |  |  |
| Book Value at June 30, 2014 | \$12 | \$- | \$- | \$617,540 | \$- | \$- |
| Market Value at June 30, 2014 | \$13 | \$- | \$- | \$657,122 | \$- | \$- |
| Shares Purchased | 17,505 | - | - | 500 | - | - |
| Shares Redeemed | $(17,438)$ | - | - | $(17,500)$ | - | - |
| Returns of Capital | - | - | - | $(17,50$ | - | - |
| Gain/(Loss) on Shares Redeemed | (51) | - | - | 1,200 | - | - |
| Net Investment Income Earned | 5 | - | - | - | - | - |
| Net Investment Income Distributed | (5) | - | - | - | - | - |
| Changes in Market Value of Fund Shares | - | - | - | 10,772 | - | - |
| Market Value at June 30, 2015 | \$29 | \$- | \$- | \$652,094 | \$- | \$- |
| Book Value at June 30, 2015 | \$28 | \$- | \$- | \$601,740 | \$- | \$- |
| Shares Outstanding | 28 | - | - | 5,223 | - | - |
| Market Value per Share | \$0.98 | \$- | \$- | \$124.86 | \$- | \$- |

COMBINED INVESTMENT FUNDS
SCHEDULE OF INVESTMENT ACTIVITY BY TRUST (Continued)
FOR THE FISCAL YEAR ENDED JUNE 30, 2015

| HIGH YIELD DEBT FUND | DEVELOPED MARKET INTERNATIONAL STOCK FUND | EMERGING MARKET INTERNATIONAL STOCK FUND | $\begin{aligned} & \text { REAL } \\ & \text { ESTATE } \\ & \text { FUND } \end{aligned}$ | COMMERCIAL MORTGAGE FUND | PRIVATE INVESTMENT FUND | TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \$- | \$6,025,333 | \$2,875,171 | \$- | \$- | \$- | \$56,005,664 |
| \$- | \$8,091,683 | \$3,035,464 | \$- | \$- | \$- | \$72,347,913 |
| - | 312,422 | 269,541 | - | - | - | 4,357,308 |
|  | $(613,628)$ | $(357,166)$ | - | - | - | $(5,354,678)$ |
|  |  |  | - | - | - | - |
|  | 167,756 | 18,077 | - | - | - | 1,124,525 |
| - | - |  | - | - | - | 11,678 |
| - | - | , | - | - | - | $(11,678)$ |
| - | $(83,986)$ | $(213,217)$ | - | - | - | 434,901 |
| \$- | \$7,874,247 | \$2,752,699 | \$- | \$- | \$- | \$72,909,969 |
| \$- | \$5,891,883 | \$2,805,623 | \$- | \$- | \$- | \$56,132,819 |
| - | 16,999 | 7,448 | - | - | - | 2,906,528 |
| \$- | \$463.22 | \$369.61 | \$- | \$- | \$- |  |
| \$- | \$1,575,066 | \$749,416 | \$- | \$- | \$- | \$16,320,508 |
| \$- | \$2,110,476 | \$791,646 | \$- | \$- | \$- | \$19,046,210 |
|  | 96,531 | 62,606 | - | - | - | 967,842 $(1,411,091)$ |
| - | $(169,414)$ | $(82,512)$ | - | - | - | $(1,411,091)$ |
| - | 45,317 ${ }^{-}$ | 4,232 | - | - | - | $189,190^{-}$ |
| - | - | 4,232 | - | - | - | 3,356 |
| - | - |  | - | - | - | $(3,356)$ |
| - | $(23,105)$ | $(55,685)$ | - | - | - | 219,314 |
| \$- | \$2,059,805 | \$720,287 | \$- | \$- | \$- | \$19,011,465 |
| \$- | \$1,547,500 | \$733,742 | \$- | \$- | \$- | \$16,066,449 |
| - | 4,447 | 1,949 | - | - | - | 697,867 |
| \$- | \$463.22 | \$369.61 | \$- | \$- | \$- |  |
| \$- | \$- | \$- | \$- | \$- | \$- | \$617,552 |
| \$- | \$- | \$- | \$- | \$- | \$- | \$657,135 |
| - | - | - |  |  | - | 18,005 |
| - | - | - | - | - | - | $(34,938)$ |
| - | - | - | - | - | - | - |
| - | - | - | - | - | - | 1,149 |
|  | - | - | - | - | - | 5 |
| - | - | - | - | - | - | (5) |
| - | - | - | - | - | - | 10,772 |
| \$- | \$- | \$- | \$- | \$- | \$- | \$652,123 |
| \$- | \$- | \$- | \$- | \$- | \$- | \$601,768 |
| - | - | - | - | - | - | 5,250 |
| \$- | \$- | \$- | \$- | \$- | \$- |  |

COMBINED INVESTMENT FUNDS

## SCHEDULE OF INVESTMENT ACTIVITY BY TRUST (Continued) FOR THE FISCAL YEAR ENDED JUNE 30, 2015

|  | LIQUIDITY <br> FUND | ALTERNATIVE INVESTMENT FUND | MUTUAL EQUITY FUND | CORE FIXED INCOME FUND | INFLATION LINKED BOND FUND | $\qquad$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| da Eaton Cotton Fund |  |  |  |  |  |  |
| Book Value at June 30, 2014 | \$72,332 | \$- | \$42,132 | \$1,476,370 | \$- | \$- |
| Market Value at June 30, 2014 | \$72,269 | \$- | \$378,715 | \$1,632,225 | \$- | \$- |
| Shares Purchased | 60,332 | - | 4,662 | 42,718 | - | - |
| Shares Redeemed | $(57,223)$ | - | $(39,379)$ | $(56,145)$ | - | - |
| Returns of Capital | - | - | - | - | - | - |
| Gain/(Loss) on Shares Redeemed | (312) | - | 35,107 | 6,261 | - | - |
| Net Investment Income Earned | 428 | - | - | - | - | - |
| Net Investment Income Distributed | (428) | - | (7910) | ${ }^{-}$ | - | - |
| Changes in Market Value of Fund Shares | (721) | - | $(7,916)$ | 23,716 | - | - |
| Market Value at June 30, 2015 | \$74,345 | \$- | \$371,189 | \$1,648,775 | \$- | \$- |
| 3ook Value at June 30, 2015 | \$75,129 | \$- | \$42,522 | \$1,469,204 | \$- | \$- |
| Shares Outstanding | 75,771 | - | 243 | 13,205 | - | - |
| Market Value per Share | \$0.98 | \$- | \$1,524.55 | \$124.86 | \$- | \$- |
| Andrew Clark Fund |  |  |  |  |  |  |
| Book Value at June 30, 2014 | \$33,937 | \$- | \$19,927 | \$710,460 | \$- | \$- |
| Market Value at June 30, 2014 | \$33,992 | \$- | \$178,129 | \$767,722 | \$- | \$- |
| Shares Purchased | 28,443 | - | 2,192 | 20,091 | - | - |
| Shares Redeemed | $(26,984)$ | - | $(18,532)$ | $(26,454)$ | - | - |
| Returns of Capital |  | - | - | - | - | - |
| Gain/(Loss) on Shares Redeemed | (80) | - | 16,510 | 2,410 | - | - |
| Net Investment Income Earned | 202 | - | - | - | - | - |
| Net Investment Income Distributed | (202) | - | - | - | - | - |
| Changes in Market Value of Fund Shares | (401) | - | $(3,720)$ | 11,690 | - | - |
| Market Value at June 30, 2015 | \$34,970 | \$- | \$174,579 | \$775,459 | \$- | \$- |
| Book Value at June 30, 2015 | \$35,316 | \$- | \$20,097 | \$706,507 | \$- | \$- |
| Shares Outstanding | 35,637 | - | 115 | 6,211 | - | - |
| Market Value per Share | \$0.98 | \$- | \$1,524.55 | \$124.86 | \$- | \$- |
| School Fund |  |  |  |  |  |  |
| Book Value at June 30, 2014 | \$324,801 | \$- | \$189,670 | \$6,658,450 | \$- | \$- |
| Market Value at June 30, 2014 | \$324,856 | \$- | \$1,704,493 | \$7,343,639 | \$- | \$- |
| Shares Purchased | 292,385 | - | 22,231 | 36,239 | - | - |
| Shares Redeemed | $(275,840)$ | - | $(174,847)$ | $(75,267)$ | - | - |
| Returns of Capital |  | - | - | - | - | - |
| Gain/(Loss) on Shares Redeemed | $(4,104)$ | - | 155,558 | 8,644 | - | - |
| Net Investment Income Earned | 1,931 | - | - | - | - | - |
| Net Investment Income Distributed | $(1,931)$ | - | - | - | - | - |
| Changes in Market Value of Fund Shares | $(1,906)$ | - | $(31,664)$ | 127,797 | - | - |
| Market Value at June 30, 2015 | \$335,391 | \$- | \$1,675,771 | \$7,441,052 | \$- | \$- |
| Book Value at June 30, 2015 | \$337,242 | \$- | \$192,612 | \$6,628,066 | \$- | \$- |
| Shares Outstanding | 341,823 | - | 1,099 | 59,596 | - | - |
| Market Value per Share | \$0.98 | \$- | \$1,524.55 | \$124.86 | \$- | \$- |

## COMBINED INVESTMENT FUNDS <br> SCHEDULE OF INVESTMENT ACTIVITY BY TRUST (Continued) FOR THE FISCAL YEAR ENDED JUNE 30, 2015

| HIGH YIELD DEBT FUND | DEVELOPED MARKET INTERNATIONAL STOCK FUND | EMERGING MARKET INTERNATIONAL STOCK FUND | $\begin{aligned} & \text { REAL } \\ & \text { ESTATE } \\ & \text { FUND } \end{aligned}$ | COMMERCIAL MORTGAGE FUND | PRIVATE INVESTMENT FUND | TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \$- | \$203,103 | \$96,852 | \$- | \$- | \$- | \$1,890,789 |
| \$- | \$272,331 | \$102,153 | \$- | \$- | \$- | \$2,457,693 |
| - | 9,066 | 7,997 | - | - | - | 124,775 |
| - | $(18,218)$ | $(10,603)$ | - | - | - | $(181,568)$ |
| - | - | - | - | - | - |  |
| - | 4,986 | 533 | - | - | - | 46,575 |
| - | - | - | - | - | - | 428 |
| - | (2,302) | (7,141) | - | - | - | (428) |
| - | $(2,392)$ | $(7,141)$ | - | - | - | 5,546 |
| \$- | \$265,773 | \$92,939 | \$- | \$- | \$- | \$2,453,021 |
| \$- | \$198,937 | \$94,779 | \$- | \$- | \$- | \$1,880,571 |
| - | 574 | 251 | - | - | - | 90,045 |
| \$- | \$463.22 | \$369.61 | \$- | \$- | \$- |  |
| \$- | \$95,529 | \$45,583 | \$- | \$- | \$- | \$905,436 |
| \$- | \$128,091 | \$48,048 | \$- | \$- | \$- | \$1,155,982 |
| - | 4,256 | 3,758 | - | - | - | 58,740 |
| - | $(8,568)$ | $(4,987)$ | - | - | - | $(85,525)$ |
| - | - | - | - | - | - | - |
| - | 2,345 | 248 | - | - | - | 21,433 |
| - | - | - | - | - | - | 202 |
| - | - | - | - | - | - | (202) |
| - | $(1,124)$ | $(3,354)$ | - | - | - | 3,091 |
| \$- | \$125,000 | \$43,713 | \$- | \$- | \$- | \$1,153,721 |
| \$- | \$93,562 | \$44,602 | \$- | \$- | \$- | \$900,084 |
| - | 270 | 118 | - | - | - | 42,350 |
| \$- | \$463.22 | \$369.61 | \$- | \$- | \$- |  |
| \$- | \$913,982 | \$435,207 | \$- | \$- | \$- | \$8,522,110 |
| \$- | \$1,225,538 | \$459,920 | \$- | \$- | \$- | \$11,058,446 |
| - | 72,297 | 47,842 | - | - | - | 470,994 |
| - | $(112,153)$ | $(58,773)$ | - | - | - | $(696,880)$ |
| - | - ${ }^{-}$ | ${ }^{-}$ | - | - | - |  |
| - | 30,119 | 2,554 | - | - | - | 192,771 |
| - | - |  | - | - | - | 1,931 |
| - | - |  | - | - | - | $(1,931)$ |
| - | $(16,220)$ | $(32,497)$ | - | - | - | 45,510 |
| \$- | \$1,199,581 | \$419,046 | \$- | \$- | \$- | \$11,070,841 |
| \$- | \$904,245 | \$426,830 | \$- | \$- | \$- | \$8,488,995 |
| - | 2,590 | 1,134 | - | - | - | 406,241 |
| \$- | \$463.22 | \$369.61 | \$- | \$- | \$- |  |

COMBINED INVESTMENT FUNDS
SCHEDULE OF INVESTMENT ACTIVITY BY TRUST (Continued) FOR THE FISCAL YEAR ENDED JUNE 30, 2015

|  | LIQUIDITY <br> FUND | ALTERNATIVE INVESTMENT FUND | MUTUAL EQUITY FUND | CORE FIXED INCOME FUND | INFLATION LINKED BOND FUND | EMERGING MARKET DEBT FUND |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Hopemead Fund |  |  |  |  |  |  |
| Book Value at June 30, 2014 | \$100,260 | \$- | \$102,565 | \$2,101,687 | \$- | \$- |
| Market Value at June 30, 2014 | \$99,875 | \$- | \$523,378 | \$2,255,710 | \$- | \$- |
| Shares Purchased | 7,071 | - | 6,792 | 60,154 | - | - |
| Shares Redeemed | - | - | $(43,003)$ | $(25,416)$ | - | - |
| Returns of Capital | - | - |  | - | - | - |
| Gain/(Loss) on Shares Redeemed | - |  | 34,889 | 2,259 | - | - |
| Net Investment Income Earned | 704 |  | - | - | - | - |
| Net Investment Income Distributed | (704) |  | - | - | - | - |
| Changes in Market Value of Fund Shares | $(1,794)$ | - | 2,942 | 39,268 | - | - |
| Market Value at June 30, 2015 | \$105,152 | \$- | \$524,998 | \$2,331,975 | \$- | \$- |
| Book Value at June 30, 2015 | \$107,331 | \$- | \$101,243 | \$2,138,684 | \$- | \$- |
| Shares Outstanding | 107,168 | - | 344 | 18,677 | - | - |
| Market Value per Share | \$0.98 | \$- | \$1,524.55 | \$124.86 | \$- | \$- |
| Police \& Fireman's Survivors' Benefit Fund |  |  |  |  |  |  |
| Book Value at June 30, 2014 | \$832,150 | \$2,226,055 | \$2,463,264 | \$1,735,464 | \$923,711 | \$1,459,370 |
| Market Value at June 30, 2014 | \$830,318 | \$2,347,644 | \$4,713,302 | \$1,873,032 | \$1,080,238 | \$1,915,426 |
| Shares Purchased | 201,372 | 130,695 | 4,703 | 103,048 | 66,857 | 172,126 |
| Shares Redeemed | $(139,596)$ | $(28,760)$ | $(285,951)$ | $(55,679)$ | $(19,680)$ | $(16,004)$ |
| Returns of Capital |  |  | - | - | - |  |
| Gain/(Loss) on Shares Redeemed | $(1,435)$ | 2,073 | 144,482 | 5,171 | 2,634 | 3,777 |
| Net Investment Income Earned | 5,736 | - | - | - | - |  |
| Net Investment Income Distributed | $(5,736)$ | - | - | - | - | - |
| Changes in Market Value of Fund Shares | $(13,014)$ | 91,799 | 195,896 | 29,242 | $(33,888)$ | $(149,960)$ |
| Market Value at June 30, 2015 | \$877,645 | \$2,543,451 | \$4,772,432 | \$1,954,814 | \$1,096,161 | \$1,925,365 |
| Book Value at June 30, 2015 | \$892,491 | \$2,330,063 | \$2,326,498 | \$1,788,004 | \$973,522 | \$1,619,269 |
| Shares Outstanding | 894,474 | 2,160,668 | 3,130 | 15,656 | 7,234 | 12,782 |
| Market Value per Share | \$0.98 | \$1.18 | \$1,524.55 | \$124.86 | \$151.53 | \$150.63 |
| OPEB Fund |  |  |  |  |  |  |
| Book Value at June 30, 2014 | \$5,237,572 | \$13,030,320 | \$23,345,140 | \$34,927,281 | \$3,097,713 | \$4,656,650 |
| Market Value at June 30, 2014 | \$5,240,337 | \$13,619,647 | \$28,879,939 | \$35,652,695 | \$3,127,011 | \$4,748,575 |
| Shares Purchased | 93,064,979 | 8,299,049 | 13,686,844 | 20,696,473 | 1,865,684 | 3,008,099 |
| Shares Redeemed | $(84,647,849)$ | - | - | - | - | - |
| Returns of Capital | - | - | - | - | - | - |
| Gain/(Loss) on Shares Redeemed | $(142,837)$ | - | - | - | - | - |
| Net Investment Income Earned | 60,496 | - | - | - | - |  |
| Net Investment Income Distributed | $(60,496)$ | ${ }^{-}$ | - ${ }^{-}$ | - ${ }^{-}$ | (123,640) | - ${ }^{-}$ |
| Changes in Market Value of Fund Shares | $(14,130)$ | 633,070 | 2,195,101 | 619,279 | $(123,640)$ | $(433,067)$ |
| Market Value at June 30, 2015 | \$13,500,500 | \$22,551,766 | \$44,761,884 | \$56,968,447 | \$4,869,055 | \$7,323,607 |
| Book Value at June 30, 2015 | \$13,511,865 | \$21,329,369 | \$37,031,984 | \$55,623,754 | \$4,963,397 | \$7,664,749 |
| Shares Outstanding | 13,759,339 | 19,157,775 | 29,361 | 456,263 | 32,132 | 48,619 |
| Market Value per Share | \$0.98 | \$1.18 | \$1,524.55 | \$124.86 | \$151.53 | \$150.63 |

## COMBINED INVESTMENT FUNDS <br> SCHEDULE OF INVESTMENT ACTIVITY BY TRUST (Continued) FOR THE FISCAL YEAR ENDED JUNE 30, 2015

| HIGH YIELD <br> DEBT <br> FUND | DEVELOPED <br> MARKET <br> INTERNATIONAL <br> STOCK FUND | EMERGING <br> MARKET <br> INTERNATIONAL <br> STOCK FUND | REAL <br> ESTATE <br> FUND | COMMERCIAL <br> MORTGAGE <br> FUND | PRIVATE <br> INVESTMENT <br> FUND | TOTAL |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: |


| \$11,567,543 | \$18,927,572 | \$6,240,159 | \$13,046,458 | \$- | \$12,601,238 | \$146,677,646 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \$12,504,983 | \$22,036,127 | \$6,484,404 | \$13,941,300 | \$- | \$14,186,918 | \$160,421,936 |
| 7,476,304 | 11,680,852 | 3,488,513 | 7,162,323 | - | 7,317,153 | 177,746,273 |
| - | - | - | - | - | - | $(84,647,849)$ |
| - | - | - | - | - | - | - |
| - | - |  | - | - | - | $(142,837)$ |
| - | - | - | - | - | - | 60,496 |
| (204,662) | - ${ }^{-}$ | (578,058) | -090, | - | -4, ${ }^{-}$ | $(60,496)$ |
| $(204,662)$ | 312,543 | $(578,058)$ | 2,090,716 | - | 2,435,612 | 6,932,764 |
| \$19,776,625 | \$34,029,522 | \$9,394,859 | \$23,194,339 | \$- | \$23,939,683 | \$260,310,287 |
| \$19,043,847 | \$30,608,424 | \$9,728,672 | \$20,208,781 | \$- | \$19,918,391 | \$239,633,233 |
| 143,341 | 73,463 | 25,419 | 520,318 | - | 383,618 | 34,629,648 |
| \$137.97 | \$463.22 | \$369.61 | \$44.58 | \$- | \$62.40 |  |

## LIST OF INVESTMENT ADVISORS AND NET ASSETS UNDER MANAGEMENT

 JUNE 30, 2015| Name of Fund | Investment Strategy | Net Assets Under Management | Percent of Fund Total |
| :---: | :---: | :---: | :---: |

LIQUIDITY (LF)

| State Street Global Advisors | Active | \$ | 988,662,597 | 45.07\% |
| :---: | :---: | :---: | :---: | :---: |
| Payden \& Rygel | Active |  | 405,745,556 | 18.50\% |
| PIMCO | Active |  | 295,470,927 | 13.47\% |
| Ambassador Capital Management | Active |  | 539,753 | 0.02\% |
| Lazard | Active |  | 200,650,000 | 9.15\% |
| Colchester Global Investors Ltd. | Active |  | 302,485,550 | 13.79\% |
| SUBTOTAL LF |  | \$ | 2,193,554,383 | 100.00\% |
| MUTUAL EQUITY FUND (MEF) |  |  |  |  |
| Large Cap |  | \$ | 5,589,613,699 | 82.55\% |
| T. Rowe Price Associates | Enhanced - Index |  | 1,810,761,116 | 26.74\% |
| State Street Global Advisors | Passive - Indexed |  | 3,778,852,583 | 55.81\% |
| All Cap |  |  | 547,628,574 | 8.09\% |
| Capital Prospects | Active |  | 283,029,157 | 4.18\% |
| FIS Group, Inc. | Active |  | 264,599,417 | 3.91\% |
| Small/Mid Cap |  |  | 621,964,816 | 9.19\% |
| Frontier Capital Mgmt Co | Active |  | 345,267,731 | 5.10\% |
| Bivium | Active |  | 276,697,085 | 4.09\% |
| Other ${ }^{(1)}$ |  |  | 11,658,627 | 0.17\% |
| SUBTOTAL MEF |  | \$ | 6,770,865,716 | 100.00\% |
| CORE FIXED INCOME FUND (CFIF) |  |  |  |  |
| State Street Global Advisors | Passive | \$ | 238,483,565 | 9.81\% |
| BlackRock Financial Management, Inc. | Active |  | 567,938,753 | 23.36\% |
| Wellington | Active |  | 556,246,683 | 22.88\% |
| Conning-Goodwin Capital | Active |  | 352,593,821 | 14.50\% |
| Progress | Active |  | 111,235,351 | 4.58\% |
| Prudence Crandall Fund III Opportunistic | Active |  | 281,466,396 | 11.58\% |
| Prudence Crandall Fund IV Opportunistic | Active |  | 282,511,247 | 11.62\% |
| Other ${ }^{(1)}$ |  |  | 40,491,360 | 1.67\% |
| SUBTOTAL CFIF |  | \$ | 2,430,967,176 | 100.00\% |
| INFLATION LINKED BOND FUND (ILBF) |  |  |  |  |
| BlackRock | Active | \$ | 500,347,178 | 44.25\% |
| Colchester | Active |  | 490,877,441 | 43.41\% |
| New Century | Active |  | 122,033,487 | 10.79\% |
| Other ${ }^{(1)}$ |  |  | 17,521,479 | 1.55\% |
| SUBTOTAL ILBF |  | \$ | 1,130,779,585 | 100.00\% |

## EMERGING MARKET DEBT FUND (EMDF)

| Ashmore | Active | \$ | 548,840,713 | 38.80\% |
| :---: | :---: | :---: | :---: | :---: |
| Stone Harbor Investment Partners | Active |  | 507,834,140 | 35.90\% |
| Pyramis | Active |  | 338,614,736 | 23.94\% |
| Other ${ }^{(1)}$ |  |  | 19,289,272 | 1.36\% |
| SUBTOTAL EMDF |  | \$ | 1,414,578,861 | 100.00\% |
| HIGH YIELD DEBT FUND (HYDF) |  |  |  |  |
| Loomis Sayles \& Co., Inc. | Active | \$ | 603,811,470 | 34.05\% |
| Stone Harbor Investment Partners | Active |  | 300,166,165 | 16.93\% |
| Shenkman Capital Management | Active |  | 422,221,718 | 23.81\% |
| Oaktree Capital Management, L.L.C. | Active |  | 347,995,961 | 19.62\% |
| Carlyle GMS Finance, Inc. | Active |  | 32,631,552 | 1.84\% |
| Carlyle NF Investment Corp. | Active |  | 47,968,916 | 2.71\% |
| Other ${ }^{(1)}$ |  |  | 18,469,898 | 1.04\% |
| SUBTOTAL HYDF |  | \$ | 1,773,265,680 | 100.00\% |

## LIST OF INVESTMENT ADVISORS AND NET ASSETS UNDER MANAGEMENT (Continued) JUNE 30, 2015

| Name of Fund | Investment Strategy |  | Net Assets Under Management | Percent of Fund Total |
| :---: | :---: | :---: | :---: | :---: |
| DEVELOPED MARKET INTERNATIONAL STOCK FUND (DMISF) |  |  |  |  |
| Index |  | \$ | 2,166,740,222 | 36.67\% |
| State Street Global Advisors | Index-Passive |  | 2,166,740,222 | 36.67\% |
| Core |  |  | 1,571,756,979 | 26.60\% |
| AQR Capital Management | Active |  | 835,876,337 | 14.15\% |
| Acadian Asset Management | Active |  | 602,937,239 | 10.20\% |
| Progress | Active |  | 132,943,403 | 2.25\% |
| Active-Growth |  |  | 826,746,692 | 13.99\% |
| MFS Institutional Advisors, Inc. | Active |  | 826,746,692 | 13.99\% |
| Active-Value |  |  | 475,361,675 | 8.04\% |
| Grantham, Mayo, Van Otterloo | Active |  | 475,361,675 | 8.04\% |
| Small Cap |  |  | 852,916,296 | 14.43\% |
| Schroder Investment Mgmt. | Active |  | 300,104,520 | 5.08\% |
| DFA | Active |  | 265,615,087 | 4.49\% |
| William Blair \& Company | Active |  | 287,196,689 | 4.86\% |
| Other ${ }^{(1)}$ |  |  | 15,722,939 | 0.27\% |
| SUBTOTAL DMISF |  | \$ | 5,909,244,803 | 100.00\% |
| EMERGING MARKET INTERNATIONAL STOCK FUND (EMISF) |  |  |  |  |
| Aberdeen Asset Management | Active | \$ | 664,832,507 | 26.88\% |
| Schroders Investment Mgt | Active |  | 897,692,176 | 36.30\% |
| Grantham, Mayo, Van Otterloo | Active |  | 889,860,048 | 35.98\% |
| Other ${ }^{(1)}$ |  |  | 20,903,021 | 0.84\% |
| SUBTOTAL EMISF |  | \$ | 2,473,287,752 | 100.00\% |
| REAL ESTATE FUND (REF) |  |  |  |  |
| AEW Partners III | Active | \$ | 5,896,095 | 0.32\% |
| American Realty Advisors | Active |  | 76,044,800 | 4.11\% |
| Apollo Real Estate | Active |  | 2,281,821 | 0.12\% |
| Blackstone Real Estate Partner Europe III LP | Active |  | 40,409,568 | 2.19\% |
| Blackstone Real Estate Spec Sit II LP | Active |  | 5,323,282 | 0.29\% |
| Blackstone Real Estate VI LP | Active |  | 83,989,075 | 4.54\% |
| Canyon Johnson Urban Fund II | Active |  | 13,796,478 | 0.75\% |
| Canyon Johnson Urban Fund III | Active |  | 32,033,471 | 1.73\% |
| Capri Select Income II LLC | Active |  | 96,473 | 0.00\% |
| Colony Realty Partners II LP | Active |  | 18,850,800 | 1.02\% |
| Cornerstone Patriot Fund LP | Active |  | 253,741,522 | 13.73\% |
| Covenant Apartment Fund V LP | Active |  | 6,385,510 | 0.34\% |
| Covenant Apartment Fund VI | Active |  | 4,926,979 | 0.27\% |
| Cypress Acquisition Prtnrs Retail FD LP | Active |  | 26,620,637 | 1.44\% |
| Gerding Edlen Green Cities II | Active |  | 27,575,494 | 1.49\% |
| Hart Realty Advisors | Active |  | 153,032,945 | 8.28\% |
| IL \& FS India Realty Fund II LLC | Active |  | 37,661,210 | 2.04\% |
| JP Morgan Strategic Property | Active |  | 75,000,000 | 4.06\% |
| Landmark RE Partners VII LP | Active |  | 2,577,854 | 0.14\% |
| Lone Star Real Estate Part II LP | Active |  | 18,231,320 | 0.99\% |
| Macfarlane Urban Real Estate Fund II LP | Active |  | 14,406,271 | 0.78\% |
| New Boston IV | Active |  | 582,960 | 0.03\% |
| Prime Property Fund LLC | Active |  | 263,282,799 | 14.24\% |
| PRISA | Active |  | 100,531,981 | 5.44\% |
| Rockwood Capital Fund V | Active |  | 1,199,820 | 0.06\% |
| Rockwood Capital VI Limited Partnership | Active |  | 8,630,734 | 0.47\% |
| Rockwood Capital VII Limited Partnership | Active |  | 24,007,702 | 1.30\% |
| Starwood Opportunity Fund VII | Active |  | 24,637,761 | 1.33\% |
| Starwood Opportunity Fund VIII | Active |  | 31,903,903 | 1.73\% |
| Starwood Opportunity Fund IX | Active |  | 37,270,876 | 2.02\% |
| Starwood Opportunity Fund X | Active |  | 706,210 | 0.04\% |

## LIST OF INVESTMENT ADVISORS AND NET ASSETS UNDER MANAGEMENT (Continued) JUNE 30, 2015

|  | Investment <br> Strategy |  | Net Assets <br> Under <br> Management |
| :--- | :--- | :--- | :--- |


| PRIVATE INVESTMENT FUND (PIF) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Buyout |  | \$ | 1,166,370,582 | 42.05\% |
| KKR Millennium Fund | Active |  | 30,383,731 | 1.10\% |
| Yucaipa American Alliance Fund II LP | Active |  | 98,306,067 | 3.55\% |
| Hicks, Muse Tate \& Furst Equity Fund III | Active |  | 10,637,089 | 0.38\% |
| Thomas H. Lee Equity Fund VI | Active |  | 73,609,111 | 2.65\% |
| GENNX360 Capital Partners II | Active |  | 6,153,687 | 0.22\% |
| TA XI, L.P. | Active |  | 68,540,156 | 2.47\% |
| Charterhouse Equity Partners IV | Active |  | 25,261,265 | 0.91\% |
| DLJ Merchant Banking Fund II | Active |  | 259,607 | 0.01\% |
| FS Equity Partners V | Active |  | 23,069,976 | 0.83\% |
| FS Equity Partners VI | Active |  | 89,653,148 | 3.23\% |
| JFL Equity Investors III, LP | Active |  | 30,442,771 | 1.10\% |
| Wellspring Capital Partners V | Active |  | 47,313,462 | 1.71\% |
| Candover 2008 Fund | Active |  | 8,668,840 | 0.31\% |
| Leeds Equity Partners V LP | Active |  | 26,682,696 | 0.96\% |
| Welsh Carson Anderson \& Stowe XI | Active |  | 80,513,106 | 2.90\% |
| AIG Healthcare Partners LP | Active |  | 6,315,146 | 0.23\% |
| AIG Altaris Health Partners II | Active |  | 30,619,140 | 1.11\% |
| AIG Altaris Health Partners III | Active |  | 8,949,698 | 0.32\% |
| Welsh Carson Anderson \& Stowe X LP | Active |  | 53,050,806 | 1.91\% |
| Court Square Capital Partners II | Active |  | 69,229,554 | 2.50\% |
| Ethos Private Equity Fund V | Active |  | 21,416,854 | 0.77\% |
| Boston Ventures VII | Active |  | 52,223,901 | 1.88\% |
| KKR 2006 Fund | Active |  | 96,483,216 | 3.48\% |
| Nogales Investors Fund II | Active |  | 6,871,023 | 0.25\% |
| ICV Partners II LP | Active |  | 28,322,690 | 1.02\% |
| Vista Equity Partners Fund III | Active |  | 21,525,653 | 0.78\% |
| Vista Equity Partners Fund IV | Active |  | 73,567,483 | 2.65\% |
| RFE Investments Partners VIII | Active |  | 22,030,848 | 0.79\% |
| RFE Investment Partners VII | Active |  | 40,612,924 | 1.46\% |
| Court Square Capital Partners III LP | Active |  | 15,656,934 | 0.57\% |
| Venture Capital |  |  | 10,796,528 | 0.39\% |
| Crescendo III | Active |  | 1,156,486 | 0.04\% |
| Syndicated Communications | Active |  | 9,640,042 | 0.35\% |
| Mezzanine |  |  | 69,421,353 | 2.50\% |
| SW Pelham Fund | Active |  | 998,289 | 0.04\% |
| Audax Mezzanine III Limited Partnership | Active |  | 39,735,041 | 1.43\% |
| GarMark Partners II LP | Active |  | 28,688,023 | 1.03\% |
| International |  |  | 41,071,137 | 1.48\% |

CONNECTICUT STATE TREASURER'S COMBINED INVESTMENT FUNDS

## LIST OF INVESTMENT ADVISORS AND NET ASSETS UNDER MANAGEMENT (Continued) JUNE 30, 2015

|  |  | Net Assets | Percent <br> Onder |
| :--- | :--- | ---: | ---: |
| Name of Fund | Investment <br> Strategy | Total |  |


| ALTERNATIVE INVESTMENT FUND (AIF) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Arclight Energy Partners Fund | Active | \$ | 37,798,741 | 2.10\% |
| Energy Fund XV Limited Partnership | Active |  | 43,343,847 | 2.40\% |
| Marathon European Credit Opportunity | Active |  | 23,726,333 | 1.31\% |
| Prudence Crandall I Permal Limited Partnership | Active |  | 572,217,624 | 31.71\% |
| Prudence Crandall II Prisma Limited Partnership | Active |  | 323,232,586 | 17.91\% |
| Prudence Crandall III Rock Creek Limited Partnership | Active |  | 299,120,008 | 16.58\% |
| Prudence Crandall IV K2 Limited Partnership | Active |  | 291,741,711 | 16.17\% |
| Thomas Welles Fund I | Active |  | 85,349,111 | 4.73\% |
| Thomas Welles Fund II | Active |  | 86,448,422 | 4.79\% |
| Other ${ }^{(2)}$ |  |  | 41,456,060 | 2.30\% |
| SUBTOTAL AIF |  | \$ | 1,804,434,443 | 100.00\% |
| TOTAL |  | \$ | 30,523,339,329 |  |
| Adjustments ${ }^{(3)}$ |  |  | (871,362,813) |  |
| GRAND TOTAL |  | \$ | 29,651,976,516 |  |

(1) Other represents cash equivalents, other net assets and terminated advisor balances, as well as, currency overlay balances for the DMISF.
(2) Other includes partnerships with nonmaterial balances, as well as moneys earmarked for distribution to participants, reinvestment, expenses and other net assets.
(3) Represents Elimination Entry to the Financial Statements to account for investment of Combined Investment Funds in the Liquidity Fund.

CONNECTICUT STATE TREASURER'S COMBINED INVESTMENT FUNDS
SCHEDULE OF CONSULTING SERVICES IN EXCESS OF \$5,000 ${ }^{(1)}$ FOR PERIODS ENDED JUNE 30

| Name of Firm | Description of Services | Aggregate Compensation Paid in Fiscal Year: |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 2015 | 2014 | 2013 | 2012 | 2011 |
| CONSULTING SERVICES |  |  |  |  |  |  |
| CRA RogersCasey Consulting Inc. | Pension Funds Consultant | - | - |  | 123,539 | 240,225 |
| Callan Associates, Inc. | Pension Funds Consultant | - | 85,000 | 60,000 | - |  |
| Cliffwater Associates, LLC | Alternative Inv. Consultant | 529,587 | 485,000 | - |  |  |
| Franklin Park Associates LLC | Private Equity Consultant | 1,059,856 | 1,051,606 | 1,019,075 | 989,873 | 956,085 |
| Hewitt EnnisKnupp Inc. | Private Equity Consultant | 479,492 | 472,000 | 472,000 | 298,945 |  |
| Hudepohl \& Associates, Inc. | Pension Funds Consultant | 22,000 | 102,226 | 76,709 | - | - |
| Mercer Investment Consulting | Pension Funds Consultant | - | - | - | 127,625 | 505,250 |
| New England Pension Consultants | Pension Funds Consultatn | - | 86,941 | 503,956 | 443,805 | 397,747 |
| The Townsend Group | Pension Funds Consultant | 250,000 | 250,000 | 250,000 | 250,000 | 250,000 |
| TOTAL CONSULTING SERVICES COMPENSATION |  | \$2,340,935 | \$2,532,773 | \$2,381,740 | \$2,233,787 | \$2,349,307 |

(1) Expenses are presented on a cash basis.

## TOP TEN HOLDINGS BY FUND AT JUNE 30, 2015*

LIQUIDITY FUND

| Security Name | Maturity Date | Market Value | \% |
| :--- | :---: | ---: | :---: |
| BNP PARIBAS CAT 1 REPO | $7 / 1 / 2015$ | $\$ 70,000,000$ | $3.21 \%$ |
| M L (COR) REPO REPO | $7 / 1 / 2015$ | $35,951,000$ | $1.65 \%$ |
| BANK OF AMERICA N/A | $7 / 20 / 2015$ | $35,000,665$ | $1.60 \%$ |
| CAISSE DES DEPOTS DISC | $7 / 31 / 2015$ | $34,973,906$ | $1.60 \%$ |
| CITIBANK NA REPO | $7 / 1 / 2015$ | $34,000,000$ | $1.56 \%$ |
| FEDERAL HOME LN BK CONS DISC | $7 / 6 / 2015$ | $32,597,256$ | $1.49 \%$ |
| US TREASURY NOTE | $4 / 30 / 2017$ | $30,150,442$ | $1.38 \%$ |
| BNP PARIBAS NY BRH INSTL C/D | $9 / 14 / 2015$ | $30,000,000$ | $1.37 \%$ |
| CREDIT AGRICOLE CORP INSTL C/D | $7 / 1 / 2015$ | $30,000,000$ | $1.37 \%$ |
| US TREASURY NOTE | $2 / 15 / 2018$ | $\mathbf{2 8 , 9 8 6 , 8 6 0}$ | $1.33 \%$ |
| Top Ten |  | $\mathbf{\$ 3 6 1 , 6 6 0 , 1 2 9}$ | $\mathbf{1 6 . 5 6 \%}$ |
|  | $\mathbf{\$ 2 , 1 8 3 , 9 6 2 , 8 7 5}$ |  |  |

## ALTERNATIVE INVESTMENT FUND

| Security Name | Partnership Type | Market Value | $\%$ |
| :--- | :--- | ---: | :---: |
| PRUDENCE CRANDALL I PERMAL | Hedge Fund-of-Funds | $572,217,624$ | $31.71 \%$ |
| PRUDENCE CRANDALL II PRISMA | Hedge Fund-of-Funds | $323,232,586$ | $17.91 \%$ |
| PRUDENCE CRANDALL III RCREEK | Hedge Fund-of-Funds | $299,120,008$ | $16.58 \%$ |
| PRUDENCE CRANDALL IV K2 | Hedge Fund-of-Funds | $291,741,711$ | $16.17 \%$ |
| THOMAS WELLES FUND II | Hedge Fund-of-Funds | $86,448,422$ | $4.79 \%$ |
| THOMAS WELLES FUND I | Hedge Fund-of-Funds | $85,349,111$ | $4.73 \%$ |
| EIG ENERGY FUND XV LP | Real Assets | $43,343,847$ | $2.40 \%$ |
| ARCLIGHT ENERGY PARTNERS V | Real Assets | $37,798,741$ | $2.10 \%$ |
| MARATHONEUROPEAN CREDIT OPP FUND SPCB | Opportunistic | $\mathbf{2 3 , 7 2 6 . 3 3 3}$ | $1.31 \%$ |
| Top Nine |  | $\mathbf{\$ 1 , 7 6 2 , 9 7 8 , 3 8 3}$ | $\mathbf{9 7 . 7 0 \%}$ |
|  |  | $\mathbf{\$ 1 , 8 0 4 , 4 8 7 , 7 4 6}$ |  |

## MUTUAL EQUITY FUND

| Security Name | Industry Sector | Market Value | $\%$ |
| :--- | :--- | ---: | :---: |
| APPLE INC | INFORMATION TECHNOLOGY | $\$ 207,029,515$ | $3.05 \%$ |
| MICROSOFT CORP | INFORMATION TECHNOLOGY | $113,242,322$ | $1.67 \%$ |
| EXXON MOBIL CORP | ENERGY | $103,912,474$ | $1.53 \%$ |
| JPMORGAN CHASE \& CO | FINANCIALS | $86,529,113$ | $1.28 \%$ |
| GENERAL ELECTRIC CO | PRODUCER DURABLES | $84,227,431$ | $1.24 \%$ |
| JOHNSON \& JOHNSON | HEALTH CARE | $75,414,840$ | $1.11 \%$ |
| WELLS FARGO \& CO | FINANCIALS | $68,547,112$ | $1.01 \%$ |
| CITIGROUP INC | FINANCIALS | $60,486,585$ | $0.89 \%$ |
| FACEBOOK INC | INFORMATION TECHNOLOGY | $59,755,220$ | $0.88 \%$ |
| PROCTER \& GAMBLE CO | CONSUMER STAPLES | $57,962,304$ | $0.86 \%$ |
| Top Ten |  | $\mathbf{\$ 9 1 7 , 1 0 6 , 9 1 6}$ | $\mathbf{1 3 . 5 2 \%}$ |
| FAIR VALUE MEF |  | $\mathbf{\$ 6 , 7 8 4 , 0 2 8 , 5 7 1}$ |  |

CORE FIXED INCOME FUND

| Security Name | Coupon | Maturity | Security Type | Market Value | \% |
| :--- | :---: | :--- | :--- | :--- | :---: |
| FNMA TBA | $3.500 \%$ | $7 / 1 / 2045$ | U.S. Govt/Agency | $\$ 66,315,893$ | $2.52 \%$ |
| FNMA TBA | 4.000 | $7 / 1 / 2045$ | U.S. Govt/Agency | $29,294,622$ | $1.12 \%$ |
| U S TREASURY NOTE | 2.125 | $6 / 30 / 2022$ | U.S. Govt/Agency | $19,808,240$ | $0.75 \%$ |
| U S TREASURY BOND | 3.000 | $5 / 15 / 2045$ | U.S. Govt/Agency | $17,979,080$ | $0.68 \%$ |
| US TREAS-CPI INFLAT | 0.250 | $1 / 15 / 2025$ | U.S. Govt/Agency | $17,708,833$ | $0.67 \%$ |
| US TREAS-CPI INFLAT | 0.125 | $7 / 15 / 2024$ | U.S. Govt/Agency | $17,548,720$ | $0.67 \%$ |
| U S TREASURY NOTE | 1.875 | $5 / 31 / 2022$ | U.S. Govt/Agency | $17,488,873$ | $0.67 \%$ |
| U S TREASURY NOTE | 0.625 | $6 / 30 / 2017$ | U.S. Govt/Agency | $14,184,466$ | $0.54 \%$ |
| FNMA TBA | 4.500 | $7 / 1 / 2045$ | U.S. Govt/Agency | $14,162,279$ | $0.54 \%$ |
| U S TREASURY BOND | 6.125 | $11 / 15 / 2027$ | U.S. Govt/Agency | $12.343,855$ | $0.47 \%$ |
| Top Ten |  |  | $\mathbf{\$ 2 2 6 , 8 3 4 , 8 6 1}$ | $\mathbf{8 . 6 3 \%}$ |  |
|  |  |  | $\mathbf{\$ 2 , 6 2 7 , 2 5 0 , 6 2 6}$ |  |  |
| FAIR VALUE CFIF |  |  |  |  |  |

## INFLATION LINKED BOND FUND

| Security Name | Coupon | Maturity | Security Type Market Value | \% |
| :---: | :---: | :---: | :---: | :---: |
| U.S. Treasury Notes | 3.875 | 4/15/2029 | U.S. Govt/Agency \$60,797,262 | 5.43\% |
| U.S. Treasury Notes | 0.125 | 7/15/2022 | U.S. Govt/Agency 43,596,349 | 3.89\% |
| U.S. Treasury Notes | 2.375 | 1/15/2027 | U.S. Govt/Agency 43,092,071 | 3.85\% |
| France Government Bond | 1.800 | 7/25/2040 | France Govt/Agency 37,258,449 | 3.33\% |
| U.S. Treasury Notes | 0.750 | 2/15/2042 | U.S. Govt/Agency 37,221,982 | 3.32\% |
| New Zealand Government Bond | 3.000 | 9/20/2030 | New Zealand Govt/Agency 30,905,962 | 2.76\% |
| U.S. Treasury Notes | 2.375 | 1/15/2017 | U.S. Govt/Agency 29,099,786 | 2.60\% |
| United Kingdom Bond | 1.875 | 11/22/2022 | U.K. Govt/Agency 26,836,099 | 2.39\% |
| New Zealand Government Bond | 2.000 | 9/20/2025 | New Zealand Govt/Agency 26,229,062 | 2.34\% |
| United Kingdom Bond | 1.250 | 11/22/2027 | U.K. Govt/Agency 22.710.001 | 2.02\% |
| Top Ten |  |  | \$357,747,023 | 31.93\% |
| FAIR VALUE ILBF |  |  | \$1,120,365,183 |  |

EMERGING MARKET DEBT FUND

| Security Name | Coupon | Maturity | Market Value | \% |
| :--- | ---: | :--- | ---: | :--- |
| SOUTH AFRICA GOVERNIMENT BOND | 10.500 | $12 / 21 / 2026$ | $\$ 14,770,388$ | $1.05 \%$ |
| BRAZIL NOTAS DO TESOURO | 10.000 | $1 / 1 / 2017$ | $13,368,603$ | $0.95 \%$ |
| VENEZUELA GOVERNMENT BOND | 5.750 | $2 / 26 / 2016$ | $11,952,533$ | $0.85 \%$ |
| ARGENTINA GOVERNMENT BOND | 7.000 | $4 / 17 / 2017$ | $11,694,548$ | $0.84 \%$ |
| MEXICAN BONDS | 10.000 | $12 / 5 / 2024$ | $10,646,497$ | $0.76 \%$ |
| INDONESIA TREASURY BOND | 9.000 | $3 / 15 / 2029$ | $9,428,211$ | $0.67 \%$ |
| MALAYSIA GOVERNMENT BOND | 3.314 | $10 / 31 / 2017$ | $8,979,318$ | $0.64 \%$ |
| INDONESIA TREASURY BOND | 7.000 | $5 / 15 / 2022$ | $8,893,658$ | $0.64 \%$ |
| INDONESIA TREASURY BOND | 8.375 | $3 / 15 / 2024$ | $8,077,374$ | $0.58 \%$ |
| COLOMBIA GOVERNMENT BOND | 9.850 | $6 / 28 / 2027$ | $\mathbf{7 . 8 0 3 . 9 8 6}$ | $0.56 \%$ |
| Top Ten |  |  | $\mathbf{\$ 1 0 5 , 6 1 5 , 1 1 6}$ | $\mathbf{7 . 5 4 \%}$ |
| FAIR VALUE EMDF |  | $\mathbf{\$ 1 , 3 9 9 , 8 6 4 , 8 1 9}$ |  |  |


| HIGH YIELD DEBT FUND <br> Security Name | Coupon | Maturity | Market Value | \% |
| :---: | :---: | :---: | :---: | :---: |
| REPUBLIC OF INDONESIA 144A | 5.875 | 1/15/2024 | \$9,503,000 | 0.54\% |
| SPRINT CAPITAL CORP | 6.875 | 11/15/2028 | 9,133,200 | 0.51\% |
| SEADRILL PARTNERS 2/14 TL | 0.000 | 2/21/2021 | 9,087,455 | 0.51\% |
| CCO HOLDINGS LLC | 5.750 | 1/15/2024 | 9,075,150 | 0.51\% |
| DISH DBS CORP | 5.000 | 3/15/2023 | 8,454,500 | 0.48\% |
| ALBERTSON'S 8/14 COV-LITE TLB4 | 0.000 | 8/25/2021 | 8,115,272 | 0.46\% |
| MORGAN STANLEY | 4.750 | 11/16/2018 | 7,941,267 | 0.45\% |
| TRIBUNE MEDIA CO 144A | 5.875 | 7/15/2022 | 7,611,663 | 0.43\% |
| QWEST CAPITAL FUNDING INC | 6.875 | 7/15/2028 | 7,250,850 | 0.41\% |
| CALIFORNIARESOURCES CORP | 6.000 | 11/15/2024 | 7.073.500 | 0.40\% |
| Top Ten |  |  | \$83,245,857 | 4.70\% |
| FAIR VALUE HYDF |  |  | ,772,254,243 |  |

DEVELOPED MARKET INTERNATIONAL STOCK FUND

| Security Name | Country | Market Value | $\%$ |
| :--- | :--- | ---: | :---: |
| NESTLE SA REG | SWITZERLAND | $\$ 78,862,434$ | $1.34 \%$ |
| NOVARTIS AG REG | SWITZERLAND | $70,601,267$ | $1.20 \%$ |
| HSBC HOLDINGS PLC | UNITED KINGDOM | $69,092,489$ | $1.18 \%$ |
| ROCHE HOLDING AG GENUSSCHEIN | SWITZERLAND | $67,929,643$ | $1.16 \%$ |
| BAYER AG REG | GERMANY | $55,840,276$ | $0.95 \%$ |
| BP PLC | UNITED KINGDOM | $43,658,184$ | $0.74 \%$ |
| ASTRAZENECA ORD USD 0.25 | UNITED KINGDOM | $42,832,982$ | $0.73 \%$ |
| TOYOTA MOTOR CORP | JAPAN | $41,536,211$ | $0.71 \%$ |
| TOTAL SA | FRANCE | $41,418,652$ | $0.70 \%$ |
| ROYAL DUTCH SHELLPLCA SHS | NETHERLANDS | $40.169,119$ | $0.68 \%$ |
| Top Ten |  | $\$ 551,941,257$ | $\mathbf{9 . 3 9 \%}$ |
| FAIR VALUE DMISF | $\mathbf{\$ 5 , 8 7 9 , 6 8 0 , 8 8 3}$ |  |  |

EMERGING MARKET INTERNATIONAL STOCK FUND

| Security Name | Country | Market Value | \% |
| :--- | :--- | ---: | :---: |
| TAIWAN SEMICONDUCTOR MANUFACTURE | Taiwan | $\$ 80,464,232$ | $3.27 \%$ |
| Samsung Electronic Co LTD | Republic of Korea | $74,726,103$ | $3.03 \%$ |
| CHINA CONSTRUCTION BANK CORP | CHINA | $69,228,894$ | $2.81 \%$ |
| China Mobile LTD | HONG KONG | $65,194,136$ | $2.65 \%$ |
| AIA GROUP LTD | HONG KONG | $51,894,609$ | $2.11 \%$ |
| TENCENT HLDGS LIMI HKD 0.00002 | CHINA | $45,925,799$ | $1.86 \%$ |
| INFOSYS LTD | INDIA | $44,182,034$ | $1.79 \%$ |
| HDFC BANK LTD | INDIA | $43,690,978$ | $1.77 \%$ |
| Industrial \& Commercial Bank | CHINA | $43,376,756$ | $1.76 \%$ |
| Samsung Electronics Co LTD 144A | Republic of Korea | $\mathbf{3 2 , 4 4 7 , 7 9 1}$ | $\mathbf{1 . 3 2 \%}$ |
| Top Ten |  | $\mathbf{5 5 1 , 1 3 1 , 3 3 2}$ | $\mathbf{2 2 . 3 7 \%}$ |
|  | $\mathbf{\$ 2 , 4 6 3 , 3 5 8 , 4 3 0}$ |  |  |
| FAIR VALUE EMISF |  |  |  |

## REAL ESTATE FUND

| Patnership Name | Patnership Type | Market Value | $\%$ |
| :--- | :--- | ---: | :---: |
| PRIME PROPERTY FUND LLC | Core | $\$ 263,282,799$ | $14.25 \%$ |
| CORNERSTONE PATRIOT FUND LP | Core | $253,741,522$ | $13.73 \%$ |
| HART REALTY ADVISORS | Core | $153,032,945$ | $8.28 \%$ |
| PRISA | Core | $100,531,981$ | $5.44 \%$ |
| USAA EAGLE RE FUND | Core | $88,350,410$ | $4.78 \%$ |
| BLACKSTONE REAL ESTATE VI LP | Opportunistic | $83,989,075$ | $4.54 \%$ |
| UBS-TRUMBULL PROPERTY FUND LP | Core | $78,041,475$ | $4.22 \%$ |
| AMERICAN REALTY ADVISORS | Core | $76,044,800$ | $4.11 \%$ |
| JP MORGAN STRATEGIC PROPERTY | Core | $75,000,000$ | $4.06 \%$ |
| UBS-TRUMBULL PROPERTY INCOME | Core | $52,839,651$ | $2.86 \%$ |
| Top Ten |  | $\mathbf{\$ 1 , 2 2 4 , 8 5 4 , 6 5 8}$ | $\mathbf{6 6 . 2 7 \%}$ |
|  | $\mathbf{\$ 1 , 8 4 8 , 2 9 1 , 1 4 8}$ |  |  |

COMMERCIAL MORTGAGE FUND

| Property Name | Location | Property Type | Market Value | $\%$ |
| :--- | :--- | :--- | :---: | :---: |
| Yankee Mac Series G 0.00\% | Various | Residential | $\$ 18,199$ | $61.07 \%$ |
| FAIR VALUE CMF |  |  | $\mathbf{\$ 2 9 , 7 9 9}$ |  |

PRIVATE INVESTMENT FUND

| Partnership Name | Partnership Type | Market Value | \% |
| :---: | :---: | :---: | :---: |
| FAIRVIEW CONSTITUTION IIILIMITED PARTNERSHIP | Fund of Funds | \$327,362,530 | 11.80\% |
| FAIRVIEW CONSTITUTION II LP | Fund of Funds | 146,774,529 | 5.29\% |
| STEPSTONE PIONEER CAPITAL II L | Fund of Funds | 125,316,910 | 4.52\% |
| YUPAICA AMERICAN ALLIANCE FUND II LP | Buyout | 98,306,067 | 3.55\% |
| KKR 2006 FUND | Buyout | 96,483,216 | 3.48\% |
| FS EQUITY PARTNERS VI | Buyout | 89,653,148 | 3.23\% |
| WELSH,CARSON,ANDERSON + STOWE XI | Buyout | 80,513,106 | 2.90\% |
| FAIRVIEW CONSTITUTION IV LP | Fund of Funds | 75,076,266 | 2.71\% |
| CT EMERGING PRIVATE EQUITY | Fund of Funds | 74,483,436 | 2.69\% |
| IHOMAS HLEEEQUITY FUND V/LP | Buyout | 73,609.111 | 2.65\% |
| Top Ten |  | \$1,187,578,319 | 42.82\% |
| FAIR VALUE PIF |  | 2,773,374,435 |  |

[^3]Active extension - Active extension is defined as an investment strategy that allows for both long and short positions in an investment portfolio with a gross exposure above $100 \%$ of total portfolio value on an absolute basis, while maintaining a beta of one

Agency Securities - Securities, usually bonds, issued by U.S. Government agencies. These securities have high credit ratings but are not backed by the full faith and credit of the U.S. Government.
All-cap - An investment approach that disregards market capitalization (i.e. small, medium, or large cap) in its security selection process.
Alpha - A coefficient which measures risk-adjusted performance, factoring in the risk due to the specific security, rather than the overall market. A high value for alpha implies that the stock or mutual fund has performed better than would have been expected given its beta (volatility).
Asset - Anything owned that has economic value; any interest in property, tangible or intangible, that can be used for payment of debts.
Asset Backed Security - Bonds or notes collateralized by one or more types of assets including real property, mortgages, and receivables.
At Value - A term used to denote the current value of an asset at a point in time. Generally used in presentations containing a mix of assets some of which are traded on an exchange and some that are valued on an appraisal or similar basis.
Banker's Acceptance (BA) - A high-quality, short-term negotiable discount note, drawn on and accepted by banks which are obligated to pay the face amount at maturity.
Basis Point (bp) - The smallest measure used in quoting yields or returns. One basis point is $0.01 \%$ of yield, 100 basis points equals $1 \%$. For example, a yield that changed from $8.75 \%$ to $9.50 \%$ has increased by 75 basis points.
Benchmark - A standard unit used as the basis of comparison; a universal unit that is identified with sufficient detail so that other similar classifications can be compared as being above, below, or comparable to the benchmark.
Benchmark composite - A term used when reporting on a portfolio containing multiple asset classes. The composite is generally calculated as a weighted average of the benchmarks of the underlying portfolios.
Beta - A quantitative measure of the volatility of a given stock, mutual fund or portfolio relative to the overall market.
Book Value (BV) - The value of individual assets, calculated as actual cost minus accumulated depreciation. Book value may be more or less than current market value.
Buyout - See "Leveraged Buyout"
Capital Gain (Loss) - Also known as capital appreciation (depreciation), capital gain (loss) measures the increase (decrease) in valuation of an asset over time.
Capitalized Fees - Fees (and expenses) that increase the cost basis of an investment.
Certificates of Deposit (CDs) - A debt instrument issued by banks, usually paying interest, with maturities ranging from 3 months to six years.
Citigroup Broad Investment-Grade Bond Index (CBIG) - A market value-weighted index composed of over 4,000 individually priced securities with a quality rating of at least BBB. Each issue has a minimum maturity of one year with an outstanding par amount of at least $\$ 25$ million.
Citigroup World Government Bond Index Non-U.S. (CWGBI) - An unhedged index measuring government issues of 12 major industrialized countries.
Close-End fund - Funds that have set limits on the life of the fund and/or the total amount to be invested.
Coefficient of Determination (R2) - A measurement of how closely the returns of an investment portfolio and its benchmark match. An R2 of 1.0 indicates that portfolio returns perfectly match the returns of the benchmark, while a value less than 1.0 indicates that the returns of the portfolio do not match the benchmark return. The closer the value is to 1 the closer the return of the portfolio is to the benchmark.
Collateral - Assets pledged by a borrower to secure a loan or other credit, and subject to seizure in the event of default.
Collateralized Mortgage Obligation (CMO) - A mortgage-backed, investment-grade bond that separates mortgage pools into different maturity classes. CMO payment obligations are backed by mortgage-backed securities with a fixed maturity.
Commercial Paper - Short-term obligations with maturities ranging from 2 to 270 days. An unsecured obligation issued by a corporation or bank to finance its short-term credit needs.
Commingled fund - A fund consisting of assets from multiple investors that are blended together. A mutual fund is a common example of a commingled fund.
Committed capital - Money that is committed by limited partners to a private investment fund.

Company risk - The risk of investing in any single company's stock or bonds.
Compounded Annual Total Return - Compounded annual total return measures the implicit annual percentage change in value of an investment, assuming reinvestment of dividends, interest, and realized capital gains, including those attributable to currency fluctuations. In effect, compounded annual total return "smoothes" fluctuations in long-term investment returns to derive an implied year-to-year annual return.
Consumer Price Index (CPI) - A measure of change in the cost of a fixed basket of products and services as determined by a monthly survey of the U.S. Bureau of Labor Statistics. Components of the CPI include housing costs, food, transportation, and electricity.
Core real estate strategy - Lower risk, low leverage, vehicles that invest in stabilized income-producing properties that provide steady net operating income or cash flow. Properties are usually located in major regional markets, have investment grade tenants, at-market rents, and high occupancy levels.
Cost basis - The original price paid for an investment.
Counter-party risk - The risk to each party of a contract that the counterparty will not live up to its contractual obligations.
Credit default risk - The risk that a debtor will not make payments in accordance with the terms of the debt.
Credit risk - The risk that a borrower will fail to make payments in a timely manner.
Cumulative Rate of Return - A measure of the total return earned for a particular time period. This calculation measures the absolute percentage change in value of an investment over a specified period, assuming reinvestment of dividends, interest income, and realized capital gains. For example, if a $\$ 100$ investment grew to $\$ 120$ in a two-year period, the cumulative rate of return would be 20\%.
Currency exchange risk - The risk that a foreign country's currency may appreciate or depreciate relative to the U. S. dollar, thus impacting the value of foreign investments.
Currency hedging - Transactions intended to manage the foreign exchange rate risk associated with investing in foreign securities.
Currency spot - A contract for the purchase or sale of a commodity, security or currency for settlement (payment and delivery) on the spot date, which is normally two business days after the trade date.
Current Yield - The relationship between the stated annual interest or dividend rate and the market price of a security. In calculating current yield, only income payments are considered; no consideration is given to capital gain/loss.
Default risk - The chance that an issuer will not make the required coupon payments or principal repayments to its debt holders.
Derivative - Derivatives are generally defined as contracts whose value depend on, or are derived from, the value of an underlying asset, reference rate, or index. For example, an option is a derivative instrument because its value derives from an underlying stock, stock index, commodity.
Discount Rate - The interest rate that the Federal Reserve charges banks for loans, using government securities or eligible paper as collateral.
Diversification - A portfolio strategy designed to reduce exposure to risk by putting assets in several different securities or categories of investments.
Drawdown-(a) A request for cash charged against capital committed to a limited partnership, limited liability corporation, or other like entity; (b) a decline in the current value of an investment or other asset. Duration - Duration is a measure of the price sensitivity of a fixed-income investment to a change in interest rates. (See Modified and Macaulay Duration).
Economic risk - The risk that economic activities will negatively impact an investment.
Enhanced indexing - Refers to the application of strategies to an index fund designed to generate higher rates of returns.
Equity - The ownership interest possessed by shareholders in a corporation in the form of common stock or preferred stock.
ERISA (Employee Retirement Income Security Act) - The 1974 federal law which established legal guidelines for private pension plan administration and investment practices.
Expense Ratio - Operating costs (including management fees) expressed as a percentage of the fund's average net assets for a given time period.
Fair Value - The amount at which a financial instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.
Federal Funds Rate - The interest rate that banks charge each other for the use of Federal Funds. This rate changes daily and is a sensitive indicator of general interest rate trends.
Federal Reserve Board - The seven member Board of Governors that oversees Federal Reserve Banks, establishes monetary policy and monitors the economic health of the economy.

Fiduciary - A person, company, or association holding assets in trust for a beneficiary. The fiduciary is charged with the responsibility to invest the assets prudently and solely for the beneficiary's benefit.
Fitch Investor Services - A financial services rating agency.
Floating Rate Note - A fixed principal instrument which has a long or even indefinite life and whose yield is periodically reset relative to a reference index rate to reflect changes in short- or intermediate-term interest rates.
Forward contract - A contract between two parties that requires the parties to sell or purchase an asset at a price set when the contract is entered into for settlement at a specified future date.
Funded Capital - Amount of cash invested.
Geopolitical risk - See "Political risk".
Gross Domestic Product - Total market value of goods and services produced in a country over a particular period of time, usually one year. The GDP growth rate is the primary indicator of the health of the economy.
Hedge - An investment in assets which serves to reduce the risk of adverse price movements in a security, by taking an offsetting position in a related security, such as an option or short sale.
Index - A benchmark of securities used as an independent representation of market performance. Example: S\&P 500 index.
Index Fund - A passively managed fund constructed to mirror the performance of a specific index, such as the S\&P 500.
Individual company risk - The risk associated with investment in the securities of any single company.
Inflation - The overall general upward price movement of goods and services in an economy, usually as measured by the Consumer Price Index and the Producer Price Index.
Inflation risk - The risk that the value of an investment will erode as a result of inflationary pressures.
Interest rate risk - The risk that changes in the general level of interest rates will adversely affect the fair value of an investment.

Investment Income - The equity dividends, bond interest, and/or cash interest paid on an investment.
J-Curve - An economic theory stating that a policy designed to have one effect will initially have the opposite effect. With regard to closed end commingled fund investments, this generally refers to a trend whereby a fund's return tends to be negative in the early years of a fund's existence until income and valuations increase in the later periods as investments mature and as the relative size of fees and other costs diminish relative to the value of invested capital.
JP Morgan Emerging Markets Bond Index Plus (EMBI+) - An index which tracks total returns for traded external debt instruments in the emerging markets. The instruments include external-currency-denominated Brady bonds, loans and Eurobonds, as well as U.S. dollar denominated local market instruments. The EMBI+ expands upon JP Morgan's original Emerging Markets Bond Index, which was introduced in 1992 and covers only Brady bonds.
Letter of Credit - An instrument or document issued by a bank, guaranteeing the payment of a customer's drafts up to a stated amount for a specified period. It substitutes the bank's credit for the buyer's and reduces the seller's risk.
Leverage - The use of borrowed funds to increase purchasing power and, ideally, to increase profitability of an investment transaction or business.
Leveraged buyout - A leveraged buyout (LBO) is an acquisition (usually of a company) financed through a combination of equity and debt and in which the cash flows or assets of the target are used to secure and repay the debt used to finance the acquisition.
Liability - The claim on the assets of a company or individual - excluding ownership equity. An obligation that legally binds an individual or company to settle a debt.
Limited Partnership - A partnership formed by two or more entities with at least one limited partner and one general partner. Limited partner responsibility for debts and losses is limited to the amount of their investment in the partnership. In addition, the limited partner does not participate in the activities of the partnership. The general partner has control over the management of the partnership and has unlimited liability for partnership debt and losses.
Liquidity risk - The risk that an investment cannot be immediately liquidated unless discounted in value.
Macaulay Duration - The weighted-average term to maturity of a bond's cash flows. The weighting is based on the present value of each cash flow divided by price.
Management risk - The risks associated with ineffective, destructive or underperforming management.
Marked-to-market pricing - An accounting practice in which the price of an investment recorded within the accounting records is the market value at the end of the month.
Market Risk - The risk that fluctuations in the overall market for securities will impact an investment portfolio.
Market Value - A security's last reported sale price or its current bid and ask prices. The price as determined dynamically by buyers and sellers in an open market.

Master Custodian - An entity, usually a bank, used for safekeeping of securities and other assets. May be responsible for other functions including accounting, performance measurement and securities lending.
Maturity Date - The date on which the principal amount of a bond or other debt instrument becomes payable or due.
Mezzanine Debt - Debt that incorporates equity-based options, such as warrants, and is subordinated debt.
MFR Index (iMoneyNet's First Tier Institutional-only Rated Money Fund Report AveragesTM Index) - An index which represents an average of the returns of institutional money market mutual funds that invest primarily in first-tier (securities rated $\mathrm{A}-1, \mathrm{P}-1$ ) taxable securities.
Modified Duration - A measure of the price sensitivity of a bond to interest rate movements. It is the primary basis for comparing the effect of interest rate changes on prices of fixed income securities.
Money Market Fund - An open-ended mutual fund that invests in commercial paper, bankers' acceptances, repurchase agreements, government securities, certificates of deposit, and other highly liquid and safe securities and pays money market rates of interest. The fund's net asset value remains a constant $\$ 1$ per share - only the interest rate goes up or down.

## Moody's (Moody's Investors Service) - A financial services rating agency.

MSCI EAFE - Morgan Stanley Europe Australasia Far East foreign equity index. An arithmetic value weighted average of the performance of over 900 securities on the stock exchanges of 23 countries on three continents. NCREIF (National Council of Real Estate Investment Fiduciaries) - National Council of Real Estate Investment Fiduciaries, a non-profit organization established to serve the institutional real estate investment community as a non-partisan collector, processor, validator and disseminator of real estate performance information.
Net Asset Value (NAV) - The total assets (including any valuation gains or losses on investments or currencies) minus total liabilities divided by shares outstanding.
Netted Fees - Refers to instances in which investment management fees/expenses are offset against income normally distributed to investors. May also refer to practices whereby investment management fees/expenses are added to the cost basis of an investment.
NPI - NCREIF Property Index. The NCREIF Property Index is a quarterly time series composite total rate of return measure of investment performance of a very large pool of individual commercial real estate properties acquired in the private market for investment purposes only.. Properties comprising this benchmark, which include wholly owned and joint venture investments, are held on an all-cash, non-leveraged basis, and is restricted to investment-grade, nonagricultural, and income-producing properties.
Open-End fund - A fund operated by an investment company in accordance with a stated set of objectives. Open-end funds raise money by periodically selling shares of the fund to the public.
Operations risk - The risk associated with negative operating events (net operating losses, inventory write-downs, breakdown in internal procedures, etc).
Par Value - The stated or face value of a stock or bond. While it has little significance for common stocks, for bonds, it specifies the payment amount at maturity.
Pension Fund - A fund set up by a corporation, labor union, governmental entity, or other organization to provide retirement income.
Percentile - A description of the percentage rank of a portfolio's performance,relative to a larger universe of portfolios.
Political Risk - The risk resulting from political changes or instability in a country's system of government, laws or regulation.
Prepayment risk - The risk associated with the prepayment of fixed income investments in a declining rate environment.
Present Value - The current value of a future cash flow or series of cash flows discounted at an appropriate interest rate or rates. For example, at a $12 \%$ interest rate, the value of one dollar a year from now has a present value of $\$ 0.89286$.
Price/Book (P/B) - A ratio showing the price of a stock divided by its book value per share. The P/B measures the multiple at which the market is capitalizing the net asset value per share of a company at any given time.
Price/Earnings (P/E) - A ratio showing the price of a stock divided by its earnings per share. The P/E measures the multiple at which the market is capitalizing the earnings per share of a company at any given time.
Principal - Face value of an obligation, such as a bond or a loan, that must be repaid at maturity.
Product risk - The risk associated with the introduction of a new product or process.
Prudent Person Rule - The standard adopted by some states to guide those fiduciaries with responsibility for investing the money of others. Such fiduciaries must act as a prudent person would be expected to act, with discretion and intelligence, to seek reasonable income, preserve capital, and, in general, avoid speculative investments.
Purchasing power risk- See "Inflation risk"

## CONNECTICUT STATE TREASURER'S COMBINED INVESTMENT FUNDS

## GLOSSARY OF INVESTMENT TERMS (Continued)

Pure indexing - Refers to the application of strategies to an index fund designed to exactly match the returns of the portfolio benchmark.

R2 - See "Coefficient of Determination"
Real interest rate - An interest rate that has been adjusted to remove the effects of inflation.
Real rate of return - The return realized on an investment adjusted for changes due to inflation or other external effects.
Realized Gain (Loss) - A gain (loss) that has occurred financially. The difference between the principal amount received and the cost basis of an asset realized at sale.
Reinvestment risk - The risk that cash flows received from a security will be reinvested at lower rates due to declining interest rates.
Relative Volatility - The standard deviation of the Fund divided by the standard deviation of its selected benchmark. A relative volatility greater than 1.0 suggests comparatively more volatility in Fund returns than those of the benchmark.
Repurchase Agreements ("Repos") - A contract in which the seller of securities, such as Treasury Bills, agrees to buy them back at a specified time and price. Repos are widely used as a money market instrument.
Return on Equity (ROE) - Net income of a company (after payment of preferred stock dividends but before payment of common stock dividends) divided by common shareholder equity.Reverse Repurchase Agreements ("Reverse Repos") - A purchase of securities with an agreement to resell them at a higher price at a specific future date.
Risk Adjusted Return - A measure of investment return which accounts for the amount of risk taken over a specified period.
Russell $\mathbf{3 0 0 0}$ - An equity index comprised of the securities of the 3,000 largest public U.S. companies as determined by total market capitalization. This index represents approximately $98 \%$ of the U.S. equity market's capitalization.
Securities Lending - A collateralized process of loaning portfolio positions to custodians, dealers, and short sellers who must make physical delivery of positions. Securities lending may reduce custody costs or enhance annual returns by a full percentage point or more in certain market environments.
Senior debt securities - Debt that must be paid off before other liabilities in the event of a business failure or bankruptcy.
Separate accounts - An investment portfolio managed by a third party investment manager in which the investor directly owns the securities within the portfolio.
Soft Dollars - The value of research or other services that brokerage houses and other service entities provide to a client "free of charge" in exchange for the client's brokerage.
S\&P 500 (Standard \& Poor's) - A basket of 500 stocks chosen for market size, liquidity and industry grouping, among other factors, designed to represented a US equity universe of large capitalization stocks.
S\&P Credit Ratings Service - A financial services rating agency.
Special situations - Private equity investments in a variety of securities (Debt, Preferred Equity and/or Common Equity) in portfolio companies at a variety of stages of development (Seed, Early Stage, Later Stage).

Standard Deviation - A measure of the dispersion of a set of data from its mean. Often used as a measure of investment volatility or risk, it measures how much an investment return may vary from its average return.

Tail risk - The risk that a loss (or gain) would be three standard deviations from the mean or current price.
Treasury Bill (T-Bill) - Short-term, highly liquid government securities issued at a discount from the face value and returning the face amount at maturity.
Treasury Bond or Note - Debt obligations of the Federal government that make semiannual coupon payments and are sold at or near par value in denominations of $\$ 1,000$ or more.
Trust - A fiduciary relationship in which a person, called a trustee, holds title to property for the benefit of another person, called a beneficiary.
TUCS - Trust Universe Comparison Service. TUCS is a universe based upon a pooling of quarterly trust accounting data from participating banks and other organizations that provide custody for trust assets.
Turnover - Security purchases and sales divided by the fiscal year's average market value $\{(\mathrm{P}+\mathrm{S}) /[(\mathrm{BMV}+\mathrm{EMV}) / 2]\}$ for a given portfolio.
Unhedged - Not protected from market actions.
Un-levered - Investments made without the use of debt or debt like securities.
Unrealized Gain (Loss) - A profit (loss) that has not been realized through the sale of a security. The gain (loss) is realized when a security or futures contract is actually sold or settled.

Variable Rate Note - Floating rate notes with a coupon rate adjusted at set intervals, such as daily, weekly, or monthly, based on different interest rate indices, such as LIBOR, Fed Funds, and Treasury Bills.

Vintage year - The year in which a capital commitment is made to an investment, most often applied to real estate and private equity investments.

Volatility - A statistical measure of the tendency of a market price or yield to vary over time. Volatility is said to be high if the price, yield, or return typically changes dramatically in a short period of time.

Warrant - A security that entitles the holder to buy a specific security at a specified price within a specified time frame.
Yield - The income return on an investment.
Yield Curve - A graph showing the term structure of interest rates by plotting the yields of all bonds of the same quality with maturities ranging from the shortest to the longest. The Y -axis represents the interest rate and the X -axis represents time, generally with a normal curve that is convex in shape.
Zero Coupon Bond - A bond paying no interest that sells at a discount and returns principal only at maturity.

## UNDERSTANDING INVESTMENT PERFORMANCE

## Introduction

This section discusses the Treasury's approach to measuring performance, including risk and return of the Connecticut Retirement Plans and Trust Funds (CRPTF).

## Understanding Performance

To measure success in achieving the primary objective of the Asset Allocation Plan, the Fund's performance is evaluated in two principal areas: risk and return. The results of these reviews, coupled with information on portfolio characteristics, are used to monitor and improve the performance of the Fund's external investment managers.

To monitor and evaluate Fund performance and measurements of risk and return, CRPTF performance is compared to those of similarly structured peer groups and indices. In addition, the performance of the Combined Investment Funds (CIF) invested in by the various plans and trusts is compared to the performance of their respective benchmarks. Each CIF's benchmark is selected on the basis of portfolio composition, investment style, and objectives. The benchmark comparisons enable plan participants, the Treasurer and the Investment Advisory Council, to determine whether and by how much CIF returns exceeded or fell short of their respective benchmarks. The comparisons provide an understanding of the reason for the CIF's performance relative to their benchmarks.

Comparative performance is reviewed over both the near-term and the long-term for two reasons. First, pension management is, by its very nature, a long-term process. While both young and old employees comprise the pool of plan beneficiaries, the increasing life span of plan participants makes it important that plan assets be managed for the long term. Second, as experience has shown, results attained in the short term are not necessarily an indicator of results to be achieved over the long term. Performance must be viewed in a broad context.

Overall performance is measured by calculating monthly returns and linking them to provide one-, three-, five- and ten-year histories of overall investment performance. Short-term performance is measured by total return over one-month, quarter-end, and trailing one-year time periods. Risk is also measured over both short- and long-term periods.

## Risk

The measurement of risk is a critical component in investment management. It is the basis for both strategic decision-making and investment evaluation. Investors assume risk to enhance portfolio returns. The primary objective is to generate returns in excess of those available in "risk-free" investments, such as Treasury Bills. The amount of excess returns varies in magnitude according to the degree of risk assumed. Many investors focus on the negative aspects of risk and in doing so forego substantial upside potential, which can significantly enhance long-term returns. Thus, while risk can never be completely eliminated from a portfolio, the prudent management of risk can maximize investment returns at acceptable levels of risk.

Risk can take several forms and include: market risk, the risk of fluctuations in the overall market for securities; company risk, the risk of investing in any single company's stock or bonds; currency-exchange risk, the risk that a foreign country's currency may appreciate or depreciate relative to the U.S. dollar, thus impacting the value of foreign investments; and political risk, risk incurred through investing in foreign countries with volatile economies and political systems.

With respect to fixed income investments, investors also assume: reinvestment risk, the risk that cash flows received from a security will be reinvested at lower rates due to declining interest rates; credit or default risk, the risk that the issuer of a fixed income security may fail to make principal and interest payments on the security; interest rate risk, the risk that the market value of fixed coupon bonds will decline in the event of rising market interest rates; and inflation or purchasing power risk, the risk that the real value of a security and its cash flows may be reduced by inflation. The level of risk incurred in fixed income investing increases as the investment time horizon is lengthened. This is demonstrated by the comparatively higher yields available on "long bonds," or bonds maturing in 20 to 30 years, versus those available on short-term fixed income securities.

In the alternative investment category, risks are significantly greater than those of publicly traded investments. Assessment of progress is more tenuous and valuation judgments are more complex. The investor assumes not only management, product, market, and operations risk, similar to equity investing, but also assumes liquidity risk, the risk
that one's investment cannot be immediately liquidated at other than a substantially discounted value. An additional risk to this category is transparency risk, the risk associated with not knowing the underlying investments within a portfolio.

## Volatility

To measure the effects of risk on the portfolio, the volatility of returns is calculated over time. Volatility, viewed as the deviation of returns from an average of these returns over some period of time, is measured statistically by standard deviation. Funds with high standard deviations are considered riskier than those with low standard deviations.

To evaluate the significance of the CIF's standard deviation, each CIF's relative volatility, or the ratio of the CIF's standard deviation to that of the benchmark is calculated. A relative volatility greater than 1.0 indicates that the CIF is more volatile than the benchmark while a measure less than 1.0 indicates less volatility. A relative volatility of 1.0 indicates that the volatility of the CIF is the same as the benchmark.

As an extension of standard deviation, each CIF's beta, (a measure of the relative price fluctuation of the CIF to its benchmark) is also calculated. The measurement of beta allows one to evaluate the sensitivity of Fund returns to given movements in the market and/or its benchmark. A beta greater than 1.0 compared to the selected market benchmark signifies greater price sensitivity while a beta less than 1.0 indicates less sensitivity.

To measure the degree of correlation between CIF returns and the benchmark, the Division calculates the coefficient of determination, or R2. This calculation, which is used in conjunction with beta, allows one to evaluate how much of the volatility in CIF returns is explained by returns in the selected market benchmark. An R2 of 1.0 indicates that CIF returns are perfectly explained by returns of the benchmark, while a value less than 1.0 indicates that the returns of the benchmark explain only a portion of the fund return.

Finally, to evaluate how well each of the above measures actually predicted returns of the CIF, a calculation is performed on the CIF's alpha. This calculation measures the absolute difference between the CIF's monthly return and that predicted by its beta. Used together, these measures provide a comprehensive view of a CIF's relative risk profile.

## Return

The Pension and Trust Funds are managed to maximize return and minimize risk. Return, viewed in this context, includes realized and unrealized gains in the market value of a security, including those attributable to currency fluctuations, as well as income distributed by a security such as dividends and interest. Return is measured through two calculations: compounded annual total return and cumulative total return.

Compounded Annual Total Return - This return measure evaluates performance over the short and long-term. Compounded annual total return measures the implicit annual percentage change in value of an investment, assuming reinvestment of dividends, interest, and realized and unrealized capital gains, including gains attributable to currency fluctuations. In effect, compounded annual total return "smoothes" fluctuations in long-term investment returns to derive an implied year-to-year annual return.

Cumulative Total Return - This calculation measures the absolute percentage change in value of an investment over a specified period, assuming reinvestment of dividends, interest income, and realized capital gains. While this calculation does not "smooth" year-to-year fluctuations in long-term returns to derive implied annual performance, cumulative total return allows one to see on an absolute basis the percentage increase in the total Fund's value over a specified time. Viewed graphically, cumulative total return shows one what a $\$ 10$ million investment in the CRPTF a set number of years ago would be worth today.
$\frac{\text { Statistical }}{\text { Section }}$
©

## STATISTICAL SECTION

This part of the Combined Investment Fund's (CIF's) comprehensive annual financial report presents detailed information as a context for understanding what the information in the financial schedules and other supplementary information say about the overall financial health of CIF. The schedules within this statistical section comply with the requirements of GASB 44.

## Financial Trends

These schedules contain the ten-year trend information on the financial performance of CIF.
Schedule ..... Page
o Per share data ..... 146
o Schedule of rates of return ..... 146
o Schedule of financial ratios ..... 146
o Schedule of balances in Combined Investment Funds ..... 148

## Revenue Capacity

Revenue capacity is not applicable to CIF.

## Borrowing Capacity

Borrowing capacity is not applicable to CIF.

## Demographic and Economic Information

These schedules show the breakdown between CIF funds, growth of the fund and rate of return information.

Schedule
o Investment summary
o Annual money-weighted rates of return

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152

## Operating Information

The summary of operations schedule outlines the expenses, additions and deductions associated with the management of CIF.

## Schedule Page

o Schedule of Net Position
153

Sources: Unless otherwise noted, the information in these schedules is derived from the comprehensive annual financial reports for the relevant year. CIF implemented Statement 34 in fiscal year 2005.

SUPPLEMENTAL SCHEDULE OF FINANCIAL HIGHLIGHTS


Source: Amounts were derived from custodial records.

SUPPLEMENTAL SCHEDULE OF FINANCIAL HIGHLIGHTS (Continued)

FISCAL YEAR ENDED JUNE 30,

## PER SHARE DATA

Net Position- Beginning of Period
INCOME FROM INVESTMENT OPERATIONS
Net Investment Income (Loss)
Net Gains or (Losses) on Securities
(Both Realized and Unrealized)
Total from Investment Operations
LESS DISTRIBUTIONS
Dividends from Net Investment Income
Net Position - End of Period
TOTAL RETURN
RATIOS
Net Position - End of Period (\$000,000 Omitted)
Ratio of Expenses to Average Net Position
(excl. sec. lending fees \& rebates)
Ratio of Expenses to Average Net Position
Ratio of Net Investment Income
(Loss) to Average Net Position

| HIGH YIELD DEBT |  |  |  |  |
| ---: | ---: | ---: | ---: | ---: |
| $\mathbf{2 0 1 5}$ | $\mathbf{2 0 1 4}$ | $\mathbf{2 0 1 3}$ | $\mathbf{2 0 1 2}$ | $\mathbf{2 0 1 1}$ |
| $\$ 139.80$ | $\$ 125.63$ | $\$ 121.79$ | $\$ 122.95$ | $\$ 113.69$ |
|  |  |  |  |  |
| $\$ 8.06$ | $\$ 7.86$ | $\$ 8.37$ | $\$ 9.22$ | $\$ 10.40$ |
| $\$(9.89)$ | $\$ 7.30$ | $\$ 2.22$ | $\$(1.87)$ | $\$ 7.36$ |
| $\$(1.83)$ | $\$ 15.16$ | $\$ 10.59$ | $\$ 7.35$ | $\$ 17.76$ |


| $\$-$ | $\$(0.99)$ | $\$(6.75)$ | $\$(8.51)$ | $\$(8.50)$ |
| ---: | ---: | ---: | ---: | ---: |
| $\$ 137.97$ | $\$ 139.80$ | $\$ 125.63$ | $\$ 121.79$ | $\$ 122.95$ |
| $-1.31 \%$ | $12.24 \%$ | $8.46 \%$ | $6.23 \%$ | $15.96 \%$ |


| $\$ 1,773$ | $\$ 1,588$ | $\$ 1,248$ | $\$ 711$ | $\$ 718$ |
| :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |
| $0.33 \%$ | $0.35 \%$ | $0.36 \%$ | $0.38 \%$ | $0.39 \%$ |
| $0.34 \%$ | $0.36 \%$ | $0.39 \%$ | $0.41 \%$ | $0.42 \%$ |
|  |  |  |  |  |
| $5.80 \%$ | $5.91 \%$ | $6.07 \%$ | $7.54 \%$ | $8.67 \%$ |

DEVELOPED MARKET INTERNATIONAL

| $\mathbf{2 0 1 5}$ | $\mathbf{2 0 1 4}$ | $\mathbf{2 0 1 3}$ | $\mathbf{2 0 1 2}$ | $\mathbf{2 0 1 1}$ |
| :---: | :---: | :---: | :---: | :---: |
| $\$ 460.14$ | $\$ 378.32$ | $\$ 314.31$ | $\$ 366.79$ | $\$ 295.58$ |


| $\$ 11.36$ | $\$ 13.40$ | $\$ 10.35$ | $\$ 9.49$ | $\$ 8.68$ |
| ---: | ---: | ---: | ---: | ---: |
|  |  |  |  |  |
| $\$(8.28)$ | $\$ 70.75$ | $\$ 60.42$ | $\$(54.79)$ | $\$ 68.92$ |
| $\$ 3.08$ | $\$ 84.15$ | $\$ 70.77$ | $\$(45.30)$ | $\$ 77.60$ |


| $\$-$ | $\$(2.33)$ | $\$(6.76)$ | $\$(7.18)$ | $\$(6.39)$ |
| ---: | ---: | ---: | ---: | ---: |
| $\$ 463.22$ | $\$ 460.14$ | $\$ 378.32$ | $\$ 314.31$ | $\$ 366.79$ |
| $0.67 \%$ | $22.31 \%$ | $22.56 \%$ | $-12.48 \%$ | $26.30 \%$ |


| $\$ 5,909$ | $\$ 6,135$ | $\$ 5,447$ | $\$ 4,626$ | $\$ 5,409$ |
| :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |
| $0.40 \%$ | $0.40 \%$ | $0.43 \%$ | $0.45 \%$ | $0.51 \%$ |
| $0.41 \%$ | $0.40 \%$ | $0.45 \%$ | $0.47 \%$ | $0.53 \%$ |
|  |  |  |  |  |
| $2.46 \%$ | $3.17 \%$ | $3.02 \%$ | $2.79 \%$ | $2.62 \%$ |

FISCAL YEAR ENDED JUNE 30,
PER SHARE DATA
Net Position- Beginning of Period
INCOME FROM INVESTMENT OPERATIONS
Net Investment Income (Loss)
Net Gains or (Losses) on Securities
(Both Realized and Unrealized)
Total from Investment Operations
LESS DISTRIBUTIONS
Dividends from Net Investment Income
Net Position - End of Period
TOTAL RETURN

## RATIOS

Net Position - End of Period (\$000,000 Omitted)
Ratio of Expenses to Average Net Position
(excl. sec. lending fees \& rebates)
Ratio of Expenses to Average Net Position
Ratio of Net Investment Income
(Loss) to Average Net Position

| EMERGING MARKET INTERNATIONAL STOCK <br> $\mathbf{2 0 1 5}$ |  |  |  | $\mathbf{2 0 1 4}$ |
| :---: | :---: | :---: | :---: | :---: |
|  | $\mathbf{2 0 1 3}$ | $\mathbf{2 0 1 2}$ | $\mathbf{2 0 1 1}$ |  |
| $\$ 397.12$ | $\$ 358.76$ | $\$ 351.61$ | $\$ 416.41$ | $\$ 327.75$ |
|  |  |  |  |  |
| $\$ 8.22$ | $\$ 6.81$ | $\$ 6.36$ | $\$ 9.28$ | $\$ 7.00$ |
| $\$(35.73)$ | $\$ 34.08$ | $\$ 5.57$ | $\$(67.82)$ | $\$ 86.38$ |
| $\$(27.51)$ | $\$ 40.89$ | $\$ 11.93$ | $\$(58.54)$ | $\$ 93.38$ |
| $\$-$ | $\$(2.53)$ | $\$(4.78)$ | $\$(6.26)$ | $\$(4.72)$ |
| $\$ 369.61$ | $\$ 397.12$ | $\$ 358.76$ | $\$ 351.61$ | $\$ 416.41$ |
| $-6.93 \%$ | $11.50 \%$ | $3.29 \%$ | $-14.16 \%$ | $28.55 \%$ |


| REAL ESTATE |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| $\mathbf{2 0 1 5}$ | $\mathbf{2 0 1 4}$ | $\mathbf{2 0 1 3}$ | $\mathbf{2 0 1 2}$ | $\mathbf{2 0 1 1}$ |
| $\$ 39.48$ | $\$ 36.46$ | $\$ 35.21$ | $\$ 33.72$ | $\$ 30.40$ |
| $\$ 1.59$ | $\$(0.97)$ | $\$ 2.04$ | $\$ 0.89$ | $\$ 1.44$ |
| $\$ 3.51$ | $\$ 4.84$ | $\$ 1.55$ | $\$ 1.51$ | $\$ 3.40$ |
| $\$ 5.10$ | $\$ 3.87$ | $\$ 3.59$ | $\$ 2.40$ | $\$ 4.84$ |
| $\$-$ | $\$(0.85)$ | $\$(2.34)$ | $\$(0.91)$ | $\$(1.52)$ |
| $\$ 44.58$ | $\$ 39.48$ | $\$ 36.46$ | $\$ 35.21$ | $\$ 33.72$ |
| $12.93 \%$ | $10.66 \%$ | $10.26 \%$ | $7.19 \%$ | $16.12 \%$ |


| $\$ 2,473$ | $\$ 2,655$ | $\$ 2,369$ | $\$ 2,227$ | $\$ 2,638$ | $\$ 1,848$ | $\$ 1,510$ | $\$ 1,482$ | $\$ 1,328$ | $\$ 1,097$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $0.70 \%$ | $0.69 \%$ | $0.84 \%$ | $0.72 \%$ | $0.85 \%$ |  | $0.39 \%$ | $0.55 \%$ | $0.35 \%$ | $0.33 \%$ |
| $0.71 \%$ | $0.70 \%$ | $0.85 \%$ | $0.73 \%$ | $0.86 \%$ | $0.39 \%$ | $0.55 \%$ | $0.35 \%$ | $0.33 \%$ | $0.43 \%$ |
|  |  |  |  |  |  |  |  |  |  |
| $2.15 \%$ | $1.81 \%$ | $1.78 \%$ | $2.42 \%$ | $1.90 \%$ | $3.77 \%$ | $-2.50 \%$ | $5.56 \%$ | $2.59 \%$ | $4.62 \%$ |


| PRIVATE INVESTMENT |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| $\mathbf{2 0 1 5}$ | $\mathbf{2 0 1 4}$ | $\mathbf{2 0 1 3}$ | $\mathbf{2 0 1 2}$ | $\mathbf{2 0 1 1}$ |
|  |  |  |  |  |
| $\$ 54.72$ | $\$ 48.06$ | $\$ 49.83$ | $\$ 51.00$ | $\$ 49.63$ |

## FISCAL YEAR ENDED JUNE 30,

## PER SHARE DATA

Net Position- Beginning of Period
INCOME FROM INVESTMENT OPERATIONS
Net Investment Income (Loss)
Net Gains or (Losses) on Securities
(Both Realized and Unrealized)
Total from Investment Operations
LESS DISTRIBUTIONS
Dividends from Net Investment Income
Net Position - End of Period
TOTAL RETURN
RATIOS
Net Position - End of Period (\$000,000 Omitted)
Ratio of Expenses to Average Net Position
(excl. sec. lending fees \& rebates)
Ratio of Expenses to Average Net Position
Ratio of Net Investment Income
(Loss) to Average Net Position

| COMMERCIAL MORTGAGE |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| $\mathbf{2 0 1 5}$ | $\mathbf{2 0 1 4}$ | $\mathbf{2 0 1 3}$ | $\mathbf{2 0 1 2}$ | $\mathbf{2 0 1 1}$ |
| $\$ 33.45$ | $\$ 30.36$ | $\$ 40.34$ | $\$ 46.54$ | $\$ 48.51$ |
|  |  |  |  |  |
| $\$ 0.71$ | $\$ 5.47$ | $\$ 5.59$ | $\$ 2.47$ | $\$ 3.51$ |
| $\$(0.62)$ | $\$(2.38)$ | $\$(7.62)$ | $\$(5.34)$ | $\$(1.35)$ |
| $\$ 0.09$ | $\$ 3.09$ | $\$(2.03)$ | $\$(2.87)$ | $\$ 2.16$ |
| $\$-$ | $\$-$ | $\$(7.95)$ | $\$(3.33)$ | $\$(4.13)$ |
| $\$ 3.54$ | $\$ 33.45$ | $\$ 30.36$ | $\$ 40.34$ | $\$ 46.54$ |
| $0.25 \%$ | $10.17 \%$ | $0.88 \%$ | $-6.48 \%$ | $4.61 \%$ |


| \$- | \$- | \$- | \$1 | \$2 |
| ---: | ---: | ---: | ---: | ---: |
|  |  |  |  |  |
| $0.01 \%$ | $0.00 \%$ | $6.26 \%$ | $1.65 \%$ | $0.97 \%$ |
| $0.01 \%$ | $0.00 \%$ | $6.26 \%$ | $1.65 \%$ | $0.97 \%$ |
|  |  |  |  |  |
| $2.12 \%$ | $16.41 \%$ | $7.11 \%$ | $5.64 \%$ | $7.49 \%$ |


| $\$ 1.31$ | $\$ 4.72$ | $\$ 5.51$ | $\$ 4.09$ | $\$ 7.58$ |
| :---: | :---: | :---: | :---: | :---: |
| $\$ 6.37$ | $\$ 2.79$ | $\$(1.23)$ | $\$(1.24)$ | $\$ 1.50$ |
| $\$ 7.68$ | $\$ 7.51$ | $\$ 4.28$ | $\$ 2.85$ | $\$ 9.08$ |
| $\$-$ | $\$(0.85)$ | $\$(6.05)$ | $\$(4.02)$ | $\$(7.71)$ |
| $\$ 62.40$ | $\$ 54.72$ | $\$ 48.06$ | $\$ 49.83$ | $\$ 51.00$ |
| $14.04 \%$ | $16.06 \%$ | $9.50 \%$ | $5.92 \%$ | $19.89 \%$ |
|  |  |  |  |  |
| $\$ 2,774$ | $\$ 2,919$ | $\$ 2,550$ | $\$ 2,572$ | $\$ 2,232$ |
| $0.17 \%$ | $0.22 \%$ | $0.29 \%$ | $0.36 \%$ | $0.44 \%$ |
| $0.17 \%$ | $0.22 \%$ | $0.29 \%$ | $0.36 \%$ | $0.44 \%$ |
| $2.25 \%$ | $9.21 \%$ | $11.23 \%$ | $8.09 \%$ | $15.26 \%$ |



INVESTMENT SUMMARY AT JUNE 30, $2015{ }^{(1)}$

|  | Liquidity Fund ${ }^{(2)}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Book Value | Fair Value | \% of Total Fund FV | Rate of Return |
| 2015 | \$1,358,875,058 | \$1,282,270,968 | 4.31\% | -1.07\% |
| 2014 | 1,157,564,578 | 1,158,961,835 | 3.93\% | 0.54\% |
| 2013 | 1,062,418,543 | 1,041,232,312 | 4.01\% | 0.66\% |
| 2012 | 772,408,827 | 770,217,574 | 3.20\% | -0.14\% |
| 2011 | 756,915,969 | 775,433,903 | 3.07\% | 1.20\% |
| 2010 | 1,626,177,183 | 1,621,182,259 | 7.44\% | 0.98\% |
| 2009 | 952,212,787 | 950,605,428 | 4.65\% | 1.54\% |
| 2008 | 1,140,821,830 | 1,140,821,830 | 4.36\% | 4.59\% |
| 2007 | 236,297,695 | 236,297,695 | 0.88\% | 5.61\% |
| 2006 | 280,548,978 | 280,548,978 | 1.20\% | 4.51\% |


|  | Mutual Fixed Income Fund ${ }^{(6)}$ |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
|  | Book <br> Value | Fair <br> Value | $\%$ of Total <br> Fund FV | Rate of <br> Return |  |
| 2015 | $\$$ | $-\$$ | - | - | - |
| 2014 | - | - | - | - |  |
| 2013 | - | - | - | - |  |
| 2012 | - | - | - | - |  |
| 2011 | - | - | - | - |  |
| 2010 | - | - | - | - |  |
| 2009 | - | - | - | - |  |
| 2008 | - | - | - | - |  |
| 2007 | $8,604,509,537$ | $8,537,943,917$ | $31.89 \%$ | $6.92 \%$ |  |
| 2006 | $7,179,817,139$ | $7,052,537,386$ | $30.03 \%$ | $0.77 \%$ |  |


|  | Inflation Linked Bond Fund ${ }^{(6)}$ |  |  |  |
| :--- | ---: | ---: | ---: | ---: |
|  | Book <br> Value |  | Fair <br> Value |  |
|  | \% of Total <br> Fund FV |  | Rate of <br> Return |  |
| 2015 | $\$ 1,189,323,643$ | $\$ 1,120,365,183$ | $3.77 \%$ | $-2.85 \%$ |
| 2014 | $1,057,661,503$ | $1,075,489,795$ | $3.65 \%$ | $4.17 \%$ |
| 2013 | $886,052,044$ | $879,482,495$ | $3.39 \%$ | $-4.33 \%$ |
| 2012 | $864,059,933$ | $932,982,728$ | $3.88 \%$ | $11.91 \%$ |
| 2011 | $1,075,894,193$ | $1,115,148,171$ | $4.42 \%$ | $7.23 \%$ |
| 2010 | $1,033,720,440$ | $1,070,660,872$ | $4.91 \%$ | $9.48 \%$ |
| 2009 | $813,926,651$ | $829,543,021$ | $4.06 \%$ | $-0.20 \%$ |
| 2008 | $1,152,973,047$ | $1,162,545,028$ | $4.45 \%$ | $16.81 \%$ |
| 2007 | - | - | - | - |
| 2006 | - | - | - | - |


| Mutual Equity Fund |  |  |  |  |
| ---: | ---: | ---: | ---: | :---: |
| Book | $\begin{array}{c}\text { Fair } \\ \text { Value }\end{array}$ | Value | \% of Total |  |
| Fund FV |  |  |  |  | \(\left.\begin{array}{c}Rate of <br>


Return\end{array}\right]\)| $\$ 4,584,447,046$ | $\$ 6,784,028,571$ | $22.80 \%$ | $7.32 \%$ |
| :---: | :---: | :---: | ---: |
| $4,612,970,046$ | $7,055,012,881$ | $23.93 \%$ | $25.28 \%$ |
| $4,664,358,346$ | $6,236,082,798$ | $24.07 \%$ | $21.15 \%$ |
| $5,144,712,429$ | $6,417,508,518$ | $26.65 \%$ | $3.38 \%$ |
| $5,327,666,479$ | $6,634,922,151$ | $26.28 \%$ | $31.92 \%$ |
| $5,175,570,747$ | $5,288,853,566$ | $24.28 \%$ | $14.01 \%$ |
| $6,019,782,554$ | $5,588,272,211$ | $27.35 \%$ | $-28.36 \%$ |
| $7,563,373,750$ | $8,017,007,807$ | $30.68 \%$ | $-12.99 \%$ |
| $7,628,304,018$ | $9,810,773,724$ | $36.64 \%$ | $18.24 \%$ |
| $7,501,163,477$ | $8,983,043,768$ | $38.25 \%$ | $10.29 \%$ |

Core Fixed Income Fund ${ }^{(6)}$

| Book <br> Value |  | Fair <br> Value |  |
| ---: | ---: | ---: | ---: |
| $\$ 2,603,408,489$ | \% of Total <br> Fund FV | Rate of <br> Return |  |
| $2,52,627,250,626$ | $8.83 \%$ | $1.85 \%$ |  |
| $2,042,090,874$ | $2,056,321,868$ | $7.94 \%$ | $-0.24 \%$ |
| $2,726,575,207$ | $2,859,134,784$ | $11.88 \%$ | $7.63 \%$ |
| $2,911,577,713$ | $3,001,125,667$ | $11.89 \%$ | $4.49 \%$ |
| $2,682,943,303$ | $2,789,605,943$ | $12.81 \%$ | $11.81 \%$ |
| $3,400,625,343$ | $3,215,718,047$ | $15.74 \%$ | $2.84 \%$ |
| $4,979,684,914$ | $4,851,300,830$ | $18.57 \%$ | $5.65 \%$ |


| Emerging Market Debt Fund ${ }^{(6)}$ |  |  |  |
| :---: | :---: | :---: | :---: |
| Book | Fair | \% of Total Fund FV | Rate of <br> Return |
| \$1,523,207,614 | \$1,399,864,819 | 4.70\% | -7.57\% |
| 1,470,166,119 | 1,500,069,627 | 5.09\% | 6.99\% |
| 1,415,363,738 | 1,388,070,525 | 5.36\% | 1.69\% |
| 1,098,205,685 | 1,176,095,315 | 4.88\% | 4.78\% |
| 1,012,164,604 | 1,141,817,330 | 4.52\% | 16.06\% |
| 1,082,027,071 | 1,155,351,613 | 5.30\% | 23.02\% |
| 1,153,012,696 | 1,125,226,197 | 5.51\% | -3.62\% |
| 1,006,342,436 | 1,040,295,964 | 3.98\% | 5.59\% |

INVESTMENT SUMMARY AT JUNE 30, 2015 (Continued)

|  | High Yield Debt Fund ${ }^{(6)}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Book Value | Fair Value | \% of Total Fund FV | Rate of Return |
| 2015 | \$1,824,316,127 | \$1,772,254,243 | 5.96\% | -1.31\% |
| 2014 | 1,520,226,270 | 1,592,980,848 | 5.40\% | 12.24\% |
| 2013 | 1,261,124,831 | 1,267,238,204 | 4.89\% | 8.46\% |
| 2012 | 693,951,103 | 706,123,033 | 2.93\% | 6.23\% |
| 2011 | 685,595,880 | 710,362,023 | 2.81\% | 15.96\% |
| 2010 | 659,015,939 | 656,175,724 | 3.01\% | 24.54\% |
| 2009 | 801,755,724 | 718,563,903 | 3.52\% | -4.59\% |
| 2008 | 784,159,491 | 745,137,049 | 2.85\% | -1.88\% |
| 2007 | - | - | - | - |
| 2006 | - | - | - | - |

Developed Market International Stock Fund ${ }^{(5)}$

| $\begin{array}{c}\text { Book } \\ \text { Value }\end{array}$ |  | $\begin{array}{c}\text { Fair } \\ \text { Value }\end{array}$ | $\begin{array}{c}\% \text { of Total } \\ \text { Fund FV }\end{array}$ |
| ---: | ---: | ---: | ---: | \(\left.\begin{array}{r}Rate of <br>

Return\end{array}\right]\)

2015
2014
2013
2012
2011
2010
2009
2008
2007
2006

Real Estate Fund ${ }^{(3)}$

| Book <br> Value | Fair <br> Value | \% of Total <br> Fund FV | Rate of <br> Return |
| :---: | ---: | :---: | ---: |
| $\mathbf{\$ 1 , 7 6 3 , 2 5 6 , 2 8 8}$ | $\$ 1,848,291,148$ | $6.21 \%$ | $12.93 \%$ |
| $1,478,885,377$ | $1,509,757,272$ | $5.12 \%$ | $10.66 \%$ |
| $1,611,385,620$ | $1,471,299,222$ | $5.68 \%$ | $10.26 \%$ |
| $1,524,367,937$ | $1,328,560,229$ | $5.52 \%$ | $7.19 \%$ |
| $1,350,551,373$ | $1,097,203,255$ | $4.35 \%$ | $16.12 \%$ |
| $1,174,718,491$ | $792,483,221$ | $3.64 \%$ | $-20.18 \%$ |
| $1,021,805,530$ | $770,955,194$ | $3.77 \%$ | $-28.66 \%$ |
| $954,279,128$ | $1,002,243,816$ | $3.84 \%$ | $6.04 \%$ |
| $638,511,736$ | $684,741,163$ | $2.56 \%$ | $14.21 \%$ |
| $327,772,520$ | $398,391,108$ | $1.70 \%$ | $6.87 \%$ |

Emerging Market International Stock Fund ${ }^{(5)}$

| Book <br> Value | Fair <br> Value | \% of Total <br> Fund FV | Rate of <br> Return |
| :---: | ---: | ---: | ---: |
| $\$ 2,313,960,007$ | $\$ 2,463,358,430$ | $8.28 \%$ | $-6.93 \%$ |
| $2,278,127,868$ | $2,645,431,257$ | $8.97 \%$ | $11.50 \%$ |
| $2,241,227,436$ | $2,367,182,053$ | $9.14 \%$ | $3.29 \%$ |
| $2,086,716,284$ | $2,216,901,370$ | $9.21 \%$ | $-14.16 \%$ |
| $2,114,345,516$ | $2,629,250,556$ | $10.41 \%$ | $28.55 \%$ |
| $1,860,837,675$ | $2,065,255,957$ | $9.48 \%$ | $25.23 \%$ |
| $1,110,911,776$ | $1,141,401,975$ | $5.59 \%$ | $-30.90 \%$ |
| $1,111,317,184$ | $1,295,936,888$ | $4.96 \%$ | $0.19 \%$ |

International Stock Fund ${ }^{(5)}$

| Book Value | Fair Value | \% of Total Fund FV | Rate of Return |
| :---: | :---: | :---: | :---: |
| \$ | \$ | - | - |
| - | - | - | - |
| - | - | - | - |
| - |  | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| 4,293,498,472 | 5,940,213,814 | 22.19\% | 29.65\% |
| 4,145,802,552 | 5,392,666,574 | 22.96\% | 25.69\% |

Commercial Mortgage Fund ${ }^{(3)}$

| Book <br> Value | Fair <br> Value | \% of Total <br> Fund FV | Rate of <br> Return |
| ---: | ---: | ---: | ---: |
| $\$ 29,834$ | $\$ 29,799$ | $0.00 \%$ | $0.25 \%$ |
| 67,723 | 67,609 | $0.00 \%$ | $10.17 \%$ |
| 70,239 | 70,099 | $0.00 \%$ | $0.88 \%$ |
| 717,122 | 765,779 | $0.00 \%$ | $-6.48 \%$ |
| $2,338,063$ | $2,386,359$ | $0.01 \%$ | $4.61 \%$ |
| $3,769,581$ | $3,818,115$ | $0.02 \%$ | $6.75 \%$ |
| $5,084,919$ | $5,135,144$ | $0.02 \%$ | $-3.14 \%$ |
| $6,255,651$ | $6,906,096$ | $0.03 \%$ | $12.05 \%$ |
| $7,355,621$ | $7,763,461$ | $0.03 \%$ | $8.17 \%$ |
| $17,729,189$ | $18,192,114$ | $0.08 \%$ | $9.51 \%$ |

INVESTMENT SUMMARY AT JUNE 30, 2015 (Continued)

|  | Private Investment Fund ${ }^{(3)}$ |  |  |  | Alternative Investment Fund ${ }^{(7)}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Book Value | Fair Value | \% of Total Fund FV Fund FV | Rate of Return | Book Value | Fair Value | \% of Total Fund FV | Rate of Return |
| 2015 | \$2,286,868,807 | \$2,773,374,435 | 9.32\% | 14.04\% | \$1,611,126,633 | \$1,804,487,746 | 6.06\% | 3.98\% |
| 2014 | 2,449,109,360 | 2,918,978,182 | 9.90\% | 16.06\% | 1,210,080,164 | 1,349,977,450 | 4.58\% | 6.63\% |
| 2013 | 2,246,698,441 | 2,564,877,605 | 9.90\% | 9.50\% | 1,190,675,281 | 1,247,574,910 | 4.81\% | 6.39\% |
| 2012 | 2,221,945,727 | 2,569,809,038 | 10.67\% | 5.92\% | 550,080,365 | 549,205,302 | 2.28\% | -1.62\% |
| 2011 | 1,909,670,699 | 2,229,679,980 | 8.83\% | 19.89\% | 511,873,555 | 519,007,742 | 2.06\% | 0.00\% |
| 2010 | 1,859,585,108 | 2,013,101,198 | 9.24\% | 17.32\% |  |  |  |  |
| 2009 | 1,819,125,566 | 1,621,268,022 | 7.94\% | -16.36\% |  |  |  |  |
| 2008 | 1,809,775,995 | 1,789,139,253 | 6.85\% | 13.66\% |  |  |  |  |
| 2007 | 1,657,888,536 | 1,556,795,484 | 5.81\% | 19.56\% |  |  | - |  |
| 2006 | 1,692,805,252 | 1,357,518,114 | 5.78\% | 11.46\% | - | - | - |  |


| Total Fund (4) |  |  |  |
| ---: | ---: | ---: | ---: |
| Book <br> Value | Fair <br> Value | \% of Total <br> Fund FV | Rate of <br> Return |
| $\$ 26,111,332,380$ | $\$ 29,755,256,851$ | $100.00 \%$ | $2.79 \%$ |
| $\$ 24,570,121,041$ | $\$ 29,482,334,377$ | $100.00 \%$ | $15.43 \%$ |
| $23,483,171,029$ | $25,912,503,786$ | $100.00 \%$ | $11.64 \%$ |
| $22,270,077,625$ | $24,077,340,469$ | $100.00 \%$ | $-0.90 \%$ |
| $22,343,270,597$ | $25,247,594,232$ | $100.00 \%$ | $20.75 \%$ |
| $21,710,645,358$ | $21,784,939,405$ | $100.00 \%$ | $12.88 \%$ |
| $21,945,913,372$ | $20,431,180,148$ | $100.00 \%$ | $-17.37 \%$ |
| $25,388,309,339$ | $26,129,160,510$ | $100.00 \%$ | $-4.71 \%$ |
| $23,066,365,615$ | $26,774,529,258$ | $100.00 \%$ | $17.34 \%$ |
| $21,145,639,107$ | $23,482,898,042$ | $100.00 \%$ | $10.55 \%$ |

(1) All rates of return are net of management fees and division operating expenses.
(2) The fair value of the Liquidity Fund for the periods presented represents the fair value of the pension and trust balances in the Liquidity Fund only (excluding receivables and payables); the Liquidity Fund balances of the other combined investment funds are shown in the fair value of each fund.
(3) Investment returns published for prior years were net of management fees, but were restated in 2008 net of all expenses.
(4) Represents a composite return of the total pension and trust funds. Individual returns for the three primary pension funds (Teachers, State Employees and Minicipal Employees) are separately presented elsewhere due to different asset allocations of each fund.
(5) On November 1, 2007 the International Stock Fund (ISF) was reallocated into two sub portfolios of international equity securities. The reallocation was a result of the modifications to the Investment Policy Statement (IPS) as approved by the Investment Advisory Council (IAC) and adopted by the Treasurer in October 2007. The reallocation of assets, outlined in the IPS, was based on an asset liability study that identified the need to reallocate the international stock fund into two components: developed markets international stocks and emerging markets international stocks to allow for greater flexibility in managing risk and return in the various Connecticut Retirement Plans and Trust Funds.
(6) On November 1, 2007 the Mutual Fixed Income Fund was reallocated into four sub portfolios of fixed income securities. The reallocation was a result of the modifications to the Investment Policy Statement (IPS) as approved by the Investment Advisory Council (IAC) and adopted by the Treasurer in October 2007. The reallocation of assets, outlined in the IPS, was based on an asset liability study that identified the need to reallocate the mutual fixed income fund into four components: core fixed income, emerging market debt, high yield debt and inflation-linked bonds to allow for greater flexibility in managing risk and return in the various Connecticut Retirement Plans and Trust Funds.
7) Inception of the Alternative Investment Fund during Fiscal 2011.

|  | $6 / 30 / 15^{*}$ | $6 / 30 / 2014$ |
| :--- | :---: | :---: |
|  | $2.79 \%$ | $15.67 \%$ |
| Teachers' Retirement Fund | $2.84 \%$ | $15.62 \%$ |
| State Employees' Retirement Fund | $2.57 \%$ | $13.58 \%$ |
| Municipal Employees' Retirement Fund | $2.58 \%$ | $13.66 \%$ |
| State Judges' Retirement Fund | $2.49 \%$ | $13.86 \%$ |
| The Probate Court Retirement Fund | $1.58 \%$ | $13.66 \%$ |
| State's Attorneys' Retirement Fund | $2.17 \%$ | $9.44 \%$ |
| Soldiers' Sailors' \& Marines' Fund | $2.85 \%$ | $14.17 \%$ |
| Police \& Fireman's Survivors' Benefit Fund | $2.19 \%$ | $9.40 \%$ |
| Connecticut Arts Endowment Fund | $2.17 \%$ | $9.56 \%$ |
| School Fund | $2.17 \%$ | $9.50 \%$ |
| Ida Eaton Cotton Fund | $2.15 \%$ | $9.41 \%$ |
| Hopemead State Park Fund | $2.18 \%$ | $9.50 \%$ |
| Andrew C. Clark Fund | $1.85 \%$ | $4.29 \%$ |
| Agricultural College Fund | $3.40 \%$ | $11.75 \%$ |
| OPEB Fund |  |  |
|  |  |  |

*This schedule is to be built prospectively until it contains ten years of data.
Fiscal Year Ended June 30,

| Assets | 2015 | 2014 | 2013 | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 | 2006 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Investments at Fair Value | \$29,755.0 | \$29,482.3 | \$25,912.5 | \$24,077.3 | \$25,247.6 | \$21,784.9 | \$20,431.2 | \$26,129.2 | \$26,774.5 | \$23,482.9 |
| Cash, Receivables and Other | 10,609.0 | 6,096.3 | 9,430.8 | 6,964.2 | 7,959.9 | 7,494.7 | 11,520.3 | 15,884.6 | 14,440.5 | 16,145.9 |
| Total Assets | 40,364.0 | 35,578.6 | 35,388.3 | 31,041.5 | 33,207.5 | 29,279.6 | 31,951.5 | 42,013.8 | 41,215.0 | 39,628.8 |
| Liabilities | 10,712.1 | 6,150.7 | 9,447.5 | 7,064.7 | 8,023.8 | 7,410.0 | 11,569.3 | 16,142.0 | 15,286.7 | 16,812.0 |
| Net Position | \$29,651.9 | \$29,427.9 | \$25,940.8 | \$23,976.8 | \$25,183.7 | \$21,869.6 | \$20,382.2 | \$25,871.8 | \$25,928.3 | 22,816.8 |

CONDENSED SCHEDULE OF CHANGES IN NET POSITION FISCAL YEAR ENDED JUNE 30 (dollars in millions)

$$
\begin{aligned}
&
\end{aligned}
$$

$$
\begin{aligned}
& \text { (56.5) } \quad 3,111.5 \quad 1,517.7 \\
& \begin{array}{lllllllllll}
29,427.9 & 25,940.8 & \$ 23,976.8 & 25,183.7 & 21,869.6 & 20,382.2 & 25,871.8 & 25,928.3 & 22,816.8 & 21,299.1 \\
\hline
\end{array}
\end{aligned}
$$

> Additions Total Additions
> Administrative Expense
> Distributions to Unit Holders
> Redemption of Units by Participants
> Total Deductions
> Net Change in Position
> Beginning Net Position
> Ending Net Position


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[^0]:    * A complete list of portfolio holdings is available upon request from the Office of the Treasurer, in accordance with the Connecticut Freedom of Information Act.

[^1]:    * A complete list of portfolio holdings is available upon request from the Office of the Treasurer, in accordance with the Connecticut Freedom of Information Act.

[^2]:    * Includes Liquidity Fund and other assets. Note: Ending weights

[^3]:    * A complete list of portfolio holdings is available upon request from the Office of the Treasurer, in accordance with the Connecticut Freedom of Information Act.

