



**STATE OF NEW JERSEY
DIVISION OF PENSIONS & BENEFITS**

Financial Statements and Supplementary Schedules

June 30, 2018

(With Independent Auditors' Report Thereon)

**STATE OF NEW JERSEY
DIVISION OF PENSIONS & BENEFITS**

Financial Statements and Supplementary Schedules

June 30, 2018

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Independent Auditors' Report

The Treasurer
State of New Jersey:

We have audited the accompanying financial statements of the fiduciary activities of the State of New Jersey, Division of Pensions and Benefits (the Division), as of and for the year ended June 30, 2018, and the related notes to the financial statements, which collectively comprise the Division's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; 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 of America. 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 auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the fiduciary activities of the State of New Jersey, Division of Pensions and Benefits, as of June 30, 2018, and the respective changes in financial position for the year then ended in accordance with U.S. generally accepted accounting principles.



Emphasis of Matter

Reporting Entity

As discussed in note 2(a) to the financial statements, the financial statements referred to above are intended to present the financial position and the changes in financial position of the fiduciary funds administered by the Division. As a result, these financial statements do not purport to, and do not, present fairly the financial position of the State of New Jersey as of June 30, 2018 and the changes in its financial position, or, where applicable, its cash flows thereof for the year then ended in conformity with U.S. generally accepted accounting principles. Our opinion is not modified with respect to this matter.

Other Matters

Required Supplementary Information

U.S. generally accepted accounting principles require that the management's discussion and analysis and the schedules included under Required Supplementary Information in the accompanying table of contents be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the GASB 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 conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Division's basic financial statements. The schedules included under Supplementary Information in the accompanying table of contents (the Schedules) are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The Schedules are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the Schedules are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

KPMG LLP

Short Hills, New Jersey
April 16, 2019

STATE OF NEW JERSEY
DIVISION OF PENSIONS & BENEFITS

Management's Discussion and Analysis

(Unaudited)

June 30, 2018

Our discussion and analysis of the financial performance of the fiduciary funds (the Funds) administered by the Division of Pensions & Benefits (the Division) provides an overview of the Funds' financial activities for the State fiscal year ended June 30, 2018. Please read it in conjunction with the basic financial statements and financial statement footnotes, which follow this discussion.

Financial Highlights

Fiduciary Funds – Pension Trust Funds and Other Postemployment Benefit (OPEB) Plan

- Fiduciary net position increased by \$2.7 billion as a result of this year's operations from \$83.7 billion to \$86.4 billion.
- Additions for the year are \$14.5 billion, which are comprised of member, employer, nonemployer, and employer specific and other pension contributions of \$7.4 billion and net investment income of \$7.1 billion.
- Deductions for the year are \$11.9 billion, which are comprised of benefit and refund payments of \$11.8 billion and administrative expenses of \$48.3 million.

Overview of the Financial Statements

This discussion and analysis is intended to serve as an introduction to the basic financial statements. The basic financial statements are comprised of two components: 1) fiduciary fund financial statements and 2) notes to the financial statements. This report also contains required and other supplementary information in addition to the basic financial statements.

Fund Financial Statements

A fund is a grouping of related accounts that is used to maintain control over resources that have been segregated for specific activities or objectives. The Division uses fund accounting to ensure and demonstrate compliance with finance-related legal requirements.

Fiduciary Funds

Fiduciary funds are used to account for the assets that the Division holds on behalf of others as their agent. Agency funds are custodial in nature and do not involve measurement of results of operations.

The Division administers fourteen fiduciary funds: ten pension trust funds, one OPEB plan, and three agency funds.

The statement of fiduciary net position for the pension trust funds and other postemployment benefit plan and the agency funds presents the Division's assets and liabilities by major categories and may serve over time as a useful indicator of the Division's financial position. The difference between assets and liabilities represents the net position restricted for pension and other postemployment benefits.

**STATE OF NEW JERSEY
DIVISION OF PENSIONS & BENEFITS**

Management's Discussion and Analysis

(Unaudited)

June 30, 2018

The statement of changes in fiduciary net position for the pension trust funds and other postemployment benefit plan provides information on the change in the Division's net position during the current year. Additions are comprised of investment income and member, employer, nonemployer, and employer specific and other contributions. Deductions include retirement and health benefit payments, refunds of contributions, and administrative expenses.

Notes to the Financial Statements

The notes to the financial statements provide additional information that is essential to a full understanding of the data provided in the basic financial statements and includes a description of the fiduciary funds.

Other Information

In addition to the basic financial statements and accompanying notes, this report also presents certain required supplementary information, which includes the schedules of changes in net pension liability and related ratios, the schedules of employer contributions and schedule of investment returns for the pension trust funds as well as the schedule of changes in net OPEB liability and related ratios and the schedule of investment returns for the OPEB plan.

Financial Analysis

**Summary of Fiduciary Net Position
Pension Trust Funds and Other Postemployment Benefit Plan**

	2018	2017	Increase/ (Decrease)
Assets:			
Cash and cash equivalents	\$ 923,522,162	883,450,234	40,071,928
Receivables	2,592,511,428	2,377,510,013	215,001,415
Investments	81,792,443,010	79,262,467,350	2,529,975,660
Securities lending collateral	839,926,356	958,403,742	(118,477,386)
Members' loans and mortgages	2,308,198,797	2,381,008,709	(72,809,912)
Total assets	88,456,601,753	85,862,840,048	2,593,761,705
Liabilities:			
Accounts payable and accrued expenses	269,894,272	252,706,110	17,188,162
Retirement benefits payable	930,488,730	883,776,543	46,712,187
Noncontributory group life insurance premiums payable	20,186,135	15,310,176	4,875,959
Administrative expense payable	3,922,068	13,229,786	(9,307,718)
Securities lending collateral and rebates payable	839,902,523	958,120,840	(118,218,317)
Total liabilities	2,064,393,728	2,123,143,455	(58,749,727)
Net position	\$ 86,392,208,025	83,739,696,593	2,652,511,432

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Management's Discussion and Analysis

(Unaudited)

June 30, 2018

Assets of the pension trust funds and OPEB plan consist of cash and cash equivalents, investments, contributions due from members and participating employers, accrued interest and dividends on investments, other receivables, securities lending collateral, and members' loans and mortgages. Between State fiscal years 2017 and 2018, total assets increased by \$2.6 billion or 3%. This is primarily attributable to an increase of \$2.5 billion in investments due to strong returns from public equities, real estate, and private equity as explained more thoroughly below and a \$0.2 billion increase in various receivables, offset by a decrease of \$0.2 billion in securities lending collateral and members' loans and mortgages.

Liabilities of the pension trust funds and OPEB plan consist of retirement benefits payable to retirees and beneficiaries, noncontributory group life insurance (NCGI) premiums payable to the Funds' insurance provider, securities lending collateral and rebates payable, administrative expense payable, and, classified under accounts payable and accrued expenses, outstanding medical claims payable to the medical providers under the OPEB plan. Also included within accounts payable and accrued expenses are liabilities of the pension trust funds for unclaimed member accounts and checks issued to members that have not been negotiated by the members but remain due and payable. Total liabilities decreased by \$58.7 million or 2.8%. This decrease is mainly due to a decrease in securities lending collateral and rebates payable of \$118.2 million and a decrease in administrative expense payable of \$9.3 million, offset by an increase by \$68.8 in all other payables.

Net position restricted for pension and other postemployment benefits increased by \$2.7 billion or 3.2%.

**Summary of Fiduciary Net Position
Agency Funds**

	<u>2018</u>	<u>2017</u>	<u>Increase</u>
Assets	\$ 92,435,481	92,091,661	343,820
Liabilities	<u>92,435,481</u>	<u>92,091,661</u>	<u>343,820</u>
Net position	<u>\$ —</u>	<u>—</u>	<u>—</u>

Assets of the agency funds consist of cash and cash equivalents, investments, contributions due from the State and local employers and other receivables. Between State fiscal years 2017 and 2018, total assets increased by \$0.3 million or 0.4%. This is attributable to the increased amount invested in the Cash Management Fund (CMF) of \$1.1 million and an increase of receivables of \$0.3 million, offset by a decrease of \$1.1 million in cash and cash equivalents.

Liabilities in the agency funds vary according to each plan. In the Alternate Benefit Program (ABP), they include reimbursements to state and county colleges, reimbursement to the State of New Jersey general fund of any unused appropriations, and NCGI benefits payable. In the Dental Expense Program (DEP), they include claims payable, and in the Pension Adjustment Fund (PAF), they include liabilities for payroll and amounts due to the State of New Jersey general fund and other pension trust funds. Between State fiscal years 2017 and 2018, total liabilities increased by \$0.3 million or 0.4%. This was comprised of a \$0.8 million decrease in accounts payable and a \$1.1 million increase in amounts due to the State of New Jersey.

STATE OF NEW JERSEY
DIVISION OF PENSIONS & BENEFITS

Management's Discussion and Analysis

(Unaudited)

June 30, 2018

Summary of Changes in Fiduciary Net Position
Pension Trust Funds and Other Postemployment Benefit Plan

	<u>2018</u>	<u>2017*</u>	<u>Increase/ (Decrease)</u>
Additions:			
Member contributions	\$ 2,342,536,213	2,301,658,885	40,877,328
Employer contributions	3,330,118,429	2,925,363,922	404,754,507
Nonemployer contributions	1,677,137,908	1,265,145,499	411,992,409
Employer specific and other contributions	13,948,732	30,162,523	(16,213,791)
Net investment income	7,129,937,947	9,393,632,217	(2,263,694,270)
Transfers	26,977,641	24,649,892	2,327,749
Total additions	<u>14,520,656,870</u>	<u>15,940,612,938</u>	<u>(1,419,956,068)</u>
Deductions:			
Benefits	11,602,782,838	11,212,724,712	390,058,126
Refunds of contributions	189,053,148	193,448,262	(4,395,114)
Transfers	28,034,716	26,065,189	1,969,527
Administrative expenses	48,274,736	45,489,693	2,785,043
Total deductions	<u>11,868,145,438</u>	<u>11,477,727,856</u>	<u>390,417,582</u>
Change in net position	<u>\$ 2,652,511,432</u>	<u>4,462,885,082</u>	<u>(1,810,373,650)</u>

* 2017 balances adjusted for transfers which are now presented separately.

Additions of the pension trust funds and OPEB plan consist of member, employer, nonemployer, employer specific and other contributions, transfers and earnings from investment activities. There was a decrease of \$1.4 billion or 8.9% in total additions attributable to a decrease in net investment income of \$2.3 billion and a net increase of \$0.9 billion in member, employer, nonemployer, employer specific and other contributions and transfers in State fiscal year 2018 as compared to State fiscal year 2017.

Member contributions increased by \$40.9 million mainly due to the annual rate increases for the Teachers' Pension and Annuity Fund (TPAF), Public Employees' Retirement System (PERS) and the Judicial Retirement System (JRS) as required in P.L. 2011, C. 78.

The State contributed \$2,479.2 million to the pension trust funds in State fiscal year 2018. It was composed of \$323.1 million of normal cost and \$2,156.1 million of accrued liability. The contributions were as follows: \$1,476 million to TPAF, \$656.4 million to PERS, \$251.1 million to the Police & Firemen's Retirement System (PFRS), \$23.3 million to JRS, \$72.1 million to the State Police Retirement System (SPRS), and \$325 thousand to the Consolidated Police and Firemen's Pension Fund (CPFPF).

State NCGI contributions for the State fiscal year totaling \$75 million were as follows: \$35.8 million for TPAF, \$28.4 million for PERS, \$7.6 million for PFRS, \$0.7 million for JRS, and \$2.5 million for SPRS. Between State fiscal years 2017 and 2018, the State's contribution toward NCGI decreased by \$7.3 million due to lower claims activity. State NCGI benefits are funded on a pay-as-you-go basis. The local contributions for PERS and PFRS are included in the annual billings to local employers.

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(Unaudited)

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The annual local employer pension appropriation billings increased per the actuarial valuation as of July 1, 2016. For PERS, the amount accrued in State fiscal year 2017 for normal contribution, accrued liability, and NCGI was \$926.4 million and was due on April 1, 2018. For State fiscal year 2018, the total amount accrued was \$994.7 million and is due April 1, 2019. For PFRS, the total amount accrued in State fiscal year 2017 for normal contributions, accrued liability, and NCGI was \$885.1 million and was due April 1, 2018. For State fiscal year 2018, the total amount accrued was \$977.7 million and is due April 1, 2019.

For the OPEB plan, employer contributions increased by \$39.4 million primarily attributable to rate increases effective January 1, 2017.

The pension trust funds and the OPEB plan earned net investment income of \$7.1 billion in fiscal year 2018, which is a decrease of \$2.3 billion from the prior year.

During State 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 U.S. equity market outperformed 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.

International equities realized favorable returns, on balance, during State fiscal year 2018, but lagged the U.S. market. Within the global marketplace, the MSCI Emerging Market (EM) Index outperformed Non-U.S. Developed Markets. Performance for international equity markets varied sharply from the first half to the second half of the State fiscal year, with strong returns from July 2017 through December 2017 partly offset by weakness from January 2018 through June 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 State 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%).

Private Equity was the best performing asset class of the State fiscal year 2018 as the Cambridge Associates Global Private Equity & Venture Capital Index 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. Real Estate also realized favorable returns with State fiscal year 2018 marking the ninth consecutive fiscal year of positive returns supported by a constructive fundamental backdrop.

STATE OF NEW JERSEY
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Management's Discussion and Analysis

(Unaudited)

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In reference to Schedule of Investment Returns – Annual Money-Weighted Rate of Return, Net of Investment Expense (see Required Supplementary Information Schedule 3), the State fiscal year 2018 rate was 9.11% compared to 13.01% in the prior year. It was based on Governmental Accounting Standards Board (GASB) Statement No. 67, *Financial Reporting for Pension Plans – an Amendment of GASB Statement No. 25* (GASB 67).

Deductions of the pension trust funds and OPEB plan are mainly comprised of pension benefit payments to retirees and beneficiaries, refunds of contributions to former members, transfer, and administrative costs incurred by the Funds to operate the pension trust funds and the OPEB plan. Also included are claim charges for the self-insured health and prescription drug benefit programs. Between State fiscal years 2017 and 2018, benefit payments increased by \$390.1 million or 3.5% due to an increase in the number of retirees receiving retirement and other benefits.

The change in net position was mainly attributable to the decrease in net investment income of \$2.3 billion and an increase in benefit expense of \$0.4 billion offset by an increase of \$0.8 billion in employer and nonemployer contributions.

Investment Performance

The rates of return (i.e. investment performance, which includes income and changes in the fair value of investments) for JRS, Prison Officers' Pension Fund (POPF), SPRS, CPFPPF, TPAF, PFRS, and PERS, collectively, the Pension Funds, and various market indices are as follows:

**STATE OF NEW JERSEY
DIVISION OF PENSIONS & BENEFITS**

Management's Discussion and Analysis

(Unaudited)

June 30, 2018

	Year ended June 30	
	2018	2017
Risk Mitigation	5.04	2.33
<i>T-Bill + 300 BP</i>	4.44	3.54
Total Short Term and Cash ¹	1.81	1.08
<i>91 Day Treasury Bill (Daily)</i>	1.36	0.49
Governments	(0.77)	(2.69)
<i>Custom Government Benchmark</i>	(0.65)	(1.97)
Total Liquidity	0.26	(0.95)
<i>Liquidity Benchmark</i>	0.66	(0.37)
Investment Grade Credit	(0.68)	0.67
<i>Custom Investment Grade Credit Benchmark</i>	(0.73)	1.01
Public High Yield	2.78	12.24
<i>BBG BARC Corp HY (Daily)</i>	2.62	12.70
Global Diversified Credit	9.46	25.86
<i>BBG BARC Corp HY (Daily)</i>	2.62	12.70
Credit-Oriented Hedge Funds	6.88	10.13
<i>50% HFRI DR 50% HFRI CA (1 month lag)</i>	5.29	13.22
Debt Related Private Equity	14.97	9.95
<i>BarCap Corp HY (Qtr lag) + 300 bps</i>	6.93	19.92
Debt Related Real Estate	8.29	4.15
<i>Barclays CMBS 2.0 Baa (Quarter lag) + 100bps</i>	9.16	6.14
Total Income	4.07	7.28
<i>Income Benchmark</i>	2.01	7.80
Real Return Private Real Assets and Commodities	12.70	6.86
<i>Custom Cambridge Real Asset Index</i>	5.82	22.73
Equity Related Real Estate	12.59	8.80
<i>Real Estate Index</i>	7.11	7.36
Total Real Return	12.64	8.23
<i>Real Return Benchmark</i>	6.75	11.12
US Equity	12.78	19.80
<i>S&P 1500 Super Composite (Daily)</i>	14.50	18.09
Non-US Equity Developed Markets Equity	8.19	19.02
<i>Custom International Developed Markets Benchmark²</i>	6.86	19.59
Emerging Markets Equity	5.40	22.69
<i>Custom International Emerging Markets Benchmark²</i>	7.99	24.07

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(Unaudited)

June 30, 2018

	Year ended June 30	
	2018	2017
Equity Oriented Hedge Funds	1.34	18.48
<i>50% HFRI EH 50% HFRI ED ACTIVIST (1 month lag)</i>	5.93	12.40
Buyouts-Venture Capital	17.94	12.99
<i>Custom Cambridge Blend</i>	20.42	14.10
Total Global Growth	11.56	18.80
<i>Global Growth Benchmark</i>	13.14	18.51
Opportunistic Investments	11.83	15.18
Total Pension Funds	9.06	13.07
<i>NJ Division of Investment Policy Index</i>	8.65	13.14

- 1 The cash aggregate comprises the two common pension fund cash accounts, in addition to the seven plan cash accounts.
- 2 Source: MSCI. The MSCI data is comprised of a custom index calculated by MSCI for, and as requested by the Division of Investment. These benchmarks exclude those securities deemed ineligible for investment under the State statutes governing investments in Iran, Sudan and companies that boycott Israel.

Overall Financial Condition of the Funds

Based on GASB 67 and actuaries' GASB 67 disclosures for State fiscal year 2018, for the defined benefit pension trust funds, the combined state and local ratios of plan fiduciary net position as a percentage of the total pension liability was 38.41% and the net pension liability as a percentage of covered payroll was 499.78%. For the prior year, the combined state and local ratios of plan fiduciary net position as a percentage of the total pension liability was 35.79% and the net pension liability as a percentage of covered payroll was 551.39%.

For the OPEB plan, total revenues incurred exceeded total expenses recognized by \$101.2 million, increasing the surplus at the beginning of the year from \$213.3 million to \$314.5 million at year-end.

For the New Jersey State Employees Deferred Compensation Plan and the Supplemental Annuity Collective Trust, members are 100% vested in the present value of their contributions and the funds have sufficient assets to meet future benefit obligations.

Contacting System Financial Management

This financial report is designed to provide our members, beneficiaries, investors, and other interested parties with a general overview of the Funds' finances and to show the Funds' accountability for the money it receives. This report is available on the Division of Pensions and Benefits website at www.state.nj.us/treasury/pensions. If you have any questions about this report or need additional financial information, contact the Division of Pensions and Benefits, P.O. Box 295, Trenton, NJ 08625-0295.

**STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS**

Statement of Fiduciary Net Position
Fiduciary Funds

June 30, 2018

	Pension Trust Funds and Other Postemployment Benefit Plan	Agency Funds
Assets:		
Cash and cash equivalents	\$ 923,522,162	1,124,682
Receivables:		
Contributions:		
Members	203,413,624	—
Employers	2,308,859,253	191,300
Accrued interest and dividends	4,710,132	—
Other	75,528,419	40,742,774
Total receivables	2,592,511,428	40,934,074
Investments, at fair value:		
Cash Management Fund	536,624,104	50,376,725
Common Pension Fund D	51,553,067,864	—
Common Pension Fund E	25,161,107,808	—
Domestic equities	801,472,808	—
Fixed income mutual funds	452,415,003	—
Equity mutual funds	3,287,755,423	—
Total investments	81,792,443,010	50,376,725
Securities lending collateral	839,926,356	—
Members' loans and mortgages	2,308,198,797	—
Total assets	88,456,601,753	92,435,481
Liabilities:		
Accounts payable and accrued expenses	269,894,272	88,955,292
Retirement benefits payable	930,488,730	—
Noncontributory group life insurance premiums payable	20,186,135	—
Administrative expense payable	3,922,068	—
Assets held for local contributing employers	—	1,965,508
Pension adjustment payroll payable	—	60,025
Due to State of New Jersey	—	1,314,040
Due to other funds	—	140,616
Securities lending collateral and rebates payable	839,902,523	—
Total liabilities	2,064,393,728	92,435,481
Net position:		
Restricted for pension and other postemployment benefits	\$ 86,392,208,025	—

See accompanying notes to financial statements.

STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS
Combining Statement of Fiduciary Net Position
Fiduciary Funds – Pension Trust Funds and Other Postemployment Benefit Plan
June 30, 2018

	Defined Benefit Pension Plans							Defined Contribution Pension Plans		Other Postemployment Benefit Plan	Total	
	Judicial Retirement System	Prison Officers' Pension Fund	State Police Retirement System	Consolidated Police and Firemen's Pension Fund	Teachers' Pension and Annuity Fund	Police and Firemen's Retirement System	Public Employees' Retirement System	Central Pension Fund	New Jersey State Employees Deferred Compensation Plan	Supplemental Annuity Collective Trust		State Health Benefits Local Government Retired Employees Plan
Assets:												
Cash and cash equivalents	\$ 4,975,574	228,655	17,904,920	134,113	371,943,696	205,366,800	322,533,336	40,722	14,831	147,186	232,329	923,522,162
Receivables:												
Contributions:												
Members	437,097	—	1,086,870	—	82,297,872	51,866,967	66,301,621	—	—	438,929	984,268	203,413,624
Employers	—	—	385,181	—	88,600,287	1,095,444,433	1,113,337,815	—	—	—	11,091,537	2,308,859,253
Accrued interest and dividends	756	38	3,102	55	63,622	3,874,133	55,798	17	520,663	191,948	—	4,710,132
Other	834,838	—	50,580	205,783	4,396,947	9,387,201	22,619,532	—	192,818	1,120,645	36,720,075	75,528,419
Total receivables	1,272,691	38	1,525,733	205,838	175,358,728	1,160,572,734	1,202,314,766	17	713,481	1,751,522	48,795,880	2,592,511,428
Investments, at fair value:												
Cash Management Fund	5,455,618	5,075,199	17,178,875	1,552,981	68,939,752	57,568,282	58,486,184	7,415	9,161,453	1,845,135	311,353,210	536,624,104
Common Pension Fund D	108,018,095	—	1,184,272,588	—	15,175,421,815	16,421,808,549	18,663,546,817	—	—	—	—	51,553,067,864
Common Pension Fund E	52,386,040	—	574,343,332	—	7,389,928,845	8,024,631,500	9,119,818,091	—	—	—	—	25,161,107,808
Domestic equities	—	—	—	—	—	—	—	—	568,546,130	232,926,678	—	801,472,808
Fixed income mutual funds	—	—	—	—	—	—	—	—	452,415,003	—	—	452,415,003
Equity mutual funds	—	—	—	—	—	—	—	—	3,287,755,423	—	—	3,287,755,423
Total investments	165,859,753	5,075,199	1,775,794,795	1,552,981	22,634,290,412	24,504,008,331	27,841,851,092	7,415	4,317,878,009	234,771,813	311,353,210	81,792,443,010
Securities lending collateral	1,759,881	—	19,294,715	—	247,244,970	267,551,678	304,075,112	—	—	—	—	839,926,356
Members' loans and mortgages	400,378	—	13,766,305	—	275,431,126	1,448,641,030	569,959,958	—	—	—	—	2,308,198,797
Total assets	174,268,277	5,303,892	1,828,286,468	1,892,932	23,704,268,932	27,586,140,573	30,240,734,264	48,154	4,318,606,321	236,670,521	360,381,419	88,456,601,753
Liabilities:												
Accounts payable and accrued expenses	46	673	77,927	1,114	90,420,723	6,699,378	123,188,574	18,350	1,485,975	2,142,559	45,858,953	269,894,272
Retirement benefits payable	4,768,017	79,395	18,453,016	127,993	368,936,445	208,404,035	328,961,231	29,804	—	728,794	—	930,488,730
Noncontributory group life insurance premiums payable	—	—	385,181	—	5,278,892	4,499,140	10,022,922	—	—	—	—	20,186,135
Administrative expense payable	16,035	368	31,494	362	1,278,077	437,834	2,120,518	—	—	—	37,380	3,922,068
Securities lending collateral and rebates payable	1,759,831	—	19,294,168	—	247,237,955	267,544,086	304,066,483	—	—	—	—	839,902,523
Total liabilities	6,543,929	80,436	38,241,786	129,469	713,152,092	487,584,473	768,359,728	48,154	1,485,975	2,871,353	45,896,333	2,064,393,728
Net position:												
Restricted for pension and other postemployment benefits	\$ 167,724,348	5,223,456	1,790,044,682	1,763,463	22,991,116,840	27,098,556,100	29,472,374,536	—	4,317,120,346	233,799,168	314,485,086	86,392,208,025

See accompanying notes to financial statements.

**STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS**

Statement of Changes in Fiduciary Net Position
Fiduciary Funds

Year ended June 30, 2018

	<u>Pension Trust Funds and Other Postemployment Benefit Plan</u>
Additions:	
Contributions:	
Members	\$ 2,342,536,213
Employers	3,330,118,429
Nonemployer	1,677,137,908
Employer specific and other	<u>13,948,732</u>
Total contributions	<u>7,363,741,282</u>
Investment income:	
Net increase in fair value of investments	5,462,741,580
Interest and Dividends	<u>1,682,748,167</u>
	7,145,489,747
Less investment expense	<u>15,551,800</u>
Net investment income	<u>7,129,937,947</u>
Transfers	<u>26,977,641</u>
Total additions	<u>14,520,656,870</u>
Deductions:	
Benefits	11,602,782,838
Refunds of contributions	189,053,148
Transfer	28,034,716
Administrative and miscellaneous expenses	<u>48,274,736</u>
Total deductions	<u>11,868,145,438</u>
Change in net position	2,652,511,432
Net position restricted for pension and other postemployment benefits:	
Beginning of year	<u>83,739,696,593</u>
End of year	<u><u>\$ 86,392,208,025</u></u>

See accompanying notes to financial statements.

**STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS**

Combining Statement of Changes In Fiduciary Net Position
Fiduciary Funds – Pension Trust Funds and Other Postemployment Benefit Plan

Year ended June 30, 2018

	Defined Benefit Pension Plans							Defined Contribution Pension Plan		Other Postemployment Benefit Plan	Total	
	Judicial Retirement System	Prison Officers' Pension Fund	State Police Retirement System	Consolidated Police and Firemen's Pension Fund	Teachers' Pension and Annuity Fund	Police and Firemen's Retirement System	Public Employees' Retirement System	Central Pension Fund	New Jersey State Employees Deferred Compensation Plan	Supplemental Annuity Collective Trust		State Health Benefits Local Government Retired Employees Plan
Additions:												
Contributions:												
Members	\$ 9,177,453	—	22,416,571	—	810,899,751	395,604,883	854,178,790	—	190,196,996	6,074,603	53,987,166	2,342,536,213
Employers	24,023,637	—	74,603,780	—	1,723,827	1,127,617,114	1,680,631,409	324,000	—	—	421,194,662	3,330,118,429
Nonemployer	—	—	—	325,000	1,514,407,623	108,857,000	—	—	—	—	53,548,285	1,677,137,908
Employer specific and other	—	484,565	—	806,330	345,897	3,822,741	8,466,985	22,214	—	—	—	13,948,732
Total contributions	33,201,090	484,565	97,020,351	1,131,330	2,327,377,098	1,635,901,738	2,543,277,184	346,214	190,196,996	6,074,603	528,730,113	7,363,741,282
Investment income:												
Net increase in fair value of investments	11,626,472	—	118,766,237	—	1,549,694,540	1,592,956,386	1,838,398,729	—	331,796,817	19,502,399	—	5,462,741,580
Interest and Dividends	3,204,540	71,686	35,387,318	22,998	471,677,008	548,256,412	605,751,230	1,069	11,310,243	4,745,241	2,320,422	1,682,748,167
	14,831,012	71,686	154,153,555	22,998	2,021,371,548	2,141,212,798	2,444,149,959	1,069	343,107,060	24,247,640	2,320,422	7,145,489,747
Less investment expense	21,143	1,471	124,546	1,456	5,054,619	1,731,572	8,386,400	—	230,593	—	—	15,551,800
Net investment income	14,809,869	70,215	154,029,009	21,542	2,016,316,929	2,139,481,226	2,435,763,559	1,069	342,876,467	24,247,640	2,320,422	7,129,937,947
Transfers	2,859,841	—	248,479	—	13,092,464	3,605,472	7,171,385	—	—	—	—	26,977,641
Total additions	50,870,800	554,780	251,297,839	1,152,872	4,356,786,491	3,778,988,436	4,986,212,128	347,283	533,073,463	30,322,243	531,050,535	14,520,656,870
Deductions:												
Benefits	58,007,824	947,877	222,117,649	1,289,899	4,345,295,975	2,513,406,534	3,813,712,429	342,040	203,425,764	22,615,594	421,621,253	11,602,782,838
Refunds of contributions	278,597	—	198,074	—	55,907,156	10,055,932	122,608,146	5,243	—	—	—	189,053,148
Transfers	—	—	57,576	—	7,406,171	182,584	20,388,385	—	—	—	—	28,034,716
Administrative and miscellaneous expenses	185,364	4,315	377,193	4,006	13,222,178	4,505,685	21,368,150	—	407,732	—	8,200,113	48,274,736
Total deductions	58,471,785	952,192	222,750,492	1,293,905	4,421,831,480	2,528,150,735	3,978,077,110	347,283	203,833,496	22,615,594	429,821,366	11,868,145,438
Change in net position	(7,600,985)	(397,412)	28,547,347	(141,033)	(65,044,989)	1,250,837,701	1,008,135,018	—	329,239,967	7,706,649	101,229,169	2,652,511,432
Net position restricted for pension and other postemployment benefits:												
Beginning of year	175,325,333	5,620,868	1,761,497,335	1,904,496	23,056,161,829	25,847,718,399	28,464,239,518	—	3,987,880,379	226,092,519	213,255,917	83,739,696,593
End of year	\$ 167,724,348	5,223,456	1,790,044,682	1,763,463	22,991,116,840	27,098,556,100	29,472,374,536	—	4,317,120,346	233,799,168	314,485,086	86,392,208,025

See accompanying notes to financial statements.

**STATE OF NEW JERSEY
DIVISION OF PENSIONS & BENEFITS**

Notes to Financial Statements

June 30, 2018

(1) Description of the Plans

(a) Organization

The State of New Jersey, Division of Pensions and Benefits (the Division) was created and exists pursuant to N.J.S.A. 52:18A to oversee and administer the pension trust funds and an other postemployment benefit (OPEB) plan sponsored by the State of New Jersey (the State). The following is a list of the benefit plans, which have been included in the basic financial statements of the Division, collectively referred to as the Plans:

Plan Name	Type of Plan
Defined benefit pension plans:	
Judicial Retirement System (JRS)	Single-employer
Prison Officers' Pension Fund (POPF)	Single-employer
State Police Retirement System (SPRS)	Single-employer
Consolidated Police and Firemen's Pension Fund (CPFPF)	Cost-sharing multiple-employer with special funding situation
Teachers' Pension and Annuity Fund (TPAF)	Cost-sharing multiple-employer with special funding situation
Police and Firemen's Retirement System (PFRS)	Cost-sharing multiple-employer with special funding situation
Public Employees' Retirement System (PERS)	Cost-sharing multiple-employer
Central Pension Fund (CPF)	Single-employer
Defined contribution pension plans:	
New Jersey State Employees Deferred Compensation Plan (NJSEDCP)	Single-employer
Supplemental Annuity Collective Trust (SACT)	Multiple-employer
Defined benefit other postemployment benefit plan:	
State Health Benefits Local Government Retired Employees Plan	Cost-sharing multiple-employer with special funding situation

The Division oversees the following agency funds:

Agency Fund
Pension Adjustment Fund (PAF)
Alternate Benefit Program (ABP)
Dental Expense Program Fund (DEP)

**STATE OF NEW JERSEY
DIVISION OF PENSIONS & BENEFITS**

Notes to Financial Statements

June 30, 2018

(b) Defined Benefit Pension Plans

Each defined benefit pension plan's designated purpose is to provide retirement, death, and disability benefits to its members. Below is a summary description of each defined benefit pension plan administered by the Division:

Plan	Established as of	Legislation	Membership
JRS	June 1, 1973	N.J.S.A. 43:6A	All members of the State Judiciary.
POPF*	January 1, 1941	N.J.S.A. 43:7	Various employees in the state penal institutions appointed prior to January 1, 1960.
SPRS	July 1, 1965	N.J.S.A. 53:5A	All uniformed officers and troopers of the Division of State Police.
CPFPF*	January 1, 1952	N.J.S.A. 43:16	County and municipal police and firemen appointed prior to July 1, 1944.
TPAF	January 1, 1955	N.J.S.A. 18A:66	Substantially all teachers or members of the professional staff certified by the State Board of Examiners and employees of the Department of Education, who have titles that are unclassified, professional and certified.
PFRS	July 1, 1944	N.J.S.A. 43:16A	Substantially all full-time county and municipal police or firemen and state firemen or officer employees with police powers appointed after June 30, 1944.
PERS	January 1, 1955	N.J.S.A. 43:15A	Substantially all full-time employees of the State of New Jersey or any county, municipality, school district or public agency, provided the employee is not required to be a member of another state-administered retirement system or other state pension fund or local jurisdiction's pension fund.
CPF*	Various	Various	The CPF is a "pay-as-you-go" benefit plan. The CPF's designated purpose is to provide retirement allowances under the following series of noncontributory pension acts: Veterans Act Pensioners (N.J.S.A. 43:4-1 to 4-6); Health Pension Act (N.J.S.A. 43:5-1 to 5-4); Pension to Widows of Governors (N.J.S.A. 43:8-2); Disabled Veterans Pension, Surviving Spouse of Veterans (N.J.S.A. 38:18-1 to 18-2 and N.J.S.A. 38:18A-1) and Special Act (N.J.S.A. 43:5A to 5A-1).

* Represents a closed plan.

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Notes to Financial Statements

June 30, 2018

The authority to amend the provisions of the above plans rests with new legislation passed by the State of New Jersey. Pension reforms enacted pursuant to P.L. 2011, C. 78 included provisions creating special Pension Plan Design Committees for JRS, SPRS, TPAF, PFRS, and PERS, once a Target Funded Ratio (TFR) is met. The Pension Plan Design Committees will have the discretionary authority to modify certain plan design features, including member contribution rate; formula for calculation of final compensation or final salary; fraction used to calculate a retirement allowance; age at which a member may be eligible and the benefits for service or early retirement; and benefits provided for disability retirement. The committees will also have the authority to reactivate the cost of living adjustment (COLA) on pensions. However, modifications can only be made to the extent that the resulting impact does not cause the funded ratio to drop below the TFR in any one year of a 30-year projection period.

Plan Membership and Contributing Employers

Membership and contributing employers of the defined benefit pension plans consisted of the following at June 30, 2018:

	<u>JRS</u>	<u>POPF</u>	<u>SPRS</u>	<u>CPFPF</u>	<u>TPAF*</u>	<u>PFRS</u>	<u>PERS</u>	<u>CPF</u>
Inactive plan members or beneficiaries currently receiving benefits	607	77	3,337	77	102,573	43,755	174,904	16
Inactive plan members entitled to but not yet receiving benefits	4	—	—	—	197	39	589	—
Active plan members	<u>428</u>	<u>—</u>	<u>2,812</u>	<u>—</u>	<u>154,889</u>	<u>41,517</u>	<u>254,780</u>	<u>—</u>
Total	<u>1,039</u>	<u>77</u>	<u>6,149</u>	<u>77</u>	<u>257,659</u>	<u>85,311</u>	<u>430,273</u>	<u>16</u>
Contributing employers	1	1	1	35	24	586	1,708	1
Contributing nonemployers	—	—	—	1	1	1	—	—

* In addition to the State, who is the sole payer of regular employer contributions to the fund, TPAF's contributing employers include boards of education, who elected to participate in the Early Retirement Incentive Program and continue to pay towards their incurred liability.

**STATE OF NEW JERSEY
DIVISION OF PENSIONS & BENEFITS**

Notes to Financial Statements

June 30, 2018

Pension Plans' Boards and Composition

The table below represents the composition and source of selection for the Plan's boards:

	SPRS	TPAF	PFRS	PERS
Appointments by:				
Governor	2	2	5	2
Treasurer	1	1	1	1
Superintendent of the State Police	2	—	—	—
Elected by Board or Members	—	4	5	6
Total	5	7	11	9

POPF, CPF and CPF are managed by the Division. General responsibility for JRS is vested with the State House Commission.

Contribution Requirements and Benefit Provisions

Significant Legislation

P.L. 2009, C. 19, effective March 17, 2009, provided an option for local employers of PFRS and PERS to contribute 50% of the normal and accrued liability contribution amounts certified for payments due in State fiscal year 2009. Such an employer will be credited with the full payment and any such amounts will not be included in their unfunded liability. The actuaries will determine the unfunded liability of those retirement systems, by employer, for the reduced normal and accrued liability contributions provided under this law. This unfunded liability is paid by the employer in level annual payments over a period of 15 years beginning with fiscal year ended June 30, 2012 and will be adjusted by the rate of return on the actuarial value of assets.

Pursuant to the provisions of P.L. 2011, C. 78, COLA increases were suspended for all current and future retirees of all retirement systems.

In accordance with the Lottery Enterprise Contribution Act, L. 2017, c. 98 ("LECA"), the net proceeds from the New Jersey State Lottery are contributed to the PERS, TPAF and PFRS beginning in State fiscal year 2018. For the purpose of depositing the lottery contribution made to the eligible pension plans, LECA established Common Pension Fund L within the Division of Investment. The net lottery proceeds are contributed to the respective pension plans based upon percentages detailed in the Act on a periodic basis through Common Pension Fund L. The Common Pension Fund L investment account is managed and invested by the Director of the Division of Investment, subject to the oversight of the State Investment Council. The Director of the Division of Investment has full discretion to distribute proceeds and all investments thereof and investment earnings thereon from the investment account into investment vehicles managed by the Division of Investment on behalf of the retirement systems. During fiscal year 2018, \$976,002,197 was contributed to Common Pension Fund L and has been included as employer contributions in PERS, TPAF and PFRS in the accompanying financial statements.

**STATE OF NEW JERSEY
DIVISION OF PENSIONS & BENEFITS**

Notes to Financial Statements

June 30, 2018

The following are specific contribution requirements and benefit provisions related to each defined benefit plan:

JRS

The contribution policy is set by N.J.S.A. 43:6A and requires contributions by active members and the State of New Jersey. Members enrolled on January 1, 1996 or after, contribute on their entire base salary. Contributions by active members enrolled prior to January 1, 1996 are based on the difference between their current salary and the salary of the position on January 18, 1982. Pursuant to the provisions of P.L. 2011, C. 78, the active member contribution rate is being increased from 3% to 12%, phased-in over seven years for members hired or reappointed after June 28, 2011. In October 2011, the member contribution rate for new members increased. The phase-in of the additional incremental member contribution rate takes place in July of each subsequent State fiscal year. The member contribution rate was 12% in State fiscal year 2018. The State's contribution is based on an actuarially determined amount, which includes the normal cost and unfunded accrued liability.

The vesting and benefit provisions are set by N.J.S.A. 43:6A. JRS provides retirement benefits as well as death and disability benefits. Retirement is mandatory at age 70. Service retirement benefits are available to members who have reached certain ages and various years of service. Benefits of 75% of final salary are available to members at age 70 with 10 years or more of judicial service; members between ages 65-69 with 15 years or more of judicial service or between ages 60-64 with 20 years or more of judicial service. Benefits of 50% of final salary are available to those with both judicial service and non-judicial service for which five or more consecutive years of judicial service. These benefits are available at age 65 or older with 15 years or more of aggregate service or age 60 or older with 20 years or more of aggregate service. Benefits of 2% of final salary for each year of public service up to 25 years plus 1% of final salary for each year in excess of 25 years are available at age 60 with five consecutive years of judicial service plus 15 years in the aggregate of public service or at age 60 while serving as a judge.

Early retirement benefits of 2% of final salary for each year of service up to 25 years and 1% of final salary for each year over 25 years is available to members who retire before age 60, have 5 or more consecutive years of judicial service, and 25 years or more in aggregate public service. The amount of benefits is actuarially reduced for the number of months remaining until the member reaches age 60.

POPF

There are no active members in POPF. Additionally, based on the recent actuarial valuation, there was no normal cost or accrued liability contribution required by the State for the fiscal year ended June 30, 2018. The vesting and benefit provisions were set by N.J.S.A. 43:7.

SPRS

The contribution policy is set by N.J.S.A. 53:5A and requires contributions by active members and the State of New Jersey. Pursuant to the provisions of P.L. 2011, C. 78, the active member contribution rate was 9% in State fiscal year 2018. The State's contribution is based on an actuarially determined amount, which includes the normal cost and unfunded accrued liability.

The vesting and benefit provisions are set by N.J.S.A. 53:5A. SPRS provides retirement benefits as well as death and disability benefits. All benefits vest after ten years of service, and members are always fully vested in their contributions. Mandatory retirement is at age 55. Voluntary retirement is prior to age 55 with

STATE OF NEW JERSEY
DIVISION OF PENSIONS & BENEFITS

Notes to Financial Statements

June 30, 2018

20 years of credited service. The benefit is an annual retirement allowance equal to the greater of (a), (b), or (c), as follows: (a) 50% of final compensation; (b) for members retiring with 25 years or more of service, 65% of final compensation, plus 1% for each year of service in excess of 25 years, to a maximum of 70% of final compensation; or (c) for members as of August 29, 1985 who would not have 20 years of service by age 55, benefit as defined in (a) above. For members as of August 29, 1985, who would have 20 years of service, but would not have 25 years of service at age 55, benefit is as defined in (a) above plus 3% for each year of service.

CPFPE

There are no active members in CPFPE. Additionally, based on the recent actuarial valuation, the State made a \$325,000 contribution towards the unfunded accrued liability during the fiscal year ended June 30, 2018. The vesting and benefit provisions were set by N.J.S.A. 43:16.

TPAF

The contribution policy is set by N.J.S.A. 18A:66 and requires contributions by active members and contributing employers. Pursuant to the provisions of P.L. 2011, C. 78, the active member contribution rate increased from 5.5% of annual compensation to 6.5% plus an additional 1% phased-in over 7 years beginning in July 2012. The member contribution rate was 7.34% in State fiscal year 2018. The phase-in of the additional incremental member contribution rate takes place in July of each subsequent State fiscal year. The State's contribution is based on an actuarially determined amount, which includes the normal cost and unfunded accrued liability.

The vesting and benefit provisions are set by N.J.S.A. 18A:66. TPAF provides retirement, death, and disability benefits. All benefits vest after ten years of service, except for medical benefits, which vest after 25 years of service or under the disability provisions of TPAF. Members are always fully vested for their own contributions and, after three years of service credit, become vested for 2% of related interest earned on the contributions. In the case of death before retirement, members' beneficiaries are entitled to full interest credited to the members' accounts.

The following represents the membership tiers for TPAF:

<u>Tier</u>	<u>Definition</u>
1	Members who were enrolled prior to July 1, 2007
2	Members who were eligible to enroll on or after July 1, 2007 and prior to November 2, 2008
3	Members who were eligible to enroll on or after November 2, 2008 and prior to May 22, 2010
4	Members who were eligible to enroll on or after May 22, 2010 and prior to June 28, 2011
5	Members who were eligible to enroll on or after June 28, 2011

Service retirement benefits of 1/55th of final average salary for each year of service credit is available to tiers 1 and 2 members upon reaching age 60 and to tier 3 members upon reaching age 62. Service retirement benefits of 1/60th of final average salary for each year of service credit is available to tier 4 members upon reaching age 62 and tier 5 members upon reaching age 65. Early retirement benefits are available to tiers 1 and 2 members before reaching age 60, tiers 3 and 4 with 25 years or more of service credit before age 62, and tier 5 before age 65 with 30 years or more of service credit. Benefits are reduced

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DIVISION OF PENSIONS & BENEFITS**

Notes to Financial Statements

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by a fraction of a percent for each month that a member retires prior to the retirement age for his/her respective tier. Deferred retirement is available to members who have at least 10 years of service credit and have not reached the service retirement age for the respective tier.

PFRS

The contribution policy is set by N.J.S.A. 43:16A and requires contributions by active members and contributing employers. Pursuant to the provisions of P.L. 2011, C. 78, the active member contribution rate was 10.0% in State fiscal year 2018. Employers' contributions are based on an actuarially determined amount, which includes the normal cost and unfunded accrued liability.

The vesting and benefit provisions are set by N.J.S.A. 43:16A. PFRS provides retirement as well as death and disability benefits. All benefits vest after ten years of service, except disability benefits, which vest after four years of service.

The following represents the membership tiers for PFRS:

<u>Tier</u>	<u>Definition</u>
1	Members who were enrolled prior to May 22, 2010
2	Members who were eligible to enroll on or after May 22, 2010 and prior to June 28, 2011
3	Members who were eligible to enroll on or after June 28, 2011

Service retirement benefits are available at age 55 and are generally determined to be 2% of final compensation for each year of creditable service up to 30 years plus 1% for each year of service in excess of 30 years. Members may seek special retirement after achieving 25 years of creditable service, in which benefits would equal 65% (tiers 1 and 2 members) and 60% (tier 3 members) of final compensation plus 1% for each year of creditable service over 25 years, but not to exceed 30 years. Members may elect deferred retirement benefits after achieving ten years of service, in which case benefits would begin at age 55 equal to 2% of final compensation for each year of service.

PERS

The contribution policy is set by N.J.S.A. 43:15A and requires contributions by active members and contributing employers. Pursuant to the provisions of P.L. 2011, C. 78, the active member contribution rate increased from 5.5% of annual compensation to 6.5% plus an additional 1% phased-in over 7 years beginning in July 2012. The member contribution rate was 7.34% in State fiscal year 2018. The phase-in of the additional incremental member contribution rate takes place in July of each subsequent State fiscal year. The rate for members who are eligible for the Prosecutors Part of PERS (P.L. 2001, C. 366) was 10.0% in State fiscal year 2018. Employers' contributions are based on an actuarially determined amount, which includes the normal cost and unfunded accrued liability.

The vesting and benefit provisions are set by N.J.S.A. 43:15A. PERS provides retirement, death, and disability benefits. All benefits vest after ten years of service, except for medical benefits, which vest after 25 years of service or under the disability provisions of PERS.

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The following represents the membership tiers for PERS:

Tier	Definition
1	Members who were enrolled prior to July 1, 2007
2	Members who were eligible to enroll on or after July 1, 2007 and prior to November 2, 2008
3	Members who were eligible to enroll on or after November 2, 2008 and prior to May 22, 2010
4	Members who were eligible to enroll on or after May 22, 2010 and prior to June 28, 2011
5	Members who were eligible to enroll on or after June 28, 2011

Service retirement benefits of 1/55th of final average salary for each year of service credit is available to tiers 1 and 2 members upon reaching age 60 and to tier 3 members upon reaching age 62. Service retirement benefits of 1/60th of final average salary for each year of service credit is available to tier 4 members upon reaching age 62 and tier 5 members upon reaching age 65. Early retirement benefits are available to tiers 1 and 2 members before reaching age 60, tiers 3 and 4 with 25 years or more of service credit before age 62, and tier 5 with 30 years or more of service credit before age 65. Benefits are reduced by a fraction of a percent for each month that a member retires prior to the age at which a member can receive full early retirement benefits in accordance with their respective tier. Tier 1 members can receive an unreduced benefit from age 55 to age 60 if they have at least 25 years of service. Deferred retirement is available to members who have at least 10 years of service credit and have not reached the service retirement age for the respective tier.

CPF

The State of New Jersey makes an annual appropriation payment to CPF to pay current year benefits. The contribution requirements were established by the statutes mentioned in the previous table and are not actuarially determined.

Benefits are payable under various State of New Jersey legislation in an amount equal to one-half of the compensation received by the participant for his/her service.

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(c) Defined Contribution Pension Plans

The Division administers the following defined contribution plans to certain members as further discussed below:

<u>Plan</u>	<u>Established as of</u>	<u>Legislation</u>	<u>Membership</u>
NJSEDCP	June 19, 1978	Chapter 39, P.L. 1978, amended by Chapter 449, P.L. 1985, effective January 14, 1986, and further amended by Chapter 116, P.L. 1997, effective June 6, 1997	Any state employee who is a member of a state-administered retirement system or an employee of an eligible state agency, authority, commission or instrumentality of state government provided the employee has at least 12 continuous months of employment, and any individual employed through a Governor's appointment.
SACT	1963	Chapter 123, P.L. 1963, amended by Chapter 90, P.L. 1965	Active members of several state-administered retirement systems to provide specific benefits to supplement the guaranteed benefits that are provided by their basic retirement system.

Plan Membership

At June 30, 2018, membership in the defined contribution pension plans consisted of the following based on the information within the Division's database:

<u>Plan</u>	<u>Members</u>
NJSEDCP	54,890
SACT	3,003

Contribution Requirements and Benefit Provisions

NJSEDCP

Participants may defer between 1% and 100% of their salary, less any Internal Revenue Code (IRC) Section 414(h) reductions, or \$18,500 annually. Under the limited "catch-up" provision, a participant may be eligible to defer up to a maximum of twice the annual maximum in the three years immediately preceding the retirement age at which no reduction in benefits would be applicable.

There are no employer or nonemployer entities that are required to contribute to the plan.

Assets in the plan are held in trust for the exclusive benefit of plan members and their beneficiaries in accordance with Governmental Accounting Standards Board (GASB) Statement No. 32, *Accounting and Financial Reporting for Internal Revenue Code Section 457 Deferred Compensation Plans*. Plan members

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are fully vested for the current valuation of their account from the date of enrollment in the plan. Benefits are payable upon separation from service with the State of New Jersey.

SACT

Participants contribute through payroll deductions and may contribute from 1% to 100% of their base salary. Contributions are voluntary and may be suspended at the beginning of any quarter. Contributions under the Tax Sheltered Supplemental Annuity Plan are subject to Federal law limitations and qualify for tax-sheltered treatment permitted under Section 403(b) of the IRC. Participants are always fully vested for the accumulated units in their accounts.

Upon retirement, a participant receives a life annuity benefit or may elect to receive a benefit paid as a single cash payment or various forms of monthly annuity payments with a beneficiary provision based on the value of the participant's account in the month of retirement. Upon the death of a participant, the designated beneficiary may elect to receive a lump sum equal to the account value or an annuity under any of the settlement options, which a retiree could elect under SACT. Upon termination of employment and withdrawal from the basic retirement systems, a participant must also withdraw his/her account under SACT as a lump-sum settlement.

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(d) Other Postemployment Benefit Plan

The Division administers the State Health Benefits Local Government Retired Employees plan. The plan was established in 1961 under Title 52 Article 14 – 17.25 et. seq. and offers medical and prescription coverage to qualified local government public retirees and their spouses. Local employers must adopt a resolution to participate. The OPEB plan is overseen by the State Health Benefits Commission (the Commission), which was established by NJSA 52:14-17.27. The Commission reviews any member appeals related to member eligibility, benefit or claim denial, and benefit payments for the medical and prescription drug claims. They also have contracting authority for vendors to administer the medical and prescription drug programs as well as the health benefit consultant and actuary. Further, they approve the premiums for the various plans on an annual basis. The Commission is comprised of one representative each from the Office of the Treasurer, Department of Banking and Insurance, Civil Service Commission, State Employee Union, and Local Employee Union.

Plan Membership and Contributing Employers

Membership and contributing employers of the defined benefit OPEB plan consisted of the following at June 30, 2018:

Inactive plan members or beneficiaries currently receiving benefits	26,277
Inactive plan members entitled to but not yet receiving benefits	—
Active plan members	<u>61,789</u>
Total	<u><u>88,066</u></u>
Contributing employers	587
Contributing nonemployers	1

Contribution Requirements and Benefit Provisions

The funding policy for the OPEB plan is pay-as-you-go; therefore, there is no prefunding of the liability. However, due to premium rates being set prior to each calendar year, there is a minimal amount of net position available to cover benefits in future years. Contributions to pay for the health benefit premiums of participating employees in the OPEB plan are collected from the State of New Jersey, participating local employers, and retired members. The State of New Jersey makes contributions to cover those employees eligible under P.L. 1997, C. 330 as disclosed below. Local employers remit employer contributions on a monthly basis. Retired member contributions are generally received on a monthly basis.

The employers participating in the OPEB plan made a contribution of \$421.2 million and the State of New Jersey, as the nonemployer contributing entity, contributed \$53.5 million for fiscal year 2018.

Pursuant to P.L. 2011, C. 78, future retirees eligible for postretirement medical coverage who have less than 20 years of creditable service on June 28, 2011 will be required to pay a percentage of the cost of their health care coverage in retirement provided they retire with 25 or more years of pension service credit. The percentage of the premium for which the retiree will be responsible will be determined based on the retiree's annual retirement benefit and level of coverage.

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Partially funded benefits are also available to local police officers and firefighters who retire with 25 years of service or on disability from an employer who does not provide coverage under the provisions of P.L. 1997, C. 330. Upon retirement, these individuals must enroll in the OPEB plan.

(e) Agency Funds

The Division oversees PAF, ABP and DEP as agency funds. For PAF, the Division utilizes the annual appropriation payment from the State to pay the cost of living adjustment (COLA) benefits to retirees and beneficiaries of POPF, CPFPPF and CPF. For ABP, the Division collects from the State, the contributions related to the employer portion of the plan and remits it to the pension providers (insurance and mutual fund companies) on behalf of the participating employees at the State and county colleges. For DEP, the Division receives employer contributions from the State and local employers and from active and retired employees to pay premiums to the plan.

(2) Summary of Significant Accounting Policies

(a) Reporting Entity

The financial statements include all funds, which are administered by the Division over which operating controls are with the individual Plan's governing Boards and/or the State of New Jersey. The financial statements of the Plans and the agency funds are included in the financial statements of the State of New Jersey; however, the accompanying financial statements are intended to present solely the funds listed above, which are administered by the Division and not the State of New Jersey as a whole.

(b) Measurement Focus and Basis of Accounting

The accompanying financial statements were prepared in accordance with U.S. generally accepted accounting principles as applicable to governmental organizations. In doing so, the Division adheres to reporting requirements established by GASB.

The accrual basis of accounting is used for measuring financial position and changes in net position of the pension trust funds and other postemployment benefit plan. Under this method, contributions are recorded in the accounting period in which they are legally due from the employer or plan member, and deductions are recorded at the time the liabilities are due and payable in accordance with the terms of each plan. The accounts of the Division are organized and operated on the basis of funds. All funds are accounted for using an economic resources measurement focus.

Fiduciary Funds

The Division reports the following types of funds:

Pension trust funds and other postemployment benefit plan – Account for monies received for, expenses incurred by and the net position available for plan benefits of the various public employee retirement systems and an OPEB plan. The pension trust funds include JRS, POPF, SPRS, CPFPPF, TPAF, PFRS, PERS, CPF, NJSEDCP, and SACT.

Agency funds – Agency funds are used to account for the assets that the Division holds on behalf of others as their agent. Agency funds are custodial in nature and do not involve measurement of results of operations.

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(c) Receivables

Receivables consist primarily of member and employer contributions and other amounts that are legally required to be due to the Plans.

(d) Capital Assets

Capital assets utilized by the Division include equipment, which is owned and paid for by the State of New Jersey.

(e) Investments

The Division of Investment, Department of the Treasury, State of New Jersey (Division of Investment) manages and invests certain assets of seven of the defined benefit pension plans (JRS, POPF, SPRS, CPFPPF, TPAF, PFRS and PERS) and two defined contribution pension plans (SACT and certain accounts in NJSEDCP). Accounts managed by the Division of Investment included in the Division of Pensions and Benefits report are: Common Pension Fund D and Common Pension Fund E (collectively known as the Common Pension Funds), and other investments owned directly by the seven defined benefit pension plans. Common Pension Fund D invests primarily in global equity and fixed income securities. Common Pension Fund E invests primarily in global diversified credit funds and alternative investments, which includes private equity, real estate, real asset, and absolute return strategy funds.

In addition, the Division of Investment manages the State of New Jersey Cash Management Fund (CMF), which is available on a voluntary basis for investment by State and certain non-State participants. CMF is considered to be an investment trust fund as defined in GASB Statement No. 31, *Certain Investments and External Investment Pools*. Units of ownership in CMF may be purchased or redeemed on any given business day (excluding State holidays) at the unit cost or value of \$1.00. Participant shares are valued on a fair value basis. For additional information about CMF, refer to the audited financial statements, which can be obtained at <http://www.state.nj.us/treasury/doinvest/cmef/FinancialStatementsFiscal2018.pdf>.

Prudential Retirement is the third-party administrator for the NJSEDCP. Prudential Retirement provides recordkeeping, administrative services and access to 22 investment options through a combination of their separate account product offerings and retail branded mutual funds. The four state-managed investments options (NJSEDCP Fixed Income Fund, NJSEDCP Equity Fund, NJSEDCP Small Capitalization Equity Fund, and NJSEDCP Cash Management Fund) were closed to new contributions on December 31, 2005. On August 1, 2014, the NJSEDCP Fixed Income Fund and the NJSEDCP Cash Management Fund were closed. On December 15, 2014, the NJSEDCP Equity Fund and the NJSEDCP Small Capitalization Fund were opened to new contributions. The Board of the NJSEDCP is the fiduciary for the investments of the Plan. The Division of Pensions and Benefits maintains its administrative oversight functions for the Plan.

Investment transactions are accounted for on a trade or investment date basis. Interest and dividend income is recorded on the accrual basis, with dividends accruing on the ex-dividend date. The net increase or decrease in the fair value of investments includes the net realized and unrealized gains or losses on investments.

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(f) *Members' Loans*

Members of JRS, SPRS, TPAF, PFRS, and PERS who have at least three years of service in these plans may borrow up to 50% of their accumulated member contributions. Repayment of loan balances is deducted from payroll checks and bears a commercially reasonable interest rate as set by the State Treasurer. For 2018, the interest rate was 7.00%. There was a \$15 processing fee per loan. Members who retire with an outstanding loan have the option of paying the loan in full prior to receiving any benefits or continuing their monthly loan payment schedule into retirement.

(g) *Administrative Expenses*

Administrative expenses are paid by the plans to the State of New Jersey, Department of the Treasury and are included in the accompanying financial statements.

In certain funds (JRS, SPRS, TPAF, PFRS and PERS) miscellaneous expenses and reimbursements from the fund that comprise various adjustments to member and employer accounts are incorporated into the administrative expense amounts included in the accompanying financial statements.

(h) *Income Tax Status*

Based on Internal Revenue Service (IRS) determination letters received in January 2012 for JRS, POPF, SPRS, TPAF, and PERS and in June 2012 for CPFPF and PFRS, the seven pension funds comply with the qualification requirements of the Internal Revenue Code (IRC).

NJSEDCP and SACT are eligible plans as described in Section 457 and Section 401(a) of the IRC, respectively.

(i) *Commitments*

Common Pension Fund E is obligated, under certain private equity, real estate, real asset, absolute return strategy, and global diversified credit fund agreements to make additional capital contributions up to contractual levels over the investment period specified for each investment. As of June 30, 2018, Common Pension Fund E had unfunded commitments totaling approximately \$9.9 billion.

(j) *Use of Estimates*

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make significant 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, as well as the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

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(3) Employers' Net Pension Liability – Defined Benefit Plans

Components of Net Pension Liability

The components of the net pension liability of the participating employers for the defined benefit plans at June 30, 2018 are as follows:

	<u>JRS</u>	<u>POPF</u>	<u>SPRS</u>	<u>CPFPF</u>	<u>TPAF</u>	<u>PFRS</u>	<u>PERS</u>
Total pension liability	\$ 922,019,220	5,263,321	4,849,714,240	5,695,602	86,797,467,286	46,797,559,654	72,866,174,168
Plan fiduciary net position	<u>167,724,348</u>	<u>5,223,456</u>	<u>1,790,044,682</u>	<u>1,763,463</u>	<u>22,991,116,840</u>	<u>27,098,556,100</u>	<u>29,472,374,536</u>
Net pension liability	<u>\$ 754,294,872</u>	<u>39,865</u>	<u>3,059,669,558</u>	<u>3,932,139</u>	<u>63,806,350,446</u>	<u>19,699,003,554</u>	<u>43,393,799,632</u>
Plan fiduciary net position as a percentage of the total pension liability	18.19%	99.24%	36.91%	30.96%	26.49%	57.91%	40.45%

The total pension liability was determined by actuarial valuations as of July 1, 2017, which was rolled forward to June 30, 2018, using the following actuarial assumptions, applied to all periods in the measurement:

	<u>JRS</u>	<u>POPF</u>	<u>SPRS</u>	<u>CPFPF</u>	<u>TPAF</u>	<u>PFRS</u>	<u>PERS</u>
Inflation rate	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%
Salary increases:							
Initial fiscal year applied							
through	2025	N/A	2025	N/A	2026	2026	2026
Rate	2.00%	N/A	2.95%	N/A	1.55 - 4.55	2.10 - 8.98% based on age	1.65 to 4.15% based on age
Thereafter	3.00%	N/A	3.95%	N/A	2.00 - 5.45	3.10 - 9.98% based on age	2.65 - 5.15% based on age
Long-term expected rate of return	7.00%	1.00%	7.00%	1.00%	7.00%	7.00%	7.00%
Period of actuarial experience study upon which actuarial assumptions were based	July 1, 2011 - June 30, 2014	N/A	July 1, 2011 - June 30, 2014	N/A	July 1, 2012 - June 30, 2015	July 1, 2010 - June 30, 2013	July 1, 2011 - June 30, 2014

N/A - This is a closed plan, therefore there are no active employees.

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The following table represents the mortality table and improvement assumptions used:

<u>Plan</u>	<u>Pre-retirement mortality</u>	<u>Post-retirement mortality</u>	<u>Disability</u>
JRS	RP-2000 Combined Healthy Mortality Tables (unadjusted for males and set forward 3 years for females) projected on a generational basis from the base year of 2000 to 2013 using Projection Scale BB and the Conduent Modified 2014 Projection scale thereafter.	RP-2000 Combined Healthy Mortality Tables (unadjusted for males and set forward 3 years for females) projected on a generational basis from the base year of 2000 to 2013 using Projection Scale BB and the Conduent Modified 2014 Projection scale thereafter.	RP-2000 Disability Mortality Tables (set forward 2 years for males and females) without projection.
POPF	Not applicable as there are no active members.	RP-2000 Combined Healthy Mortality Tables projected on a generational basis from the base year of 2000 to 2014 using Projection Scale BB as the base tables. Tables are further projected beyond the valuation date using the Conduent Modified 2014 projection scale.	RP-2000 disabled retiree mortality table.
SPRS	RP-2000 Combined Healthy Mortality Table, set back 3 years for males, projected on a generational basis using scale BB from the base year of 2000 to 2013 and the Conduent Modified MP-2014 projection scale thereafter.	RP-2000 Combined Healthy Mortality Table, set back 3 years for males, projected on a generational basis using scale BB from the base year of 2000 to 2013 and the Conduent Modified MP-2014 projection scale thereafter.	RP-2000 Combined Healthy Mortality Table, set forward 5 years for both males and females.
CPFPF	Not applicable as there are no active members.	RP-2000 Combined Healthy Mortality Tables projected on a generational basis from the base year of 2000 to 2014 using Projection Scale BB as the base tables. Tables are further projected beyond the valuation date using the Conduent Modified 2014 projection scale.	Not applicable as there are no disabled retirees.

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<u>Plan</u>	<u>Pre-retirement mortality</u>	<u>Post-retirement mortality</u>	<u>Disability</u>
TPAF	RP-2006 Employee White Collar Mortality Tables, set back 3 years for males and 5 years for females, projected on a generational basis from a base year of 2006 using a 60-year average of improvement rates based on Social Security data from 1953 to 2013. All pre-retirement deaths are assumed to be ordinary deaths.	RP-2006 Healthy Annuitant White Collar Mortality Tables, with adjustments as described in the latest experience study, projected on a generational basis from a base year of 2006 using a 60-year average of improvement rates based on Social Security data from 1953 to 2013.	RP-2006 Disabled Retiree Mortality Tables with rates adjusted by 90%. No mortality improvement is assumed for disabled retiree mortality.
PFRS	Pre-Retirement Ordinary Mortality: RP-2000 Combined Healthy Mortality Tables projected on a generational basis from the base year of 2000 to 2013 using Projection Scale BB and the Conduent Modified 2014 Projection Scale thereafter. Pre-Retirement Accidental Mortality: Custom table with representative rates are used. No mortality improvement is assumed for pre-retirement accidental mortality.	Healthy Female Retirees and Beneficiaries: RP-2000 Combined Healthy Mortality Tables projected on a generational basis from the base year of 2000 to 2013 using Projection Scale BB and the Conduent Modified 2014 Projection Scale thereafter. Healthy Male Retirees: RP-2000 Combined Healthy Mortality Tables projected on a generational basis using Projection Scale AA from the base year of 2012 to 2013 and the Conduent Modified 2014 Projection Scale thereafter.	Custom table with representative rates are used. No mortality improvement is assumed for disabled retiree mortality.
PERS	Pre-Retirement Ordinary Mortality: RP-2000 Employee Mortality Tables. For State, the tables are set back four years for males and females. For Local employers, the tables are set back two years for males and seven years for females. The tables are projected on a generational basis from the base year of 2013 using the Conduent Modified 2014 Projection Scale. Pre-Retirement Accidental Mortality: 0.001% at all ages. No mortality improvement is assumed.	RP-2000 Combined Healthy Mortality Tables, set back one year for males and females, projected on a generational basis using Projection Scale AA from the base year of 2012 to 2013 and the Conduent Modified 2014 Projection Scale thereafter.	RP-2000 Disabled Mortality Tables, set back three years for males and set forward one year for females. No mortality improvement is assumed.

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Long-Term Expected Rate of Return

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plans investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the pension plans' target asset allocation as of June 30, 2018 are summarized in the following table:

Asset Class	JRS, SPRS, TPAF, PFRS and PERS	POPF & CPFPP
Risk Mitigation Strategies	5.51%	—
Cash Equivalents	1.00%	1.00%
U.S. Treasuries	1.87%	—
Investment Grade Credit	3.78%	—
High Yield	6.82%	—
Global Diversified Credit	7.10%	—
Credit Oriented Hedge funds	6.60%	—
Debt Related Private Equity	10.63%	—
Debt Related Real Estate	6.61%	—
Private Real Asset	11.83%	—
Equity Related Real Estate	9.23%	—
U.S. Equity	8.19%	—
Non-U.S. Developed Markets Equity	9.00%	—
Emerging Markets Equity	11.64%	—
Buyouts/Venture Capital	13.08%	—

Discount Rate

The discount rates used to measure the total pension liabilities of the plans were as follows:

Plan	Discount Rate
JRS	4.09%
POPF	3.87%
SPRS	4.97%
CPFPP	3.87%
TPAF	4.86%
PFRS	6.51%
PERS	5.66%

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The following table represents the crossover period, if applicable, for each defined benefit plan:

	<u>JRS</u>	<u>POPF</u>	<u>SPRS</u>	<u>CPFPPF</u>	<u>TPAF</u>	<u>PFRS</u>	<u>PERS</u>
Period of projected benefit payments for which the following rates were applied:							
Long-term expected rate of return	Through June 30, 2024	Not applicable	Through June 30, 2041	Not applicable	Through June 30, 2040	Through June 30, 2062	Through June 30, 2046
Municipal Bond rate*	From July 1, 2024 and thereafter	All periods	From July 1, 2041 and thereafter	All periods	From July 1, 2040 and thereafter	From July 1, 2062 and thereafter	From July 1, 2046 and thereafter

* The municipal bond return rate used is 3.87%. The source is the Bond Buyer Go 20-Bond Municipal Bond Index, which includes tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher.

Sensitivity of Net Pension Liability

The following presents the net pension liability of each plan calculated using the discount rates as disclosed above as well as what each plan's net pension liability (asset) would be if it were calculated using a discount rate that is 1-percentage point lower or 1-percentage-point higher than the current rate:

<u>Pension Plan (rates used)</u>	<u>At 1% decrease</u>	<u>At current discount rate</u>	<u>At 1% increase</u>
JRS (3.09%, 4.09%, 5.09%)	\$ 848,589,906	754,294,872	673,698,696
POPF (2.87%, 3.87%, 4.87%)	303,389	39,865	(198,429)
SPRS (3.97%, 4.97%, 5.97%)	3,786,698,342	3,059,669,558	2,475,545,273
CPFPPF (2.87%, 3.87%, 4.87%)	4,184,073	3,932,139	3,703,466
TPAF (3.86%, 4.86%, 5.86%)	75,417,894,537	63,806,350,446	54,180,663,328
PFRS (5.51%, 6.51%, 7.51%)	25,660,737,948	19,699,003,554	14,782,645,355
PERS (4.66%, 5.66%, 6.66%)	52,170,323,599	43,393,799,632	36,035,282,132

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(4) Employers' Net Pension Liability – Defined Benefit Plans - OPEB

Components of Net OPEB Liability – OPEB Plan

The components of the net OPEB liability of the participating employers for the OPEB plan at June 30, 2018 are as follows:

Total OPEB liability		\$ 15,981,103,227
Plan fiduciary net position		<u>314,485,086</u>
Net OPEB liability		<u>\$ 15,666,618,141</u>
Plan fiduciary net position as a percentage of the total OPEB liability		1.97%

The total OPEB liability was determined by an actuarial valuation as of July 1, 2017, which was rolled forward to June 30, 2018 using the following actuarial assumptions, applied to all periods in the measurement:

Inflation rate		2.50%
Salary Increases*		
Initial fiscal year applied through		2026
Rate		1.65% to 8.98%
Rate thereafter		2.65% to 9.98%
Mortality		RP-2006 Headcount-Weighted Healthy Employee Male / Female Mortality Table with fully generational mortality improvement projections from the central year using Scale MP-2017
Long-term rate of return		1.00%

* Salary increases are based on the defined benefit plan that the individual is enrolled in and his or her age.

Actuarial assumptions used in the July 1, 2017 valuation were based on the results of the PFRS and PERS experience studies prepared for July 1, 2010 to June 30, 2013 and July 1, 2011 to June 30, 2014, respectively.

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For pre-Medicare preferred provider organization (PPO) medical benefits, this amount initially is 5.8% and decreases to a 5.0% long-term trend rate after eight years. For self-insured post-65 PPO medical benefits, the trend rate is 4.5%. For health maintenance organization (HMO) medical benefits, the trend rate is initially 5.8% and decreases to a 5.0% long-term trend rate after eight years. For prescription drug benefits, the initial trend rate is 8.0% and decreases to a 5.0% long-term trend rate after seven years. The Medicare Advantage trend rate is 4.5% and will continue in all future years.

As the OPEB plan only invests in the State of New Jersey CMF, the long-term expected rate of return on OPEB investments was based off the best-estimate ranges of future real rates of return (expected returns, net of OPEB plan investment expense and inflation) for cash equivalents, which is 1.00%.

The discount rate for the OPEB plan was 3.87%. This represents the municipal bond return rate as chosen by the Division. The source is the Bond Buyer Go 20-Bond Municipal Bond Index, which includes tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher. As the long-term rate of return is less than the municipal bond rate, it is not considered in the calculation of the discount rate, rather the discount rate is set at the municipal bond rate.

Sensitivity of Net OPEB Liability to changes in the discount rate:

	<u>At 1% decrease (2.87%)</u>	<u>At current discount rate (3.87%)</u>	<u>At 1% increase (4.87%)</u>
\$	18,381,085,096	15,666,618,141	13,498,373,388

Sensitivity of Net OPEB Liability to changes in the healthcare trend rate:

	<u>1% Decrease</u>	<u>Healthcare Cost Trend Rate</u>	<u>1% Increase</u>
\$	13,068,471,450	15,666,618,141	19,029,006,023

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(5) Investments

The Plans' investments (including investments held directly by the Common Pension Funds) as of June 30, 2018 are as follows:

Common Pension Fund D:	
Cash	\$ 159,325,952
Cash Management Fund	1,122,228,425
Domestic equities	24,600,475,585
International equities	14,238,388,603
Domestic fixed income	9,188,894,082
International fixed income	2,037,463,375
Other ⁽¹⁾	206,291,842
	<u>51,553,067,864</u>
Common Pension Fund E:	
Cash	26,083,597
Cash Management Fund	724,943,984
Private equity funds	8,709,999,926
Absolute return strategy funds	4,953,526,473
Global diversified credit funds	4,365,663,181
Real estate funds	3,817,372,883
Real assets	2,094,110,314
Opportunistic private equity investments	431,962,894
Other ⁽¹⁾	37,444,556
	<u>25,161,107,808</u>
All Other Investments:	
Cash Management Fund	587,000,829
Domestic equities	801,472,808
Fixed income mutual funds	452,415,003
Equity mutual funds	3,287,755,423
	<u>5,128,644,063</u>
Total	<u>\$ 81,842,819,735</u>

⁽¹⁾ Includes assets (other than investments) and liabilities included in the net position of the Common Pension Funds. Excludes assets and liabilities related to securities lending.

New Jersey State statute provides for a State Investment Council (the Council) and a Director. Investment authority is vested in the Director of the Division of Investment and the role of the Council is to formulate investment policies. The Council issues regulations, which establish guidelines for permissible investments for the Common Pension Funds managed by the Division of Investment, which include global equity investments, non-convertible preferred stocks, covered call options, put options, futures contracts, obligations of the U.S. Treasury, government agencies, corporations, international governments and agencies, global diversified credit investments, swap transactions, state and municipal general obligations, public authority revenue

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obligations, collateralized notes and mortgages, commercial paper, certificates of deposit, repurchase agreements, money market funds, private equity funds, real estate funds, other real assets, absolute return strategy funds, and the CMF.

The asset allocation policy as of June 30, 2018 for the Pension Funds, is as follows:

Asset Class	Target
Absolute return/risk mitigation	5.00%
Total risk mitigation	5.00%
Total Cash and Short Term	5.50%
Governments	3.00%
Total liquidity	8.50%
Investment grade credit	10.00%
Public high yield	2.50%
Global diversified credit	5.00%
Credit oriented hedge funds	1.00%
Debt related private equity	2.00%
Debt related real estate	1.00%
Total income	21.50%
Real Assets	2.50%
Equity related real estate	6.25%
Total real return	8.75%
U.S. equity	30.00%
Non-U.S. developed markets equity	11.50%
Emerging markets equity	6.50%
Buyouts/venture capital	8.25%
Total global growth	56.25%
Total	100.00%

The asset allocation policy is reviewed on at least an annual fiscal year basis.

Rate of Return

The annual money-weighted rate of return for the Pension Funds, POPF, CPFPPF and the OPEB plan were 9.11%, 1.36%, 1.36% and 1.28%, respectively. The money-weighted rate of return considers the changing amounts actually invested during a period and weights the amounts of pension plan investments by the proportion of time they are available to earn a return during that period. External cash flows are determined on a monthly basis and are assumed to occur at the end of each month. External cash inflows are netted with external cash outflows, resulting in a net external cash flow in each month. The money-weighted rate of return is calculated net of investment expenses.

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Deposit and Investment Risk Disclosure

Custodial credit risk, as it relates to investments, is the risk that in the event of the failure of the custodian, the Plans will not be able to recover the value of investments or collateral securities that are in the possession of the third party. The Plans' investment securities are not exposed to custodial credit risk as they are held in segregated accounts in the name of the Plans with the custodians.

The Plans' investments are subject to various risks. Among these risks are credit risk, concentration of credit risk, interest rate risk, and foreign currency risk. Each one of these risks is discussed in more detail below.

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The credit risk of issuers and debt instruments is evaluated by nationally recognized statistical rating agencies, such as Moody's Investors Service, Inc. (Moody's), Standard & Poor's Corporation (S&P), and Fitch Ratings (Fitch). Concentration of credit risk is the risk of loss attributed to the magnitude of an investment in a single issuer. There are no restrictions in the amount that can be invested in U.S. Treasury and government agency obligations. Council regulations require minimum credit ratings for certain categories of fixed income obligations held directly by the various funds and limit the amount that can be invested in any one issuer or issue.

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The credit ratings and limits for the Pension Funds as of June 30, 2018 are as follows:

Category	Minimum rating ⁽¹⁾			Limitation of issuer's outstanding debt/stock	Limitation of issue	Other limitations
	Moody's	S&P	Fitch			
Certificates of deposit						Split rating allowable. Cannot exceed 10% of issuer's primary capital. Not more than 5% of pension fund assets can be invested in any one issuer and affiliated entities.
Domestic	A3/P-1	A-/A-1	A-/F-1	—	—	
International	Aa3/P-1	AA-/A-1	AA-/F-1	—	—	
Collateralized notes and mortgages	Baa3	BBB-	BBB-	—	25%	Not more than 5% of pension fund assets can be invested in any one issuer and affiliated entities.
Commercial paper	P-1	A-1	F-1	—	—	Split rating allowable. Not more than 5% of pension fund assets can be invested in any one issuer and affiliated entities.
Global debt obligations	Baa3	BBB-	BBB-	10%	—	Not more than 5% of pension fund assets can be invested in any one issuer and affiliated entities.
Global diversified credit investments:						Not more than 10% of pension fund assets can be invested in this category. Not more than 5% of pension fund assets can be invested in any one issuer and affiliated entities.
Direct bank loans	—	—	—	10%	—	
Funds	—	—	—	—	—	
International government and agency obligations	Baa3	BBB-	BBB-	25%	25%	Not more than 5% of the pension fund assets can be invested in this category.

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Category	Minimum rating ⁽¹⁾			Limitation of issuer's outstanding debt/stock	Limitation of issue	Other limitations
	Moody's	S&P	Fitch			
Money market funds	—	—	—	—	—	Not more than 5% of pension fund assets can be invested in money market funds; limited to 5% of shares or units outstanding.
Mortgage backed						
Pass-through securities	A3	A-	A-	—	—	Not more than 10% of pension fund assets can be invested in mortgage backed securities.
Senior debt securities	—	—	—	—	25%	
Non-convertible preferred stocks	Baa3	BBB-	BBB-	10%	25%	Not more than 5% of pension fund assets can be invested in any one issuer and affiliated entities.
Repurchase agreements						
Bank or trust company	—	—	—	—	—	—
Broker	P-1	A-1	F-1	—	—	—
State, municipal and public authority obligations	A3	A-	A-	10%	10%	Not more than 2% of pension fund assets can be invested in debt of any one obligor.
Swap transactions	Baa2	BBB	BBB	—	—	Notional value of net exposure to any one counterparty shall not exceed 1% of pension fund assets. Notional value of all swap transactions shall not exceed 5% of pension fund assets, but may be increased to 10% for a fixed period of time.

⁽¹⁾ Short term ratings (e.g. P-1, A-1, F-1) are used for commercial paper and certificates of deposit.

Up to 8% of the fair value of the combined assets of the Pension Funds may be invested in global debt obligations, collateralized notes and mortgages, non-convertible preferred stock, and mortgage-backed pass-through securities that do not meet the minimum credit rating requirements set forth above.

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The total amount of a particular class of stock directly purchased of any one entity by the Common Pension Funds cannot exceed 10% of that class of stock outstanding. The total amount of shares or interests directly purchased or acquired of any one exchange traded fund or global, regional or country fund by the Common Pension Funds shall not exceed 10% of the total shares outstanding or interests of such fund.

The NJSEDCP Equity Fund and the NJSEDCP Small Capitalization Equity Fund are invested in equity securities that are denominated in U.S. dollars that trade on a securities exchange in the United States or the over-the-counter market. The NJSEDCP Equity Fund and the NJSEDCP Small Capitalization Equity Fund may hold up to 25% of their assets either in short-term fixed income securities, as permitted by the Council regulations, or in CMF. Not more than 10% of the fair value of the NJSEDCP Equity Fund or the NJSEDCP Small Capitalization Equity Fund can be invested in the equity of any one issuer and affiliated entities. The total amount of a particular class of stock directly purchased or acquired of any one entity cannot exceed 5% of that class of stock outstanding. The total amount of shares directly purchased or acquired of any one exchange traded fund shall not exceed 5% of the total shares outstanding of such fund.

The funds managed by Prudential Retirement investments for the NJSEDCP consist of a number of individual investment managers, which individually have investment guidelines that they comply with and follow. For Prudential Retirement, the NJSEDCP is a participant directed program offering a range of diversified investment alternatives. The options include bond investments, which are diversified by sector and number of securities held, mitigating undue concentration of both credit and foreign currency risks as well as interest rate risk.

SACT can only invest in equity securities denominated in U.S. dollars that are traded on a securities exchange in the United States or over-the-counter market. For SACT, not more than 10% of the fair value of the fund can be invested in the equity of any one issuer and affiliated entities. The total amount of shares directly purchased or acquired of any one exchange traded fund shall not exceed 5% of the total shares outstanding of such fund. The total amount of a particular class of stock directly purchased or acquired of any one entity shall not exceed 5% of that class of stock outstanding.

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The following tables disclose aggregate fair value, by major credit quality rating category as of June 30, 2018 for the fixed income securities held directly by the Common Pension Funds. The first table includes fixed income securities rated by Moody's. The second table discloses Standard & Poor's ratings for fixed income securities not rated by Moody's (in thousands).

	Moody's rating								P-1	Totals
	Aaa	Aa	A	Baa	Ba	B	Caa	Ca		
Corporate obligations	\$ 651,028	773,511	3,664,169	369,477	212,760	380,992	146,672	3,534	—	6,202,143
U.S. Treasury bonds	1,231,499	—	—	—	—	—	—	—	—	1,231,499
Commercial paper	—	—	—	—	—	—	—	—	631,432	631,432
Foreign government obligations	200,882	845,093	34,624	—	726	—	—	—	—	1,081,325
Foreign agency obligations	399,532	—	99,953	—	—	—	—	—	—	499,485
International corporate obligations	14,860	49,681	243,492	23,889	45,609	64,496	25,818	511	—	468,356
Certificates of deposit	—	—	—	—	—	—	—	—	785,000	785,000
Municipal obligations	—	128,831	33,732	—	—	—	—	—	—	162,563
Mortgages (FHLMC/FNMA/GNMA)	15,340	—	—	—	—	—	—	—	—	15,340
Other	108	—	—	—	707	1,808	—	—	—	2,623
	<u>\$ 2,513,249</u>	<u>1,797,116</u>	<u>4,075,970</u>	<u>393,366</u>	<u>259,802</u>	<u>447,296</u>	<u>172,490</u>	<u>4,045</u>	<u>1,416,432</u>	<u>11,079,766</u>

	Standard and Poor's rating						Fitch's rating	Totals	
	AAA	AA	A	BBB	BB	B	CCC		
Corporate obligations	\$ —	—	14,076	14,914	2,866	5,613	2,522	—	39,991
Foreign government obligations	—	—	38,626	—	—	—	—	—	38,626
International corporate obligations	—	—	4,366	4,863	21,037	4,881	—	416	35,563
Municipal obligations	11,765	8,647	—	—	—	—	—	—	20,412
	<u>\$ 11,765</u>	<u>8,647</u>	<u>57,068</u>	<u>19,777</u>	<u>23,903</u>	<u>10,494</u>	<u>2,522</u>	<u>416</u>	<u>134,592</u>

The tables do not include certain domestic and international corporate obligations and certain fixed income mutual funds, which invest in an underlying portfolio of fixed income securities, totaling \$464,413,733, and do not have a Moody's or Standard & Poor's rating. The above tables also do not include investment in the Cash Management Fund totaling \$2,434,173,238, which is not rated.

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. Commercial paper must mature within 270 days. Certificates of deposits are limited to a term of one year or less. Repurchase agreements must mature within 30 days. Council regulations permit the Common Pension Funds to enter into foreign exchange contracts for the purpose of hedging the international portfolio.

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The following table summarizes the maturities (or, in the case of Remics and mortgage-backed securities, the expected average life) of the Common Pension Funds' fixed income portfolio as of June 30, 2018 (in thousands).

Fixed income investment type	Maturities in years				Total fair value
	Less than 1	1-5	6-10	More than 10	
Corporate obligations	\$ 68,943	1,949,900	3,099,390	1,127,441	6,245,674
U.S. Treasury bonds	—	709,840	319,206	202,453	1,231,499
Commercial paper	631,432	—	—	—	631,432
Foreign government obligations	96,466	594,997	226,443	202,045	1,119,951
International corporate obligations	66,176	75,243	304,425	62,398	508,242
Federal agency obligations	99,953	203,889	195,643	—	499,485
Certificates of deposit	785,000	—	—	—	785,000
Municipal obligations	—	44,884	—	138,091	182,975
Mortgages (FHLMC/FNMA/GNMA)	—	211	4,039	11,090	15,340
Asset backed securities	—	—	—	3,314	3,314
Bank loans	—	1,857	—	—	1,857
SBA pass through certificates	108	—	—	—	108
	<u>\$ 1,748,078</u>	<u>3,580,821</u>	<u>4,149,146</u>	<u>1,746,832</u>	<u>11,224,877</u>

The fixed income exchange traded funds held by the Common Pension Funds and the fixed income mutual funds held by NJSEDCP as of June 30, 2018 were \$1,480,392 and \$452,415,003, respectively. These funds have a weighted average duration of 3.87 and 6.07 years, respectively.

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The Common Pension Funds invest in global markets. Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment. The Common Pension Funds had the following foreign currency exposure as of June 30, 2018 (expressed in thousands of U.S. dollars):

<u>Currency</u>	<u>Equities</u>	<u>Fixed income</u>	<u>Alternative investments</u>	<u>Total fair value</u>
Australian dollar	\$ 544,695	—	—	544,695
Brazilian real	264,260	—	—	264,260
Canadian dollar	801,752	56,135	—	857,887
Chilean peso	36,104	—	—	36,104
Colombian peso	—	1,282	—	1,282
Czech koruna	25,512	—	—	25,512
Danish krone	142,791	—	—	142,791
Euro	2,436,572	28,468	782,457	3,247,497
Hong Kong dollar	1,383,324	—	—	1,383,324
Hungarian forint	47,173	—	—	47,173
Indonesian rupiah	108,009	—	—	108,009
Japanese yen	2,019,122	—	—	2,019,122
Malaysian ringgit	97,404	—	—	97,404
Mexican peso	111,266	—	—	111,266
Moroccan dirham	3,327	—	—	3,327
New Israeli sheqel	14,978	—	—	14,978
New Taiwan dollar	12,458	—	—	12,458
New Zealand dollar	1,078	—	—	1,078
Norwegian krone	61,472	—	—	61,472
Pakistan rupee	21,291	—	—	21,291
Philippine peso	43,641	—	—	43,641
Polish zloty	79,694	—	—	79,694
Pound sterling (U.K)	1,460,411	2,627	138,106	1,601,144
Qatari rial	21,470	—	—	21,470
Singapore dollar	94,288	—	—	94,288
South African rand	329,964	—	—	329,964
South Korean won	676,128	—	—	676,128
Swedish krona	217,715	—	—	217,715
Swiss franc	629,790	—	—	629,790
Thailand baht	99,514	—	—	99,514
Turkish lira	69,143	—	—	69,143
Uae dirham	30,620	—	—	30,620
	<u>\$ 11,884,966</u>	<u>88,512</u>	<u>920,563</u>	<u>12,894,041</u>

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The Pension Funds' interests in alternative investments may contain elements of credit, currency and market risk. Such risks include, but are not limited to, limited liquidity, absence of regulatory oversight, dependence upon key individuals, speculative investments (both derivatives and nonmarketable investments), and nondisclosure of portfolio composition. Council regulations provide that not more than 38% of the fair value of the Pension Funds can be invested in alternative investments, with limits on the individual investment categories of real estate (9%), real assets (7%), private equity (12%) and absolute return strategy (15%).

Not more than 5% of the fair value invested through direct investments, separate accounts, fund-of-funds, commingled funds, co-investments and joint ventures in global diversified credit, private equity, real asset and absolute return strategy investments, plus outstanding commitments, may be committed to any one partnership or investment. These investments cannot comprise more than 20% of any one investment managers' total assets.

As of June 30, 2018, the net position of Common Pension Fund E includes receivables of \$39 million related to the secondary sale of real estate funds and redemption of hedge funds.

(6) Securities Lending Collateral

The State Investment Council policies permit the Common Pension Funds and several of the direct pension plan portfolios to participate in securities lending programs, whereby securities are loaned to brokers or other borrowers and, in return, the Pension Funds have rights to the collateral received. All of the publicly traded securities held in Common Pension Funds, and certain securities held directly by the pension plans, are eligible for the securities lending program. Collateral received may consist of cash, letters of credit, or U.S. Treasury obligations having a fair value equal to or exceeding 102% (U.S. dollar denominated) or 105% (non-U.S. dollar denominated) of the value of the loaned securities at the time the loan is made. Collateral is marked to market daily and adjusted as needed to maintain the required minimum level.

For loans of U.S. government securities or sovereign debt issued by non-U.S. governments, in the event that the fair value of the collateral falls below 100% of the fair value of the outstanding loaned securities to an individual borrower, or the fair value of the collateral of all loans of such securities falls below the collateral requirement, additional collateral shall be transferred by the borrower to the respective funds no later than the close of the next business day so that the fair value of such additional collateral together with collateral previously delivered meets the collateral requirements.

For loans of all other types of securities, in the event that the fair value of the collateral falls below the collateral requirement of either 102% or 105% (depending on whether the securities are denominated in U.S. dollars or a foreign currency, respectively) of the fair value of the outstanding loaned securities to an individual borrower, additional collateral shall be transferred in an amount that will increase the aggregate of the borrower's collateral to meet the collateral requirements. As of June 30, 2018, the Common Pension Funds had no aggregate credit risk exposure to borrowers because the collateral amount held by the Common Pension Funds exceeded the fair value of the securities on loan.

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The contract with the Common Pension Funds' securities lending agent requires them to indemnify the Common Pension Funds if the brokers or other borrowers fail to return the securities and provide that collateral securities may be sold in the event of a borrower default. The Common Pension Funds are also indemnified for any loss of principal or interest on collateral invested in repurchase agreements. The Common Pension Funds cannot participate in any dividend reinvestment program or vote with respect to any securities that are on loan on the applicable record date. The securities loans can be terminated by notification by either the borrower or the Common Pension Funds. The term to maturity of the securities loans is generally matched with the term to maturity of the investment of the cash collateral.

The securities lending collateral is subject to various risks. Among these risks are custodial credit risk, credit risk, concentration of credit risk, and interest rate risk. Securities lending collateral is invested in repurchase agreements, the maturities of which cannot exceed 30 days. The collateral for repurchase agreements is limited to obligations of the U.S. Government or certain U.S. Government agencies, collateralized notes and mortgages and corporate obligations meeting certain minimum rating criteria. Total exposure to any individual issuer is limited consistent with internal policies for funds managed by the Division of Investment.

For securities exposed to credit risk in the collateral portfolio, the following table discloses aggregate fair value, by major credit quality rating category as of June 30, 2018 (in thousands).

	Rating		
	Aaa/AAA	Not rated	Totals
Repurchase agreements	\$ 722,000	—	722,000
State Street Navigator Securities Lending			—
Money Market Portfolio	—	118,143	118,143
	<u>\$ 722,000</u>	<u>118,143</u>	<u>840,143</u>

Custodial credit risk for investments is the risk that in the failure of the counterparty to the transaction, the pension funds will not recover the value of the investments that are in the possession of an outside party. The repurchase agreement's underlying securities are held in a segregated account at the tri-party bank.

As of June 30, 2018, the Pension Funds had outstanding loaned investment securities with an aggregate fair value of \$814,270,812 and did not hold any noncash collateral. There were no borrowers or lending agent default losses, and no recoveries or prior period losses during the year.

(7) Derivatives

The pension funds (JRS, SPRS, TPAF, PFRS, and PERS) invest in derivative securities through the Common Pension Funds. A derivative security is an investment whose value is derived from other financial instruments such as commodity prices, bonds and stock prices, or a market index. The Common Pension Funds' derivative securities are considered investment derivative instruments. The fair value of all derivative securities is reported in the statement of fiduciary net position, and the change in fair value is recorded in the statement of changes in fiduciary net position as a net increase or decrease in fair value of investments.

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Derivative transactions involve, to varying degrees, credit risk and market risk. Credit risk is the possibility that a loss may occur because a party to a transaction fails to perform according to terms. Market risk includes, but is not limited to, the possibility that a change in interest rate risk, foreign currency risk or the value of the underlying securities will cause the value of a financial instrument to decrease or become more costly to settle. The market or the value of underlying security, or securities, risk associated with derivatives, the prices of which are constantly fluctuating, is regulated by imposing limits as to the types, amounts and degree of risk that the Common Pension Funds may undertake as set forth in the Council Regulations.

The Common Pension Funds may use financial futures to replicate an underlying security or indices they wish to hold in the portfolio. In certain instances, it may be beneficial to own a futures contract rather than the underlying security. Additionally, the Common Pension Funds may use futures contracts to improve the yield or adjust the duration of the fixed income portfolio or may sell futures contracts to hedge the portfolio. A financial futures contract is an agreement between a buyer and a seller that is based on a referenced item, such as financial indices, or interest rates or a financial instrument, such as equity or fixed income securities, physical commodities or currencies. Futures contracts may call for physical delivery of specified quantity of the underlying asset at a specified price (futures or strike price) and date, or be settled in cash. Futures contracts must be traded on a securities exchange or over-the-counter market. The net change in the futures contracts value is settled daily in cash with the exchanges. The cash to fulfill these obligations is held in a margin account. As the fair value of the futures contract varies from the original contract price, a gain or loss is paid to or received from the clearinghouse and recognized in the statement of changes in fiduciary net position. The Common Pension Funds had no investments in futures at June 30, 2018.

Foreign currency forward contracts are used as a means to hedge against currency risks in the Common Pension Fund. Foreign currency forward contracts are agreements to buy or sell a specific amount of a foreign currency at a specified delivery or maturity date for an agreed upon price. Foreign currency forward contracts are marked to market on a daily basis with the change in fair value included in investment income in the statement of changes in fiduciary net position.

The Common Pension Funds utilize covered call and put options in an effort to add value to or reduce the risk level in the portfolio. Options are agreements that give the owner of the option the right, but not obligation, to buy (in the case of a call option) or to sell (in the case of a put option) a specific amount of an asset for a specific price (called the strike price) on or before a specified expiration date. The Common Pension Funds enter into covered calls when it writes (or sells) call options on underlying stocks held by the Common Pension Funds or stock indices. The Common Pension Funds enter into covered put options when it purchases put options on underlying stocks held by the Common Pension Funds or stock indices. The Common Pension Fund enters into put spreads when it purchases put options while simultaneously writing put options on the same underlying securities or indices at a lower strike price. The purchaser of put options pays a premium at the outset of the agreement and stands to gain from an unfavorable change (i.e., a decrease) in the price of the instrument underlying the option. The writer of call options receives a premium at the outset of the agreement and may bear the risk of an unfavorable change (i.e., an increase) in the price of the instrument underlying the option.

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As of June 30, 2018, the Common Pension Fund's derivative investments included foreign currency forward contracts:

	Notional value (local currency)		Receivable	Payable	Change in fair value
Foreign currency forward contracts:					
Buy:					
Euro	747,548	\$	873,737	872,330	1,407
Pound sterling	19,000		25,116	25,283	(167)
Sell:					
Euro	25,528,125	\$	29,837,710	29,851,830	(14,120)
Pound sterling	2,068,516		2,775,000	2,734,787	40,213
Total Forward contracts		\$	33,511,563	33,484,230	27,333

Certain of the alternative investment funds and partnerships may use derivative instruments to hedge against market risk and to enhance investment returns. At any point during the year, the Common Pension Funds may have additional exposure to derivatives primarily through limited liability vehicles such as limited partnerships and commingled investment funds.

(8) Fair Value Measurements

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between independent market participants at the measurement date. Inputs refer broadly to the assumptions that market participants would use in pricing the asset or liability, including assumptions about risk. Inputs may be observable or unobservable. Observable inputs are inputs that reflect the assumptions market participants would use in pricing the asset or liability developed based on market data obtained from sources independent of the reporting entity. Unobservable inputs are inputs that reflect the reporting entity's own assumptions about the assumptions market participants would use in pricing the asset or liability developed based on the best information available in the circumstances. The three levels of the fair value hierarchy are as follows:

Level 1 – Quoted prices are available in active markets for identical investments as of the reporting date.

Level 2 – Pricing inputs are other than quoted prices in active markets, which are either directly or indirectly observable as of the reporting date, and fair value is determined through the use of models or other valuation methodologies.

Level 3 – Pricing inputs are unobservable for the investment and inputs into the determination of fair value require significant management judgment or estimation, including assumptions about risk.

Investments are reported at fair value as follows:

- Domestic and international equity securities and exchange traded funds are valued using closing sales prices reported on recognized securities exchanges on which the securities are principally traded; these securities are included as Level 1 in the chart below. For listed securities having no

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sales reported and for unlisted securities, such securities will be valued based upon the last reported bid price; these securities are included as Level 2 in the chart below.

- Fixed income and equity mutual funds are valued using the published daily closing prices reported by Prudential and are included as Level 1 in the chart below.
- Foreign and domestic government, agency and corporate obligations, municipal bonds, mortgages, bank loans and asset-backed securities are valued using an evaluated price, which is based on a compilation of primarily observable market information or broker quotes in a non-active market. These are included as Level 2 in the chart below.
- Foreign exchange contracts are valued using industry recognized market-based models to calculate the value that a holder or counterparty would receive within the bid-ask spread, in an orderly transaction under current market conditions. These securities are included as Level 2 in the chart below.
- Options are valued using closing sales prices reported on recognized securities exchanges on which the securities are principally traded. These securities are included as Level 1 in the chart below.
- Distributions from alternative investment vehicles are received as the underlying investments are liquidated. The Plan's ownership interest in partners' capital can never be redeemed, but could be sold subject to approval by the fund's management. As of June 30, 2018, a buyer (or buyers) for these investments have not yet been identified. The partnership interest may be sold at an amount different from the net asset value (NAV) per share (or its equivalent) of the plan's ownership interest in partners' capital.
- The valuation methods for investments measured at the NAV per share (or its equivalent) is presented in the table below.

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The following table summarizes the fair value hierarchy of the investment portfolio as of June 30, 2018 (in thousands):

	<u>Total</u>	<u>Level 1</u>	<u>Level 2</u>
Investments at fair value			
Equity securities			
Domestic equities	\$ 25,158,893	25,147,378	11,515
International equities	13,584,639	13,583,920	719
Equity mutual funds	3,287,755	3,287,755	—
Exchange traded funds	896,805	896,805	—
Total equity securities	<u>42,928,092</u>	<u>42,915,858</u>	<u>12,234</u>
Debt securities			
Corporate obligations	6,245,674	—	6,245,674
U.S. Treasury bonds	1,231,499	—	1,231,499
Commerical Paper	631,432	—	631,432
Foreign government obligations	1,119,951	—	1,119,951
International corporate obligations	508,242	—	508,242
Federal agency obligations	499,485	—	499,485
Fixed income mutual funds	452,415	452,415	—
Municipal obligations	182,975	—	182,975
Mortgages (FHLMC/FNMA/GNMA)	15,340	—	15,340
Asset backed securities	3,314	—	3,314
Bank loans	1,857	—	1,857
Exchanged traded funds	1,480	1,480	—
SBA pass through certificates	108	—	108
Total debt securities	<u>10,893,772</u>	<u>453,895</u>	<u>10,439,877</u>
Total investments by fair value level	<u>53,821,864</u>	<u>43,369,753</u>	<u>10,452,111</u>
Investments at cost			
Certificates of deposit	<u>785,000</u>		
Investments measured at the net asset value (NAV)			
Buyout private equity funds	7,211,723		
Global diversified credit funds	4,365,663		
Real estate funds - equity	3,401,887		
Multi-strategy hedge funds	2,131,053		
Real assets	2,094,110		
Opportunistic hedge funds	1,115,390		
Debt related private equity funds	967,820		
Credit oriented hedge funds	867,913		
Equity oriented hedge funds	839,171		
Venture capital private equity funds	491,899		
Opportunistic private equity investments	431,963		
Real estate funds - debt	415,486		
Secondary private equity funds	38,558		
Total investments measured at NAV	<u>24,372,636</u>		
Local Government Investment Pool			
Cash Management Fund	<u>2,434,173</u>		
Total investments	<u>\$ 81,413,673</u>		
Investment derivative instruments			
Foreign currency forward contracts (assets)	33,512	33,512	
Foreign currency forward contracts (liabilities)	(33,484)	(33,484)	
Total investment derivative instruments	<u>\$ 28</u>	<u>28</u>	<u>—</u>

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The following table represents the unfunded commitments, redemptions frequency and redemption notice period for investments measured at NAV as of June 30, 2018 (in thousands).

	<u>Fair Value</u>	<u>Unfunded Commitments</u>	<u>Redemption Frequency (if currently Eligible)</u>	<u>Redemption Notice Period</u>
Buyout private equity funds ⁽¹⁾	\$ 7,211,723	3,107,552	None	N/A
Global diversified credit funds ⁽²⁾	4,365,663	1,978,183	Quarterly, semi-annual	45 and 90 days
Real estate funds - equity ⁽³⁾	3,401,887	1,775,681	Quarterly	15 and 90 days
Multi-strategy hedge funds ⁽⁴⁾	2,131,053	232,626	Quarterly, semi-annual	None
Real assets ⁽⁵⁾	2,094,110	1,006,317	None	None
Opportunistic hedge funds ⁽⁶⁾	1,115,390	125,000	Monthly, quarterly	2-90 days
Debt related private equity funds ⁽⁷⁾	967,820	819,136	None	N/A
Credit oriented hedge funds ⁽⁸⁾	867,913	—	Monthly, quarterly, semi-annual, annually	45-60 days
Equity oriented hedge funds ⁽⁹⁾	839,171	50,000	Quarterly, semi-annual, annually	45-92 days
Venture capital private equity funds ⁽¹⁰⁾	491,899	89,395	None	N/A
Opportunistic private equity funds ⁽¹¹⁾	431,963	341,618	None	N/A
Real estate funds - debt ⁽¹²⁾	415,486	346,178	None	N/A
Secondary private equity funds ⁽¹³⁾	38,558	27,823	None	N/A
Total investments measured at NAV	<u>\$ 24,372,636</u>	<u>9,899,509</u>		

- Buyout private equity funds include investments in 76 partnerships and 7 co-investment vehicles, which invest primarily in the equity of established operating companies in order to restructure the target company's reserve capital, management and/or organizational structure or facilitate ongoing growth of the firm. Return on investment is typically realized through an initial public offering, sale or merger of the company, or a recapitalization. All of the investments provide for transfer or sale of limited partnership interest with the prior written approval of the General Partner and six investments further require the right of first refusal by the other partner in the investment. It is expected that the underlying assets will be liquidated over the next 1 to 14 years. The fair value of the investments in this type have been determined using the NAV per share (or its equivalent) of the investment.
- Global diversified credit funds include investments in 17 funds and separate account investments that make investment in mezzanine debt, credit structured products, commercial and residential mortgage-backed securities, commercial and residential whole loans, and other similar strategies. One of the funds has a quarterly redemption provision and one fund has a semi-annual redemption provision. Fifteen of these investments cannot be redeemed because the investments include restrictions. As of June 30, 2018, these remaining redemption restriction periods range from 3 to 72 months. It is expected that the underlying assets will be liquidated over the next 1 to 8 years. The fair value of the investments in this type have been determined using the NAV per share (or its equivalent) of the investment.

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3. Real estate funds - equity include investments in 47 funds or separate accounts that make investments in the equity of the underlying asset, where the investor acts as a shareholder in a specific property and receives a share of the rental income the property generates. Investments representing approximately 71% of real estate equity investments can never be redeemed. Thirty six of the investments provide for the transfer or sale of the limited partnership interest with the prior written approval of the General Partner and nine investments further require the right of first refusal by the other partners in the investment. Distributions from each fund and separate account will be received as the underlying investments are liquidated. It is expected that the underlying assets will be liquidated over the next 6 months to 16 years. The fair value of the investments in this type have been determined using the NAV per share (or its equivalent) of the investment.
4. Multi-strategy hedge funds include investments in 12 hedge funds that pursue multiple strategies to diversify risks and reduce volatility. Investments representing approximately 58% of the value of the investments cannot be redeemed because the investment includes restrictions that do not allow for redemptions. As of June 30, 2018, the remaining redemption restriction periods range from 6 to 7 months. The fair values of the investments in this type have been determined using the NAV per share (or its equivalent) of the investments.
5. Real asset funds includes investments in 18 fund or separate account strategies, which invest in the equity or debt of infrastructure, energy, utilities, water, timber, agriculture, metals, mining, and commodity-related and commodity-linked investments. Real asset investments include investments in products, services and technology related to the above. No real asset investments can be redeemed. Seventeen of the investments provide for transfer or sale of limited partnership interest with the prior written approval of the General Partner and one investment further requires the right of first refusal by the other partners in the investment. Distributions from each fund and separate account will be received as the underlying investments are liquidated. It is expected that the underlying assets will be liquidated over the next 1 to 15 years. The fair value of the investments in this type have been determined using the NAV per share (or its equivalent) of the investment.
6. Opportunistic hedge funds include investments in 5 hedge funds that invest in speculative opportunities with high net market exposure across varied markets. Opportunistic funds include global macro funds, commodity trading advisor funds, and funds employing other similar strategies. Investments representing approximately 14% of the value of the investments in this type cannot be redeemed because the investments include restrictions. As of June 30, 2018, this remaining redemption restriction period is 15 months. The fair value of the investments in this type have been determined using the NAV per share (or its equivalent) of the investment.
7. Debt related private equity funds include investments in 24 funds employing distressed, turnaround and mezzanine debt strategies. Distressed debt involves purchasing debt securities that are trading at a distressed level, in anticipation that those securities will have a higher market valuation and generate profit at a future date, or strategies which take a position to potentially gain control of an asset. Turnaround investments focus on acquiring voting control in companies that are in distress, and aim to subsequently restore the company to profitability. Mezzanine debt strategies provide a middle level of financing in leveraged buyouts, which is below the senior debt layer and above the equity layer. A typical mezzanine investment includes a loan to the borrower, in addition to the borrower's issuance of equity in the form of warrants, common stock, preferred stock, or some other equity investment. All of the investments provide for transfer or sale of the limited partnership interest with the prior written approval of the General Partner. Distributions from each fund will be received

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as the underlying investments of the funds are liquidated. It is expected that the underlying assets of the funds will be liquidated over the next 1 to 14 years. The fair value of the investments in this type have been determined using the NAV per share (or its equivalent) of the investment

8. Credit oriented hedge funds include investments in 8 hedge fund and separate account strategies that include both credit and distressed debt funds. Credit strategies typically invest both long and short in high yield and high-grade bonds, and structured products using fundamental credit analysis. These securities tend to be relatively liquid. Distressed debt strategies take advantage of corporate securities in default, under bankruptcy protection, in distress, or in liquidation. These securities are often illiquid. Investments representing approximately 97% of the value of the investments cannot be redeemed because the investment includes restrictions that do not allow for redemptions. As of June 30, 2018, these remaining redemption restriction periods range from 3 to 18 months. The fair value of the investments in this type have been determined using the NAV per share (or its equivalent) of the investment.
9. Equity oriented hedge funds include investments in 7 hedge fund and separate account strategies that include both equity long/short and event driven funds. Equity long/short funds hold a combination of long and short positions primarily in publicly traded equities. Event driven funds invest in merger arbitrage, capital structure arbitrage, relative value, activist or other similar strategies. Investments representing approximately 46% of the value of the investments cannot be redeemed because the investment includes restrictions that do not allow for redemptions. As of June 30, 2018, these remaining redemption restriction periods range from 3 to 36 months. The fair value of the investments in this type have been determined using the NAV per share (or its equivalent) of the investment.
10. Venture capital private equity funds include investments in 8 partnership vehicles that make equity investments primarily in high growth companies during their early or expansion stages. These companies may or may not have revenues or a client base and in most cases will not be cash flow positive. Distributions from each vehicle will be received as the underlying investments are liquidated. It is expected that the underlying assets will be liquidated over the next 6 months to 6 years. The fair value of the investments in this type have been determined using the NAV per share (or its equivalent) of the investment.
11. Opportunistic private equity funds include investments in 4 funds and separate accounts, which acquire minority equity interests in investment management companies. Investments in these funds have a perpetual term and cannot be redeemed. The fair value of the investments in this type have been determined using the NAV per share (or its equivalent) of the investment.
12. Real estate funds – debt include investments in 7 funds or separate accounts that make investments in the debt of the underlying asset, where the investor acts as a lender to the property owner and receives an interest rate on the loan. Investments can never be redeemed. Six of the investments provide for transfer or sale of the limited partnership interest with the prior written approval of the General Partner and two investments further require the right of first refusal by the other partners in the investment. Distributions from each fund and separate account will be received as the underlying investments are liquidated. It is expected that the underlying assets will be liquidated over the next 1 to 8 years. The fair value of the investments in this type have been determined using the NAV per share (or its equivalent) of the investment.

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13. Secondary private equity funds include investments in 4 funds that purchase secondary interests in private equity partnerships. The underlying investments represent ownership interests in private equity funds managed by buyout or venture capital firms after the capital has been deployed. Distributions from each fund will be received as the underlying investments are liquidated. It is expected that the underlying assets will be liquidated over the next 1 to 5 years. The fair value of the investments in this type have been determined using the NAV per share (or its equivalent) of the investment.

(9) Local Employer's Contributions under P.L. 2009, C. 19

As discussed in Note 1, in the fiscal year ended June 30, 2009, the State passed P.L. 2009, C. 19 to allow local employers of PFRS and PERS to contribute 50% of the normal and accrued liability contributions amounts, while deferring the remaining amount for a 15-year period with payments beginning in the fiscal year ended June 30, 2012. At June 30, 2018, the remaining receivable balances related to P.L. 2009, C. 19 were \$102.1 million and \$34.2 million for PFRS and PERS, respectively.

(10) Reserves

The Plans maintain the following legally required reserves as follows (amounts indicated in parenthesis represent net position restricted for the respective reserve as indicated):

Members' Annuity Savings Reserve and Accumulative Interest Reserve – JRS (\$81,706,889); SPRS (\$220,907,335); TPAF (\$13,354,276,513); PFRS (\$3,887,361,606); PERS (\$15,193,195,465)

The Members' Annuity Savings Reserve (New Jersey Statutes Annotated (NJSA): JRS 43:6A- 34.1 and 34.2; SPRS 53:5A-35; TPAF 18A:66-19 and 25; PFRS 43:16A-16; PERS 43:15A-25 and 33) is credited with all contributions made by active members of the Plans. Interest earned on member contributions is credited to the Accumulative Interest Reserve, which is applied to JRS, TPAF and PERS. Member withdrawals are paid out of these reserves.

Contingent Reserve – JRS (\$-88,570,942); SPRS (\$957,480,914); TPAF (\$-29,844,595,183); PERS (\$-18,666,339,307)

The Contingent Reserve (NJSA: JRS 43:6A-33; SPRS 53:5A-34; TPAF 18A:66-18; PERS 43:15A-24) is credited with the contributions of contributing employers. Interest earnings, after crediting the Accumulative Interest Reserve and Retirement Reserve, as required, are credited to this account. Additionally, payments for administrative and miscellaneous expenses are made from this reserve.

Retirement Reserve – JRS (\$174,588,401); SPRS (\$611,656,433); TPAF (\$39,481,435,510); PFRS (\$26,470,969,567); PERS (\$32,746,022,070)

The Retirement Reserve (NJSA: JRS 43:6A-34; SPRS 53:5A-36; TPAF 18A:66-21; PFRS 43:16A-16; PERS 43:15A-27) is the account from which retirement benefits including COLA adjustments are paid. Upon retirement of a member, accumulated contributions together with accumulated interest are transferred to the Retirement Reserve from the Members' Annuity Savings Reserve and Accumulative Interest Reserve. Any additional reserves needed to fund the balance of the retirement benefit are transferred from the Contingent Reserve or Pension Accumulation Reserve. Annually, interest as determined by the State Treasurer (7.50% for State fiscal year 2018) is credited to the Retirement Reserve.

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Retirement Reserve – POPF (\$5,223,456)

The Retirement Reserve (NJSA: POPF 43:7-13) is credited with State of New Jersey contributions and investment income. In addition, all benefits are paid from this account.

Non-Contributory Group Insurance Premium Reserve – PFRS – Local (\$38,672,685); PERS – Local (\$70,726,865)

The Non-Contributory Group Insurance Premium Reserve (NJSA: PFRS 43:16A-56; PERS 43:15A-91) represents the accumulation of employer group life insurance contributions in excess of premiums disbursed to the insurance carrier since the inception of the noncontributory death benefit program plus reserves held by the insurance carrier. Members are eligible by statute for the noncontributory group life insurance plan in the first year of membership. TPAF, PFRS – State and PERS – State show a zero balance as these premium expenses are funded on a monthly basis.

Pension Accumulation Reserve – PFRS (\$-3,298,447,758)

The Pension Accumulation Reserve (NJSA: PFRS 43:16A-16) is credited with the contributions of the State of New Jersey and other employers. Interest earnings, after crediting the Retirement Reserve, as required, are credited to this account. Additionally, payments for administrative and miscellaneous expenses are made from this Reserve.

Pension Reserve – CPFPPF (\$1,763,463)

The Pension Reserve (NJSA: CPFPPF 43:16-5) is credited with State of New Jersey contributions and investment income.

Benefit Enhancement Reserve – PERS – Local (\$128,769,443)

The Benefit Enhancement Reserve (NJSA: 43:15A-22) is a special reserve from which the required normal contributions to provide benefit increases under P.L. 2001, C. 353 and P.L. 2001, C. 133 will be charged. The reserve was established in 2002 and credited with excess assets equivalent to member contributions for State fiscal years 2000 and 2001 by transferring reserves in the Contingent Reserve to the Benefit Enhancement Reserve. Additional transfers will be made, as required, to maintain a reserve balance equal to the present value of expected additional normal contributions due to the increased benefits.

SHBP Reserve Fund – Local - Retired (\$314,485,086)

The net position of SHBP – Local (NJSA: SHBP 52:14-17.42) is available to pay claims of future periods. These reserves are maintained by the fund to stabilize rates and to meet unexpected increase in claims.

Variable Accumulation Reserve – NJSEDCP (\$4,317,120,346); SACT (\$189,972,506)

The Variable Accumulation Reserve (NJSA: NJSEDCP 52:18A-164; SACT 52:18A-109) is credited with member contributions and interest earnings on those contributions. Payments for administrative and miscellaneous expense are made from this reserve.

Variable Benefits Reserve – SACT (\$43,826,662)

The Variable Benefits Reserve (NJSA: SACT 52:18A-109) represents contributions accumulations that are transferred to Annuity Benefits for retirees that are receiving monthly life annuity payments.

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Various reserve balances as of June 30, 2018 are as follows:

	Pension Reserves	Other Postemployment Benefit Plan Reserves
Members' Annuity Savings Reserve and Accumulated Interest Reserve	\$ 32,737,447,808	—
Contingent Reserve	(47,642,024,518)	—
Retirement Reserve	99,489,895,437	—
Non-Contributory Group Insurance Premium Reserve	109,399,550	—
Pension Accumulation Reserve	(3,298,447,758)	—
Pension Reserve	1,763,463	—
SHBP Reserve	—	314,485,086
Benefit Enhancement Reserve	128,769,443	—
Variable Accumulation Reserve	4,507,092,852	—
Variable Benefits Reserve	43,826,662	—
Total	\$ 86,077,722,939	314,485,086

(11) Contingencies

The Division is a party to various legal actions arising in the ordinary course of its operations. While it is not feasible to predict the ultimate outcome of these actions, it is the opinion of management that the resolution of these matters will not have a material adverse effect on the Division's financial statements.

STATE OF NEW JERSEY
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Required Supplementary Information

Schedule of Changes in Net Pension Liability and Related Ratios - Defined Benefit Pension Plans

Judicial Retirement System

(Unaudited)

June 30, 2018

	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Total pension liability:					
Service cost	\$ 35,477,981	37,224,230	33,333,864	30,702,986	32,123,341
Interest on total pension liability	36,209,627	30,788,977	36,471,524	41,473,055	40,332,123
Effect of economic/demographic (gains) or losses	(8,553,096)	14,120,673	254,822	(1,733,197)	—
Effect of assumptions changes or inputs	(23,084,707)	(70,235,370)	85,677,552	(41,873,530)	26,907,821
Transfers from other systems	2,859,841	1,121,097	726,284	2,081,523	—
Benefit payments	(58,286,421)	(56,365,718)	(54,686,521)	(52,430,016)	(49,604,080)
Net change in total pension liability	(15,376,775)	(43,346,111)	101,777,525	(21,779,179)	49,759,205
Total pension liability—beginning	937,395,995	980,742,106	878,964,581	900,743,760	850,984,555
Total pension liability—ending (a)	\$ 922,019,220	937,395,995	980,742,106	878,964,581	900,743,760
Plan fiduciary net position:					
Contributions—employer	\$ 24,023,637	20,341,379	14,794,774	17,031,026	15,874,857
Contributions—employee	9,177,453	10,348,191	9,271,869	6,310,124	5,096,577
Net investment (loss) income	14,809,869	20,031,152	(2,721,949)	8,475,641	34,448,036
Transfers from other systems	2,859,841	1,121,097	726,284	2,081,523	—
Benefit payments, including refunds of employee contributions	(58,286,421)	(56,365,718)	(54,686,521)	(52,430,016)	(49,604,080)
Administrative expense	(185,364)	(150,588)	(168,008)	(168,762)	(162,372)
Net change in Plan fiduciary net position	(7,600,985)	(4,674,487)	(32,783,551)	(18,700,464)	5,653,018
Plan fiduciary net position—beginning	175,325,333	179,999,820	212,783,371	231,483,835	225,830,817
Plan fiduciary net position—ending (b)	167,724,348	175,325,333	179,999,820	212,783,371	231,483,835
Plan's net pension liability—ending (a)-(b)	\$ 754,294,872	762,070,662	800,742,286	666,181,210	669,259,925
Plan fiduciary net position as a percentage of the total pension liability	18.19%	18.70%	18.35%	24.21%	25.70%
Covered-employee payroll	\$ 69,216,709	68,062,584	67,097,166	66,028,491	67,810,110
Net pension liability as a percentage of covered-employee payroll	1089.76%	1119.66%	1193.41%	1008.93%	986.96%

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

Notes to Schedule:

Changes in benefit terms:

None

Changes in assumptions:

Discount rate	4.09%	3.83%	3.11%	4.12%	4.58%
Long-term expected rate of return	7.00%	7.00%	7.65%	7.90%	7.90%

For 2016, salary increases were assumed to increase 2.00% through fiscal year 2025 and 3.00% for each fiscal year thereafter.

For 2015, the demographic assumptions were revised to reflect those recommended on the basis of the July 1, 2011 - June 30, 2014 experience study.

See accompanying independent auditors' report.

**STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS**

Required Supplementary Information

Schedule of Changes in Net Pension Liability and Related Ratios - Defined Benefit Pension Plans

Prison Officers' Pension Fund

(Unaudited)

June 30, 2018

	2018	2017	2016	2015	2014
Total pension liability:					
Service cost	\$ —	—	—	—	—
Interest on total pension liability	215,068	198,788	251,254	331,362	401,659
Effect of economic/demographic (gains) or losses	(407,471)	82,047	96,657	(296,620)	—
Effect of assumptions changes or inputs	(73,662)	(240,233)	1,171,953	163,490	129,449
Benefit payments	(947,877)	(1,069,209)	(1,240,307)	(1,377,505)	(1,583,408)
Net change in total pension liability	(1,213,942)	(1,028,607)	279,557	(1,179,273)	(1,052,300)
Total pension liability-beginning	6,477,263	7,505,870	7,226,313	8,405,586	9,457,886
Total pension liability-ending (a)	\$ 5,263,321	6,477,263	7,505,870	7,226,313	8,405,586
Plan fiduciary net position:					
Contributions-other	\$ 484,565	552,131	634,217	698,360	793,174
Net investment income	70,215	30,847	18,067	6,355	7,368
Benefit payments, including refunds of employee contributions	(947,877)	(1,069,209)	(1,240,307)	(1,377,505)	(1,583,408)
Administrative expense	(4,315)	(4,134)	(5,312)	(5,843)	(5,853)
Net change in Plan fiduciary net position	(397,412)	(490,365)	(593,335)	(678,633)	(788,719)
Plan fiduciary net position-beginning	5,620,868	6,111,233	6,704,568	7,383,201	8,171,920
Plan fiduciary net position-ending (b)	5,223,456	5,620,868	6,111,233	6,704,568	7,383,201
Plan's net pension liability-ending (a)-(b)	\$ 39,865	856,395	1,394,637	521,745	1,022,385
Plan fiduciary net position as a percentage of the total pension liability	99.24%	86.78%	81.42%	92.78%	87.84%
Covered-employee payroll	N/A	N/A	N/A	N/A	N/A
Net pension liability as a percentage of covered-employee payroll	N/A	N/A	N/A	N/A	N/A

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

Notes to Schedule:

Changes in benefit terms:

None

Changes in assumptions:

Discount rate

3.87%

3.58%

2.85%

3.80%

4.29%

For 2016, the mortality improvement assumption was revised to be projected on a generational basis from the base year of 2000 to 2014 using Projection Scale BB as the base tables and further projected beyond the valuation date using the plan actuary's modified 2014 projection. Further, the RP-2000 disabled retiree mortality table is used for the period after disability retirement for disability retirements.

See accompanying independent auditors' report.

**STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS**

Required Supplementary Information

Schedule of Changes in Net Pension Liability and Related Ratios - Defined Benefit Pension Plans

State Police Retirement System

(Unaudited)

June 30, 2018

	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Total pension liability:					
Service cost	\$ 119,718,797	139,506,057	113,546,510	93,740,921	93,623,020
Interest on total pension liability	226,928,605	202,545,532	221,675,495	216,980,562	209,010,706
Effect of economic/demographic (gains) or losses	(19,592,172)	23,786,696	(17,580,385)	35,245,543	—
Effect of assumptions changes or inputs	(379,490,284)	(697,970,471)	747,941,075	435,691,094	92,686,900
Transfers from other systems	190,903	3,925	54,000	222,557	—
Benefit payments	(222,315,723)	(217,303,946)	(213,436,150)	(206,493,624)	(197,958,938)
Net change in total pension liability	(274,559,874)	(549,432,207)	852,200,545	575,387,053	197,361,688
Total pension liability-beginning	5,124,274,114	5,673,706,321	4,821,505,776	4,246,118,723	4,048,757,035
Total pension liability-ending (a)	<u>\$ 4,849,714,240</u>	<u>5,124,274,114</u>	<u>5,673,706,321</u>	<u>4,821,505,776</u>	<u>4,246,118,723</u>
Plan fiduciary net position:					
Contributions-employer	\$ 74,603,780	53,006,614	37,435,541	38,527,297	36,436,923
Contributions-employee	22,416,571	23,721,785	22,818,295	22,315,431	24,034,496
Net investment (loss) income	154,029,009	207,401,590	(19,284,054)	75,532,779	287,098,217
Transfers from other systems	190,903	3,925	54,000	222,557	—
Benefit payments, including refunds of employee contributions	(222,315,723)	(217,303,946)	(213,436,150)	(206,493,624)	(197,958,938)
Administrative expense	(377,193)	(294,745)	(334,630)	(351,724)	(280,026)
Net change in Plan fiduciary net position	28,547,347	66,535,223	(172,746,998)	(70,247,284)	149,330,672
Plan fiduciary net position-beginning	1,761,497,335	1,694,962,112	1,867,709,110	1,937,956,394	1,788,625,722
Plan fiduciary net position-ending (b)	<u>1,790,044,682</u>	<u>1,761,497,335</u>	<u>1,694,962,112</u>	<u>1,867,709,110</u>	<u>1,937,956,394</u>
Plan's net pension liability-ending (a)-(b)	<u>\$ 3,059,669,558</u>	<u>3,362,776,779</u>	<u>3,978,744,209</u>	<u>2,953,796,666</u>	<u>2,308,162,329</u>
Plan fiduciary net position as a percentage of the total pension liability	36.91%	34.38%	29.87%	38.74%	45.64%
Covered-employee payroll	\$ 284,707,387	277,771,135	275,477,457	262,496,289	262,063,829
Net pension liability as a percentage of covered-employee payroll	1074.67%	1210.63%	1444.31%	1125.27%	880.76%

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

Notes to Schedule:

Changes in benefit terms:

In 2017, Chapter 26, P.L. 2016 amended statutes to change the definition of child to include a child 18 years of age or older and enrolled in a secondary school, or under the age of 24 and enrolled in a degree program in an institution of higher education for at least 12 credits in each semester, provided that the member died in the line of duty while in active service. It also increases the accidental death benefit payable to children if there is no surviving spouse to 70% of final compensation.

Changes in assumptions:

Discount rate	4.97%	4.42%	3.55%	4.59%	5.12%
Long-term expected rate of return	7.00%	7.00%	7.65%	7.90%	7.90%

For 2016, salary increases were assumed to increased 2.95% through fiscal year 2025 and 3.95% for each fiscal year thereafter.

For 2015, the discount rate changed to 4.59% and the demographic assumptions were revised to reflect those recommended on the basis of the July 1, 2011 - June 30, 2014 experience study. In addition, the social security wage base was set at \$118,500 for 2015, increasing 4.00% per annum, compounded annually and the 401(a)(17) pay limit was set at \$265,000 for 2015, increasing 3.00% per annum, compounded annually.

See accompanying independent auditors' report.

STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS

Required Supplementary Information

Schedule of Changes in Net Pension Liability and Related Ratios - Defined Benefit Pension Plans

Consolidated Police and Firemen's Pension Fund

(Unaudited)

June 30, 2018

	2018	2017	2016	2015	2014
Total pension liability:					
Service cost	\$ —	—	—	—	—
Interest on total pension liability	241,913	260,211	352,889	504,066	632,080
Effect of economic/demographic (gains) or losses	(582,507)	(984,588)	(71,313)	(993,528)	—
Effect of assumptions changes or inputs	(70,518)	(236,022)	1,273,909	193,719	163,528
Benefit payments	(1,289,899)	(1,535,623)	(1,881,252)	(2,445,627)	(2,942,035)
Net change in total pension liability	(1,701,011)	(2,496,022)	(325,767)	(2,741,370)	(2,146,427)
Total pension liability-beginning	7,396,613	9,892,635	10,218,402	12,959,772	15,106,199
Total pension liability-ending (a)	\$ 5,695,602	7,396,613	9,892,635	10,218,402	12,959,772
Plan fiduciary net position:					
Contributions-nonemployer	\$ 325,000	575,000	148,000	—	11,740
Net investment income	21,542	10,099	10,856	198	585
Contributions-other	806,330	964,280	1,196,017	1,577,751	1,889,091
Benefit payments, including refunds of employee contributions	(1,289,899)	(1,535,623)	(1,881,252)	(2,445,627)	(2,942,035)
Administrative expense	(4,006)	(4,188)	(6,643)	(8,003)	(9,566)
Net change in Plan fiduciary net position	(141,033)	9,568	(533,022)	(875,681)	(1,050,185)
Plan fiduciary net position-beginning	1,904,496	1,894,928	2,427,950	3,303,631	4,353,816
Plan fiduciary net position-ending (b)	1,763,463	1,904,496	1,894,928	2,427,950	3,303,631
Plan's net pension liability-ending (a)-(b)	\$ 3,932,139	5,492,117	7,997,707	7,790,452	9,656,141
Plan fiduciary net position as a percentage of the total pension liability	30.96%	25.75%	19.15%	23.76%	25.49%
Covered-employee payroll	N/A	N/A	N/A	N/A	N/A
Net pension liability as a percentage of covered-employee payroll	N/A	N/A	N/A	N/A	N/A

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

Notes to Schedule:

Changes in benefit terms:

None

Changes in assumptions:

Discount rate

3.87%

3.58%

2.85%

3.80%

4.29%

For 2016, the mortality improvement assumption was revised to be projected on a generational basis from the base year of 2000 to 2014 using Projection Scale BB as the base tables and further projected beyond the valuation date using the plan actuary's modified 2014 projection. Further, the RP-2000 disabled retiree mortality table is used for the period after disability retirement for disability retirements.

See accompanying independent auditors' report.

STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS

Required Supplementary Information

Schedule of Changes in Net Pension Liability and Related Ratios - Defined Benefit Pension Plans

Teachers' Pension and Annuity Fund

(Unaudited)

June 30, 2018

	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Total pension liability:					
Service cost	\$ 2,229,422,113	3,028,689,581	2,344,321,810	2,022,411,197	1,870,901,832
Interest on total pension liability	3,858,188,355	3,304,988,177	3,694,844,118	3,797,032,970	3,794,362,523
Effect of economic/demographic (gains) or losses	1,195,858,381	236,377,556	(134,644,168)	365,228,279	(24,898,221)
Effect of assumptions changes or inputs	(6,816,855,725)	(13,285,524,000)	10,827,093,000	5,913,556,000	2,614,173,709
Transfers from other systems	5,686,293	1,338,431	1,564,002	4,117,141	—
Benefit payments	(4,401,203,131)	(4,306,268,745)	(4,169,070,762)	(4,015,003,587)	(3,837,859,513)
Net change in total pension liability	(3,928,903,714)	(11,020,399,000)	12,564,108,000	8,087,342,000	4,416,680,330
Total pension liability-beginning	<u>90,726,371,000</u>	<u>101,746,770,000</u>	<u>89,182,662,000</u>	<u>81,095,320,000</u>	<u>76,678,639,670</u>
Total pension liability-ending (a)	<u>\$ 86,797,467,286</u>	<u>90,726,371,000</u>	<u>101,746,770,000</u>	<u>89,182,662,000</u>	<u>81,095,320,000</u>
Plan fiduciary net position:					
Contributions-employer	\$ 1,723,827	1,404,292	1,105,810	807,246	4,688,045
Contributions-nonemployer	1,514,407,623	1,125,614,188	798,963,467	539,796,289	423,012,101
Contributions-employee	810,899,751	790,788,033	761,711,695	740,296,265	716,183,306
Net investment (loss) income	2,016,316,929	2,736,988,791	(267,684,353)	1,066,062,926	4,100,273,453
Transfers from other systems	5,686,293	1,338,431	1,564,002	4,117,141	—
Employer specific contributions - delayed appropriation and delayed enrollments	345,897	357,659	243,660	358,899	—
Benefit payments, including refunds of employee contributions	(4,401,203,131)	(4,306,268,745)	(4,169,070,762)	(4,015,003,587)	(3,837,859,513)
Administrative expense	(13,222,178)	(11,923,787)	(13,768,112)	(13,890,080)	(12,170,971)
Net change in Plan fiduciary net position	(65,044,989)	338,298,862	(2,886,934,593)	(1,677,454,901)	1,394,126,421
Plan fiduciary net position-beginning	23,056,161,829	22,717,862,967	25,604,797,560	27,282,252,461	25,888,126,040
Plan fiduciary net position-ending (b)	<u>22,991,116,840</u>	<u>23,056,161,829</u>	<u>22,717,862,967</u>	<u>25,604,797,560</u>	<u>27,282,252,461</u>
Plan's net pension liability-ending (a)-(b)	<u>\$ 63,806,350,446</u>	<u>67,670,209,171</u>	<u>79,028,907,033</u>	<u>63,577,864,440</u>	<u>53,813,067,539</u>
Plan fiduciary net position as a percentage of the total pension liability	26.49%	25.41%	22.33%	28.71%	33.64%
Covered-employee payroll	\$ 10,636,814,121	10,436,205,103	10,305,472,484	10,162,263,470	10,038,792,896
Net pension liability as a percentage of covered-employee payroll	599.86%	648.42%	766.86%	625.63%	536.05%

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

Notes to Schedule:

Changes in benefit terms:

None

Changes in assumptions:

Discount rate	4.86%	4.25%	3.22%	4.13%	4.68%
Long-term expected rate of return	7.00%	7.00%	7.65%	7.90%	7.90%

For 2016, the demographic assumptions were revised to reflect those recommended on the basis of the July 1, 2012 - June 30, 2015 experience study.

See accompanying independent auditors' report.

STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS

Required Supplementary Information

Schedule of Changes in Net Pension Liability and Related Ratios - Defined Benefit Pension Plans

Police and Firemen's Retirement System

(Unaudited)

June 30, 2018

	2018	2017	2016	2015	2014
Total pension liability:					
Service cost	\$ 1,030,735,624	1,136,338,028	1,148,613,712	994,248,683	1,079,166,175
Interest on total pension liability	2,898,092,706	2,738,598,309	2,751,445,220	2,680,664,300	2,535,619,539
Effect of economic/demographic (gains) or losses	47,676,088	89,364,940	(34,916,637)	(215,122,438)	—
Effect of assumptions changes or inputs	(2,069,626,924)	(3,534,553,975)	343,078,737	3,755,474,472	649,814,155
Transfers from other systems	3,422,888	289,960	358,929	800,782	—
Benefit payments	<u>(2,523,462,466)</u>	<u>(2,421,485,437)</u>	<u>(2,324,175,953)</u>	<u>(2,205,464,297)</u>	<u>(2,105,829,011)</u>
Net change in total pension liability	(613,162,084)	(1,991,448,175)	1,884,404,008	5,010,601,502	2,158,770,858
Total pension liability-beginning	47,410,721,738	49,402,169,913	47,517,765,905	42,507,164,403	40,348,393,545
Total pension liability-ending (a)	<u>\$ 46,797,559,654</u>	<u>47,410,721,738</u>	<u>49,402,169,913</u>	<u>47,517,765,905</u>	<u>42,507,164,403</u>
Plan fiduciary net position:					
Contributions-employer	\$ 1,127,617,114	1,002,043,734	900,033,567	883,776,917	858,047,628
Contributions-nonemployer	108,857,000	86,467,000	61,466,000	76,038,000	—
Contributions-employee	395,604,883	395,878,384	388,681,408	386,991,641	385,660,096
Net investment (loss) income	2,139,481,226	2,791,104,860	(150,693,159)	922,598,676	3,381,553,869
Transfers from other systems	3,422,888	289,960	358,929	800,782	—
Employer specific contributions - additional contribution	173,554	268,910	1,923,531	535,424	—
Employer specific contributions - delayed appropriation	450,244	892,514	763,176	865,936	—
Employer specific contributions - delayed enrollments	90,933	179,386	142,034	224,629	—
Employer specific contributions - retroactive	3,120,240	11,476,881	3,661,101	24,536,440	—
Contributions-other	(12,230)	—	—	—	—
Benefit payments, including refunds of employee contributions	(2,523,462,466)	(2,421,485,437)	(2,324,175,953)	(2,205,464,297)	(2,105,829,011)
Administrative expense	<u>(4,505,685)</u>	<u>(4,124,457)</u>	<u>(4,292,891)</u>	<u>(4,531,012)</u>	<u>(3,884,342)</u>
Net change in Plan fiduciary net position	1,250,837,701	1,862,991,735	(1,122,132,257)	86,373,136	2,515,548,240
Plan fiduciary net position-beginning	25,847,718,399	23,984,726,664	25,106,858,921	25,020,485,785	22,504,937,545
Plan fiduciary net position-ending (b)	27,098,556,100	25,847,718,399	23,984,726,664	25,106,858,921	25,020,485,785
Plan's net pension liability-ending (a)-(b)	<u>\$ 19,699,003,554</u>	<u>21,563,003,339</u>	<u>25,417,443,249</u>	<u>22,410,906,984</u>	<u>17,486,678,618</u>
Plan fiduciary net position as a percentage of the total pension liability	57.91%	54.52%	48.55%	52.84%	58.86%
Covered-employee payroll	\$ 3,803,348,329	3,726,807,562	3,695,509,355	3,682,677,356	3,678,910,266
Net pension liability as a percentage of covered-employee payroll	517.94%	578.59%	687.79%	608.55%	475.32%

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

Notes to Schedule:

Changes in benefit terms:

In 2017, Chapter 26, P.L. 2016 increased the accidental death benefit payable to children if there is no surviving spouse to 70% of final compensation.

Changes in assumptions:

Discount rate	6.51%	6.14%	5.55%	5.79%	6.32%
Long-term expected rate of return	7.00%	7.00%	7.65%	7.90%	7.90%

For 2016, the mortality improvement scale incorporated the plan actuary's modified 2014 projection scale. Further, salary increases were assumed to increase between 2.10% and 8.98% (based on age) through fiscal year 2026 and 3.10% and 9.98% (based on age) for each fiscal year thereafter. For 2015, demographic assumptions were revised in accordance with the results of the July 1, 2010 - June 30, 2013 experience study.

See accompanying independent auditors' report.

STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS

Required Supplementary Information

Schedule of Changes in Net Pension Liability and Related Ratios - Defined Benefit Pension Plans

Public Employees' Retirement System

(Unaudited)

June 30, 2018

	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Total pension liability:					
Service cost	\$ 1,555,424,045	1,865,398,219	1,628,065,678	1,523,631,386	1,592,214,831
Interest on total pension liability	3,849,650,265	3,412,789,012	3,653,373,426	3,647,688,354	3,506,486,225
Effect of economic/demographic (gains) or losses	(363,908,216)	306,941,390	600,806,505	1,050,795,158	—
Effect of assumptions changes or inputs	(5,613,718,254)	(10,156,789,076)	8,792,817,065	4,091,557,460	1,222,437,554
Transfers from other systems	(13,217,000)	854,976	778,753	1,651,542	—
Benefit payments	<u>(3,936,320,575)</u>	<u>(3,810,818,692)</u>	<u>(3,629,651,915)</u>	<u>(3,441,046,065)</u>	<u>(3,259,290,114)</u>
Net change in total pension liability	(4,522,089,735)	(8,381,624,171)	11,046,189,512	6,874,277,835	3,061,848,496
Total pension liability-beginning	<u>77,388,263,903</u>	<u>85,769,888,074</u>	<u>74,723,698,562</u>	<u>67,849,420,727</u>	<u>64,787,572,231</u>
Total pension liability-ending (a)	<u>\$ 72,866,174,168</u>	<u>77,388,263,903</u>	<u>85,769,888,074</u>	<u>74,723,698,562</u>	<u>67,849,420,727</u>
Plan fiduciary net position:					
Contributions-employer	\$ 1,680,631,409	1,465,931,579	1,273,425,342	1,085,237,214	917,689,000
Contributions-employee	854,178,790	847,952,137	821,305,787	805,232,235	797,818,225
Net investment (loss) income	2,435,763,559	3,202,393,837	(237,215,643)	1,117,827,113	4,102,964,869
Transfers from other systems	(13,217,000)	854,976	778,753	1,651,542	—
Employer specific contributions - additional contribution	28,566	25,676	257,850	111,824	—
Employer specific contributions - delayed appropriation	2,687,967	3,224,612	1,721,199	1,664,415	—
Employer specific contributions - delayed enrollments	931,611	1,030,774	532,612	594,843	—
Employer specific contributions - retroactive	4,818,841	11,230,521	687,225	6,504,878	—
Other	—	(7,797)	(51,586)	(31,006)	—
Benefit payments, including refunds of employee contributions	<u>(3,936,320,575)</u>	<u>(3,810,818,692)</u>	<u>(3,629,651,915)</u>	<u>(3,441,046,065)</u>	<u>(3,259,290,114)</u>
Administrative expense	<u>(21,368,150)</u>	<u>(19,648,715)</u>	<u>(23,285,920)</u>	<u>(23,761,860)</u>	<u>(21,756,019)</u>
Net change in Plan fiduciary net position	1,008,135,018	1,702,168,908	(1,791,496,296)	(446,014,867)	2,537,425,961
Plan fiduciary net position-beginning	<u>28,464,239,518</u>	<u>26,762,070,610</u>	<u>28,553,566,906</u>	<u>28,999,581,773</u>	<u>26,462,155,812</u>
Plan fiduciary net position-ending (b)	<u>29,472,374,536</u>	<u>28,464,239,518</u>	<u>26,762,070,610</u>	<u>28,553,566,906</u>	<u>28,999,581,773</u>
Plan's net pension liability-ending (a)-(b)	<u>\$ 43,393,799,632</u>	<u>48,924,024,385</u>	<u>59,007,817,464</u>	<u>46,170,131,656</u>	<u>38,849,838,954</u>
Plan fiduciary net position as a percentage of the total pension liability	40.45%	36.78%	31.20%	38.21%	42.74%
Covered-employee payroll	\$ 11,360,644,671	11,296,345,312	11,320,198,747	11,441,433,226	11,448,531,265
Net pension liability as a percentage of covered-employee payroll	381.97%	433.10%	521.26%	403.53%	339.34%

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

Notes to Schedule:

Changes in benefit terms:

None

Changes in assumptions:

Discount rate	5.66%	5.00%	3.98%	4.90%	5.39%
Long-term expected rate of return	7.00%	7.00%	7.65%	7.90%	7.90%

For 2016, demographic assumptions were revised in accordance with the results of the July 1, 2011 - June 30, 2014 experience study and the mortality improvement scale incorporated the plan actuary's modified MP-2014 projection scale. Further, salary increases were assumed to increase between 1.65% and 4.15% (based on age) through fiscal year 2026 and 2.65% and 5.15% (based on age) for each fiscal year thereafter. For 2015, the social security wage base was set at \$118,500 for 2015, increasing 4.00% per annum, compounded annually and the 401(a)(17) pay limit was set at \$265,000 for 2015, increasing 3.00% per annum, compounded annually.

See accompanying independent auditors' report.

**STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS**

Required Supplementary Information

Schedule of Employer Contributions - Defined Benefit Pension Plans

(Unaudited)

	<u>Actuarially determined contribution</u>	<u>Actual employer contribution</u>	<u>Contribution excess (deficiency)</u>	<u>Covered payroll</u>	<u>Contribution as a percentage of covered payroll</u>
Judicial Retirement System					
Year ended June 30:					
2018	\$ 47,224,943	24,023,637	(23,201,306)	69,216,709	34.71%
2017	44,807,771	20,341,379	(24,466,392)	68,062,584	29.89
2016	47,305,819	14,794,774	(32,511,045)	67,097,166	22.05
2015	45,136,504	17,031,026	(28,105,478)	66,028,491	25.79
2014	43,922,167	15,874,681	(28,047,486)	67,810,110	23.41
2013	45,415,467	12,308,227	(33,107,240)	67,497,660	18.24
2012	42,475,660	5,969,713	(36,505,947)	67,437,125	8.85
2011	38,450,553	651,718	(37,798,835)	71,746,413	0.91
2010	32,540,704	1,032,857	(31,507,847)	70,133,372	1.47
2009	29,809,782	1,696,843	(28,112,939)	67,159,516	2.53
Prison Officers' Pension Fund					
Year ended June 30:					
2018	\$ —	—	—	N/A	N/A
2017	—	—	—	N/A	N/A
2016	—	—	—	N/A	N/A
2015	—	—	—	N/A	N/A
2014	—	—	—	N/A	N/A
2013	—	—	—	N/A	N/A
2012	—	—	—	N/A	N/A
2011	—	—	—	N/A	N/A
2010	—	—	—	N/A	N/A
2009	—	—	—	N/A	N/A
State Police Retirement System					
Year ended June 30:					
2018	\$ 145,908,823	74,603,780	(71,305,043)	284,707,387	26.20%
2017	135,017,662	53,006,614	(82,011,048)	277,771,135	19.08
2016	120,800,705	37,435,541	(83,365,164)	275,477,457	13.59
2015	110,904,703	38,527,297	(72,377,406)	262,496,289	14.68
2014	105,093,378	36,436,923	(68,656,455)	262,063,829	13.90
2013	99,876,582	27,777,047	(72,099,535)	283,219,927	9.81
2012	98,869,662	13,545,607	(85,324,055)	275,219,752	4.92
2011	114,120,061	2,201,604	(111,918,457)	289,980,657	0.76
2010	91,411,237	1,018,200	(90,393,037)	287,267,502	0.35
2009	86,385,254	5,574,860	(80,810,394)	281,087,566	1.98

**STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS**

Required Supplementary Information

Schedule of Employer Contributions - Defined Benefit Pension Plans

(Unaudited)

	<u>Actuarially determined contribution</u>	<u>Actual employer contribution</u>	<u>Contribution excess (deficiency)</u>	<u>Covered payroll</u>	<u>Contribution as a percentage of covered payroll</u>
Consolidated Police and Firemen's Pension Fund					
Year ended June 30:					
2018	\$ 325,191	1,131,330	806,139	N/A	N/A
2017	884,680	1,539,280	654,600	N/A	N/A
2016	491,683	1,344,017	852,334	N/A	N/A
2015	—	1,577,751	—	N/A	N/A
2014	864,041	1,900,831	1,036,790	N/A	N/A
2013	1,095,632	896,883	(198,749)	N/A	N/A
2012	1,240,860	174,000	(1,066,860)	N/A	N/A
2011	528,714	—	(528,714)	N/A	N/A
2010	1,678,690	—	(1,678,690)	N/A	N/A
2009	1,824,798	1,256,000	(568,798)	N/A	N/A
Teachers' Pension and Annuity Fund					
Year ended June 30:					
2018	\$ 3,035,344,625	1,516,131,450	(1,519,213,175)	10,636,814,121	14.25%
2017	2,737,175,151	1,127,018,480	(1,610,156,671)	10,436,205,103	10.80
2016	2,544,811,534	800,069,277	(1,744,742,257)	10,305,472,484	7.76
2015	2,306,611,715	540,603,535	(1,766,008,180)	10,162,263,470	5.32
2014	2,158,287,358	427,700,146	(1,730,587,212)	10,038,792,896	4.26
2013	2,331,811,395	647,059,335	(1,684,752,060)	9,779,212,916	6.62
2012	2,269,823,968	317,927,358	(1,951,896,610)	9,682,318,739	3.28
2011	2,123,175,951	30,655,332	(2,092,520,619)	10,025,401,658	—
2010	1,796,358,016	33,199,655	(1,763,158,361)	9,747,020,060	—
2009	1,601,478,508	95,863,972	(1,505,614,536)	9,419,083,203	1.02
Police and Firemen's Retirement System					
Year ended June 30:					
2018	\$ 1,424,767,509	1,171,681,149	(253,086,360)	3,803,348,329	30.81%
2017	1,335,659,737	1,046,327,392	(289,332,345)	3,726,807,562	28.08
2016	1,311,849,713	986,654,840	(325,194,873)	3,695,509,355	26.70
2015	1,217,110,411	941,950,336	(275,160,075)	3,682,677,356	25.58
2014	1,150,719,106	880,431,697	(270,287,409)	3,678,910,266	23.93
2013	1,279,412,723	895,743,379	(383,669,344)	3,656,218,573	24.50
2012	1,238,132,402	826,461,015	(411,671,387)	3,649,416,297	22.65
2011	1,337,424,856	889,724,548	(447,700,308)	3,720,534,369	23.91
2010	1,161,763,447	758,722,185	(403,041,262)	3,673,674,523	20.65
2009	1,048,234,663	716,491,044	(331,743,619)	3,596,254,177	19.92

STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS

Required Supplementary Information

Schedule of Employer Contributions - Defined Benefit Pension Plans

(Unaudited)

	<u>Actuarially determined contribution</u>	<u>Actual employer contribution</u>	<u>Contribution excess (deficiency)</u>	<u>Covered payroll</u>	<u>Contribution as a percentage of covered payroll</u>
	Public Employees' Retirement System				
Year ended June 30:					
2018	\$ 2,306,287,092	1,632,971,072	(673,316,020)	11,360,644,671	14.37%
2017	2,207,859,541	1,448,520,025	(759,339,516)	11,296,345,312	12.82
2016	2,097,570,117	1,265,246,226	(832,323,891)	11,320,198,747	11.18
2015	1,935,315,246	1,067,584,583	(867,730,663)	11,441,433,226	9.33
2014	1,797,073,081	941,023,184	(856,049,897)	11,448,531,265	8.22
2013	1,911,359,009	1,087,389,140	(823,969,869)	11,433,091,635	9.51
2012	1,895,158,413	976,093,907	(919,064,506)	11,609,042,726	8.41
2011	1,824,391,081	832,016,186	(992,374,895)	11,981,354,783	6.94
2010	1,422,475,763	640,282,996	(782,192,767)	11,995,447,141	5.34
2009	1,285,791,399	627,989,949	(657,801,450)	11,815,800,825	5.31

See accompanying independent auditors' report.

**STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS**

Schedule of Employer Contributions - Defined Benefit Pension Plans

Last 10 Fiscal Years

(Unaudited)

Notes to Schedule:

Method and assumptions used in calculations of employers' actuarially determined contributions: The actuarially determined contributions are calculated as of July 1 preceding the fiscal year in which the contributions are reported. Unless otherwise noted above, the following actuarial methods and assumptions were used to determine contribution rates in the Schedule of Employer Contributions.

	JRS	POPF	SPRS	CPFPF	TPAF	PFRS	PERS
Actuarial cost method	Projected Unit Credit Level Dollar, open	Projected Unit Credit Level Dollar, open	Projected Unit Credit Level Dollar, open	Projected Unit Credit Level Dollar, open	Projected Unit Credit Level Dollar, open	Projected Unit Credit Level Dollar, open	Projected Unit Credit Level Dollar, open
Amortization method	30 years	1 year	30 years	30 years	30 years	30 years	30 years
Remaining amortization period	30 years	1 year	30 years	30 years	30 years	30 years	30 years
Asset valuation method	Five-year average of market values	Market value	Five-year average of market values	Five-year average of market values	20% of the difference between the expected Actuarial Value and market value is recognized each year	Five-year average of market values	Five-year average of market values
Inflation	2.25%	2.25%	2.25%	2.25%	2.3% until June 30, 2026 / 3.6% thereafter	2.25%	2.25%
Projected salary increase							
2017 and 2016							
Initial fiscal year applied through	2025	N/A^	2025	N/A^	N/A	2026	2026
Rate	2.00%	N/A^	2.95%	N/A^	Varies based on experience	2.10 - 8.98% based on age	1.65 - 4.15% based on age
Thereafter	3.00%	N/A^	3.95%	N/A^	Varies based on experience	3.10 - 9.98% based on age	2.65 - 5.15% based on age
2015 and 2014							
Through fiscal year 2021	2.50%	N/A^	3.45%	N/A^	Varies based on experience	2.60 - 9.48% based on age	2.15 - 4.40% based on age
Thereafter	3.50%	N/A^	4.45%	N/A^	Varies based on experience	3.60 - 10.48% based on age	3.15 - 5.40% based on age
Projected COLAs	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
Investment rate of return							
2018	7.50%	5.00%	7.50%	2.00%	7.50%	7.50%	7.50%
2017	7.50%	5.00%	7.50%	2.00%	7.50%	7.50%	7.50%
2016	7.65%	5.00%	7.65%	2.00%	7.65%	7.65%	7.65%
2015	7.90%	5.00%	7.90%	2.00%	7.90%	7.90%	7.90%
2014	7.90%	5.00%	7.90%	2.00%	7.90%	7.90%	7.90%

* Pursuant to the provisions of Chapter 78, P.L. 2011, cost of living adjustment (COLA) increases were suspended for all current and future retirees of all retirement systems.

^ This is a closed plan, therefore there are no active employees.

Contributions: Contributions reported on Schedule 1 include actual contributions by State and, where applicable, the local employer's contribution revenue recorded in fiscal year 2018 that is due in fiscal year 2019 and contributions to the Non-Contributory Group Insurance Premium Fund. Contributions reported on Schedule 2 represent actual contributions by the State and local employers (where applicable) made during the year, including contributions to the Non-Contributory Group Life Insurance Premium Fund.

See accompanying independent auditors' report.

**STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS**

Required Supplementary Information

Schedule of Investment Returns - Defined Benefit Pension Plans

Annual Money-Weighted Rate of Return, Net of Investment Expense

(Unaudited)

	JRS, SPRS, TPAF, PERS and PFRS*	POPF	CPFPF
Year ended June 30:			
2018	9.11%	1.36%	1.36%
2017	13.01%	0.53%	0.53%
2016	-1.15%	0.28%	0.50%
2015	4.08%	0.09%	0.34%
2014	16.79%	0.09%	0.02%

* The annual money-weighted rate of return, net of investment expense, which includes JRS, SPRS, TPAF, PFRS and PERS, is calculated on the investments held within Common Pension Funds D and E, and the State of New Jersey, Cash Management Fund for the Pension Funds, as a whole rather than by individual plan since the portfolios are managed through common trust funds.

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

See accompanying independent auditors' report.

STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS

Required Supplementary Information

Schedule of Changes in Net OPEB Liability and Related Ratios

(Unaudited)

June 30, 2018

	2018	2017
Total OPEB liability:		
Service cost	\$ 896,235,148	1,064,525,862
Interest on total OPEB liability	764,082,232	648,423,508
Difference between expected and actual experience	(3,626,384,047)	—
Effect of changes of assumptions	(2,314,240,675)	(2,587,850,974)
Contributions - employee	53,987,166	53,585,505
Benefit payments	(421,621,253)	(417,488,848)
Net change in total OPEB liability	(4,647,941,429)	(1,238,804,947)
Total OPEB liability-beginning	20,629,044,656	21,867,849,603
Total OPEB liability-ending (a)	\$ 15,981,103,227	20,629,044,656
Plan fiduciary net position:		
Contributions-employer	\$ 421,194,662	381,813,324
Contributions-nonemployer contributing entity	53,548,285	53,064,311
Contributions-retiree	53,987,166	53,585,505
Net investment income	2,320,422	791,049
Benefit payments	(421,621,253)	(417,488,848)
Administrative expense	(8,200,113)	(8,894,576)
Net change in Plan fiduciary net position	101,229,169	62,870,765
Plan fiduciary net position-beginning	213,255,917	150,385,152
Plan fiduciary net position-ending (b)	314,485,086	213,255,917
Plan's net OPEB liability-ending (a)-(b)	\$ 15,666,618,141	20,415,788,739
Plan fiduciary net position as a percentage of the total OPEB liability	1.97%	1.03%
Covered-employee payroll	\$ 4,646,915,753	4,336,016,376
Net OPEB liability as a percentage of covered-employee payroll	337.14%	470.84%

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

Notes to Schedule:

Changes in benefit terms: None None

Changes in assumptions:

In 2017, the discount rate changed to 3.58% from 2.85%. In 2018, the discount rate changed to 3.87% from 3.58%, there were changes in the census, claims and premiums experience and a decrease in the assumed health care cost trend and excise tax assumptions.

Adjustments to June 30, 2017 reported amounts:

The categories composing the changes in total OPEB liability were changed from previously reported amounts in the Division's 2017 CAFR to include certain active plan members that were improperly excluded from the measurement of the total OPEB liability in the prior year.

See accompanying independent auditors' report.

**STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS**

Required Supplementary Information

Schedule of Investment Returns - OPEB Plan

Annual Money-Weighted Rate of Return, Net of Investment Expense

(Unaudited)

Year ended June 30:

2018	1.28%
2017	0.58%

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

See accompanying independent auditors' report.

STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS

Schedule of Administrative Expenses

Year ended June 30, 2018

	<u>JRS</u>	<u>POPF</u>	<u>SPRS</u>	<u>CPFPF</u>	<u>TPAF</u>	<u>PFRS</u>	<u>PERS</u>	<u>NJSEDCP</u>	<u>Total</u>
Personnel services:									
Salaries and wages	\$ 102,650	1,588	108,116	1,684	5,712,234	1,416,974	9,345,405	241,802	16,930,453
Employee benefits	54,235	839	57,123	889	3,018,064	748,660	4,937,653	122,544	8,940,007
Total personnel services	156,885	2,427	165,239	2,573	8,730,298	2,165,634	14,283,058	364,346	25,870,460
Professional services:									
Actuarial services	6,546	409	38,271	356	197,474	530,976	430,039	—	1,204,071
Data processing	4,561	285	26,668	248	1,151,295	370,005	1,763,778	27,481	3,344,321
Information systems	4,744	296	27,737	258	1,111,919	384,830	1,834,446	54	3,364,284
Other professional (1)	1,173	73	7,096	64	276,823	98,357	456,148	51	839,785
Medical reviews (exams/hearings)	3,450	—	24,935	—	314,515	437,617	799,139	—	1,579,656
Elections	—	—	—	—	—	40,889	10,000	—	50,889
Internal audit and legal	3,402	212	19,893	185	797,455	275,995	1,315,643	—	2,412,785
Total professional services	23,876	1,275	144,600	1,111	3,849,481	2,138,669	6,609,193	27,586	12,795,791
Communication:									
Travel	6	—	30	—	4,309	4,776	7,408	—	16,529
Telephone	363	23	2,120	20	84,987	29,413	140,211	2,800	259,937
Postage	1,290	81	7,544	70	302,449	104,676	498,982	1,000	916,092
Motor pool	12	1	69	1	2,777	961	4,581	—	8,402
Printing and office	268	17	1,567	15	69,099	21,836	103,753	—	196,555
Total communication	1,939	122	11,330	106	463,621	161,662	754,935	3,800	1,397,515
Miscellaneous:									
Office space	2,749	172	16,073	150	644,347	223,005	1,063,045	—	1,949,541
Maintenance	52	3	304	3	12,188	4,218	20,107	—	36,875
Equipment	32	2	184	1	7,374	2,552	12,166	—	22,311
Other services and charges	—	—	—	—	—	—	—	12,000	12,000
Total miscellaneous	2,833	177	16,561	154	663,909	229,775	1,095,318	12,000	2,020,727
Total administrative expenses	\$ 185,533	4,001	337,730	3,944	13,707,309	4,695,740	22,742,504	407,732	42,084,493

(1) Portion of consulting

See accompanying independent auditors' report.

**STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS**

Schedule of Investment Expenses

Year ended June 30, 2018

	<u>JRS</u>	<u>POPF</u>	<u>SPRS</u>	<u>CPFPP</u>	<u>TPAF</u>	<u>PFRS</u>	<u>PERS</u>	<u>NJSEDCP</u>	<u>Total</u>
Investment expense \$	21,143	1,471	124,546	1,456	5,054,619	1,731,572	8,386,400	230,593	15,551,800

See accompanying independent auditors' report.

**STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS**

Schedule of Expenses for Consultants

Year ended June 30, 2018

	<u>JRS</u>	<u>POPF</u>	<u>SPRS</u>	<u>CPFPF</u>	<u>TPAF</u>	<u>PFRS</u>	<u>PERS</u>	<u>Total</u>
Actuarial:								
Conduent	\$ 6,546	409	38,271	356	—	530,976	430,039	1,006,597
Milliman	—	—	—	—	197,474	—	—	197,474
Medical reviews (exams/hearings)	3,450	—	24,935	—	314,515	437,617	799,139	1,579,656
Board elections:								
Election America	—	—	—	—	—	40,889	10,000	50,889
Total expenses for consultants	<u>\$ 9,996</u>	<u>409</u>	<u>63,206</u>	<u>356</u>	<u>511,989</u>	<u>1,009,482</u>	<u>1,239,178</u>	<u>2,834,616</u>

See accompanying independent auditors' report.

STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS

Combining Schedule of Fiduciary Net Position Information
Fiduciary Funds – Select Pension Trust Funds

June 30, 2018

	<u>Judicial Retirement System</u>	<u>Prison Officers' Pension Fund</u>	<u>State Police Retirement System</u>	<u>Consolidated Police and Firemen's Pension Fund</u>	<u>Teachers' Pension and Annuity Fund</u>	<u>Police and Firemen's Retirement System</u>	<u>Public Employees' Retirement System</u>	<u>Total</u>
Assets:								
Cash and cash equivalents	\$ 4,975,574	228,655	17,904,920	134,113	371,943,696	205,366,800	322,533,336	923,087,094
Receivables:								
Contributions:								
Members	437,097	—	1,086,870	—	82,297,872	51,866,967	66,301,621	201,990,427
Employers	—	—	385,181	—	88,600,287	1,095,444,433	1,113,337,815	2,297,767,716
Accrued interest and dividends	756	38	3,102	55	63,622	3,874,133	55,798	3,997,504
Other	834,838	—	50,580	205,783	4,396,947	9,387,201	22,619,532	37,494,881
Total receivables	1,272,691	38	1,525,733	205,838	175,358,728	1,160,572,734	1,202,314,766	2,541,250,528
Investments, at fair value:								
Cash Management Fund	5,455,618	5,075,199	17,178,875	1,552,981	68,939,752	57,568,282	58,486,184	214,256,891
Common Pension Fund D	108,018,095	—	1,184,272,588	—	15,175,421,815	16,421,808,549	18,663,546,817	51,553,067,864
Common Pension Fund E	52,386,040	—	574,343,332	—	7,389,928,845	8,024,631,500	9,119,818,091	25,161,107,808
Total investments	165,859,753	5,075,199	1,775,794,795	1,552,981	22,634,290,412	24,504,008,331	27,841,851,092	76,928,432,563
Securities lending collateral	1,759,881	—	19,294,715	—	247,244,970	267,551,678	304,075,112	839,926,356
Members' loans and mortgages	400,378	—	13,766,305	—	275,431,126	1,448,641,030	569,959,958	2,308,198,797
Total assets	174,268,277	5,303,892	1,828,286,468	1,892,932	23,704,268,932	27,586,140,573	30,240,734,264	83,540,895,338
Liabilities:								
Accounts payable and accrued expenses	46	673	77,927	1,114	90,420,723	6,699,378	123,188,574	220,388,435
Retirement benefits payable	4,768,017	79,395	18,453,016	127,993	368,936,445	208,404,035	328,961,231	929,730,132
Noncontributory group life insurance premiums payable	—	—	385,181	—	5,278,892	4,499,140	10,022,922	20,186,135
Administrative expense payable	16,035	368	31,494	362	1,278,077	437,834	2,120,518	3,884,688
Securities lending collateral and rebates payable	1,759,831	—	19,294,168	—	247,237,955	267,544,086	304,066,483	839,902,523
Total liabilities	6,543,929	80,436	38,241,786	129,469	713,152,092	487,584,473	768,359,728	2,014,091,913
Net position restricted for pensions	\$ 167,724,348	5,223,456	1,790,044,682	1,763,463	22,991,116,840	27,098,556,100	29,472,374,536	81,526,803,425

See accompanying independent auditors' report.

STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS

Combining Schedule of Changes In Fiduciary Net Position Information
Fiduciary Funds – Select Pension Trust Funds

Year ended June 30, 2018

	Judicial Retirement System	Prison Officers' Pension Fund	State Police Retirement System	Consolidated Police and Firemen's Pension Fund	Teachers' Pension and Annuity Fund	Police and Firemen's Retirement System	Public Employees' Retirement System	Total
Additions:								
Contributions:								
Members:								
State	\$ 9,177,453	—	22,416,571	—	810,899,751	49,052,970	320,487,632	1,212,034,377
Local	—	—	—	—	—	346,551,913	533,691,158	880,243,071
Employers:								
State	24,023,637	—	74,603,780	—	1,723,827	149,867,604	685,954,490	936,173,338
Local	—	—	—	—	—	977,749,510	994,676,919	1,972,426,429
Nonemployer	—	—	—	325,000	1,514,407,623	108,857,000	—	1,623,589,623
Employer specific and other	—	484,565	—	806,330	345,897	3,822,741	8,466,985	13,926,518
Total contributions	33,201,090	484,565	97,020,351	1,131,330	2,327,377,098	1,635,901,738	2,543,277,184	6,638,393,356
Investment income:								
Net increase in fair value of investments	11,626,472	—	118,766,237	—	1,549,694,540	1,592,956,386	1,838,398,729	5,111,442,364
Interest	3,204,540	71,686	35,387,318	22,998	471,677,008	548,256,412	605,751,230	1,664,371,192
	14,831,012	71,686	154,153,555	22,998	2,021,371,548	2,141,212,798	2,444,149,959	6,775,813,556
Less investment expense	21,143	1,471	124,546	1,456	5,054,619	1,731,572	8,386,400	15,321,207
Net investment income	14,809,869	70,215	154,029,009	21,542	2,016,316,929	2,139,481,226	2,435,763,559	6,760,492,349
Transfers	2,859,841	—	248,479	—	13,092,464	3,605,472	7,171,385	26,977,641
Total additions	50,870,800	554,780	251,297,839	1,152,872	4,356,786,491	3,778,988,436	4,986,212,128	13,425,863,346
Deductions:								
Benefits:								
Benefit expense - retirement allowances	57,250,187	947,877	219,617,869	1,289,899	4,309,529,034	2,470,096,547	3,741,505,365	10,800,236,778
Noncontributory group insurance expense	757,637	—	2,499,780	—	35,766,941	43,309,987	72,207,064	154,541,409
Refunds of contributions	278,597	—	198,074	—	55,907,156	10,055,932	122,608,146	189,047,905
Transfers	—	—	57,576	—	7,406,171	182,584	20,388,385	28,034,716
Administrative and miscellaneous expenses	185,364	4,315	377,193	4,006	13,222,178	4,505,685	21,368,150	39,666,891
Total deductions	58,471,785	952,192	222,750,492	1,293,905	4,421,831,480	2,528,150,735	3,978,077,110	11,211,527,699
Change in net position	(7,600,985)	(397,412)	28,547,347	(141,033)	(65,044,989)	1,250,837,701	1,008,135,018	2,214,335,647
Net position restricted for pensions:								
Beginning of year	175,325,333	5,620,868	1,761,497,335	1,904,496	23,056,161,829	25,847,718,399	28,464,239,518	79,312,467,778
End of year	\$ 167,724,348	5,223,456	1,790,044,682	1,763,463	22,991,116,840	27,098,556,100	29,472,374,536	81,526,803,425

See accompanying independent auditors' report.

STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS

Combining Schedule of Balance Sheet Information
Fiduciary Funds – Agency Funds

June 30, 2018

	<u>Alternate Benefit Program Fund</u>	<u>Pension Adjustment Fund</u>	<u>Dental Expense Program Fund</u>	<u>Total Agency Funds</u>
Assets:				
Cash and cash equivalents	\$ 804,731	124,795	195,156	1,124,682
Receivables:				
State related employer contributions	—	191,300	—	191,300
Other	<u>40,385,204</u>	<u>1,787</u>	<u>355,783</u>	<u>40,742,774</u>
Total receivables	<u>40,385,204</u>	<u>193,087</u>	<u>355,783</u>	<u>40,934,074</u>
Investments, at fair value:				
Cash Management Fund	<u>576,602</u>	<u>1,890,381</u>	<u>47,909,742</u>	<u>50,376,725</u>
Total investments	<u>576,602</u>	<u>1,890,381</u>	<u>47,909,742</u>	<u>50,376,725</u>
Total assets	<u>\$ 41,766,537</u>	<u>2,208,263</u>	<u>48,460,681</u>	<u>92,435,481</u>
Liabilities:				
Accounts payable and accrued expenses	\$ 40,494,611	—	48,460,681	88,955,292
Assets held for local contributing employers	—	1,965,508	—	1,965,508
Pension adjustment payroll payable	—	60,025	—	60,025
Due to State of New Jersey	1,271,926	42,114	—	1,314,040
Due to other funds	<u>—</u>	<u>140,616</u>	<u>—</u>	<u>140,616</u>
Total liabilities	<u>\$ 41,766,537</u>	<u>2,208,263</u>	<u>48,460,681</u>	<u>92,435,481</u>

See accompanying independent auditors' report.

**STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS**

Combining Schedule of Changes in Fiduciary Net Position Information
Fiduciary Funds – Agency Funds

Year ended June 30, 2018

	<u>Alternate Benefit Program Fund</u>	<u>Pension Adjustment Fund</u>	<u>Dental Expense Program Fund</u>	<u>Total Agency Funds</u>
Additions:				
Contributions:				
Members	\$ 833,121	—	109,947,440	110,780,561
Employers	<u>198,747,704</u>	<u>1,271,182</u>	<u>37,396,066</u>	<u>237,414,952</u>
Total contributions	<u>199,580,825</u>	<u>1,271,182</u>	<u>147,343,506</u>	<u>348,195,513</u>
Investment income:				
Interest	<u>51,587</u>	<u>27,866</u>	<u>680,470</u>	<u>759,923</u>
Total investment income	<u>51,587</u>	<u>27,866</u>	<u>680,470</u>	<u>759,923</u>
Total additions	<u>199,632,412</u>	<u>1,299,048</u>	<u>148,023,976</u>	<u>348,955,436</u>
Deductions:				
Benefits	199,467,955	1,359,078	143,368,103	344,195,136
Refunds of contributions	<u>164,457</u>	<u>(60,030)</u>	<u>4,655,873</u>	<u>4,760,300</u>
Total deductions	<u>199,632,412</u>	<u>1,299,048</u>	<u>148,023,976</u>	<u>348,955,436</u>
Change in net position	—	—	—	—
Net position – beginning of year	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
Net position – end of year	<u>\$ —</u>	<u>—</u>	<u>—</u>	<u>—</u>

See accompanying independent auditors' report.

STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS

Combining Schedule of Balance Sheet Information
Agency Fund – Dental Expense Program Fund

June 30, 2018

	State	Local	Total Agency Fund – Dental Expense Program Fund
Assets:			
Cash and cash equivalents	\$ 181,496	13,660	195,156
Receivables:			
Other	192,196	163,587	355,783
Total receivables	192,196	163,587	355,783
Investments, at fair value:			
Cash Management Fund	37,044,423	10,865,319	47,909,742
Total investments	37,044,423	10,865,319	47,909,742
Total assets	\$ 37,418,115	11,042,566	48,460,681
Liabilities:			
Accounts payable and accrued expenses	\$ 37,418,115	11,042,566	48,460,681
Total liabilities	\$ 37,418,115	11,042,566	48,460,681

See accompanying independent auditors' report.

STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS

Combining Schedule of Changes in Fiduciary Net Position Information
Agency Fund – Dental Expense Program Fund

Year ended June 30, 2018

	<u>State</u>	<u>Local</u>	<u>Total Agency Fund – Dental Expense Program Fund</u>
Additions:			
Contributions:			
Members	\$ 59,182,176	50,765,264	109,947,440
Employers	32,485,916	4,910,150	37,396,066
Total contributions	<u>91,668,092</u>	<u>55,675,414</u>	<u>147,343,506</u>
Investment income:			
Net decrease in fair value of investments	—	—	—
Interest	519,820	160,650	680,470
Total investment income	<u>519,820</u>	<u>160,650</u>	<u>680,470</u>
Total additions	<u>92,187,912</u>	<u>55,836,064</u>	<u>148,023,976</u>
Deductions:			
Benefits	88,219,501	55,148,602	143,368,103
Refunds of contributions	3,968,411	687,462	4,655,873
Total deductions	<u>92,187,912</u>	<u>55,836,064</u>	<u>148,023,976</u>
Change in net position	—	—	—
Net position – beginning of year	<u>—</u>	<u>—</u>	<u>—</u>
Net position – end of year	<u>\$ —</u>	<u>—</u>	<u>—</u>

See accompanying independent auditors' report.

STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS

Schedule of Changes in Assets and Liabilities Information
Agency Fund – Alternate Benefit Program Fund

June 30, 2018

	<u>Balance</u> <u>June 30, 2017</u>	<u>Additions</u>	<u>Deductions</u>	<u>Balance</u> <u>June 30, 2018</u>
Assets:				
Cash and cash equivalents	\$ 950,247	176,867,509	177,013,025	804,731
Receivables:				
Other	38,879,816	40,385,204	38,879,816	40,385,204
Investments, at fair value:				
Cash Management Fund	896,915	205,037,800	205,358,113	576,602
Total assets	<u>\$ 40,726,978</u>	<u>422,290,513</u>	<u>421,250,954</u>	<u>41,766,537</u>
Liabilities:				
Accounts payable and accrued expenses	\$ 40,644,958	41,115,694	41,266,041	40,494,611
Due to State of New Jersey	82,020	1,271,926	82,020	1,271,926
Total liabilities	<u>\$ 40,726,978</u>	<u>42,387,620</u>	<u>41,348,061</u>	<u>41,766,537</u>

See accompanying independent auditors' report.

**STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS**

Schedule of Changes in Assets and Liabilities Information
Agency Fund – Pension Adjustment Fund

June 30, 2018

	<u>Balance June 30, 2017</u>	<u>Additions</u>	<u>Deductions</u>	<u>Balance June 30, 2018</u>
Assets:				
Cash and cash equivalents	\$ 1,028,528	938,293	1,842,026	124,795
Receivables:				
State related employer contributions	258,955	1,166,759	1,234,414	191,300
Other	3,457	7,738	9,408	1,787
Investments, at fair value:				
Cash Management Fund	1,009,611	2,362,310	1,481,540	1,890,381
Total assets	<u>\$ 2,300,551</u>	<u>4,475,100</u>	<u>4,567,388</u>	<u>2,208,263</u>
Liabilities:				
Assets held for local contributing employers	\$ 2,023,233	—	57,725	1,965,508
Pension adjustment payroll payable	72,370	881,743	894,088	60,025
Due to State of New Jersey	44,420	42,114	44,420	42,114
Due to other funds	160,528	895,387	915,299	140,616
Total liabilities	<u>\$ 2,300,551</u>	<u>1,819,244</u>	<u>1,911,532</u>	<u>2,208,263</u>

See accompanying independent auditors' report.

STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS

Schedule of Changes in Assets and Liabilities Information
Agency Fund – Dental Expense Program Fund – Total

June 30, 2018

	<u>Balance</u> <u>June 30, 2017</u>	<u>Additions</u>	<u>Deductions</u>	<u>Balance</u> <u>June 30, 2018</u>
Assets:				
Cash and cash equivalents	\$ 225,496	37,589,956	37,620,296	195,156
Receivables:				
Other	1,476,104	141,954,094	143,074,415	355,783
Investments, at fair value:				
Cash Management Fund	<u>47,362,532</u>	<u>203,787,819</u>	<u>203,240,609</u>	<u>47,909,742</u>
Total assets	<u>\$ 49,064,132</u>	<u>383,331,869</u>	<u>383,935,320</u>	<u>48,460,681</u>
Liabilities:				
Accounts payable and accrued expenses	<u>\$ 49,064,132</u>	<u>42,964,892</u>	<u>43,568,343</u>	<u>48,460,681</u>
Total liabilities	<u>\$ 49,064,132</u>	<u>42,964,892</u>	<u>43,568,343</u>	<u>48,460,681</u>

See accompanying independent auditors' report.

**STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS**

Schedule of Changes in Assets and Liabilities Information
Agency Fund – Dental Expense Program Fund – State

June 30, 2018

	<u>Balance June 30, 2017</u>	<u>Additions</u>	<u>Deductions</u>	<u>Balance June 30, 2018</u>
Assets:				
Cash and cash equivalents	\$ 217,316	31,450,777	31,486,597	181,496
Receivables:				
Other	1,388,124	90,095,911	91,291,839	192,196
Investments, at fair value:				
Cash Management Fund	<u>33,094,127</u>	<u>146,887,227</u>	<u>142,936,931</u>	<u>37,044,423</u>
Total assets	<u>\$ 34,699,567</u>	<u>268,433,915</u>	<u>265,715,367</u>	<u>37,418,115</u>
Liabilities:				
Accounts payable and accrued expenses	<u>\$ 34,699,567</u>	<u>34,647,803</u>	<u>31,929,255</u>	<u>37,418,115</u>
Total liabilities	<u>\$ 34,699,567</u>	<u>34,647,803</u>	<u>31,929,255</u>	<u>37,418,115</u>

See accompanying independent auditors' report.

STATE OF NEW JERSEY
DIVISION OF PENSIONS AND BENEFITS

Schedule of Changes in Assets and Liabilities Information
Agency Fund – Dental Expense Program Fund – Local

June 30, 2018

	<u>Balance</u> <u>June 30, 2017</u>	<u>Additions</u>	<u>Deductions</u>	<u>Balance</u> <u>June 30, 2018</u>
Assets:				
Cash and cash equivalents	\$ 8,180	6,139,179	6,133,699	13,660
Receivables:				
Other	87,980	51,858,183	51,782,576	163,587
Investments, at fair value:				
Cash Management Fund	<u>14,268,405</u>	<u>56,900,592</u>	<u>60,303,678</u>	<u>10,865,319</u>
Total assets	<u>\$ 14,364,565</u>	<u>114,897,954</u>	<u>118,219,953</u>	<u>11,042,566</u>
Liabilities:				
Accounts payable and accrued expenses	<u>\$ 14,364,565</u>	<u>8,317,089</u>	<u>11,639,088</u>	<u>11,042,566</u>
Total liabilities	<u>\$ 14,364,565</u>	<u>8,317,089</u>	<u>11,639,088</u>	<u>11,042,566</u>

See accompanying independent auditors' report.