2019 COMPREHENSIVE ANNUAL FINANCIAL REPORT

For the Fiscal Year Ended June 30, 2019

INPRS is a component unit and a pension trust fund of the State of Indiana.

INPRS
INDIANA PUBLIC RETIREMENT SYSTEM

Prepared through the joint efforts of INPRS's team members.
Available online at www.in.gov/inprs

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INPRS is a component unit and a pension trust fund of the State of Indiana.

INPRS is a trust and an independent body corporate and politic. The system is not a department or agency of the state, but is an independent instrumentality exercising essential governmental functions (IC 5-10.5-2-3).

	FUNDS MANAGED BY INPRS	ABBREVIATIONS USED
	Defined Benefit	**DB Fund**
1.	Public Employees' Defined Benefit Account	PERF DB
2.	Teachers' Pre-1996 Defined Benefit Account	TRF Pre-'96 DB
3.	Teachers' 1996 Defined Benefit Account	TRF '96 DB
4.	1977 Police Officers' and Firefighters' Retirement Fund	'77 Fund
5.	Judges' Retirement System	JRS
6.	Excise, Gaming and Conservation Officers' Retirement Fund	EG&C
7.	Prosecuting Attorneys' Retirement Fund	PARF
8.	Legislators' Defined Benefit Fund	LE DB
	Defined Contribution	**DC Fund**
9.	Public Employees' Defined Contribution Account	PERF DC
10.	My Choice: Retirement Savings Plan for Public Employees	PERF MC DC
11.	Teachers' Defined Contribution Account	TRF DC
12.	Legislators' Defined Contribution Fund	LE DC
	Other Postemployement Benefit	**OPEB Fund**
13.	Special Death Benefit Fund	SDBF
	Custodial	**Custodial Fund**
14.	Local Public Safety Pension Relief Fund	LPSPR

Contact Information

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For the Fiscal Year Ended June 30, 2019

Financial Section

Integrity

We hold ourselves accountable to the highest standards of ethical and professional behavior.

$1.9 Billion

Increase in net position over the previous fiscal year

$3.1 Billion

Benefits and distributions paid to members

$150 Million

Additional funds appropriated to overfund TRF '96 DB

$46 Million

Earmarked to five newly established supplemental reserve accounts

INPRS

INDIANA PUBLIC RETIREMENT SYSTEM

RSM

RSM US LLP

Independent Auditor’s Report

Board of Trustees
Indiana Public Retirement System

Report on the Financial Statements

We have audited the accompanying Statement of Fiduciary Net Position of the Indiana Public Retirement System (System), a component unit of the State of Indiana, as of June 30, 2019, and the related Statement of Changes in its Fiduciary Net Position for the year then ended, and the related notes to the financial statements, which collectively comprise the System’s basic financial statements as listed in the table of contents.

Management’s Responsibility for the Financial Statements

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

Auditor’s Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor’s judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity’s preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity’s internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Indiana Public Retirement System as of June 30, 2019, and the changes in its fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Prior-Year Comparative Information:
We have previously audited the System’s 2018 financial statements, and we expressed an unmodified opinion in our report dated November 16, 2018. In our opinion, the summarized comparative information presented herein as of and for the year ended June 30, 2018, is consistent, in all material respects, with the audited financial statements from which it has been derived.

Required Supplementary Information:
Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 18 through 21 and the schedules of changes in net pension liability and net pension liability, schedule of contributions, schedule of investment returns, annual money-weighted rate of return, net of investment expense and the related schedule of notes to required supplementary information on pages 61 through 81 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information:
Our audit for the year ended June 30, 2019 was conducted for the purpose of forming an opinion on the System's basic financial statements. The other supplementary information consisting of Supporting Schedules in the financial section, and the accompanying introductory, investment, actuarial, and statistical sections are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The other supplementary information for the year ended June 30, 2019 (pages 82 through 84) is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The supporting schedules in the financial section have been subjected to the auditing procedures applied in the audit of the basic financial statements for the year ended June 30, 2019 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 supporting schedules in the financial section, are fairly stated in all material respects, in relation to the basic financial statements as a whole as of and for the year ended June 30, 2019.

We have also previously audited, in accordance with auditing standards generally accepted in the United States of America, the System's basic financial statements as of and for the year ended June 30, 2018 (not presented herein), and have issued our report thereon dated November 16, 2018, which contained an unmodified opinion on those basic financial statements. The accompanying supplementary information which consists of supporting schedules in the financial section, for the year ended June 30, 2018 is presented for purposes of additional analysis and is not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the 2018 basic financial statements. The supporting schedules in the financial section have been subjected to the auditing procedures applied in the audit of the 2018 basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare those basic financial statements or to those 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 supplementary information is fairly stated, in all material respects, in relation to the basic financial statements as a whole for the year ended June 30, 2018.

The introductory, investment, actuarial, and statistical sections have not been subjected to the auditing procedures applied in the audit of the financial statements, and accordingly, we do not express an opinion or provide any assurance on them.

RSM US LLP

Indianapolis, Indiana
November 22, 2019

Introduction

Management's Discussion & Analysis (MD&A) provides details of INPRS's financial performance during the fiscal year ended June 30, 2019. The MD&A is intended to serve as an introduction to INPRS's financial statements that we present in conjunction with the Letter of Transmittal included in the Introductory Section of this CAFR. Reviewing these statements, along with the accompanying notes, as well as the Investment, Actuarial, and Statistical sections provides for a better understanding of INPRS's financial position.

The Statement of Fiduciary Net Position is a point-in-time snapshot of the amounts the plans have accumulated in net assets to pay for future benefits and any liabilities that are owed as of the statement date. The Statement of Changes in Fiduciary Net Position presents the additions and deductions for the fiscal year. Major sources of additions are contributions and investment income. Major sources of deductions are benefit disbursements, distributions of contributions and interest, and administrative expenses.

Notes to the Financial Statements provide additional analysis that are essential for complete understanding of the information provided in the financial statements. The notes describe the history and purpose of the plans, current information about accounting and investment policies, actuarial methods and assumptions, as well as subsequent events that may impact INPRS's financial position.

The Required Supplementary Information includes schedules about the changes in the net pension liability, employer contributions, actuarial assumptions used to calculate the actuarially determined contributions, historical trends, along with other information used in evaluating the financial condition of INPRS.

INPRS administers 14 funds consisting of eight defined benefit and four defined contribution retirement funds, one other postemployment benefit fund, and one custodial fund (refer to Note 1 for further details). PERF DC and PERF MC DC are consolidated on the financial statements for reporting purposes and shown as PERF DC.

Management Discussion

Financial Highlights

The Fiduciary Net Position of INPRS held in trust to pay pension benefits and refund of contributions were $36.1 billion as of June 30, 2019. The amount reflects an increase of $1.9 billion from the prior year. This change is primarily the result of the net appreciation of the fair value of the investment portfolio.

- INPRS's Net Investment Income for the years ended June 30, 2019 and 2018 was $2.3 billion and $2.8 billion, respectively. The decrease in Net Investment Income compared to prior year is due to a lower rate of return on investments. The money-weighted rate of return for Defined Benefits, net of investment expense, was 6.84 percent for the year ended June 30, 2019 and 8.88 percent for the year ended June 30, 2018.
- Contributions from employers, members, and appropriations were $2.7 billion for the year ended June 30, 2019 compared to $2.5 billion for the fiscal year ended June 30, 2018. The $0.2 billion increase was due to an additional $150 million appropriation for TRF '96 DB, the annual 3% increase in appropriations for TRF-Pre '96 DB which totaled $26 million, and an increase in covered payroll of $33 million. Supplemental Reserve Accounts at June 30, 2019 totaled $46 million. These reserves, established on July 1, 2018, will fund future postretirement benefit increases for PERF DB, TRF Pre-'96 DB, TRF '96 DB, EG&C, and LE DB.
- Benefits and refunds of contributions and interest paid totaled $3.1 billion for the year ended June 30, 2019 compared to $2.9 billion for the year ended June 30, 2018. The $0.2 billion increase was due to a full year of outsourcing annuities to MetLife, as well as an increase in retirements. Benefits paid included a distribution of $54 million as a 13th check to certain benefit recipients of PERF DB, TRF Pre-'96 DB, TRF '96 DB, and EG&C.

CONDENSED SUMMARY OF TOTAL FIDUCIARY NET POSITION RESTRCTED

(dollars in millions)	Defined Benefit		Defined Contribution		OPEB and Custodial		Total		Increase/(Decrease)	
Assets	**2019**	**2018**	**2019**	**2018**	**2019**	**2018**	**2019**	**2018**	**Amount**	**Percent**
Investments	$ 40,054	$ 37,794	$ 5,767	$ 5,670	$ 31	$ 41	$ 45,852	$ 43,505	$ 2,347	5.4%
Other Assets	36	45	5	6	4	3	45	54	(9)	(16.7)
Total Assets	**40,090**	**37,839**	**5,772**	**5,676**	**35**	**44**	**45,897**	**43,559**	**2,338**	5.4
Liabilities										
Investments	9,684	9,328	22	26	—	—	9,706	9,354	352	3.8
Other Liabilities	116	16	5	4	2	2	123	22	101	459.1
Total Liabilities	**9,800**	**9,344**	**27**	**30**	**2**	**2**	**9,829**	**9,376**	**453**	4.8
Net Position	**$ 30,290**	**$ 28,495**	**$ 5,745**	**$ 5,646**	**$ 33**	**$ 42**	**$ 36,068**	**$ 34,183**	**$ 1,885**	**5.5%**

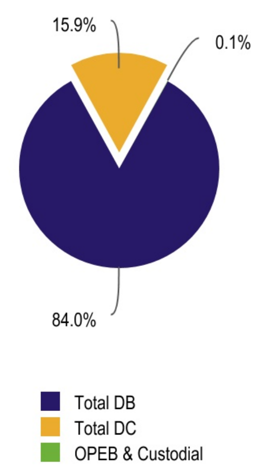
CONDENSED SUMMARY OF CHANGES IN TOTAL FIDUCIARY NET POSITION RESTRICTED

(dollars in millions)	Defined Benefit		Defined Contribution		OPEB and Custodial		Total		Increase/(Decrease)	
Additions	**2019**	**2018**	**2019**	**2018**	**2019**	**2018**	**2019**	**2018**	**Amount**	**Percent**
Contributions	$ 2,163	$ 2,099	$ 304	$ 153	$ 201	$ 207	$ 2,668	$ 2,459	$ 209	8.5%
Net Investment Income	2,075	2,734	250	89	2	1	2,327	2,824	(497)	(17.6)
Other Additions	12	14	—	5,524	—	—	12	5,538	(5,526)	(99.8)
Total Additions	4,250	4,847	554	5,766	203	208	5,007	10,821	(5,814)	(53.7)
Deductions										
Benefits and Refunds	2,414	2,549	443	146	213	213	3,070	2,908	162	5.6
Other Deductions	41	5,572	11	5	—	—	52	5,577	(5,525)	(99.1)
Total Deductions	2,455	8,121	454	151	213	213	3,122	8,485	(5,363)	(63.2)
Net Increase/(Decrease)	1,795	(3,274)	100	5,615	(10)	(5)	1,885	2,336	(451)	(19.3)
Balance, Beginning of Year	28,495	31,769	5,646	31	42	47	34,183	31,847	2,336	7.3
Balance, End of Year	**$ 30,290**	**$ 28,495**	**$ 5,746**	**$ 5,646**	**$ 32**	**$ 42**	**$ 36,068**	**$ 34,183**	**$ 1,885**	**5.5%**

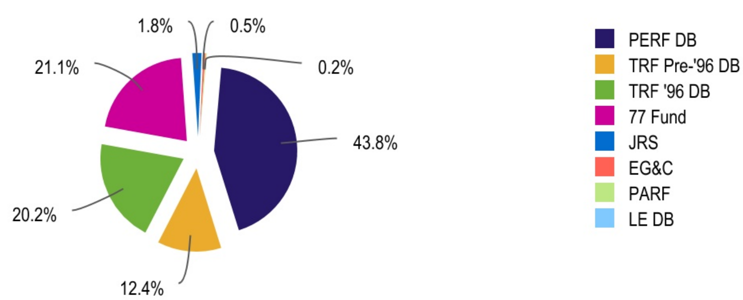
FIDUCIARY NET POSITION RESTRICTED - SUMMARY BY FUND

(dollars in millions)	As of June 30		Increase/ (Decrease)	
Fund	**2019**	**2018**	**Amount**	**Percent**
PERF DB	$ 13,271	$ 12,694	$ 577	4.5%
TRF Pre-'96 DB	3,759	3,711	48	1.3
TRF '96 DB	6,124	5,452	672	12.3
77 Fund	6,380	5,928	452	7.6
JRS	545	514	31	6.0
EG&C	142	132	10	7.6
PARF	66	61	5	8.2
LE DB	3	3	—	—
Total DB	30,290	28,495	1,795	6.3
PERF DC	2,928	2,868	60	2.1
TRF DC	2,784	2,744	40	1.5
LE DC	34	34	—	—
Total DC	5,746	5,646	100	1.8
SDBF	15	15	—	—
LPSPR	17	27	(10)	(37.0)
Total Fiduciary Net Position	**$ 36,068**	**$ 34,183**	**$ 1,885**	**5.5%**

TOTAL NET POSITION BY PLAN TYPE



PERCENT OF TOTAL DB NET POSITION BY FUND



Investment Highlights

Defined Benefits

The consolidated defined benefit assets returned 7.4 percent (time-weighted) net of all fees over the past fiscal year, exceeding the target rate of return, and ended with a fair value of $30.4 billion. Performance of each asset class for the year ended June 30, 2019, the drivers behind the performance, and comparison to the respective benchmark are outlined below:

- The Public Equity global asset class delivered a return of 5.4 percent for the year, which was 6.3 percentage points below the prior year performance. The portfolio outperformed the benchmark by 0.8 percentage points. The domestic segment underperformed the benchmark by 0.9 percentage points and the international segment outperformed the benchmark by 2.3 percentage points. Public Equity Markets experienced volatility during the year due to geopolitical concerns and uncertainty relating to trade negotiations, and monetary policy.
- The Private Markets asset class delivered a return of 20.4 percent for the year, which was better by 4.4 percentage points compared to the prior year's return and exceeded the benchmark by 16.7 percentage points. Co-investment returns were a significant contributor to the returns achieved during the fiscal year, and, generally speaking, the market environment for buyout, growth, venture strategies, and credit continued to be favorable.
- The Fixed Income Ex-Inflation Linked global asset class delivered a return of 10.0 percent, which surpassed the prior year by 8.8 percentage points and delivered a return higher than the benchmark by 0.1 percentage points. Manager selection and asset allocation within the long government/credit and emerging market portfolios were the largest contributors to
- The Fixed Income Inflation Linked global asset class delivered a return of 5.7 percent, which decreased by 0.2 percentage points compared to the prior year and was 0.5 percentage points better than the benchmark. Manager selection was the largest contributor to outperformance.
- The Commodities global asset class delivered a negative return of 8.2 percent, which was lower by 30.2 percentage points compared to the prior year, and below the benchmark by 0.2 percentage points. Energy markets experienced significant volatility, due to trade disputes and tensions between the United States and Iran. Agriculture prices declined due to the severe impact of Chinese tariffs on imported United States agricultural products. Industrial metals prices were adversely impacted by global trade uncertainties and declining growth forecasts around the world. Precious metal prices benefited when central banks eased monetary policy.
- The Real Estate global asset class delivered a return of 8.7 percent, which declined by 3.5 percentage points compared to the prior year and decreased by 7.4 percentage points compared to the benchmark. The opportunistic equity portion of the portfolio underperformed expectations, but value-add equity strategies exceeded expectations.
- The Absolute Return global asset class delivered a return of 4.2 percent which was 1.3 percentage points lower compared to the prior year, but better than the benchmark by 2.4 percentage points particularly due to strategy selection and individual manager performance.
- The Risk Parity global asset class delivered a return of 8.4 percent, which increased by 0.3 percentage points compared to the prior year, and exceeded the benchmark by 2.2 percentage points. Performance for the year was driven mainly by nominal bond and equity positioning with mixed results from commodities.

The following table provides a comparison of annualized time-weighted rates of return for the defined benefit assets for the year ended June 30, 2019 and June 30, 2018, with corresponding benchmarks for each asset class.

		1-Year Actual Return			1-Year Benchmark Return and Variance			
Global Asset Class	Target Allocation	2019	2018	Increase / (Decrease)	2019	Over/(Under) Performance	2018	Over/(Under) Performance
Public Equity	22.0%	5.4%	11.7%	(6.3)	4.6%	0.8	11.1%	0.6
Private Markets	14.0	20.4	16.0	4.4	3.7	16.7	15.6	0.4
Fixed Income - Ex Inflation - Linked	20.0	10.0	1.2	8.8	9.9	0.1	1.0	0.2
Fixed Income - Inflation - Linked	7.0	5.7	5.9	(0.2)	5.2	0.5	4.9	1.0
Commodities	8.0	(8.2)	22.0	(30.2)	(8.0)	(0.2)	16.0	6.0
Real Estate	7.0	8.7	12.2	(3.5)	16.1	(7.4)	(0.3)	12.5
Absolute Return	10.0	4.2	5.5	(1.3)	1.8	2.4	3.7	1.8
Risk Parity	12.0	8.4	8.1	0.3	6.2	2.2	7.4	0.7
Cash + Cash Overlay	—	5.6	9.3	(3.7)	6.9	(1.3)	8.0	1.3
Total Consolidated Defined Benefit Assets		**7.4%**	**9.3%**	**(1.9)**	**6.7%**	**0.7**	**8.3%**	**1.0**

As of June 30, 2019, INPRS estimates 24 percent of the Consolidated Defined Benefit Assets could be liquidated in one week, 58 percent of the assets could be liquidated within one month, and 79 percent of the assets could be liquidated within six months without a significant market impact.

Defined Contribution

The Consolidated Defined Contribution Assets returned 4.5 percent and ended with a fair value of $5.7 billion. On an absolute basis, all seven of the INPRS defined contribution investment funds exhibited positive performance, led by the Large Cap Equity Index Fund which returned 10.4 percent during the fiscal year. The Small/Mid Cap Equity Fund trailed all other investment options on an absolute basis, returning 2.2 percent over the same time period. The International Equity Fund and the Money Market Fund outperformed their respective performance benchmarks by 1.4 percent and 0.1 percent, respectively, while the remaining three actively managed funds trailed their benchmarks. The Fixed Income Fund was the worst performing fund on a relative basis, trailing its benchmark by 0.2 percent. The Small/Mid Cap Equity Fund trailed its benchmark by 0.2 percent, and the Stable Value Fund trailed its benchmark by 0.1 percent.

Actuarial Highlights

In accordance with GASB Statement No. 67, the fair value of assets is used for financial reporting purposes; however, the actuarial value of assets will continue to be used for funding purposes as presented in the Actuarial Section. The Fair Value Funded Status improved for PERF DB, TRF Pre-'96 DB, TRF '96 DB, PARF, and LE DB due to investment gains and contributions, including a special $150 million contribution to TRF '96 DB. The funded status for 77 Fund decreased due to plan benefit increases. The funded status for JRS and EG&C marginally decreased due to larger-than-expected salary growth, leading to liability increases.

The INPRS Funding Policy sets the employer contribution rates for PERF DB, TRF '96 DB, 77 Fund, and EG&C. The employer contribution rate is set to be at least the Actuarially Determined Contribution (ADC), but per the funding policy, is not allowed to decrease until a fund reaches 105% funded. As a result, employers in these funds systemically contribute more than the ADC. TRF Pre-'96 DB, JRS, PARF, and LE DB are funded through appropriations. Due to the biennial budget cycle, these appropriations do not always match their corresponding ADC exactly.

An analysis of the funding progress, contributions, and a summary of actuarial assumptions and methods are outlined in Note 8 and in the Required Supplementary Information of the Financial Section. For additional actuarial-related information on a funding basis, refer to the Actuarial Section.

The following table provides a comparison of the defined benefit funding progress for each plan as of June 30, 2019 and June 30, 2018.

(dollars in millions)

Pre-Funded DB Pension Funds	Fair Value Funded Status 2019	Fair Value Funded Status 2018	Net Pension Liability/ (Asset)	Contributions as a Percent of ADC
PERF DB	80.1%	78.9%	$ 3,305.1	110.2%
TRF '96 DB	102.4	98.0	(143.7)	173.9
77 Fund	99.9	101.5	9.2	197.7
JRS	93.0	93.8	41.2	107.9
EG&C	93.4	93.9	10.1	143.2
PARF	59.5	59.1	44.6	90.8
LE DB	90.0	84.4	0.3	112.1
Pay-As-You-Go DB Pension Fund				
TRF Pre-'96 DB	26.1%	25.4%	$ 10,630.0	100.0%

Request For Information

This financial report is designed to provide the Board of Trustees, our membership, employers, rating agencies, and investment managers with a general overview of INPRS's finances. Questions concerning any of the information provided in this report or requests for additional financial information should be directed to:

Indiana Public Retirement System

Finance Department

One North Capitol, Suite 001

Indianapolis, IN 46204

Statement of Fiduciary Net Position

As of June 30, 2019 (with Comparative Totals as of June 30, 2018) [1]

(dollars in thousands)	Pension Trust Funds [2]								
	Defined Benefit (DB)								
	PERF DB	TRF Pre-'96 DB	TRF '96 DB	'77 Fund	JRS	EG&C	PARF	LE DB	Total DB
Assets									
Cash	$ 1,346	$ 1	$ 240	$ 1,161	$ —	$ —	$ 2	$ —	$ 2,750
Receivables:									
Contributions and Miscellaneous	8,139	2,557	2,749	6,699	3,610	—	14	—	23,768
Investments	137,100	39,822	63,405	65,914	5,602	1,471	677	31	314,022
Foreign Exchange Contracts	3,656,998	1,062,217	1,691,270	1,758,193	149,432	39,232	18,072	837	8,376,251
Interest and Dividends	34,307	9,965	15,866	16,494	1,402	368	170	8	78,580
Due From Other Funds	3,966	—	—	—	—	—	—	—	3,966
Total Receivables	3,840,510	1,114,561	1,773,290	1,847,300	160,046	41,071	18,933	876	8,796,587
Investments:									
Short-Term	—	—	—	—	—	—	—	—	—
Pooled Investments:									
Repurchase Agreements	2,558	743	1,183	1,229	105	27	13	—	5,858
Short-Term	725,888	210,842	335,705	348,989	29,661	7,787	3,587	166	1,662,625
Fixed Income	4,483,900	1,302,400	2,073,692	2,155,748	183,221	48,103	22,159	1,026	10,270,249
Equities	2,883,576	837,567	1,333,581	1,386,350	117,828	30,935	14,250	660	6,604,747
Alternative	5,510,723	1,600,631	2,548,537	2,649,383	225,123	59,105	27,227	1,261	12,621,990
Derivatives	7,625	2,215	3,527	3,667	312	82	38	2	17,468
Total Pooled Investments	13,614,270	3,954,398	6,296,225	6,545,366	556,250	146,039	67,274	3,115	31,182,937
Pooled Synthetic GIC's at Contract Value	—	—	—	—	—	—	—	—	—
Securities Lending Collateral	44,717	12,988	20,680	21,499	1,827	480	221	10	102,422
Total Investments	13,658,987	3,967,386	6,316,905	6,566,865	558,077	146,519	67,495	3,125	31,285,359
Other Assets	201	—	—	—	—	—	—	—	201
Gross Capital Assets	21,259	—	—	—	—	—	—	—	21,259
Less: Accumulated Depreciation and Amortization	(16,348)	—	—	—	—	—	—	—	(16,348)
Net Capital Assets	4,911	—	—	—	—	—	—	—	4,911
Total Assets	**17,505,955**	**5,081,948**	**8,090,435**	**8,415,326**	**718,123**	**187,590**	**86,430**	**4,001**	**40,089,808**
Liabilities									
Administrative Payable	6,169	23	25	70	12	9	8	8	6,324
Retirement Benefits Payable	994	94,417	10,950	2,448	—	100	—	—	108,909
Investments Payable	230,093	66,833	106,412	110,622	9,402	2,468	1,137	53	527,020
Foreign Exchange Contracts Payable	3,675,927	1,067,714	1,700,023	1,767,293	150,205	39,435	18,166	841	8,419,604
Securities Lending Obligations	44,717	12,988	20,680	21,499	1,827	480	221	10	102,422
Obligations Under Reverse Repurchase Agreement	277,059	80,474	128,132	133,202	11,321	2,972	1,369	63	634,592
Due to Other Funds	—	354	127	406	25	11	6	—	929
Due to Other Governments	—	—	—	—	—	—	—	—	—
Total Liabilities	**4,234,959**	**1,322,803**	**1,966,349**	**2,035,540**	**172,792**	**45,475**	**20,907**	**975**	**9,799,800**
Total Fiduciary Net Position Restricted	**$ 13,270,996**	**$ 3,759,145**	**$ 6,124,086**	**$ 6,379,786**	**$ 545,331**	**$ 142,115**	**$ 65,523**	**$ 3,026**	**$ 30,290,008**

[1] *The accompanying notes are an integral part of the financial statements.*

[2] *Pension Trust Fund assets are restricted solely for qualifying member benefits.*

Statement of Fiduciary Net Position, continued

As of June 30, 2019 (with Comparative Totals as of June 30, 2018) [1]

(dollars in thousands)	Pension Trust Funds [2]				OPEB Fund [3]	Custodial Fund	INPRS Totals	
	Defined Contribution (DC)							
	PERF DC	TRF DC	LE DC	Total DC	SDBF	LPSPR	2019	2018
Assets								
Cash	$ 399	$ 21	$ 15	$ 435	$ —	$ —	$ 3,185	$ 9,090
Receivables:								
Contributions and Miscellaneous	2,448	1,497	499	4,444	49	2,941	31,202	32,237
Investments	7,468	7,100	85	14,653	—	—	328,675	220,407
Foreign Exchange Contracts	4,372	4,156	50	8,578	—	—	8,384,829	8,275,856
Interest and Dividends	9,989	9,497	114	19,600	—	188	98,368	89,291
Due From Other Funds	29	—	—	29	—	—	3,995	7,147
Total Receivables	24,306	22,250	748	47,304	49	3,129	8,847,069	8,624,938
Investments:								
Short-Term	—	—	—	—	—	15,996	15,996	25,988
Pooled Investments:								
Repurchase Agreements	—	—	—	—	—	—	5,858	3,631
Short-Term	54,988	52,279	627	107,894	176	—	1,770,695	1,371,057
Fixed Income	241,555	229,654	2,756	473,965	15,010	—	10,759,224	10,132,170
Equities	1,323,146	1,257,960	15,093	2,596,199	—	—	9,200,946	8,877,603
Alternative	—	—	—	—	—	—	12,621,990	11,563,468
Derivatives	—	—	—	—	—	—	17,468	22,970
Total Pooled Investments	1,619,689	1,539,893	18,476	3,178,058	15,186	—	34,376,181	31,970,899
Pooled Synthetic GIC's at Contract Value	1,297,838	1,233,899	14,805	2,546,542	—	—	2,546,542	2,614,560
Securities Lending Collateral	—	—	—	—	—	—	102,422	307,922
Total Investments	2,917,527	2,773,792	33,281	5,724,600	15,186	15,996	37,041,141	34,919,369
Other Assets	—	—	—	—	—	—	201	159
Gross Capital Assets	—	—	—	—	—	—	21,259	21,121
Less: Accumulated Depreciation and Amortization	—	—	—	—	—	—	(16,348)	(15,981)
Net Capital Assets	—	—	—	—	—	—	4,911	5,140
Total Assets	**2,942,232**	**2,796,063**	**34,044**	**5,772,339**	**15,235**	**19,125**	**45,896,507**	**43,558,696**
Liabilities								
Administrative Payable	1,121	291	1	1,413	—	—	7,737	8,808
Retirement Benefits Payable	392	123	19	534	—	—	109,443	4,710
Investments Payable	6,753	6,421	77	13,251	1	—	540,272	489,726
Foreign Exchange Contracts Payable	4,374	4,159	50	8,583	—	—	8,428,187	8,257,435
Securities Lending Obligations	—	—	—	—	—	—	102,422	307,922
Obligations Under Reverse Repurchase Agreement	—	—	—	—	—	—	634,592	298,692
Due to Other Funds	2,122	943	—	3,065	1	—	3,995	7,147
Due to Other Governments	—	—	—	—	—	1,506	1,506	1,693
Total Liabilities	**14,762**	**11,937**	**147**	**26,846**	**2**	**1,506**	**9,828,154**	**9,376,133**
Total Fiduciary Net Position Restricted	**$ 2,927,470**	**$ 2,784,126**	**$ 33,897**	**$ 5,745,493**	**$ 15,233**	**$ 17,619**	**$ 36,068,353**	**$ 34,182,563**

[1] The accompanying notes are an integral part of the financial statements.

[2] Pension Trust Fund assets are restricted solely for qualifying member benefits.

[3] Other postemployment benefit trust fund.

Statement of Changes in Fiduciary Net Position

For the Year Ended June 30, 2019 (with Comparative Totals as of June 30, 2018) [1]

(dollars in thousands)

	Pension Trust Funds [2]								
	Defined Benefit (DB)								
	PERF DB	TRF Pre-'96 DB	TRF '96 DB	'77 Fund	JRS	EG&C	PARF	LE DB	Total DB
Additions									
Contributions:									
Employer	$ 581,873	$ 3,505	$ 393,172	$ 155,051	$ 16,031	$ 6,982	$ 3,216	$ 269	$ 1,160,099
Nonemployer Contributing Entity	—	943,900	—	—	—	—	—	—	943,900
Member	296	36	127	52,811	3,476	1,368	1,307	—	59,421
Total Contributions	582,169	947,441	393,299	207,862	19,507	8,350	4,523	269	2,163,420
Investment Income:									
Net Appreciation Fair Value of Investments	799,983	236,214	363,116	384,004	32,881	8,554	3,956	185	1,828,893
Other Net Investment Income	498	158	218	237	21	5	2	—	1,139
Net Interest and Dividends Income	192,841	59,269	85,743	91,744	7,870	2,042	948	45	440,502
Securities Lending Income	1,283	403	565	607	52	14	6	—	2,930
Total Investment Income	994,605	296,044	449,642	476,592	40,824	10,615	4,912	230	2,273,464
Less Direct Investment Expenses:									
Investment Management Fees	(82,406)	(25,442)	(36,577)	(39,180)	(3,364)	(872)	(405)	(19)	(188,265)
Securities Lending Fees	(264)	(83)	(117)	(126)	(11)	(3)	(1)	—	(605)
General Investment Expenses	(5,547)	(1,510)	(1,801)	(1,057)	(78)	(29)	(17)	(2)	(10,041)
Total Direct Investment Expenses	(88,217)	(27,035)	(38,495)	(40,363)	(3,453)	(904)	(423)	(21)	(198,911)
Net Investment Income	906,388	269,009	411,147	436,229	37,371	9,711	4,489	209	2,074,553
Other Additions:									
Transfer from Defined Benefit	—	—	—	—	—	—	—	—	—
Member Reassignment Income	2,101	2,931	4,958	—	—	—	—	—	9,990
Miscellaneous Income	882	317	605	2	—	—	—	—	1,806
Total Other Additions	2,983	3,248	5,563	2	—	—	—	—	11,796
Total Additions	**1,491,540**	**1,219,698**	**810,009**	**644,093**	**56,878**	**18,061**	**9,012**	**478**	**4,249,769**
Deductions									
Pension, Disability and Survivor Benefits	888,512	1,165,134	132,572	185,537	25,236	7,249	4,234	356	2,408,830
Special Death Benefits	—	—	—	951	—	—	—	—	951
Distributions of Contributions and Interest	—	—	—	3,463	155	76	199	—	3,893
Distributions of Custodial Funds	—	—	—	—	—	—	—	—	—
Administrative Expenses	18,472	5,329	5,038	1,904	108	112	75	38	31,076
Transfer to Defined Contribution	—	—	—	—	—	—	—	—	—
Member Reassignment Expenses	7,888	1,437	665	—	—	—	—	—	9,990
Miscellaneous Expenses	—	—	—	22	—	—	—	—	22
Total Deductions	**914,872**	**1,171,900**	**138,275**	**191,877**	**25,499**	**7,437**	**4,508**	**394**	**2,454,762**
Net Increase / (Decrease)	**576,668**	**47,798**	**671,734**	**452,216**	**31,379**	**10,624**	**4,504**	**84**	**1,795,007**
Beginning Fiduciary Net Position Restricted	12,694,328	3,711,347	5,452,352	5,927,570	513,952	131,491	61,019	2,942	28,495,001
Ending Fiduciary Net Position Restricted	**$13,270,996**	**$ 3,759,145**	**$ 6,124,086**	**$ 6,379,786**	**$ 545,331**	**$ 142,115**	**$ 65,523**	**$ 3,026**	**$ 30,290,008**

[1] The accompanying notes are an integral part of the financial statements.

[2] Pension Trust Fund assets are restricted solely for qualifying member benefits.

Statement of Changes in Fiduciary Net Position, continued

For the Year Ended June 30, 2019 (with Comparative Totals as of June 30, 2018) [1]

(dollars in thousands)	Pension Trust Funds [2]				OPEB Fund [3]	Custodial Fund	INPRS Totals	
	Defined Contribution (DC)							
	PERF DC	TRF DC	LE DC	Total DC	SDBF	LPSPR	2019	2018
Additions								
Contributions:								
Employer	$ —	$ —	$ 1,483	$ 1,483	$ —	$ —	$ 1,161,582	$ 984,332
Nonemployer Contributing Entity	—	—	—	—	515	200,710	1,145,125	1,124,814
Member	178,108	123,437	407	301,952	—	—	361,373	349,246
Total Contributions	178,108	123,437	1,890	303,435	515	200,710	2,668,080	2,458,392
Investment Income:								
Net Appreciation Fair Value of Investments	88,302	89,054	1,038	178,394	992	—	2,008,279	2,558,820
Other Net Investment Income	22	27	—	49	—	—	1,188	1,624
Net Interest and Dividends Income	36,857	45,643	681	83,181	3	1,832	525,518	464,630
Securities Lending Income	—	—	—	—	—	—	2,930	4,555
Total Investment Income	125,181	134,724	1,719	261,624	995	1,832	2,537,915	3,029,629
Less Direct Investment Expenses:								
Investment Management Fees	(4,725)	(4,415)	(87)	(9,227)	(5)	—	(197,497)	(189,216)
Securities Lending Fees	—	—	—	—	—	—	(605)	(825)
General Investment Expenses	(1,144)	(884)	(10)	(2,038)	—	—	(12,079)	(15,221)
Total Direct Investment Expenses	(5,869)	(5,299)	(97)	(11,265)	(5)	—	(210,181)	(205,262)
Net Investment Income	119,312	129,425	1,622	250,359	990	1,832	2,327,734	2,824,367
Other Additions:								
Transfer from Defined Benefit	—	—	—	—	—	—	—	5,524,199
Member Reassignment Income	—	—	—	—	—	—	9,990	13,446
Miscellaneous Income	—	—	25	25	—	—	1,831	695
Total Other Additions	—	—	25	25	—	—	11,821	5,538,340
Total Additions	**297,420**	**252,862**	**3,537**	**553,819**	**1,505**	**202,542**	**5,007,635**	**10,821,099**
Deductions								
Pension, Disability and Survivor Benefits	—	—	—	—	—	—	2,408,830	2,514,769
Special Death Benefits	—	—	—	—	1,050	—	2,001	1,634
Distributions of Contributions and Interest	230,340	209,642	3,228	443,210	—	—	447,103	179,575
Distributions of Custodial Funds	—	—	—	—	—	212,239	212,239	212,634
Administrative Expenses	7,186	3,127	8	10,321	1	—	41,398	38,991
Transfer to Defined Contribution	—	—	—	—	—	—	—	5,524,199
Member Reassignment Expenses	—	—	—	—	—	—	9,990	13,446
Miscellaneous Expenses	155	70	—	225	—	37	284	437
Total Deductions	**237,681**	**212,839**	**3,236**	**453,756**	**1,051**	**212,276**	**3,121,845**	**8,485,685**
Net Increase / (Decrease)	**59,739**	**40,023**	**301**	**100,063**	**454**	**(9,734)**	**1,885,790**	**2,335,414**
Beginning Fiduciary Net Position Restricted	2,867,731	2,744,103	33,596	5,645,430	14,779	27,353	34,182,563	31,847,149
Ending Fiduciary Net Position Restricted	**$ 2,927,470**	**$ 2,784,126**	**$ 33,897**	**$ 5,745,493**	**$ 15,233**	**$ 17,619**	**$ 36,068,353**	**$ 34,182,563**

[1] The accompanying notes are an integral part of the financial statements.

[2] Pension Trust Fund assets are restricted solely for qualifying member benefits.

[3] Other postemployment benefit trust fund.

Note 1. Descriptions of System and Funds

Reporting Entity

The Indiana Public Retirement System (INPRS) is an independent body corporate and politic, a component unit, and is not a department or agency of the state of Indiana. INPRS exercises essential government functions as established by Indiana Public Law 23-2011, and is a pension trust fund for the state of Indiana for financial statement reporting purposes.

INPRS administers 14 funds consisting of eight defined benefit and four defined contribution retirement funds, one other postemployment benefit fund, and one custodial fund. PERF DC and PERF MC DC are consolidated on the financial statements for reporting purposes and shown as PERF DC. These fiduciary funds account for assets held by the government in a trustee capacity or as an agent on behalf of others.

In accordance with Indiana Code (IC) 5-10.5, INPRS is governed by a nine-member Board of Trustees. The Board approves an annual budget for general administrative and direct investment expenses. Expenses are paid from investment earnings and if necessary plan assets. The Board is composed of:

- One trustee with experience in economics, finance, or investments;
- One trustee with experience in executive management or benefits administration;
- One trustee who is an active or retired member of the ’77 Fund;
- Two trustees who are TRF members with at least 10 years of creditable service;
- One trustee who is a PERF member with at least 10 years of creditable service;
- Director of the State Budget Agency, or designee;
- Auditor of State, or nominee;
- Treasurer of State, or nominee.

Demographic Information of Funds

DB member data shown below is based on census data as of June 30, 2018, and used in the actuarial valuations for June 30, 2019. DC member data is as of June 30, 2018, based on information from the recordkeeper.

		Number of DB Members				
DB Fund	Number of DB Employers	Active	Annuitants	Inactive Vested	Inactive Non-Vested With Balance	Total
PERF DB	1,187	129,099	89,932	33,062	—	252,093
TRF Pre-'96 DB	345	10,497	53,498	2,382	—	66,377
TRF '96 DB	373	58,308	7,041	5,778	—	71,127
77 Fund	168	14,119	5,187	243	1,200	20,749
JRS	1	453	375	22	36	886
EG&C	1	436	240	4	137	817
PARF	1	203	152	92	132	579
LE DB	1	8	78	9	—	95

		Number of DC Members		
DC Fund	Number of DC Employers	Active	Inactive	Total
PERF DC	1,188	127,189	87,128	214,317
PERF MC DC	9	1,489	1,846	3,335
TRF DC	374	69,193	25,218	94,411
LE DC	1	150	67	217

Description of Defined Benefit Funds

Public Employees' Defined Benefit Account (PERF DB)

PERF DB is a cost-sharing, multiple-employer defined benefit fund providing retirement, disability, and survivor benefits to full-time employees of the State of Indiana not covered by another plan and those political subdivisions (counties, cities, townships, and other governmental units) that elect to participate in the retirement fund. Administration of the fund is generally in accordance with IC 5-10.2, 5-10.3, 5-10.5, 35 IAC 1.2, and other Indiana pension law. PERF DB is a component of the Public Employees' Hybrid plan (PERF Hybrid).

PERF Hybrid consists of two components: PERF DB, the monthly employer-funded defined benefit component, along with the Public Employees' Hybrid Members Defined Contribution Account (PERF DC), a member-funded account. First time new employees hired by the State or a participating political subdivision who offers a choice have a one-time election to join either the PERF Hybrid plan or PERF My Choice: Retirement Savings Plan for Public Employees (PERF MC DC). Refer to the Description of Defined Contribution Funds for discussion of both the PERF DC and PERF MC DC accounts. A new hire that is an existing member of PERF Hybrid and was not given the option for the PERF MC DC plan is given the option to elect PERF MC DC or remain in PERF Hybrid.

Members who have at least one year of service in both PERF DB and the Teachers' Retirement Fund (TRF Pre-'96 DB or TRF '96 DB) have the option of choosing from which of these funds they would like to retire.

Eligibility for Pension Benefit Payment

Full Retirement Benefit

- At age 65 with at least 10 years of creditable service (eight years for certain elected officials).
- At age 60 with at least 15 years of creditable service.
- At age 55 if age and creditable service total at least 85 ("Rule of 85").
- At age 55 with 20 years of creditable service and active as an elected official in the PERF-covered position.
- At age 70 with 20 years of creditable service and still active in the PERF-covered position.

Early Retirement Benefit

Age 50 and minimum of 15 years of creditable service (44 percent of full benefit at age 50, increasing five percent per year up to 89 percent at age 59).

Disability Benefit

An active member qualifying for Social Security disability with five years of creditable service may receive an unreduced retirement benefit for the duration of their disability (minimum of $180 per month).

Survivor Benefit

While in active service, a spouse or dependent beneficiary of a member with a minimum of 15 years of creditable service receives a benefit as if the member retired the later of age 50 or the age the day before the member's death.

While receiving a benefit, a spouse or dependent receives the benefit associated with the member's selected form of payment: Five Year Certain & Life, Joint with 100 percent Survivor Benefits, Joint with Two-Thirds Survivor Benefits, or Joint with One-Half Survivor Benefits.

Contribution Rates

Contributions are determined by the Board based on an actuarial valuation. Employers contribute 11.2 percent of covered payroll, with 0.43 percent funding a supplemental reserve account for postretirement benefits. Contributions from employers with PERF MC DC plan members, who either currently offer or have offered PERF Hybrid, fund PERF DB's unfunded liability at 8.2 percent of covered payroll for the State and 7.4 percent for political subdivisions. No member contributions are required.

Benefit Formula & Postretirement Benefit Adjustment

Lifetime Annual Benefit = Years of Creditable Service x Average Highest Five-Year Annual Salary x 1.1 percent (minimum of $180 per month). Average annual compensation is outlined in IC 5-10.2-4-3 and includes compensation of not more than $2,000 received from the employer in severance.

Postretirement benefit increases are granted on an ad hoc basis pursuant to IC 5-10.2-12.4 and administered by the Board. For the year ended June 30, 2019, postretirement benefits of $29.6 million were issued to members as a 13th check.

Description of Defined Benefit Funds (continued)

Teachers' Pre-1996 Defined Benefit Account (TRF Pre-'96 DB)

TRF Pre-'96 DB is a pay-as-you-go, cost-sharing, multiple-employer defined benefit fund providing retirement, disability, and survivor benefits for teachers, administrators, and certain INPRS personnel hired before July 1, 1996. Membership in TRF Pre-'96 DB is closed to new entrants. Administration of the fund is generally in accordance with IC 5-10.2, IC 5-10.4, 35 IAC 14, and other Indiana pension law. TRF Pre-'96 DB is a component of the Teachers' Hybrid Plan.

The Teachers' Hybrid Plan consists of two components: TRF Pre-'96 DB: the monthly employer-funded defined benefit component, along with TRF DC, a member-funded account. Refer to the Description of Defined Contribution Funds for discussion of the TRF DC plan.

Eligibility for Pension Benefit Payment

Full Retirement Benefit

- At age 65 with at least 10 years of creditable service.
- At age 60 with at least 15 years of creditable service.
- At age 55 if age and creditable service total at least 85 ("Rule of 85").
- At age 55 with 20 years of creditable service and active as an elected official in the TRF- covered position.
- At age 70 with 20 years of creditable service and still active in the TRF- covered position.

Early Retirement Benefit

Age 50 and minimum of 15 years of creditable service (44 percent of full benefit at age 50, increasing five percent per year up to 89 percent at age 59).

Disability Benefit

An active member qualifying for Social Security disability with five years of creditable service may receive an unreduced retirement benefit for the duration of their disability (minimum of $185 per month). Under certain conditions, active TRF members may qualify for a classroom disability benefit of at least $125 per month.

Survivor Benefit

While in active service, a spouse or dependent beneficiary of a member with a minimum of 15 years of creditable service receives a benefit as if the member retired the later of age 50 or the age the day before the member's death.

While receiving a benefit, a spouse or dependent receives the benefit associated with the member's selected form of payment: Five Year Certain & Life, Joint with 100% Survivor Benefits, Joint with Two-Thirds Survivor Benefits, or Joint with One-Half Survivor Benefits.

Contribution Rates

According to statute, the TRF Pre-'96 DB fund is funded primarily by appropriations from the state general fund and lottery proceeds. The Actuarially Determined Contribution (ADC) for TRF Pre-'96 DB was $947.4 million. This includes a base appropriation of $892.2 million, a special appropriation of $21.7 million for 13th checks, $30.0 million of lottery proceeds to fund the supplemental reserve account for postretirement benefits, and $3.5 million of employer contributions from grant monies. No member contributions are required.

Benefit Formula & Postretirement Benefit Adjustment

Lifetime Annual Benefit = Years of Creditable Service x Average Highest Five-Year Annual Salary x 1.1 percent (minimum of $185 per month). Average annual compensation is outlined in IC 5-10.2-4-3 and includes compensation of not more than $2,000 received from the employer in severance.

Postretirement benefit increases are granted on an ad hoc basis pursuant to IC 5-10.2-12.4 and administered by the Board. For the year ended June 30, 2019, postretirement benefits of $21.8 million were issued to members as a 13th check.

Description of Defined Benefit Funds (continued)

Teachers' 1996 Defined Benefit Account (TRF '96 DB)

TRF '96 DB is a cost-sharing, multiple-employer defined benefit fund providing retirement, disability, and survivor benefits. Membership in TRF '96 DB is required for all legally qualified and regularly employed licensed teachers who serve in the public schools of Indiana, teachers employed by the state at state institutions, and certain INPRS personnel. Faculty members and professional employees at Ball State University and Vincennes University have the option of selecting membership in the Fund or an alternate University plan not administered by INPRS. Membership in TRF '96 DB is optional for teachers employed by charter schools, employees and officials of the Indiana State Board of Education who were Indiana licensed teachers before their employment with the Board, and teachers employed by special management teams as defined under IC 20-31. Administration of the fund is generally in accordance with IC 5-10.2, IC 5-10.4, 35 IAC 14, and other Indiana pension law. TRF '96 DB is a component of the Teachers' Hybrid Plan.

The Teachers' Hybrid Plan consists of two components: TRF '96 DB: the monthly employer-funded defined benefit component, along with TRF DC, a member-funded account. Refer to the Description of Defined Contribution Funds for discussion of the TRF DC plan.

Eligibility for Pension Benefit Payment

Full Retirement Benefit

- At age 65 with at least 10 years of creditable service.
- At age 60 with at least 15 years of creditable service.
- At age 55 if age and creditable service total at least 85 ("Rule of 85").
- At age 55 with 20 years of creditable service and active as an elected official in the TRF- covered position.
- At age 70 with 20 years of creditable service and still active in the TRF- covered position.

Early Retirement Benefit

Age 50 and minimum of 15 years of creditable service (44 percent of full benefit at age 50, increasing five percent per year up to 89 percent at age 59).

Disability Benefit

An active member qualifying for Social Security disability with five years of creditable service may receive an unreduced retirement benefit for the duration of their disability (minimum of $185 per month). Under certain conditions, active TRF members may qualify for a classroom disability benefit of at least $125 per month.

Survivor Benefit

While in active service, a spouse or dependent beneficiary of a member with a minimum of 15 years of creditable service receives a benefit as if the member retired the later of age 50 or the age the day before the member's death.

While receiving a benefit, a spouse or dependent receives the benefit associated with the member's selected form of payment: Five Year Certain & Life, Joint with 100% Survivor Benefits, Joint with Two-Thirds Survivor Benefits, or Joint with One-Half Survivor Benefits.

Contribution Rates

Contributions are determined by the Board based on an actuarial valuation. Employers contribute 7.5 percent of covered payroll, with 0.14 percent funding a supplemental reserve account for future postretirement benefit increases. No member contributions are required.

Benefit Formula & Postretirement Benefit Adjustment

Lifetime Annual Benefit = Years of Creditable Service x Average Highest Five-Year Annual Salary x 1.1 percent (minimum of $185 per month). Average annual compensation is outlined in IC 5-10.2-4-3 and includes compensation of not more than $2,000 received from the employer in severance.

Postretirement benefit increases are granted on an ad hoc basis pursuant to IC 5-10.2-12.4 and administered by the Board. For the year ended June 30, 2019, postretirement benefits of $2.3 million were issued to members as a 13th check.

Description of Defined Benefit Funds (continued)

1977 Police Officers' and Firefighters' Retirement Fund (77 Fund)

The 77 Fund is a cost-sharing, multiple-employer defined benefit fund for members hired (or rehired) after April 30, 1977. The fund provides retirement, disability, and survivor benefits to full-time sworn officers of a police force of an Indiana city or eligible town, along with full-time firefighters employed by an Indiana city, town, township, or county. Administration of the fund is generally in accordance with IC 36-8 and other Indiana pension law.

Eligibility for Pension Benefit Payment

Full Retirement Benefit
At age 52 with 20 years of creditable service.

Early Retirement Benefit
At age 50 and 20 years of creditable service (reduce full benefit by 7 percent for each year less than age 52).

Deferred Retirement Option Plan (DROP)
In accordance with IC 36-8-8.5, members eligible to retire with an unreduced benefit may elect to earn a DROP benefit while continuing to work. Members execute an irrevocable election to retire on a DROP retirement date and remain in active service while contributing to the fund until that date. The DROP retirement date must be not less than 12 months and not more than 36 months after their DROP entry date, and cannot be after the date the member reaches mandatory retirement age. The DROP and future retirement monthly benefit are calculated as of the member's DROP entry date. At retirement, members must choose among the available options for distribution of the accumulated benefit under the DROP. As of June 30, 2019, the amount held by the fund under the DROP is $68 million.

Nonvested Termination
The sum total of the member's contributions plus interest at a rate set by the Board.

Disability Benefit
An active member may qualify for a benefit with the amount based on the class of impairment and other factors, as recommended by the local pension board with final determination by the Board.

Survivor Benefit
The eligible survivor of a member who dies in the line of duty receives 100 percent of member's benefit (the minimum benefit is calculated as if the member had at least 20 years of service and age 52). Otherwise, eligible survivors of members who die other than in the line of duty receive 60 percent of the member's benefit.

While receiving a benefit, a spouse or a wholly dependent parent (for their lifetimes) or dependent (until at least age 18) receives up to 60 percent of the member's benefit. Heirs or estate may be entitled to receive $12,000.

Contribution Rates

Contributions are determined by the Board based on an actuarial valuation. Employers contribute 17.5 percent of the salary of a first-class officer or firefighter. Members are required to contribute six percent of the salary of a first-class officer or firefighter for the term of the member's employment up to 32 years. Employers may pay all or part of the member contribution for the member.

Benefit Formula & Postretirement Benefit Adjustment

Annual Benefit = 50 percent of first-class officer salary for 20 years of service. The percentage is increased by one percent for each six months of active service accumulated after 20 years of service to a maximum of 32 years, or 74 percent.

Postretirement benefit increases is a percentage determined by statute equal to the change in the Consumer Price Index but not in excess of a three percent increase. For the year ended June 30, 2019, an adjustment of 2.2 percent occurred and was administered by the Board.

Description of Defined Benefit Funds (continued)

Judges' Retirement System (JRS)

JRS is a single-employer (State of Indiana) defined benefit fund providing retirement, disability, and survivor benefits to members. Membership consists of individuals who served, are serving, or shall serve as a regular judge, magistrate, or justice of the (1) Supreme Court of the state of Indiana, (2) Court of Appeals, (3) Indiana Tax Court, (4) Circuit Court of a Judicial Circuit, or (5) county courts including: Superior, Criminal, Probate, Juvenile, Municipal, and County. Administration of the fund is generally in accordance with IC 33-38 and other Indiana pension law.

Eligibility for Pension Benefit Payment

Full Retirement Benefit

- At age 65 with at least eight years of creditable service.
- At age 55 if age and creditable service total at least 85 ("Rule of 85").

Early Retirement Benefit
At age 62 and at least eight years of creditable service (full benefit reduced by 0.1 percent for each month less than age 65).

Nonvested Termination
The sum total of the member's contributions plus interest at a rate set by the Board.

Disability Benefit
A qualified member with 22+ years of creditable service receives an unreduced benefit. Members with less than 22 years of creditable service receive the full benefit reduced by one percent for each year under 22 years of creditable service (benefit to be no lower than 50 percent).

Survivor Benefit
While in active service with 8+ years of service, or while receiving a benefit, a spouse or dependent child(ren) (for their lifetime) receive the greater of $12,000 annually or 50 percent of benefit entitled at the date of death.

Contribution Rates

Employer contributions are determined by the Board based on an actuarial valuation and are received from the state general fund and certain court and docket fees. Employer contributions totaled $16.0 million, with appropriations of $8.9 million and $7.1 million in docket and court fees. The Actuarially Determined Contribution (ADC) was $14.9 million.

Members are required to contribute six percent of the member's salary for a maximum period of 22 years of creditable service. Employers may pay all or part of the member contribution for the member.

Benefit Formula & Postretirement Benefit Adjustment

Annual Benefit = Individual Salary, or Salary of Office at Retirement x Percentage for Years of Service: 24 percent at eight years of service; increased by three percent per year for years nine through 11; 50 percent at year 12; increased by one percent per year for years 13 through 22 with a maximum of 60 percent.

Postretirement benefit increases for JRS members (not survivors or disabled members) are equal to the change in the salary of the office at retirement. For the year ended June 30, 2019, a postretirement benefit adjustment of 2.1 percent occurred and was administered by the Board.

Description of Defined Benefit Funds (continued)

Excise, Gaming and Conservation Officers' Retirement Fund (EG&C)

EG&C is a single-employer (the State of Indiana) defined benefit fund providing retirement, disability, and survivor benefits to certain employees of the: (1) the Indiana Department of Natural Resources, (2) Indiana Alcohol and Tobacco Commission, and (3) any Indiana State excise police officer, Indiana State conservation enforcement officer, gaming agent, or any gaming control officer who is engaged exclusively in the performance of law enforcement duties. Administration of the fund is generally in accordance with IC 5-10-5.5 and other Indiana pension law.

Eligibility for Pension Benefit Payment

Full Retirement Benefit

- At age 65 if members were employed by age 50 with 15 years of creditable service. Retirement is mandatory.
- At age 65 if employed after age 50 with 10 years of service. Mandatory retirement occurs on the first day of the month after age 65 or 15 years of creditable service.
- At age 55 if age and creditable service total at least 85 ("Rule of 85").
- At age 50 with 25 years of service.

Early Retirement Benefit

At age 45 and 15 years of creditable service (reduce full benefit by 0.25 percent for each month less than age 60).

Deferred Retirement Option Plan (DROP)

In accordance with IC 5-10-5.5-22, members eligible to retire with an unreduced benefit may elect to earn a DROP benefit while continuing to work. Members execute an irrevocable election to retire on a DROP retirement date and remain in active service while contributing to the fund until that date. The DROP retirement date must be not less than 12 months and not more than 36 months after their DROP entry date, and cannot be after the member reaches mandatory retirement age. The DROP and future retirement monthly benefit are calculated as of the members' DROP entry date. At retirement, members must choose among the available options for distribution of the accumulated benefit under the DROP. As of June 30, 2019, the amount held by the fund under the DROP is $0.8 million.

Nonvested Termination

The sum total of the member's contributions plus interest at a rate set by the Board.

Disability Benefit

If disability occurs in the line of duty, the benefit is the member's salary times the degree of impairment without a reduction for early commencement. If not in the line of duty, the member's salary used to calculate the benefit is reduced 50 percent. A minimum benefit may apply.

Survivor Benefit

While in active service, a spouse or dependent beneficiary of a member with 15+ years of creditable service receives a monthly annuity. For less than 15 years of creditable service, the benefit consists of contributions plus interest.

While receiving a benefit, a spouse or parent (for their lifetime), or dependent(s) (until age 18) receives 50 percent of the member's benefit. If the spouse is more than five years younger than the member, the benefit is actuarially adjusted.

Contribution Rates

Contributions are determined by the Board based on an actuarial valuation. Employers contribute 20.75 percent, with 0.73 percent funding a supplemental reserve account for postretirement benefits administered by the Board. Members are required to contribute four percent of annual salary. Employers may pay all or part of the member contribution for the member.

Benefit Formula & Postretirement Benefit Adjustment

Annual Benefit = 25 percent x Average Annual Salary. Average annual salary = average annual salary of the five highest years in the 10 years immediately preceding an officer's retirement date. Percentage is increased by 1.66 percent for each completed year of creditable service after 10 years. Total percentage may not exceed 75 percent.

Postretirement benefit increases are granted on an ad hoc basis pursuant to IC 5-10.2-12.4 and administered by the Board. For the year ended June 30, 2019, postretirement benefits of $94 thousand were issued to members as a 13th check.

Description of Defined Benefit Funds (continued)

Prosecuting Attorneys' Retirement Fund (PARF)

PARF is a single-employer (State of Indiana) defined benefit fund that provides retirement, disability, and survivor benefits to prosecuting attorneys. Members serve as a: (1) prosecuting attorney or chief deputy prosecuting attorney, (2) deputy prosecuting attorney, (3) executive director, or (4) assistant executive director of the Indiana Prosecuting Attorneys Council. Administration of the fund is generally in accordance with IC 33-39-7 and other Indiana pension law.

PARF members are also members of the PERF Hybrid Plan. According to statute, benefits payable from PARF are reduced by any benefits payable from the PERF DB Fund.

Eligibility for Pension Benefit Payment

Full Retirement Benefit

- At age 65 with at least eight years of creditable service.
- At age 55 if age and creditable service total at least 85 ("Rule of 85").

Early Retirement Benefit

At age 62 and eight years of creditable service (reduce full benefit by 0.25 percent for each month less than age 65).

Nonvested Termination

The sum total of the member's contributions plus interest at a rate set by the Board.

Disability Benefit

A qualified member with 22+ years of creditable service receives full benefit. Less than 22 years of creditable service receives the full benefit reduced by one percent for each year under 22. Benefit to be no lower than 50 percent.

Survivor Benefit

While in active service, a spouse or dependent child(ren) receives the greater of $12,000 annually or 50 percent of benefit for the later of age 62 or age the day before death.

While receiving a benefit, a spouse (for their lifetime), or dependent child(ren) (until age 18 unless disabled) receives the greater of $12,000 annually or 50 percent of the member's benefit.

Contribution Rates

Employer contributions are determined by the Board based on an actuarial valuation and appropriations are received from the state's General Fund and totaled $3.2 million. The Actuarially Determined Contribution (ADC) was $3.5 million.

Members are required to contribute six percent of the state-paid portion of salary for a maximum period of 22 years of creditable service. In addition, members are required to contribute three percent as participants of the PERF DC plan. Employers may pay all or part of the member contributions for the member.

Benefit Formula & Postretirement Benefit Adjustment

Annual Benefit = Highest 12 consecutive months of salary (state-paid portion only) before separation from service x Percentage for Years of Service: 24 percent at eight years of service; increased by three percent per year for years nine through 11; 50 percent at year 12; increased by one percent per year for years 13 through 22 with a maximum of 60 percent, and reduced for any PERF DB benefit.

No postretirement benefit adjustment is provided.

Description of Defined Benefit Funds (continued)

Legislators' Defined Benefit Fund (LE DB)

LE DB is a single-employer (State of Indiana) defined benefit fund providing retirement, disability, and survivor benefits to members of the General Assembly who were serving on April 30, 1989, and filed an election under IC 2-3.5-3-1(b). The fund is closed to new entrants. Administration of the fund is generally in accordance with IC 2-3.5 and other Indiana pension law.

Eligibility for Pension Benefit Payment

Full Retirement Benefit

- At age 65 with at least 10 years of creditable service.
- At age 60 with at least 15 years of creditable service.
- At age 55 if age and creditable service total at least 85 ("Rule of 85").

Early Retirement Benefit

At age 55 and 10 years of creditable service (reduce full benefit by 0.1 percent per month between ages 60 and 65, and by 5/12 percent per month between ages 55 and 60). Early retirement benefits are applicable when the member is no longer serving in the General Assembly and is not receiving, nor entitled to receive, compensation from the state for work in any capacity.

Disability Benefit

Any active member that qualifies for social security disability with at least five years of creditable service may receive an unreduced benefit for the duration of their disability.

Survivor Benefit

While in active service, a spouse or dependent child(ren) receives 50 percent of the benefit for the later of age 55 or age the day before the member's death.

While receiving a benefit, a spouse (for their lifetime), or dependent(s) (until age 18 unless disabled) receives 50 percent of the member's benefit.

Contribution Rates

Employer contributions are actuarially determined and derive from the state's General Fund, a portion of which will be allocated to fund a supplemental reserve account for postretirement benefits administered by the Board. Appropriations were $0.3 million. The Actuarially Determined Contribution (ADC) was $0.2 million.

Benefit Formula & Postretirement Benefit Adjustment

Annual Benefit = The lesser of $40 x 12 months x years of service before November 8, 1989, or the highest consecutive three year average annual salary.

Postretirement adjustments are granted by the Indiana General Assembly on an ad hoc basis pursuant to IC 5-10.2-12.4 and administered by the Board. No postretirement adjustment occurred in the year ended June 30, 2019.

Description of Defined Contribution Funds

Public Employees' Defined Contribution Account (PERF DC)

PERF DC is a multiple-employer defined contribution fund providing retirement benefits to full-time employees of the State of Indiana not covered by another plan and those political subdivisions (counties, cities, townships and other governmental units) that elected to participate in the retirement fund. Administration of the account is generally in accordance with IC 5-10.2, IC 5-10.3, 35 IAC 1.2, and other Indiana pension law.

PERF DC fund provides supplemental defined contribution benefits under the PERF Hybrid plan. Refer to the Description of Defined Benefit Funds for discussion of the PERF Hybrid plan.

First time new employees hired by the State of Indiana or a political subdivision that offers a choice have a one-time election to join either PERF Hybrid or PERF My Choice. A state rehire that is an existing member of PERF Hybrid plan and was not given the option for PERF My Choice is given the option to elect PERF My Choice or remain in PERF Hybrid.

Contribution Rates

Member contributions under PERF DC are set by statute and the Board at three percent of covered payroll. The employer may choose to make these contributions on behalf of the member. Under certain limitations, voluntary post-tax member contributions up to 10 percent of their compensation can be made solely by the member.

Retirement & Termination Benefit

Members are entitled to the sum total of vested contributions plus earnings 30 days after separation from employment (retirement, termination, disability, or death). The amount may be paid in a lump sum, partial lump sum, direct rollover to another eligible retirement plan, or a monthly annuity (in accordance with INPRS requirements). PERF DC members are 100 percent vested in their account balance.

Disability Benefit

Upon providing proof of the member's qualification for social security disability benefits, the member is entitled to the sum total of contributions plus earnings. The amount can be paid in a full or partial withdrawal as a lump sum, direct rollover to another eligible retirement plan, or a monthly annuity (in accordance with INPRS requirements).

Survivor Benefit

Beneficiary is entitled to the sum total of contributions plus earnings. The amount can be paid in a lump sum, direct rollover to another eligible retirement plan, or a monthly annuity (in accordance with INPRS requirements).

Description of Defined Contribution Funds (continued)

My Choice: Retirement Savings Plan for Public Employees (PERF MC DC)

PERF MC DC is a multiple-employer defined contribution fund providing retirement benefits to full-time employees of the State of Indiana not covered by another plan and those political subdivisions (counties, cities, townships, and other governmental units) that elected to participate in the retirement fund. PERF MC DC is a primary defined contribution benefit plan for members making this election. Administration of the account is generally in accordance with other Indiana pension law.

First time new employees hired by the State of Indiana or a political subdivision who offer a choice have a one-time election to join either PERF Hybrid or PERF My Choice. A state hire that is an existing member of PERF Hybrid plan and was not given the option for PERF My Choice is given the option to elect PERF My Choice or remain in PERF Hybrid.

Contribution Rates

The PERF MC DC plan may be funded with an employer variable rate contribution. The variable rate contribution is three percent for state employees and up to 3.8 percent for political subdivision members. Political subdivisions may match 50 percent of a member's voluntary contributions.

Member contributions under the PERF MC DC are set by statute and the Board at three percent of covered payroll. The employer may choose to make these contributions on behalf of the member. Under certain limitations, voluntary member contributions up to 10 percent can be made solely by the member.

Retirement & Termination Benefit

Members are entitled to the sum total of vested contributions plus earnings 30 days after separation from employment (retirement, termination, disability, or death). The amount may be paid in a lump sum, partial lump sum, direct rollover to another eligible retirement plan, or a monthly annuity (in accordance with INPRS requirements). PERF MC DC members are 100 percent vested in member and voluntary contributions, and vested in employer variable rate contributions at 20 percent after one year of service and increases in 20 percent increments for each year of service thereafter until 100 percent vested after five years of service.

Disability Benefit

Upon providing proof of the member’s qualification for social security disability benefits, the member is entitled to the sum total of vested contributions plus earnings. The amount can be paid in a lump sum, direct rollover to another eligible retirement plan, or a monthly annuity (in accordance with INPRS requirements).

Survivor Benefit

Beneficiary is entitled to the sum total of vested contributions plus earnings. The amount can be paid in a lump sum, direct rollover to another eligible retirement plan, or a monthly annuity (in accordance with INPRS requirements).

Description of Defined Contribution Funds (continued)

Teachers' Defined Contribution Account (TRF DC)

TRF DC is a multiple-employer defined contribution fund providing supplemental retirement benefits to TRF Pre-'96 DB and TRF '96 DB members. Administration of the fund is generally in accordance with IC 5-10.2, IC 5-10.4, 35 IAC 14, and other Indiana pension law. TRF DC is the defined contribution component of the Teachers' Hybrid Plan. Refer to the Description of Defined Benefit Funds for discussion of both Teachers' Defined Benefit plans.

Contribution Rates

Contributions are determined by statute and the Board at three percent of covered payroll. The employer may choose to make these contributions on behalf of the member. Under certain limitations, voluntary contributions up to 10 percent can be made solely by the member.

Retirement & Termination Benefit

Members are 100 percent vested in their account balance plus earnings and may take a distribution 30 days after separation from employment (retirement, termination, disability, or death). The amount may be paid in a lump sum, partial lump sum, direct rollover to another eligible retirement plan, or a monthly annuity (in accordance with INPRS requirements).

Disability Benefit

Upon providing proof of the member's qualification for social security disability benefits, the member is entitled to the sum total of vested contributions plus earnings. The amount can be paid in a lump sum, direct rollover to another eligible retirement plan, or a monthly annuity (in accordance with INPRS requirements).

Survivor Benefit

Beneficiary is entitled to the sum total of vested contributions plus earnings. The amount can be paid in a lump sum, direct rollover to another eligible retirement plan, or a monthly annuity (in accordance with INPRS requirements).

Legislators' Defined Contribution Fund (LE DC)

LE DC is a single-employer (State of Indiana) defined contribution fund that provides retirement benefits to members of the General Assembly. Administration of the fund is generally in accordance with IC 2-3.5 and other Indiana pension law. Effective January 1, 2019, members of the fund can no longer invest in the Consolidated Defined Benefit Assets.

Contribution Rates

Contributions are determined by and the Board and confirmed by the State Budget Agency. The employer contribution rate is 14.2 percent of covered payroll. This rate may not exceed the sum contribution rates for State of Indiana employer and member PERF Hybrid plans. The member contribution is five percent of member's salary. The employer may choose to make contributions on behalf of the member.

Retirement & Termination Benefit

Members are entitled to the sum total of vested contributions plus earnings. The amount may be paid in a lump sum, partial lump sum, direct rollover to another eligible retirement plan, monthly annuity, or installment options (in accordance with INPRS requirements).

Survivor Benefit

Beneficiary is entitled to the sum total of contributions plus earnings. The amount can be paid in a lump sum, direct rollover to another eligible retirement plan, or a monthly annuity (in accordance with INPRS requirements).

Description of Other Postemployment Benefit Fund

Special Death Benefit Fund (SDBF)

SDBF is a postemployment benefit fund and is generally administered in accordance with IC 5-10-10, IC 5-10-11, IC 35-33-8, and IC 36-8-8. The fund is a multiple-employer, cost-sharing plan with approximately 50,000 members. Funds are restricted for the purpose of providing surviving spouses, children, or parents a benefit of $100,000 for state employees and $150,000 for public safety officers or other eligible officers who die in the line of duty.

Funding is derived from bail bond fees, payments under IC 5-10-10-4.5, and investment income earned. The measurement of potential liability and the related disclosures required for other postemployment benefit plans have been excluded, as they would not be material to the INPRS system.

Description of Custodial Fund

Local Public Safety Pension Relief Fund (LPSPR)

LPSPR is a custodial fund and is generally administered in accordance with IC 5-10.3 and IC 36-8. Funds are restricted for the purpose of providing financial relief to pension funds maintained by units of local government for their police officers' and firefighters' retirement plan benefits.

Funding is derived from contributions from the state of Indiana from a portion of cigarette and alcohol taxes, a portion of the state's lottery proceeds, investment income earned, and appropriations from the General Assembly.

Distributions are made from LPSPR to units of local government in two equal installments before July 1 and before October 2 of each year. The distribution is determined by an estimate of the total amount of pension, disability, and survivor benefits paid by the local government units from the 1925 Police Pension Fund, the 1937 Firefighters' Pension Fund, and the 1953 Police Pension Fund (before the establishment of the 77 Fund). The estimate is prepared by the actuary on a city-by-city basis and a departmental basis.

Local government units may deposit funds with INPRS and funds are maintained in separate accounts for each local governmental unit that made an election in 2001. As of June 30, 2019, the amount deposited with INPRS is $1.5 million. These amounts are invested and are available for withdrawal at their request.

Note 2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying financial statements for the eight defined benefit funds (DB Funds), four defined contribution funds (DC Funds), one other postemployment fund, and one custodial fund are prepared using the economic resources measurement focus. In the Statement of Fiduciary Net Position and the Statement of Changes in Fiduciary Net Position, PERF DC and PERF My Choice are combined into PERF DC for the purposes of presentation. INPRS's financial statements are not intended to present the financial position or results of operations for the state of Indiana or any other retirement and benefit plans administered by the state.

Basis of Accounting

Accrual Basis

INPRS maintains records and prepares financial statements using the accrual basis of accounting in conformity with generally accepted accounting principles (GAAP) as applied to governmental units.

Provision for Taxes

All defined benefit funds administered by INPRS are qualified under section 401(a) of the internal revenue code and are exempt from federal income taxes. Therefore, no provision for income taxes has been included in the financial statements.

Use of Estimates

In preparing the financial statements in conformity with GAAP, INPRS management makes estimates and assumptions that affect the reported amount of assets and liabilities, disclosures of contingent assets and liabilities, as well as the reported amounts of revenue and expenses at the date of the financial statements. Actual results could differ from those estimates and assumptions.

Contributions

Employer and member contributions are recognized when due, according to statutory requirements, in accordance with the terms of each plan. Nonemployer contributions are recognized when funds are received from the State of Indiana. Service purchase revenues are recognized in full when employers elect to participate in a fund or enlarge participation. As of June 30, 2019, $1.2 million is outstanding for employer service purchase contracts. The payment terms of the contracts vary between five and 40 years.

Net Investment Income

Net appreciation (depreciation) is determined by calculating the change in the fair value of investments between the beginning of the year and the end of the year, less purchases of investments at cost, plus sales of investments at fair value. Other investment income is recognized when earned. Dividend income is recognized on the ex-dividend date. Investment expenses consist of external expenses directly related to INPRS's investment operations, as well as the internal administrative expenses associated with INPRS's investment program.

Other Additions

Member reassignments are recorded when a member is retiring with service credit in multiple funds. Applicable member and employer balances are transferred between funds as allowed by the statute. The transfer allows all benefits to be paid from the fund designated by the member.

Deductions & Expenses

Benefit payments, including refunds and distributions of employee contributions, are recognized when due and payable in accordance with the benefit terms. Internal administrative expenses are recognized when due and payable. INPRS also acts as a custodian to receive and distribute funds on a biannual basis to specific pension plans of local government entities.

Year-end expense accruals include compensated absences which are calculated for earned but unused vacation, compensatory, and personal time of full-time INPRS employees.

Net Investment Assets

Investments are recorded on a trade-date basis and reported at fair value. Fair value is defined as the amount that can reasonably be expected to be received for an investment in a current sale between a willing buyer and a willing seller. Certain INPRS investment assets, in particular, Global Real Assets, Global Private Equity, and Opportunistic Investments, use estimates in reporting fair value in the financial statements. These estimates are subject to uncertainty in the near term, which could result in changes in the values reported for those assets in the Statement of Fiduciary Net Position. See Note 3 for detailed information on the investment policy, valuation, and methods used to measure the fair value of investments.

Pool Accounting

All DB assets are also pooled for the purpose of investments. Each DB fund holds units of the total investment pool. Units of participation are bought and sold as each plan contributes and withdraws cash or assets from the investment pool. The investment pool earnings are allocated to each fund with a change in the unit of participation price. The price is determined by dividing the net asset value of the investment pool by the total number of Master Trust Units held by funds. The price of one unit of the DB pool on June 30, 2019 was $34.1771. The unit holdings of DB funds is shown below:

DB Fund Name	Units
PERF DB	387,595,729
TRF Pre-'96 DB	111,817,267
TRF '96 DB	179,336,954
77 Fund	186,505,899
JRS	15,851,464
EG&C	4,158,030
PARF	1,917,095
LE DB	88,773
Total	**887,271,211**

All DC assets are pooled for the purpose of investments. The DC pool consists of the asset class options offered to the DC members. Each DC fund holds units of each asset class option.

Capital Assets

The cost of Building and Related Improvements, Equipment, and Software in excess of $50 thousand is capitalized when the asset is put to use. Improvements that increase the useful life of the property are capitalized. Capital Assets are depreciated using the straight-line method. Land is not subject to depreciation. Depreciation expense is included in Adminisrative Expenses. A summary of Capital Assets is shown below:

(dollars in thousands)

Capital Assets (Useful Life)	June 30, 2018	Additions	Disposals	June 30, 2019
Equipment (5 years)	$ 65	$ —	$ 65	$ —
Software (5 years)	15,989	—	—	15,989
Building and Related Improvements (20 years)	4,211	203	—	4,414
Land	856	—	—	856
Total Capital Assets	**21,121**	**203**	**65**	**21,259**
Less: Accumulated Depreciation/Amortization				
Equipment	65	—	65	—
Software	15,613	203	—	15,816
Building and Related Improvements	303	229	—	532
Total Accumulated Depreciation/ Amortization	**15,981**	**432**	**65**	**16,348**
Total Net Capital Assets	**$ 5,140**			**$ 4,911**

Reserves

The reserves required by Indiana Code are shown below for June 30, 2019:

- Member Reserves - The sum of member contributions and the investment earnings for the four DB funds listed below are set aside in a separate member's account. A member may withdraw the amounts before being vested.
- Supplemental Reserve Accounts - Amount set aside to pay future postretirement benefits.

(dollars in thousands)

Defined Benefit Pension Trust Fund	Member Reserves	Defined Benefit Pension Trust Fund	Supplemental Reserve Account
77 Fund	$ 883,706	PERF DB	$ 11,506
JRS	38,165	TRF Pre-'96 DB	31,916
EG&C	11,661	TRF '96 DB	2,417
PARF	27,471	EG&C	125
		LE DB	—

Other

Effective January 1, 2018, DC balances previously reported within PERF DB, TRF Pre-'96 DB, and TRF '96 DB were transferred to the appropriate DC fund. The prior year numbers in the Statement of Changes in Fiduciary Net Position reflects the one-time transfer of member balances.

Due To/Due From

Interfund transfers are recorded in the applicable account. A surcharge of 6.75% (Long-Term Assumed Investment Rate of Return) is collected by the respective fund if the balance is not repaid within a year.

Due to Other Governments

Represents funds payable to local police and fire departments that are maintained in separate accounts. Interest is payable monthly to the local units based on current money market rates. Local government units may make deposits or withdraw all or part of the balance to pay contributions or pension benefits.

Accounting Pronouncements Effective for the Year

Management has determined that GASB Statement No. 83 (Certain Asset Retirement Obligations) and GASB Statement No. 88 (Certain Disclosures Related to Debt, including Direct Borrowings and Direst Placements) does not apply to the financial statements as presented. Management has implemented GASB Statement No. 90 (Majority Equity) in the financial statements as presented.

Note 3. Investment Policy, Valuation and Performance

Investment Oversight and Policy

Oversight of INPRS assets is the fiduciary responsibility of the Board. As stated in IC 5-10.3-5-3(a) and IC 5-10.4-3-10(a) "The Board shall invest its assets with the care, skill, prudence, and diligence that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character with like aims." Accordingly, the Board must sufficiently diversify the portfolio to minimize the risk of large losses unless, under the circumstances, it is clearly prudent not to do so. Primary risk measures are volatility in the plan's assets, funded status, and contribution rates.

Indiana law permits the Board to establish investment guidelines and limits on all types of investments and take other actions necessary to fulfill its duty as a fiduciary for all assets under its control. On June 30, 2019, cash and investments were held by banks or trust companies under custodial agreements with INPRS. The Investment Policy Statement, adopted by the Board, includes target asset allocation and allowable ranges that are expected to meet rates of return over a period while minimizing risk.

Defined Benefit Assets

The following global asset classes, target allocations, and target ranges were approved by the INPRS Board on October 23, 2015 for DB funds, based on a formal asset-liability study and shall remain in place until revised by the INPRS Board. An asset-liability study is conducted every five years. Detailed information on each asset class is included in the Investment Section.

Global Asset Classes	Target Allocation	Target Range
Public Equity	22.0 %	19.5 to 24.5 %
Private Markets	14.0	10.0 to 18.0
Fixed Income - Ex Inflation - Linked	20.0	17.0 to 23.0
Fixed Income - Inflation - Linked	7.0	4.0 to 10.0
Commodities	8.0	6.0 to 10.0
Real Estate	7.0	3.5 to 10.5
Absolute Return	10.0	6.0 to 14.0
Risk Parity	12.0	7.0 to 17.0

Defined Contribution Assets

The DC plans are structured to provide members with a choice of diverse investment options that offer a range of risk and return characteristics appropriate for members. Members can self-direct their investment options or leave their contributions invested in the default target date retirement fund. The offered investment options undergo periodic reviews by the Board. Detailed information of the funds is provided in the Investment Section.

Other Funds Assets

SDBF is 100 percent invested in intermediate fixed income investments in a commingled fund. LPSPR is invested 100 percent in high-quality, short-term money market instruments.

Methods Used to Value Investments

Public Equity investments are comprised of domestic and international stocks as well as commingled equity instruments. Equity securities traded on a national or international exchange are valued at the official closing price or last reported sales price of the instrument. International equities are then adjusted to reflect the exchange rate as of June 30, 2019 of the underlying currency. Commingled equities are not traded on a national security exchange and are valued at the net asset value of the units held at June 30, 2019, based on the fair value of the underlying securities.

Private Market investments are valued using current estimates of fair value obtained from the general partner or investment manager. Holdings are generally valued by a general partner or investment manager on a quarterly or semi-annual basis. Investments in private markets are generally considered illiquid long-term investments. Due to the inherent uncertainty that exists in the valuation of alternative investments, the realized value upon sale of an asset may differ significantly from the fair value.

Fixed Income securities are comprised of U.S. Government, U.S. government-sponsored agencies, publicly traded debt, and commingled debt instruments. Securities traded on national and international exchanges are valued based on published market prices and quotations.

Securities that are not traded on a national security exchange are valued using a matrix pricing approach. Commingled securities are valued at the net asset value of the units held as of June 30, 2019 based on the fair value of the securities.

Commodities including derivative instruments are reported at fair value and involve, to varying degrees, elements of market risk to the extent of future market movements in excess of amounts recognized in the Financial Statements. Derivative instruments are considered investments and not hedges for accounting purposes. The fair value of all derivative financial instruments are reported in the Statement of Fiduciary Net Position. The change in the fair value is recorded in the Statement of Changes in Fiduciary Net Position as Net Investment Income / (Loss). Gains and losses arising from this activity are recognized in the Statement of Changes in Fiduciary Net Position as incurred.

Real Estate, Absolute Return, and Risk Parity investments are valued by the manager or independent appraiser based on reported net asset values, cash flow analysis, purchases and sales of similar investments, new financings, economic conditions, other practices used within the industry, or other information provided by the underlying investment advisors. Due to the inherent uncertainty in privately held securities, the fair value may differ from the values that would have been used if a ready market for such securities existed, and the differences can be material.

INPRS relies on third party resources to verify the methodology and calculation used for investment valuation and performance metric reported by the custodian.

Fair Value Measurement

INPRS investments are measured at fair value within the fair value hierarchy established by GASB Statement No. 72. The categorization of the investments within the hierarchy is based upon the valuation transparency of the instrument and should not be perceived as the risk of the particular investment. The three-tier hierarchy is summarized as follows:

Level 1 - Unadjusted quoted prices for identical instruments in active markets.

Level 2 - Quoted prices in active markets; quoted prices for identical or similar instruments in markets that are not active, and model-derived valuations in which all significant inputs are observable.

Level 3 - Valuations reflect practices where significant inputs are unobservable.

The table on the next page presents the fair value hierarchy of the INPRS investment portfolio as of June 30, 2019.

U.S. Treasury Obligations generally include investments in money market securities that are reported at either fair value or at cost plus accrued interest, which approximates market or fair value.

Equity, U.S. corporate obligations, U.S. Government, and Derivative securities classified in Level 1 are valued using prices quoted in active markets for those securities.

Debt and Derivative securities classified in Level 2 are valued using either a bid evaluation or a matrix based pricing technique. Bid evaluations are typically based on market quotations, yields, maturities, call features, and ratings. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices. Index linked debt securities are valued by multiplying the external market price by the applicable day's index ratio. Level 2 debt securities have non-proprietary information that is readily available to market participants, from multiple independent sources, which are known to be actively involved in the market. Equity and equity derivatives classified in Level 2 are securities whose values are derived daily from associated traded securities.

Investments classified as Level 3 are valued using best available sources such as property appraisals, discounted cash flow models, and public market comparisons of similar assets where applicable. The values are supplied by advisors or general partners who hold those or similar assets in investment vehicles they oversee. These pricing sources may or may not be indicative of realizable exit values attainable for the assets.

Investments that are measured at fair value using the Net Asset Value (NAV) are not classified in the fair value hierarchy. The NAV for these investments is provided by the investee and may be sold at an amount different than NAV. To manage risk relating to Absolute Return investments, assets are placed in limited liability vehicles to protect INPRS from losing more than its invested capital.

The table below summarizes assets and liabilities carried at fair value based on levels from the fair value hierarchy as of June 30, 2019, with certain assets carried at NAV and cost also included to allow reconciliation to the Statement of Fiduciary Net Position. The investments categorized below differ from the Global Asset Classes shown above and the Asset Allocation Summary shown in the Investment Section.

(dollars in thousands) Investment Type	June 30, 2019	Fair Value Measurements Using: Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments Measured at Amortized Cost				
Cash at Brokers	$ 192,767			
Repurchase Agreements	5,858			
Pooled and Non-Pooled Short-Term Investments	1,252,949			
Total Investments Measured at Amortized Cost	**1,451,574**			
Investments by Fair Value Level				
Pooled Short-Term Investments				
BNY - Mellon Cash Reserves	5,228	$ —	$ 5,228	$ —
Certificate of Deposit	—	—	—	—
Commercial Paper	3,897	—	3,897	—
Corporate Bonds	3,731	—	3,731	—
U.S. Treasury Obligations	293,559	293,559	—	—
Non - U.S. Governments	7,202	—	7,202	—
Total Short-Term Investments	313,617	293,559	20,058	—
Fixed Income Investments				
U.S. Governments	4,145,318	4,145,049	269	—
Non - U.S. Governments	3,708,058	653	3,702,498	4,907
U.S. Agencies	294,577	—	294,577	—
Corporate Bonds	1,122,203	5,405	913,789	203,009
Asset - Backed Securities	261,964	—	261,964	—
Total Fixed Income Investments	9,532,120	4,151,107	5,173,097	207,916
Equity Investments				
Domestic Equities	4,006,632	4,005,247	1,385	—
International Equities	3,356,894	3,355,050	1,844	—
Total Equity Investments	7,363,526	7,360,297	3,229	—
Total Investments by Fair Value Level	**$ 17,209,263**	**$ 11,804,963**	**$ 5,196,384**	**$ 207,916**
Investments Measured at the Net Asset Value (NAV)				
Commingled Short-Term Funds	11,360			
Commingled Fixed Income Funds	1,227,106			
Commingled Equity Funds	1,837,420			
Private Markets	4,105,253			
Absolute Return	3,006,984			
Real Estate	1,511,614			
Risk Parity	3,998,139			
Total Investments Measured at the Net Asset Value (NAV)	**15,697,876**			
Investment Derivatives				
Total Futures	30,236	$ 30,236	$ —	$ —
Total Options	(145)	—	(145)	—
Total Swaps	(12,623)	—	(12,623)	—
Total Investment Derivatives	**17,468**	**$ 30,236**	**$ (12,768)**	$ —
Total Pooled Investments	**$ 34,376,181**			

The valuation method for investments measured at the NAV per share or equivalent, at June 30, 2019, is presented as follows:

(dollars in thousands)	Fair Value	Unfunded Commitments	Redemption Frequency (if Currently Eligible)	Redemption Notice Period
Commingled Short-Term Funds	$ 11,360	$ —	Daily	1 day
Commingled Fixed Income Funds	1,227,106	—	Daily	1 day
Commingled Equity Funds	1,837,420	—	Daily	1 day
Private Markets	4,105,253	2,275,009	Not Eligible	N/A
Absolute Return	3,006,984	—	Monthly, Quarterly, Semi-Annually	30-120 days
Real Estate Funds	1,511,614	616,566	Quarterly	N/A
Risk Parity	3,998,139	—	Daily, Weekly, Monthly	3-5 days
Total	**$ 15,697,876**	**$ 2,891,575**		

Commingled Short-Term, Fixed Income, and Equity Funds

There are three short-term funds, 15 fixed income funds and three equity funds, which are considered to be commingled in nature. These investments are valued at the net asset value of the units held at June 30, 2019, based upon the fair value of the underlying securities.

Private Markets

There are 269 funds that invest across a range of strategies, geographies, and industries within private equity and private credit. The underlying portfolio investments cannot be redeemed with each fund, but rather the fund will make distributions of capital as the fund liquidates the underlying portfolio investments over the typical 10 year term in the case of private equity, and the typical 7 year term in the case of private credit.

Absolute Return

The portfolio consists of 32 fund holdings that cover a broad spectrum of investment strategies and investment horizons which results in distinct fund redemption terms to prevent asset-liability mismatches. These funds attempt to generate returns in excess of the plan's target actuarial rate of return over a full market cycle with minimal beta to the plan's primary long-only market exposures (equities, credit, rates, and commodities). Fund redemption periods range from weeks (alternative beta) to years (drawdown vehicles), but as a whole, on a weighted-average basis, the portfolio maintains a liquidity profile of less than one year. The valuation process for the funds are comparable to private market valuations, with quarterly valuations.

Real Estate Funds

There are 43 funds invested primarily in U.S. commercial real estate, of which 37 funds are classified as illiquid, or approximately 56 percent of the value of the real estate fund investments. These funds have underlying portfolio investments that cannot be redeemed with the funds, but rather these funds will make distributions of capital as the funds liquidate their underlying portfolio investments over the average 10 year life of the funds. There are six real estate funds that have been classified as liquid due to the open-end structure of the fund. Open-end funds generally offer periodic distributions of net cash flow, which can be reinvested, as well as quarterly redemption windows.

Risk Parity

This portfolio, which consists of four funds is constructed to accrue various asset class risk premiums, including equity, without long-term reliance on any single asset class. The structure of these investments provides a reasonable level of liquidity and investments may be redeemed in accordance to the terms set forth by each investment management agreement. Investments are considered to be liquid, market-priced instruments, and 100 percent of the NAV is independently calculated by the fund administrators. Fair values are reported as NAV per share.

As of June 30, 2019, it is probable that $4.1 billion and $1.5 billion of the investments in the private market and real estate funds type, respectively, will be sold at an amount different from the NAV of the ownership interest in partners' capital. Therefore, the fair values of the investments in this type have been estimated using recent observable transaction information for similar investments and non-binding bids received from potential buyers of the investments (one quarter in arrears plus current quarter cash flows). As of June 30, 2019, a buyer (or buyers) for these investments has not yet been identified. Once a buyer has been identified, the investee fund's management must approve the buyer before the sale of the investments can be completed.

Investment Performance

The money-weighted rate of return expresses investment performance, net of investment expenses, adjusted for the changing amounts invested.

For the year ended June 30, 2019, the annual money-weighted rates of return for DB investments are as follows:

Defined Benefit Pension Trust Funds	Annual-Money Weighted Rate of Return
PERF DB	7.32%
TRF Pre-'96 DB	7.61
TRF '96 DB	7.47
77 Fund	7.34
JRS	7.31
EG&C	7.40
PARF	7.30
LE DB	7.19

Time-weighted rates of return for DC Investment options are detailed in the Investment Section.

Note 4. Deposit and Investment Risk Disclosure

Custodial Credit Risk for Deposits

Custodial credit risk for deposits is the risk that in the event of a bank failure, INPRS's deposits may not be returned. Deposits are exposed to custodial credit risk if they are not covered by depository insurance, and the deposits are uncollateralized or collateralized with securities held by the pledging financial institution. At June 30, 2019, $198 million of cash deposits were uninsured and uncollateralized and therefore exposed to credit risk. The following table shows cash deposits and short-term investments as of June 30, 2019.

(dollars in thousands)

Cash Deposits	Total
Demand Deposit Account – Bank Balances (Insured by FDIC up to $250 thousand per financial institution)	$ 2,935
Held with Custodian Bank (Uncollateralized)	192,767
Short-Term Investment Funds held at Bank (Collateralized)	1,285,534
Total	**$ 1,481,236**

Custodial Credit Risk for Investments

Custodial credit risk for investments is a risk if the securities are uninsured, are not registered in the name of INPRS, and are held by either the counterparty or the counterparty's trust department or agent, but not in the name of INPRS. INPRS's custody agreement with the custodian requires the custodian to segregate the securities on the custodian's books and records from the custodian's property. In addition, investment managers are not allowed, under any circumstances, to take possession, custody, title, or ownership of any managed assets.

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates adversely affect the fair value of the investments. Duration is a measure of interest rate risk. The longer a fixed-income investment is to maturity, the more susceptible the value of the fixed-income investment is to market interest rate changes. The Investment Policy Statement recognizes interest rate risk as a market risk factor. While INPRS does not have a formal stated policy regarding interest rate risk, it is monitored regularly at the Plan level, and within the fixed income asset classes, as part of achieving the long-term actuarial rate of return.

As of June 30, 2019, the duration of the fixed income portfolio is as follows:

(dollars in thousands)

Debt Security Type	Fair Value	% of All Debt Security	Portfolio Weighted Average Effective Duration (Years)
Short-Term Investments			
Short-Term Investment Fund	$ 1,285,534	10.3%	0.08
Corporate Bonds	6,271	0.1	0.57
Commercial Paper	3,897	—	0.03
Certificate of Deposit	—	—	0.00
U.S. Treasury Obligations	293,560	2.3	0.32
Non-U.S. Government	4,662	—	0.21
Duration Not Available	192,767	1.5	N/A
Total Short-Term Investments	**1,786,691**	14.2	
Fixed Income Investments			
U.S. Governments	4,151,468	33.1	11.98
U.S. Agencies	326,325	2.6	5.01
Non-U.S. Government	3,377,699	26.9	8.51
Corporate Bonds	1,242,629	9.9	7.45
Asset-Backed Securities	238,087	1.9	2.63
Duration Not Available	1,423,017	11.4	N/A
Total Fixed Income Investments	**10,759,225**	85.8	
Total Debt Securities	**$ 12,545,916**	**100.0%**	

Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of a plan's investment in a single issuer. As of June 30, 2019, single issuer exposure in the portfolio did not exceed 5 percent of the Fiduciary Net Position. To limit business and liquidity risk arising due to the allocation of a large percentage of assets to a single investment manager, the Board has placed an upper limit on the concentration of assets placed with an investment manager as follows:

- No investment manager shall manage more than 10 percent of the assets in actively managed portfolios at the time of funding. Through capital appreciation and additional purchases, no investment manager will be allowed to manage more than 15 percent of the System's assets in actively managed portfolios without Board approval.
- No investment manager shall manage more than 15 percent of the assets in passively managed portfolios at the time of funding. Through capital appreciation and additional purchases, no investment manager will be allowed to manage more than 20 percent of the System's assets in passively managed portfolios without Board approval.
- No investment manager shall manage more than 25 percent of the assets in a combination of actively and passively managed portfolios.

Credit Quality Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. In accordance with the Investment Policy Statement, when building the most diversified investment portfolio, emphasis is laid on risk allocation, not capital allocation. As a result, INPRS regularly monitors success in achieving the targeted risk diversification that is inherent in the approved asset allocation. Credit ratings, obtained from several industry rating services for Fixed Income Securities and Short-Term Investments are shown in the table below. The most conservative rating of Standard and Poors, Moody's, and Fitch are utilized in the schedule below. Short-Term Investments excludes cash with custodian of approximately $193 million. Unrated investments primarily consist of money market sweep vehicles, private placement, term loans and asset-backed securities, commercial mortgages, CMO/REMIC's, and commingled debt funds.

(dollars in thousands)

Credit Rating	Short-Term Investments	Fixed Income Securities	Total	% of All Debt Securities
AAA	$ —	$ 778,383	$ 778,383	6.2%
U.S. Government Guaranteed	—	4,477,749	4,477,749	35.7
AA	293,559	1,295,742	1,589,301	12.7
A	—	899,033	899,033	7.1
BBB	3,897	997,124	1,001,021	8.0
BB	—	272,407	272,407	2.2
B	—	279,264	279,264	2.2
Below B	—	201,937	201,937	1.6
Unrated	1,489,235	1,557,586	3,046,821	24.3
Total	**$ 1,786,691**	**$ 10,759,225**	**$ 12,545,916**	**100.0%**

Custodial Credit Risk for Securities Lending

The Board has authorized the custodian to enter into a securities lending program agreement under which securities held by the custodian on behalf of INPRS may be loaned. The purpose of such a program is to provide additional revenue. The policy requires the following:

- Securities are loaned in exchange for cash or securities collateral equal to approximately 102 percent of the market value of domestic securities on loan and 105 percent of the market value of international securities on loan, with a simultaneous agreement to return the collateral for the same securities in the future. In no event shall the acceptable collateral be less than the total market value of loaned securities. Securities shall not be loaned in excess of 40% of the market value.
- The custodian and/or securities lending sub-agent is required to provide agreed upon indemnification to INPRS from and against any losses, damages, costs, and expenses which arise from a borrower defaulting on a loan or filing for bankruptcy.
- A maximum of 25 percent of the cash collateral may be invested with a single counterparty.
- All collateral investments have a maturity of the next business day.

As of June 30, 2019, there was no security lending credit risk exposure as the collateral pledged of $792 million, exceeded the fair value of securities on loan, as shown below. All reinvested cash collateral investments consist of repurchase agreements which are not rated by any of the rating agencies.

(dollars in thousands)

Security Type	Fair Value of Securities on Loan
U.S. Government	$ 330,597
Corporate Bonds	7,909
International Bonds	17,037
Domestic Equities	360,248
International Equities	56,973
Total	**$ 772,764**

Credit Risk for Repurchase Agreements

A repurchase agreement is an agreement in which cash is transferred to a broker-dealer or financial institution in return for transfer of security to the custodian and promise to repay cash plus interest. These repurchase agreements are assets whereby security collateral is held by the custodian. An obligation under a reverse repurchase agreement is the same as a repurchase agreement, but from the perspective of the buyer rather than a seller. Obligations under reverse repurchase agreements are liabilities whereby security collateral is held at the broker-dealer or financial institution's custodian.

INPRS's Investment Policy Statement allows prudent use of securities lending, repurchase, and reverse repurchase agreements. Repurchase agreements that may create explicit leverage in the portfolio are prohibited; however, repurchase transactions (including tri-party repurchase transactions) collateralized with U.S. Government securities are permitted. Repurchase transactions are required to be collateralized at 102 percent at time of purchase and marked to market on each business day.

Investments under Repurchase Agreements (exclusive of Securities Lending) as of June 30, 2019 are as follows. At June 30, 2019 there was no reverse repurchase risk since the cash collateral value posted was less than the fair value of the liability held.

(dollars in thousands)

Repurchase Agreements by Collateral Type	Cash Collateral Received	Fair Value
U.S. Treasury	$ 5,858	$ 5,858

Obligations Under Reverse Repurchase Agreements by Collateral Type	Cash Collateral Posted	Fair Value
U.S. Treasury	$ 634,592	$ 702,440

Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment. INPRS has defined a foreign exchange risk management policy to effectively manage the Fund's performance volatility associated with foreign currency risk.

Foreign investments included in the Fiduciary Net Position as of June 30, 2019 are below. Short-term, fixed income, and equity investments include income accruals. Other investments include foreign holdings of other investments, derivatives, and receivables/payables. The percentage shown in the table is with respect to DB pooled investments.

(dollars in thousands)	Investments Held in Foreign Currency					
Currency	Short-Term	Fixed Income	Equity	Other Investments	Total	% of Total
Argentina Peso	$ (59)	$ 3,638	$ —	$ 9,767	$ 13,346	—%
Australian Dollar	1,758	98,737	105,799	(104,658)	101,636	0.3
Brazilian Real	(320)	18,901	33,201	27,477	79,259	0.2
Canadian Dollar	2,341	151,901	148,619	(155,491)	147,370	0.4
Chilean Peso	—	16,146	—	1,531	17,677	—
Chinese R Yuan HK	—	—	—	1,410	1,410	—
China Yuan Renminbi	547	8	45,469	(141)	45,883	0.1
Colombian Peso	427	23,774	—	2,409	26,610	0.1
Czech Koruna	43	8,009	—	15,096	23,148	0.1
Danish Krone	2,033	17,720	42,168	(18,349)	43,572	0.1
Dominican Rep Peso	—	4,784	—	—	4,784	—
Egyptian Pound	8,867	—	777	(40)	9,604	—
Euro Currency Unit	6,952	1,399,117	758,330	(1,377,676)	786,723	2.2
Hong Kong Dollar	1,202	(22)	177,405	142	178,727	0.5
Hungarian Forint	(43)	6,708	4,323	6,856	17,844	0.1
Indian Rupee	3	273	34,062	5,548	39,886	0.1
Indonesian Rupiah	—	43,338	2,256	(4,030)	41,564	0.1
Israeli Shekel	10	52	4,910	—	4,972	—
Japanese Yen	13,774	517,309	498,247	(526,277)	503,053	1.4
Malaysian Ringgit	861	20,984	—	(7,624)	14,221	—
Mexican Peso	1,541	37,471	7,847	(7,022)	39,837	0.1
Taiwan New Dollar	—	—	59,113	(635)	58,478	0.2
New Zealand Dollar	328	6,431	3,204	(6,379)	3,584	—
Norwegian Krone	800	4,836	13,438	(1,967)	17,107	0.1
Peruvian Nuevo Sol	76	16,285	—	(1,429)	14,932	—
Polish Zloty	1,040	41,490	5,616	(3,078)	45,068	0.1
British Pound Sterling	6,014	595,632	337,833	(602,510)	336,969	0.9
Romania Leu	—	1,476	—	2,708	4,184	—
Russian Ruble	35	32,391	—	(3,103)	29,323	0.1
Singapore Dollar	1,468	7,996	24,036	(10,440)	23,060	0.1
South African Rand	1,213	53,788	32,335	(21,125)	66,211	0.2
South Korean Won	702	18	100,777	180	101,677	0.3
Swedish Krona	1,049	85,490	59,696	(86,310)	59,925	0.2
Swiss Franc	6,563	—	208,715	(462)	214,816	0.6
Thai Baht	58	33,060	15,346	(11,729)	36,735	0.1
Turkish Lira	28	7,418	8,010	8,757	24,213	0.1
UAE Dirham	—	—	1,298	—	1,298	—
Ukraine Hryvana	2,196	—	—	—	2,196	—
Uruguayan Peso	—	596	—	—	596	—
Held in Foreign Currency	**$ 61,507**	**$ 3,255,755**	**$ 2,732,830**	**$ (2,868,594)**	**$ 3,181,498**	**8.8%**

Note 5. Derivative Instruments - Activity and Risk

Derivative Instruments - Activity

A derivative is a contract between two or more parties whose value is based on an agreed-upon underlying financial asset (similar to a security) or set of assets (similar to an index). Common underlying instruments include bonds, commodities, currencies, interest rates, market indexes, and stocks. The following derivative instruments are included in Investments:

Futures

A futures contract is an agreement between two parties to buy and sell a financial instrument at a set price on a future date.

Options

Options are agreements that give the owner of the option the right, but not the obligation, to buy (in the case of a call) or to sell (in the case of a put) a specific amount of an asset for an agreed price on or before the specified expiration date.

Swaps

Swaps are derivative instruments in which one party exchanges a stream of fixed cash flows for floating cash flows. A notional amount of principal is required to compute the actual cash amounts and is determined at contract inception.

Currency Exchange Forwards

A currency exchange forward contract is a commitment to purchase or sell a foreign currency at a future date at a negotiated forward rate. A contract is classified as a forward contract when the settlement date is more than two days after the trade date.

The following table summarizes the derivative instruments outstanding as of June 30, 2019:

(dollars in thousands)

Investment Derivatives	Change in Fair Value	Fair Value	Notional
Futures:			
Index Futures - Long	$ 36,551	$ 36,551	$ 898,684
Commodity Futures - Long	(13,057)	(13,057)	1,600,713
Fixed Income Futures - Long	23,137	23,137	964,213
Fixed Income Futures - Short	(16,395)	(16,395)	(1,056,430)
Total Futures	**30,236**	**30,236**	**2,407,180**
Options:			
Interest Rate Options Bought	(1,335)	60	106,700
Interest Rate Options Written	1,352	(31)	245,900
Fixed Income Options Written	18	(171)	(171)
Credit Default Index Swaptions Written	29	(3)	24,100
Total Options	**64**	**(145)**	**376,529**
Swaps:			
Interest Rate Swaps - Pay Fixed Receive Variable	(10,720)	(17,363)	555,344
Interest Rate Swaps - Pay Variable Receive Fixed	3,837	4,304	382,985
Overnight Index Interest Rate Swaps - Pay Variable Receive Fixed	10	10	1,508
Inflation Swaps - Pay Fixed Receive Variable	(5)	(4)	2,900
Inflation Swaps - Pay Variable Receive Fixed	—	—	—
Total Return Swaps	15	15	4,445
Credit Default Swaps Single Name - Buy Protection	(452)	58	27,086
Credit Default Swaps Single Name - Sell Protection	132	(417)	32,895
Credit Default Swaps Index - Buy Protection	(129)	(739)	26,773
Credit Default Swaps Index - Sell Protection	749	1,513	78,350
Total Swaps	**(6,563)**	**(12,623)**	**1,112,286**
Total Derivatives	**$ 23,737**	**$ 17,468**	**$ 3,895,995**

The table below summarizes the swap maturity profile of derivative instruments as of June 30, 2019:

(dollars in thousands)

	Swap Maturity Profile					
Swap Type	**< 1 yr**	**1-5 yrs**	**5-10 yrs**	**10-20 yrs**	**20+ yrs**	**Total**
Interest Rate Swaps - Pay Fixed Receive Variable	$ (88)	$ (1,762)	$ (3,267)	$ (3,069)	$ (9,177)	$ (17,363)
Interest Rate Swaps - Pay Variable Receive Fixed	—	3,771	98	435	—	4,304
Overnight Index Interest Rate Swaps - Pay Variable Receive Fixed	10	—	—	—	—	10
Inflation Swaps - Pay Fixed Receive Variable	—	—	—	(4)	—	(4)
Inflation Swaps - Pay Variable Receive Fixed	—	—	—	—	—	—
Total Return Swaps	15	—	—	—	—	15
Credit Default Swaps Single Name - Buy Protection	(2)	60	—	—	—	58
Credit Default Swaps Single Name - Sell Protection	16	(433)	—	—	—	(417)
Credit Default Swaps Index - Buy Protection	—	(739)	—	—	—	(739)
Credit Default Swaps Index - Sell Protection	7	1,486	—	—	20	1,513
Total Swap Fair Value	**$ (42)**	**$ 2,383**	**$ (3,169)**	**$ (2,638)**	**$ (9,157)**	**$ (12,623)**

Derivative Instruments - Risk Management:

INPRS's Investment Policy Statement allows derivatives transactions by investment managers who possess recognized expertise in derivative overlay strategies to offset, or hedge, unintended market exposures in underlying funds that remain in a lock-up period. Direct purchases of physical commodities is prohibited; however, swaps and instruments that constitute a security or authorized derivatives are permitted.

INPRS effectively manages credit risk relating to derivative instruments by following the guidelines below:

- To avoid counterparty risk, derivative transactions are executed through the use of listed options and futures traded on registered exchanges, whenever possible. Non-exchange traded options, forwards, or swaps are executed only if the counterparty is rated “A” or better by at least one of the Nationally Recognized Statistical Rating Organizations (“NSRSOs”).
- Exchange-traded commodity futures, options, and other instruments are traded on any exchange regulated by the Commodities Futures Trading Commission (“CFTC”) of the United States and/or the Financial Services Authority (“FSA”) of the United Kingdom.
- For non-exchange traded derivatives, counterparty creditworthiness is at a minimum of “A3” as defined by Moody’s Investor Service, “A-” by Standard & Poor’s, and/or “A-” by Fitch. Unrated counterparties are not selected unless such counterparty is a wholly-owned affiliate of a parent organization that guarantees payment and meets the above counterparty creditworthiness standards.
- Derivative instruments are standardized and exchange-traded (e.g., futures) and/or privately-negotiated and over-the-counter (e.g., swap agreements). Underlying risk exposures may be to cash commodities and/or commodity derivatives. Risk exposures for exchange-traded instruments shall lie with exchange clearinghouses and with approved counterparties for non-exchange traded transactions.
- The market value of commodities collateral is maintained at 100 percent or greater of the net option-adjusted notional value of any commodities overlay exposure at the consummation of any new commodities overlay position. If the collateral market value falls below the net option-adjusted value of the overlay, the investment manager(s) adjust their portfolio at the earliest feasible opportunity to bring the collateral value up to the notional value of the overlay.

Derivative Instruments - Counterparty Credit Risk

This risk exists on all open over-the-counter derivatives, such as swaps and currency forwards. Counterparty credit risk is the risk that a derivative counterparty may fail to meet its payment. As of June 30, 2019, the aggregate fair value of investment derivatives in an asset position subject to counterparty credit risk was approximately $15 million.

The table below summarizes the counterparty positions as of June 30, 2019:

(dollars in thousands)

		Fair Value			Collateral	
Swaps Counterparty	S&P Rating	Receivable Unrealized Gain	Payable (Unrealized Loss)	Total Fair Value	Posted	Received
Bank of America	A-	$ 67	$ (50)	$ 60	$ 250	$ (490)
Banque Nationale De Paris	A+	4	—	1	—	(150)
Barclays	BBB	53	(21)	(8)	—	(90)
Citigroup	BBB+	311	(7)	252	200	(260)
Chicago Mercantile Exchange	AA-	4,708	(7,870)	(11,539)	1,080	—
Deutsche Bank	BBB+	795	(1,148)	(581)	—	(10)
Goldman Sachs	BBB+	210	(312)	(205)	1,160	(140)
HSBC Securities Inc.	A	19	(10)	(6)	490	(130)
Intercontinental Exchange Inc.	A	2,024	(1,387)	1,130	455	—
JPMorgan Chase Bank	A-	4,360	(4,410)	(21)	420	—
London Clearing House	A	2,143	(6,100)	(1,764)	—	—
Morgan Stanley	BBB+	58	—	58	420	(510)
Total		**$ 14,752**	**$ (21,315)**	**$ (12,623)**	**$ 4,475**	**$ (1,780)**

Derivative Instruments - Foreign Currency Risk

Foreign currency forward contracts and futures contracts are exposed to foreign currency risk. At June 30, 2019, INPRS's investments included a foreign currency contract receivable balance of $8,385 million and an offsetting foreign currency contract payable of $8,428 million. The net gain recognized for the year ended June 30, 2019, due to foreign currency transactions was $43 million.

Derivative Instruments - Synthetic Guaranteed Investment Contracts (GICs)

The Defined Contribution Stable Value Fund consists of fully benefit-responsive synthetic guaranteed investment contracts (GICs). The Stable Value Fund is an investment option that seeks to provide safety of principal and a stable credited rate of interest, while generating competitive returns over time compared to other comparable investments. As of June 30, 2019, the Stable Value Fund portfolio of well-diversified high-quality investment grade fixed income securities had a fair value of $2,586 million, which was $39 million above the fair value protected by the wrap contract.

Derivative Instruments - Interest Risk

INPRS has exposure to interest rate risk due to investments in interest rate swaps, inflation swaps, and forward mortgage-backed securities (TBAs).

Derivative Instruments as of June 30, 2019, subject to interest rate risk are summarized below:

(dollars in thousands)

Reference Currency	Pays	Receives	Fair Value	Notional
Interest Rate Swap - Pay Fixed Receive Variable				
U.S. Dollar	1.50% to 3.25%	3M USD LIBOR	$ (14,549)	$ 355,940
Mexican Peso	5.66% to 8.36%	28D MXN TIIE BANXICO	(187)	70,142
Pound Sterling	1.25% to 2.00%	6M GBP LIBOR BBA	(1,061)	63,126
Japanese Yen	0.30% to 0.45%	6M JPY LIBOR BBA	(848)	24,782
Czech Koruna	1.75% to 2.13%	6M CZK PRIBOR PRBO	(242)	19,568
Euro Currency Unit	0.25% to 1.50%	6M EURIBOR REUTERS	(309)	6,935
Polish Zloty	2.50%	6M PLN WIBOR WIBO	(146)	4,781
South Korean Won	1.50%	3M KRW KWCDC COD	—	4,684
Hong Kong Dollar	1.75% to 2.00%	3M HIBOR BLOOMBERG	(21)	2,588
South Korean Won	1.25%	3M KRW CD KSDA BLOOMBERG	—	1,812
Indian Rupee	5.75%	INR FBIL MIBOR OIS COM	—	986
			$ (17,363)	**$ 555,344**
Interest Rate Swap - Pay Variable Receive Fixed				
U.S. Dollar	3M USD LIBOR BBA	2.25% to 2.7%	$ 3,133	$ 86,300
South Korean Won	3M KRW CD KSDA BLOOMBERG	1.25% to 1.75%	—	67,711
Thailand Baht	6M THB THBFIX REUTERS	1.50% to 1.75%	188	59,955
South Korean Won	3M KRW KWCDC COD	1.75%	—	36,061
Mexican Peso	28D MXN TIIE BANXICO	7.35% to 8.25%	154	25,583
South African Rand	3M ZAR JIBAR SAFEX	6.75% to 8.00%	25	20,382
Czech Koruna	6M CZK PRIBOR PRBO	2.20%	127	20,198
Hungarian Forint	6M HUF BUBOR REUTERS	0.6% to 2.50%	111	15,919
Indian Rupee	INR FBIL MIBOR OIS COM	6.75%	4	14,255
Chilean Peso	CLP CLICP BLOOMBERG	3.15% to 3.6%	186	9,275
Brazilian Real	1D BRL CDI	6.66%	18	6,690
Chinese Yuan Renminbi	7D CHINA FIXING REPO RATES	3.00%	3	4,960
Israeli Shekel	3M ILS TELBOR REFERENCE BANKS	1.75%	52	4,410
Euro Currency Unit	6M EURIBOR REUTERS	1.00%	264	3,257
Mexican Peso	1M MXN TIIE BANXICO	7.50%	11	3,216
Brazilian Real	1M BRL CDI	6.85%	26	3,157
Singapore Dollar	6M SGD SIBOR REUTERS	2.00%	2	1,656
			$ 4,304	**$ 382,985**

Note 6. Other Risk Management

INPRS is exposed to the following risks:

- Damage to INPRS property.
- Personal injury or property damage liabilities.
- Errors, omissions, and employee theft.
- Employee death benefits.
- Certain employee health benefits, unemployment, and worker's compensation costs for INPRS employees.
- Breach of fiduciary responsibility.
- Lawsuits.

INPRS purchases commercial insurance for property, general liability, employee crime, employee health and unemployment, and fiduciary responsibility. Settlements have not exceeded the insurance coverage for any of the past three years. INPRS records expenses for losses, if any, as the liabilities are incurred or replacement items are purchased.

Note 7. Legislative Changes

The following legislative changes were signed into law which have a financial impact in the current and future years. These changes have been included in the actuarial valuations as of June 30, 2019.

House Enrolled Act (HEA) 1001

HEA 1001 is the biennial budget for the state of Indiana. The budget determined the amount of appropriations INPRS will receive in fiscal years 2020 and 2021 and modified INPRS's assigned duties. This included regular employer and nonemployer contributing entity contributions, a special $150 million contribution for TRF '96 DB, and funding for 13th checks in fiscal year 2020. In addition, INPRS will assume administrative responsibilities from the State Budget Agency in administering the Retirement Medical Benefits Account, and the bill provided a receipt of funds for its administration. INPRS was also assigned responsibility to provide actuarial support and reports for four other OPEB plans and to submit a report to the Pension Management Oversight Committee regarding local pension plans. The bill provided funding for the local pension plan report analysis.

HEA 1059

If a member of PERF DB, TRF Pre-'96 DB, or TRF '96 DB dies after June 30th, 2018, the qualifying surviving spouse/dependent receives the benefit if the deceased member had a minimum of 10 years of creditable service.

HEA 1192

Provides clarification for PERF DB, TRF Pre-'96 DB, TRF '96 DB, JRS, and PARF that when INPRS withholds payment due to employer property being criminally taken, INPRS cannot withhold either the defined benefit portion of a member's retirement or their disability retirement benefit. The 77 Fund now enables the withholding of a member's contributions and interest if INPRS has been notified of criminal charges being filed.

HEA 1258

Expands the population eligible to receive the $150 thousand special death benefit to include:

- Emergency management workers as defined in IC 10-14-3-3
- Division fire investigators as described in IC 22-14-2-8

Legislative Changes, continued

Senate Enrolled Act (SEA) 22

Addresses various pension matters regarding withdrawals, leave of absence, administrative expenses, service credit, and other administrative items for specific funds. Clarifies that any increase in the postretirement benefit to PERF DB has no effect on the part of the retirement benefit that is paid from PARF.

SEA 85

For a 77 Fund member who retires after June 30, 2019 (20 years of service minimum), the basic monthly pension benefit increased to 52 percent of a monthly first class salary. Early retirement benefits use the same base salary as for the reduced benefit formula. For a non-line of duty death occurring after June 30, 2019, the surviving spouse receives 70 percent of the member's monthly benefit.

SEA 545

Before November 1st of the following state of Indiana fiscal year, whenever INPRS performs a stress test or risk assessment on any public pension and retirement funds of the system, INPRS's executive director shall report to the interim Pension Management Oversight Committee results of any stress tests or sensitivity analysis performed. Upon request, INPRS will present a summary to the committee.

Note 8. Net Pension Liability and Actuarial Information – Defined Benefit Plans

The components of the Net Pension Liability (NPL) of each defined benefit retirement plan as of June 30, 2019:

(dollars in thousands) **Pre-Funded Defined Benefit Pension Trust Funds**	**Total Pension Liability (a)**	**Fiduciary Net Position (b)**	**Net Pension Liability (a) - (b)**	**Fiduciary Net Position as a Percent of Total Pension Liability (b) / (a)**
PERF DB	$ 16,576,060	$ 13,270,996	$ 3,305,064	80.1%
TRF '96 DB	5,980,426	6,124,086	(143,660)	102.4
77 Fund	6,389,002	6,379,786	9,216	99.9
JRS	586,499	545,331	41,168	93.0
EG&C	152,207	142,115	10,092	93.4
PARF	110,082	65,523	44,559	59.5
LE DB	3,362	3,026	336	90.0
Total Pre-Funded DB	**$ 29,797,638**	**$ 26,530,863**	**$ 3,266,775**	**89.0**
Pay-As-You-Go Defined Benefit Pension Trust Fund				
TRF Pre-'96 DB	$ 14,389,164	$ 3,759,145	$ 10,630,019	26.1%
Total DB	**$ 44,186,802**	**$ 30,290,008**	**$ 13,896,794**	**68.5%**

Total Pension Liability (TPL) is determined by the actuaries in accordance with GASB Statement No. 67, as part of their annual actuarial valuation for each defined benefit retirement plan. Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts (e.g., salaries, credited service, etc.) and assumptions about the probability of occurrence of events in the future (e.g., mortality, disabilities, retirements, employment terminations, etc.). Actuarially determined amounts are subject to review and modifications, as actual results are compared with past expectations and new estimates are developed. In 2019, none of the actuarial assumptions or methods changed.

The Schedule of Contributions in the Required Supplementary Information presents trend information about the amounts contributed to the plan by employers and a nonemployer contributing entity in comparison to the Actuarially Determined Contribution (ADC). The ADC represents a level of funding that, if paid on an ongoing basis, is projected to cover the normal cost for each year and the amortization of any unfunded actuarial accrued liability.

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employers and plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing benefit costs between the employers and plan members. The projection of benefits for financial reporting purposes does not explicitly incorporate the potential effects of legal or contractual funding limitations.

Actuarial calculations reflect a long-term perspective. For a newly hired employee, actuarial calculations will take into account the employee's entire career with the employer and also take into consideration the benefits, if any, paid to the employee after termination of employment until the death of the employee and any applicable contingent annuitant. In many cases, actuarial calculations reflect several decades of service with the employer and the payment of benefits after termination.

Key methods and assumptions used in calculating the total pension liability in the latest actuarial valuations are presented below:

Description	PERF DB	TRF Pre-'96 DB	TRF '96 DB	77 Fund	JRS	EG&C	PARF	LE DB
Asset Valuation Date	June 30, 2019							
Liability Valuation Date	June 30, 2018 - Member census data as of June 30, 2018 was used in the valuation and adjusted, where appropriate, to reflect changes between June 30, 2018 and June 30, 2019. Standard actuarial roll forward techniques were then used to project the total pension liability computed as of June 30, 2018 to the June 30, 2019 measurement date.							
Actuarial Cost Method (Accounting)	Entry Age Normal (Level Percent of Payroll)							
Actuarial Assumptions:								
Experience Study Date	Period of four years ended June 30, 2014	Period of three years ended June 30, 2014		Period of four years ended June 30, 2014				
Investment Rate of Return (Accounting)	6.75%, includes inflation and net of investment expenses							
Cost of Living Increases (COLA), see Note 1.	2020-2021 - 13th check, Beginning Jan. 1, 2022 - 0.40%, Beginning Jan. 1, 2034 - 0.50%, Beginning Jan. 1, 2039 - 0.60%			2.0%	2.5%	2020-2021 - 13th check, Beginning Jan. 1, 2022 - 0.40%, Beginning Jan. 1, 2034 - 0.50%, Beginning Jan. 1, 2039 - 0.60%	N/A	2020-2021 - 13th check, Beginning Jan. 1, 2022 - 0.40%, Beginning Jan. 1, 2034 - 0.50%, Beginning Jan. 1, 2039 - 0.60%
Future Salary Increases, including Inflation	2.50% - 4.25%	2.50% - 12.50%		2.50%			4.00%	2.25%
Inflation	2.25%							
Mortality - Healthy	RP-2014 Total Data Set Mortality Table, with Social Security Administration generational improvement scale from 2006	RP-2014 White Collar Mortality Table, with Social Security Administration generational improvement scale from 2006		RP-2014 Blue Collar Mortality Table, with Social Security Administration generational improvement scale from 2006	RP-2014 White Collar Mortality Table, with Social Security Administration generational improvement scale from 2006	RP-2014 Blue Collar Mortality Table, with Social Security Administration generational improvement scale from 2006	RP-2014 White Collar Mortality Table, with Social Security Administration generational improvement scale from 2006	
Mortality - Disabled	RP-2014 Disabled Mortality Table, with Social Security Administration generational improvement scale from 2006							

The long-term return expectation for the INPRS defined benefit retirement plans has been determined by using a building-block approach and assumes a time horizon, as defined in the INPRS Investment Policy Statement. A forecasted rate of inflation serves as the baseline for the return expectation. In order to determine the expected long-term nominal rate of return, the asset class geometric real returns are projected for a 30-year time horizon. These returns are combined with a projected covariance matrix and the target asset allocations to create a range of expected long-term real rates of return for the portfolio. A range of possible expected long-term rates of return is created by adding the forecasted inflation to the expected long-term real rates of return. This range ultimately supports the long-term expected rate of return assumption of 6.75% selected by the Board as the discount rate. The assumption is a long-term assumption and is not expected to change with small fluctuations in the underlying inputs, but may change with a fundamental shift in the underlying market factors or significant asset allocation change.

Global Asset Class	Long-Term Expected Real Rate of Return (Geometric Basis)	Target Asset Allocation
Public Equity	4.9 %	22.0 %
Private Markets	7.0	14.0
Fixed Income - Ex Inflation-Linked	2.5	20.0
Fixed Income - Inflation-Linked	1.3	7.0
Commodities	2.0	8.0
Real Estate	6.7	7.0
Absolute Return	2.9	10.0
Risk Parity	5.3	12.0

The TPL for each defined benefit pension plan was calculated using the long-term expected rate of return of 6.75%. The projection of cash flows used to determine the discount rate assumed the contributions from employers and, where applicable, from members, would at the minimum be made at the actuarially determined required rates, computed in accordance with the current funding policy adopted by the Board, and contributions required by the State of Indiana (the nonemployer contributing entity) would be made as stipulated by Indiana statute. Projected inflows from investment earnings were calculated using the 6.75% long-term assumed investment rate of return. Based on those assumptions, each defined benefit pension plan's Fiduciary Net Position were projected to be available to make all projected future benefit payments of current plan members, therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefits to determine the TPL for each plan.

NPL is sensitive to changes in the discount rate. To illustrate the potential impact, the following table presents the NPL of the defined benefit pension plans calculated using the discount rate of 6.75%, as well as what each plan's NPL would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current rate:

(dollars in thousands)	Discount Rate		
Pre-Funded Defined Benefit Pension Trust Funds	**1% Decrease 5.75%**	**Current 6.75%**	**1% Increase 7.75%**
PERF DB	$ 5,307,976	$ 3,305,064	$ 1,634,482
TRF '96 DB	879,486	(143,660)	(972,389)
77 Fund	1,019,780	9,216	(806,948)
JRS	108,093	41,168	(15,088)
EG&C	30,404	10,092	(6,623)
PARF	58,441	44,559	33,112
LE DB	559	336	138
Pay-As-You-Go Defined Benefit Pension Trust Fund			
TRF Pre-'96 DB	$ 11,949,033	$ 10,630,019	$ 9,494,757

Note 9. Subsequent Events

Impact on the Financial Statements

Before the issuance of the financial statements, there were no known events or transactions that were material in nature that would have affected the financial results as of June 30, 2019. All events and transactions have been recognized or disclosed in the financial statements and notes as it pertains to the period ending June 30, 2019.

Future GASB Pronouncements

GASB Statement No. 87 - Leases

Improves the accounting and financial reporting for leases by governments. The requirements of this statement are effective for reporting periods beginning after December 15, 2019. Management is currently evaluating GASB Statement No. 87 and if applicable, will implement in the appropriate period.

GASB Statement No. 89 - Accounting for Interest Cost Incurred Before the End of a Construction Period

Enhances the relevance and comparability of information on capital assets and the cost of borrowing for a reporting period and simplifies the accounting of interest cost incurred prior to the end of a construction period. The requirements of this statement are effective for reporting periods beginning after December 15, 2019. Management is currently evaluating GASB Statement No. 89 and if applicable, will implement in the appropriate period.

Introduction to Required Supplementary Information (Unaudited)

Purpose of Supplementary Information

Required Supplementary Information (RSI) and the Other Supplementary Schedules (OSS) consist of statistical data and other information to provide greater transparency and to enhance the usefulness of the financial statements. RSI schedules currently reflect available historical results for seven of the required 10 years. PERF and TRF results were restated in fiscal year 2018 to reflect the DB/DC split at January 1, 2018.

RSI Schedules (Unaudited)

- Schedule of Changes in Net Pension Liability and Net Pension Liability
- Schedule of Contributions
- Schedule of Investment Returns
- Schedule of Notes to Required Supplementary Information

OSS Schedules

- Schedule of Administrative Expenses
- Schedule of Administrative Expenses - Vendors
- Schedule of Direct Investment Expenses

Accompanying Notes to the RSI Schedules

The following details are intended to clarify some numbers presented in RSI schedules:

- **ASA Annuitizations** - include activity through December 31, 2017. Effective January 1, 2018, members can no longer annuitize their DC balances to increase their DB payments.
- **Net Member Reassignments** - includes net inter-fund transfers of employer contribution amounts.
- **Contributions** - include contributions from employers, members, and a nonemployer contributing entity, payments by employers towards service purchases, and additional one-time contributions as reflected in the table below. In accordance with statute, TRF Pre-'96 DB nonemployer contributing entity contributions increase three percent annually.

(dollars in thousands)

	One-time Contributions		
Fund	2019	2016	2013
PERF DB	$ —	$ 67,772	$ —
TRF Pre-'96 DB	—	—	206,796
TRF '96 DB	150,000	—	—
JRS	—	—	90,187
EG&C	—	70	14,619
PARF	—	—	17,363

- **Benefit Payments** - includes pension, disability and survivor benefits, special death benefits, distributions of contributions and interest, and refund of employee contributions.
- **Administrative Expenses** - include contributions by INPRS to PERF DB and TRF '96 DB for its employees in their respective funds. Administrative expenses are allocated to each fund using allocation methodology mentioned in Note 2 of the Financial Statements.
- **Covered Payroll** - for 2010-2013 is estimated based on contributions received and the contribution rate. LE DB has no covered payroll. TRF Pre-'96 DB and LE DB are closed to new members and the population will continue to decline over time.
- **Actuarially Determined Contribution (ADC)** - calculated using covered payroll at the applicable ADC rate.

Trends

In 2018, SEA 373 replaced the 1% COLA assumption for five funds (PERF DB, TRF Pre-'96 DB, TRF '96 DB, EG&C, LE DB) with a COLA of 0.40/0.50/0.60%, which lowered the actuarial accrued liabilities for those funds.

In 2015, an experience study was performed resulting in an update to several assumptions. These assumption changes included a change in the mortality assumptions, retirement assumptions, withdrawal assumptions, disability assumptions, ASA annuitization assumptions (PERF DB, TRF Pre-'96 DB and TRF '96 DB only), dependent assumptions, future salary increase assumptions, inflation assumptions, and COLA assumptions. For further details refer to the Actuarial Section of the CAFR.

Schedule of Changes in Net Pension Liability and Net Pension Liability
Public Employees' Defined Benefit Account [1]
For the Years Ended June 30

(dollars in thousands)

Changes in Net Pension Liability	2019	2018	2017	2016	2015
Total Pension Liability - Beginning of Year	**$ 16,091,373**	**$ 16,335,253**	**$ 15,752,055**	**$ 15,263,395**	**$ 13,880,722**
Service Cost	195,383	202,324	194,101	191,055	273,910
Interest Cost	1,069,184	1,088,503	1,051,217	1,018,993	936,404
Experience (Gains) / Losses	101,180	20,103	82,964	(4,870)	247,978
Assumption Changes	—	(731,601)	22,809	—	488,354
Plan Amendments	12,920	—	(22,766)	—	—
Benefit Payments [1]	(888,512)	(860,613)	(820,721)	(786,607)	(752,896)
ASA Annuitizations [1]	—	43,874	78,793	75,036	196,788
Net Member Reassignment [1]	(5,787)	(7,030)	(3,618)	(5,441)	(8,155)
Other	319	560	419	494	290
Net Change in Total Pension Liability	**484,687**	**(243,880)**	**583,198**	**488,660**	**1,382,673**
Total Pension Liability - End of Year	**$ 16,576,060**	**$ 16,091,373**	**$ 16,335,253**	**$ 15,752,055**	**$ 15,263,395**
Fiduciary Net Position - Beginning of Year	**$ 12,694,328**	**$ 11,873,709**	**$ 11,213,610**	**$ 11,190,493**	**$ 11,252,787**
Employer Contributions [1]	581,873	571,374	558,891	615,773	538,059
Member Contributions [1]	296	708	590	443	—
Net Investment Income / (Loss)	906,388	1,093,094	870,592	147,106	(10,667)
Benefit Payments [1]	(888,512)	(860,613)	(820,721)	(786,607)	(752,896)
ASA Annuitizations [1]	—	43,874	78,793	75,036	196,788
Net Member Reassignment [1]	(5,787)	(7,030)	(3,618)	(5,441)	(8,155)
Administrative Expenses [1]	(18,472)	(20,844)	(24,483)	(24,098)	(25,506)
Other	882	56	55	905	83
Net Change in Fiduciary Net Position	**576,668**	**820,619**	**660,099**	**23,117**	**(62,294)**
Fiduciary Net Position - End of Year	**$ 13,270,996**	**$ 12,694,328**	**$ 11,873,709**	**$ 11,213,610**	**$ 11,190,493**
Net Pension Liability					
Total Pension Liability	$ 16,576,060	$ 16,091,373	$ 16,335,253	$ 15,752,055	$ 15,263,395
Fiduciary Net Position	13,270,996	12,694,328	11,873,709	11,213,610	11,190,493
Net Pension Liability	**$ 3,305,064**	**$ 3,397,045**	**$ 4,461,544**	**$ 4,538,445**	**$ 4,072,902**
Fiduciary Net Position as a Percentage of the Total Pension Liability	**80.1%**	**78.9%**	**72.7%**	**71.2%**	**73.3%**
Covered Payroll [1]	$ 5,205,243	$ 5,083,131	$ 4,997,555	$ 4,868,709	$ 4,804,145
Net Pension Liability as a Percentage of Covered Payroll	**63.5%**	**66.8%**	**89.3%**	**93.2%**	**84.8%**

[1] See Accompanying Notes to the RSI Schedules included in the Introduction to Required Supplementary Information (Unaudited)

Schedule of Changes in Net Pension Liability and Net Pension Liability, continued

Public Employees' Defined Benefit Account [1]

For the Years Ended June 30

(dollars in thousands)

Changes in Net Pension Liability	2014	2013
Total Pension Liability - Beginning of Year	**$ 13,349,578**	**$ 13,034,791**
Service Cost	258,070	270,974
Interest Cost	895,454	875,616
Experience (Gains) / Losses	(15,161)	(104,471)
Assumption Changes	—	—
Plan Amendments	(42,985)	(167,486)
Benefit Payments [1]	(680,203)	(662,283)
ASA Annuitizations [1]	119,094	107,520
Net Member Reassignment [1]	(3,125)	(5,083)
Other	—	—
Net Change in Total Pension Liability	**531,144**	**314,787**
Total Pension Liability - End of Year	**$ 13,880,722**	**$ 13,349,578**
Fiduciary Net Position - Beginning of Year	**$ 9,924,498**	**$ 9,494,306**
Employer Contributions [1]	526,090	455,658
Member Contributions	—	—
Net Investment Income / (Loss)	1,393,814	563,530
Benefit Payments [1]	(680,203)	(662,283)
ASA Annuitizations [1]	119,094	107,520
Net Member Reassignment [1]	(3,125)	(5,083)
Administrative Expenses [1]	(27,433)	(29,181)
Other	52	31
Net Change in Fiduciary Net Position	**1,328,289**	**430,192**
Fiduciary Net Position - End of Year	**$ 11,252,787**	**$ 9,924,498**
Net Pension Liability		
Total Pension Liability	$ 13,880,722	$ 13,349,578
Fiduciary Net Position	11,252,787	9,924,498
Net Pension Liability	**$ 2,627,935**	**$ 3,425,080**
Fiduciary Net Position as a Percentage of the Total Pension Liability	**81.1%**	**74.3%**
Covered Payroll [1]	$ 4,896,635	$ 4,700,000
Net Pension Liability as a Percentage of Covered Payroll	**53.7%**	**72.9%**

[1] See Accompanying Notes to the RSI Schedules included in the Introduction to Required Supplementary Information (Unaudited)

Schedule of Changes in Net Pension Liability and Net Pension Liability

Teachers' Pre-1996 Defined Benefit Account [1]

For the Years Ended, June 30

(dollars in thousands)

Changes in Net Pension Liability	2019	2018	2017	2016	2015
Total Pension Liability - Beginning of Year	**$ 14,583,189**	**$ 15,494,539**	**$ 15,575,072**	**$ 15,596,292**	**$ 14,639,876**
Service Cost	37,234	44,603	43,204	46,787	57,751
Interest Cost	947,607	1,010,565	1,016,915	1,019,403	959,895
Experience (Gains) / Losses	(15,073)	(162,414)	22,416	(5,794)	(140,466)
Assumption Changes	—	(668,484)	(61,548)	—	1,033,158
Plan Amendments	(190)	—	4,213	—	—
Benefit Payments [1]	(1,165,134)	(1,153,374)	(1,135,662)	(1,118,122)	(1,100,434)
ASA Annuitizations [1]	—	16,301	30,502	35,185	143,225
Net Member Reassignment [1]	1,494	1,428	—	—	3,266
Other	37	25	(573)	1,321	21
Net Change in Total Pension Liability	**(194,025)**	**(911,350)**	**(80,533)**	**(21,220)**	**956,416**
Total Pension Liability - End of Year	**$ 14,389,164**	**$ 14,583,189**	**$ 15,494,539**	**$ 15,575,072**	**$ 15,596,292**
Fiduciary Net Position - Beginning of Year	**$ 3,711,347**	**$ 3,575,400**	**$ 3,522,401**	**$ 3,678,455**	**$ 3,786,527**
Employer Contributions [1]	3,505	4,168	4,525	5,048	5,811
Nonemployer Contributing Entity Contributions [1]	943,900	917,900	871,000	887,500	845,616
Member Contributions [1]	36	156	10	132	—
Net Investment Income / (Loss)	269,009	354,639	288,850	40,767	953
Benefit Payments [1]	(1,165,134)	(1,153,374)	(1,135,662)	(1,118,122)	(1,100,434)
ASA Annuitizations [1]	—	16,301	30,502	35,185	143,225
Net Member Reassignment [1]	1,494	1,429	—	—	3,266
Administrative Expenses [1]	(5,329)	(5,385)	(6,226)	(6,564)	(6,530)
Other	317	113	—	—	21
Net Change in Fiduciary Net Position	**47,798**	**135,947**	**52,999**	**(156,054)**	**(108,072)**
Fiduciary Net Position - End of Year	**$ 3,759,145**	**$ 3,711,347**	**$ 3,575,400**	**$ 3,522,401**	**$ 3,678,455**
Net Pension Liability					
Total Pension Liability	$ 14,389,164	$ 14,583,189	$ 15,494,539	$ 15,575,072	$ 15,596,292
Fiduciary Net Position	3,759,145	3,711,347	3,575,400	3,522,401	3,678,455
Net Pension Liability	**$ 10,630,019**	**$ 10,871,842**	**$ 11,919,139**	**$ 12,052,671**	**$ 11,917,837**
Fiduciary Net Position as a Percentage of the Total Pension Liability	**26.1%**	**25.4%**	**23.1%**	**22.6%**	**23.6%**
Covered Payroll [1]	$ 753,355	$ 824,770	$ 912,685	$ 989,093	$ 1,074,827
Net Pension Liability as a Percentage of Covered Payroll	**1,411.0%**	**1,318.2%**	**1,305.9%**	**1,218.6%**	**1,108.8%**

[1] See Accompanying Notes to the RSI Schedules included in the Introduction to Required Supplementary Information (Unaudited)

Schedule of Changes in Net Pension Liability and Net Pension Liability, continued

Teachers' Pre-1996 Defined Benefit Account [1]

For the Years Ended, June 30

(dollars in thousands)

Changes in Net Pension Liability	2014	2013
Total Pension Liability - Beginning of Year	**$ 14,649,549**	**$ 14,547,939**
Service Cost	68,860	81,343
Interest Cost	961,628	957,228
Experience (Gains) / Losses	(70,517)	(40,719)
Assumption Changes	—	—
Plan Amendments	(25,524)	—
Benefit Payments [1]	(1,034,563)	(988,335)
ASA Annuitizations [1]	93,982	86,941
Net Member Reassignment [1]	(3,802)	—
Other	263	5,152
Net Change in Total Pension Liability	**(9,673)**	**101,610**
Total Pension Liability - End of Year	**$ 14,639,876**	**$ 14,649,549**
Fiduciary Net Position - Beginning of Year	**$ 3,401,153**	**$ 3,084,834**
Employer Contributions [1]	6,325	9,484
Nonemployer Contributing Entity Contributions [1]	825,617	1,003,596
Member Contributions [1]	5	—
Net Investment Income / (Loss)	504,801	212,554
Benefit Payments [1]	(1,034,563)	(988,335)
ASA Annuitizations [1]	93,982	86,941
Net Member Reassignment [1]	(3,802)	—
Administrative Expenses [1]	(7,010)	(7,926)
Other	19	5
Net Change in Fiduciary Net Position	**385,374**	**316,319**
Fiduciary Net Position - End of Year	**$ 3,786,527**	**$ 3,401,153**
Net Pension Liability		
Total Pension Liability	$ 14,639,876	$ 14,649,549
Fiduciary Net Position	3,786,527	3,401,153
Net Pension Liability	**$ 10,853,349**	**$ 11,248,396**
Fiduciary Net Position as a Percentage of the Total Pension Liability	**25.9%**	**23.2%**
Covered Payroll [1]	$ 1,262,828	$ 1,383,428
Net Pension Liability as a Percentage of Covered Payroll	**859.4%**	**813.1%**

[1] See Accompanying Notes to the RSI Schedules included in the Introduction to Required Supplementary Information (Unaudited)

Schedule of Changes in Net Pension Liability and Net Pension Liability

Teachers' 1996 Defined Benefit Account [1]

For the Years Ended June 30

(dollars in thousands)

Changes in Net Pension Liability	2019	2018	2017	2016	2015
Total Pension Liability - Beginning of Year	**$ 5,563,264**	**$ 5,536,094**	**$ 5,174,317**	**$ 4,734,776**	**$ 4,116,264**
Service Cost	180,559	182,558	168,651	167,836	170,892
Interest Cost	383,384	382,298	357,392	328,018	287,264
Experience (Gains) / Losses	(21,588)	(142,275)	46,460	29,876	(40,857)
Assumption Changes	—	(285,442)	(115,506)	—	263,991
Plan Amendments	2,939	—	1,353	—	—
Benefit Payments [1]	(132,572)	(122,239)	(109,335)	(99,507)	(90,267)
ASA Annuitizations [1]	—	6,504	8,504	8,932	22,575
Net Member Reassignment [1]	4,293	5,601	4,258	4,370	4,890
Other	147	165	—	16	24
Net Change in Total Pension Liability	**417,162**	**27,170**	**361,777**	**439,541**	**618,512**
Total Pension Liability - Ending	**$ 5,980,426**	**$ 5,563,264**	**$ 5,536,094**	**$ 5,174,317**	**$ 4,734,776**
Fiduciary Net Position - Beginning of Year	**$ 5,452,352**	**$ 4,873,897**	**$ 4,393,797**	**$ 4,208,198**	**$ 4,068,713**
Employer Contributions [1]	393,172	235,819	227,207	215,626	205,763
Member Contributions [1]	127	130	58	43	—
Net Investment Income / (Loss)	411,147	457,708	354,927	61,722	2,684
Benefit Payments [1]	(132,572)	(122,239)	(109,335)	(99,507)	(90,267)
ASA Annuitizations [1]	—	6,504	8,504	8,932	22,575
Net Member Reassignment [1]	4,293	5,601	4,258	4,370	4,890
Administrative Expenses [1]	(5,038)	(5,208)	(5,553)	(5,603)	(6,184)
Other	605	140	34	16	24
Net Change in Fiduciary Net Position	**671,734**	**578,455**	**480,100**	**185,599**	**139,485**
Fiduciary Net Position - End of Year	**$ 6,124,086**	**$ 5,452,352**	**$ 4,873,897**	**$ 4,393,797**	**$ 4,208,198**
Net Pension Liability					
Total Pension Liability	$ 5,980,426	$ 5,563,264	$ 5,536,094	$ 5,174,317	$ 4,734,776
Fiduciary Net Position	6,124,086	5,452,352	4,873,897	4,393,797	4,208,198
Net Pension Liability	**$ (143,660)**	**$ 110,912**	**$ 662,197**	**$ 780,520**	**$ 526,578**
Fiduciary Net Position as a Percentage of the Total Pension Liability	**102.4 %**	**98.0%**	**88.0%**	**84.9%**	**88.9%**
Covered Payroll [1]	$ 3,257,918	$ 3,129,070	$ 3,020,463	$ 2,881,397	$ 2,742,187
Net Pension Liability as a Percentage of Covered Payroll	**(4.4)%**	**3.5%**	**21.9%**	**27.1%**	**19.2%**

[1] *See Accompanying Notes to the RSI Schedules included in the Introduction to Required Supplementary Information (Unaudited)*

Schedule of Changes in Net Pension Liability and Net Pension Liability, continued

Teachers' 1996 Defined Benefit Account [1]

For the Years Ended June 30

(dollars in thousands)

Changes in Net Pension Liability	2014	2013
Total Pension Liability - Beginning of Year	**$ 3,757,444**	**$ 3,438,970**
Service Cost	155,314	147,337
Interest Cost	262,263	240,282
Experience (Gains) / Losses	504	(15,995)
Assumption Changes	—	—
Plan Amendments	(4,504)	—
Benefit Payments [1]	(77,253)	(68,793)
ASA Annuitizations [1]	15,151	11,621
Net Member Reassignment [1]	6,922	—
Other	423	4,022
Net Change in Total Pension Liability	**358,820**	**318,474**
Total Pension Liability - Ending	**$ 4,116,264**	**$ 3,757,444**
Fiduciary Net Position - Beginning of Year	**$ 3,442,972**	**$ 3,118,810**
Employer Contributions [1]	194,751	180,714
Member Contributions	—	—
Net Investment Income / (Loss)	492,856	207,098
Benefit Payments [1]	(77,253)	(68,793)
ASA Annuitizations [1]	15,151	11,621
Net Member Reassignment [1]	6,922	—
Administrative Expenses [1]	(6,707)	(6,482)
Other	21	4
Net Change in Fiduciary Net Position	**625,741**	**324,162**
Fiduciary Net Position - End of Year	**$ 4,068,713**	**$ 3,442,972**
Net Pension Liability		
Total Pension Liability	$ 4,116,264	$ 3,757,444
Fiduciary Net Position	4,068,713	3,442,972
Net Pension Liability	**$ 47,551**	**$ 314,472**
Fiduciary Net Position as a Percentage of the Total Pension Liability	**98.8%**	**91.6%**
Covered Payroll [1]	$ 2,598,115	$ 2,442,496
Net Pension Liability as a Percentage of Covered Payroll	**1.8%**	**12.9%**

[1] See Accompanying Notes to the RSI Schedules included in the Introduction to Required Supplementary Information (Unaudited)

Schedule of Changes in Net Pension Liability and Net Pension Liability

1977 Police Officers' and Firefighters' Retirement Fund [1]

For the Years Ended June 30

(dollars in thousands)

Changes in Net Pension Liability	2019	2018	2017	2016	2015
Total Pension Liability - Beginning of Year	**$ 5,839,659**	**$ 5,385,753**	**$ 5,039,836**	**$ 4,680,695**	**$ 4,706,998**
Service Cost	150,289	136,640	134,489	129,369	138,204
Interest Cost	398,002	366,932	344,397	320,218	323,129
Experience (Gains) / Losses	31,019	123,069	33,409	41,723	(61,640)
Assumption Changes	—	—	(23,399)	—	(309,801)
Plan Amendments	157,278	—	1,323	—	—
Benefit Payments [1]	(189,951)	(172,908)	(148,865)	(132,746)	(116,490)
Net Member Reassignment [1]	—	—	—	(74)	—
Other	2,706	173	4,563	651	295
Net Change in Total Pension Liability	**549,343**	**453,906**	**345,917**	**359,141**	**(26,303)**
Total Pension Liability - Ending	**$ 6,389,002**	**$ 5,839,659**	**$ 5,385,753**	**$ 5,039,836**	**$ 4,680,695**
Fiduciary Net Position - Beginning of Year	**$ 5,927,570**	**$ 5,401,179**	**$ 4,950,999**	**$ 4,828,415**	**$ 4,757,978**
Employer Contributions [1]	155,051	147,094	150,857	151,674	146,697
Member Contributions [1]	52,811	48,839	51,521	44,918	43,523
Net Investment Income / (Loss)	436,229	504,991	398,196	60,320	(1,600)
Benefit Payments [1]	(189,951)	(172,908)	(148,865)	(132,746)	(116,490)
Net Member Reassignment [1]	—	—	—	(74)	—
Administrative Expenses [1]	(1,904)	(1,643)	(1,607)	(1,651)	(1,708)
Other	(20)	18	78	143	15
Net Change in Fiduciary Net Position	**452,216**	**526,391**	**450,180**	**122,584**	**70,437**
Fiduciary Net Position - End of Year	**$ 6,379,786**	**$ 5,927,570**	**$ 5,401,179**	**$ 4,950,999**	**$ 4,828,415**
Net Pension Liability					
Total Pension Liability	$ 6,389,002	$ 5,839,659	$ 5,385,753	$ 5,039,836	$ 4,680,695
Fiduciary Net Position	6,379,786	5,927,570	5,401,179	4,950,999	4,828,415
Net Pension Liability	**$ 9,216**	**$ (87,911)**	**$ (15,426)**	**$ 88,837**	**$ (147,720)**
Fiduciary Net Position as a Percentage of the Total Pension Liability	**99.9%**	**101.5 %**	**100.3 %**	**98.2%**	**103.2 %**
Covered Payroll [1]	$ 866,299	$ 842,179	$ 809,382	$ 771,949	$ 745,336
Net Pension Liability as a Percentage of Covered Payroll	**1.1%**	**(10.4)%**	**(1.9)%**	**11.5%**	**(19.8)%**

[1] *See Accompanying Notes to the RSI Schedules included in the Introduction to Required Supplementary Information (Unaudited)*

Schedule of Changes in Net Pension Liability and Net Pension Liability, continued

1977 Police Officers' and Firefighters' Retirement Fund [1]

For the Years Ended June 30

(dollars in thousands)

Changes in Net Pension Liability	2014	2013
Total Pension Liability - Beginning of Year	**$ 4,392,947**	**$ 4,122,436**
Service Cost	133,075	130,912
Interest Cost	301,824	283,733
Experience (Gains) / Losses	(11,754)	(39,592)
Assumption Changes	—	(4,810)
Plan Amendments	—	—
Benefit Payments [1]	(109,094)	(99,803)
Net Member Reassignment [1]	—	71
Other	—	—
Net Change in Total Pension Liability	**314,051**	**270,511**
Total Pension Liability - Ending	**$ 4,706,998**	**$ 4,392,947**
Fiduciary Net Position - Beginning of Year	**$ 4,116,861**	**$ 3,817,013**
Employer Contributions [1]	140,119	137,111
Member Contributions [1]	41,791	40,786
Net Investment Income / (Loss)	570,058	223,510
Benefit Payments [1]	(109,094)	(99,803)
Net Member Reassignment [1]	—	71
Administrative Expenses [1]	(1,787)	(1,845)
Other	30	18
Net Change in Fiduciary Net Position	**641,117**	**299,848**
Fiduciary Net Position - End of Year	**$ 4,757,978**	**$ 4,116,861**
Net Pension Liability		
Total Pension Liability	$ 4,706,998	$ 4,392,947
Fiduciary Net Position	4,757,978	4,116,861
Net Pension Liability	**$ (50,980)**	**$ 276,086**
Fiduciary Net Position as a Percentage of the Total Pension Liability	**101.1 %**	**93.7%**
Covered Payroll [1]	$ 710,581	$ 695,000
Net Pension Liability as a Percentage of Covered Payroll	**(7.2)%**	**39.7%**

[1] *See Accompanying Notes to the RSI Schedules included in the Introduction to Required Supplementary Information (Unaudited)*

Schedule of Changes in Net Pension Liability and Net Pension Liability

Judges' Retirement System [1]

For the Years Ended June 30

(dollars in thousands)

Changes in Net Pension Liability	2019	2018	2017	2016	2015
Total Pension Liability - Beginning of Year	**$ 547,694**	**$ 523,735**	**$ 501,126**	**$ 468,944**	**$ 464,855**
Service Cost	18,230	14,886	14,762	13,870	15,283
Interest Cost	37,346	35,567	34,083	31,889	31,753
Experience (Gains) / Losses	8,527	(3,090)	(3,107)	7,182	8,411
Assumption Changes	—	—	(1,213)	—	(31,926)
Plan Amendments	—	—	—	—	—
Benefit Payments [1]	(25,391)	(23,623)	(22,099)	(20,922)	(19,432)
Net Member Reassignment	—	—	—	—	—
Other	93	219	183	162	—
Net Change in Total Pension Liability	**38,805**	**23,959**	**22,609**	**32,181**	**4,089**
Total Pension Liability - Ending	**$ 586,499**	**$ 547,694**	**$ 523,735**	**$ 501,125**	**$ 468,944**
Fiduciary Net Position - Beginning of Year	**$ 513,952**	**$ 475,055**	**$ 441,790**	**$ 437,352**	**$ 432,730**
Employer Contributions	16,031	15,117	16,824	16,946	21,020
Member Contributions	3,476	3,418	3,468	3,239	3,292
Net Investment Income / (Loss)	37,371	44,104	35,196	5,323	(102)
Benefit Payments [1]	(25,391)	(23,623)	(22,099)	(20,922)	(19,432)
Net Member Reassignment	—	—	—	—	—
Administrative Expenses [1]	(108)	(119)	(124)	(148)	(165)
Other	—	—	—	—	9
Net Change in Fiduciary Net Position	**31,379**	**38,897**	**33,265**	**4,438**	**4,622**
Fiduciary Net Position - End of Year	**$ 545,331**	**$ 513,952**	**$ 475,055**	**$ 441,790**	**$ 437,352**
Net Pension Liability					
Total Pension Liability	$ 586,499	$ 547,694	$ 523,735	$ 501,125	$ 468,944
Fiduciary Net Position	545,331	513,952	475,055	441,790	437,352
Net Pension Liability	**$ 41,168**	**$ 33,742**	**$ 48,680**	**$ 59,335**	**$ 31,592**
Fiduciary Net Position as a Percentage of the Total Pension Liability	**93.0%**	**93.8%**	**90.7%**	**88.2%**	**93.3%**
Covered Payroll [1]	$ 56,380	$ 53,350	$ 54,755	$ 51,382	$ 48,582
Net Pension Liability as a Percentage of Covered Payroll	**73.0%**	**63.2%**	**88.9%**	**115.5%**	**65.0%**

[1] See Accompanying Notes to the RSI Schedules included in the Introduction to Required Supplementary Information (Unaudited)

Schedule of Changes in Net Pension Liability and Net Pension Liability, continued

Judges' Retirement System [1]

For the Years Ended June 30

(dollars in thousands)

Changes in Net Pension Liability	2014	2013
Total Pension Liability - Beginning of Year	**$ 453,110**	**$ 437,854**
Service Cost	15,302	16,084
Interest Cost	30,992	30,047
Experience (Gains) / Losses	(16,026)	(13,603)
Assumption Changes	—	186
Plan Amendments	—	—
Benefit Payments [1]	(18,527)	(17,579)
Net Member Reassignment [1]	4	121
Other	—	—
Net Change in Total Pension Liability	**11,745**	**15,256**
Total Pension Liability - Ending	**$ 464,855**	**$ 453,110**
Fiduciary Net Position - Beginning of Year	$ 375,752	$ 262,326
Employer Contributions [1]	20,895	111,419
Member Contributions [1]	2,856	2,631
Net Investment Income / (Loss)	51,890	16,955
Benefit Payments[1]	(18,527)	(17,579)
Net Member Reassignment [1]	4	121
Administrative Expenses [1]	(146)	(126)
Other	6	5
Net Change in Fiduciary Net Position	**56,978**	**113,426**
Fiduciary Net Position - End of Year	**$ 432,730**	**$ 375,752**
Net Pension Liability		
Total Pension Liability	$ 464,855	$ 453,110
Fiduciary Net Position	432,730	375,752
Net Pension Liability	**$ 32,125**	**$ 77,358**
Fiduciary Net Position as a Percentage of the Total Pension Liability	**93.1%**	**82.9%**
Covered Payroll [1]	$ 46,041	$ 47,595
Net Pension Liability as a Percentage of Covered Payroll	**69.8%**	**162.5%**

[1] See Accompanying Notes to the RSI Schedules included in the Introduction to Required Supplementary Information (Unaudited)

Schedule of Changes in Net Pension Liability and Net Pension Liability
Excise, Gaming and Conservation Officers' Retirement Fund [1]
For the Years Ended June 30

(dollars in thousands)

Changes in Net Pension Liability	2019	2018	2017	2016	2015
Total Pension Liability - Beginning of Year	**$ 140,056**	**$ 142,603**	**$ 138,965**	**$ 132,796**	**$ 123,601**
Service Cost	3,551	3,369	3,550	3,011	3,905
Interest Cost	9,448	9,619	9,389	8,955	8,384
Experience (Gains) / Losses	6,427	(587)	120	470	845
Assumption Changes	—	(8,015)	(2,578)	—	2,669
Plan Amendments	—	—	—	—	—
Benefit Payments [1]	(7,325)	(6,935)	(6,826)	(6,245)	(6,608)
Net Member Reassignment [1]	—	—	(26)	(21)	—
Other	50	2	9	(1)	—
Net Change in Total Pension Liability	**12,151**	**(2,547)**	**3,638**	**6,169**	**9,195**
Total Pension Liability - Ending	**$ 152,207**	**$ 140,056**	**$ 142,603**	**$ 138,965**	**$ 132,796**
Fiduciary Net Position - Beginning of Year	**$ 131,491**	**$ 120,016**	**$ 111,329**	**$ 110,038**	**$ 110,657**
Employer Contributions [1]	6,982	6,175	5,691	5,367	5,215
Member Contributions [1]	1,368	1,172	1,102	1,016	1,004
Net Investment Income / (Loss)	9,711	11,189	8,869	1,313	(71)
Benefit Payments [1]	(7,325)	(6,935)	(6,826)	(6,245)	(6,608)
Net Member Reassignment [1]	—	—	(26)	(21)	—
Administrative Expenses [1]	(112)	(136)	(123)	(139)	(159)
Other	—	10	—	—	—
Net Change in Fiduciary Net Position	**10,624**	**11,475**	**8,687**	**1,291**	**(619)**
Fiduciary Net Position - End of Year	**$ 142,115**	**$ 131,491**	**$ 120,016**	**$ 111,329**	**$ 110,038**
Net Pension Liability					
Total Pension Liability	$ 152,207	$ 140,056	$ 142,603	$ 138,965	$ 132,796
Fiduciary Net Position	142,115	131,491	120,016	111,329	110,038
Net Pension Liability	**$ 10,092**	**$ 8,565**	**$ 22,587**	**$ 27,636**	**$ 22,758**
Fiduciary Net Position as a Percentage of the Total Pension Liability	**93.4%**	**93.9%**	**84.2%**	**80.1%**	**82.9%**
Covered Payroll [1]	$ 33,272	$ 29,387	$ 27,428	$ 25,526	$ 25,133
Net Pension Liability as a Percentage of Covered Payroll	**30.3%**	**29.1%**	**82.4%**	**108.3%**	**90.6%**

[1] See Accompanying Notes to the RSI Schedules included in the Introduction to Required Supplementary Information (Unaudited)

Schedule of Changes in Net Pension Liability and Net Pension Liability, continued

Excise, Gaming and Conservation Officers' Retirement Fund [1]

For the Years Ended June 30

(dollars in thousands)

Changes in Net Pension Liability	2014	2013
Total Pension Liability - Beginning of Year	**$ 118,097**	**$ 113,282**
Service Cost	3,841	3,811
Interest Cost	8,031	7,740
Experience (Gains) / Losses	(430)	(1,845)
Assumption Changes	—	(40)
Plan Amendments	—	—
Benefit Payments [1]	(5,938)	(4,836)
Net Member Reassignment [1]	—	(15)
Other	—	—
Net Change in Total Pension Liability	**5,504**	**4,815**
Total Pension Liability - Ending	**$ 123,601**	**$ 118,097**
Fiduciary Net Position - Beginning of Year	$ 97,019	$ 76,543
Employer Contributions [1]	5,359	19,740
Member Contributions [1]	1,019	1,006
Net Investment Income / (Loss)	13,339	4,702
Benefit Payments [1]	(5,938)	(4,836)
Net Member Reassignment [1]	—	(15)
Administrative Expenses [1]	(141)	(121)
Other	—	—
Net Change in Fiduciary Net Position	**13,638**	**20,476**
Fiduciary Net Position - End of Year	**$ 110,657**	**$ 97,019**
Net Pension Liability		
Total Pension Liability	$ 123,601	$ 118,097
Fiduciary Net Position	110,657	97,019
Net Pension Liability	**$ 12,944**	**$ 21,078**
Fiduciary Net Position as a Percentage of the Total Pension Liability	**89.5%**	**82.2%**
Covered Payroll [1]	$ 25,825	$ 24,675
Net Pension Liability as a Percentage of Covered Payroll	**50.1%**	**85.4%**

[1] *See Accompanying Notes to the RSI Schedules included in the Introduction to Required Supplementary Information (Unaudited)*

Schedule of Changes in Net Pension Liability and Net Pension Liability

Prosecuting Attorneys' Retirement Fund [1]

For the Years Ended June 30

(dollars in thousands)

Changes in Net Pension Liability	2019	2018	2017	2016	2015
Total Pension Liability - Beginning of Year	**$ 103,284**	**$ 96,655**	**$ 85,033**	**$ 77,861**	**$ 65,336**
Service Cost	2,031	1,947	1,650	1,626	1,603
Interest Cost	6,959	6,521	5,714	5,239	4,409
Experience (Gains) / Losses	2,240	2,156	1,996	4,058	4,551
Assumption Changes	—	—	(216)	—	5,216
Plan Amendments	—	—	6,547	—	—
Benefit Payments [1]	(4,433)	(3,995)	(4,069)	(3,747)	(3,254)
Net Member Reassignment	—	—	—	—	—
Other	1	—	—	(4)	—
Net Change in Total Pension Liability	**6,798**	**6,629**	**11,622**	**7,172**	**12,525**
Total Pension Liability - Ending	**$ 110,082**	**$ 103,284**	**$ 96,655**	**$ 85,033**	**$ 77,861**
Fiduciary Net Position - Beginning of Year	**$ 61,019**	**$ 55,575**	**$ 52,792**	**$ 53,424**	**$ 54,507**
Employer Contributions [1]	3,216	3,014	1,486	1,440	1,063
Member Contributions [1]	1,307	1,294	1,357	1,279	1,269
Net Investment Income / (Loss)	4,489	5,218	4,167	589	(34)
Benefit Payments [1]	(4,433)	(3,995)	(4,069)	(3,747)	(3,254)
Net Member Reassignment	—	—	—	—	—
Administrative Expenses [1]	(75)	(87)	(158)	(193)	(127)
Other	—	—	—	—	—
Net Change in Fiduciary Net Position	**4,504**	**5,444**	**2,783**	**(632)**	**(1,083)**
Fiduciary Net Position - End of Year	**$ 65,523**	**$ 61,019**	**$ 55,575**	**$ 52,792**	**$ 53,424**
Net Pension Liability					
Total Pension Liability	$ 110,082	$ 103,284	$ 96,655	$ 85,033	$ 77,861
Fiduciary Net Position	65,523	61,019	55,575	52,792	53,424
Net Pension Liability	**$ 44,559**	**$ 42,265**	**$ 41,080**	**$ 32,241**	**$ 24,437**
Fiduciary Net Position as a Percentage of the Total Pension Liability	**59.5%**	**59.1%**	**57.5%**	**62.1%**	**68.6%**
Covered Payroll [1]	$ 21,791	$ 21,578	$ 22,635	$ 21,372	$ 21,145
Net Pension Liability as a Percentage of Covered Payroll	**204.5%**	**195.9%**	**181.5%**	**150.9%**	**115.6%**

[1] See Accompanying Notes to the RSI Schedules included in the Introduction to Required Supplementary Information (Unaudited)

Schedule of Changes in Net Pension Liability and Net Pension Liability, continued

Prosecuting Attorneys' Retirement Fund [1]

For the Years Ended June 30

(dollars in thousands)

Changes in Net Pension Liability	2014	2013
Total Pension Liability - Beginning of Year	**$ 61,940**	**$ 56,080**
Service Cost	1,587	1,568
Interest Cost	4,207	3,816
Experience (Gains) / Losses	—	1,474
Assumption Changes	—	(109)
Plan Amendments	—	1,346
Benefit Payments[1]	(2,398)	(2,235)
Net Member Reassignment	—	—
Other	—	—
Net Change in Total Pension Liability	**3,396**	**5,860**
Total Pension Liability - Ending	**$ 65,336**	**$ 61,940**
Fiduciary Net Position - Beginning of Year	**$ 47,920**	**$ 27,689**
Employer Contributions [1]	1,174	19,443
Member Contributions [1]	1,334	1,271
Net Investment Income / (Loss)	6,581	1,897
Benefit Payments [1]	(2,398)	(2,235)
Net Member Reassignment	—	—
Administrative Expenses [1]	(108)	(145)
Other	4	—
Net Change in Fiduciary Net Position	**6,587**	**20,231**
Fiduciary Net Position - End of Year	**$ 54,507**	**$ 47,920**
Net Pension Liability		
Total Pension Liability	$ 65,336	$ 61,940
Fiduciary Net Position	54,507	47,920
Net Pension Liability	**$ 10,829**	**$ 14,020**
Fiduciary Net Position as a Percentage of the Total Pension Liability	**83.4%**	**77.4%**
Covered Payroll [1]	$ 20,608	$ 18,805
Net Pension Liability as a Percentage of Covered Payroll	**52.5%**	**74.6%**

[1] See Accompanying Notes to the RSI Schedules included in the Introduction to Required Supplementary Information (Unaudited)

Schedule of Changes in Net Pension Liability and Net Pension Liability
Legislators' Defined Benefit Fund [1]
For the Years Ended June 30

(dollars in thousands)

Changes in Net Pension Liability	2019	2018	2017	2016	2015
Total Pension Liability - Beginning of Year	**$ 3,484**	**$ 3,804**	**$ 4,015**	**$ 4,325**	**$ 4,166**
Service Cost	—	—	1	2	3
Interest Cost	223	245	258	280	269
Experience (Gains) / Losses	10	(85)	(113)	(233)	(68)
Assumption Changes	—	(121)	—	—	325
Plan Amendments	—	—	—	—	—
Benefit Payments[1]	(356)	(359)	(357)	(359)	(370)
Net Member Reassignment	—	—	—	—	—
Other	1	—	—	—	—
Net Change in Total Pension Liability	**(122)**	**(320)**	**(211)**	**(310)**	**159**
Total Pension Liability - Ending	**$ 3,362**	**$ 3,484**	**$ 3,804**	**$ 4,015**	**$ 4,325**
Fiduciary Net Position - Beginning of Year	**$ 2,942**	**$ 2,865**	**$ 2,919**	**$ 3,174**	**$ 3,489**
Employer Contributions [1]	269	237	135	138	131
Member Contributions	—	—	—	—	—
Net Investment Income / (Loss)	209	263	221	27	(5)
Benefit Payments [1]	(356)	(359)	(357)	(359)	(370)
Net Member Reassignment	—	—	—	—	—
Administrative Expenses [1]	(38)	(64)	(53)	(61)	(71)
Other	—	—	—	—	—
Net Change in Fiduciary Net Position	**84**	**77**	**(54)**	**(255)**	**(315)**
Fiduciary Net Position - End of Year	**$ 3,026**	**$ 2,942**	**$ 2,865**	**$ 2,919**	**$ 3,174**
Net Pension Liability					
Total Pension Liability	$ 3,362	$ 3,484	$ 3,804	$ 4,015	$ 4,325
Fiduciary Net Position	3,026	2,942	2,865	2,919	3,174
Net Pension Liability	**$ 336**	**$ 542**	**$ 939**	**$ 1,096**	**$ 1,151**
Fiduciary Net Position as a Percentage of the Total Pension Liability	**90.0%**	**84.4%**	**75.3%**	**72.7%**	**73.4%**
Covered Payroll [1]	N/A	N/A	N/A	N/A	N/A
Net Pension Liability as a Percentage of Covered Payroll	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**

[1] *See Accompanying Notes to the RSI Schedules included in the Introduction to Required Supplementary Information (Unaudited)*

Schedule of Changes in Net Pension Liability and Net Pension Liability, continued

Legislators' Defined Benefit Fund [1]

For the Years Ended June 30

(dollars in thousands)

Changes in Net Pension Liability	2014	2013
Total Pension Liability - Beginning of Year	**$ 4,285**	**$ 4,497**
Service Cost	3	2
Interest Cost	277	291
Experience (Gains) / Losses	(36)	(140)
Assumption Changes	—	—
Plan Amendments	—	—
Benefit Payments[1]	(363)	(365)
Net Member Reassignment	—	—
Other	—	—
Net Change in Total Pension Liability	**(119)**	**(212)**
Total Pension Liability - Ending	**$ 4,166**	**$ 4,285**
Fiduciary Net Position - Beginning of Year	**$ 3,337**	**$ 3,385**
Employer Contributions [1]	138	150
Member Contributions	—	—
Net Investment Income / (Loss)	439	201
Benefit Payments [1]	(363)	(365)
Net Member Reassignment	—	—
Administrative Expenses [1]	(62)	(34)
Other	—	—
Net Change in Fiduciary Net Position	**152**	**(48)**
Fiduciary Net Position - End of Year	**$ 3,489**	**$ 3,337**
Net Pension Liability		
Total Pension Liability	$ 4,166	$ 4,285
Fiduciary Net Position	3,489	3,337
Net Pension Liability	**$ 677**	**$ 948**
Fiduciary Net Position as a Percentage of the Total Pension Liability	**83.7%**	**77.9%**
Covered Payroll	N/A	N/A
Net Pension Liability as a Percentage of Covered Payroll	**N/A**	**N/A**

[1] *See Accompanying Notes to the RSI Schedules included in the Introduction to Required Supplementary Information (Unaudited)*

Schedule of Contributions

(dollars in thousands) For the Years Ended June 30	Actuarially Determined Contribution (ADC) [2]	Contributions in Relation to ADC [2]	Contribution Deficiency (Excess)	Contributions as a Percentage of ADC	Covered Payroll [1]	Contributions as a Percentage of Covered Payroll
			PERF DB			
2019 [1]	$ 527,836	$ 581,559	$ (53,723)	110.2%	$ 5,205,243	11.2%
2018 [1]	502,206	571,099	(68,893)	113.7	5,083,131	11.2
2017 [1]	496,867	558,659	(61,792)	112.4	4,997,555	11.2
2016 [1]	492,000	547,684	(55,684)	111.3	4,868,709	11.2
2015 [1]	517,717	536,467	(18,750)	103.6	4,804,145	11.2
2014 [1]	528,562	519,576	8,986	98.3	4,896,635	10.6
2013	464,047	455,658	8,389	98.2	4,700,000	9.7
2012	449,388	397,843	51,545	88.5	4,550,000	8.7
2011	351,000	342,779	8,221	97.7	4,500,000	7.6
2010	329,731	331,090	(1,359)	100.4	4,800,000	6.9
			TRF Pre-'96 DB			
2019	$ 947,405	$ 947,405	$ —	100.0%	$ 753,355	125.8%
2018	922,068	922,068	—	100.0	824,770	111.8
2017	875,525	875,525	—	100.0	912,685	95.9
2016	892,548	892,548	—	100.0	989,093	90.2
2015	851,427	851,427	—	100.0	1,074,827	79.2
2014	831,942	831,942	—	100.0	1,262,828	65.9
2013	1,013,080	1,013,080	—	100.0	1,383,428	73.2
2012	764,423	764,423	—	100.0	1,637,066	46.7
2011	748,978	748,978	—	100.0	1,762,750	42.5
2010	731,149	731,149	—	100.0	1,865,102	39.2
			TRF '96 DB			
2019 [1]	$ 226,099	$ 393,151	$ (167,052)	173.9%	$ 3,257,918	12.1%
2018 [1]	210,586	235,675	(25,089)	111.9	3,129,070	7.5
2017	198,444	227,207	(28,763)	114.5	3,020,463	7.5
2016	180,375	215,626	(35,251)	119.5	2,881,397	7.5
2015	178,260	205,763	(27,503)	115.4	2,742,187	7.5
2014	177,711	194,751	(17,040)	109.6	2,598,115	7.5
2013	167,311	180,714	(13,403)	108.0	2,442,496	7.4
2012	154,800	181,067	(26,267)	117.0	2,400,000	7.5
2011	135,057	166,633	(31,576)	123.4	2,225,000	7.5
2010	99,000	154,491	(55,491)	156.1	2,200,000	7.0
			77 Fund			
2019 [1]	$ 78,010	$ 154,228	$ (76,218)	197.7%	$ 866,299	17.8%
2018 [1]	74,491	147,074	(72,583)	197.4	842,179	17.5
2017 [1]	91,258	150,698	(59,440)	165.1	809,382	18.6
2016 [1]	113,438	151,299	(37,861)	133.4	771,949	19.6
2015 [1]	118,881	146,402	(27,521)	123.2	745,336	19.6
2014	103,425	140,119	(36,694)	135.5	710,581	19.7
2013	112,590	137,111	(24,521)	121.8	695,000	19.7
2012	132,549	135,605	(3,056)	102.3	690,000	19.7
2011	117,820	133,726	(15,906)	113.5	687,000	19.5
2010	94,135	130,775	(36,640)	138.9	670,000	19.5

[1] *Contributions include year-end accruals and exclude specific financed liabilities. Covered payroll does not include payroll corresponding to the contribution accrual.*

[2] *See Accompanying Notes to the RSI Schedules included in the Introduction to Required Supplementary Information (Unaudited)*

Schedule of Contributions, continued

(dollars in thousands) For the Years Ended June 30	Actuarially Determined Contribution (ADC) [1]	Contributions in Relation to ADC [1]	Contribution Deficiency (Excess)	Contributions as a Percentage of ADC	Covered Payroll [2]	Contributions as a Percentage of Covered Payroll
JRS						
2019	$ 14,862	$ 16,031	$ (1,169)	107.9%	$ 56,380	28.4%
2018	14,853	15,117	(264)	101.8	53,350	28.3
2017	14,335	16,824	(2,489)	117.4	54,755	30.7
2016	17,485	16,946	539	96.9	51,382	33.0
2015	18,865	21,020	(2,155)	111.4	48,582	43.3
2014	27,648	20,895	6,753	75.6	46,041	45.4
2013	25,458	111,419	(85,961)	437.7	47,595	234.1
2012	19,664	18,896	768	96.1	45,138	41.9
2011	18,910	19,200	(290)	101.5	45,764	42.0
2010	16,077	18,631	(2,554)	115.9	36,722	50.7
EG&C						
2019	$ 4,874	$ 6,982	$ (2,108)	143.2%	$ 33,272	21.0%
2018	4,393	6,175	(1,782)	140.6	29,387	21.0
2017	4,033	5,691	(1,658)	141.1	27,428	20.7
2016	4,078	5,297	(1,219)	129.9	25,526	20.8
2015	4,820	5,215	(395)	108.2	25,133	20.7
2014	5,341	5,359	(18)	100.3	25,825	20.8
2013	4,794	19,740	(14,946)	411.8	24,675	80.0
2012	4,556	5,054	(498)	110.9	24,300	20.8
2011	4,112	5,197	(1,085)	126.4	25,000	20.8
2010	4,200	5,256	(1,056)	125.1	25,300	20.8
PARF						
2019	$ 3,543	$ 3,216	$ 327	90.8%	$ 21,791	14.8%
2018	2,533	3,014	(481)	119.0	21,578	14.0
2017	2,148	1,486	662	69.2	22,635	6.6
2016	1,381	1,440	(59)	104.3	21,372	6.7
2015	1,419	1,063	356	74.9	21,145	5.0
2014	2,345	1,174	1,171	50.1	20,608	5.7
2013	2,542	19,443	(16,901)	764.9	18,805	103.4
2012	2,037	1,839	198	90.3	21,705	8.5
2011	1,960	170	1,790	8.7	18,082	0.9
2010	1,663	170	1,493	10.2	21,016	0.8
LE DB [1]						
2019	$ 240	$ 269	$ (29)	112.1%	N/A	N/A
2018	237	237	—	100.0	N/A	N/A
2017	170	135	35	79.4	N/A	N/A
2016	138	138	—	100.0	N/A	N/A
2015	119	131	(12)	110.1	N/A	N/A
2014	138	138	—	100.0	N/A	N/A
2013	140	150	(10)	107.1	N/A	N/A
2012	113	112	1	99.1	N/A	N/A
2011	113	—	113	—	N/A	N/A
2010	63	—	63	—	N/A	N/A

[1] See Accompanying Notes to the RSI Schedules included in the Introduction to Required Supplementary Information (Unaudited)

[2] Contributions include year-end accruals and exclude specific financed liabilities. Covered payroll does not include payroll corresponding to the contribution accrual.

Schedule of Investment Returns [1]

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

For the Years Ended, June 30

Defined Benefit Pension Trust Funds	2019	2018	2017	2016	2015	2014	2013
PERF DB	7.32%	9.33%	7.60%	1.11%	0.32%	12.33%	5.79%
TRF Pre-'96 DB	7.61	9.46	8.14	1.01	0.57	12.71	5.11
TRF '96 DB	7.47	9.28	8.14	1.01	0.57	12.71	5.11
77 Fund	7.34	9.30	7.97	1.22	(0.07)	13.70	5.85
JRS	7.31	9.32	7.96	1.18	(0.06)	13.69	5.24
EG&C	7.40	9.30	7.97	1.17	(0.09)	13.69	5.48
PARF	7.30	9.31	7.94	1.10	(0.08)	13.70	4.84
LE DB	7.19	9.39	7.91	0.84	(0.13)	13.65	6.16
Total INPRS [2]	**6.84**	**8.88**	**7.85**	**1.10**	**0.44**	**12.69**	**5.57**

[1] See Accompanying Notes to the RSI Schedules included in the Introduction to Required Supplementary Information (Unaudited)

[2] Rate of return includes PERF DC, TRF DC, LE DC, SDBF, and LPSPR.

Schedule of Notes to Required Supplementary Information

Plan Amendments

In 2019, PERF DB, TRF Pre-'96 DB, and TRF '96 DB were modified pursuant to HEA 1059. Previously, statute generally required PERF and TRF members to have 15 years of service to qualify for a survivor benefit prior to retirement. Statute now allows a qualifying spouse/ dependent to receive a benefit if the deceased member had a minimum of 10 years of creditable service.

In 2019, SEA 85 modified the 77 Fund by increasing the basic pension benefit from 50 to 52 percent of a monthly first class salary and the maximum benefit from 74 to 76 percent. Additionally, a surviving spouse in a non-line of duty death now receives 70 percent of the member's monthly benefit, increased from 60 percent.

Assumption Changes

In 2019, there were no changes to assumptions that impacted the NPL during the fiscal year.

In 2018, SEA 373 replaced the 1% COLA assumption for five funds (PERF DB, TRF Pre-'96 DB, TRF '96 DB, EG&C, LE DB) with a COLA of 0.40/0.50/0.60%, which lowered the actuarial accrued liabilities for those funds.

In 2015, an experience study was performed resulting in an update to several assumptions. These assumption changes included a change in the mortality assumptions, retirement assumptions, withdrawal assumptions, disability assumptions, ASA annuitization assumptions (PERF DB, TRF Pre-'96 DB and TRF '96 DB only), dependent assumptions, future salary increase assumptions, inflation assumptions, and COLA assumptions. For further details refer to the Actuarial Section of the CAFR.

Methods and Assumptions Used in Calculating Actuarially Determined Contributions [1]

The following actuarial methods and assumptions were used to determine the ADC Rates for the Fiscal Year Ending June 30, 2019:

Description	PERF DB	TRF Pre-'96 DB	TRF '96 DB	77 Fund	JRS	EG&C	PARF	LE DB
Valuation Date:								
Assets	June 30, 2017							
Liabilities	June 30, 2016 - Member census data as of June 30, 2016 was used in the valuation and adjusted, where appropriate, to reflect changes between June 30, 2016 and June 30, 2017. Standard actuarial roll forward techniques were then used to project the total pension liability computed as of June 30, 2016 to the June 30, 2017 measurement date.							
Actuarial Cost Method (Funding)	Entry Age Normal (Level Percent of Payroll)							Traditional Unit Credit
Actuarial Amortization Method for Unfunded Liability	Level Dollar							
Actuarial Amortization Period for Unfunded Liability	20 years, closed	5 years, closed	20 years, closed	30 years, open	20 years, closed			5 years, closed
Remaining Amortization Period in Years (Weighted) [2]	24	4	24	30 years, open	13	22	23	4
Asset Valuation Method	Five-year smoothing of gains and losses on the fair value of assets subject to a 20% corridor							
Investment Rate of Return (Funding)	6.75%, includes inflation, and net of administrative and investment expenses							
Cost of Living Increases	1.00%	1.00%		2.00%	2.50%	1.00%	N/A	1.00%
Future Salary Increases, including Inflation	2.50% - 4.25%	2.50% - 12.50%		2.50%			4.00%	2.25%
Inflation	2.25%							

[1] Differs from Note 8 schedule as this table is for funding purposes and Note 8 is for financial reporting purposes. Actuarially Determined Contributions in a given year are determined based on the actuarial valuation dated two fiscal years prior (i.e., rates effective 7-1-17 are based on the 6-30-16 valuation).

[2] The remaining amortization period becomes 30 years, open when a plan reaches 100% funded status.

Schedule of Administrative Expenses
For the Years Ended June 30

(dollars in thousands)	2019	2018
Personnel Services		
Salaries and Wages	$ 13,976	$ 13,616
Employee Benefits	6,219	6,131
Temporary Services	1,108	1,221
Total Personnel Services	**21,303**	**20,968**
Professional Services		
Benefit Payment Processing Fees	2,046	2,319
Professional Services	1,876	2,254
Actuarial Services	430	614
Legal Services	57	263
Recordkeeper Services [1]	6,272	3,147
Total Professional Services	**10,681**	**8,597**
Information Technology Services		
Data Processing	2,198	2,411
Software and Licenses	2,019	1,949
Other Computer Services	2,728	1,919
Total Information Technology Services	**6,945**	**6,279**
Communications		
Postage	193	358
Telephone	438	404
Printing	196	133
E-communications	11	71
Total Communications	**838**	**966**
Miscellaneous		
Depreciation and Amortization	432	1,055
Building and Facility Expenses	549	496
Memberships and Training	228	232
Travel	139	132
Equipment Rental	58	62
Other Administrative Expenses	225	204
Total Miscellaneous	**1,631**	**2,181**
Total Administrative Expenses	**$ 41,398**	**$ 38,991**

[1] 2018 represents a half year of recordkeeper expenses due to DB/DC split at 1/1/2018.

Schedule of Administrative Expenses - Vendors

For the Years Ended June 30

INPRS elected to display vendors with administrative expenses of $30 thousand or greater.

(dollars in thousands)

Vendor	2019	2018	Nature of Services
Voya Institutional Plan Services LLC [1]	$ 8,871	$ 4,006	Recordkeeper & Benefit Processing Services
Bluelock LLC	1,715	1,894	Servers - Offsite
iLab LLC	1,651	1,564	Quality Assurance
Mythics (Includes Oracle in FY18)	1,339	1,449	Oracle Software Vendor and Support
Cherry Road	1,015	1,108	INPAS Pension System Support
Indiana Office of Technology	533	559	Desktop & Network Services, Software
RSM US LLP	442	432	Auditing Services
Cavanaugh Macdonald Consulting LLC	431	243	Actuarial Services
JLL Property Management	400	284	Property Management
Level 3 Communications LLC	388	362	Call Center Software and Phone Services
Guidesoft Inc.	244	467	Temporary Contract Services
Service Now	170	170	IT Desktop Support Software
Fineline Printing Group	149	57	Printing
United States Postal Service	128	50	Postage
LexisNexis a Division of RELX Group	107	23	Information & Risk Management Services
Crowe	104	20	IT Security, Website Governance Assessment
Brown & Brown Of Indiana Inc.	99	141	Insurance
Loyalty Research Center	92	92	Research Services
Omkar N Markand	89	84	Medical Consulting
Indiana State Personnel Department	80	76	HR Shared Services
Conduent HR Services LLC [1]	75	1,967	Benefit Processing & Historical Data Services
Advisa	72	33	Training / HR Consulting
Gartner Inc.	71	69	IT Project Research & Advisory Services
Post Masters	71	—	Mail and Print Services
Looker Data Sciences Inc.	66	27	Data Analytics & Reporting Software
Allclear ID, Inc.	64	64	Identity Theft Protection Services
Business Furniture LLC	59	35	Office Furniture
Enterprise Rent-A-Car	53	53	Car Rental Services
Cvent Inc.	47	47	Scheduling Application for Retirements
Automatic Data Processing, Inc.	46	44	Payroll Processing Services
CEM Benchmarking Inc.	45	45	Benchmarking Services
Winklevoss Technologies LLC	44	18	Software for Pensions
Vertosoft LLC	41	—	Work Management and Publishing Software
Ice Miller LLP	38	78	Legal Services
Ricoh USA Inc.	34	37	Printer & Copier Lease
Audit Command Language Services Ltd	34	29	Risk Management Software and Licenses
DAS	32	—	Filenet Managed Service Provider
Callan LLC	30	15	Defined Contribution Consulting Firm
Other	694	1,327	
Total	**19,663**	**16,969**	
Personnel Services	21,303	20,968	
Depreciation and Amortization	432	1,054	
Total Administrative Expenses	**$ 41,398**	**$ 38,991**	

[1] 2018 represents a half year of benefit processing and recordkeeper expenses due to DB/DC split at 1/1/2018.

Schedule of Direct Investment Expenses

For the Years Ended June 30

(dollars in thousands)	2019	2018
Investment Management Fees [1]	$ 197,497	$ 189,216
Securities Lending Fees	605	825
General Investment Expenses		
Investment Consultants:		
Verus (formerly Wurts)	688	653
TorreyCove	575	575
Aksia	450	450
Mercer	366	350
Capital Cities	85	85
Other	208	235
Total Investment Consultants	**2,372**	**2,348**
Investment Custodian (BNY Mellon)	**1,362**	**1,348**
Broker Commissions:		
Morgan Stanley & Co. Inc.	1,007	1,025
Goldman Sachs & Co.	581	612
Newedge USA LLC	472	471
Pershing LLC	123	100
Merrill Lynch International	101	96
JP Morgan Secs LTD	86	95
Wells Fargo Securities LLC	84	89
Instinet Europe Limited	75	82
Redburn Partners LLP	45	69
Merrill Lynch Pierce Fenner Smith Inc.	41	51
Other Brokers	1,236	1,374
Total Broker Commissions	**3,851**	**4,064**
Investment Recordkeeper Fees (Conduent) [2]	**—**	**4,109**
Investment Staff Expenses	**2,799**	**2,278**
Investment Administrative Expenses:		
Barra	428	393
Foster Pepper LLC	400	234
Bloomberg	218	179
Paganelli Law Group LLC	137	47
Kutak Rock LLP	122	40
Other	390	181
Total Investment Administrative Expenses	**1,695**	**1,074**
Total General Investment Expenses	**12,079**	**15,221**
Total Direct Investment Expenses	**$ 210,181**	**$ 205,262**

[1] A complete list of investment professionals that have provided services to INPRS can be found in the Schedule of Investment Professionals in the Investment Section.

[2] 2018 represents a half year of recordkeeper expenses.