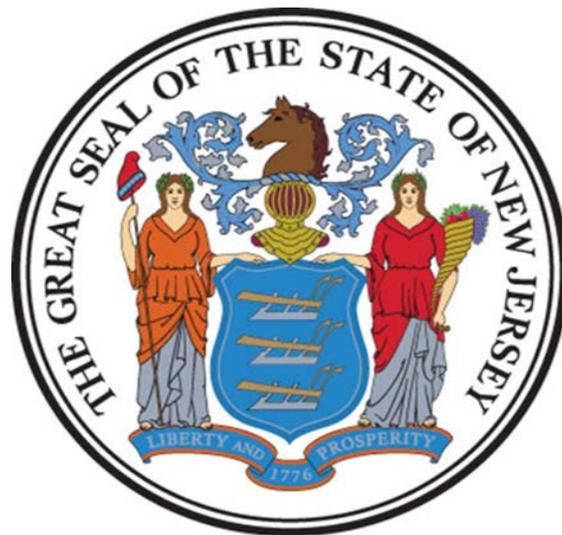


2018 ANNUAL REPORT

NEW JERSEY STATE INVESTMENT COUNCIL



FOR FISCAL YEAR 2018

TABLE OF CONTENTS

OVERVIEW

LETTER FROM THE ACTING CHAIRPERSON.....2-4
 INTRODUCTION TO THE COUNCIL AND N.J. DIVISION OF INVESTMENT5-7

ORGANIZATION

COUNCIL REGULATIONS AND STRUCTURE.....7-9
 LEGISLATIVE UPDATE.....9

ASSETS UNDER MANAGEMENT

NET ASSETS UNDER MANAGEMENT.....10
 20-YEAR PENSION FUND FINANCIAL SUMMARY11
 PENSION FUND ASSET ALLOCATION..... 11-12
 MARKET OVERVIEW FOR FISCAL YEAR 2018 13-14
 TOTAL PENSION FUND RETURN VS. BENCHMARK15
 DOMESTIC EQUITY HIGHLIGHTS OF FISCAL YEAR 2018..... 15-16
 INTERNATIONAL EQUITY HIGHLIGHTS OF FISCAL YEAR 2018 17-18
 FIXED INCOME HIGHLIGHTS OF FISCAL YEAR 201819
 PRIVATE EQUITY HIGHLIGHTS OF FISCAL YEAR 201820
 REAL ESTATE HIGHLIGHTS OF FISCAL YEAR 201821
 RISK MITIGATION STRATEGIES, AND CREDIT- AND EQUITY-ORIENTED HEDGE FUND HIGHLIGHTS OF FISCAL YEAR 2018.....22
 REAL ASSET HIGHLIGHTS OF FISCAL YEAR 201823
 CASH MANAGEMENT FUND24

COSTS

COSTS OF MANAGEMENT 25-28
 APPENDIX 1: FIVE YEAR COST COMPARISON29
 APPENDIX 2: ALTERNATIVE INVESTMENT DISCLOSURES PURSUANT TO N.J.S.A. 52:18A-91(b).....30

**New Jersey State Investment Council
50 West State Street, 9th Floor
P.O. Box 290
Trenton, N.J. 08625**

January 30, 2019

To the Honorable: the Governor, the Legislature, the State Treasurer and the Citizens of New Jersey:

It is my privilege to submit this Annual Report on behalf of the State Investment Council and the NJ Division of Investment.

In some ways, looking back to our investment period of July 2017 through June 2018 may seem like ancient history eclipsed by more recent and volatile market news. However, as this is the Annual Report for Fiscal Year 2018, we take this opportunity to look back, recap our performance and policies, and use that review to inform our strategies and challenges ahead.

For Fiscal Year 2018, the Pension Fund realized a 9.06% return, net of all fees, which exceeded both our benchmark return of 8.65% and the assumed rate of return of 7.5%. The total Pension Fund grew by over \$2 billion from \$76 billion at the beginning of the fiscal year to \$78.2 billion by the close. This growth is net after payment of \$11 billion to beneficiaries and \$7.1 billion in contributions from employees and employers. The fund benefitted from favorable market performance, diligent oversight, and increased contributions from the State according to the phased-in approach adopted in preceding annual budgets.

Fiscal Year 2018 was a transitional period for the State Investment Council and Division of Investment. The reporting period began under an outgoing Governor and ended under Governor Philip Murphy, and the new leadership and vision that comes with a change in administration. Pension investments and fees were hot issues on the campaign trail, deservedly so. The Council continued to implement and strived to expand its policies to minimize costs and negotiate investment contracts with attractive management fee arrangements and co-investment terms.

Management of investments has been steady and seamless despite many personnel changes on the Council and at the Division of Investment. Among the Council members who resigned during the fiscal year, former Council Chair Thomas Byrne resigned effective June 30, 2018. We thank him and all Council members who moved through the Council for their thoughtful, committed service. Several positions on the Council that were vacated between January and July of 2018 remain unfilled and await legislative approval.

Fiscal Year 2018 also reached the end of a two-year implementation period for our current asset allocation plan, first adopted in August 2016. After much debate led by labor nominated Council members, the Division and Council reached consensus to reduce our targeted allocation to hedge funds from 12.5% to 6%. This was a large proportional shift in allocation strategy and these hedge fund investments required a wind-down over an extended period. For these reasons, it is timely to note Fiscal Year 2018 closed under this allocation plan and we will take the opportunity in Fiscal Year 2019 to make allocation adjustments for current and future conditions.

Costs of management continued to be a concern for members of the Council during Fiscal Year 2018, and a legitimate flashpoint in public conversations about investment of public funds.

Focusing only on hedge funds, during Fiscal Year 2018, the Pension Fund redeemed \$1.2 billion to align with our targeted asset allocation plan. This reduction in hedge funds helped lower fees paid in connection with the Alternative Investment Program by \$29 million while net profits increased \$225.6 million in Fiscal Year 2018 compared to Fiscal Year 2017.

Total costs in Fiscal Year 2018 were \$11.6 million for the Division of Investment and \$402.4 million for all other costs. Of that larger amount, the Division paid \$363.1 million in management fees and expenses related to the Alternative Investment Program, which covers \$24.4 billion in assets. The total cost for all investment operations, both alternatives and the rest of the portfolio, comes to 0.46% of assets under management. It is impossible to directly compare NJ's costs of management against other large public pension funds, as the level of reporting detail varies across funds.

This Annual Report and the diligent management of \$90 billion in total assets are to the credit of the staff at the Division of Investment. The State Investment Council sets parameters for investment strategy, but the day-to-day management and execution of the policies set by the Council fall on the Division staff. They admirably manage \$65.6 billion (equaling 73% of total assets) at a total operating cost of around \$11.6 million which is a cost ratio of 0.01% of total assets under management.

Let me put it frankly – New Jersey taxpayers, public employers, and beneficiaries are getting a heck of a deal to have in-house investment managers cost only 1/100th of 1 percent to manage \$90 billion in total assets. Relative performance has been strong and costs have been kept low. For several years, and in several iterations of members spanning multiple governors, the State Investment Council has stated its desire and support for expanding the Division staff and to right-sizing compensation to recruit and retain talented investment managers. Council members believe “investing” in our internal staff and resources will improve overall management of the funds, and we hope to continue to make progress on this with the new administration.

Starting late 2017 and becoming formal in February 2018, the Council also took large and historic strides to implement Environmental, Societal, and Governance (ESG) principles into our analysis and reporting for all investment decisions. We did not approach this in a purely theoretical manner, but as a practical investment concern guided by our fiduciary obligations and sound investment strategies.

Again, led by labor nominated Council members and with the support of the administration and the Division of Investment, the Council created an ad hoc ESG Subcommittee tasked with recommending a formal ESG policy and reviewing certain investment issues that had garnered media attention. Rather than react to issues only when they hit the headlines, the Council used the ESG Subcommittee to proactively recommend changes to policy and Council bylaws, and to integrate ESG factors within the investment decision-making process. We engaged on payday lending, labor disputes at casinos related to investments held by hedge funds or private equity firms, and driver-asserted misclassification in the trucking/transportation industry. We used ESG analysis for direct engagement with investment firms that are involved with foreclosures in Puerto Rico while it continues to rebuild, and to discuss investments in companies that manufacture or sell firearms and ammunition. Work on ESG issues in Fiscal Year 2018 led directly to creation of bylaw revisions and formal policy adoption in the fall of 2018.

In March 2018, the Council and Division reported an asset-liability study by the Division's General Consultant, undertaken at the request of the Division, which was the result of several months of analysis regarding our investment strategy in relation to liabilities and underfunded status of the plans. The asset-liability study reiterated the fact that underfunding status is caused by decades of deficient State contributions, but also demonstrated that a steady path of contributions and cautious investing will improve the health of the fund. Running 5,000 possible economic scenarios over a 30-year horizon, the study concluded our asset allocation had an appropriate risk profile given our assets and liabilities. Simply put, decreasing our risk would increase our reliance on contributions, and increasing our risk to chase returns would expose our funds and the progress made thus far. Importantly, the asset-liability study also demonstrated that asset allocation must be partnered with consistent inflow of contributions to maintain the pension system for current and future beneficiaries.

With respect for the enormous responsibility of safeguarding and growing the retirement plans of approximately 795,000 members in seven public pension systems, and with eagerness to tackle the important work ahead, we submit this Annual Report for Fiscal Year 2018.

Sincerely,

A handwritten signature in black ink that reads "Adam Liebtog". The signature is written in a cursive, slightly slanted style.

Adam Liebtog
Acting Chair

INTRODUCTION TO THE COUNCIL AND N.J. DIVISION OF INVESTMENT

DIVISION STAFF

Acting Director:
Corey Amon ¹

THE STATE INVESTMENT COUNCIL

The State Investment Council (the “Council”) was created by the New Jersey Legislature in 1950 to formulate policies governing the investment of funds by the Director of the Division of Investment (the “Division”), as well as to consult with the Director with respect to the work of the Division.

The Council conducts meetings to discuss major investment policy issues, review Pension Fund performance and accept comments from members of the public. Other investment programs and returns are reviewed annually or when needed.

Council meetings are open to the public. Agendas, meeting times and locations are available on the Division’s website, www.state.nj.us/treasury/doinvest under the State Investment Council tab.

Mailing Address:
PO Box 290, Trenton, NJ 08625-0290
Email Address:
doi@treas.nj.gov

COUNCIL MEMBERSHIP:

Council Acting-Chairman:
Adam Liebttag
New Jersey State AFL-CIO Nominee

Council Members:
Marty Barrett
Police and Firemen’s Retirement System Designee

Thomas Bruno, Jr.
Public Employees’ Retirement System Designee

Michael Cleary
New Jersey State AFL-CIO Nominee

Vaughn E. Crowe
Kotumba Capital Management

Andrew Michael Greaney
State Troopers Fraternal Association Nominee

James E. Hanson II
CEO, Hampshire Real Estate Company

Kevin Kelleher
Teachers’ Pension and Annuity Fund Designee

Timothy McGuckin
New Jersey Education Association Nominee

Samir Pandiri
Former CEO, BNY Mellon Asset Servicing

Eric E. Richard
Senate President and Assembly Speaker Joint Appointee

¹ Division Director Christopher McDonough resigned effective July 27, 2018. Deputy Director Corey Amon currently serves as Acting Director.

COUNCIL MEMBERSHIP

The Council is comprised of sixteen (16) members¹ pursuant to N.J.S.A. 52:18A-83. Nine members are appointed by the Governor for five-year terms, and are drawn traditionally from the investment community. Of those nine appointments, eight are made with the advice and consent of the State Senate. One appointment is made from nominees submitted jointly by the President of the Senate and Speaker of the Assembly. The statute requires that at least seven of the nine gubernatorial appointments shall be qualified by training and experience in the direct management, analysis, supervision or investment of assets, which training and experience shall have been acquired through academic training or through actual employment in those fields.

Four members are appointed by the Governor from nominees submitted by various employee organizations. Two of these four are appointed for five-year terms from nominees submitted by the New Jersey State AFL-CIO, with at least one of the two appointed members being a member of a union representing police officers or firefighters. One of these four members is appointed for a three-year term from nominees submitted by the New Jersey Education Association. The last of these four members is appointed by the Governor for a three-year term from nominees submitted by the State Troopers Fraternal Association. The statute requires that these four appointments shall be qualified by training, experience or long-term interest in the direct management, analysis, supervision or investment of assets and this training, experience or long-term interest shall have been supplemented by academic training in the fields of economics, business, law, financial or actuarial science or by actual employment in those fields.

Three members, representing the Public Employees' Retirement System (PERS), Teachers' Pension and Annuity Fund (TPAF) and Police and Firemen's Retirement System (PFRS), are designated from members of the respective pension system's board of trustees and serve three-year terms.

All members serve until reappointed or until a successor is named and has qualified.

THE DIVISION OF INVESTMENT

The Division, under the Council's supervision, is the 42nd largest pension fund manager globally² and the 18th largest among U.S. public and corporate pension fund managers³. The Pension Fund supports the retirement plans of approximately 795,000 members in seven public pension systems: the Consolidated Police & Firemen's Pension Fund, the Judicial Retirement System, the Police & Firemen's Retirement System, the Prison Officers' Pension Fund, the Public Employees' Retirement System, the State Police Retirement System and the Teachers' Pension & Annuity Fund (collectively referred to in this report as the "Pension Fund"). Approximately 49% of the members are still working and contributing to the pension plans while 42% are retired. The remaining 9% reflects the number of vested members no longer accruing benefits but not yet retired. Pension Fund assets are primarily managed through common trust funds ("Common Pension Funds").

¹ As of December 31, 2018, there were 11 Council members, with 5 vacant positions

² Measured by assets as of December 31, 2017. Reported by Pensions & Investments (P&I) and TowerWatson.com in "P&I/ TW 300 analysis." https://www.thinkingaheadinstitute.org/en/Library/Public/Research-and-Ideas/2018/09/P_I_300_2018_research_paper Page 38

³ Measured by assets as of September 30, 2017. Reported by P&I on February 8, 2018.

The net asset value of the Pension Fund assets managed by the Division was \$78.2 billion as of June 30, 2018 compared to \$76.0 billion as of June 30, 2017. The Total Pension Fund investment return¹ for Fiscal Year 2018 was 9.06% (net of all fees) and approximately \$11 billion was paid to plan beneficiaries. The Pension Fund received contributions of \$2.5 billion from the State (including net lottery proceeds and receivables of \$970 million), \$1.9 billion from local employers, and \$2.7 billion from employees.

The Division also manages the State of New Jersey Cash Management Fund, Supplemental Annuity Collective Trust (a 403b plan), a portion of the NJBEST Fund (a 529 college savings plan) as well as several funds under the New Jersey State Employees Deferred Compensation Plan (a 457 plan).

STATUTORY AUTHORITY AND HISTORY OF THE DIVISION

The Division was created in 1950 by the New Jersey Legislature (P.L. 1950, c.270) to centralize all functions relating to the purchase, sale or exchange of securities for the State's diverse funds under experienced and professional management. The statute also established a State Investment Council to formulate policies that govern the methods, practices or procedures for investment, reinvestment, sale or exchange transactions to be followed by the Director of the Division. The statute vests investment authority in the Director of the Division, who is appointed by the State Treasurer from a list of qualified candidates and submitted by the Council.

INVESTMENT PARAMETERS

All investments must conform to the heightened "prudent person" standard set by the New Jersey Legislature (P.L. 1997, c.26). This standard requires the Director "to manage and invest the portfolio solely in the interests of the beneficiaries of the portfolio and for the exclusive purpose of providing financial benefits to the beneficiaries of the portfolio."

The mission of the Division is to achieve the best possible return at an acceptable level of risk utilizing the highest fiduciary standards.

COUNCIL REGULATIONS AND STRUCTURE

In addition to investment guidelines established by law, the Council is authorized by statute to establish investment policies that govern the methods, practices or procedures for investment, reinvestment, sale or exchange transactions (P.L. 1950, c.270).

Proposed regulations and amendments are filed upon approval of the Council with the Office of Administrative Law for publication in *The New Jersey Register*, followed by a 60-day public comment period. After the public comment period, each proposal is returned to the Council for adoption, along with any comments received. The adopted regulations of the Council are published in the New Jersey Administrative Code (N.J.A.C. 17:16), and are available for viewing online at <http://www.lexisnexis.com/njoal>.

On September 27, 2018, the Council approved the readoption of specially adopted amendments at N.J.A.C. 17:16-69.1 to implement certain provisions of P.L. 2017, c. 98 (the "Lottery Contribution Act"). In accordance with the Lottery Contribution Act, the State contributed the Lottery Enterprise for a

¹ Total Pension Fund returns cited throughout this Annual Report exclude the Police and Fire Mortgage Program. The mortgages are considered a receivable under GASB 72. All investment returns are reported net of all fees.

period of 30 years for the benefit of three of the pension plans (Police and Firemen's Retirement System, Public Employees' Retirement System and Teachers' Pension and Annuity Fund), and deposited the same in Common Pension Fund L, which was created within the Division by the Act. The rules are designed to make clear that Common Pension Fund L, established by the Lottery Contribution Act, shall be a Common Pension Fund for purposes of N.J.A.C. 17:16-69. The readoption was effective on November 5, 2018.

COUNCIL ORGANIZATIONAL CHANGES DURING FISCAL YEAR 2018

The Council underwent the following organizational changes during Fiscal Year 2018:

- Brady Middlesworth replaced Marty Barrett as the Police and Firemen's Retirement System representative on July 10, 2017.
- Edward "Ned" Thomson replaced Thomas Bruno as the Public Employees' Retirement System representative on July 19, 2017.
- Thomas Bruno was reappointed as the Public Employees' Retirement System representative on August 16, 2017 after Mr. Thomson resigned.
- The Council re-elected Brendan Thomas Byrne, Jr. as Council Chair and Adam Liebttag as Council Vice-Chair, each for a one-year term on October 4, 2017.
- Council Member Jeffrey Oram resigned from the Council on December 11, 2017.
- Council Member Guy Haselmann resigned from the Council on December 15, 2017.
- Council Member Mitchell Shivers resigned from the Council on April 30, 2018.
- Council Member Charles Dolan resigned from the Council on May 4, 2018.
- Council Member Brady Middlesworth resigned from the Council on June 12, 2018.
- Council Chair Brendan Thomas Byrne, Jr. resigned from the Council on June 30, 2018.
- In accordance with the Council bylaws, Vice-Chair Adam Liebttag assumed the duties of Acting Chair upon the resignation of Mr. Byrne on June 30, 2018.

COUNCIL ORGANIZATIONAL UPDATE

On April 16, 2018, Governor Murphy announced eight new nominations to the Council subject to the advice and consent of the State Senate. The nominations of Mr. Vaughn Crowe and Mr. Samir Pandiri were confirmed by the New Jersey Senate on September 27, 2018. The remaining nominees are awaiting confirmation.

Marty Barrett was designated as a replacement for Brady Middlesworth on July 9, 2018 as the Police and Firemen's Retirement System representative.

Kevin Kelleher was designated as a replacement for James Joyner on January 10, 2019 as the Teachers' Pension and Annuity Fund representative.

TRANSFER OF OVERSIGHT OF POLICE AND FIREMEN'S RETIREMENT SYSTEM

On July 3, 2018, P.L. 2018, c.55 (the "Act") was enacted, which provides for the transfer of oversight of the Police and Firemen's Retirement System ("PFRS") from the State Investment Council to a newly constituted twelve-member PFRS Board of Trustees (the "New PFRS Board"). The New PFRS Board is required by the Act to be set up by February 1, 2019. The Act provides the New PFRS Board with the authority to direct investment policy. The actual purchase, sale or exchange of any investment or

security remains under the control and management of the Division.

LEGISLATIVE UPDATE

PROHIBITED INVESTMENTS

The Division maintains a list of companies ineligible for investment under three State laws: a Sudan divestiture law (P.L. 2005, c. 162), an Iran divestiture law (P.L. 2007, c. 250), and a law requiring divestment of companies boycotting Israel (P.L. 2016, c. 24). The Division uses an independent research firm to assist it in complying with the provisions of the statutes. Reports are filed with the Legislature annually in accordance with each of the statutes.

Divestitures pose three primary fiscal challenges to the Pension Fund: 1) the requirement of the identification and sale of holdings on a timetable that may not consider market conditions; 2) the impact on risk and return for the Pension Fund; and 3) the reduction of the investment universe available to the Pension Fund. Collectively, the divestiture laws reduced the investment universe as of June 30, 2018 by approximately 2.1% for the international developed markets and 1.5% for the international emerging markets, relative to their respective benchmarks.

NORTHERN IRELAND REPORT

The Division has been required since 1987 (P.L. 1987, c.177) to report annually to the Legislature regarding the adherence of U.S. companies and their subsidiaries doing business in Northern Ireland, in which the assets of any state pension or annuity fund are invested, to the “MacBride Principles.” “McBride Principles” refers to a body of employment laws aimed at reducing employment discrimination in Northern Ireland. The report is filed each year by January 15th in accordance with the statute.

NET ASSETS UNDER MANAGEMENT

NET ASSETS IN MILLIONS

	June 30, 2018	June 30, 2017
PENSION FUND ⁽¹⁾	\$78,186	\$75,964
The Pension Fund includes pension assets contributed by participants, Lottery contributions, and State and local employers for participants in seven statewide retirement plans.		
Public Employees' Retirement System	27,858	26,834
Police & Firemen's Retirement System	25,685	24,459
Teachers' Pension & Annuity Fund	22,695	22,749
State Police Retirement System	1,776	1,743
Judicial Retirement System	166	172
Prison Officers' Pension Fund	5	5
Consolidated Police & Firemen's Pension Fund	2	2
<i>Note: Total may not equal sum of components due to rounding</i>		
CASH MANAGEMENT FUND⁽²⁾	\$12,812	\$14,335
This fund includes the cash balances of State government funds and other non-state government entities (counties, municipalities, school districts and the agencies or authorities created by any of these).		
SUPPLEMENTAL ANNUITY COLLECTIVE TRUST	\$235	\$227
This fund includes voluntary investments by employees for retirement income separate from, and in addition to, their basic pension plan.		

⁽¹⁾The net assets of the Pension Fund include the net assets managed by the Division through the Common Pension Funds and exclude certain direct assets and liabilities of the seven underlying pension plans. Year over year change in net assets is impacted by a variety of factors including performance, plan funding and plan design.

⁽²⁾The total for the Cash Management Fund includes \$2.3 billion on June 30, 2018 (\$4 billion on June 30, 2017) held for and included in the totals for the Pension Fund, the Supplemental Annuity Collective Trust, Trustees for the Support of Public Schools Fund, the NJBEST Fund and Deferred Compensation Program.

NJBEST FUND

The Division manages a portion of the State's tax-advantaged 529 college savings program. On June 30, 2018, the Division-managed portion of this fund had a market value of \$316 million compared with \$352 million on June 30, 2017. The year-over-year decline in market value is primarily attributable to net redemptions.

DEFERRED COMPENSATION PLAN

The Division manages several funds that comprise the New Jersey State Employees Deferred Compensation Plan. Prudential Retirement, a business of Prudential Financial, serves as the third-party administrator for this plan. The Division manages the Equity Fund and Small Capitalization Equity Fund. As of June 30, 2018, these funds had a combined market value of \$577 million compared with \$548 million as of June 30, 2017, with the increased market value primarily attributable to investment earnings in a strong financial market environment.

TRUSTEES FOR THE SUPPORT OF PUBLIC SCHOOLS FUND

The Division manages the fund reserve required to support the rating of school bonds issued for the maintenance and support of the State's public schools. As of June 30, 2018, the portfolio had a market value of \$152 million compared with \$149 million as of June 30, 2017.

20-YEAR PENSION FUND FINANCIAL SUMMARY

FISCAL YEAR	NET ASSETS (\$BILLIONS)	RATE OF RETURN (net of all fees) (%)	GROSS PENSION PAYMENTS (\$BILLIONS)
2018	78.2	9.06	11.0
2017	76.0	13.07	10.4
2016	72.9	(0.93)	10.0
2015	79.0	4.09	9.6
2014	81.2	16.79	9.1
5-YEAR ANNUALIZED RETURN		8.23	
2013	74.4	11.72	8.7
2012	70.1	2.47	8.3
2011	73.7	17.97	7.7
2010	66.8	13.34	7.0
2009	62.9	(15.49)	6.6
10-YEAR ANNUALIZED RETURN		6.75	
2008	78.6	(2.61)	6.1
2007	82.5	17.14	5.6
2006	73.1	9.79	5.2
2005	69.8	8.77	4.8
2004	67.8	14.16	4.4
15-YEAR ANNUALIZED RETURN		7.57	
2003	62.6	3.31	4.1
2002	63.3	(8.61)	3.6
2001	72.2	(9.80)	3.2
2000	82.6	11.86	2.9
1999	76.2	16.27	2.7
20-YEAR ANNUALIZED RETURN		6.17	

During Fiscal Year 2018, net transfers of approximately \$6.2 billion were made from the Common Funds to the following pension plans: \$22.8 million to the Judicial Retirement System, \$1.2 billion to the Police & Firemen's Retirement System, \$2.1 billion to the Public Employees' Retirement System, \$123.5 million to the State Police Retirement System and \$2.8 billion to the Teachers' Pension & Annuity Fund. Included within the transfers are contributions totaling \$893.0 million to the investment account of Common Pension Fund L on behalf of the following pension plans: \$10.7 million for the Police & Firemen's Retirement System, \$187.7 million for the Public Employees' Retirement System, and \$694.6 million for the Teachers' Pension & Annuity Fund. Net transfers are the difference between total contributions to the pensions plans and liabilities (primarily benefit payments) paid by the pension plans.

PENSION FUND ASSET ALLOCATION

The Council reviews, approves, and adopts an investment plan that includes a targeted asset allocation, as well as allowable ranges for asset classes. The Council's key objective in setting the targeted asset allocation is to provide for a well-diversified portfolio designed to achieve the best possible return at an acceptable level of risk utilizing the highest fiduciary standards.

At its March 2018 meeting, the Council reviewed the findings of a comprehensive asset-liability study undertaken by the Division's General Consultant at the request of the Division. The primary objective of the asset-liability study was to provide analysis for the asset allocation decision informed by the liability profile of the Pension Fund.

A key conclusion of the study was that the Council's targeted asset allocation and level of risk was appropriate based on the Pension Fund's liabilities and financial profile. The Pension Fund is underfunded and is likely to maintain a negative cash flow profile as benefit payments exceed contributions and expected investment returns. According to the study, a material reduction in the Pension Fund's risk allocation would likely increase the Pension Fund's already high dependency on contributions. A material increase in the Pension Fund's risk allocation could improve funded status, but could also meaningfully increase the volatility of returns and magnify downside risk that may increase the likelihood of a weakening financial position.

The Division presented a detailed asset allocation review to the Council at its May 2017 meeting. At the time, the Division recommended adopting a continuation of the existing targeted asset allocation policy. The Council approved the retention of the targeted asset allocation shown below.

ACTUAL ALLOCATION AS OF JUNE 30, 2018 VS. TARGETED ASSET ALLOCATION

	Actual Allocation %	Target %	Difference %	Allocation (\$ in millions)	Allowable Ranges
Total Risk Mitigation	4.69	5.00	(0.31)	3,663.98	0-10%
Total Cash & Short Term ⁽⁴⁾	4.92	5.50	(0.58)	3,848.32	0-15%
Governments	1.58	3.00	(1.42)	1,236.80	0-10%
Total Liquidity	6.50	8.50	(2.00)	5,085.12	2-15%
Investment Grade Credit	9.43	10.00	(0.57)	7,370.93	5-20%
Public High Yield	1.27	2.50	(1.23)	995.34	0-8%
Global Diversified Credit	5.73	5.00	0.73	4,477.64	0-7%
Credit-Oriented Hedge Funds	1.12	1.00	0.12	875.93	0-6%
Debt-Related Private Equity	1.24	2.00	(0.76)	973.40	0-4%
Debt-Related Real Estate	0.53	1.00	(0.47)	415.49	0-4%
Total Income	19.32	21.50	(2.18)	15,108.71	15-40%
Real Assets	3.11	2.50	0.61	2,428.12	0-7%
Equity Related Real Estate	5.62	6.25	(0.63)	4,396.46	2-9%
Total Real Return	8.73	8.75	(0.02)	6,824.58	3-12%
U.S. Equity	30.08	30.00	0.08	23,520.45	15-35%
Non-US Developed Markets Equity	11.39	11.50	(0.11)	8,905.72	8-20%
Emerging Markets Equity	6.43	6.50	(0.07)	5,028.59	5-15%
Buyouts/Venture Capital	9.90	8.25	1.65	7,736.60	4-12%
Equity Oriented Hedge Funds	0.56	0.00	0.56	440.70	0-8%
Total Global Growth	58.36	56.25	2.11	45,632.07	45-65%
Opportunistic Investments	0.55	0.00	0.55	431.96	
Police and Fire Mortgage Program ⁽²⁾	1.51	0.00	1.51	1,180.45	
Other Cash and Receivables	0.33	0.00	0.33	259.49	
Total Pension Fund	100.00%	100.00%	0.00%	78,186.36	

Totals may not equal sum of components due to rounding.

⁽¹⁾ Cash includes the two common pension fund cash accounts, in addition to the seven plan cash accounts.

⁽²⁾ For financial reporting, the Police and Fire Mortgage Program is considered a receivable under GASB 72. Only the Police and Fire Retirement System has exposure to the Program.

MARKET OVERVIEW FOR FISCAL YEAR 2018

During Fiscal Year 2018, global capital market returns were strong, led by public equity, private equity, and real estate. Fixed income securities were the notable exception, with generally negative returns in a rising interest rate environment. The +10.73% return of the MSCI All Country World Index (ACWI), a broad measure of the global equity market, set the pace, buoyed by strong performance for U.S. equities.

The U.S. equity market outperformed, with the Russell 3000 returning +14.77% during Fiscal Year 2018, as a nearly decade-long bull market persisted. An investment in U.S. equities held from March 2009 through June 2018 has quadrupled in value, representing an annualized return of nearly 19% over the same horizon. Strong equity market performance has coincided with a relatively modest economic recovery, with returns fueled by extraordinarily accommodative monetary policy, low volatility and near-zero interest rates that drove valuations higher. More recently, U.S. equity investors in 2018 were supported by accelerating earnings growth and fiscal stimulus in the form of tax cuts that allowed for favorable returns even as multiples contracted to more sustainable levels.

There was a wide disparity in returns across the U.S. equity market, with the technology sector outperforming for the second consecutive year. Over the past five years, technology stocks have returned +21.30% (annualized) driven by robust free cash flow and earnings growth that coincided with increased cloud computing and digitization. Investors favored growth stocks (+22.46%) versus value stocks (+7.24%) as defensive sectors underperformed for a second straight year. In this environment, consumer staples (-6.56%) and utilities (+3.27%) were the worst performing sectors of the U.S. equity market.

International equities realized favorable returns, on balance, during Fiscal Year 2018, but lagged the U.S. market. Within the global marketplace, the MSCI Emerging Market (EM) Index (+8.20%) outperformed the MSCI EAFE + Canada Index (+7.04%), a broad measure of non-U.S. Developed Market (DM) equities, by 116 basis points. Performance for international equity markets varied sharply from the first half to the second half of the fiscal year, with strong returns from July 2017 through December 2017 partly offset by weakness from January 2018 through June 2018. EM equities and DM equities returned +15.92% and 10.09%, respectively, during the first half of Fiscal Year 2018 as a favorable economic backdrop and strong earnings growth supported returns. Subsequently, increasing global trade tensions, a stronger U.S. dollar, and rising geopolitical risk in Asia and Europe led to returns of -6.66% and -2.77% for EM equities and non-U.S. DM equities, respectively, during the final six months of Fiscal Year 2018.

For the first time in history, the broad fixed income market realized two consecutive fiscal years of negative returns, as the Bloomberg Barclays U.S. Aggregate Bond Index returned -0.40% during Fiscal Year 2018. Treasury yields rose as the Federal Reserve increased its targeted Fed Funds Rate by 0.25% on three occasions (from 1.25% to 2.0%). The U.S. Treasury Index and the U.S. Credit Index, a broad measure of investment grade fixed income universe, both coincidentally returned -0.65% in a rising interest rate environment. Long Treasuries (-0.13%) outperformed intermediate Treasuries (-0.76%) as the yield curve flattened. In contrast, the Long U.S. Credit Index (-1.30%) underperformed the Intermediate U.S. Credit Index (-1.30%) as spread curves steepened.

While investment grade fixed income investors experienced negative returns, the High Yield Index (+2.62%) managed to realize positive returns, albeit modest. The key driver of the High Yield market was spread compression as lower quality CCC rated corporate bonds (+6.84%) outperformed higher quality BB rated corporate bonds (+0.60%) by 624 basis points. The high yield sector also benefited from higher commodity prices as energy-related bonds (+8.19%) realized favorable returns.

Private Equity was the best performing asset class of Fiscal Year 2018 as the Cambridge Associates Global Private Equity & Venture Capital Index (+18.26%) had its best one year return since 2014. Private equity markets benefited from a continued robust exit environment, driven by low interest rates, high multiples, and strong demand for acquisitions. Returns were broadly up across geographies, industries, and sub-strategies. The best performing region of the globe during the period was Developed Europe, the second largest regional component of the index (behind the U.S.), which benefited from an appreciation in the Euro over the period and finished up 33.51%. Buyouts, the largest sub-strategy component of the index, was also the top performing sub-strategy (+20.89%).

Notwithstanding low cap rates and pressure from rising global bond yields, the NCREIF ODCE Real Estate Index, a broad measure of private real estate returns, realized favorable performance (+8.44%) during Fiscal Year 2018. This marked the ninth consecutive fiscal year of positive returns supported by a constructive fundamental backdrop. Of the major property types, the performance of industrial assets remains particularly robust as companies streamline their logistics and distribution networks to satisfy both business and consumer demand. Continued tenant demand for high quality real estate and relatively low levels of construction kept supply in check. Income producing assets remain particularly attractive to investors in a moderate growth, later-cycle economy. While the recent increase in interest rates is reducing the participation of high-levered investors, investor demand for quality properties continues to be competitive. The fundamental outlook remains constructive, with positive net absorption and limited new supply in most property sectors.

TOTAL PENSION FUND RETURN VS. BENCHMARK

	Annualized Returns (%)					
	FY18	3 Years	5 Years	10 Years	20 Years	25 Years
Total Pension Fund	9.06	6.90	8.23	6.75	6.17	7.99
Total Fund Benchmark⁽¹⁾	8.65	7.21	8.00	6.36	*	*

(1) Benchmark is a weighted composite of index returns in each asset class

* Benchmark return not available for 20 and 25 year periods

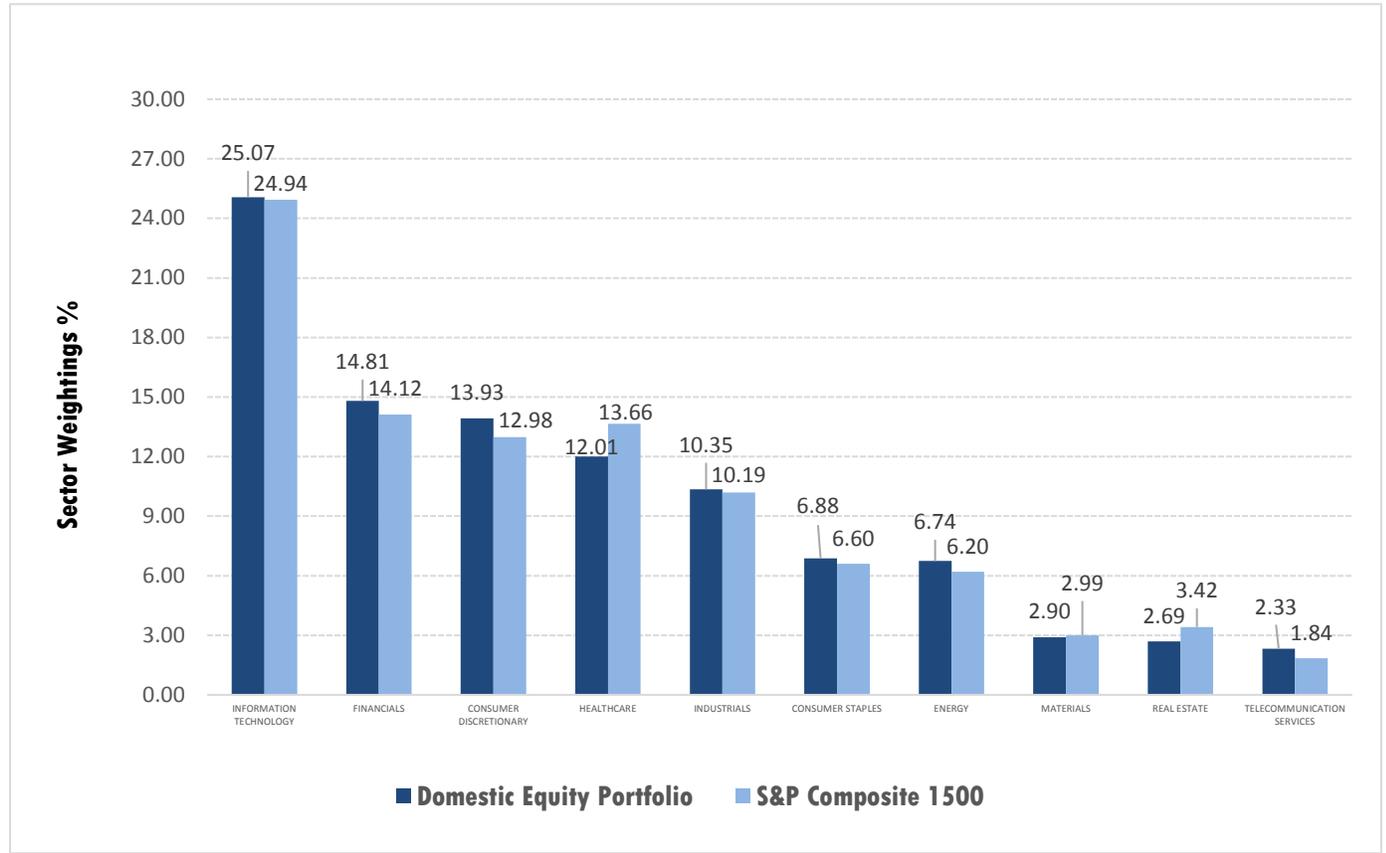
- During Fiscal Year 2018, the Total Pension Fund returned +9.06% versus +8.65% for the benchmark index.
- For the five and ten year periods ended June 30, 2018, the Total Pension Fund outperformed the Total Fund Benchmark by 23 and 39 basis points, respectively, on an annualized basis.
- For the five and ten year periods ended June 30, 2018, the Total Pension Fund's risk-adjusted returns are in the top quartile versus the Fund's peer universe.
- Since June 30, 2010, the Total Pension Fund has experienced gains and income through investments totaling \$50.3 billion, with an annualized return of 9.09% versus 8.46% for the Total Fund Benchmark, outperforming the benchmark by 63 basis points (annualized).

DOMESTIC EQUITY HIGHLIGHTS OF FISCAL YEAR 2018

	Annualized Returns (%)			
	FY18	3 Years	5 Years	10 Years
Domestic Equity Only (Ex Cash and hedges)	12.78	9.97	12.53	10.41
S&P 1500 Super Composite (Daily)	14.50	11.90	13.40	10.29

- The Domestic Equity portfolio is broadly diversified by economic sector with approximately 900 publicly traded stocks. While exposure to most sectors is generally comparable to that of the overall market, the Division will actively overweight and underweight securities and industries in the portfolio with the objective of outperforming the benchmark.
- During Fiscal Year 2018, the U.S. Equity Portfolio returned +12.78% versus +14.50% for the benchmark index.
- The Domestic Equity portfolio has gradually adopted more of a value orientation in recent years as the market's gains have been concentrated in a relatively small number of growth names, stretching the valuation levels on some high-profile growth issues. During Fiscal Year 2018, this approach adversely impacted relative returns as growth outperformed value.
- The Domestic Equity portfolio has outperformed the benchmark index in eleven of the past fourteen fiscal years.

SELECT SECTOR WEIGHTINGS OF DOMESTIC EQUITY PORTFOLIO vs. S&P 1500 AS OF JUNE 30, 2018



The top 10 holdings (including related receivables) in the Domestic Equity portfolio represent 24.1% of the total portfolio.

TOP HOLDINGS IN DOMESTIC EQUITY PORTFOLIO AS OF JUNE 30, 2018

Company	% of Portfolio
AMAZON.COM INC	3.85
MICROSOFT CORP	3.59
APPLE INC	3.39
ALPHABET INC	2.98
FACEBOOK INC	2.45
JPMORGAN CHASE	1.90
EXXON MOBIL CORP	1.57
BANK OF AMERICA CORP	1.52
JOHNSON & JOHNSON	1.52
VISA INC	1.32

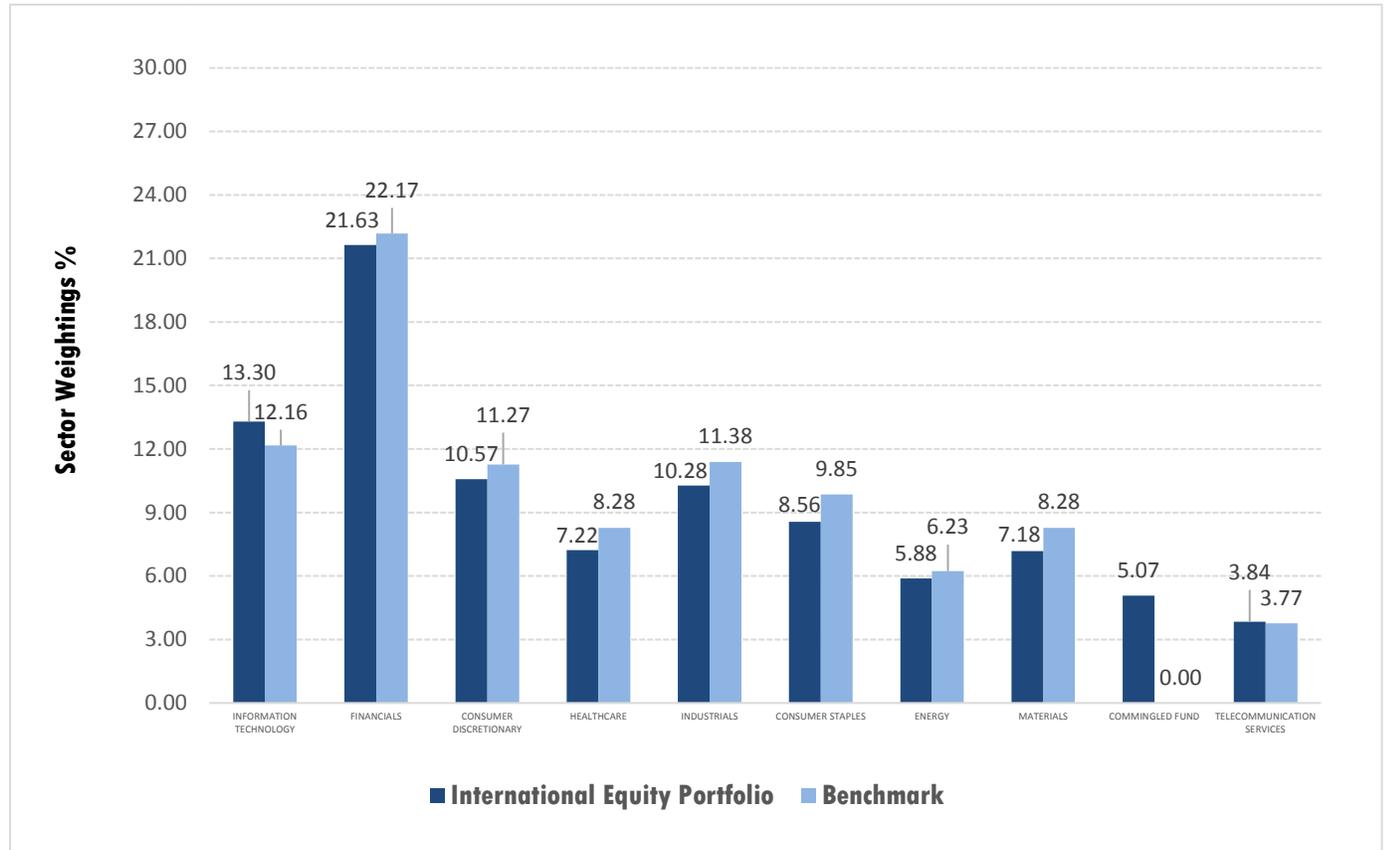
INTERNATIONAL EQUITY HIGHLIGHTS OF FISCAL YEAR 2018

	Annualized Returns (%)			
	FY18	3 Years	5 Years	10 Years
International Equity with Cash, Hedges, Miscellaneous	7.05	4.89	5.56	2.04
<i>Custom International Equity Markets Benchmark ⁽¹⁾</i>	7.37	5.24	5.89	
<i>MSCI All Country World Index (ex U.S.)</i>	7.25	5.05	5.99	2.50
Developed Markets Equity	8.19	5.20	6.67	
<i>Custom International Developed Markets Benchmark ⁽¹⁾</i>	6.86	4.79	6.24	
Emerging Markets Equity	5.40	4.87	3.83	
<i>Custom International Emerging Markets Benchmark⁽¹⁾</i>	7.99	5.74	5.13	

⁽¹⁾ Source: MSCI. Each benchmark is a custom index calculated by MSCI for, and as requested by the Division, based on screening criteria defined by the Division. These benchmarks exclude those securities deemed ineligible for investment under the State statutes governing investments in Iran, Sudan and companies that boycott Israel. The MSCI data is for internal use only and may not be redistributed or used in connection with creating or offering any securities, financial products or indices. Neither MSCI nor any other third party involved in or related to compiling, computing or creating the MSCI data (the "MSCI Parties") makes any express or implied warranties or representations with respect to such data (or the results to be obtained by the use thereof), and the MSCI Parties hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to such data. Without limiting any of the foregoing, in no event shall any of the MSCI Parties have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages.

- The International Equity portfolio is broadly diversified with investments in over 2,700 publicly traded stocks across more than 50 countries. The International Equity portfolio includes both Developed Market (DM) equities and Emerging Market (EM) equities. The DM portfolio is primarily managed passively and also includes an actively managed allocation to small cap stocks. The EM portfolio includes both passively managed and actively managed strategies.
- During Fiscal Year 2018, the International Equity Portfolio returned +7.05% versus +7.37% for the benchmark index.
- The International Equity portfolio was adversely impacted by relative returns within the Emerging Markets (EM) portfolio, as the EM portfolio underperformed by 259 basis points. The primary drivers of underperformance within the EM portfolio were country allocation and security selection.
- The DM portfolio returned +8.19% versus +6.86% for the benchmark index. Strong relative returns within the DM portfolio were driven by the portfolio's commitment to small cap equities, as small caps outperformed. Within small caps, security selection added value as the small cap portfolio outperformed its benchmark by +775 basis points.

SELECT SECTOR WEIGHTINGS OF INTERNATIONAL EQUITY PORTFOLIO vs. BENCHMARK INDEX AS OF JUNE 30, 2018



The top 10 holdings (including related receivables) in the International Equity portfolio represent 11.85% of the portfolio.

TOP HOLDINGS IN INTERNATIONAL EQUITY PORTFOLIO AS OF JUNE 30, 2018

Company	% of Portfolio
ISHARES MSCI TAIWAN ETF	1.90
TENCENT HOLDINGS LTD	1.75
ISHARES MSCI INDIA ETF	1.49
SAMSUNG ELECTRONICS CO LTD	1.34
ALIBABA GROUP HOLDING	1.19
TAIWAN SEMICONDUCTOR	1.08
NESTLE SA	0.91
CHINA CONSTRUCTION BANK	0.79
ROCHE HOLDING AG GENUSSSCHEIN	0.71
NOVARTIS AG	0.69

FIXED INCOME HIGHLIGHTS OF FISCAL YEAR 2018

	Annualized Returns (%)			
	FY18	3 Years	5 Years	10 Years
Fixed Income with Cash, Hedges, Miscellaneous	2.26	4.09	4.31	6.74
<i>Fixed Income Blended Benchmark</i>	0.54	3.43	3.63	5.93
Governments	(0.77)	0.28	0.53	
<i>Custom Government Benchmark</i>	(0.65)	0.88	1.81	
Investment Grade Credit	(0.68)	2.14	3.12	
<i>Custom Investment Grade Credit Benchmark</i>	(0.73)	2.55	2.90	
Public High Yield	2.78	5.60	5.64	
<i>Bloomberg Barclays Corp High Yield Index</i>	2.62	5.53	5.51	
Global Diversified Credit (GDC)	9.46	9.62	10.31	
<i>Bloomberg Barclays Corp High Yield Index</i>	2.62	5.53	5.51	

- The Fixed Income portfolio is comprised of the U.S. Government portfolio (including U.S. Treasuries and Treasury Inflation Protected Securities), the Investment Grade (IG) Credit portfolio, the Public High Yield (HY) portfolio, and the Global Diversified Credit (GDC) portfolio. The IG and HY portfolios are broadly diversified across economic sectors. The GDC portfolio is comprised primarily of limited partnerships invested in a wide range of private credit strategies.
- During Fiscal Year 2018, the Fixed Income Portfolio returned +2.26% versus +0.54% for the benchmark index.
- Favorable relative returns were driven by broad-based strong outperformance across differentiated private credit opportunities with lower correlation to the public fixed income markets within the GDC portfolio.
- The IG and HY portfolios both modestly outperformed their respective benchmarks. Favorable relative returns were largely driven by quality selection. Within the IG portfolio, a more defensive portfolio structure emphasizing higher quality corporate bonds benefitted overall returns as lower quality IG credit spreads widened.
- Within the U.S. Government portfolio, the Pension Fund's commitment to TIPS added value, offset by yield curve strategies as the portfolio remained underweight longer dated Treasuries in a flattening yield curve environment.
- Fiscal Year 2018 marked the eighth time in the past ten years that the Fixed Income portfolio has outperformed its benchmark.

PRIVATE EQUITY HIGHLIGHTS OF FISCAL YEAR 2018

	Annualized Returns (%)			
	FY18	3 Years	5 Years	10 Years
Private Equity	17.52	12.05	15.46	10.01
<i>Custom Cambridge Associates Blended Benchmark⁽¹⁾</i>	20.42	12.28	13.35	10.41

(1) Reported on a one-quarter lag

- The Private Equity portfolio is comprised of Buyouts/Venture Capital and Debt-Related Private Equity. As of June 30, 2018, the Private Equity portfolio had a market value of \$8.7 billion and consisted of investments in 115 limited partnerships and co-investments vehicles. The Pension Fund committed a total of \$1.15 billion to nine new Private Equity partnerships in Fiscal Year 2018.
- The Private Equity portfolio is broadly diversified across a wide range of private equity limited partnerships and co-investment opportunities. Private equity investment agreements specify the investment horizon, with a wide range of possible time periods. The typical investment time period for private equity investment agreements is 10-12 years.
- During Fiscal Year 2018, the Private Equity portfolio returned +17.52% versus +20.42% for the benchmark index.
- The primary drivers of underperformance within the Private Equity portfolio were underweights to Venture Capital (5.4% vs 13.8%), International Private Equity (16.3% vs 34.0%) and Vintage Years 2009 – 2011 (7.02% vs 20.7%).
- As of June 30, 2018, the Total Value Multiple (TVM) for the Private Equity Portfolio was 1.53x. The TVM measures the portfolio's current market value plus distributions, divided by contributions. The current value of the remaining Private Equity investments plus all distributions received to date exceeds contributions by \$6.8 billion.
- The Private Equity portfolio continues to generate significant distributions. During Fiscal Year 2018, the Private Equity portfolio was net cash flow positive by \$439 million, with distributions of \$2.05 billion versus contributions of \$1.60 billion. Since the start of Fiscal Year 2013, the Private Equity portfolio is net cash flow positive by \$2.97 billion.

REAL ESTATE HIGHLIGHTS OF FISCAL YEAR 2018

	Annualized Returns (%)			
	FY18	3 Years	5 Years	10 Years
Real Estate	11.98	9.87	11.20	3.41
<i>NCREIF(ODCE)</i> ⁽¹⁾	7.11	9.00	10.41	6.53

(1) Reported on a one-quarter lag

- The Real Estate portfolio is comprised of Equity-Related Real Estate and Debt-Related Real Estate. As of June 30, 2018, the Real Estate portfolio had a market value of \$4.8 billion and consisted of investments in 54 limited partnerships that invest in global opportunities, as well as investments in publicly traded REIT securities. The Pension Fund committed a total of \$150 million to two Real Estate partnerships in Fiscal Year 2018.
- During Fiscal Year 2018, the Real Estate portfolio returned +11.98% versus 7.11% for the benchmark index.
- Within the Real Estate portfolio, the Pension Fund's commitment to non-core investment strategies added value as Opportunistic strategies (+17.02%) outperformed Core strategies (+11.2%). Relative to its benchmark, the Real Estate portfolio is 72% overweight Non-Core strategies. The Real Estate portfolio also benefited from strong year-over-year fluctuations in the foreign currency markets as approximately 22% of the portfolio is in non-U.S. real estate fund holdings.
- As of June 30, 2018, the Total Value Multiple (TVM) for the Real Estate Portfolio was 1.46x. The TVM measures the portfolio's current market value plus distributions, divided by contributions. The current value of the remaining Real Estate investments plus all distributions received to date exceeds contributions by \$2.7 billion.
- The Real Estate portfolio continues to generate significant distributions. During Fiscal Year 2018, the Real Estate portfolio was net cash flow positive by \$227 million, with distributions of \$750 million versus contributions of \$523 million. Since the start of Fiscal Year 2013, the Real Estate portfolio is net cash flow positive by \$1.6 billion.

RISK MITIGATION STRATEGIES AND CREDIT- AND EQUITY-ORIENTED HEDGE FUND HIGHLIGHTS OF FISCAL YEAR 2018

	Annualized Returns (%)			
	FY18	3 Years	5 Years	10 Years
Risk Mitigation Strategies and Credit- and Equity-Oriented Hedge Funds	6.32	2.89	4.64	3.56
<i>HFRI Fund of Funds Composite⁽¹⁾</i>	5.64	1.75	3.27	1.36

⁽¹⁾ Reported on a one-month lag.

- The Hedge Fund portfolio is comprised primarily of Risk Mitigation (Absolute Return) Strategies, with additional investments in Credit-Oriented Hedge Funds and Equity-Oriented Hedge Funds. As of June 30, 2018, the portfolio had a combined market value of \$5 billion and consisted of investments in 33 limited partnerships.
- During Fiscal Year 2018, the Hedge Fund portfolio returned +6.32% versus 5.64% for the benchmark index.
- Favorable relative returns were driven by several strategies, including Volatility Arbitrage, Event Driven and Activist strategies supported by higher volatility and a favorable mergers and acquisitions environment.
- In August 2016, the Council adopted new targeted allocations that generally reflected a desire to reduce the overall allocation to hedge funds (from 12.5% to 6%) while maintaining a reasonable level of diversification and downside protection. Accordingly, the remaining investments in hedge fund strategies are focused on Risk Mitigation strategies (with a targeted allocation of 5%) following the elimination of the target allocation to Equity-Oriented hedge funds and a sharp reduction in the target allocation to Credit-Oriented hedge funds (from 3% to 1%).
- The Division has made significant progress towards reallocating to the Council's targeted asset allocation. During Fiscal Year 2018, the Pension Fund redeemed \$1.2 billion from hedge funds.

REAL ASSET HIGHLIGHTS OF FISCAL YEAR 2018

	Annualized Returns (%)		
	FY18	3 Years	5 Years
Real Assets & Commodities	12.70	4.89	
<i>Custom Cambridge Real Asset Index</i>	5.82	1.58	

- The Real Asset portfolio is comprised of private real assets including energy, infrastructure, power, mining, and agriculture, as well as investments in publicly traded securities. As of June 30, 2018, the Real Assets portfolio had a market value of \$2.4 billion and consisted of investments in 18 limited partnerships that invest in global opportunities, as well as investments in publicly traded securities. The Pension Fund committed a total of \$260 million to two Real Asset partnerships in Fiscal Year 2018.
- During Fiscal Year 2018, the Real Assets portfolio returned +12.70% versus +5.82% for the benchmark index.
- Within the Real Asset portfolio, the Fund's commitment to the energy sector added value as energy outperformed.

CASH MANAGEMENT FUND

	Returns ⁽¹⁾ (%)		
	FY18	3 Years	5 Years
Cash Mgt. Fund – State Participants	1.36	0.76	0.51
Cash Mgt. Fund – Non-State Participants	1.30	0.70	0.44
<i>91 Day U.S. Treasury Bills (Daily)</i>	1.36	0.71	0.44

⁽¹⁾ Returns represent the annual rate for the period based on the average daily rate of return.

- The Cash Management Fund (CMF) is the Local Government Investment Pool (LGIP) utilized by the Pension Fund, the State of New Jersey and local towns, municipalities, school districts, agencies, and authorities for its cash management needs. Participation is voluntary. As of June 30, 2018, the net asset value of the Cash Management Fund was \$12.8 billion.
- The CMF primarily invests in U.S. Treasury and Agency obligations, highly-rated commercial paper and short-term corporate obligations, other highly-rated government debt, and certificates of deposit.
- The yield on the CMF has increased over time as short term interest rates have moved higher in conjunction with a more restrictive Federal Reserve monetary policy stance.
- The Non-State Participants' return is reduced by an Administrative Expense Fund Fee (0.05% per year) and a Reserve Fund Fee (0.01% per year). The Administrative Expense Fund Fee is used to reimburse the State of New Jersey for administrative and custodial fees of the Fund. The Reserve Fund fees are reinvested and participate in the Cash Management Fund.

CASH MANAGEMENT PORTFOLIO ⁽¹⁾ DETAIL AS OF JUNE 30, 2018

	Percentage	(000'S)
US TREASURY BILLS	32.94%	\$4,199,373
US TREASURY NOTES	31.90%	4,066,510
COMMERCIAL PAPER	24.27%	3,093,999
CERTIFICATES OF DEPOSIT	5.25%	669,979
GOVERNMENT AGENCY	4.19%	534,452
CORPORATE BONDS	1.45%	184,974
STATE STREET STIF	0.00%	183
TOTAL	100.00%	\$12,749,470

⁽¹⁾Excludes receivables and payables

COSTS OF MANAGEMENT

All investment returns for the Pension Fund and the various asset classes are reported net of external fees and expenses associated with investing the assets. The Division strives to minimize costs, with the key objective to realize attractive risk-adjusted net returns. The Division continues to utilize internal resources to minimize costs, with the Pension Fund representing one of the highest percentages of internally managed plans amongst public pension funds.

The Division utilizes external fund managers for strategies that require greater resources than are currently available internally. The large majority of the fees and expenses within the Pension Fund are incurred by the \$24.4 billion Alternative Investment Program (AIP) that includes private equity funds, real estate funds, real asset funds, opportunistic funds, hedge funds and global diversified credit funds. The Division paid \$363.1 million in management fees and expenses in Fiscal Year 2018 to investment managers within the AIP.

While more costly, the AIP provides important investment benefits for the Pension Fund, including a long-term performance advantage (net of all fees) on both an absolute and risk-adjusted basis, enhanced portfolio diversification, and better downside protection. Moreover, certain strategies within the AIP provide exposure to rapidly growing segments of the global market which are not investable in the public market.

The Division paid an additional \$33.0 million to the advisers of a portion of its emerging market equity, international small cap equity and high-yield fixed income portfolios in Fiscal Year 2018. Investments in these portfolios totaled \$6.6 billion as of June 30, 2018.

Operating expenses for staff compensation, overhead and equipment were \$11.6 million for the fiscal year and represent approximately 2.8% of fees and expenses or 0.01% of \$90 billion in total assets under management.

Fees for consulting services, custodial banking, and legal services were \$6.3 million for the fiscal year and represent approximately 1.5% of fees and expenses or less than 0.01% of \$90 billion in total assets under management.

In total, costs to manage the portfolios were \$414.0 million, or 0.46% of \$90 billion in total assets under management. The chart below summarizes total fees and expenses for Fiscal Year 2018.

Fiscal Year
Ended
June 30, 2018

Fees & Expenses ¹ :	\$ Millions
Private Equity Funds	134.1
Real Estate Funds	56.5
Real Assets Funds	30.0
Opportunistic Funds	10.8
Hedge Funds	59.5
Global Diversified Credit Funds	72.3
Subtotal	363.1
High-Yield, Small Cap and Emerging Market Advisers	33.0
Division Operations	11.6
Consulting Fees	2.4
Custodial Banking Fees	2.7
Legal Fees	1.2
Total	414.0

Total may not equal sum of components due to rounding

¹ Alternative Investment Program fees and expenses are based on information provided by the manager.

PERFORMANCE ALLOCATIONS

The Council also provides detailed information regarding the performance allocation earned by the investment managers within the AIP. By way of background, investment managers may earn a performance allocation or share of the investment profits, also known as carried interest, if certain conditions and objectives are met. Typically a private equity limited partner (e.g., the Pension Fund) must receive a net minimum return, also known as a hurdle rate or preferred rate, before the general partner can collect a performance allocation. Other requirements may include prior repayment of contributed capital, management fees, and other expenses to limited partners. The Division is committed to negotiating preferential terms that incentivize strong performance, provide the Division with meaningful governance rights, and ensure alignment of interests.

The table below summarizes the performance allocation for the AIP for Fiscal Year 2018.

(\$ in millions)

	Performance Allocation		
	Amount	As % of Assets	As % of Profit
Private Equity	\$ 145.7	1.81%	9.37%
Real Estate	40.0	0.83%	6.91%
Real Assets	8.0	0.32%	2.41%
Opportunistic	0.0	0.00%	0.00%
Hedge Funds	36.0	0.64%	13.31%
Global Diversified Credit	38.3	0.94%	6.74%
Total	\$ 267.9	1.05%	7.99%

For Fiscal Year 2018, the AIP earned a net return of 11.9% and generated \$2.7 billion of net profits. The AIP has been a significant driver of the Pension Fund's performance in recent years. Over the five years ending June 30, 2018, the AIP has returned 9.2%, outperforming the Total Pension Fund, excluding the AIP, by 380 bps on an annualized basis.

The table below summarizes the net returns and profits for the AIP for Fiscal Year 2018.

(\$ in millions)

	Estimated Average Gross Assets	Estimated Gross Profit	Estimated Net Profit	FY18 Net Return
Private Equity	\$ 8,064.2	\$ 1,554.3	\$ 1,274.5	17.52%
Real Estate	4,841.1	578.6	482.2	11.98%
Real Assets	2,458.8	330.6	292.7	12.70%
Opportunistic	381.1	51.8	41.0	11.83%
Hedge Funds	5,642.6	270.2	174.7	6.32%
Global Diversified Credit	4,095.9	568.4	457.8	9.46%
Total	\$ 25,483.8	\$ 3,353.9	\$ 2,722.9	11.88%

Performance allocations were \$5.9 million lower in Fiscal Year 2018 versus Fiscal Year 2017, led by a sharp reduction in performance allocation for Hedge Funds. Performance allocations were significantly higher for Private Equity in Fiscal Year 2018 versus Fiscal Year 2017, in line with strong investment returns.

Fees and expenses within the AIP were \$29.1 million lower in Fiscal Year 2018 versus Fiscal Year 2017, driven primarily by a decrease in hedge fund fees and expenses. The reduction in hedge fund fees is consistent with the Council's decision to reduce the overall allocation to hedge funds.

The table below summarizes year-over-year changes in AIP fees and expenses, performance allocation, and estimated net profits.

(\$ in millions)	Fiscal Year 2017	Fiscal Year 2018	Year over Year Change*
Fees and Expenses	\$ 392.2	\$ 363.1	\$ (29.1)
Performance Allocation	\$ 273.8	\$ 267.9	\$ (5.9)
Estimated Net Profit	\$ 2,497.3	\$ 2,722.9	\$ 225.6

* May not equal difference of components due to rounding

REPORTING STANDARDS AND COMPARISONS TO OTHER FUNDS

Public pension funds do not have a uniform standard for the reporting of investment fees and expenses, including performance allocations. As a result, comparisons to other public funds may not be meaningful because most other funds elect not to provide the same level of disclosure. For example, the Council includes performance allocation in this report, whereas other public funds may not include performance allocation in similar reports. Accordingly, it is possible that the Council reports more types of costs and, therefore, *higher* costs than other funds, while the Pension Fund may actually incur *lower* costs than those same funds.

ADDITIONAL INFORMATION REGARDING ALTERNATIVE INVESTMENT PROGRAM FEES AND EXPENSES

The Division and the Council are both committed to demonstrating industry leadership in transparency. As part of this commitment, the Council also includes a detailed report of fees and expenses, along with performance allocation and returns over the past 5 fiscal years, in Appendix 1 of this Annual Report.

In accordance with N.J.S.A. 52:18A-91(b), the Council is also including a schedule of the percentage and amount of fees, expenses and performance allocations that were paid to those AIP investment managers that entered into contracts with the Pension Fund from January 1, 2018 through June 30, 2018 in Appendix 2 of this Annual Report.

COMMISSIONS

The Division incurred broker/dealer commission costs totaling \$13.1 million for Fiscal Year 2018. The commission total includes \$3.7 million in soft dollar commissions used to procure systems and services critical to the Division's trading and research.

The Division purchases and sells certain investments with no involvement by a broker/dealer, including commercial paper, certificates of deposit, foreign currency transactions and investments in alternative investment funds by transacting directly with the issuer, partnership or fund; as a result, no direct commissions are paid.

Appendix 1: Five Year Cost Comparison

Appendix 1	Fiscal Year Ended June 30, 2018	Fiscal Year Ended June 30, 2017	Fiscal Year Ended June 30, 2016	Fiscal Year Ended June 30, 2015	Fiscal Year Ended June 30, 2014
Fees and Expenses:					
Hedge Funds	\$ 59,513,685	99,974,409	126,880,195	141,737,524	142,913,986
Private Equity Funds	134,088,404	135,822,473	132,287,674	126,561,769	131,559,403
Real Estate Funds	56,459,596	67,920,674	50,751,772	47,764,490	44,625,247
Real Asset Funds	29,980,413	33,901,880	26,914,795	21,908,944	17,793,180
Opportunistic Funds	10,765,042	6,082,764	7,019,900	3,762,715	-
Global Diversified Credit Funds	72,338,858	48,538,827	33,600,719	31,292,645	18,020,664
Division Operations and Internal Mgt ¹	50,831,884	45,578,113	39,675,226	42,634,420	44,142,172
Total Fees and Expenses:	413,977,881	437,819,141	417,130,281	415,662,506	399,054,651
Performance Allocation:					
Hedge Funds	35,961,645	66,331,578	55,307,643	128,180,329	162,339,457
Private Equity Funds	145,675,005	90,228,372	109,485,871	125,663,807	99,552,572
Real Estate Funds	39,998,435	72,966,276	49,204,152	50,318,243	50,153,959
Real Asset Funds	7,974,099	1,632,938	11,587,460	3,619,892	4,990,119
Opportunistic Funds	-	-	-	-	-
Global Diversified Credit Funds	38,302,254	42,642,060	16,396,283	20,602,969	84,284,502
Total Performance Allocation:	267,911,438	273,801,224	241,981,410	328,385,240	401,320,609
Total Fees, Expenses, Performance Allocation:	\$ 681,889,319	711,620,365	659,111,691	744,047,746	800,375,260
Performance					
Hedge Funds	6.32%	7.99%	-5.13%	4.21%	10.53%
Private Equity Funds	17.52%	12.66%	6.27%	17.61%	24.01%
Real Estate Funds	11.98%	7.79%	9.86%	12.57%	13.90%
Real Asset Funds	12.70%	5.70%	-4.39%	-10.50%	9.66%
Opportunistic Funds	11.83%	15.18%	-0.92%	11.42%	-
Global Diversified Credit Funds	9.46%	16.46%	3.32%	4.74%	18.38%
Total Alternative Investment Program	11.88%	10.12%	1.60%	7.80%	15.07%
Total Non-Alternative Investment Portfolio	7.67%	14.37%	-2.26%	2.24%	17.46%
Alternative Investment Portfolio Net Profit (\$)	2,722,890,897	2,497,253,176	405,411,118	1,949,148,666	3,273,766,736
Percentage of Net Assets Internally Managed ¹	73%	74%	72%	72%	74%

¹ Includes costs related to external investment advisers for international small cap, emerging markets equity and high yield, as well as Division operations, consulting fees, legal fees, and custodial banking fees. International small cap, emerging markets and high yield assets managed with the support of external investment advisers are considered internally managed.

APPENDIX 2: ALTERNATIVE INVESTMENT DISCLOSURES PURSUANT TO N.J.S.A. 52:18A-91(b).

Pursuant to N.J.S.A. 52:18A-91(b), the Pension Fund made commitments after January 1, 2018 to the investments in the table below, which includes the terms of the commitments and the amounts of fees and expenses paid from January 1, 2018 through June 30, 2018.

Investment	Commitment (\$ Millions)	Annual Management Fee %	Performance Fee/Carried Interest %	Fees and Expenses Paid	Performance Fees Paid
Aether Real Assets SONJ Fund, L.P Executed February 2018	\$135	Years 1-5: 0.60% on committed capital. Years 6-12: 85% of prior year's fee. Years 13-15: 0.1% on committed capital. Thereafter 0.00%.	4.475% carried interest subject to 7% return.	\$446,827	\$0
Blueprint Cap I, LP Executed May 2018	\$300	0.25% of Invested Net Asset Value	No Performance Fee/No Carried Interest	\$0	\$0
NB/NJ Custom Fund III Executed April 2018	\$200	0.10% on commitment during the investment period; thereafter, 0.30% on actively invested capital.	10% carried interest subject to 8% return. 15% carried interest subject to 15% return.	\$0	\$0
TPG Real Estate Partners III LP Executed May 2018	\$100	1.5% on first \$50 million of invested capital; 1.25% on next \$150 million.	20% carried interest subject to 8% net return.	\$260,358	\$0
Sycamore Partners III, L.P Executed January 2018	\$150	2% on commitment during the investment period; thereafter, 2% on invested capital.	20% carried interest subject to 8% return.	\$1,500,000	\$0
Total	\$885			\$2,207,185	\$0