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

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 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

INPRS | One North Capitol, Suite 001 | Indianapolis, IN, 46204

Toll-free (844) GO - INPRS | www.inprs.in.gov | questions@inprs.in.gov

INPRS
INDIANA PUBLIC RETIREMENT SYSTEM

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2019 COMPREHENSIVE ANNUAL FINANCIAL REPORT

For the Fiscal Year Ended June 30, 2019

Introductory Section

Vision

Engaged members able to realize their retirement dreams.

Mission

As fiduciaries, educate stakeholders, collect necessary contributions, and prudently manage member assets to deliver promised defined benefit and defined contribution benefits and services.

466,000+
Members

1,200+
Participating employers

$36.1 Billion
Total fund market value

88.1% Funded
Excluding TRF Pre-'96

INPRS
INDIANA PUBLIC RETIREMENT SYSTEM

The Indiana Public Retirement System (INPRS) is an independent body corporate and politic of the state of Indiana, which currently consists of 14 funds (eight defined benefit, four defined contribution, one other postemployment benefit, and one custodial). The Public Employees' Retirement Fund (PERF) and the Teachers' Retirement Fund (TRF), two largest retirement plans offered by the State of Indiana, trace their existence back to the early and middle parts of the 20th Century. TRF was established in 1921 and PERF in 1945. Pursuant to statute, the Indiana General Assembly integrated the management of the two systems in 2011, creating INPRS.

In accordance with Indiana Code (IC) 5-10.5, INPRS is governed by a nine-member Board of Trustees. 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.

Indiana Public Pension Timeline (Calendar Year)

1915	Locally funded teachers retirement fund established.
1921	State funded Teachers' Retirement Fund created; a "pay-as-you-go", multiple-employer pension system.
1945	Public Employees' Retirement Fund created; a multiple-employer retirement system with a defined benefit component (DB).
1953	JRS was created with its own board.
1955	Annuity Savings Accounts (ASA's) created to supplement PERF DB and TRF DB plans resulting in the nation's first pension changes to adopt a hybrid design.
1972	EG&C created.
1977	'77 Fund created for local police officers and firefighters hired after April 30, 1977.
1980	LPSPR created to support police and firefighter pension obligations of Indiana's cities and towns for plans under the "Old Funds".
1983	The 1977 and 1985 Judges' Benefits Fund System (now Judges' Retirement System) were created and administered by the PERF board and the 1953 JRS plan was eliminated and members were transferred to the 1977 Judges' Benefits Fund System.
1989	Legislators' Retirement System created. Participants in the DB plan limited to members serving as of April 30, 1989; otherwise, the plan is Defined Contribution only.
1990	PARF created. Members must also be members of PERF.
1995	Closed TRF Pre-'96 to new entrants and created TRF '96. Also created the Pension Stabilization Fund (PSF) to partially fund TRF Pre-'96.
1996	Amendment to the Indiana Constitution approved allowing funds to invest in equities.
2011	Indiana General Assembly created the Board of Trustees of INPRS to administer public employee retirement plans.
2013	ASA Only (now PERF MC DC) plan offered to state employees who joined after March 1, 2013. Default option remains as PERF Hybrid.
2016	PERF MC DC offered to employees of political subdivisions who join after January 2, 2016. Default option remained as PERF Hybrid.
2017	State Employees' Death Benefit Fund, Public Safety Officer's Death Benefit Fund, and the "in the line of duty" death benefit from the Local Public Safety Pension Relief Fund assets merged into SDBF.
2018	ASA's previously reported within the DB Hybrid funds of PERF, TRF Pre-'96 and TRF '96, are segregated and administered as DC plans.
2018	Supplemental Reserve Accounts (SRA's) established for PERF DB, TRF Pre-'96 DB, TRF '96 DB, EG&C, and LE DB to pay postretirement benefit increases after June 30, 2018.

INDIANA PUBLIC RETIREMENT SYSTEM

ONE NORTH CAPITOL, SUITE 001 ▲ INDIANAPOLIS, IN 46204

November 22, 2019

Dear Board Members:

On behalf of all management and staff, we are pleased to submit the Comprehensive Annual Financial Report (CAFR) of the Indiana Public Retirement System (INPRS) for the year ended June 30, 2019. We are responsible for the accuracy of the content and the completeness and fairness of the presentation, including disclosures. A narrative overview and analysis to accompany the basic financial statements is presented as Management's Discussion and Analysis (MD&A); which can be found immediately following the Independent Auditor's Report in the Financial Section. This Letter of Transmittal is designed to complement the MD&A.

INPRS, an independent body corporate and politic of the state of Indiana, currently consists of 14 funds. As fiduciaries, our mission is to educate stakeholders, collect necessary contributions, and prudently manage member assets to deliver promised defined benefit and defined contribution benefits and services.

Major Accomplishments

We are proud to look back at the many accomplishments and initiatives that helped us deliver benefits and distributions of $3.1 billion and provide high quality service at low cost to approximately 467,000 members and 1,244 employers. Details about INPRS's members and employers are found in the Statistical Section.

Funding Status

INPRS's primary objective is to ensure that at the time benefits commence, sufficient funds will be available to provide retirement, disability, and survivor benefits to its members. In addition, INPRS is committed to sustaining contribution rates that remain level from generation to generation.

The aggregate funded status percentage for all of the pre-funded funds is 88.1 percent. The TRF Pre-'96 DB, which was designed to have a zero funded status, has a funded status of 25.7 percent. In addition, contributions in FY 2019 from members, employers, and nonemployer contributing entities were 116.6 percent of the Actuarial Determined Contribution. Historical progress on meeting the funding objective can be found in the Required Supplementary Information in the Financial Section of this report. Details of the actuarial analysis are in the Actuarial Section.

Investments

We are pleased to report that the consolidated defined benefit assets returned 7.4 percent net of all fees over the past FY, exceeding the target rate of return, and ending with a fair value of $30.4 billion. The one year, three year and 10 year total return rates also exceeded our defined benefit long term goal of 6.75 percent. To maximize returns without sacrificing liquidity, we navigated through the volatile investment environment by constantly rebalancing the portfolio while remaining within the Board approved allocation bands for each global asset class. In addition, INPRS administered defined contribution assets of $5.7 billion.

The investment portfolio is diversified by asset class, investment approach, and individual investments within each global asset class to reduce overall portfolio risk and volatility. For more information on INPRS's portfolio performance, investment strategy, and policy, please refer to the Investment Section.

Voice of the Customer

INPRS continues to utilize its Voice of the Customer (VOC) program to gain insights from members, employers, and other key stakeholders. We integrate VOC, and our customers' input, as a standard process to improve organizational performance and key service levels that are most important to our members. During the fiscal year, customer feedback, from both members and employers, were used extensively in measuring satisfaction and planning.

Annual Member Statements

As we continue to engage members to help them realize their retirement dreams, a notable achievement this year was launching an Annual Member Statement initiative for PERF and TRF members. This statement includes key demographic data as well as projected benefits for members' defined benefit and defined contribution accounts. This information, mailed annually, will allow members to not only review and verify the accuracy of their data, but also plan for their retirement goals.

Data Governance and Technology

Continuous improvement remained a primary business focus. As such, a data management and governance initiative was launched this year with the objective of improving data integrity.

We are mindful that to be successful we need to leverage technology and innovation. Our efforts with implementing enhanced technology helped to streamline the retirement application process which has resulted in members receiving their first retirement check faster than before. As we continue to use improved and sophisticated technology, we recognize the importance of proactively managing enterprise risk and are committed to ongoing improvements of our cybersecurity efforts to identify, prevent, and respond to INPRS's stakeholder information.

Strategic Plan

The INPRS strategic plan provides the foundation from which INPRS moves towards its vision to be a member-focused organization. A copy of the INPRS strategic plan that includes details of other key initiatives can be found on the INPRS website, www.in.gov/inprs.

Legislative Changes

Several legislative changes were signed into law to improve the benefits of members and beneficiaries. Details can be found in Note 7 of the Financial Section.

Economic Conditions

The economic condition of INPRS is driven by investment results and contributions from members, employers, and nonemployer contributing entities. Our Chief Investment Officer in partnership with Verus Consulting have evaluated the economic conditions of INPRS's investments, the details of which can be found in the Investment Section. Total defined benefit contributions for fiscal year 2019 have exceeded the actuarially determined contribution. A historical look at this activity is outlined in the Schedule of Contributions in the Required Supplementary Information.

Management's Responsibility for Financial Reporting

INPRS management is responsible for establishing and maintaining a system of adequate internal accounting controls. A system of internal accounting controls ensures the security of member and employer contributions and provides a reasonable, but not absolute, assurance that assets are properly safeguarded, transactions are properly executed, and financial statements are reliable. Our independent external auditors have conducted an audit of the basic financial statements in accordance with auditing standards generally accepted in the United States of America. They have full and unrestricted access to the Board to discuss their audit and related findings concerning the integrity of financial reporting and adequacy of internal controls. The Independent Auditor's Report regarding the fair presentation of the financial statements is in the Financial Section.

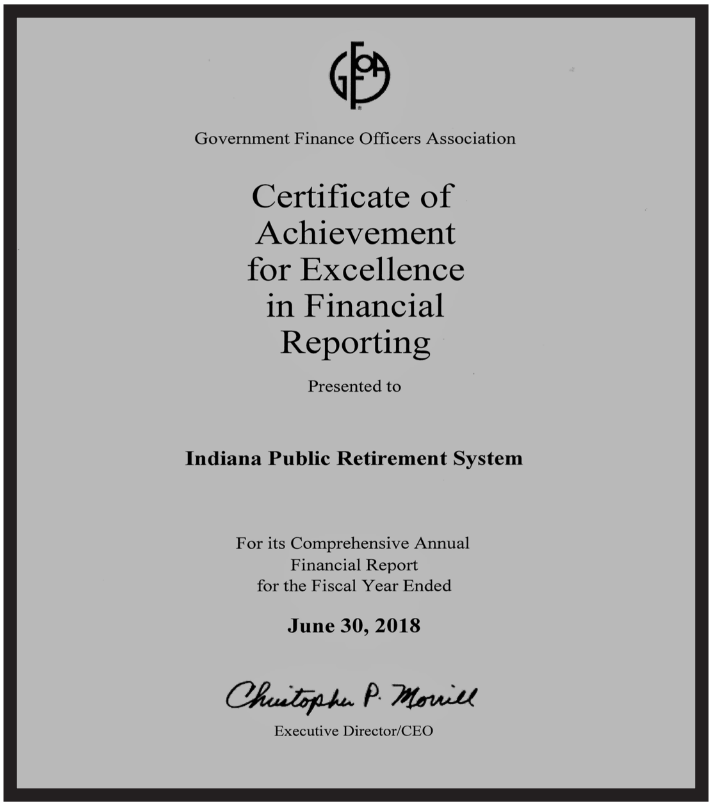
Awards and Acknowledgments

For the 7th consecutive year, INPRS received a Certificate of Achievement for Excellence in Financial Reporting from the Government Finance Officers Association (GFOA), the highest recognition in governmental accounting and financial reporting. For the 7th consecutive year, INPRS received a Public Pension Standards Award for Funding and Administration from the Public Pension Coordinating Council.

We express our gratitude to the staff, advisors, and all who have contributed to the preparation of this report. This report is intended to provide complete and reliable information as a basis for making management decisions, for determining compliance with legal provisions, and as a measurement of responsible stewardship of the assets. The INPRS staff also wishes to express our appreciation to Indiana Governor Eric Holcomb, the Indiana General Assembly, members of the Indiana Committee on Pension Management Oversight, and the INPRS Board of Trustees who provided INPRS staff the privilege of serving the needs of our members and employers.

Sincerely,

Steve Russo	Donna L. Grotz
Steve Russo	Donna Grotz
Executive Director	Chief Finance and Administration Officer



Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

Indiana Public Retirement System

For its Comprehensive Annual Financial Report for the Fiscal Year Ended

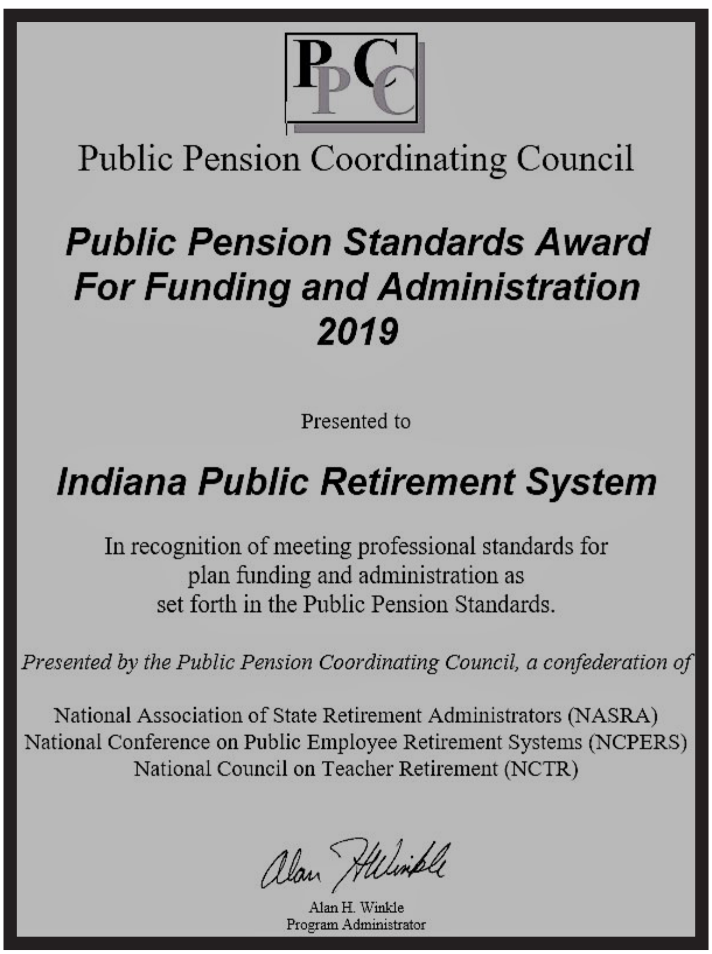
June 30, 2018

Christopher P. Morrill

Executive Director/CEO

CERTIFICATE OF ACHIEVEMENT FOR EXCELLENCE IN FINANCIAL REPORTING

The Government Finance Officers Association of the United States and Canada awarded the Certificate of Achievement for Excellence in Financial Reporting to INPRS for its CAFR for the fiscal year ended June 30, 2018. This was the 7th consecutive year that INPRS has achieved this prestigious award. To be awarded the Certificate of Achievement, a government must publish an easily readable and efficiently organized CAFR that satisfies both generally accepted accounting principles and applicable legal requirements. We believe our current CAFR continues to meet the Certificate of Achievement Program's requirements.



PPCC

Public Pension Coordinating Council

Public Pension Standards Award For Funding and Administration 2019

Presented to

Indiana Public Retirement System

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

Presented by the Public Pension Coordinating Council, a confederation of

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

Alan H. Winkle

Alan H. Winkle
Program Administrator

PUBLIC PENSION STANDARDS AWARD

The Public Pension Coordinating Council awarded the Public Pension Standards Award for Funding and Administration to INPRS for the fiscal year ended June 30, 2019. This is the 8th consecutive year that INPRS has achieved this prestigious award. In order to be awarded a Public Pension Standards Award, a public pension program must meet professional standards for plan design and administration as set forth in the Public Pension Standards. A Public Pension Standards Award is valid for a period of one year.

Governance and Administrative Organization

Executive Branch

Eric Holcomb

Governor

Suzanne Crouch

Lt. Governor

Board of Trustees [1]

Brian Abbott

TRF Member

Nomination/ Appointment:

Speaker of House/ Governor

Term Expiration:

6/30/2022

Ken Cochran

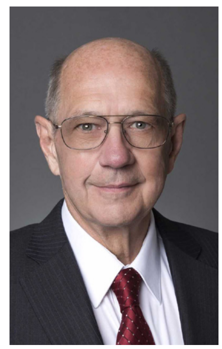
PERF Member

Nomination/ Appointment:

Senate Pro Tempore/ Governor

Term Expiration:

Vacant



David Frick

Executive Management and Benefits Administration

Nomination/Appointment:

Governor

Term Expiration:

6/30/2021

Tera Klutz

Auditor of State

Nomination/ Appointment:

Self-nominated/ Governor

Term Expiration:

6/30/2023

Kelly Mitchell

Treasurer of State

Nomination/ Appointment:

Self-nominated/ Governor

Term Expiration:

6/30/2023

Mike Pinkham

1977 Fund Member

Nomination/Appointment:

Speaker of House/ Governor

Term Expiration:

6/30/2020

Connie Plankenhorn

TRF Member

Nomination/ Appointment:

Senate Pro Tempore/ Governor

Term Expiration:

6/30/2021

Bret Swanson

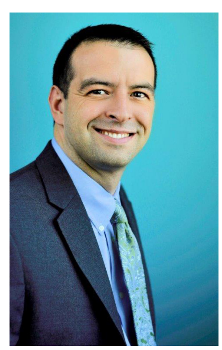
Economics, Finance, Investments

Nomination/ Appointment:

Governor

Term Expiration:

6/30/2021



Micah Vincent

OMB Director

Nomination/Appointment:

Director of State Budget Agency/Governor

Term Expiration:

Vacant

[1] *As of June 30, 2019, the INPRS Board has two vacancies, Ken Cochran and Micah Vincent.*

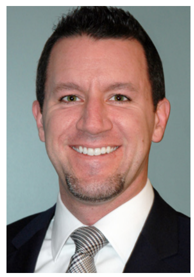
Executive Team

Steve Russo

Executive Director

Steven Barley

Chief Operations Officer and Deputy Director



Scott Davis

Chief Investment Officer

Tom Farrer

Director of Strategic Initiatives - Retired May 2019

Tony Green

Chief Legal and Compliance Officer

Donna Grotz

Chief Finance and Administration Officer

Mike Hineline

Chief Information and Technology Officer

Jeffrey Hutson

Chief Communication Officer

Teresa Snedigar

Chief Audit and Risk Officer

Professional Consultants [1]

Capital Cities, LLC 426 East New York Street Indianapolis, IN 46202	Cavanaugh Macdonald Consulting, LLC 3802 Raynor Parkway, Suite 202 Bellevue, NE 68123	Foster Pepper PLLC 1111 Third Avenue, Suite 3400 Seattle, WA 98101
Kutak Rock, LLP 8601 North Scottsdale Road, #300 Scottsdale, AZ 85253	Paganelli Law Group 10401 North Meridian Street, Suite 450 Indianapolis, IN 46290	Verus 800 Fifth Avenue, Suite 3900 Seattle, WA 98104

[1] A complete list of investment professionals that have provided services to INPRS can be found beginning on page 119 of the Investment Section.

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2019 COMPREHENSIVE ANNUAL FINANCIAL REPORT

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 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

Management's Discussion and Analysis (Unaudited)

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%**

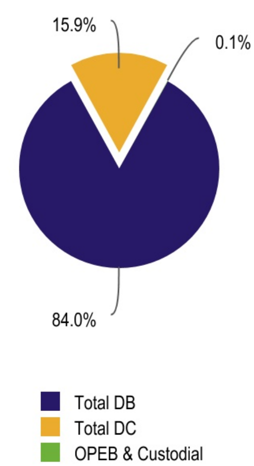
CONDENSED SUMMARY OF CHANGES IN TOTAL FIDUCIARY NET POSITION RESTRICTED

(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%**

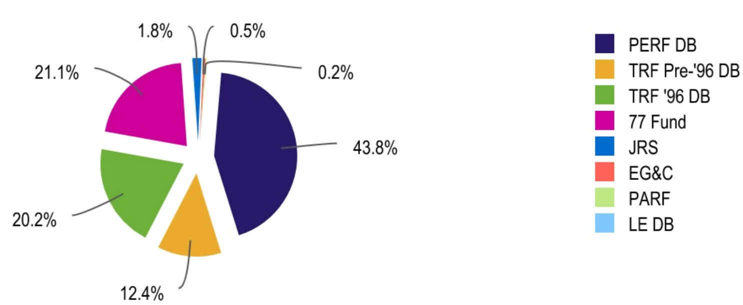
FIDUCIARY NET POSITION RESTRICTED - SUMMARY BY FUND

(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.

2019 COMPREHENSIVE ANNUAL FINANCIAL REPORT

For the Fiscal Year Ended June 30, 2019

Investment Section

Stewardship

We prudently manage assets held in trust for current and future retirees. We are value oriented. We rigorously identify, measure, and manage risks.

$30.4 Billion
Fair value of defined benefit assets

$5.7 Billion
Fair value of defined contribution assets

7.4%
Annualized time-weighted rate of return on defined benefit investments

INPRS
INDIANA PUBLIC RETIREMENT SYSTEM

August 6, 2019

Board of Trustees
Indiana Public Retirement System
One North Capitol Avenue
Indianapolis, IN 46204

Dear Trustees:

Verus is pleased to provide the Board of Trustees of the Indiana Public Retirement System ("INPRS") with an overview of the market environment, an update on performance, and a summary of recent developments for the fiscal year ended June 30, 2019.

Investment Landscape

U.S. Equity

U.S. equities delivered strong returns over the trailing 1-year period ending in June; the S&P 500 Index returned 10.4 percent, weathering a healthy degree of volatility along the way. Last December, trade uncertainty and a decision from the Federal Reserve to hike interest rates helped to spark a 19.8 percent decline in the S&P 500 Index from previous peak levels. Year-to-date, U.S. large-cap equities have led global equity markets higher, and the S&P 500 Index advanced 18.5 percent, nearly recovering from the selloff at the end of 2018.

In recent periods, equity and bond markets have benefited from Federal Reserve support during periods of market stress. In late 2018 and the first half of 2019 some weakness appeared in the U.S. economy and markets grew shaky. During this time the Fed stepped in, indicating much easier monetary policy, boosting asset prices. Many investors have expressed concern regarding the level of the current (cycle-high) fed funds range relative to past business cycle highs. This has left many to ask how impactful further central bank easing might be as U.S. interest rates approach zero.

A variety of secular trends have helped cultivate a supportive environment for U.S. stocks. Technological advances, lower interest rates, and falling corporate tax rates have all helped to boost corporate profit margins to record highs. As earnings expectations moderate, these margins may be increasingly scrutinized by investors. Per FactSet, the estimated year-over-year revenue and earnings growth for the S&P 500 Index in the second quarter are 3.7 percent and -3.0 percent respectively. At the end of the first quarter, expectations called for revenue and earnings growth of 4.5 percent and -0.5 percent, respectively, indicating that analysts' expectations fell markedly over the second quarter.

International Equity

International equities underperformed domestic stocks as U.S. exceptionalism remained the story. For the year ending June 30th, 2019, the S&P 500 Index delivered a 10.4 percent return, outpacing the MSCI ACWI Index (up 5.7 percent), the MSCI Emerging Markets Index (up 1.2 percent), and the MSCI EAFE Index (up 1.1 percent). Within emerging market equities, Latin American equities (MSCI EM Latin America up 18.4 percent) diverged from Asian equities (MCSI EM Asia down 2.3 percent), likely aided by lower levels of economic exposure to the Chinese economy, which in Q2 grew only 6.2 percent from the prior year, its lowest rate since 1992.

Interest rate differentials between U.S. Treasuries and sovereign bonds in Europe and Japan widened as the Federal Reserve hiked rates while the European Central Bank and the Bank of Japan held rates steady. Expanding interest rate differentials likely contributed to the strength of the U.S. dollar over the period, which presented headwinds for unhedged investors in international equities. The only major international developed currency which strengthened vs. the dollar over the trailing year was the Japanese yen. The yen firmed up 2.8

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percent relative to the dollar, mostly due to risk-off currency flows during the market selloff in the 4th quarter of 2018, where international investors sought safe-haven in the Japanese currency. Elsewhere, the British pound sterling weakened as uncertainty surrounding Brexit continued to drive trading in the currency.

Fixed Income

In late 2018, the Federal Reserve tightened monetary policy further with 0.25 percent rate hikes in September and December, bringing the target range for federal funds to 2.25 - 2.50 percent. In December, escalating geopolitical tensions and expectations for slowing global growth weighed on market sentiment, and despite the Fed cutting its guidance for additional rate hikes in 2019 from three to two, markets sold off. Moving into 2019, the Fed pivoted to a much more dovish stance, starting by clarifying its “patient approach” to future rate hikes, walking back its previous commitment to “further gradual increases”. In March, the Fed announced its balance sheet “normalization” process would unwind faster than originally anticipated, which effectively eased financial conditions by creating additional market liquidity. Finally, in June the Fed pledged to “act as appropriate to sustain the expansion”, an initiative unsupported by the Fed’s stated mandate of targeting maximum employment, stable prices, and moderate long-term interest rates. Analysts viewed the Fed’s language as effective in preparing markets for a 0.25 percent cut during its July meeting, and perhaps another 0.25 - 0.50 percent in cuts by the end of the calendar year.

The shift to more accommodative monetary policy is not a phenomenon unique to the Fed – the European Central Bank, the Bank of Japan, and others have also changed their tune, citing benign inflation pressures and an uncertain geopolitical backdrop as justification for lower rates. Still, with U.S. unemployment near 50-year lows and equities near all-time highs, some analysts have expressed concern over the strength of the Fed’s stimulus measures should a recession rear its head.

Falling ten-year sovereign yields were one of the biggest stories driving markets over the year. Ten-year Treasury yields reached as high as 3.2 percent in November but ended Q2 2019 at 2.0 percent. Long-duration U.S. Treasuries were top performers in the U.S., gaining 12.3 percent over the year and benefitting from precipitous declines in yields. Hard-currency emerging market debt (up 12.4 percent) was the top fixed income performer over the year, and outperformed local-currency EMD (up 9.0 percent), mostly due to a period of emerging market currency weakness last summer. In Europe, yields on many ten-year sovereign bonds established fresh all-time lows with German yields falling from 0.3 to -0.3 percent and French yields falling from 0.7 to 0.0 percent. In Italy, yields fell from 2.6 to 2.1 percent, but spiked as high as 3.6 percent in the fourth quarter of last year due to concerns that the sitting coalition government would not respect the fiscal budget deficit limits enforced by the European Union. Over the year, the value of global negative-yielding debt rose from $8.16 trillion to $12.92 trillion.

In U.S. credit, high yield and investment grade spreads remained near cycle tights at 3.8 percent and 1.2 percent. The BBgBarc U.S. High Yield Corporate Index and BBgBarc U.S. Agg Corporate Index returned 7.5 and 7.9 percent over the period, respectively.

Outlook

Global economic growth expectations have been revised slightly lower over the year, but on balance appear to remain supportive for risk assets over the medium term. Subdued inflation prints around the world have encouraged central bankers to issue accommodative guidance, and unemployment has reached cycle lows across most of the developed world. Valuations have expanded since last year but are not yet viewed as stretched. Per FactSet, on July 12th, the forward 12-month P/E ratio of the S&P 500 Index was 17.1x, above both its five-year (16.5x) and 10-year (14.8x) averages.

July 1st marked the beginning of the record-setting 121st month of the current U.S. economic expansion. While many have expressed anxiousness regarding the length of the expansion, we do not see many red flags in the short- to intermediate-term. Looking ahead, market participants are likely to remain fixated on global central bank policy, evolving international trade relations, and the impacts of protectionist measures like tariffs on global growth.

Plan Performance[1]

The INPRS consolidated defined benefit investment portfolio ("the Portfolio") earned a 7.4 percent return net of fees for the fiscal year ending June 30, 2019. This return outperformed the policy target index[2] return, and the long-term actuarial assumed return (6.75 percent) by 0.6 percent.

Portfolio risk as measured by standard deviation, remained relatively low during the year. The trailing three-year annualized standard deviation of returns was 4.4 percent for the portfolio and target index. Over the trailing 10-year period, standard deviation for the portfolio was 5.9 percent and 5.8 percent for the target index.

Intermittent turbulence aside, the continued positive economic growth led to positive absolute returns from all asset classes within the portfolio other than commodities; INPRS commodity investments, which are intended to provide diversification and hedge inflation risk, depreciated 8.2 percent, compared to an 8.0 percent loss for the benchmark. On a relative basis, INPRS was able to generate outperformance across all asset classes except for real estate; the portfolio's 8.7 percent return trailed INPRS' custom real estate benchmark, which was up 16.1 percent. Global public equity returned 5.4 percent, outperforming the benchmark by 0.8 percent. Private market investments performed very well during the fiscal year; the private equity portfolio was up 20.9 percent for the fiscal year compared to just 3.7 percent for the index, while the slightly more conservative private credit portfolio generated an 8.2 percent return, outperforming its index by 0.8 percent. Exposure to credit, nominal, and real interest rates all aided in portfolio returns; the global fixed income ex-ILB portfolio returned 10.0 percent and the inflation-linked bond portfolio returned 5.7 percent, outperforming the benchmarks by 0.1 percent and 0.5 percent, respectively. The absolute return portfolio appreciated by 4.2 percent, outperforming the index return by 2.4 percent, and the risk parity portfolio generated an 8.4 percent return, adding 2.2 percent versus the benchmark.

Looking out longer-term, the Portfolio continues to perform well relative to both the policy index and the actuarial assumed rate of return. On an annualized basis, for the three-year period ending June 30, 2019, the Portfolio returned 8.2 percent, outperforming the target index by 1.0 percent. For the five-year period, the Portfolio returned 5.1 percent, outperforming the target index by 0.6 percent, and for ten years, the Portfolio compounded at 7.8 percent, outperforming the policy index by 0.7 percent.

Plan Activity

During the 2019 fiscal year, Verus and INPRS' staff collaborated on a number of projects. Together we worked with staff to administer and complete an RFP for all passive management mandates, resulting in meaningful additional fee economies for INPRS. Verus also collaborated with staff on an RFP for the emerging manager mandate that reconfirmed the appropriateness of the existing manager and resulted in slight modifications to the mandate.

Verus assisted the public equity team in developing an active risk budget and we worked with the fixed income staff to evaluate and implement changes to the overall structure of the Fixed Income ex ILB Portfolio. This resulted in a portfolio that has a higher expected return, lower fees on invested capital, and modest diversification benefits while maintaining the same overall credit profile. Verus worked with Russell Investments and INPRS staff in establishing a total portfolio overlay and rebalancing methodology that will help the plan rebalance systematically in a more cost-effective manner.

Ongoing work also involved supporting INPRS' risk management infrastructure and reporting, investment and operational due diligence on existing managers, board education, and natural collaboration with staff on a variety of smaller projects and issues.

Verus values our relationship with INPRS and we appreciate the privilege of working with the Board and staff in designing policies and supporting decisions aimed at meeting the Plan's investment objectives. We remain confident in the direction of the Portfolio given the System's demographics, fiscal strength, and well-designed investment strategy. We look forward to continuing our partnership as we navigate ever-changing capital markets.

Sincerely,

Jeffrey J. MacLean
Chief Executive Officer

[1] Rates of return are net of fees and based on calculations made by the System's custodian, Bank of New York Mellon, and are presented using a time weighted rate of return methodology based upon fair value.
2 The target index weights for each asset class benchmark are set by the target asset allocation. The return for Risk Parity, Real Estate, and Private Equity are equal to the asset class returns and not the benchmark.

Report from the Chief Investment Officer

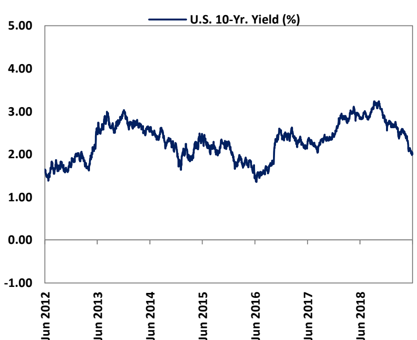
INPRS's Defined Benefit Investment Imperatives

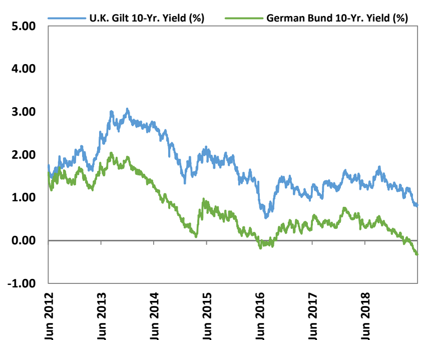
Established in fiscal year 2012, three long-term imperatives that are vital to the continued health of the System's defined benefit plans have served as the guide for the investment team. Every strategic, tactical, and operational decision that is made must have the expectation of positively contributing to at least one of these imperatives.

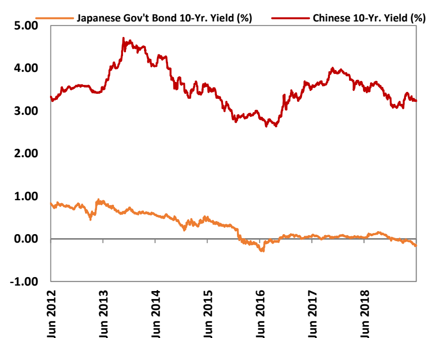
1) Achieve the long-term rate of return assumption. Effective fiscal year 2013, INPRS's Board set the long-term rate of return assumption at 6.75 percent, and again in fiscal year 2015, the Board reaffirmed 6.75 percent as the appropriate long-term assumption. In order for the System to maintain a healthy funded status, it is essential to achieve this rate of return over the long-term (defined as 10+ years in INPRS' Investment Policy Statement).
2) Accomplish the first imperative as effectively and efficiently as possible. While it is important to establish an asset allocation that is expected to meet the target rate of return over a long time horizon, as fiduciaries, it is also important to maintain focus on maximizing the return per unit of risk, limiting return volatility, and maximizing cost efficiency.
3) Maintain enough liquidity to make retirement payments on time. As the System matures, retirement payments will be a greater cash outflow each year. As a result, it is critical to maintain an appropriate level of liquidity to ensure payments are made on time and without causing undue stress to the investment portfolio.

The Year in Review (Defined Benefit Portfolio)[1]

The consolidated defined benefit assets returned 7.4 percent 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. It was a roller-coaster year though as U.S. equities experienced the largest intra-year drawdown since 2009 (-19.4%) and developed market central banks reversed course away from a tightening-focused policy mid-year. Given a back-drop of slowing global growth and steady inflation in the second half of fiscal year 2019, the Federal Reserve and other major central banks took an easier policy stance to stimulate their various economies. These moves along with lower inflation expectations pushed interest rates back toward historic lows. Europe and Japan, in particular, saw nominal interest rates fall back into negative territory; while, in the U.S., the 10 year yield fell from nearly 3.2 percent mid-year to 2.0 percent by June 2019.[2]



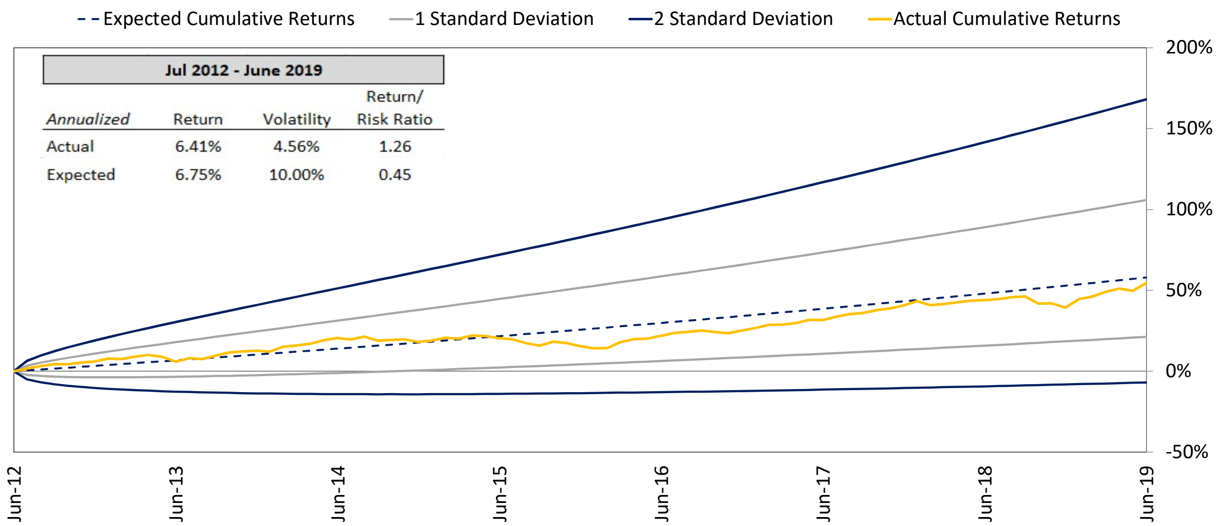




Based on extensive research of the various asset classes and their performance in different economic environments through time, it was determined starting in 2012 that a new risk-balanced framework better fit our first two imperatives. Developed from that research, the following chart illustrates the projected range of outcomes for INPRS's asset allocation around the 6.75 percent return target (blue dotted line). This visual is meant to track the cumulative performance of the actual portfolio (yellow solid line) versus those expectations along the way. Although the portfolio has underperformed the return target since adopting the new asset allocation strategy in 2012, the cumulative return is well within our range of expected outcomes and trending toward the target.

[1] Rates of return specific to INPRS's portfolio are based on calculations made by INPRS's custodian, Bank of New York Mellon, and are presented using a time-weighted rate of return methodology based upon fair value.
[2] Source: Bloomberg.

INPRS Net of Fee Cumulative Return



The following table shows INPRS's annual net-of-fees returns over the same time period. Since inception of the revised strategy, the portfolio has generated an annual return of 5.8 percent above the return of cash and outperformed the average historical spread for the asset allocation over cash by 4.5 percent.[1]

INPRS Annual Returns (Net of Fees)[2]

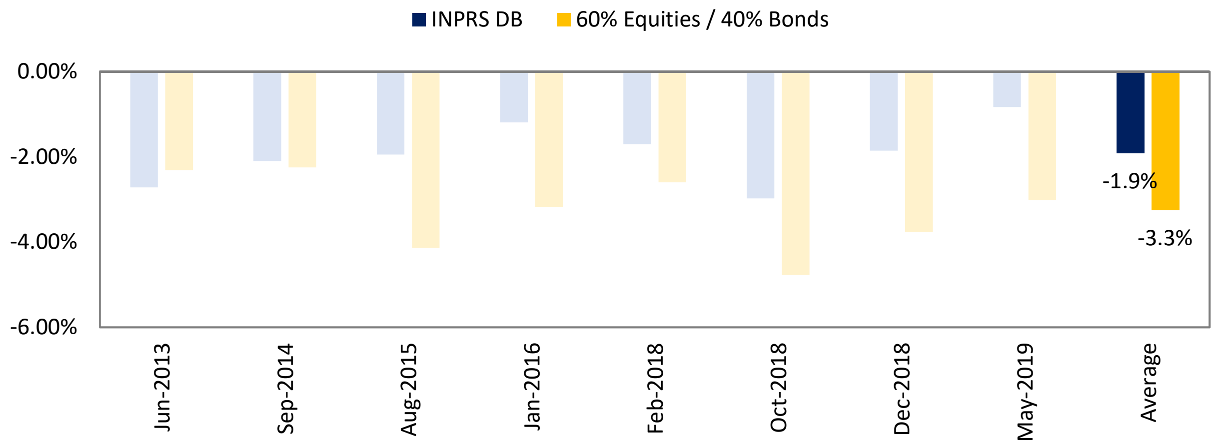
INPRS Annual Returns (Net of Fees)

	Excess Return	+	Cash Return	=	Total Return
FY2013	5.9%		0.1%		6.0%
FY2014	13.6%		0.1%		13.7%
FY2015	0.0%		0.0%		0.0%
FY2016	1.0%		0.2%		1.2%
FY2017	7.5%		0.5%		8.0%
FY2018	8.0%		1.3%		9.3%
FY2019	5.1%		2.3%		7.4%
INPRS Annual Return *(Actual FY2013 - FY2019)*	**5.8%**		**0.6%**		**6.4%**
Avg. Annual Return of INPRS Target Asset Allocation *(Back-Test 1937 - 2015)*	4.5%		3.6%		8.1%

[1] Cash return based on Citigroup 3mo Treasury (Source: INPRS's custodian, Bank of New York Mellon).
[2] Excess return presented by INPRS's general consultant, Verus, at the June 2015 INPRS Board meeting. INPRS's current target asset allocation was approximated historically using available indices. Cash return based on the one-month US Treasury bill return from 1937 - 2015 (source: Dimensional Fund Advisors' Matrix Book 2016 of Historical Returns Data).

The prior charts highlight the recent challenges from the historically low interest rate environment. Due to the low return on cash since 2012, the portfolio's total performance has fallen short of the target rate of return assumption of 6.75 percent thus far. However, the target rate of return was established based on a much longer time horizon. As such, the asset allocation that was constructed to meet the return objective will ultimately be measured over decades rather than a few years.

With this long-term focus in mind, it is important that we constantly monitor the portfolio over various market environments and evaluate whether it performed as we expected. One of the primary reasons for diversifying the portfolio was to be less impacted by the performance of equities. In the chart below, we evaluate this by looking at various historical months that a traditional 60 percent equity and 40 percent bond portfolio had a loss of 2 percent or worse since July 2012. As shown, INPRS's defined benefit portfolio continues to hold-up well on a relative basis during nearly all of these occurrences and, consistent with our expectations, has a materially lower loss on average than the 60/40 portfolio.



Performance Attribution

Looking closer at fiscal year 2019, the returns of INPRS's separate asset classes are shown in the chart below. All asset classes, except commodities, had positive returns over the course of the year as the falling interest rates in the second half of the year more than offset the weakness seen across most asset classes at the end of calendar year 2018. However, fixed income was the largest benefactor and led all public asset classes with a return of 10.0 percent.

Private markets (including private equity and private credit) continued their strong performance in fiscal year 2019 with a 20.4 percent return. Private equity still makes-up a vast majority of the exposure in private markets as we look to build-out our private credit portfolio. Returns from co-investments within the private equity portfolio, in particular, exceeded expectations due to idiosyncratic factors and were a boon for returns during the year.

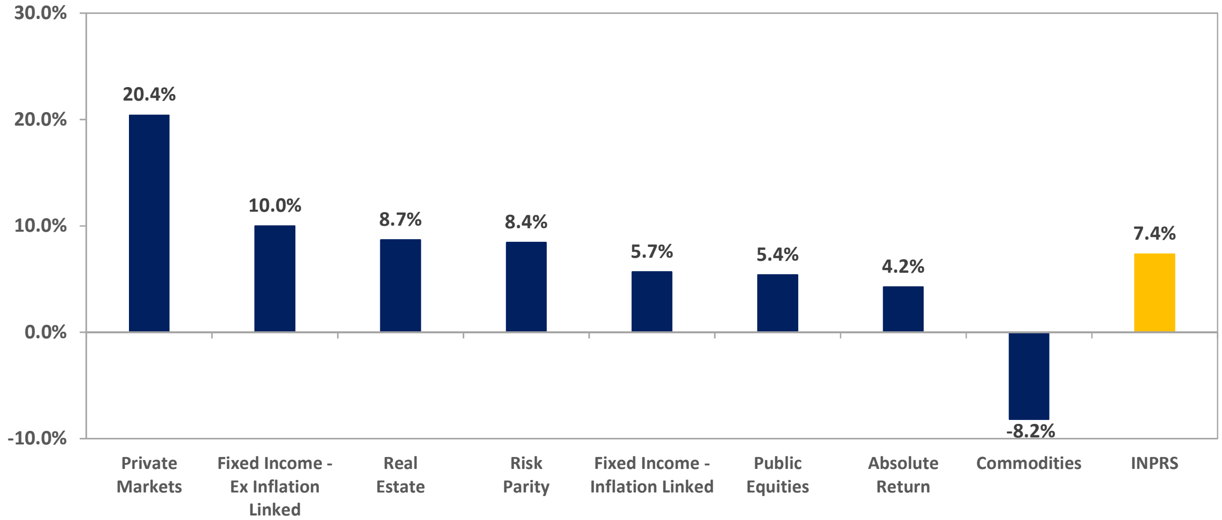
In a complete reversal from last year, commodities went from the top performing asset class with a 22.0 percent return in fiscal year 2018 to the worst performing asset class in fiscal year 2019 with a (8.2) percent return. Energy commodities were the largest driver of the negative performance as evident by comparing the (11.5) percent return of the energy-heavy S&P GSCI Index versus the -6.8 percent return of the more diversified Bloomberg Commodity Index over the course of the year. There was a wide dispersion across individual commodities though. The Bloomberg Precious Metals sub-index, including gold and silver, returned a positive 7.6 percent as elevated geopolitical uncertainty and U.S. dollar weakness boosted the safe-haven assets.[1]

The risk parity portfolio has been constructed with the most diversified collection of public markets exposure we can find. We believe this exposure will become even more important as equity markets come off one of the greatest runs of all-time, but it was also accretive in the past fiscal year. Given the strong returns across most public asset classes, the risk parity portfolio produced an 8.4 percent return this year and, as a result, outperformed the 6.2 percent return target.

The absolute return portfolio was constructed to limit correlation to equity, credit, and fixed income markets and help provide smoother performance for the overall portfolio during these difficult periods. In the second quarter of fiscal year 2019, the absolute return portfolio provided the intended diversification as it produced a positive 0.6 percent return while the public equity portfolio had a (13.6) percent return. However, the absolute return portfolio returned 4.2 percent and underperformed its target of cash plus four percent (5.3 percent) over the full year. While the return missed expectations over the short-term, the absolute return portfolio has achieved the target return since 2014, when the portfolio was reconstructed to be more diversifying to the rest of the defined benefit portfolio. Over this time period, the portfolio outperformed cash by 5.0 percent (5.8 percent return versus a 0.8 percent return on cash).

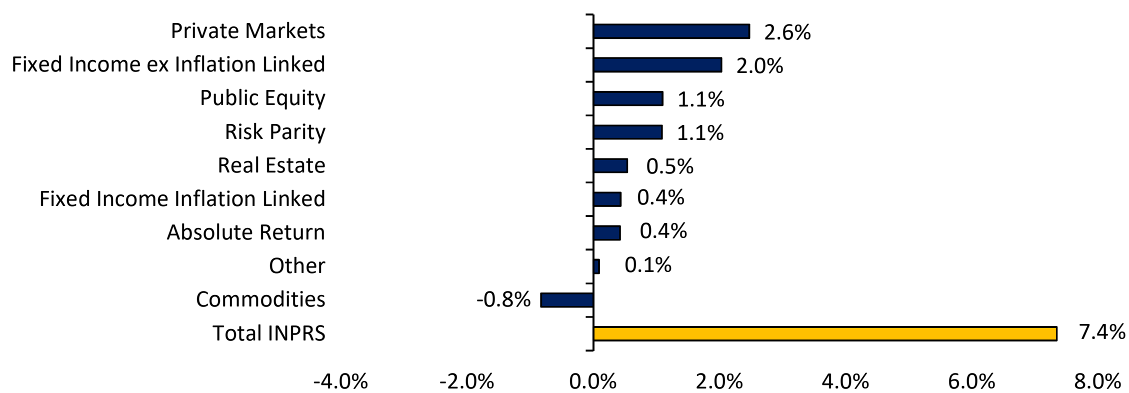
[1] *Source: Bloomberg.*

1-Year Asset Class Returns as of June 30, 2019



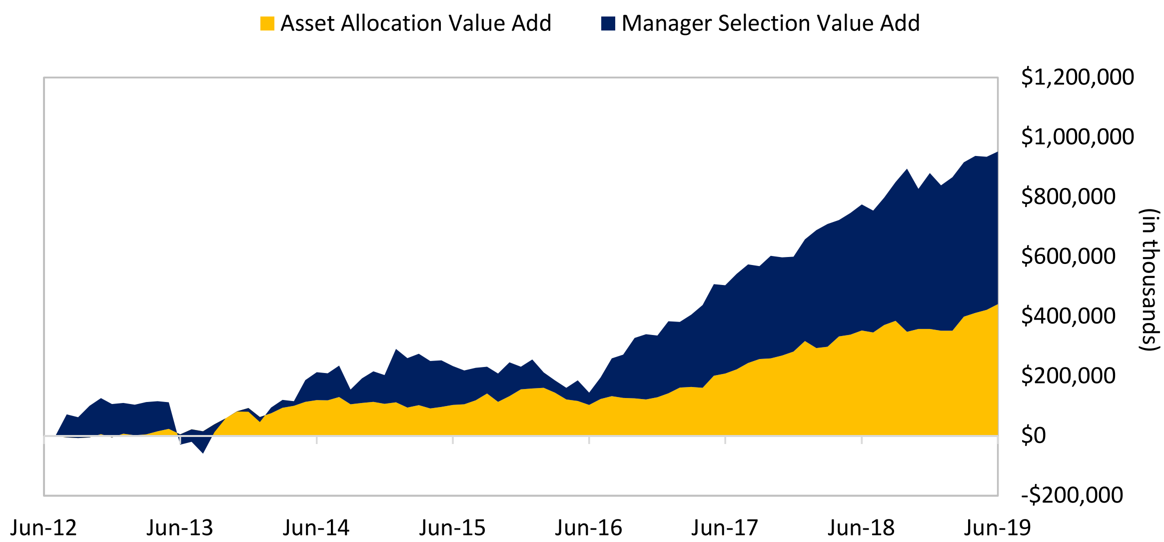
The chart above provides an incomplete picture, though, as it does not reflect the modifications we have made to our allocation across asset classes to better balance their varying levels of risk. The following chart adjusts for this by taking into account the weight of each asset class in the portfolio as well as its return over the past year. By linking these components, we are able to observe the contribution to total return that each asset class provided. This view serves as a better representation of performance given that our risk-balanced strategy produces an allocation that invests less in more volatile asset classes (e.g. commodities) and more in less volatile asset classes (e.g. fixed income).

1-Year Contribution to Total Return as of June 30, 2019



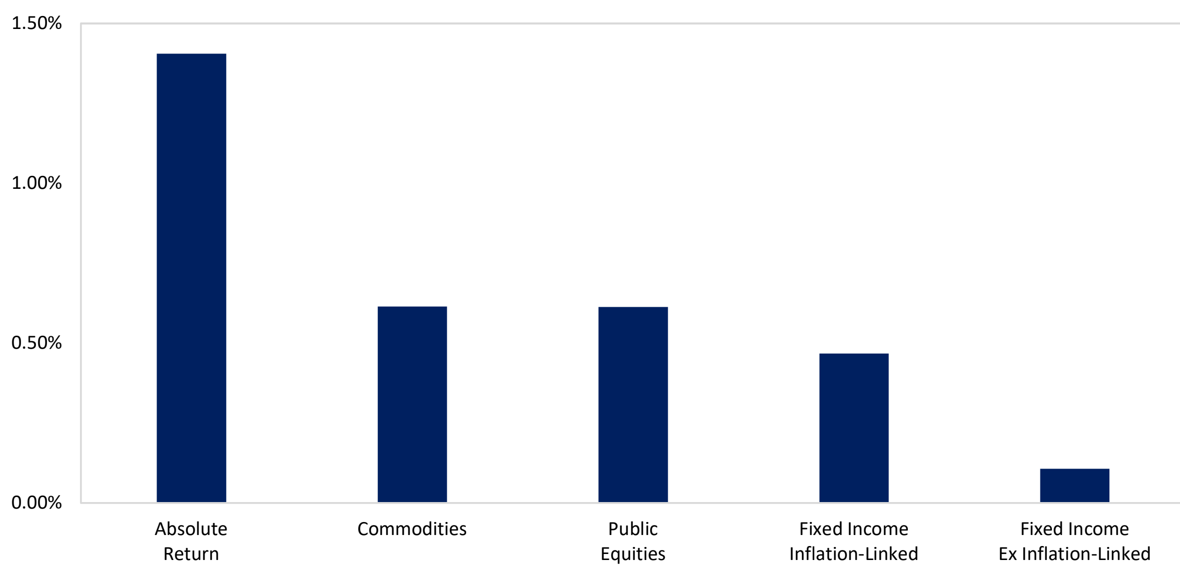
In fiscal year 2019, the investment team achieved a return that was 0.6 percent above the target asset allocation benchmark, net of all fees. The benchmark is meant to reflect what performance would have been had the portfolio been at target weights in each asset class the entire year and invested in passive strategies (e.g. index funds). Both the tactical asset allocation and manager selection decisions made by the team this year added value to the portfolio. This continued the positive trend of the past seven years as the outperformance generated by the investment team since July 2012 has produced approximately $952 million in added value (asset allocation + manager selection) over a portfolio of merely passive investments. To put this into perspective, these additional returns have been large enough to cover all of the PERF retirement payments made in fiscal year 2019.

Cumulative Excess Returns over the Target Allocation (Net of Fees)



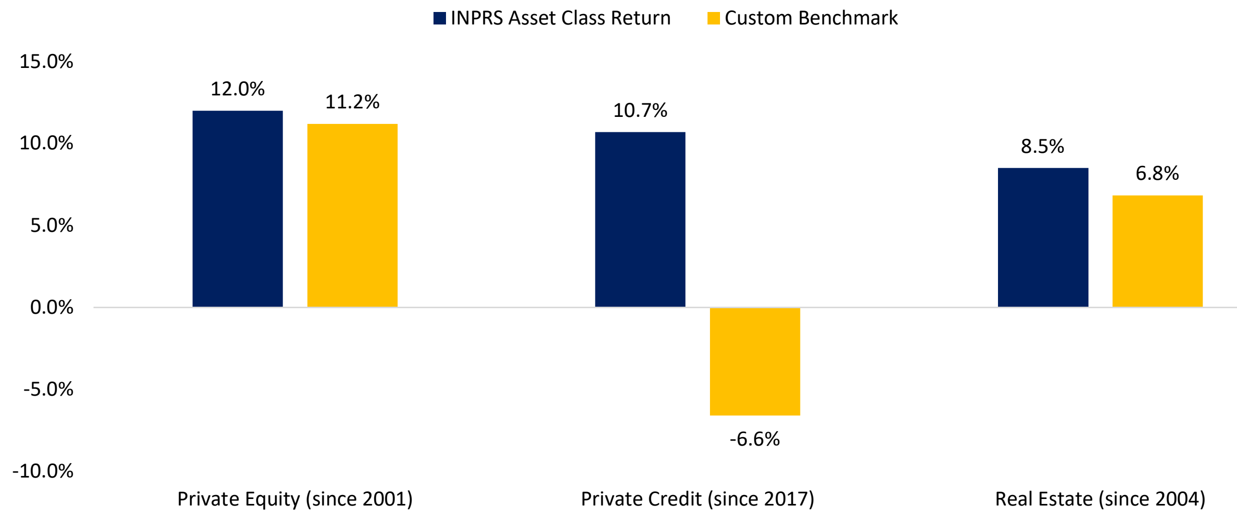
Breaking that result down further, you can see that manager selection has created a large portion of the outperformance over the past seven years because each public asset class has outperformed its benchmark.

Annualized Outperformance Relative to Benchmarks (Public Markets) July 2012-June 2019



INPRS's investments in private markets and real estate have produced similarly strong results relative to their benchmarks. They are not included in the value-add chart above because the managers in these asset classes control the timing of cash flows and, thus, we believe a different measure better captures their performance relative to a benchmark (i.e. internal rate of return or IRR). However, the chart below gives some perspective on their outperformance since inception.

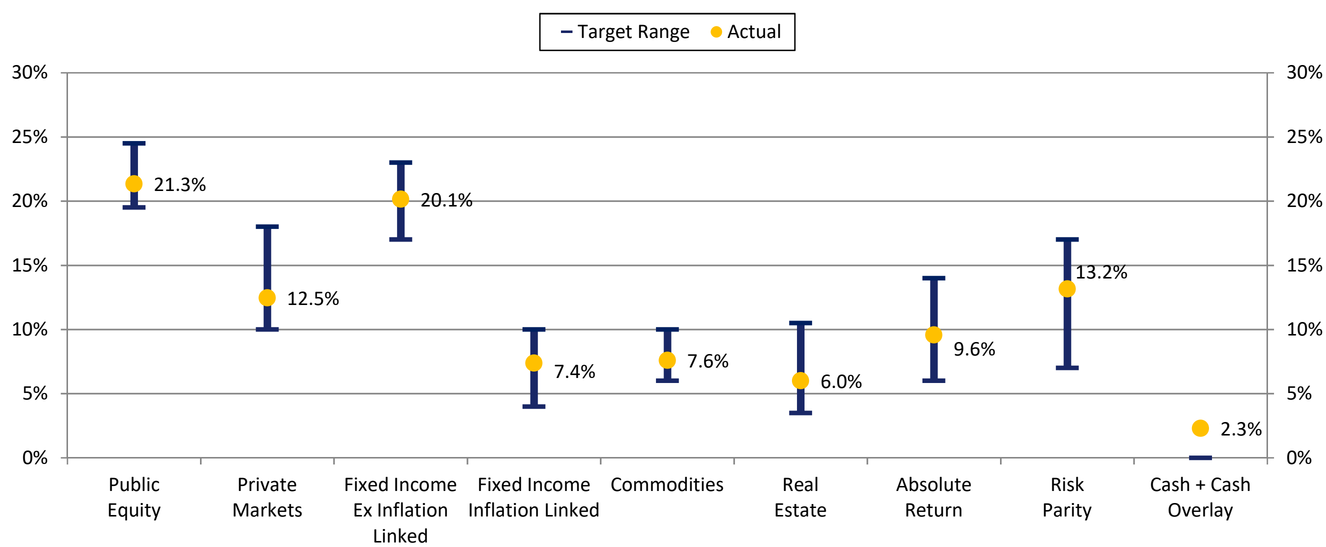
Annualized Performance (IRR) Relative to Benchmarks (Private Markets)
Since Inception of Each Asset Class[1]



Current Portfolio Exposures

As previously mentioned, INPRS set-out on a course seeking more balance across economic and market environments starting in fiscal year 2012 with the approval of a new asset allocation strategy. Despite slight revisions to the asset allocation during the last asset-liability study in fiscal year 2015 that resulted in a marginally higher expected return and return-risk ratio, the outcome reaffirmed the path of diversification INPRS had previously chosen and continues to pursue. As such, INPRS rebalanced as needed over the course of fiscal year 2019 to stay within the Board-approved allocation bands for each asset class. The allocation as of June 30, 2019 can be found in the chart below.

Defined Benefit Asset Allocation as of June 30, 2019



[1] As of March 31, 2019. Based on the first capital calls made by INPRS: Private Equity inception date is 5/14/2001; Private Credit inception date is 10/17/2017; and Real Estate inception date is 2/26/2004. The Private Equity custom benchmark is comprised of the following components lagged one quarter plus 3.00%: 60% Russell 2000 Index, 20% EAFE Small Cap Index, 15% CS High Yield Index, and 5% CS Western European High Index (Hedged). The Private Credit custom benchmark is comprised of the following components plus 1.50%: 50% Credit Suisse Leveraged Loan Total Return, 33% Wells Fargo BDC Total Return, and 17% Credit Suisse Western European Leveraged Loan. The Real Estate custom benchmark is comprised of the following components lagged one quarter: 70% FTSE NAREIT All Equity REITS Index and 30% Barclays CMBS Index.

Liquidity

As you can see from the chart above, INPRS has meaningful exposure to less liquid asset classes with 28 percent allocated across private markets, real estate, and absolute return. We believe each of these asset classes serves a unique purpose within the construct of the allocation. However, with these benefits come other risks, namely a lack of liquidity (e.g. Many of these private market funds have a lock-up of ten years or longer, and many of the absolute return funds only allow for quarterly liquidity.)

Regardless of how good we think these exposures are, we want to ensure the portfolio has enough liquidity to meet retirement payments as they come due without unnecessary fire-selling of assets in turbulent markets (see the third imperative listed above). As a result, the investment team developed and maintains a liquidity measure that assesses the System's ability to take on illiquidity risk at any point in time. The metric compares the amount of liquid assets and cash inflows available over the next five years to the expected cash outflows (e.g. retirement payments, plan expenses, etc.) over the same time frame. Through strenuous stress testing, the investment staff is comfortable that there is adequate liquidity in various negative market environments, and as of June 30, 2019, INPRS's liquid assets and projected inflows are 2.9 times the projected outflows over the next five years (versus 2.6 times on June 30, 2018).

INPRS's Defined Contribution Investment Imperatives

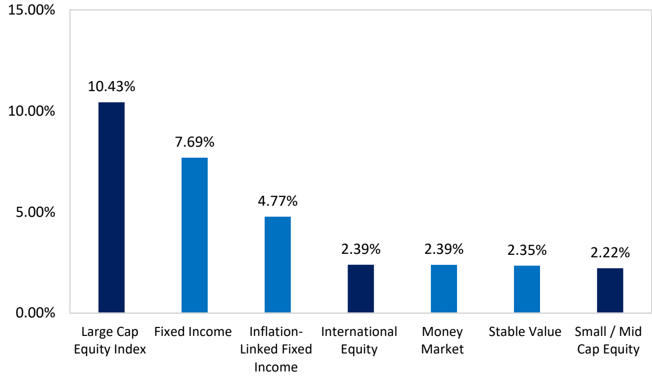
Known as the Annuity Savings Account ("ASA"), My Choice: Retirement Savings Plan ("My Choice"), and Legislators' Defined Contribution Plan, the defined contribution plans at INPRS provide members the ability to select their own asset allocation from a line-up of investment options approved by the Board. Established in fiscal year 2017, three long-term imperatives that are vital to the continued health of the System's defined contribution plans have served as the guide for the investment team.

1) **Provide a simple and diversified default option ("Allocate it for me" - Target Date Options).** Effective fiscal year 2011, INPRS' Board changed the default investment option for the ASA and My Choice plans to target date funds. This fund line-up was established to provide members with an auto-pilot allocation that targets an appropriate risk and return profile for their particular time horizon and automatically becomes more conservative as they approach retirement. Given how many members rely on INPRS to manage their asset allocation for them by defaulting to this option, it is crucial that we construct a target date fund line-up that is easy to understand yet sophisticated enough to help members achieve their savings goals.
2) **Provide a simple and diversified menu of stand-alone options ("Allocate it myself" - Core and Specialty Options).** For those members that want to select an allocation that is different than those offered in the target date funds, INPRS offers investment options for individual asset classes. This line-up of options allows members to construct an asset allocation that better suits their specific needs and objectives.
3) **Leverage the defined benefit asset base to provide low cost investment options.** One reason the multiple retirement plans under INPRS' management were originally consolidated was to reduce fees for all plans. As a result, it is critical that we maintain focus on utilizing the large asset base across the defined benefit and defined contribution plans to continually drive costs lower.

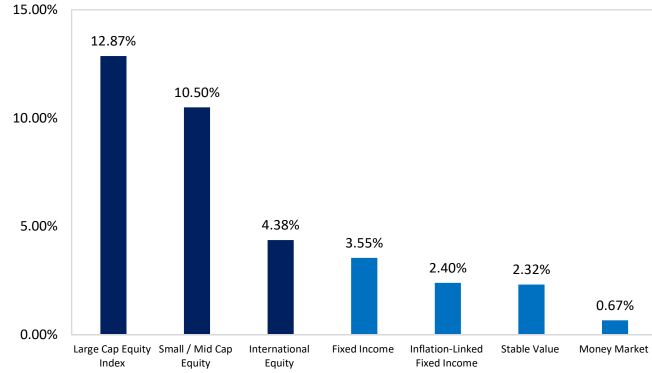
Performance Attribution

The defined contribution line-up is constructed using the basic building blocks of an asset allocation, including various equity and fixed income portfolios. As such, INPRS's investment options were influenced by the same economic forces mentioned in the defined benefit section above: slowing global growth and a lack of inflation. This backdrop caused the fixed income portfolios to outperform both the international and small/mid cap equity portfolios over the course of fiscal year 2019 (left chart below). While, U.S. large cap equities continued to produce solid returns in the face of global uncertainty. Over the long term, strong performance across each of the equity funds INPRS offers continues to be seen as we look at returns since coming out of the 2008 financial crisis (second chart below).

DC Stand-Alone Investment Options
1-Year Return (Net of Fees)

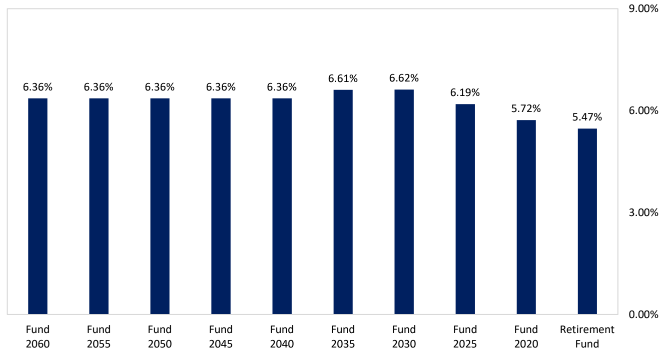


DC Stand-Alone Investment Options
July 2011 - June 2019 Return (Net of Fees)

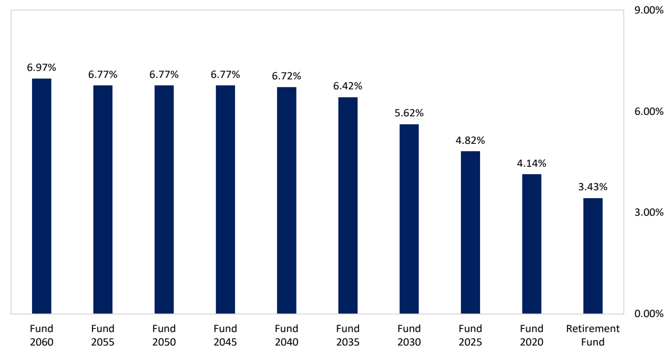


Given INPRS's target date funds are constructed using different mixes of the INPRS stand-alone investment options, their returns are merely an amalgamation of the returns shown above. The funds closer to retirement had stronger performance in fiscal year 2019 than they had the seven years prior due to their fixed income bias. While, the funds farther from retirement continue to have higher returns, as expected, going back longer-term due to their equity bias. The following charts illustrate these differences since the target date funds became INPRS's default investment option in 2011.

Target Date Funds
1-Year Return (Net of Fees)

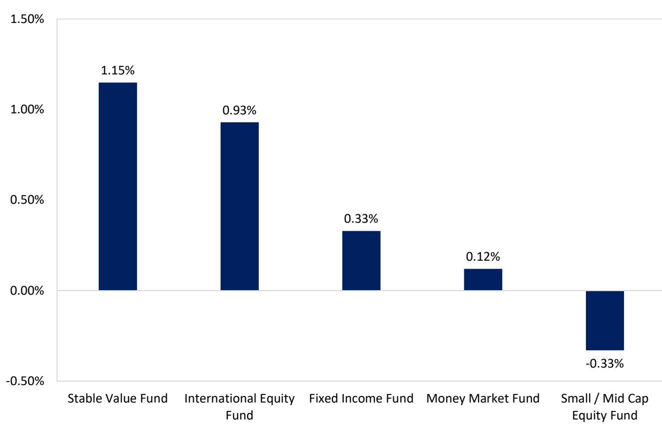


Target Date Funds
July 2011 - June 2019 (Net of Fees)

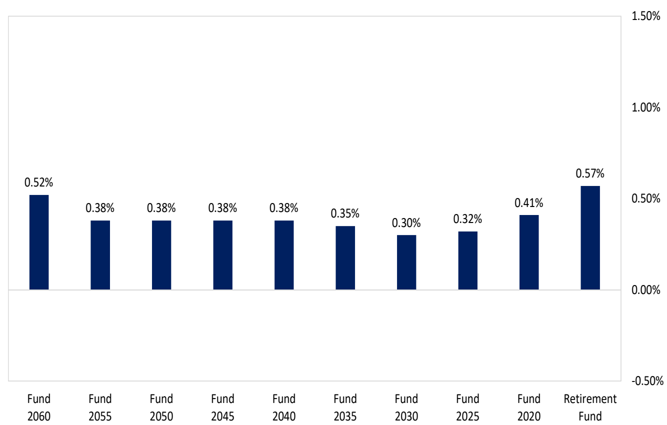


By including a moderate amount of active management within the fund line-up, the investment team was able to beat the benchmarks in four out of five of the stand-alone investment options with an active management component[1] over the past eight years by 0.12 to 1.15 percent annually, depending on the fund. The Small/Mid Cap Equity Fund had underperformance of 0.33 percent annually over this time frame due to manager underperformance. Consequently, the amount of active management within the Small/Mid Cap Equity Fund was reduced to 10 percent a few years ago and only one active small cap manager remains in the portfolio today, in-line with the Defined Benefit portfolio. Given that the target date funds are constructed using the INPRS stand-alone investment options, this also translated into outperformance across the target date fund glide path of 0.38 to 0.57 percent over the past eight years.

DC Stand-Alone Investment Options
July 2011 - June 2019 Outperformance vs. Benchmarks (Net of Fees)



Target Date Funds
July 2011 - June 2019 Outperformance vs. Benchmarks (Net of Fees)



Target Date Funds Review

INPRS is always looking for ways to improve the defined contribution investment line-up to the benefit of its members. After a period of evaluation in fiscal year 2019, INPRS's investment team identified the need to change its target date fund allocations based on demographic trends and plan-specific changes since the target date funds were established in 2010. The goal of these changes include: improving retirement outcomes and providing better alignment with similar offerings in the defined contribution market.

While volatility is an important consideration for any asset allocation, the investment team identified a variety of risks that may cause a member to miss on their retirement goals. INPRS's Investment Policy Statement now outlines each of these risks INPRS is attempting to better manage through the upcoming changes to the glide path, specifically:

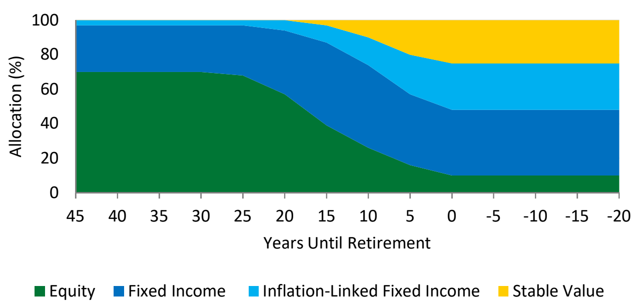
- Longevity risk: outliving your retirement savings,
- Shortfall risk: not being able to maintain your desired standard of living,
- Inflation risk: inflation outpacing investment returns, and
- Market risk: market movements harming retirement savings

[1] *The following DC investment options are only passively managed: Large Cap Equity Index Fund and Inflation-Linked Fixed Income Fund.*

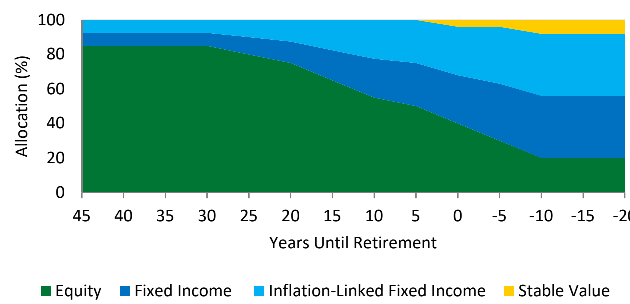
The modifications to the target date fund glide path will take place between July 1, 2019 and September 30, 2019. The adjustments are illustrated in the graphs below and can be summarized as follows:

- Increasing equity and inflation-linked bond exposure while decreasing fixed-income exposure: These changes were designed to provide more capital appreciation during a members' working years and maintain an income-focus throughout retirement in order to combat longevity, shortfall, and inflation risks in retirement. As a result, each fund's level of expected investment risk to increase as well as expected return.
- Changing to a "through retirement" model: To achieve this, two new target date funds - the 2010 Fund and 2015 Fund - will be created. Whereas the former glide path reached its final asset allocation at retirement, the "through retirement" glide path is designed to seek higher expected returns into a member's retirement years by reaching its final, most conservative allocation 10 years into retirement. This change is intended to help members better manage longevity, shortfall, and inflation risks as they enter their retirement years.

Old Allocation



New Allocation



While we believe the changes to the target date funds' allocations will benefit our members for decades to come, we are just as excited about making these changes while keeping the fees low for our members. The fees across the target date fund line-up will range from 0.09 - 0.10 percent per year down from 0.12 - 0.15 percent under the old construct. This reduction means that INPRS's continues to offer some of the most competitive fees in the country.

Target Date Fund Fee Comparison		
	Annual Fee (%)	$ per $1,000
INPRS	**0.09% to 0.10%**	**$0.86 to $1.03**
Institutional Peer Group	0.13% to 0.17%	$1.30 to $1.70
Vanguard	0.12% to 0.15%	$1.20 to $1.50
Fidelity	0.48% to 0.75%	$4.80 to $7.50
T. Rowe Price	0.54% to 0.72%	$5.40 to $7.20

Source: Institutional Peer Group is based on the 2018 CEM Benchmarking study. Vanguard, Fidelity, and T. Rowe Price current fees as reported on their respective websites on June 30, 2019.

This Time is the Same

Although we often hear "this time is different" related to the economy and markets, I would instead argue that this time is more of the same for investors. Regardless of how "different" the investment environment feels, I believe **psychology is still the largest obstacle for an investor, not markets themselves**. Great years in a portfolio can lead to overconfidence; while, poor years can introduce self-doubt. The fear of missing out on an investment with impressive returns may lead to buying over-priced assets, but contrast that with the fear of looking wrong that may cause avoidance of a contrarian strategy. There is also the continuous pull of comparing ourselves to peers, despite having unique circumstances and goals for our portfolio. These are just a few of the countless emotional distractions that investors, including us at INPRS, face every day.

This time is the same in my eyes because I believe the environment continues to call for trusting our people and process to navigate these potentially negative psychological influences. While fiscal year 2019 was a successful year for INPRS in terms of performance, which should be celebrated, we must not let good years like the last one overly influence our long-term strategy going forward. We must constantly test our conviction in the chosen strategy or managers while supporting each other as a team when, not if, it gets difficult along the way.

Sincerely,

Scott B. Davis, CFA
Chief Investment Officer

Outline of Investment Policies

Objective and Guiding Principles

The Indiana Public Retirement System's (INPRS) Board serves as the ultimate fiduciary of INPRS. The Board establishes investment policies while Indiana law establishes guidelines on the investment of the System's assets. At all times, INPRS must invest its assets according to the "Prudent Investor" standard.

The Investment Policy Statement (IPS) ensures that INPRS will maintain funding for each retirement fund to pay the benefits or actuarially determined liabilities over time in a cost-effective manner. It is a dynamic document and periodic reviews are undertaken.

Core tenets of the IPS are:

- Set investment policies that the Board judges to be appropriate and prudent.
- Develop clear, distinctive roles and responsibilities of the Board, staff, and each service provider.
- Serve as a guide for continual oversight of the invested assets.
- Establish formal criteria to measure, monitor, and evaluate the performance results of the investment managers.
- Communicate investment policies, directives, and performance criteria to the external and internal stakeholders.

DB Objectives and Structure

The Board recognizes that the allocation of defined benefit assets is the most important factor of investment returns over long periods of time. An asset liability study is conducted every five years to analyze the expected returns of various global asset classes, projected liabilities, risks associated with alternative asset mix strategies and their effect on the projected fair value of assets, funded status, and contributions to the funds. With a long-term investment focus, the defined benefit portfolio is invested across diverse asset classes as shown and approved by the Board in February 2019:

Defined Benefit Asset Allocation:	Target Allocation	Target Range	Benchmark
Public Equity	22.0%	19.5 to 24.5 %	MSCI All Country World IMI Index
Private Markets	14.0	10.0 to 18.0	Custom Benchmarks
Fixed Income - Ex Inflation-Linked	20.0	17.0 to 23.0	Custom Benchmark
Fixed Income - Inflation-Linked	7.0	4.0 to 10.0	Custom Benchmark
Commodities	8.0	6.0 to 10.0	Custom Benchmark
Real Estate	7.0	3.5 to 10.5	Custom Benchmark
Absolute Return	10.0	6.0 to 14.0	HFRI Custom Benchmark
Risk Parity	12.0	7.0 to 17.0	Custom Benchmark

DC Objectives and Structure

The defined contribution 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. The defined contribution investment options currently include and the accompanying Fund Facts are available online: https://www.in.gov/inprs/fundfactsheets.htm.

- Target-Date Retirement Funds
- Large Cap Equity Index Fund
- International Equity Fund
- Small/Mid Cap Equity Fund
- Fixed Income Fund
- Inflation - Linked Fixed Income Fund
- Stable Value Fund
- Money Market Fund

Other Funds

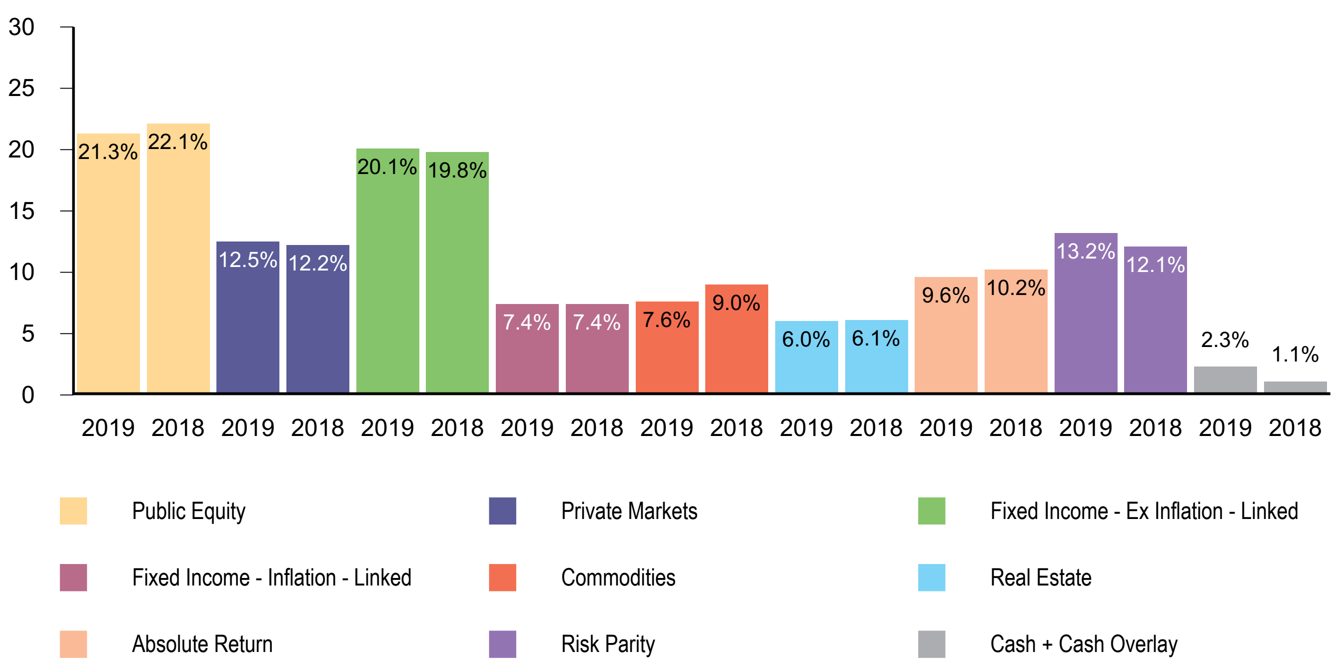
The other plans under the administration of the Board include the Local Public Safety Pension Relief Fund (LPSPR) and the Special Death Benefits Fund (SDBF). The assets of LPSPR are invested in short-term money market instruments, including, but not limited to commercial paper and securities issued or guaranteed by the U.S. government. The assets of SDBF are invested in intermediate U.S. government and U.S. credit bonds.

Investment Results - Consolidated Defined Benefit Assets

Asset Allocation Summary: June 30, 2019 Actual vs. June 30, 2018 Actual

The Total Consolidated Defined Benefit Investments shown below are grouped by global asset classes approved in the Investment Policy Statement, whereas the investments in the Statement of Fiduciary Net Position are grouped in assets and liabilities according to GASB and the security type assigned to each investment.

(dollars in thousands)	June 30, 2019			Allowable Range for Investments	June 30, 2018	
Global Asset Class	Amount	Percent	Target		Amount	Percent
Public Equity	$6,480,676	21.3%	22.0%	19.5 to 24.5 %	$ 6,280,193	22.1%
Private Markets	3,788,124	12.5	14.0	10.0 to 18.0	3,480,200	12.2
Fixed Income - Ex Inflation - Linked	6,116,645	20.1	20.0	17.0 to 23.0	5,635,420	19.8
Fixed Income - Inflation - Linked	2,241,789	7.4	7.0	4.0 to 10.0	2,121,768	7.4
Commodities	2,304,769	7.6	8.0	6.0 to 10.0	2,551,544	9.0
Real Estate	1,823,022	6.0	7.0	3.5 to 10.5	1,740,391	6.1
Absolute Return	2,905,873	9.6	10.0	6.0 to 14.0	2,914,022	10.2
Risk Parity	3,998,139	13.2	12.0	7.0 to 17.0	3,437,750	12.1
Cash + Cash Overlay	711,537	2.3	N/A		314,472	1.1
Total Consolidated Defined Benefit Investments	**$30,370,574**	**100.0%**	**100.0%**		**$ 28,475,760**	**100.0%**



Annualized Time-Weighted Rate of Return by Asset Class vs. Benchmark Returns

For the Year Ended June 30, 2019

	1-Year [1]			
Global Asset Class	Actual Return [2]	Benchmark Return [2]	Actual Over / (Under) Benchmark	Benchmark
Public Equity	5.4%	4.6%	0.8	MSCI All Country World IMI Index (MSCI ACWI)
Private Markets	20.4	3.7	16.7	Custom Benchmark [3]
Fixed Income - Ex Inflation - Linked	10.0	9.9	0.1	Custom Benchmark [4]
Fixed Income - Inflation - Linked	5.7	5.2	0.5	Custom Benchmark [5]
Commodities	(8.2)	(8.0)	(0.2)	Custom Benchmark [6]
Real Estate	8.7	16.1	(7.4)	Custom Benchmark [7]
Absolute Return	4.2	1.8	2.4	HFRI Custom Benchmark [8]
Risk Parity	8.4	6.2	2.2	Custom Benchmark [9]
Cash + Cash Overlay	5.6	6.9	(1.3)	Custom Benchmark [10]
Total Consolidated Defined Benefit Assets	**7.4**	**6.7**	**0.7**	Custom Target Benchmark

[1] *Time-weighted rates of return based on calculations made by the System's custodian, Bank of New York Mellon.*

[2] *Net of fees.*

[3] *Benchmark represents the private equity custom PME made up of the following components lagged one quarter with a 300 basis point premium: Russell 2000(weight: 60%); MSCI EAFE Small Cap Index (weight: 20%); Credit Suisse High Yield Index (weight: 15%); Credit Suisse Western Europe High Yield Index (Hedged) (weight: 5%).*

[4] *Benchmark represents the sub-asset class target allocation within the fixed income portfolio over time.*

[5] *Global Inflation 70/30 is a 70% weight to Global Inflation-Linked Bonds (including U.S.) and a 30% weight to U.S. Inflation-Linked Bonds.*

[6] *50% Bloomberg Commodity Index / 50% Goldman Sachs Commodity Index and the collateral component is a 75/25 blend of Global Inflation Linked Bonds (ILB's) and 90-day Treasury Bills respectively.*

[7] *Real Estate Custom PME made up of the following components lagged one quarter: 70% FTSE NAREIT All Equity REITS and 30% Barclays CMBS.*

[8] *Weighted average of INPRS exposure to representative HFRI sub-strategy indices.*

[9] *Comprised of 60% MSCI ACWI IMI Index (equities) and 40% Barclays Global Aggregate Bond Index (bonds).*

[10] *Benchmark represents the allocation to sub-asset class targets for the cash overlay starting in April 2016; prior to that, the 3-month LIBOR was the benchmark for cash.*

Investment Results - Consolidated Defined Benefit Assets, continued

10-Year Time-Weighted Investment Rates of Return[1]

For the Years Ended June 30

(dollars in thousands)		Fair Value of Assets	Rate of Return [2]	Actuarial Assumed Rate
2019	INPRS [3]	$30,370,574	7.4%	6.75%
2018	INPRS [3]	28,475,760	9.3	6.75
2017	INPRS [3]	26,364,510	8.0	6.75
2016	INPRS [3]	24,775,551	1.2	6.75
2015	INPRS [3]	24,629,820	0.0	6.75
2014	INPRS [3]	24,560,323	13.7	6.75
2013	INPRS [3]	21,488,715	6.0	6.75
2012	INPRS [3]	19,708,900	0.7	7.00
2011	PERF CRIF [4]	15,796,600	20.1	7.00
	TRF DB Assets [5]	5,984,000	18.2	7.00
2010	PERF CRIF [4]	13,314,000	13.9	7.25
	TRF DB Assets [5]	5,073,000	14.8	7.50

[1] Returns from 2010 - 2011 presented as previously reported; returns 2012 and thereafter are based on calculations made by the System's custodian, BNY Mellon.

[2] Net of fees: 2010-2011 reported as gross of fees.

[3] INPRS Consolidated Defined Benefit Assets.

[4] PERF Consolidated Retirement Investment Fund.

[5] TRF Defined Benefit Assets.

Investment Results - Consolidated Defined Benefit Assets, continued

Historical Comparative Investment Results[1]

As of June 30, 2019

	Percent of Portfolio	Annualized Time-Weighted Rates of Return 1-Year [2,3]	3-Year [2,3]	5-Year [2,3]
Total Consolidated Defined Benefit Assets	100.0%	7.4%	8.2%	5.1%
vs. BNY Mellon Public Universe Median [4]		6.5	9.2	6.3
Target Reference Index [5]		6.7	7.2	4.5
Total Domestic Equity	10.9	8.1	14.0	9.6
vs. BNY Mellon Public Universe Median		7.5	13.8	9.7
Russell 3000 Index		9.0	14.0	10.2
Total International Equity	10.5	2.6	10.9	4.0
vs. BNY Mellon Public Universe Median		1.3	9.8	3.3
MSCI ACWI ex U.S. IMI Net		0.3	9.2	2.3
Total Domestic Fixed Income	10.8	11.8	4.1	4.8
vs. BNY Mellon Public Universe Median		7.6	3.2	3.3
Bloomberg Barclays U.S. Aggregate Bond Index		7.9	2.3	3.0
Total International Fixed Income	7.4	8.8	3.8	3.9
vs. BNY Mellon Public Universe Median		6.3	3.6	0.3
Bloomberg Barclays Global Aggregate ex-USD (USDH)		7.6	3.3	4.4

[1] As the investment objectives and resulting portfolio construction of INPRS may differ from those in the listed peer universes, the most relevant evaluation of INPRS's performance will be against the investment imperatives outlined in the report from the Chief Investment Officer and the cited benchmarks for each asset class.

[2] Net of fees.

[3] Investment performance is based on calculations made by the system's custodian, BNY Mellon.

[4] Universe of Public Funds.

[5] The target index weights for each asset class benchmark are set by the target asset allocation. The return for Risk Parity, Real Estate, and Private Markets are equal to the asset class returns and not the benchmark.

Statistical Performance as of June 30, 2019

Statistic	1-Year	3-Years	5-Years	10-Years
Annualized Time-Weighted Rate of Return	7.4%	8.2%	5.1%	7.8%
Annualized Standard Deviation	6.4	4.4	4.7	5.9
Annualized Sharpe Ratio [1]	0.8	1.5	0.9	1.2
Beta [2]	0.3	0.3	0.3	0.4
Correlation [2]	0.9	0.8	0.8	0.9
Annualized Alpha [3]	0.5	0.8	0.4	0.4

[1] Risk Free Proxy is the Citigroup 3 Month T-Bill.

[2] Market Proxy is the S&P 500.

[3] Market Proxy is INPRS's Custom Dynamic Benchmark.

Definition of Key Terms:

Standard Deviation: A statistic used to measure the dispersion in a distribution. Dispersion is measured relative to the mean, or average of the distribution. The greater the dispersion, the higher the risk associated with the pattern of observations. One standard deviation describes two-thirds of the observations in a normal or bell-shaped distribution. In an asset allocation context, standard deviation is a conventional proxy for risk or volatility.

Sharpe Ratio: Ratio used to measure risk-adjusted performance. The Sharpe Ratio is calculated by subtracting a risk-free rate (proxy) from the rate of return for a portfolio and dividing the result by the standard deviation of the portfolio returns. The Sharpe Ratio provides insight on excess risk held in the portfolio. The greater a portfolio's Sharpe Ratio, the better its risk-adjusted performance has been. A negative Sharpe Ratio indicates that a risk-less asset would perform better than the security being analyzed.

Beta: A measure of the volatility, or systematic risk, of a security or portfolio in comparison to the market as a whole. Beta is the tendency of a security's return to respond to swings in the market. A Beta of less than one indicates less volatility than the market. A Beta of greater than one indicates greater volatility than the market.

Correlation: A statistical measure of how two securities move in relation to each other. A correlation of positive 1.0 indicates similar magnitude and direction of change. A correlation of negative (1.0) indicates similar magnitude, but opposite direction. A correlation of zero indicates the relationship is purely random.

Alpha: A measure of relative performance. Alpha is the difference between the actual performance of the assets and the performance which should have been achieved given the market’s performance and the asset’s risk posture.

Asset Class Summaries

Public Equity: Portfolio Objective

The public equity portfolio seeks to provide long-term capital appreciation and income through exposure to public equity securities. INPRS uses a variety of external managers to create a globally diversified portfolio within the asset class. Historically, public equities have performed well in environments when actual economic growth came in higher than expectations and/or when actual inflation came in lower than expectations.

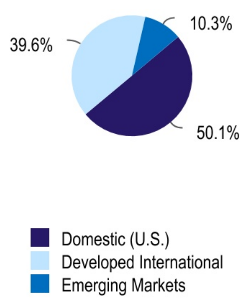
Asset Allocation and Portfolio Performance

1-Year Net Performance is the time-weighted rate of return, net of fees calculated by the custodian, BNY Mellon.

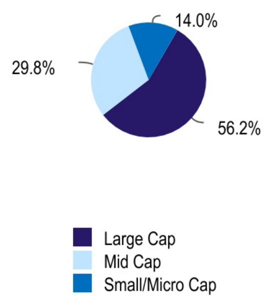
Asset Allocation as of June 30, 2019	Target Asset Allocation	Fair Value as of June 30, 2019	INPRS 1-Year Net Performance [1]	MSCI All Country Index 1-Year
21.3%	22.0%	$ 6,481 Million	5.4%	4.6%

Portfolio Structure

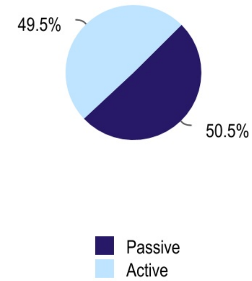
Regional Exposure



Market Cap Exposure



Investment Strategy



Performance Attribution

INPRS's public equity portfolio had a return of 5.4 percent for 2019. The portfolio outperformed the benchmark by 0.8 percent. The domestic segment underperformed the benchmark by 0.9 percent and the international segment outperformed the benchmark by 2.4 percent.

Market Overview

Over the past year, global equities, as represented by the MSCI All Country World IMI Index, were up 4.6 percent. Based on the Russell 3000 Index, domestic equities were up 9.0 percent over the fiscal year. Within the U.S,. growth outperformed value and the Russell 1000 large cap index outperformed the Russell 2000 small cap index. International equities rose by 0.3 percent based on the MSCI ACWI ex U.S. IMI Index with emerging markets besting developed markets.

In the first quarter, INPRS's global equity portfolio was up 4.3 percent. In the U.S., economic conditions continued to improve due a 50 year low in unemployment combined with an increase in consumer confidence. Country specific concerns weighed on international markets such as slowing growth in China and uncertainty surrounding Brexit negotiations. Domestic equities outperformed developed international equities by 6.1 percent during the quarter. Yet, by second quarter the global equity portfolio declined by 13.7 percent. Tighter global monetary policy and geopolitical concerns led to poor equity performance across geographies. Developed international equities outperformed domestic equities by 1.0 percent during the second quarter.

In the third quarter of the year, INPRS's global equity portfolio was up 12.9 percent. After the drawdown in the global equity markets, central banks, led by the United States Federal Reserve, showed a willingness to take a more patient approach regarding monetary policy. Increased optimism with regards to international trade also bolstered performance. Domestic equities outperformed developed market equities by 3.5 percent.

In the fourth quarter of the year, INPRS's global equity portfolio was up 3.7 percent. Globally, central banks took notice of downside risks and turned toward a more accommodative stance on monetary policy. No significant movement was cited in trade negotiations, contributing to further uncertainty around the path forward for the US and its trading partners. Again, domestic equities outperformed developed international equities during the quarter, this time by 0.6 percent.

Private Markets: Portfolio Objective

The private markets portfolio, which includes private equity and private credit seeks to provide risk-adjusted returns in excess of public markets while simultaneously decreasing the volatility of the investment portfolio through diversification.

Asset Allocation and Portfolio Performance

1-Year Net Performance is the time-weighted rate of return, net of fees calculated by the custodian, BNY Mellon. The custom public market equivalent (PME) index performance is calculated by the custodian, BNY Mellon. The overall private markets PME is calculated based on actual underlying private equity and private credit asset values.

The private equity PME is calculated on a one-quarter lagged basis and consists of the following indices: Russell 2000 Index (weight: 60%); MSCI EAFE Small Cap Index (weight: 20%); Credit Suisse High Yield Index (weight: 15%); Credit Suisse Western Europe High Yield Index (Hedged) (weight: 5%). Note: The private equity PME also includes a 300 basis point premium.

The private credit PME is calculated on a one-quarter lagged basis and consists of the following indices: Credit Suisse Leveraged Loan Total Return Index (weight: 50%); Wells Fargo BDC Total Return Index (weight: 33%); Credit Suisse Western European Leveraged Loan Index (weight: 17%). Note: The private credit PME also includes a 150 basis point premium.

Asset Allocation as of June 30, 2019	Target Asset Allocation	Fair Value as of June 30, 2019	INPRS 1-Year Net Performance	Custom Public Market Equivalent 1-Year Net Performance
12.5%	14.0%	$ 3,788 Million	20.4%	3.7%

Portfolio Overview: Private Equity

The private equity portfolio continues to maintain a home continent bias with 88.3 percent of market value with North American focused funds. Investments are well diversified by sub-asset class with buyout and venture / growth accounting for the largest portions of portfolio market value (53.7 percent and 18.2 percent, respectively).

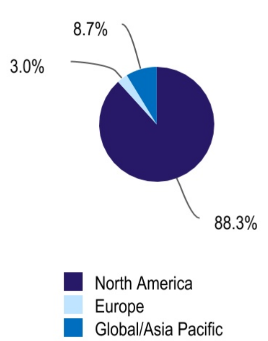
Primary fund commitments account for the vast majority of market value (78.4 percent), with fund of funds (12.0 percent), co-investments and co-investment funds (9.2 percent), and secondary interests (0.4 percent) accounting for the remainder.

The portfolio continues to mature with pre-2008 funds accounting for 13.1 percent of market value.

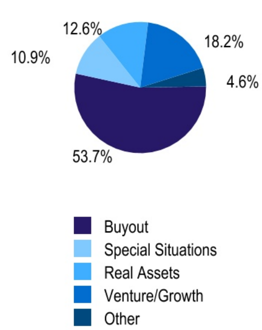
In fiscal year 2019, distributions (inflows) from and contributions (outflows) to the INPRS private equity portfolio totaled $981 million and $443 million, respectively, resulting in positive net cash flow of $538 million. During 2019, INPRS made new commitments totaling approximately $380 million.

Portfolio data and returns (IRR) as of 03/31/2019 are provided by Torrey Cove, INPRS's private markets consultant.

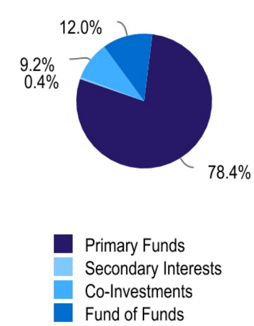
Private Equity Market Value by Region



Private Equity Market Value by Sub-Asset Class



Private Equity Market Value by Structure

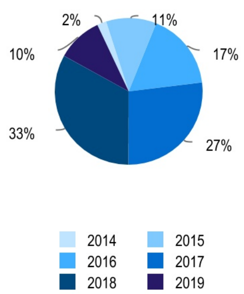


Asset Class Summaries, continued

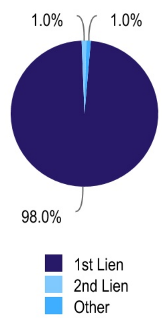
Portfolio Overview: Private Credit

By the end of 2018, INPRS had made $400 million of commitments with $34.3 million invested. During 2019, INPRS continued to expand the private credit portfolio with an additional $290 million in commitments, bringing commitments to the full total to $690 million. New commitments continued to build upon the theme of senior secured term loans to non-sponsor and sponsor-backed borrowers in a wide variety of industries across developed economies. While the initial commitments in 2018 were heavily focused on North America, INPRS expanded commitments to funds with focus on Western Europe in 2019. INPRS continues to work towards increasing the total exposure of private credit to four percent of the defined benefit plan.

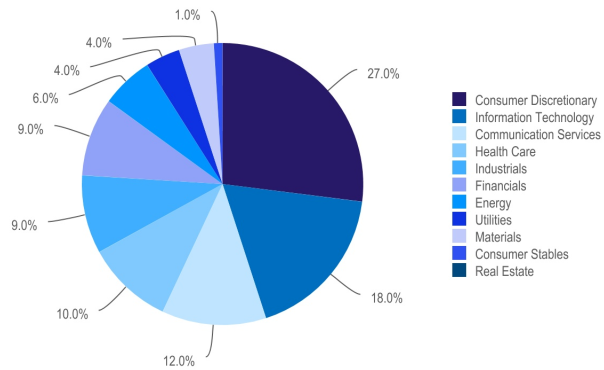
Private Credit Security Type



Private Credit Investment Year



Private Credit Sector

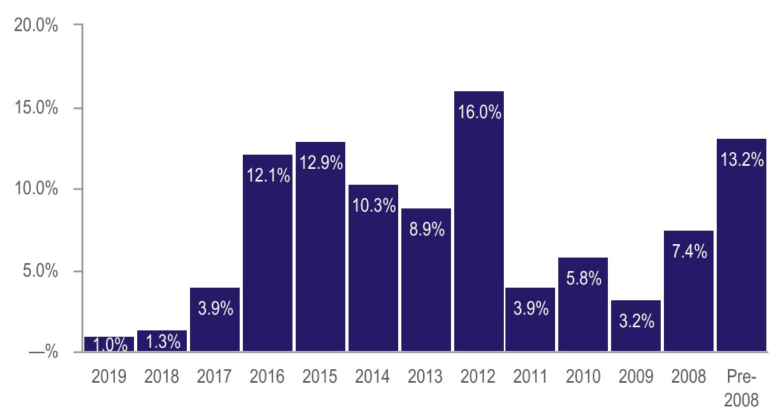


Performance Attribution: Private Equity

At end of 2019, the private equity portfolio had a market value of $3,555 milliion. The portfolio returned 20.9 percent for 2019, outperforming its benchmark by 17.2 percent. The portfolio outperformed the Cambridge Associates Pooled IRR for the one-year period ending March 31, 2019 by 7.40 percent (index 11.2 percent) and has outperformed the same index by 1.20 percent (index 10.9 percent) from inception through March 31, 2019.

North American investments have generated the highest IRR since inception, totaling 13.1 percent, while European investments have performed the least favorably with an IRR of 6.0 percent since inception. The buyout sub-asset class has generated the highest IRR since inception, amounting to 14.1 percent. The venture and special situations sub-asset classes have generated IRRs of 12.2 percent and 10.7 percent since inception.

Private Equity Market Value by Vintage Year



Performance Attribution: Private Credit

Private credit portfolio ended the year with $233 million in market value, an increase of $198.4 million over the prior year. The portfolio returned at 8.2 percent for 2019, outperforming its benchmark by 0.8 percent per custodian. Per asset class consultant, from inception through March 31, 2019, the portfolio has generated an IRR of 10.7 percent.

Fixed Income – Ex Inflation-Linked: Portfolio Objective

The fixed income - ex inflation-linked portfolio seeks to generate current income and long-term risk-adjusted return, in excess of the custom benchmark ("Benchmark"), through the investment in debt securities. A focus is placed on preservation of capital. To minimize the probability of substantial principal loss, INPRS staff seeks to reduce the volatility of the portfolio and enhance return from both contractual income and capital appreciation partially by investing in certain actively managed strategies.

Asset Allocation and Portfolio Performance

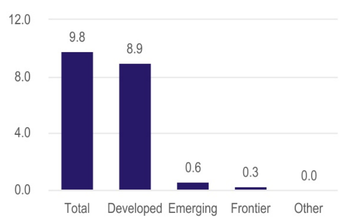
1-Year Net Performance is the time-weighted rate of return, net of fees calculated by the custodian, BNY Mellon. The custom benchmark represents sub-asset class target allocations within the portfolio over time.

Asset Allocation as of June 30, 2019	Target Asset Allocation	Fair Value as of June 30, 2019	INPRS 1-Year Net Performance	Custom Benchmark
20.1%	20.0%	$ 6,117 Million	10.0%	9.9%

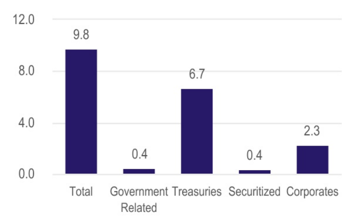
Portfolio Overview

The fixed income - ex - inflation-linked portfolio's effective duration is 9.4 years with 2.7 percent yield to maturity. Credit quality is A1/A2.

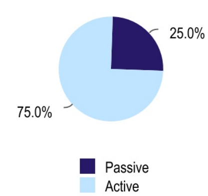
Contribution to Effective Duration - Country



Contribution to Effective Duration - Sector



Management Style



Performance Attribution

For 2019, the fixed income - ex inflation-linked portfolio returned 10 percent, outperforming its benchmark by 0.1 percent. Manager selection and asset allocation decisions within the long government/credit and opportunistic credit portfolios were the largest contributors to outperformance.

Market Overview

The year 2019 marked a continued tightening of financial conditions by central banks across the world during the first six months of the year, followed by a pause and a final reversal in the ensuing six months. The Federal Reserve (Fed) hiked rates twice in the year, on 9/26/18 and 12/19/18 due to a continued economic expansion, good GDP growth, a tight labor market, and inflation close to target. The subsequent pause in the hiking cycle may have been induced by financial volatility, geopolitical risks, and global slowdown in growth outside of the US. These conditions led the Fed to eventually increase market liquidity by signaling it would stop its balance sheet roll - off in March of 2019 by September. Further easing was expected by the market at the end of the year due to a continued slowdown in global growth, trade tensions, and inflation failing to hit target.

During the first quarter, the Fed unanimously voted to raise the Federal Funds Rate and to continue on a path of monetary tightening as GDP grew 3.1 percent year-over-year (YOY), inflation was above target at 2.3 percent YOY, and unemployment remained below 4.0 percent. These conditions may have signaled the economy was heating up to a level that could cause a recession if interest rates were not adjusted upwards. During this time, financial markets continued to rally on the upbeat outlook.

The second quarter began with Federal Reserve Chairman, Jerome Powell, proclaiming that interest rates were a "long way" from neutral, which likely caused a subsequent sell-off across a variety of risk markets. During this time, the yield curve flattened as market participants were pricing in a higher chance of a recession. The S&P fell from a high of 2,925 to a low of 2,351 and credit spreads across the globe widened.

In the third quarter of the year, risk markets across the world rebounded as the Fed changed its stance from rates being "long way" from neutral to rates are "at the lower bound" of neutral during the December 18 meeting. The CBOE Volatility Index (VIX) reflected a high of 36 during December fell to 14 by the end of the third quarter. At the end of the year, the yield curve inverted further as market participants priced in a likely rate cut from possible geopolitical risks and muted inflation. Moving forward market themes are likely to be dominated by the Fed's decision on interest rates, geopolitical tensions, trade, and global growth.

Fixed Income – Inflation-Linked: Portfolio Objective

The fixed income - inflation-linked portfolio seeks to generate a long-term risk-adjusted return similar to that of the custom global inflation index ("Benchmark") and to, more broadly, provide protection against unanticipated inflation.

Asset Allocation and Portfolio Performance

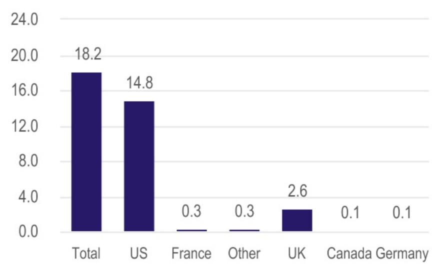
1-Year Net Performance is the time-weighted rate of return net of fees calculated by the custodian, BNY Mellon. The custom benchmark represents sub-asset class target allocations within the portfolio over time.

Asset Allocation as of June 30, 2019	Target Asset Allocation	Fair Value as of June 30, 2019	INPRS 1-Year Net Performance	Custom Benchmark 1-Year Performance
7.4%	7.0%	$ 2,242 Million	5.7%	5.2%

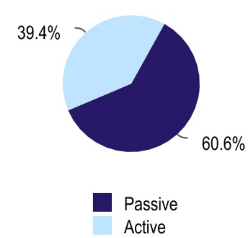
Portfolio Overview

The fixed income - inflation-linked portfolio's effective duration is 17.6 years with 0.4 percent yield to maturity. Credit quality is Aa1/AAA.

Contribution to Effective Duration - Country



Management Style



Performance Attribution

For 2019, the INPRS fixed income - inflation-linked portfolio outperformed by 0.5 percent. Active management within the global-inflation linked strategy was the largest contributor to benchmark outperformance.

Market Overview

During the first quarter of the year, low volatility ensued after a brief market sell-off in February 2018. The Fed lifted domestic interest rates by 25 basis points(bps) on 09/26/18, given strong GDP growth and a tight labor market. Inflation remained close to target. U.S. 10-year rates rose by 19 bps, while breakeven inflation decreased by 6 bps during the quarter and Global 10-year rates rose by 18 bps.

In the U.S., the second quarter was marked by increased volatility across asset classes as financial conditions tightened on the back Fed rate increases. On 12/19/18, the Fed implemented a 25 bps increase citing a sustained economic activity, strong market conditions, and inflation near its two percent target as its rationale. The 10-year rates rallied by 39 bps while breakeven inflation decreased by 34 bps during the quarter and Global 10-year rates rallied by 22 bps.

The Fed reversed a sustained heightening cycle at the end of the second quarter as risk markets across the world sold off, driven by fears of geopolitical instability and monetary tightening. In turn, risk assets across the globe rebounded accordingly in the third quarter. In the third quarter, 10-year rates rallied by an additional 21 bps and by this time the yield curve fully inverted. This inversion historically has been an indicator of a recession in the intermediate term. The Fed did not raise or cut rates in the third quarter. The Funds Rate settled between 2.25 - 2.50 and Global 10-year yields rallied an additional 14 bps.

During the fourth quarter, 10-year yield rallied an additional 50 bps while inflation expectations declined by 10 bps. Global 10-year rates rallied by 26 bps. At year-end, the Fed voted to raise interest rates with the market pricing further easing due to mounting tensions in trade negotiations, a slow down in global growth, and inflation being below target. The Fed continued to monitor risks to the economy while also noting that GDP growth and unemployment were strong.

Moving forward, developed markets are pricing in below two percent breakeven inflation, which is below central bankers targets. As of the 6/19/19 meeting, Fed officials were pricing in minimal change with the implied Fed Funds Target rate at 2.375.

Commodities: Portfolio Objective

The purpose of the commodity portfolio is to enhance long-term risk-adjusted returns by preserving investment capital and lowering overall volatility. The portfolio should also act as a hedge against unanticipated inflation. Commodity investments have historically delivered returns that are less correlated with equity and fixed income markets, which may provide an opportunity to enhance returns and/or reduce volatility.

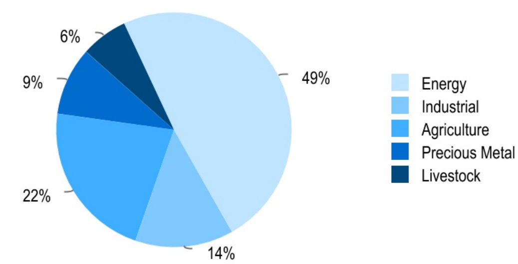
Asset Allocation and Portfolio Performance

1-Year Net Performance is the time-weighted rate of return, net of fees calculated by the custodian, BNY Mellon. The commodity portion of the portfolio benchmark is a 50/50 blend of the Bloomberg Commodity Index ("BCOM") and the Goldman Sachs Commodity Index ("GSCI"). The collateral component is a 75/25 blend of global inflation-linked bonds indices and 90-day Treasury Bills, respectively.

Asset Allocation as of June 30, 2019	Target Asset Allocation	Fair Value as of June 30, 2019	INPRS 1-Year Net Performance	Custom Benchmark 1-Year Performance
7.6%	8.0%	$ 2,305 Million	(8.2)%	(8.0)%

Portfolio Overview

Portfolio Structure



Performance Attribution

The commodities portfolio one-year total return lagged its benchmark by 0.2 percent. During the year, the energy-centric GSCI benchmark was down 11.5 percent while the more diversified BCOM index was down 6.8 percent. A slight underweight to the BCOM index relative to the GSCI index detracted from benchmark relative returns over the period.

Market Overview [1]

Commodity performance in 2019 was driven by tensions between the United States and many of its global trading partners as well as fluctuating supply and demand dynamics. Commodity sectors broadly declined throughout the fiscal year, with the exception of precious metals-the only sector that had increased in value. The 50/50 blended benchmark declined by 8.0 percent with the BCOM and GSCI components down by 6.8 and 11.5 percent, respectively.

The BCOM Energy subindex declined by 14.3 percent during the fiscal year. Energy markets experienced significant volatility during the period as the United States and China continued to work through trade disputes and tensions between the United States and Iran buoyed prices. During the first half of the year the energy subindex declined by 22.5 percent followed by a 10.6 percent increase in the second half of the year.

During the year, the BCOM Agriculture subindex declined by 4.2 percent. The decline in agriculture prices can be attributed to the severe impact of Chinese tariffs on imported United States agricultural products. Positive developments in trade negotiations, including China's promise to purchase US soybeans and an unusually wet planting season in the United States helped the sub index mitigate losses.

[1] Commodity and sector data sourced from Bloomberg. BCOMTR sub index performance used to proxy commodity sector performance.

Asset Class Summaries, continued

Real Estate: Portfolio Objective

The real estate portfolio is mostly comprised of investments in private real estate partnerships, and the underlying exposures are a mix of debt and equity holdings. The portfolio seeks to generate attractive risk-adjusted returns by providing stable current income and preserving investment capital. The portfolio should also reduce volatility by providing a hedge against inflation and through the diversification benefits provided by real estate investments.

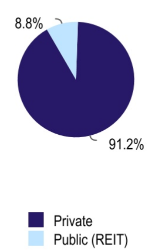
Asset Allocation and Portfolio Performance

1-Year Net Performance is the time-weighted rate of return, net of fees calculated by the custodian, BNY Mellon The custom public market equivalent index performance is based on calculations made by custodian, BNY Mellon. It is calculated on a one-quarter lagged basis and consists of the following indices: FTSE NAREIT All Equity REITS Index (weight 70 percent) and Barclays CMBS Index (weight 30 percent).

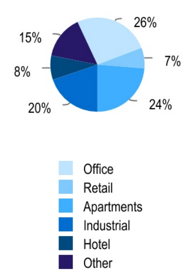
Asset Allocation as of June 30, 2019	Target Asset Allocation	Fair Value as of June 30, 2019	INPRS 1-Year Net Performance	Custom Public Market Equivalent 1-Year Performance
6.0%	7.0%	$ 1,823 Million	8.7%	16.1%

Portfolio Overview

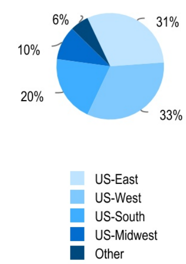
Management Style



Property Type



Property Location [1]



[1] *Exclusive of REIT mandate.*

Performance Attribution

For year 2019, the real estate portfolio underperformed its benchmark by 7.4 percent, with the real estate equity and debt portfolios returning 9.8 percent and 5.9 percent, respectively.

Market Overview

The portfolio's market value of $1,740 million at the end of the prior year increased in 2019 by $83 million. The rise of market value was primarily driven by higher returns within the industrial and multifamily property sectors, yet overall performance compared to the benchmark was less than expected.

For the trailing three-year, five-year, and 10-year period, the INPRS real estate portfolio returned 10.4 percent, 10.0 percent, and 10.1 percent. These positive returns have been driven by a combination of strong net operating income (NOI) growth coupled with robust appreciation. Given the market has benefited from a prolonged economic expansion, various indicators point to a real estate market entering a more mature part of the economic cycle. Given the cycle's maturity, near-term returns are expected to temper and become more reliant on NOI growth as compared to recent above historical average appreciation. Despite lower near-term expectations, various underlying real estate fundamentals remain solid.

Over the past year, the growing shift towards e-commerce has led to tenant demand across primary and secondary industrial markets. As e-commerce continues to become a larger portion of consumer spending, the industrial property class has experienced higher than historical average rent increases. Conversely, this move toward e-commerce coupled with the current oversupply in the retail market continue to impede retail property performance. These trends are expected to persist in the foreseeable future.

Absolute Return: Portfolio Objective

The purpose of the absolute return strategies program is to enhance the long-term risk adjusted returns of the plan by delivering alpha, providing diversification benefits, and preserving capital. Absolute return strategies generate returns by exploiting mispricing and inefficiencies in global capital markets, while attempting to reduce exposures to primary market factors (e.g. interest rates and equities) through various hedging techniques.

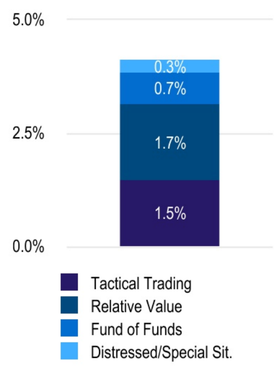
Asset Allocation and Portfolio Performance

1-Year Net Performance is the time-weighted rate of return, net of fees calculated by the custodian, BNY Mellon. The HFRI custom benchmark is a weighted average of INPRS's exposure to representative HRFI sub-strategy indices.

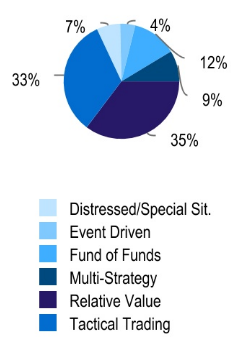
Asset Allocation as of June 30, 2019	Target Asset Allocation	Fair Value as of June 30, 2019	INPRS 1-Year Net Performance	HFRI Custom Benchmark
9.6%	10.0%	$ 2,906 Million	4.2%	1.8%

Portfolio Overview

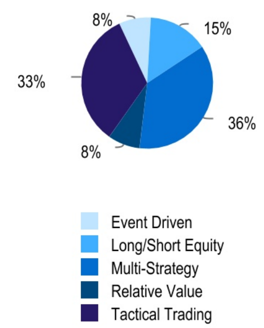
Contribution to Performance by Strategy



Portfolio Composition



Funds of Funds - Look-Through



Performance Attribution

INPRS outperformed the HFRI custom benchmark by 2.4 percent as a result from a combination of strategy selection and individual manager performance in the global macro and relative value strategies.

Market Overview

During the year, the portfolio was impacted by the shift of central banks across the world to a tighter monetary policy stance and subsequent easing, continued trade disagreements, populism, and sudden bursts of volatility. These themes are likely to persist into fiscal year 2020 and possibly beyond.

The portfolio's returns over the year ranged from (13.6) percent to 17.1 percent among the various strategies. Nineteen managers who performed positively had an average starting allocation of $138 million and a weighted average return of 5.9 percent in 2019. Five negative performing managers had an average starting allocation of $57 million and a weighted average return of (6.3) percent in 2019. The outperformance of managers with higher allocations drove returns through the year.

The portfolio also exhibited little beta to traditional asset classes over the year: 0.05 to a Global 60/40 (equities/fixed income) and 0.08 to the INPRS DB Plan. The average pairwise correlation of fund returns across the entire roster of hedge funds was 0.13. The low betas and correlations indicate that the portfolio has successfully generated attractive returns and supported the valuable benefits of diversification for the INPRS defined benefit plan.

INPRS's fund-of-funds portfolio gained 6.1 percent during fiscal year 2019. The allocation at the end of the fiscal year was 12.5 percent. Exposure to Relative Value, Multi - Strategy, and Event Driven strategies were accretive to performance over the fiscal year.

Asset Class Summaries, continued

Risk Parity: Portfolio Objective

The risk parity portfolio seeks to deliver consistent and high risk-adjusted rates of returns as a standalone investment through the allocation of capital that equalizes risks across a myriad of macroeconomic environments. While traditional asset allocation is highly dependent on favorable equity returns, risk parity can be considered an “all weather” portfolio to garner consistent, high returns from multiple asset classes without long-term inclination towards any single asset class.

Risk parity portfolio is guided by these core tenets:

- Most asset classes provide investors with a positive risk premium that is greater than cash/cash equivalents during a full market cycle to encourage investment.
- Economic growth, inflation, and changes in risk premiums are the main drivers of returns.
- The return of a particular asset class is proportional to its risk over long periods of time.
- Leverage, when used in moderation, enables an investor to allocate more risk to less volatile asset classes to provide additional diversification and more balance to various macroeconomic environments.

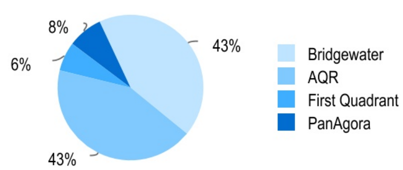
Asset Allocation and Portfolio Performance

1-Year Net Performance is the time-weighted rate of return, net of fees calculated by the custodian, BNY Mellon. Custom benchmark is comprised of 60 percent MSCI ACWI IMI Index (equities) and 40 percent Barclays Global Aggregate Bond Index (bonds).

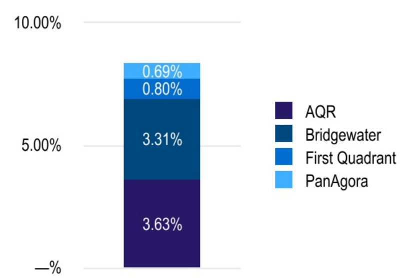
Asset Allocation as of June 30, 2019	Target Asset Allocation	Fair Value as of June 30, 2019	INPRS 1-Year Net Performance	Custom Benchmark 1-Year Performance
13.2%	12.0%	$ 3,998 Million	8.4%	6.2%

Portfolio Structure

Manager Allocation



Contribution to Performance by Manager



Performance Attribution

INPRS benchmarks performance of its Risk Parity position to a Global 60/40 portfolio consisting of 60% stocks and 40% bonds. This portfolio monitors the opportunity cost of a Risk Parity position vs the basic market alternative.

For the year, the INPRS's Risk Parity position returned 8.4% while a Global 60/40 Portfolio returned 6.2%. This indicates that INPRS's Risk Parity asset class allocation was accretive to plan performance.

INPRS saw positive performance from all four of its risk parity managers for the fiscal year, with AQR contributing the most, followed by Bridgewater, First Quadrant, and PanAgora respectively.

Market Overview

The year started with continued strong performance in equity markets as GDP growth remained strong, inflation was moderate, and labor markets were tight. Financial markets wavered and equities fell in the second quarter of the year as the Fed raised rates and a slow down in global growth ensued. In the later half of the year, growth continued to slow and inflation expectations moderated, causing central banks to switch from hawkish to dovish policy stances. Rates continued to rally through the 3rd and 4th quarter of the year causing long duration securities to perform very well. Performance for the year was driven mainly by nominal bond and equity positioning with mixed results from commodities.

Investment Results - Defined Contribution Assets

Assets by Investment Option

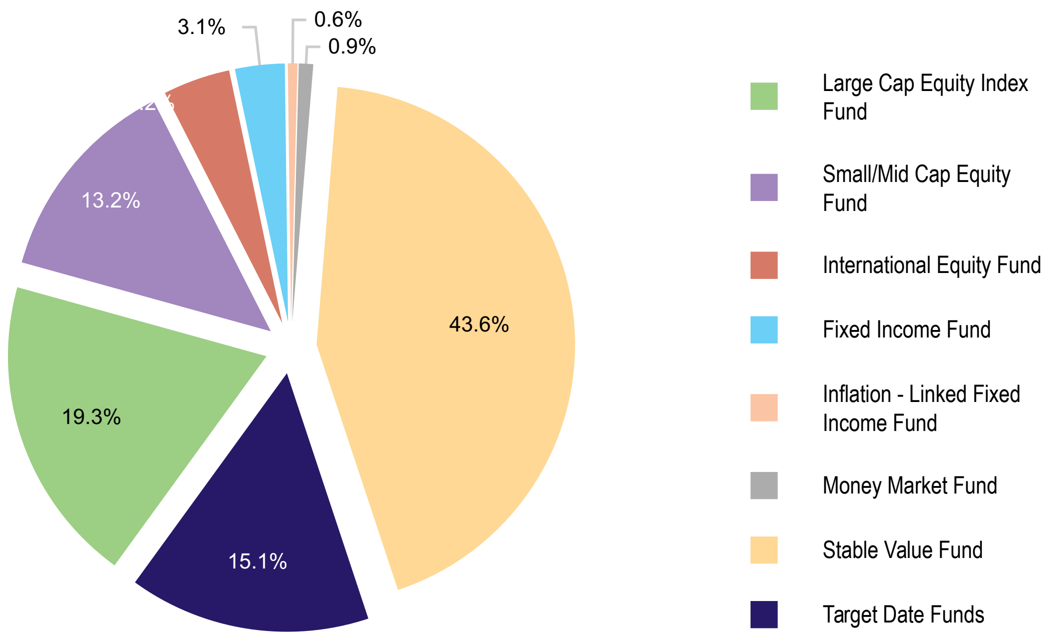
As of June 30, 2019

The Total Consolidated Defined Contribution Investments shown below are grouped by asset classes approved in the Investment Policy Statement, whereas the investments in the Statement of Fiduciary Net Position are grouped in assets and liabilities according to GASB and the security type assigned to each investment.

(dollars in thousands)

Investment Option		Plan Assets	Percent of Self-Directed Investments
Target Date Funds [1]	$	869,048	15.1%
Large Cap Equity Index Fund		1,108,340	19.3
International Equity Fund		239,806	4.2
Small/Mid Cap Equity Fund		757,040	13.2
Fixed Income Fund		177,924	3.1
Inflation - Linked Fixed Income Fund		35,379	0.6
Stable Value Fund		2,506,323	43.6
Money Market Fund		51,737	0.9
Total Defined Contribution Assets	**$**	**5,745,597**	**100.0%**

[1] Consolidated fair values of all Target Date Funds.



Investment Results - Defined Contribution Assets, continued

Historical Annualized Time-Weighted Rate of Return by Investment Option vs. Benchmark Returns

For the Year Ended June 30, 2019

Investment Option	1-Year [1]	3-Year [1]	5-Year [1]
Target Date Funds: [2]			
Fund 2060	6.4%	9.5%	5.6%
2060 Fund Index	6.1	9.0	5.2
Fund 2055	6.4	9.5	5.6
2055 Fund Index	6.1	9.0	5.2
Fund 2050	6.4	9.5	5.6
2050 Fund Index	6.1	9.0	5.2
Fund 2045	6.4	9.5	5.6
2045 Fund Index	6.1	9.0	5.2
Fund 2040	6.4	9.4	5.5
2040 Fund Index	6.2	8.9	5.1
Fund 2035	6.6	8.5	5.2
2035 Fund Index	6.5	8.1	4.8
Fund 2030	6.6	6.7	4.4
2030 Fund Index	6.7	6.2	4.1
Fund 2025	6.2	5.2	3.7
2025 Fund Index	6.3	4.8	3.5
Fund 2020	5.7	4.1	3.2
2020 Fund Index	5.8	3.8	2.9
Retirement Fund	5.5	3.4	2.7
Retirement Fund Index	5.6	3.1	2.5
All Other Funds:			
Large Cap Equity Index Fund	10.4	14.2	10.7
S&P 500 Index	10.4	14.2	10.7
International Equity Fund	2.4	10.4	3.4
MSCI ACWI ex US Index	1.0	9.3	2.1
Small/Mid Cap Equity Fund	2.2	13.3	7.8
Russell Small Cap Completeness Index	2.4	13.4	7.9
Fixed Income Fund	7.7	2.7	3.0
Barclays U.S. Aggregate Bond Index	7.9	2.3	3.0
Inflation - Linked Fixed Income Fund	4.8	2.2	1.7
Barclays U.S. TIPS Index	4.8	2.1	1.8
Stable Value Fund	2.4	2.0	1.7
Federal Reserve 3 Yr Constant Maturity	2.5	2.0	1.6
Money Market Fund	2.4	1.6	1.0
Citigroup 3 Month T-Bill Index	2.3	1.4	0.8

[1] *Return net of fees based on performance calculations made by the system's custodian.*

[2] *Target Date Fund benchmarks are comprised of performance data using a passive strategy with the same asset allocation of each Target Date Fund.*

Historical Annual Interest Crediting Rates

For the Years Ended June 30, 2019

	Annual Interest Crediting Rate [1]			
	77 Fund	JRS	EG&C	PARF
2019	2.8%	2.8%	2.8%	2.8%
2018	2.4	2.4	2.4	2.4
2017	1.8	1.8	1.8	1.8
2016	1.9	1.9	1.9	1.9
2015	2.7	2.7	2.7	2.7
2014	1.9	1.9	1.9	1.9
2013	5.5	—	0.3	5.5
2012	5.5	—	3.5	5.5
2011	5.5	—	3.5	5.5
2010	5.5	—	3.5	5.5

[1] Annual interest crediting rates are used to calculate interest on the sum of contributions to the fund for members who are not vested with a retirement benefit. Interest rates are approved by the INPRS Board of Trustees on an annual basis.

Top Ten Holdings

For the Year Ended June 30, 2019 [1]

(dollars in thousands)

Company	Shares	Fair Value
Microsoft Corporation	755,381	$ 101,191
Apple Inc.	454,717	89,998
Amazon.com Inc.	40,660	76,995
Nestle SA	489,718	50,760
Samsung Electronics Co. Ltd.	1,217,534	49,560
Facebook Inc	234,941	45,344
Prologis Inc.	563,344	45,124
Roche Holdings AG	147,243	41,477
Berkshire Hathaway Inc.	192,307	40,994
Tiawan Semiconductor Manufacturing	5,143,494	39,579

[1] A complete list of portfolio holdings is available upon request.

Income Holdings by Fair Value [1]

(dollars in thousands)

Description	Coupon Rate	Maturity Date	Par Value	Fair Value
U.S. Treasury - CPI Inflation Index Bond	2.125%	2/15/41	$ 168,213	$ 216,901
U.S. Treasury Bond	3.125	8/15/44	190,250	212,255
U.S. Treasury Bond	3.000	2/15/49	187,490	205,917
U.S. Treasury - CPI Inflation Index Bond	1.375	2/15/44	151,892	172,558
U.S. Treasury - CPI Inflation Index Bond	0.750	2/15/42	157,967	158,743
U.S. Treasury - CPI Inflation Index Bond	0.625	2/15/43	157,073	152,458
U.S. Treasury - CPI Inflation Index Bond	0.750	2/15/45	150,210	148,770
U.S. Treasury - CPI Inflation Index Bond	1.000	2/15/46	132,278	138,757
U.S. Treasury - CPI Inflation Index Bond	2.125	2/15/40	107,892	138,190
U.S. Treasury - CPI Inflation Index Bond	0.875	2/15/47	131,212	133,843

[1] A complete list of portfolio holdings is available upon request.

Investment Management Fees

For The Year Ended June 30, 2019

Private Markets and Real Estate managers provide account valuations on a net of fee basis. While management fees are disclosed in the Investment Management Fees schedule, for greater transparency, INPRS makes a good faith effort to provide realized carried interest and expenses that would not otherwise be disclosed. INPRS's consultants TorreyCove and Mercer provided additional fee information on a calendar year basis as of December 31, 2018 resulting in reported realized carried interest and expenses for Private Markets of $70.1 million and Real Estate of $19.3 million. Reported realized carried interest and expenses exclude funds where data was not provided by the general partners.

(dollars in thousands)

Asset Class		Fees Paid
Consolidated Defined Benefit Assets		
Public Equity	$	14,659
Private Markets		40,410
Fixed Income - Ex Inflation - Linked		13,398
Fixed Income - Inflation - Linked		6,246
Commodities		6,779
Real Estate		19,606
Absolute Return		76,369
Risk Parity		10,548
Cash + Cash Overlay		289
Total Consolidated Defined Benefit Assets		**188,304**
Defined Contribution Assets		9,188
Special Death Benefit Fund Assets		5
Total Investment Management Fees	**$**	**197,497**

Top Ten Brokers' Commission Fees

For the Year Ended June 30, 2019

(dollars in thousands)

Broker		Fees Paid
Morgan Stanley & Co. Inc.	$	1,007
Goldman Sachs & Co.		581
Newedge USA LLC		472
Pershing LLC		123
Merrill Lynch International Equities		101
J.P. Morgan Securities LTD		86
Wells Fargo Securities LLC		84
Instinet Europe Limited		75
Redburn Partners LLP		45
Merrill Lynch Pierce Fenner Smith Inc.		41
Top Ten Brokers' Commission Fees		**2,615**
Other Brokers		1,236
Total Brokers' Commission Fees	**$**	**3,851**

Investment Professionals

Fiscal Year Ended June 30, 2019

Consolidated Defined Benefit Assets

Custodian

Bank of New York Mellon

Consultants

Aksia (Absolute Return)
Mercer (Real Estate)
Torrey Cove (Private Equity and Private Markets)
Verus (General: Defined Benefit)

Public Equity Managers

Altrinsic Global Advisors, LLC
Arrowstreet Capital, LP
Artisan Partners Limited Partnership
Baillie Gifford & Company
BlackRock Institutional Trust
Disciplined Growth Investors
Jackson Square Partners
Leading Edge Investment Advisors
RhumbLine Advisers
Schroders
Times Square Capital Management, LLC

Private Markets Managers

A.M. Pappas & Associates
ABRY Partners
Accel-KKR
Accent Equity Partners AB
Actis Capital
Advanced Technology Ventures
Advent International
Aisling Capital
AlpInvest Partners
Apax Partners
Apollo Management
ARCH Venture Partners
Ascribe Capital
Ares Management
Austin Ventures
Avenue Capital Group
Bain Capital Partners
Baring Private Equity Asia
Bay Partners
Bertram Capital
Black Diamond Capital Management
Bregal Sagemount
Brentwood Associates
Butterfly Equity Partners, LLC
Caltius Capital Management
Cardinal Partners
Centerfield Capital Partners
Cerberus Capital Management
Charterhouse Capital Partners
CID Capital
Coller Capital
Columbia Capital
Court Square Capital Partners
Crescent Capital Partners
Crestview Partners
CVC Capital Partners
Doll Capital Management
Elevation Partners
EnCap Investments
Energy Capital Partners
Enhanced Capital Partners
Escalate Capital Partners
Falcon Investment Advisors
First Reserve Corporation
Forbion Capital Partners
Fortress
Gamut Capital Management
Gilde Buyout Partners
Globespan Capital Partners
GSO Capital Partners
GTCR Golder Rauner
H2 Equity Partners
Hammond Kennedy Whitney & Co
Hellman & Friedman
Herkules Capital
High Road Capital Partners
Horsley Bridge
HPS Investment Partners
Insight Venture Partners
Institutional Venture Partners
JFM Management
KAILAI Investments
Khosla Ventures
KPS Capital Partners
Landmark Partners
Leonard Green & Partners
Lexington Partners
Lightyear Capital
Lindsay Goldberg
Lion Capital
MBK Partners
Merit Capital Partners
Mill Road Capital
Neuberger Berman
New Enterprise Associates
New Mountain Capital
NGP Energy Capital Management
Oak Hill Advisors
Oak Hill Capital Management
Oak Investment Partners
Oaktree Capital Management
Opus Capital Venture Partners
Panda Power Funds
Parthenon Capital Partners
Pathlight Capital
Peninsula Capital Partners
Permira Advisers
Platinum Equity
Rho Capital Partners
RJD Partners
SAIF Management II
Scale Venture Partners
Silver Cup
Silver Lake Partners
StepStone Group
Sumeru Equity Partners
Sun Capital Partners
TA Associates
TCW Capital Partners
Technology Crossover Ventures
Technology Partners
Terra Firma Capital Partners
The Blackstone Group
The Carlyle Group
The Jordan Company (TJC)
TowerBrook Financial
TPG Capital
Trilantic Capital Partners
Trinity Ventures
Triton Partners

Investment Professionals, continued

Consolidated Defined Benefit Assets

Private Markets Managers, continued

- True Ventures
- TSG Consumer Partners
- Veritas Capital Management
- Veronis Suhler Stevenson (VSS)
- Vestar Capital Partners
- Vintage Venture Partners
- Vision Capital
- Vista Equity Partners
- Walden Group of Venture Capital Funds
- Warburg Pincus
- Warwick Energy Investment Group
- Wayzata Investment Partners
- Weston Presidio Capital
- White Deer Management
- Windjammer
- WL Ross & Co.
- Xenon Private Equity
- York Capital Management

Fixed Income - Ex Inflation-Linked Managers

- Goldman Sachs Asset Management, LP
- Oak Hill Advisors, LP
- Oak Tree Capital Management, LP
- Pacific Investment Management Company (PIMCO)
- Reams Asset Management
- State Street Global Advisors
- Stone Harbor

Fixed Income - Inflation-Linked Managers

- BlackRock Institutional Trust
- Bridgewater Associates, Inc.
- Northern Trust Global Investments

Commodities Managers

- BlackRock Institutional Trust
- CoreCommodity Management
- Goldman Sachs Asset Management, LP
- Gresham Investment Management, LLC
- Northern Trust Global Investments

Real Estate Managers

- Abacus Capital Group, LLC
- Asana Partners, LP
- BlackRock Financial Management
- Blackstone Property Partners
- Blackstone Real Estate Partners
- Brigade Capital Management
- Claros REIT Management LP
- Colony Capital, LLC
- Exeter Property Group, LLC
- Greenfield Partners, LLC
- H/2 Capital Partners
- Harrison Street Real Estate Capital, LLC
- JDM Partners
- LimeTree Capital
- Lone Star Funds
- Mesa West Capital
- Noble Investment Group
- Related Fund Management LLC
- Rockpoint Group LLC
- Stockbridge Capital Group
- TA Realty Associates
- Walton Street Capital, LLC
- WestRiver Capital, LLC

Absolute Return Managers

- AQR Capital Management
- Aeolus Capital Management
- Blackstone Alternative Asset Management
- Blackstone Tactical Opportunities Associates
- Bridgewater Associates, Inc.
- Davidson Kempner Capital Management
- D.E. Shaw & Co
- Eisler Capital
- Garda Capital Partners
- King Street Capital Management
- Man Investments (USA) Corporation
- Nephila Capital
- Oceanwood Capital Management
- Oxford Asset Management
- Pacific Alternative Asset Management Company (PAAMCO)
- Perella Weinberg Partners
- Pharo Management
- Tilden Park Associates
- Two Sigma Advisers

Risk Parity Managers

- AQR Capital Management
- Bridgewater Associates, Inc
- First Quadrant
- PanAgora

Cash Overlay Managers

- Russell Investments

Defined Contribution Assets

Consultant

Capital Cities, LLC (General: Defined Contribution)

Large Cap Equity Index Fund Managers

BlackRock Institutional Trust

International Equity Fund Managers

Altrinsic Global Advisors, LLC

Arrowstreet Capital, LP

Baillie Gifford & Company

BlackRock Institutional Trust

Small/Mid Cap Equity Fund Managers

RhumbLine Advisers

Times Square Capital Management, LLC

Fixed Income Fund Managers

Loomis Sayles & Company

Northern Trust Global Investments

Pacific Investment Management Company (PIMCO)

Inflation-Linked Fixed Income Fund Managers

BlackRock Institutional Trust

Northern Trust Global Investments

Stable Value Fund

Galliard Capital Management (Fund Advisor)

Income Research + Management (Fund Sub-Advisor)

Jennison Associates (Fund Sub-Advisor)

Loomis Sayles (Fund Sub-Advisor)

Reams Asset Management (Fund Sub-Advisor)

TCW (Fund Sub-Advisor)

Money Market Fund Manager

Bank of New York Mellon

Special Death Benefit Fund Assets

BlackRock Financial Management

Northern Trust Global Investments

Local Public Safety Pension Relief Fund Assets

Bank of New York Mellon

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Actuarial Section

Service
We exist to serve our stakeholders with attentiveness to high quality, respectful customer service.

$3.5 Billion Unfunded Actuarial Accrued Liability

Excluding TRF 'Pre 96 DB

135.8% ADC Contributed

For the four defined benefit funds that are funded through percent of payroll contributions

INPRS
INDIANA PUBLIC RETIREMENT SYSTEM

Purpose of the Actuarial Section

Funding methods used for the Defined Benefit retirement plans are not governed by and do not conform to GASB Statement No. 67, so the actuary prepares two actuarial valuations for each of the pension plans. One is an actuarial valuation used for financial reporting purposes, which conforms to GASB Statement No. 67 (Financial Section) and the second is an actuarial valuation used for funding purposes (Actuarial Section), which follows generally accepted actuarial principles and the Actuarial Standards of Practice issued by the Actuarial Standards Board. Actuarial methods and assumptions utilized to prepare the two actuarial valuations are nearly identical, with the primary difference being the method of valuation of the pension assets. Amounts presented in the Actuarial Section may differ from the amounts presented for financial reporting purposes in the Financial Section.

Actuarial services are provided by Cavanaugh Macdonald Consulting, LLC.

Accompanying Notes To The Actuarial Schedules

The following details are intended to clarify certain values presented in the actuarial schedules:

- The Unfunded Actuarial Accrued Liability (UAAL) is calculated using the Actuarial Value of Assets (AVA), which is different from the Net Pension Liability in the Financial Section which uses the Plan Fiduciary Net Position, also known as the Fair Value of Assets (FVA).
- Actuarial Accrued Liabilities Experience represents actual experience versus expected experience of the actuarial census assumptions. One factor was the unanticipated changes to the member census data. In JRS there was a 2.7% COLA, rather than the assumed COLA of 2.5% and in the '77 Fund there was a 1.6% COLA, rather than the assumed COLA of 2%.
- Covered Employee Payroll can also be found in the RSI Contribution Schedule in the Financial Section (LE DB is a closed plan with no Covered Employee Payroll).
- For years 2014 and later, the valuation results were calculated using the prior year census data, adjusted for certain activity during the fiscal year.
- End of year benefits are not equal to prior year end annual benefits plus additions less removals due to beneficiary benefit changes, data changes, and COLA increases on the Schedule of Retirants and Beneficiaries.
- Annual Payroll figures shown on the Schedule of Active Members Valuation Data are the anticipated pay for the one-year period following the valuation date.
- Beginning in 2018 there was a change in method impacting Average Annual Pay.

For PERF DB, TRF Pre-'96 DB, and TRF '96 DB the additional information should be considered:

- Annual benefits include amounts for members who selected annuity for their ASA.
- Effective January 1, 2018, members can no longer use their DC balances to increase their DB payments.
- The end of year number of benefit recipients are not equal to the prior end of year number of benefit recipients plus additions less removals due to reclassifications between TRF Pre-'96 DB and TRF '96 DB.

Cavanaugh Macdonald
CONSULTING, LLC
The experience and dedication you deserve

November 6, 2019

Board of Trustees
Indiana Public Retirement System
1 North Capitol, Suite 001
Indianapolis, IN 46204

Dear Members of the Board:

At your request, we performed actuarial valuations of the eight defined benefit plans administered by the Indiana Public Retirement System (INPRS): the Public Employees' Retirement Fund (PERF DB), the Teachers' Pre-1996 Account (TRF Pre-'96 DB), the Teachers' 1996 Account (TRF '96 DB), the 1977 Police Officers' and Firefighters' Retirement Fund ('77 Fund), the Judges' Retirement System (JRS), the Excise, Gaming and Conservation Officers' Retirement Fund (EG&C), Prosecuting Attorneys' Retirement Fund (PARF), and the Legislators' Defined Benefit Fund (LE DB). These valuations are as of June 30, 2019, for the purpose of estimating the actuarial required contribution for the plan years ending in calendar year 2021 (either June 30 or December 31), and reflect the benefit and funding provisions in place on June 30, 2019.

The PERF DB, TRF Pre-'96 DB, TRF '96 DB and '77 Fund were affected by changes in plan provisions resulting from the passage of House Enrolled Act No. 1059 (HEA 1059) and Senate Enrolled Act No. 85 (SEA 85).

Basis of the Valuations

In preparing our valuation, we relied, without audit, on information (some oral and some in writing) supplied by INPRS staff. This information includes, but is not limited to, statutory provisions, member data and financial information. We did review the data to ensure that it was reasonably consistent and comparable with data from prior years. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete, our results may be different and our calculations may need to be revised.

As noted above, the valuation reflects the provisions as of June 30, 2019, including the effects of HEA 1059 for PERF DB, TRF '96 DB and TRF – Pre '96 DB and SEA 85 for the '77 Fund.

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Board of Trustees
November 6, 2019
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We certify that all costs and liabilities for the funds have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the plan and reasonable expectations); and which, in combination, offer the best estimate of anticipated experience affecting the plan. Nevertheless, the emerging costs will vary from those presented in this report to the extent actual experience differs from that projected by the actuarial assumptions.

Actuarial Methods and Assumptions

While the assumptions were generally developed by the prior actuaries in experience studies for the period from July 1, 2010 or July 1, 2011 through June 30, 2014, we believe they are reasonable assumptions for the present. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in Appendix C. Specifically, we presented the existing assumptions for the 2019 valuations to the Board on February 22, 2019, and the Board subsequently adopted their use. These assumptions are applicable to both the funding and Governmental Accounting Standards Board (GASB) Statement Number 67 valuation calculations, unless otherwise noted.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements.

Actuarial computations presented in this report are for purposes of determining the funding rates for the Plan. The calculations in the enclosed report have been made on a basis consistent with our understanding of the Plan's funding requirements and goals as adopted by the Board and satisfy the guidance set forth in the applicable Actuarial Standards of Practice. Additionally, we have included actuarial computations for use in preparing certain reporting and disclosure requirements under Governmental Accounting Standards Board Statements Number 67 and Number 68. Determinations for purposes other than meeting these funding and disclosure requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Certification

We certify that the information presented herein accurately and fairly discloses the actuarial position of each fund and the System as a whole, based on the underlying census data and asset information provided by INPRS, using the assumptions and methods approved by the Board. This information, which we prepared, is provided in the following data and tables:

Financial Section:
- Note 1 - Tables of Plan Membership
- Note 8 - Net Pension Liability and Actuarial Information - Defined Benefit Plans
- Schedule of Changes in Net Pension Liability and Plan Fiduciary Net Position
- Schedule of Contributions
- Schedule of Notes to Required Supplementary Information

Actuarial Section:
- Summary of Funded Status
- Historical Summary of Actuarial Valuation Results by Retirement Plan

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- Summary of Actuarial Assumptions, Methods and Plan Provisions
- Analysis of Financial Experience
- Solvency Test
- Schedule of Active Member Valuation Data
- Schedule of Retirants and Beneficiaries

Statistical Section:

- Membership Data 10-Year Summary
- Ratio of Active Members to Annuitants
- Schedule of Defined Benefit Recipients by Type of Benefit Option
- Schedule of Average Benefit Payments

The consultants who worked on this assignment are pension actuaries. Cavanaugh Macdonald's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and the assumptions and methods used meet the guidance provided in the applicable Actuarial Standards of Practice. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

The calculations were completed in compliance with applicable law and the calculations for GASB disclosure, in our opinion, meet the requirements of GASB 67 and GASB 68. We are available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate.

We respectfully submit the following exhibits.

Sincerely,

Brent A. Banister

Patrice Beckham

Brent A. Banister Ph.D., FSA, EA, MAAA, FCA
Chief Actuary

Patrice A. Beckham, FSA, EA, FCA, MAAA
Principal and Consulting Actuary

Summary of Funded Status [1]

The following table shows the Actuarial Accrued Liabilities and Actuarial Value of Assets as of June 30, 2019 and June 30, 2018.

(dollars in thousands)	Actuarial Valuation as of June 30, 2019				Actuarial Valuation as of June 30, 2018			
Pre-Funded Defined Benefit Retirement Plans	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Actuarial Accrued Liability	Actuarial Funded Status	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Actuarial Accrued Liability	Actuarial Funded Status
PERF DB	$ 16,576,060	$ 13,157,802	$ 3,418,258	79.4%	$ 16,091,373	$ 12,823,930	$ 3,267,443	79.7%
TRF '96 DB	5,980,426	6,056,317	(75,891)	101.3	5,563,264	5,478,482	84,782	98.5
'77 Fund	6,389,002	6,299,749	89,253	98.6	5,839,659	5,953,978	(114,319)	102.0
JRS	586,499	538,600	47,899	91.8	547,694	516,749	30,945	94.4
EG&C	152,207	140,559	11,648	92.3	140,056	132,441	7,615	94.6
PARF	110,082	64,909	45,173	59.0	103,284	61,665	41,619	59.7
LE DB	3,362	3,026	336	90.0	3,485	3,050	435	87.5
Total Pre-Funded DB Retirement Plans	**29,797,638**	**26,260,962**	**3,536,676**	**88.1**	**28,288,815**	**24,970,295**	**3,318,520**	**88.3**
Pay-As-You-Go DB Retirement Plan								
TRF Pre-'96 DB	14,389,164	3,694,211	10,694,953	25.7	14,583,189	3,721,323	10,861,866	25.5
Total Defined Benefit Retirement Plans	**$ 44,186,802**	**$ 29,955,173**	**$ 14,231,629**	**67.8%**	**$ 42,872,004**	**$ 28,691,618**	**$ 14,180,386**	**66.9%**

[1] See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.

Reconciliation of the Change in the Unfunded Liability [1]

The following table reconciles the change in the unfunded liability from FY18 to FY19.

(dollars in thousands)

Defined Benefit Retirement Plans	June 30, 2018 UAAL	Normal Cost and Interest, less Expected Contributions	Expected June 30, 2019 UAAL	Actuarial Value of Assets Experience	(Gain) / Loss: Actuarial Accrued Liabilities Experience	(Gain) / Loss: Actuarial Assumption & Methodology Changes	(Gain) / Loss: Plan Provision Changes [2]	Total UAAL (Gain) / Loss	June 30, 2019 UAAL
PERF DB	$ 3,267,443	$ (18,167)	$ 3,249,276	$ 56,189	$ 99,873	$ —	$ 12,920	$ 168,982	$ 3,418,258
TRF Pre-'96 DB	10,861,866	(204,589)	10,657,277	53,359	(15,493)	—	(190)	37,676	10,694,953
TRF '96 DB	84,782	31,334	116,116	(172,850)	(22,096)	—	2,939	(192,007)	(75,891)
'77 Fund	(114,319)	1,265	(113,054)	14,122	30,907	—	157,278	202,307	89,253
JRS	30,945	(1,331)	29,614	9,754	8,531	—	—	18,285	47,899
EG&C	7,615	401	8,016	(2,795)	6,427	—	—	3,632	11,648
PARF	41,619	(951)	40,668	2,265	2,240	—	—	4,505	45,173
LE DB	435	(134)	301	26	9	—	—	35	336
Total INPRS	**$ 14,180,386**	**$ (192,172)**	**$ 13,988,214**	**$ (39,930)**	**$ 110,398**	**$ —**	**$ 172,947**	**$ 243,415**	**$ 14,231,629**

[1] See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.

[2] Plan Provision Changes include:

-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.

Employer Counts For the Years Ended June 30

The following table shows the historical number of employers by fund.

	Total DB [1]	PERF DB	TRF Pre-'96 DB [2]	TRF '96 DB [2]	Total TRF DB [2]	'77 Fund	JRS	EG&C	PARF	LE DB
2019 [3]	1,244	1,187	345	373	N/A	168	1	1	1	1
2018	1,244	1,187	345	373	N/A	168	1	1	1	1
2017	1,234	1,183	341	368	N/A	167	1	1	1	1
2016	1,224	1,177	337	362	N/A	165	1	1	1	1
2015	1,212	1,167	339	360	N/A	165	1	1	1	1
2014	1,175	1,126	340	363	N/A	162	1	1	1	1
2013 [4]	1,171	1,121	N/A	N/A	365	161	1	1	1	1
2012 [4]	1,170	1,122	N/A	N/A	364	162	1	1	1	1
2011	1,182	1,132	N/A	N/A	369	166	1	1	1	1
2010	1,230	1,180	N/A	N/A	367	164	1	1	1	1

[1] Sum of employers does not equal total, as an employer may participate in multiple retirement funds.

[2] Prior to 2014 participating employers for TRF were not split between TRF Pre-'96 DB and TRF '96 DB.

[3] The 2019 employer count is as of the 2018 valuation date.

[4] The Total was adjusted to treat the State and its component units as one employer.

Public Employees' Defined Benefit Account

Historical Summary of Actuarial Valuation Results

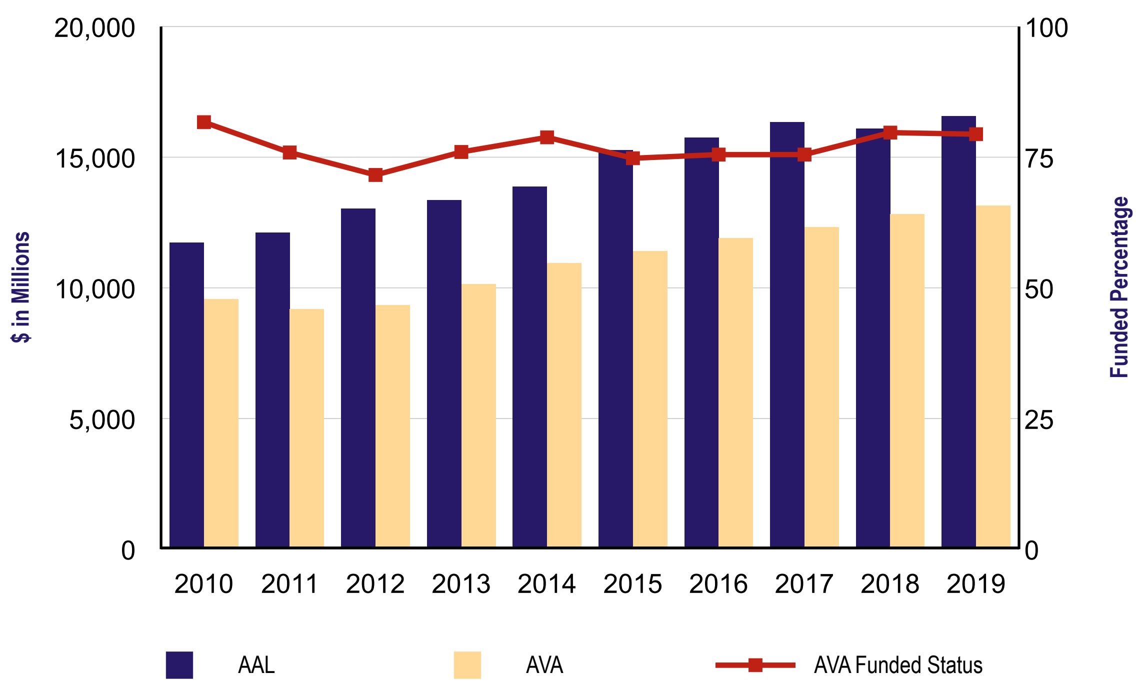
Actuarial Valuation as of June 30 [1]

The following table shows the history of the Unfunded Liability as a percentage of Covered Employee Payroll for PERF DB.

(dollars in thousands)

	Actuarial Accrued Liability (AAL)	Actuarial Value of Assets (AVA)	Unfunded Liability (AAL-AVA)	AVA Funded Status (AVA/AAL)	Covered Employee Payroll	Unfunded Liability as a percentage of Covered Employee Payroll
2019	$16,576,060	$13,157,802	**$3,418,258**	**79.4%**	$5,205,243	65.7%
2018	16,091,373	12,823,930	**3,267,443**	**79.7**	5,083,131	64.3
2017	16,335,253	12,327,958	**4,007,295**	**75.5**	4,997,555	80.2
2016	15,752,055	11,896,167	**3,855,888**	**75.5**	4,868,709	79.2
2015	15,263,395	11,414,710	**3,848,685**	**74.8**	4,804,145	80.1
2014	13,880,722	10,939,760	**2,940,962**	**78.8**	4,896,635	60.1
2013	13,349,578	10,151,181	**3,198,397**	**76.0**	4,700,000	68.1
2012	13,034,791	9,338,776	**3,696,015**	**71.6**	4,550,000	81.2
2011	12,108,124	9,195,563	**2,912,561**	**75.9**	4,500,000	64.7
2010	11,725,482	9,576,629	**2,148,853**	**81.7**	4,800,000	44.8

[1] See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.



Summary of Actuarial Assumptions, Actuarial Methods, and Plan Provisions

The actuarial assumptions and methods used in the June 30, 2019 valuation of the Public Employees' Defined Benefit Account were adopted by the INPRS Board in May 2019. The majority of the actuarial assumptions and methods are based on plan experience from July 1, 2010 through June 30, 2014, and were first used in the June 30, 2015 valuation. The INPRS Board adopted a funding policy in April 2014, and the policy was last updated in October 2018. The funding policy is available online at: https://www.in.gov/inprs/files/INPRS_Funding_Policy.pdf.

Changes in Actuarial Assumptions

There were no changes in actuarial assumptions during the fiscal year.

Changes in Actuarial Methods

There were no changes to the actuarial methods during the fiscal year.

Changes in Plan Provisions

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.

Actuarial Assumptions

Actuarial assumptions used for funding purposes are the same as those used for accounting and financial reporting, except where noted.

Economic Assumptions

A load on final average salary of $400 is included to reflect unused sick leave.

Interest Rate / Investment Return:	
Funding	6.75 percent (net of administrative and investment expenses)
Accounting & Financial Reporting	6.75 percent (net of investment expenses)
Inflation:	2.25 percent per year
Cost of Living Increases:	A service-based 13th check will be paid in the 2020 and 2021 fiscal years. Thereafter, the following COLAs, compounded annually, are assumed:
	0.4 percent beginning on January 1, 2022
	0.5 percent beginning on January 1, 2034
	0.6 percent beginning on January 1, 2039
Future Salary Increases:	Based on 2010-2014 experience.

Age	Inflation	Productivity, Merit, and Promotion	Total Individual Salary Growth
<31	2.25%	2.00%	4.25%
31-45	2.25	1.50	3.75
46-55	2.25	1.00	3.25
56-60	2.25	0.50	2.75
61+	2.25	0.25	2.50

Demographic Assumptions: Based on 2010-2014 Experience

Mortality (Healthy): RP-2014 Total Data Set Mortality Tables, with Social Security generational improvements from 2006 based on the Social Security Administration's 2014 Trustee Report.

Mortality (Disabled): RP-2014 Disability Mortality Tables, with Social Security generational improvements from 2006 based on the Social Security Administration's 2014 Trustee Report.

Retirement:

	Years of Service						
Age	10-14	15-25	26	27	28	29	30+
50-54	—%	4%	4%	4%	4%	4%	4%
55	—	5	5	5	5	5	14
56	—	5	5	5	5	14	10
57	—	5	5	5	14	10	10
58	—	5	5	14	10	10	10
59	—	5	14	10	10	10	10
60	—	12	12	12	12	12	12
61	—	16	16	16	16	16	16
62	—	22	22	22	22	22	22
63	—	19	19	19	19	19	19
64	—	24	24	24	24	24	24
65-74	30	30	30	30	30	30	30
75+	100	100	100	100	100	100	100

Benefit Commencement Timing:

Active Members: If eligible for a reduced early retirement benefit upon termination from employment, 33 percent commence immediately and 67 percent defer to earliest unreduced retirement age.

If eligible for an unreduced retirement benefit upon termination from employment, 100 percent commence immediately.

Terminated Vested Members: 100 percent defer to earliest unreduced retirement age. If currently eligible for an unreduced retirement benefit, 100 percent commence immediately.

Termination:

Earnings < $20,000

State			Political Subdivision		
Age	Male	Female	Age	Male	Female
20-24	32%	34%	20-24	31%	36%
25-29	32	33	25-29	31	34
30-34	32	30	30-34	26	25
35-39	29	30	35-39	22	18
40-44	29	24	40-44	21	15
45-49	26	24	45-49	18	12
50-54	25	22	50-54	14	11
55+	22	20	55+	14	11

Public Employees' Defined Benefit Account, continued

State (Male)
Earnings >= $20,000

	Years of Service										
Age	0	1	2	3	4	5	6	7	8	9	10+
20-24	23%	23%	23%	20%	20%	17%	17%	12%	12%	7%	7%
25-29	23	23	23	19	17	17	17	12	12	7	7
30-34	22	22	19	18	16	13	13	12	7	7	7
35-39	17	17	17	17	16	10	10	9	7	6	6
40-44	17	17	14	12	12	10	9	9	7	5	5
45-49	14	14	14	10	10	10	9	7	4	4	4
50-54	14	14	9	9	9	9	9	7	4	4	4
55+	13	13	7	7	7	7	7	7	4	4	4

State (Female)
Earnings >= $20,000

	Years of Service										
Age	0	1	2	3	4	5	6	7	8	9	10+
20-24	23%	23%	23%	23%	17%	17%	13%	12%	11%	8%	8%
25-29	23	23	22	21	17	17	13	12	11	8	8
30-34	21	21	21	17	15	14	12	12	11	8	8
35-39	19	19	16	16	12	12	12	12	9	8	7
40-44	18	18	16	13	12	12	9	9	8	8	6
45-49	16	16	16	13	10	10	9	9	8	8	6
50-54	16	16	15	12	10	9	9	9	6	6	6
55+	16	16	11	11	10	9	9	9	6	6	6

Political Subdivisions (Male)
Earnings >= $20,000

	Years of Service										
Age	0	1	2	3	4	5	6	7	8	9	10+
20-24	18%	18%	18%	18%	14%	12%	11%	11%	7%	7%	5%
25-29	18	18	18	16	14	12	11	11	7	7	5
30-34	16	16	16	15	13	11	11	11	7	7	5
35-39	15	15	12	12	12	10	9	9	7	7	5
40-44	13	13	11	11	10	10	9	9	7	7	4
45-49	11	11	11	11	9	7	7	7	7	7	4
50-54	11	11	9	9	9	7	7	6	6	4	4
55-59	11	11	7	7	7	7	7	5	5	4	4
60+	8	8	7	7	7	7	7	5	5	4	4

Political Subdivisions (Female)
Earnings >= $20,000

	Years of Service										
Age	0	1	2	3	4	5	6	7	8	9	10+
20-24	22%	22%	19%	16%	14%	14%	11%	11%	9%	7%	7%
25-29	21	21	18	16	14	14	11	11	9	7	7
30-34	16	16	16	14	14	14	11	11	9	7	7
35-39	14	14	14	12	12	12	9	9	9	7	6
40-44	13	13	12	11	10	8	8	8	8	7	4
45-49	12	12	12	10	8	8	8	7	6	6	4
50-54	11	11	10	8	8	6	6	6	6	5	4
55+	11	11	8	8	8	6	6	6	6	4	4

Disability:

Age	Sample Rates Male	Sample Rates Female
20	0.0067%	0.0050%
30	0.0208	0.0158
40	0.0646	0.0496
50	0.2005	0.1556
60	0.5815	0.3751
70	0.1000	0.1000
80	0.0000	0.0000

Spouse/Beneficiary: 75 percent of male members and 60 percent of female members are assumed to be married and or to have a dependent beneficiary. Male members are assumed to be three years older than their spouses and female members are assumed to be two years younger than their spouses.

Actuarial Methods

Funding uses the same Actuarial Methods as accounting and financial reporting, except where noted.

Actuarial Cost Method: Entry Age Normal -- Level Percent of Payroll

The normal cost is calculated separately for each active member and is equal to the level percentage of payroll needed as an annual contribution from entry age to retirement age to fund projected benefits. The actuarial accrued liability on any valuation date is the accumulated value of such normal costs from entry age to the valuation date.

This method produces a cost of future benefit accruals that is a level percent of pay over time, which is more desirable for employers from a budgeting standpoint. Other actuarial cost methods are more volatile in their allocation of cost for each year of member service.

Amortization Method: For funding, gains and losses occurring from census experience different than assumed, assumption changes, and benefit changes are amortized over a 20-year period with level payments each year. A new gain or loss base is established each year on the additional gain or loss during that year and that base is amortized over a new 20-year period. However, when the plan is at or above 100 percent funded (based on Actuarial Value of Assets), the past amortization bases are considered fully amortized and a single amortization base equal to the surplus is amortized over a 30-year period with level payment each year. Effective June 30, 2018, the bases are calculated without regard to the COLA provisions. The purpose of the method is to give a smooth progression of the costs from year-to-year and, at the same time, provide for an orderly funding of the unfunded liabilities.

For accounting and financial reporting, gains and losses occurring from census experience different than assumed and assumption changes are amortized into expense over the average expected future service of all plan participants. Gains and losses occurring from investment experience different than assumed are amortized into expense over a five-year period. The effect of plan changes on the plan liability are fully recognized in expense in the year in which they occur.

Data Measurement Date: Member census data as of the prior year end was used in the valuation and adjusted, where appropriate, to reflect changes during the current fiscal year. Standard actuarial roll forward techniques were then used to project the liabilities computed as of prior year end to the current year measurement date.

COLA Surcharge: The COLA Surcharge is developed by determining the assets needed at the start of the next biennium to fund the post-retirement benefit increases anticipated to be granted in that biennium. This amount is divided by the present value of expected payroll over which the accumulations will occur.

Asset Valuation Method: Funding uses the Actuarial Value of Assets (AVA), which is equal to a five-year smoothing of gains and losses on the Fair Value of Assets (FVA), subject to a 20 percent corridor. Accordingly, the AVA is limited to no more than 20 percent greater than or 20 percent less than the FVA.

Accounting and financial reporting uses the Fair Value of Assets (FVA) in accordance with GASB Statement No. 67.

Plan Provisions

Please refer to Note 1 of the Notes to the Financial Statements in the Financial Section, the actuarial valuation at https://www.in.gov/inprs/actuarialvaluation.htm, or the applicable Indiana Code at http://iga.in.gov/.

Analysis of Financial Experience

(dollars in thousands)	UAAL
Unfunded Actuarial Accrued Liability (UAAL): June 30, 2018	$3,267,443
Normal Cost and Interest, less Expected Contributions	(18,167)
Expected UAAL: June 30, 2019	3,249,276
UAAL (Gain) / Loss	
Actuarial Value of Assets Experience	56,189
Actuarial Accrued Liabilities Experience [1]	99,873
Actuarial Assumption & Methodology Changes	—
Plan Provision Changes [2]	12,920
Total UAAL (Gain) / Loss	168,982
Unfunded Actuarial Accrued Liability (UAAL): June 30, 2019	**$3,418,258**

[1] See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.

[2] Plan Provision Changes include:

-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.

Solvency Test [1]

The solvency test compares aggregate actuarial liabilities by various categories with the plan's assets.

(dollars in thousands)	Actuarial Accrued Liabilities				Portion of Actuarial Accrued Liabilities Covered by Assets		
Actuarial Valuation as of June 30	Retirees and Beneficiaries	Active Member (Employer Financed Portion)	Total Actuarial Accrued Liabilities	Actuarial Value of Assets	Retirees and Beneficiaries	Active Member (Employer Financed Portion)	Total Actuarial Accrued Liabilities
2019	$8,068,490	$8,507,570	$16,576,060	$13,157,802	100%	59.8%	79.4%
2018	7,768,231	8,323,142	16,091,373	12,823,930	100	60.7	79.7
2017	7,834,962	8,500,291	16,335,253	12,327,958	100	52.9	75.5
2016	7,595,089	8,156,966	15,752,055	11,896,167	100	52.7	75.5
2015	6,981,308	8,282,087	15,263,395	11,414,710	100	53.5	74.8
2014	6,250,902	7,629,820	13,880,722	10,939,760	100	61.5	78.8
2013	6,367,819	6,981,759	13,349,578	10,151,181	100	54.2	76
2012	5,895,779	7,139,012	13,034,791	9,338,776	100	48.2	71.6
2011	5,370,786	6,737,338	12,108,124	9,195,563	100	56.8	75.9
2010	4,931,592	6,793,890	11,725,482	9,576,629	100	68.4	81.7

[1] See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.

Public Employees' Defined Benefit Account, continued

Schedule of Active Members Valuation Data

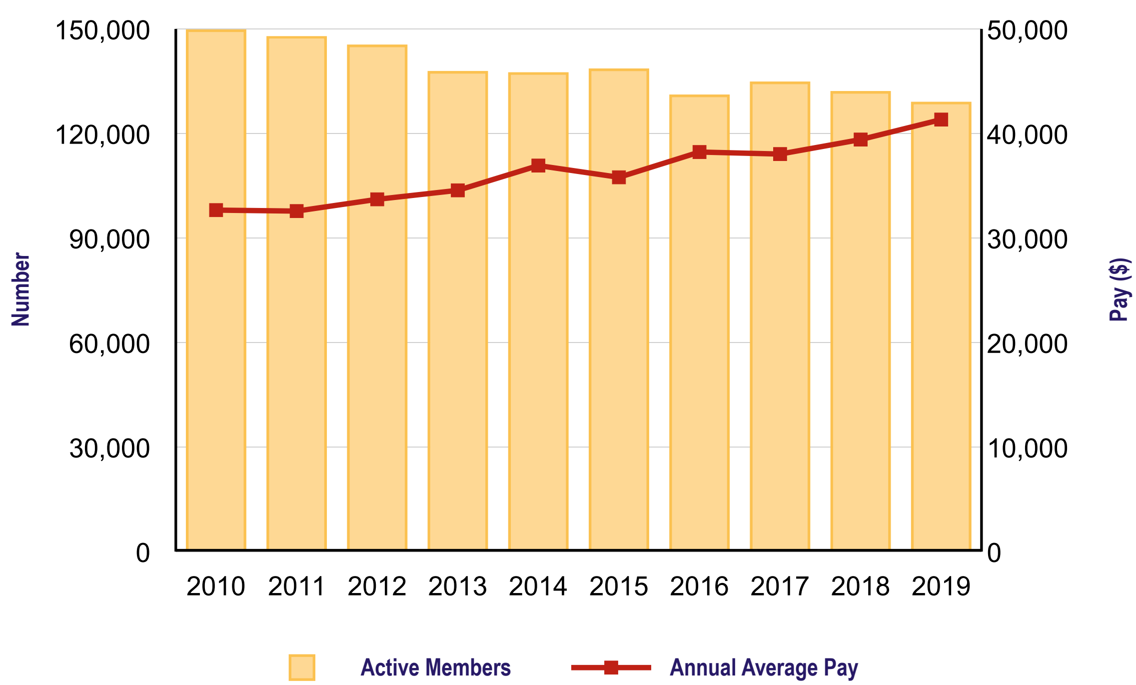
Actuarial Valuation as of June 30 [1]

(dollars in thousands - except annual average pay)

	Active Members	Annual Payroll	Annual Average Pay	Annual Percent Increase / (Decrease) in Average Pay
2019	129,099	$5,335,374	$41,328	4.8%
2018	132,181	5,210,209	39,417	3.6
2017	134,909	5,130,437	38,029	(0.5)
2016	131,178	5,014,012	38,223	6.8
2015	138,660	4,964,813	35,806	(3.0)
2014	137,567	5,080,092	36,928	6.9
2013	137,937	4,766,910	34,559	2.5
2012	145,519	4,904,052	33,700	3.5
2011	147,933	4,818,774	32,574	(0.3)
2010	149,877	4,896,013	32,667	(2.1)

[1] See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.

Total Number of Active Members Per Year and Annual Average Pay



Schedule of Retirants and Beneficiaries

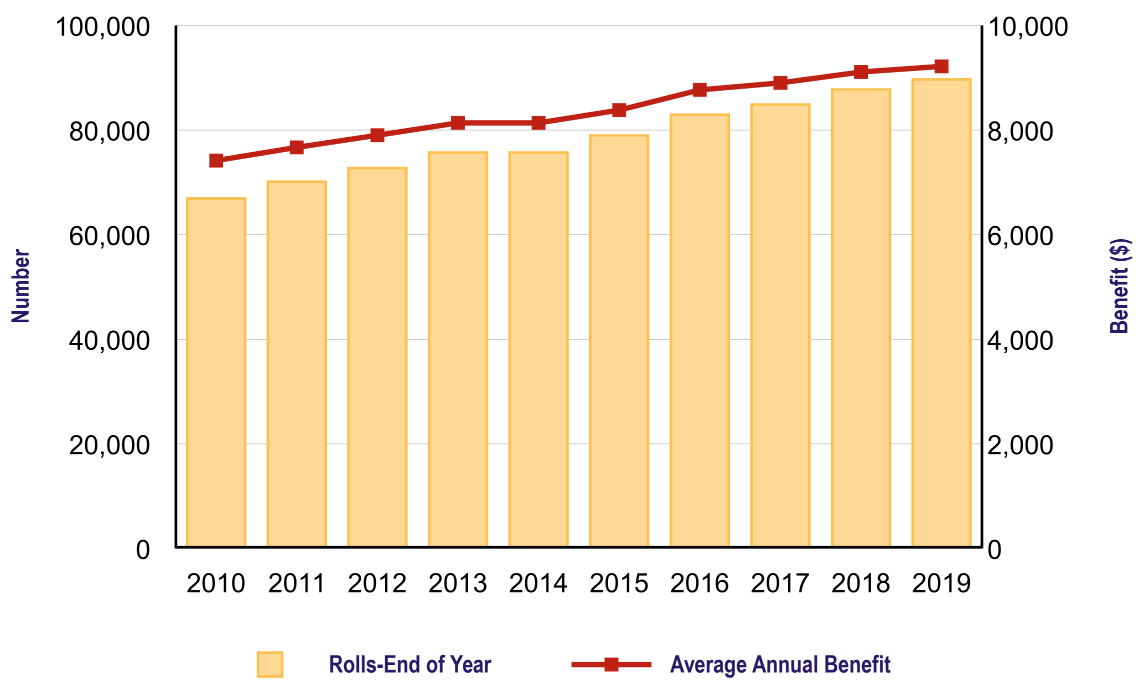
Actuarial Valuation as of June 30 [1]

(dollars in thousands -- except average annual benefit)

	Added to Rolls		Removed from Rolls		Rolls – End of Year				
	Number	Annual Benefits	Number	Annual Benefits	Number	Total Annual Benefits	Percent Increase / (Decrease) In Total Annual Benefits	Average Annual Benefit	Percent Increase / (Decrease) in Average Annual Benefit
2019	5,077	$50,319	3,135	$21,565	89,932	$829,035	3.4%	$9,218	1.2%
2018	5,249	55,236	2,389	15,609	87,990	801,551	5.8	9,110	2.3
2017	4,855	49,980	2,913	18,808	85,130	757,851	3.9	8,902	1.5
2016	6,478	78,487	2,488	15,597	83,188	729,366	9.9	8,768	4.6
2015	5,489	60,538	2,241	14,107	79,198	663,767	7.4	8,381	3.0
2014	—	—	—	—	75,950	617,977	—	8,137	—
2013	5,231	55,523	2,273	13,898	75,950	617,977	7.2	8,137	3.0
2012	4,751	49,766	2,139	12,540	72,992	576,678	6.8	7,901	3.0
2011	5,402	56,185	2,188	11,698	70,380	539,747	8.3	7,669	3.4
2010	4,827	39,214	2,760	19,022	67,166	498,199	4.3	7,417	1.1

[1] *See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.*

Total Number of Retirants and Beneficiaries Per Year and Average Annual Benefit



Teachers' Pre-1996 Defined Benefit Account

Historical Summary of Actuarial Valuation Results

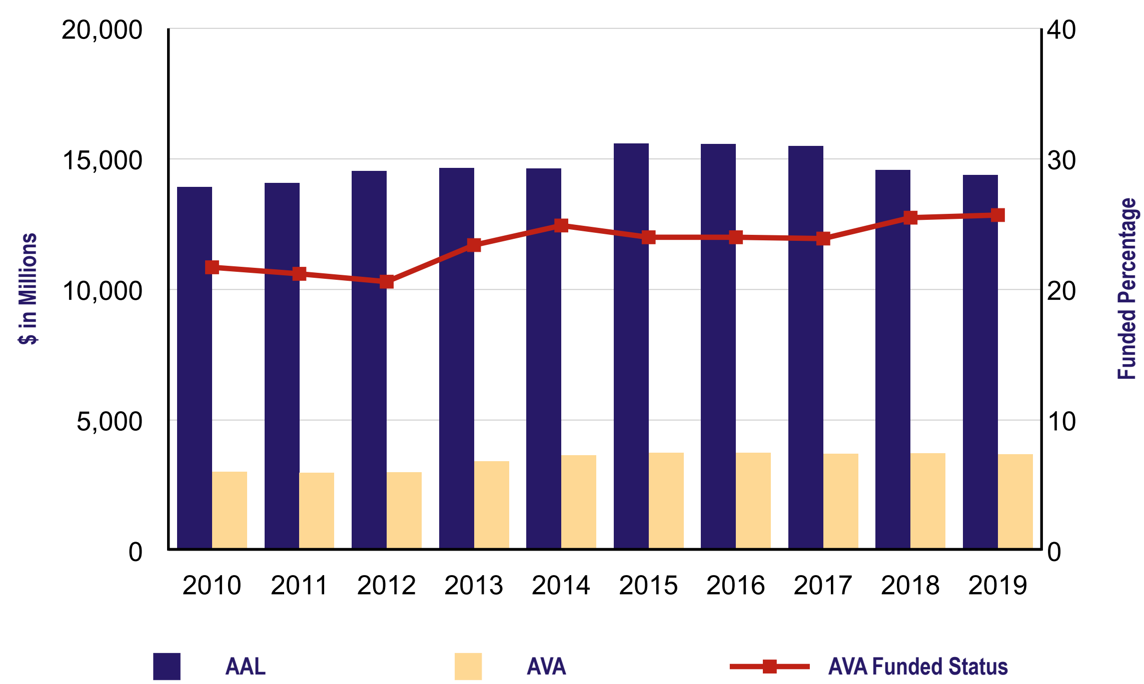
Actuarial Valuation as of June 30 [1]

The following table shows the history of the Unfunded Liability as a percentage of Covered Employee Payroll for TRF Pre-'96 DB.

(dollars in thousands)

	Actuarial Accrued Liability (AAL)	Actuarial Value of Assets (AVA)	Unfunded Liability (AAL-AVA)	AVA Funded Status (AVA/AAL)	Covered Employee Payroll	Unfunded Liability as a percentage of Covered Employee Payroll
2019	$14,389,164	$3,694,211	**$10,694,953**	**25.7%**	$753,355	1,419.6%
2018	14,583,189	3,721,323	**10,861,866**	**25.5**	824,770	1,317.0
2017	15,494,539	3,708,870	**11,785,669**	**23.9**	912,685	1,291.3
2016	15,575,072	3,743,861	**11,831,211**	**24.0**	989,093	1,196.2
2015	15,596,291	3,750,183	**11,846,108**	**24.0**	1,074,827	1,102.2
2014	14,639,876	3,643,011	**10,996,865**	**24.9**	1,262,828	870.8
2013	14,649,549	3,422,274	**11,227,275**	**23.4**	1,383,428	811.6
2012	14,547,939	3,004,031	**11,543,908**	**20.6**	1,637,066	705.1
2011	14,081,878	2,990,877	**11,091,001**	**21.2**	1,762,750	629.2
2010	13,928,351	3,028,694	**10,899,657**	**21.7**	1,865,102	584.4

[1] See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.



Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions

The actuarial assumptions and methods used in the June 30, 2019 valuation of the Teachers' Pre-1996 Defined Benefit Account were adopted by the INPRS Board in May 2019. The majority of the actuarial assumptions and methods are based on plan experience from July 1, 2011 through June 30, 2014, and were first used in the June 30, 2015 valuation. The INPRS Board adopted a funding policy in April 2014, and the policy was last updated in October 2018. The funding policy is available online at: https://www.in.gov/inprs/files/INPRS_Funding_Policy.pdf.

Changes in Actuarial Assumptions

There were no changes to the actuarial assumptions during the fiscal year.

Changes in Actuarial Methods

There were no changes to the actuarial methods during the fiscal year.

Changes in Plan Provisions

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.

Actuarial Assumptions

Actuarial assumptions used for funding purposes are the same as those used for accounting and financial reporting, except where noted.

Economic Assumptions

Interest Rate / Investment Return:

Funding	6.75 percent (net of administrative and investment expenses)
Accounting & Financial Reporting	6.75 percent (net of investment expenses)
Inflation:	2.25 percent per year
Cost of Living Increases:	A service-based 13th check will be paid in the 2020 and 2021 fiscal years. Thereafter, the following COLAs, compounded annually, are assumed: 0.4 percent beginning on January 1, 2022 0.5 percent beginning on January 1, 2034 0.6 percent beginning on January 1, 2039
Future Salary Increases:	Based on 2011-2014 experience. Illustrative rates shown below:

Years of Service	Merit and Seniority	Inflation	Total Individual Salary Growth
1	10.25%	2.25%	12.50%
5	2.75	2.25	5.00
10	2.75	2.25	5.00
15	1.50	2.25	3.75
20	0.25	2.25	2.50
25	0.25	2.25	2.50
30	0.25	2.25	2.50
35	0.25	2.25	2.50
40	0.25	2.25	2.50

Demographic Assumptions: Based on 2011-2014 Experience

Mortality (Healthy): RP-2014 White Collar Mortality Tables, with Social Security generational improvements from 2006 based on the Social Security Administration's 2014 Trustee Report.

Mortality (Disabled): RP-2014 Disability Mortality Tables, with Social Security generational improvements from 2006 based on the Social Security Administration's 2014 Trustee Report.

Retirement:

Regular Retirement		Rule of 85 Retirement		Early Retirement	
Age	Probability	Age	Probability	Age	Probability
				50-53	2.0%
				54	5.0
		55	15.0%	55	5.0
		56	15.0	56	5.0
		57	15.0	57	6.5
		58	15.0	58	8.0
		59	20.0	59	12.0
60	20.0%	60	20.0		
61	25.0	61	25.0		
62	30.0	62	30.0		
63	35.0	63	35.0		
64	40.0	64	40.0		
65-69	45.0	65-69	45.0		
70+	100.0%	70+	100.0%		

Inactive vested members are assumed to commence their retirement benefit at their earliest normal retirement date.

Termination:

Service Based			Sample Age Based [1]		
Years of Service	Male	Female	Attained Age	Male	Female
0	35.0%	35.0%	30	2.3%	3.0%
1	14.0	14.0	35	2.3	3.0
2	11.0	11.0	40	2.3	2.0
3	9.0	9.0	45	2.3	2.0
4	8.0	8.0	50	2.3	2.0
5	7.0	7.0	55	2.3	2.0
6	6.0	6.0	60	2.3	2.0
7	5.0	5.5			
8	4.5	5.0			
9	4.5	4.5			

Disability:

Age	Sample Rates
25	0.01%
30	0.01
35	0.01
40	0.01
45	0.02
50	0.05
55	0.09
60	0.10

Spouse / Beneficiary: 100 percent of members are assumed to be married for purposes of valuing death-in-service benefits. Male spouses are assumed to be three years older than female spouses.

[1] *Age-based rates apply only if 10 or more years of service.*

Actuarial Methods

Funding uses the same Actuarial Methods as accounting and financial reporting, except where noted.

Actuarial Cost Method:	Entry Age Normal – Level Percent of Payroll The normal cost is calculated separately for each active member and is equal to the level percentage of payroll needed as an annual contribution from entry age to retirement age to fund projected benefits. The actuarial accrued liability on any valuation date is the accumulated value of such normal costs from entry age to the valuation date. This method produces a cost of future benefit accruals that is a level percent of pay over time, which is desirable for employers from a budgeting standpoint. Other actuarial cost methods are more volatile in their allocation of cost for each year of member service.
Actuarially Determined Contribution:	The Fund's actuarially determined contribution is based on the approach set out in IC - 5.10.4-2-5 that the Indiana Legislature has followed in actually appropriating funds. The basic contribution is the lesser of 3% above the the prior year's basic contribution and the anticipated base benefit payments for the year. However, the contributed funds should not result in the funded ratio exceeding 100%. For fiscal years 2020 and 2021, the State will also contribute funds to pay for the scheduled 13th checks.
Amortization Method:	For accounting and financial reporting, gains and losses occurring from census experience different than assumed and assumption changes are amortized into expense over the average expected future service of all plan participants. Gains and losses occurring from investment experience different than assumed are amortized into expense over a five-year period. The effect of plan changes on the plan liability are fully recognized in expense in the year in which they occur.
Data Measurement Date:	Member census data as of the prior year end was used in the valuation and adjusted, where appropriate, to reflect changes during the current fiscal year. Standard actuarial roll forward techniques were then used to project the liabilities computed as of prior year end to the current year measurement date.
COLA Funding Amount:	The COLA Funding Amount is developed by determining the assets needed at the start of the next biennium to fund the post-retirement benefit increases anticipated to be granted in that biennium. This amount is divided by a present value factor to determine the needed annual contribution.
Asset Valuation Method:	Funding uses the Actuarial Value of Assets (AVA), which is equal to a five-year smoothing of gains and losses on the Fair Value of Assets (FVA), subject to a 20 percent corridor. Accordingly, the AVA is limited to no more than 20 percent greater than or 20 percent less than the FVA. Accounting and financial reporting uses the Fair Value of Assets (FVA) in accordance with GASB Statement No. 67.

Plan Provisions

Please refer to Note 1 of the Notes to the Financial Statements in the Financial Section, the actuarial valuation at https://www.in.gov/inprs/actuarialvaluation.htm, or the applicable Indiana Code at http://iga.in.gov/.

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Teachers' Pre-1996 Defined Benefit Account, continued

Analysis of Financial Experience

(dollars in thousands)	UAAL
Unfunded Actuarial Accrued Liability (UAAL): June 30, 2018	$10,861,866
Normal Cost and Interest, less Expected Contributions	(204,589)
Expected UAAL: June 30, 2019	10,657,277
UAAL (Gain) / Loss	
Actuarial Value of Assets Experience	53,359
Actuarial Accrued Liabilities Experience [1]	(15,493)
Actuarial Assumption & Methodology Changes	—
Plan Provision Changes [2]	(190)
Total UAAL (Gain) / Loss	37,676
Unfunded Actuarial Accrued Liability (UAAL): June 30, 2019	**$10,694,953**

[1] *See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.*

[2] *Plan Provision Changes include:*

-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.

Solvency Test [1]

The solvency test compares aggregate actuarial liabilities by various categories with the plan's assets.

(dollars in thousands)	Actuarial Accrued Liabilities				Portion of Actuarial Accrued Liabilities Covered by Assets		
Actuarial Valuation as of June 30	Retirees and Beneficiaries	Active Member (Employer Financed Portion)	Total Actuarial Accrued Liabilities	Actuarial Value of Assets	Retirees and Beneficiaries	Active Member (Employer Financed Portion)	Total Actuarial Accrued Liabilities
2019	$11,245,919	$3,143,245	$14,389,164	$3,694,211	32.8%	—%	25.7%
2018	11,160,975	3,422,214	14,583,189	3,721,323	33.3	—	25.5
2017	11,653,674	3,840,865	15,494,539	3,708,870	31.8	—	23.9
2016	11,358,156	4,216,916	15,575,072	3,743,861	33.0	—	24.0
2015	10,488,066	5,108,225	15,596,291	3,750,183	35.8	—	24.0
2014	9,686,391	4,953,485	14,639,876	3,643,011	37.6	—	24.9
2013	10,079,101	4,570,448	14,649,549	3,422,274	34.0	—	23.4
2012	9,260,069	5,287,870	14,547,939	3,004,031	32.4	—	20.6
2011	8,555,971	5,525,907	14,081,878	2,990,877	35.0	—	21.2
2010	8,153,240	5,775,111	13,928,351	3,028,694	37.1	—	21.7

[1] *See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.*

Schedule of Active Members Valuation Data

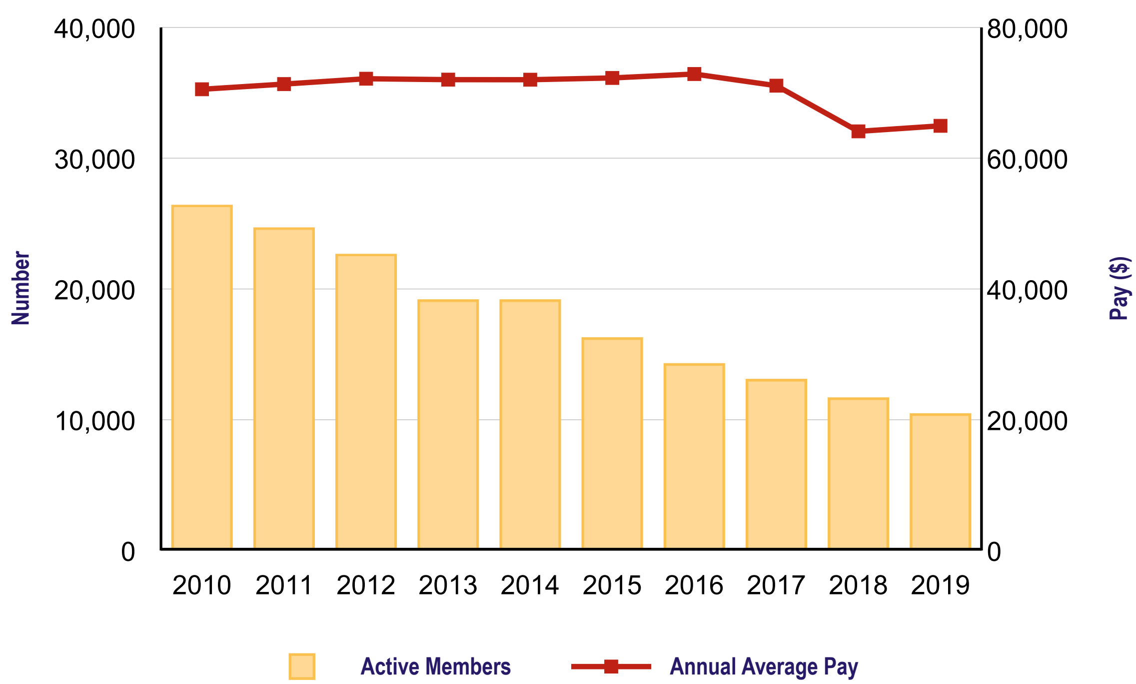
Actuarial Valuation as of June 30 [1]

(dollars in thousands - except annual average pay)

	Active Members	Annual Payroll	Annual Average Pay	Annual Percent Increase / (Decrease) In Average Pay
2019	10,497	$681,806	$64,952	1.3%
2018	11,710	750,691	64,107	(9.8)
2017	13,128	933,278	71,091	(2.4)
2016	14,327	1,044,096	72,876	0.8
2015	16,310	1,178,846	72,277	0.4
2014	19,210	1,383,242	72,006	—
2013	19,210	1,383,428	72,016	(0.2)
2012	22,688	1,637,066	72,156	1.1
2011	24,710	1,762,750	71,338	1.1
2010	26,439	1,865,102	70,544	1.8

[1] *See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.*

Total Number of Active Members Per Year and Annual Average Pay



Schedule of Retirants and Beneficiaries

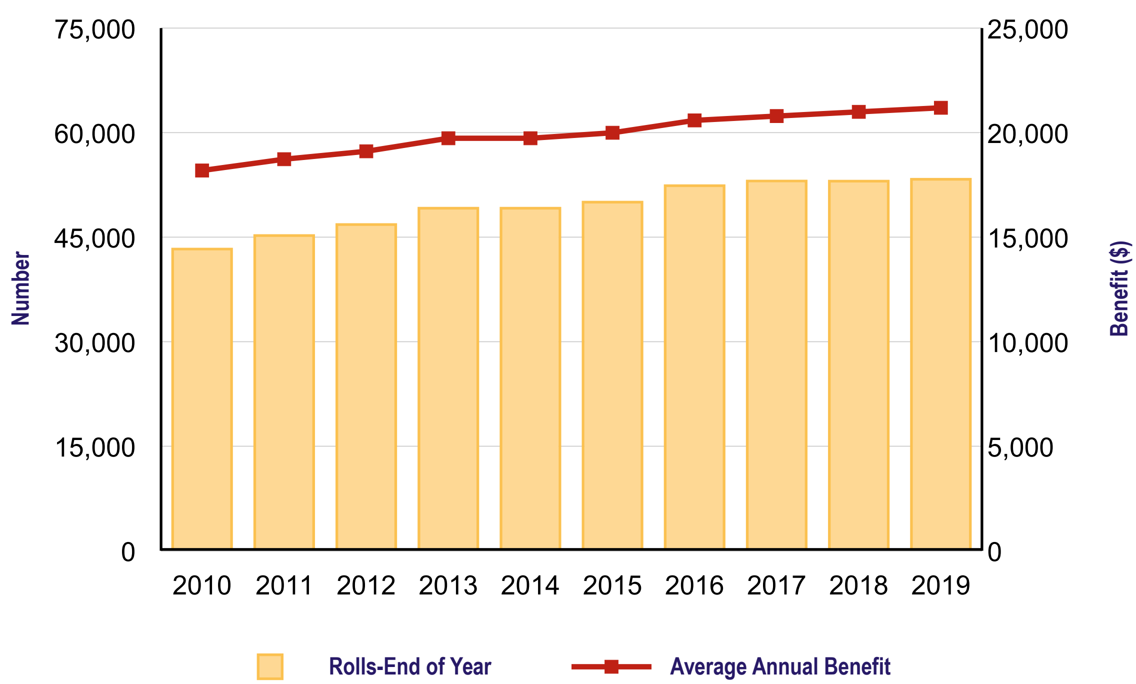
Actuarial Valuation as of June 30 [1]

(dollars in thousands -- except average annual benefit)

	Added to Rolls		Removed from Rolls		Rolls – End of Year		Percent Increase / (Decrease) In Total Annual Benefits	Average Annual Benefit	Percent Increase / (Decrease) in Average Annual Benefit
	Number	Annual Benefits	Number	Annual Benefits	Number	Total Annual Benefits			
2019	1,514	$ 37,102	1,243	$ 19,005	53,498	$ 1,133,528	1.4%	$ 21,188	0.9%
2018	1,483	33,330	1,496	20,240	53,227	1,117,463	0.9	20,994	1.0
2017	1,953	47,305	1,288	18,257	53,240	1,106,961	2.3	20,792	1.0
2016	3,466	95,994	1,105	14,677	52,575	1,082,306	7.8	20,586	3.0
2015	1,886	50,261	1,017	14,293	50,214	1,003,910	3.1	19,993	1.3
2014	—	93,605	—	14,524	49,345	973,635	—	19,731	—
2013	3,422	93,605	1,077	14,524	49,345	973,635	8.4	19,731	3.3
2012	2,541	63,923	962	12,216	47,000	898,006	5.6	19,107	2.0
2011	3,003	77,290	1,060	13,121	45,421	850,711	7.6	18,729	3.0
2010	1,940	47,657	1,010	11,982	43,478	790,773	3.8	18,188	1.5

[1] See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.

Total Number of Retirants and Beneficiaries Per Year and Average Annual Benefit



Teachers' 1996 Defined Benefit Account

Historical Summary of Actuarial Valuation Results

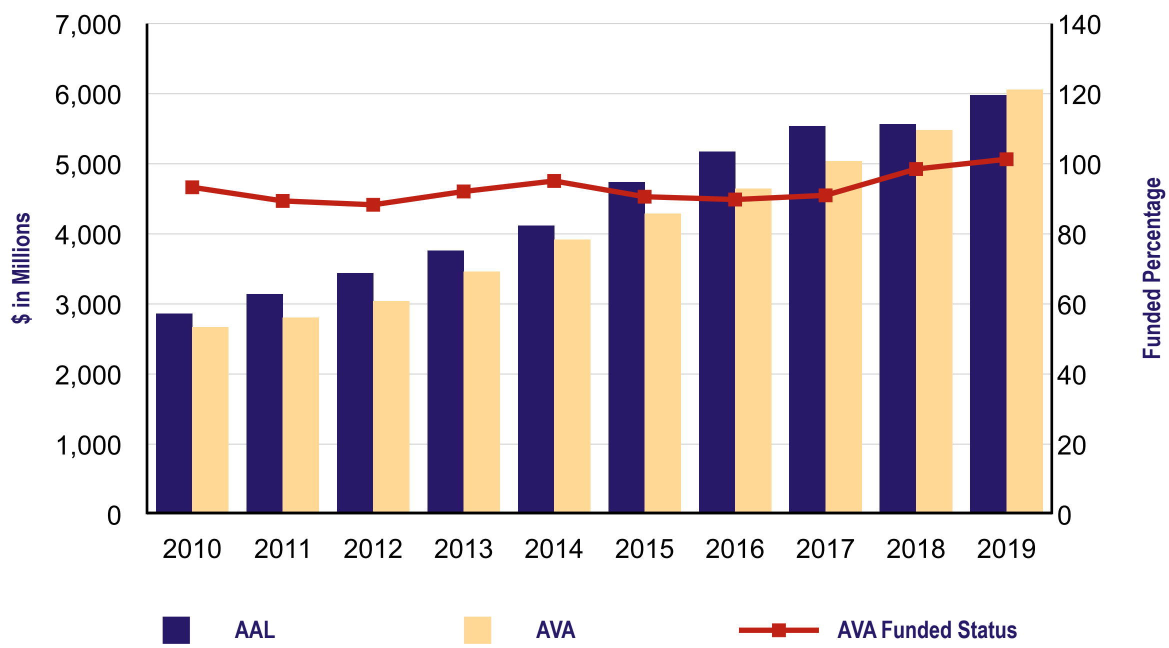
Actuarial Valuation as of June 30 [1]

The following table shows the history of the Unfunded Liability as a percentage of Covered Employee Payroll for TRF '96 DB.

(dollars in thousands)

	Actuarial Accrued Liability (AAL)	Actuarial Value of Assets (AVA)	Unfunded Liability (AAL-AVA)	AVA Funded Status (AVA/AAL)	Covered Employee Payroll	Unfunded Liability as a percentage of Covered Employee Payroll
2019	$5,980,426	$6,056,317	**$(75,891)**	**101.3%**	$3,257,918	(2.3)%
2018	5,563,264	5,478,482	**84,782**	**98.5**	3,129,070	2.7
2017	5,536,094	5,035,991	**500,103**	**91.0**	3,020,463	16.6
2016	5,174,317	4,648,297	**526,020**	**89.8**	2,881,397	18.3
2015	4,734,777	4,290,258	**444,519**	**90.6**	2,742,187	16.2
2014	4,116,264	3,914,503	**201,761**	**95.1**	2,598,115	7.8
2013	3,757,444	3,461,904	**295,540**	**92.1**	2,442,496	12.1
2012	3,438,970	3,037,116	**401,854**	**88.3**	2,400,000	16.7
2011	3,138,568	2,806,386	**332,182**	**89.4**	2,225,000	14.9
2010	2,863,985	2,671,979	**192,006**	**93.3**	2,200,000	8.7

[1] See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.



Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions

The actuarial assumptions and methods used in the June 30, 2019 valuation of the Teachers' 1996 Defined Benefit Account were adopted by the INPRS Board in May 2019. The majority of the actuarial assumptions and methods are based on plan experience from July 1, 2011 through June 30, 2014, and were first used in the June 30, 2015 valuation. The INPRS Board adopted a funding policy in April 2014, and the policy was last updated in October 2018. The funding policy is available online at: https://www.in.gov/inprs/files/INPRS_Funding_Policy.pdf.

Changes in Actuarial Assumptions

There were no changes to the actuarial assumptions during the fiscal year.

Changes in Actuarial Methods

There were no changes to the actuarial methods during the fiscal year.

Changes in Plan Provisions

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.

Actuarial Assumptions

Actuarial assumptions used for funding purposes are the same as those used for accounting and financial reporting, except where noted.

Economic Assumptions

Interest Rate / Investment Return:

Funding	6.75 percent (net of administrative and investment expenses)
Accounting & Financial Reporting	6.75 percent (net of investment expenses)
Inflation:	2.25 percent per year
Cost of Living Increases:	A service-based 13th check will be paid in the 2020 and 2021 fiscal years. Thereafter, the following COLAs, compounded annually, are assumed: 0.4 percent beginning on January 1, 2022 0.5 percent beginning on January 1, 2034 0.6 percent beginning on January 1, 2039
Future Salary Increases:	Based on 2011-2014 experience. Illustrative rates shown below:

Years of Service	Merit and Seniority	Inflation	Total Individual Salary Growth
1	10.25%	2.25%	12.50%
5	2.75	2.25	5.00
10	2.75	2.25	5.00
15	1.50	2.25	3.75
20	0.25	2.25	2.50
25	0.25	2.25	2.50
30	0.25	2.25	2.50
35	0.25	2.25	2.50
40	0.25	2.25	2.50

Demographic Assumptions: Based on 2011-2014 Experience

Mortality (Healthy): RP-2014 White Collar Mortality Tables, with Social Security generational improvements from 2006 based on the Social Security Administration's 2014 Trustee Report.

Mortality (Disabled): RP-2014 Disability Mortality Tables, with Social Security generational improvements from 2006 based on the Social Security Administration's 2014 Trustee Report.

Retirement:

Regular Retirement		Rule of 85 Retirement		Early Retirement	
Age	Probability	Age	Probability	Age	Probability
				50-53	2.0%
				54	5.0
		55	15.0%	55	5.0
		56	15.0	56	5.0
		57	15.0	57	6.5
		58	15.0	58	8.0
		59	20.0	59	12.0
60	20.0%	60	20.0		
61	25.0	61	25.0		
62	30.0	62	30.0		
63	35.0	63	35.0		
64	40.0	64	40.0		
65-69	45.0	65-69	45.0		
70+	100.0	70+	100.0		

Inactive vested members are assumed to commence their retirement benefit at their earliest normal retirement date.

Termination:

Service Based			Sample Age Based [1]		
Years of Service	Male	Female	Attained Age	Male	Female
0	35.0%	35.0%	30	2.25%	3.0%
1	14.0	14.0	35	2.25	3.0
2	11.0	11.0	40	2.25	2.0
3	9.0	9.0	45	2.25	2.0
4	8.0	8.0	50	2.25	2.0
5	7.0	7.0	55	2.25	2.0
6	6.0	6.0	60	2.25	2.0
7	5.0	5.5			
8	4.5	5.0			
9	4.5	4.5			

Disability:

Age	Sample Rates
25	0.01%
30	0.01
35	0.01
40	0.01
45	0.02
50	0.05
55	0.09
60	0.10

Spouse / Beneficiary: 100 percent of members are assumed to be married for purposes of valuing death-in-service benefits. Male spouses are assumed to be three years older than female spouses.

[1] *Age-based rates apply only if 10 or more years of service.*

Actuarial Methods

Funding uses the same Actuarial Methods as accounting and financial reporting, except where noted.

Actuarial Cost Method:	Entry Age Normal – Level Percent of Payroll The normal cost is calculated separately for each active member and is equal to the level percentage of payroll needed as an annual contribution from entry age to retirement age to fund projected benefits. The actuarial accrued liability on any valuation date is the accumulated value of such normal costs from entry age to the valuation date. This method produces a cost of future benefit accruals that is a level percent of pay over time, which is desirable for employers from a budgeting standpoint. Other actuarial cost methods are more volatile in their allocation of cost for each year of member service.
Amortization Method:	For funding, gains and losses occurring from census experience different than assumed, assumption changes, and benefit changes are amortized over a 20-year period with level payments each year. A new gain or loss base is established each year based on the additional gain or loss during that year and that base is amortized over a new 20-year period. However, when the plan is at or above 100 percent funded (based on Actuarial Value of Assets), the past amortization bases are considered fully amortized and a single amortization base equal to the surplus is amortized over a 30-year period with level payment each year. Effective June 30, 2018, the bases are calculated without regards to the COLA provisions. The purpose of the method is to give a smooth progression of the costs from year-to-year and, at the same time, provide for an orderly funding of the unfunded liabilities. For accounting and financial reporting, gains and losses occurring from census experience different than assumed and assumption changes are amortized into expense over the average expected future service of all plan participants. Gains and losses occurring from investment experience different than assumed are amortized into expense over a five-year period. The effect of plan changes on the plan liability are fully recognized in expense in the year in which they occur.
Data Measurement Date:	Member census data as of the prior year end was used in the valuation and adjusted, where appropriate, to reflect changes during the current fiscal year. Standard actuarial roll forward techniques were then used to project the liabilities computed as of prior year end to the current year measurement date.
COLA Surcharge:	The COLA Surcharge is developed by determining the assets needed at the start of the next biennium to fund the post-retirement benefit increases anticipated to be granted in that biennium. This amount is divided by the present value of expected payroll over which the accumulations will occur.
Asset Valuation Method:	Funding uses the Actuarial Value of Assets (AVA), which is equal to a five-year smoothing of gains and losses on the Fair Value of Assets (FVA), subject to a 20 percent corridor. Accordingly, the AVA is limited to no more than 20 percent greater than or 20 percent less than the FVA. Accounting and financial reporting uses the Fair Value of Assets (FVA) in accordance with GASB Statement No. 67.

Plan Provisions

Please refer to Note 1 of the Notes to the Financial Statements in the Financial Section, the actuarial valuation at https://www.in.gov/inprs/actuarialvaluation.htm, or the applicable Indiana Code at http://iga.in.gov/.

Analysis of Financial Experience

(dollars in thousands)	UAAL
Unfunded Actuarial Accrued Liability (UAAL): June 30, 2018	$84,782
Normal Cost and Interest, less Expected Contributions	31,334
Expected UAAL: June 30, 2019	116,116
UAAL (Gain) / Loss	
Actuarial Value of Assets Experience	(172,850)
Actuarial Accrued Liabilities Experience [1]	(22,096)
Actuarial Assumption & Methodology Changes	—
Plan Provision Changes [2]	2,939
Total UAAL (Gain) / Loss	(192,007)
Unfunded Actuarial Accrued Liability (UAAL): June 30, 2019	**$(75,891)**

[1] See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.

[2] Plan Provision Changes include:

-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.

Solvency Test [1]

The solvency test compares aggregate actuarial liabilities by various categories with the plan's assets.

(dollars in thousands)	Actuarial Accrued Liabilities				Portion of Actuarial Accrued Liabilities Covered by Assets		
Actuarial Valuation as of June 30	Retirees and Beneficiaries	Active Member (Employer Financed Portion)	Total Actuarial Accrued Liabilities	Actuarial Value of Assets	Retirees and Beneficiaries	Active Member (Employer Financed Portion)	Total Actuarial Accrued Liabilities
2019	$1,371,702	$4,608,724	$5,980,426	$6,056,317	100%	101.6%	101.3%
2018	1,232,059	4,331,205	5,563,264	5,478,482	100	98.0	98.5
2017	1,213,780	4,322,314	5,536,094	5,035,991	100	88.4	91.0
2016 [2]	1,079,255	4,095,062	5,174,317	4,648,297	100	87.2	89.8
2015 [2]	897,036	3,837,741	4,734,777	4,290,258	100	88.4	90.6
2014 [2]	759,244	3,357,020	4,116,264	3,914,503	100	94.0	95.1
2013 [2]	781,870	2,975,574	3,757,444	3,461,904	100	90.1	92.1
2012 [2]	646,161	2,792,809	3,438,970	3,037,116	100	85.6	88.3
2011 [2]	544,515	2,594,053	3,138,568	2,806,386	100	87.2	89.4
2010	483,118	2,380,867	2,863,985	2,671,979	100	91.9	93.3

[1] See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.

[2] DC balances were removed from retirees' and beneficiaries' actuarial accrued liabilities.

Schedule of Active Members Valuation Data

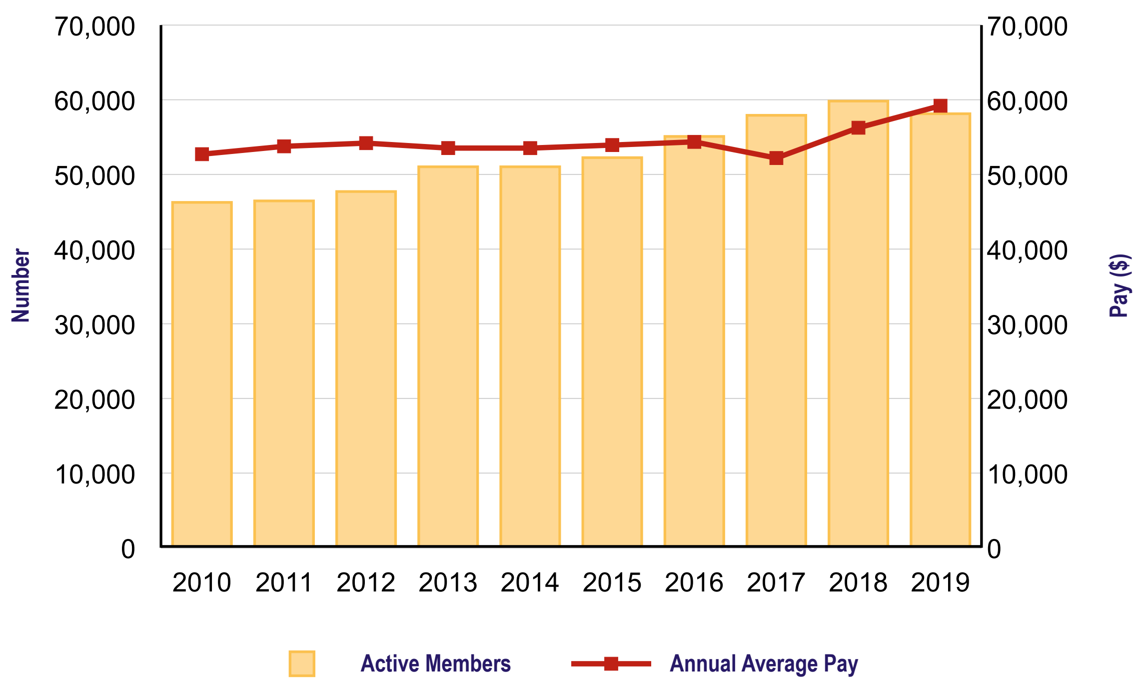
Actuarial Valuation as of June 30 [1]

(dollars in thousands - except annual average pay)

	Active Members	Annual Payroll	Annual Average Pay	Annual Percent Increase / (Decrease) In Average Pay
2019	58,308	$3,451,731	$59,198	5.2%
2018	59,996	3,374,943	56,253	7.8
2017	58,097	3,032,299	52,194	(4.0)
2016	55,265	3,004,169	54,359	0.8
2015	52,424	2,827,311	53,932	0.8
2014	51,204	2,740,661	53,524	—
2013	51,204	2,740,940	53,530	(1.2)
2012	47,885	2,594,952	54,191	0.8
2011	46,633	2,507,193	53,764	2.0
2010	46,433	2,447,509	52,711	2.9

[1] See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.

Total Number of Active Members Per Year and Annual Average Pay



Schedule of Retirants and Beneficiaries

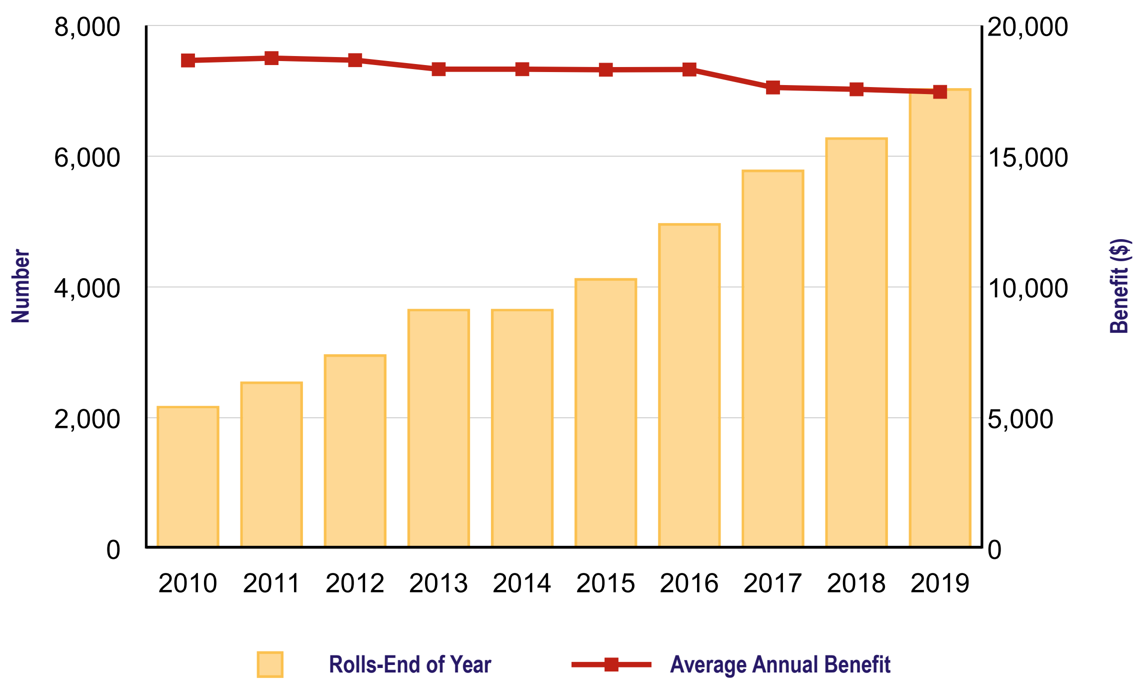
Actuarial Valuation as of June 30 [1]

(dollars in thousands -- except average annual benefit)

	Added to Rolls		Removed from Rolls		Rolls – End of Year		Percent Increase / (Decrease) In Total Annual Benefits	Average Annual Benefit	Percent Increase / (Decrease) in Average Annual Benefit
	Number	Annual Benefits	Number	Annual Benefits	Number	Total Annual Benefits			
2019	798	$13,285	46	$566	7,041	$122,935	11.3%	$17,460	(0.6)%
2018	710	9,562	217	1,002	6,289	110,423	8.1	17,558	(0.4)
2017	855	12,106	36	564	5,796	102,178	12.1	17,629	(3.8)
2016	858	16,075	17	305	4,977	91,160	20.4	18,316	0.1
2015	499	9,101	28	353	4,136	75,714	12.7	18,306	(0.1)
2014	—	12,216	—	251	3,665	67,169	—	18,327	—
2013	712	12,216	18	251	3,665	67,169	21.1	18,327	(1.8)
2012	433	8,132	16	236	2,971	55,475	15.8	18,672	(0.4)
2011	390	7,666	17	253	2,554	47,887	17.7	18,750	0.5
2010	249	4,859	12	129	2,181	40,701	12.1	18,662	(0.1)

[1] *See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.*

Total Number of Retirants and Beneficiaries Per Year and Average Annual Benefit



Historical Summary of Actuarial Valuation Results

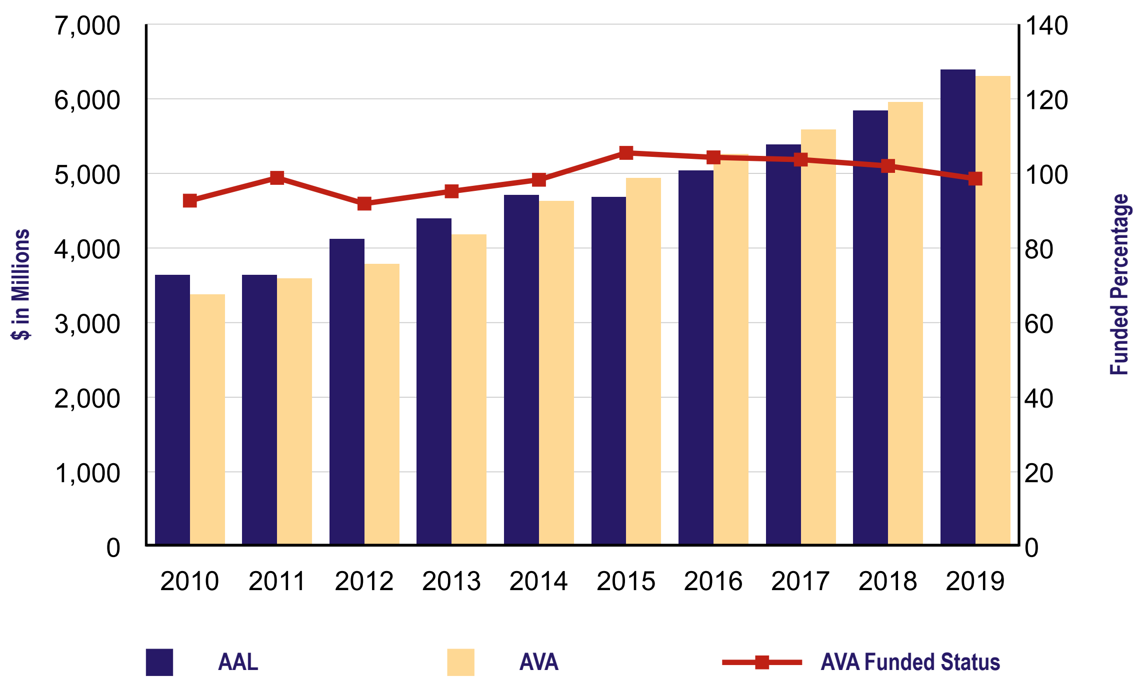
Actuarial Valuation as of June 30 [1]

The following table shows the history of the Unfunded Liability as a percentage of Covered Employee Payroll for 77 Fund.

(dollars in thousands)

	Actuarial Accrued Liability (AAL)	Actuarial Value of Assets (AVA)	Unfunded Liability (AAL-AVA)	AVA Funded Status (AVA/AAL)	Covered Employee Payroll	Unfunded Liability as a percentage of Covered Employee Payroll
2019	$6,389,002	$6,299,749	**$89,253**	**98.6%**	$866,299	10.3%
2018	5,839,659	5,953,978	**(114,319)**	**102.0**	842,179	(13.6)
2017	5,385,753	5,587,551	**(201,798)**	**103.7**	809,382	(24.9)
2016	5,039,836	5,255,255	**(215,419)**	**104.3**	771,949	(27.9)
2015	4,680,694	4,939,330	**(258,636)**	**105.5**	745,336	(34.7)
2014	4,706,997	4,625,475	**81,522**	**98.3**	710,581	11.5
2013	4,392,947	4,180,704	**212,243**	**95.2**	695,000	30.5
2012	4,122,436	3,786,595	**335,841**	**91.9**	690,000	48.7
2011	3,638,956	3,593,787	**45,169**	**98.8**	687,000	6.6
2010	3,639,669	3,374,438	**265,231**	**92.7**	670,000	39.6

[1] See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.



Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions

The actuarial assumptions and methods used in the June 30, 2019 valuation of the 1977 Police Officers' and Firefighters' Retirement Fund were adopted by the INPRS Board in May 2019. The majority of the actuarial assumptions and methods are based on plan experience from July 1, 2010 through June 30, 2014, and were first used in the June 30, 2015 valuation. The INPRS Board adopted a funding policy in April 2014, and the policy was last updated in October 2018. The funding policy is available online at: https://www.in.gov/inprs/files/INPRS_Funding_Policy.pdf.

Changes in Actuarial Assumptions

There were no changes to the actuarial assumptions during the fiscal year.

Changes in Actuarial Methods

There were no changes to the actuarial methods during the fiscal year.

Changes in Plan Provisions

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.

Actuarial Assumptions

Actuarial assumptions used for funding purposes are the same as those used for accounting and financial reporting, except where noted.

Economic Assumptions

Interest Rate / Investment Return:	
Funding	6.75 percent (net of administrative and investment expenses)
Account & Financial Reporting	6.75 percent (net of investment expenses)
Interest on Member Contributions	3.50 percent per year
Inflation	2.25 percent per year
Cost of Living Increases:	2.00 percent per year in retirement
Future Salary Increases:	2.50 percent per year

Demographic Assumptions: Based on 2010-2014 Experience

Mortality (Healthy):	RP-2014 Blue Collar Mortality Tables, with Social Security generational improvements from 2006 based on the Social Security Administration’s 2014 Trustee Report.
Mortality (Disabled):	RP-2014 Disability Mortality Tables, with Social Security generational improvements from 2006 based on the Social Security Administration’s 2014 Trustee Report.

Retirement:

Ages	Service <32	Service >= 32
50-57	10.0%	20.0%
58-61	15.0	20.0
62-64	20.0	20.0
65-69	50.0	50.0
70+	100.0	100.0

Inactive vested members are assumed to commence their retirement benefit at their earliest eligible retirement date (age 50 or current age if greater).

Termination:

Service	Rate	Service	Rate
0	10.0%	6-8	2.0%
1	5.0	9-11	1.5
2	4.0	12-19	1.0
3-4	3.5	20+	2.0
5	2.5		

Disability:

Age	Sample Rates
<=30	0.10%
35	0.16
40	0.26
45	0.36
50	0.46
55	0.56
60	0.66
62+	0.70

Spouse / Beneficiary: 80 percent of male members and 50 percent of female members are assumed to be married or to have a dependent beneficiary. Male members are assumed to be three years older than females and female members are assumed to be the same age as males.

Disability Retirement: For members hired after 1989 that become disabled, impairments are assumed to be one percent catastrophic Class 1 (at 100 percent of salary), 44 percent Class 1 (at 65 percent of salary),10 percent Class 2 (at 50 percent of salary), and 45 percent Class 3 (at 36 percent of salary).

Pre-Retirement Death: Of active member deaths, 10 percent are assumed to be in the line of duty and 90 percent are other than in the line of duty. Additionally, all deaths among retired and disabled members are other than in the line of duty.

Actuarial Methods

Funding uses the same Actuarial Methods as accounting and financial reporting, except where noted.

Actuarial Cost Method:	Entry Age Normal – Level Percent of Payroll The normal cost is calculated separately for each active member and is equal to the level percentage of payroll needed as an annual contribution from entry age to retirement age to fund projected benefits. The actuarial accrued liability on any valuation date is the accumulated value of such normal costs from entry age to the valuation date. This method produces a cost of future benefit accruals that is a level percent of pay over time, which is desirable for employers from a budgeting standpoint. Other actuarial cost methods are more volatile in their allocation of cost for each year of member service.
Amortization Method:	For funding, gains and losses occurring from census experience different than assumed, assumption changes, and benefit changes are amortized over a 20-year period with level payments each year. A new gain or loss base is established each year based on the additional gain or loss during that year and that base is amortized over a new 20-year period. However, when the plan is at or above 100 percent funded (based on Actuarial Value of Assets), the past amortization bases are considered fully amortized and a single amortization base equal to the surplus is amortized over a 30-year period with level payment each year. The purpose of the method is to give a smooth progression of the costs from year-to-year and, at the same time, provide for an orderly funding of the unfunded liabilities. For accounting and financial reporting, gains and losses occurring from census experience different than assumed and assumption changes are amortized into expense over the average expected future service of all plan participants. Gains and losses occurring from investment experience different than assumed are amortized into expense over a five-year period. The effect of plan changes on the plan liability are fully recognized in expense in the year in which they occur.
Data Measurement Date:	Member census data as of the prior year end was used in the valuation and adjusted, where appropriate, to reflect changes during the current fiscal year. Standard actuarial roll forward techniques were then used to project the liabilities computed as of prior year end to the current year measurement date.
Asset Valuation Method:	Funding uses the Actuarial Value of Assets (AVA), which is equal to a five-year smoothing of gains and losses on the Fair Value of Assets (FVA), subject to a 20 percent corridor. Accordingly, the AVA is limited to no more than 20 percent greater than or 20 percent less than the FVA. Accounting and financial reporting uses the Fair Value of Assets (FVA) in accordance with GASB Statement No. 67.

Plan Provisions

Please refer to Note 1 of the Notes to the Financial Statements in the Financial Section, the actuarial valuation at https://www.in.gov/inprs/actuarialvaluation.htm, or the applicable Indiana Code at http://iga.in.gov/.

Analysis of Financial Experience

(dollars in thousands)	UAAL
Unfunded Actuarial Accrued Liability (UAAL): June 30, 2018	$(114,319)
Normal Cost and Interest, less Expected Contributions	1,265
Expected UAAL: June 30, 2019	(113,054)
UAAL (Gain) / Loss	
Actuarial Value of Assets Experience	14,122
Actuarial Accrued Liabilities Experience [1]	30,907
Actuarial Assumption & Methodology Changes	—
Plan Provision Changes [2]	157,278
Total UAAL (Gain) / Loss	202,307
Unfunded Actuarial Accrued Liability (UAAL): June 30, 2019	**$89,253**

[1] See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.

[2] Plan Provision Changes include:

-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.

Solvency Test [1]

The solvency test compares aggregate actuarial liabilities by various categories with the plan's assets.

(dollars in thousands)	Actuarial Accrued Liabilities					Portion of Actuarial Accrued Liabilities Covered by Assets			
Actuarial Valuation as of June 30	Active Member Contributions	Retirees and Beneficiaries	Active Member (Employer Financed Portion)	Total Actuarial Accrued Liabilities	Actuarial Value of Assets	Active Member Contributions	Retirees and Beneficiaries	Active Member (Employer Financed Portion)	Total Actuarial Accrued Liabilities
2019	$883,706	$2,169,744	$3,335,552	$6,389,002	$6,299,749	100%	100%	97.3%	98.6%
2018	866,551	1,910,154	3,062,954	5,839,659	5,953,978	100	100	103.7	102.0
2017	857,426	1,715,503	2,812,824	5,385,753	5,587,551	100	100	107.2	103.7
2016	843,628	1,532,936	2,663,272	5,039,836	5,255,255	100	100	108.1	104.3
2015	832,760	1,362,021	2,485,913	4,680,694	4,939,330	100	100	110.4	105.5
2014	809,877	1,280,920	2,616,200	4,706,997	4,625,475	100	100	96.9	98.3
2013	782,124	1,288,457	2,322,366	4,392,947	4,180,704	100	100	90.9	95.2
2012	728,892	1,135,538	2,258,006	4,122,436	3,786,595	100	100	85.1	91.9
2011	679,849	970,676	1,988,431	3,638,956	3,593,787	100	100	97.7	98.8
2010	634,865	859,626	2,145,178	3,639,669	3,374,438	100	100	87.6	92.7

[1] See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.

Schedule of Active Members Valuation Data

Actuarial Valuation as of June 30 [1]

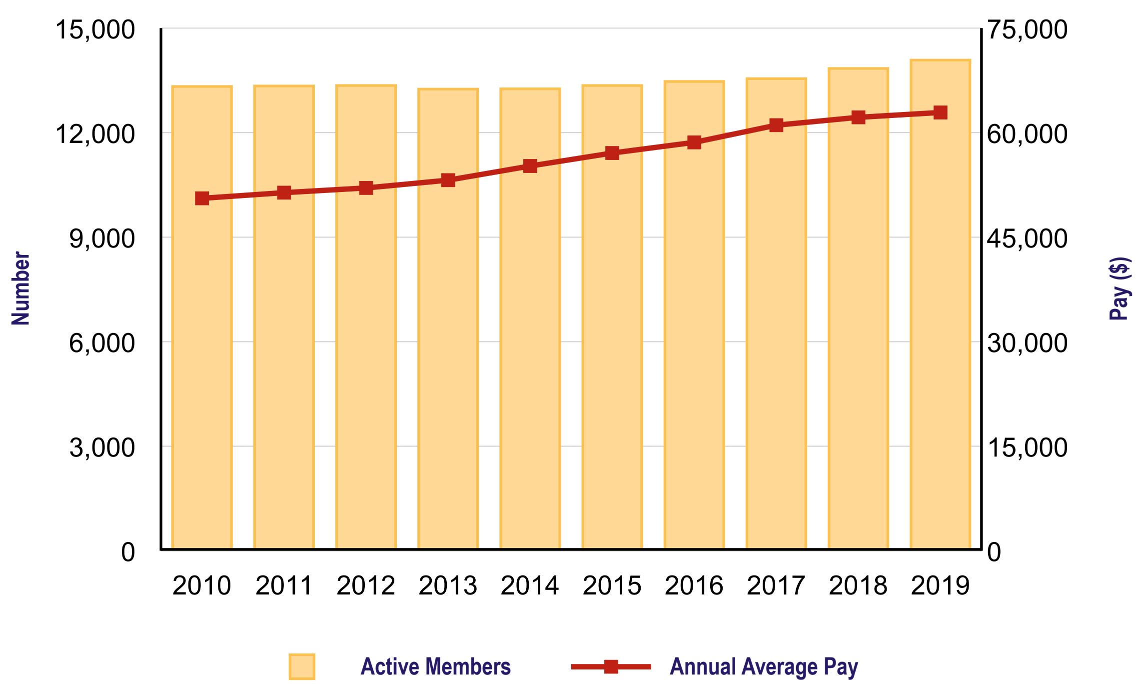
(dollars in thousands - except annual average pay)

	Active Members	Annual Payroll [2]	Annual Average Pay	Annual Percent Increase / (Decrease) In Average Pay
2019	14,119	$887,957	$62,891	1.1%
2018	13,879	863,233	62,197	1.8
2017	13,587	829,736	61,068	4.2
2016	13,506	791,508	58,604	2.7
2015	13,390	764,215	57,074	3.4
2014	13,295	734,024	55,211	3.8
2013	13,287	706,603	53,180	2.1
2012	13,390	697,111	52,062	1.3
2011	13,376	687,342	51,386	1.6
2010	13,362	675,797	50,576	2.7

[1] See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.

[2] Excludes payroll from members that are over the 32 year service cap.

Total Number of Active Members Per Year and Annual Average Pay



Schedule of Retirants and Beneficiaries

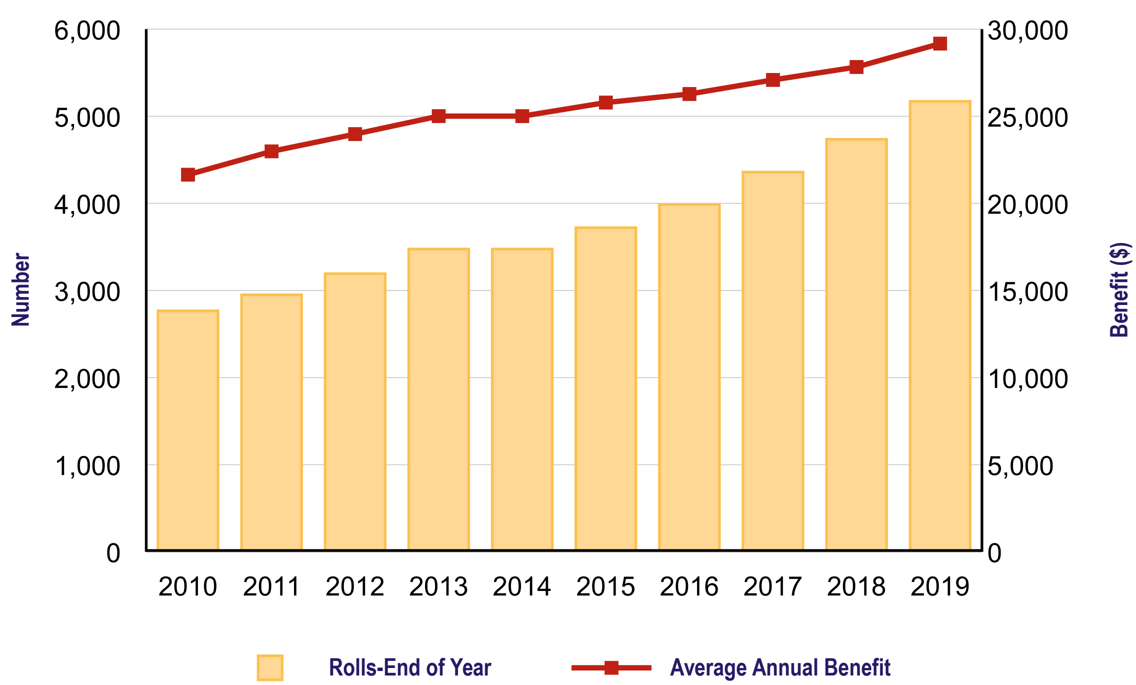
Actuarial Valuation as of June 30 [1]

(dollars in thousands -- except average annual benefit)

	Added to Rolls		Removed from Rolls		Rolls – End of Year		Percent Increase / (Decrease) In Total Annual Benefits	Average Annual Benefit	Percent Increase / (Decrease) in Average Annual Benefit
	Number	Annual Benefits	Number	Annual Benefits	Number	Total Annual Benefits			
2019	476	$17,344	40	$803	5,187	$151,305	14.4%	$29,170	4.8%
2018	429	14,914	52	1,002	4,751	132,207	11.6	27,827	2.7
2017	407	13,321	37	642	4,374	118,472	12.6	27,086	3.1
2016	312	10,074	44	834	4,004	105,218	9.2	26,278	1.9
2015	283	8,858	38	727	3,736	96,336	10.3	25,786	3.1
2014	—	—	—	—	3,491	87,301	—	25,008	—
2013	326	10,098	43	845	3,491	87,301	13.5	25,008	4.3
2012	281	7,900	39	814	3,208	76,917	12.8	23,977	4.3
2011	218	6,179	34	609	2,966	68,179	13.2	22,987	6.2
2010	208	4,918	34	641	2,782	60,220	8.4	21,646	1.6

[1] *See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.*

Total Number of Retirants and Beneficiaries Per Year and Average Annual Benefit



Historical Summary of Actuarial Valuation Results

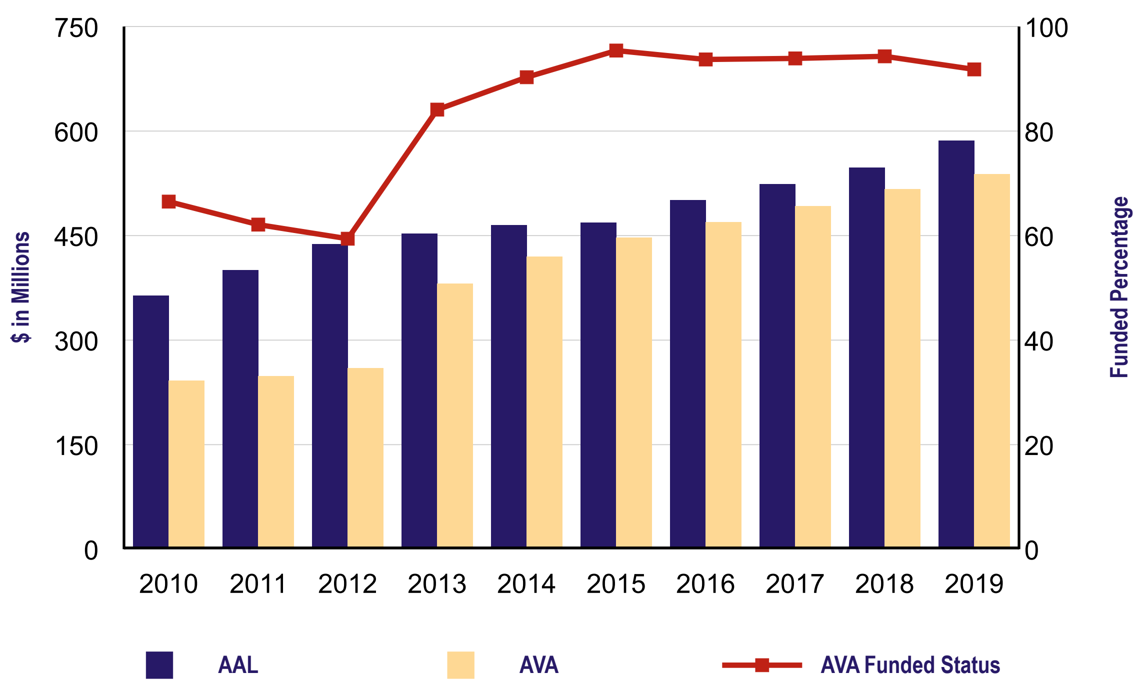
Actuarial Valuation as of June 30 [1]

The following table shows the history of the Unfunded Liability as a percentage of Covered Employee Payroll for JRS.

(dollars in thousands)

	Actuarial Accrued Liability (AAL)	Actuarial Value of Assets (AVA)	Unfunded Liability (AAL-AVA)	AVA Funded Status (AVA/AAL)	Covered Employee Payroll	Unfunded Liability as a percentage of Covered Employee Payroll
2019	$586,499	$538,600	**$47,899**	**91.8%**	$56,380	85.0%
2018	547,694	516,749	**30,945**	**94.4**	53,350	58.0
2017	523,735	492,013	**31,722**	**93.9**	54,755	57.9
2016	501,126	469,378	**31,748**	**93.7**	51,382	61.7
2015	468,945	447,514	**21,431**	**95.4**	48,582	44.1
2014	464,855	419,568	**45,287**	**90.3**	46,041	98.5
2013	453,110	381,240	**71,870**	**84.1**	47,595	151.1
2012	437,854	260,096	**177,758**	**59.4**	45,138	393.9
2011	400,274	248,623	**151,651**	**62.1**	45,764	331.5
2010	364,123	242,143	**121,980**	**66.5**	36,722	332.2

[1] See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.



Summary of Actuarial Assumptions, Actuarial Methods, and Plan Provisions

The actuarial assumptions and methods used in the June 30, 2019 valuation of the 1977 Police Officers' and Firefighters' Retirement Fund were adopted by the INPRS Board in May 2019. The majority of the actuarial assumptions and methods are based on plan experience from July 1, 2010 through June 30, 2014, and were first used in the June 30, 2015 valuation. The INPRS Board adopted a funding policy in April 2014, and the policy was last updated in October 2018. The funding policy is available online at: https://www.in.gov/inprs/files/INPRS_Funding_Policy.pdf.

Changes in Actuarial Assumptions

There were no changes to the actuarial assumptions during the fiscal year.

Changes in Actuarial Methods

There were no changes to the actuarial methods during the fiscal year.

Changes in Plan Provisions

There were no changes to the plan provisions during the fiscal year.

Actuarial Assumptions

Actuarial assumptions used for funding purposes are the same as those used for accounting and financial reporting, except where noted.

Economic Assumptions	
Interest Rate / Investment Return:	
Funding	6.75 percent (net of administrative and investment expenses)
Account & Financial Reporting	6.75 percent (net of investment expenses)
Interest on Member Contributions	3.50 percent per year
Inflation	2.25 percent per year
Cost of Living Increases:	2.50 percent per year in deferral and retirement
Future Salary Increases:	2.50 percent per year
Demographic Assumptions: Based on 2010-2014 Experience	
Mortality (Healthy):	RP-2014 White Collar Mortality Tables, with Social Security generational improvements from 2006 based on the Social Security Administration's 2014 Trustee Report.
Mortality (Disabled):	RP-2014 Disability Mortality Tables, with Social Security generational improvements from 2006 based on the Social Security Administration's 2014 Trustee Report.

Retirement:

Ages	Service <22	Age	Service>=22
62	25.0%	55-74	70.0%
63	15.0	75+	100.0
64	10.0		
65	50.0		
66-74	30.0		
75+	100.0		

Inactive vested members are assumed to commence their retirement benefit at their earliest eligible retirement date.

Termination:

3 percent per year for all members prior to retirement eligibility.

Disability:

1964 OASDI Table. Illustrative rates shown below:

Age	Rate
20	0.060%
25	0.085
30	0.110
35	0.147
40	0.220
45	0.360
50	0.606
55	1.009
60	1.627
65+	0.000

Spouse / Beneficiary:

90 percent of members are assumed to be married or to have a dependent beneficiary. Male members are assumed to be three years older than their spouses and female members are assumed to be two years younger than their spouses.

Actuarial Methods

Funding uses the same Actuarial Methods as accounting and financial reporting, except where noted.

Actuarial Cost Method:	Entry Age Normal – Level Percent of Payroll The normal cost is calculated separately for each active member and is equal to the level percentage of payroll needed as an annual contribution from entry age to retirement age to fund projected benefits. The actuarial accrued liability on any valuation date is the accumulated value of such normal costs from entry age to the valuation date. This method produces a cost of future benefit accruals that is a level percent of pay over time, which is desirable for employers from a budgeting standpoint. Other actuarial cost methods are more volatile in their allocation of cost for each year of member service.
Amortization Method:	For funding, gains and losses occurring from census experience different than assumed, assumption changes, and benefit changes are amortized over a 20-year period with level payments each year. A new gain or loss base is established each year based on the additional gain or loss during that year and that base is amortized over a new 20-year period. However, when the plan is at or above 100 percent funded (based on Actuarial Value of Assets), the past amortization bases are considered fully amortized and a single amortization base equal to the surplus is amortized over a 30-year period with level payment each year. The purpose of the method is to give a smooth progression of the costs from year-to-year and, at the same time, provide for an orderly funding of the unfunded liabilities. For accounting and financial reporting, gains and losses occurring from census experience different than assumed and assumption changes are amortized into expense over the average expected future service of all plan participants. Gains and losses occurring from investment experience different than assumed are amortized into expense over a five-year period. The effect of plan changes on the plan liability are fully recognized in expense in the year in which they occur.
Data Measurement Date:	Member census data as of the prior year end was used in the valuation and adjusted, where appropriate, to reflect changes during the current fiscal year. Standard actuarial roll forward techniques were then used to project the liabilities computed as of prior year end to the current year measurement date.
Asset Valuation Method:	Funding uses the Actuarial Value of Assets (AVA), which is equal to a five-year smoothing of gains and losses on the Fair Value of Assets (FVA), subject to a 20 percent corridor. Accordingly, the AVA is limited to no more than 20 percent greater than or 20 percent less than the FVA. Accounting and financial reporting uses the Fair Value of Assets (FVA) in accordance with GASB Statement No. 67.

Plan Provisions

Please refer to Note 1 of the Notes to the Financial Statements in the Financial Section, the actuarial valuation at https://www.in.gov/inprs/actuarialvaluation.htm, or the applicable Indiana Code at http://iga.in.gov/.

Analysis of Financial Experience

(dollars in thousands)	UAAL
Unfunded Actuarial Accrued Liability (UAAL): June 30, 2018	$30,945
Normal Cost and Interest, less Expected Contributions	(1,331)
Expected UAAL: June 30, 2019	29,614
UAAL (Gain) / Loss	
Actuarial Value of Assets Experience	9,754
Actuarial Accrued Liabilities Experience [1]	8,531
Actuarial Assumption & Methodology Changes	—
Plan Provision Changes	—
Total UAAL (Gain) / Loss	18,285
Unfunded Actuarial Accrued Liability (UAAL): June 30, 2019	**$47,899**

[1] *See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.*

Solvency Test [1,2]

The solvency test compares aggregate actuarial liabilities by various categories with the plan's assets.

(dollars in thousands)	Actuarial Accrued Liabilities					Portion of Actuarial Accrued Liabilities Covered by Assets			
Actuarial Valuation as of June 30	Active Member Contributions	Retirees and Beneficiaries	Active Member (Employer Financed Portion)	Total Actuarial Accrued Liabilities	Actuarial Value of Assets	Active Member Contributions	Retirees and Beneficiaries	Active Member (Employer Financed Portion)	Total Actuarial Accrued Liabilities
2019	$38,165	$269,886	$278,448	$586,499	$538,600	100%	100%	82.8%	91.8%
2018	38,541	258,255	250,898	547,694	516,749	100	100	87.7	94.3
2017	36,385	245,177	242,173	523,735	492,013	100	100	86.9	93.9
2016	34,804	244,484	221,838	501,126	469,378	100	100	85.7	93.7
2015	32,383	210,020	226,542	468,945	447,514	100	100	90.5	95.4
2014	32,060	216,044	216,751	464,855	419,568	100	100	79.1	90.3
2013	29,060	224,132	199,918	453,110	381,240	100	100	64.1	84.1
2012	27,699	205,341	204,814	437,854	260,096	100	100	13.2	59.4
2011	24,359	198,797	177,118	400,274	248,623	100	100	14.4	62.1
2010	23,138	182,023	158,962	364,123	242,143	100	100	23.3	66.5

[1] *See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.*

[2] *In accordance with Legislation passed during March 2012, the State appropriated $90,187 thousand during 2013 to reach a funded status of 80.0 percent based on the actuarial valuation as of June 30, 2012.*

Schedule of Active Members Valuation Data

Actuarial Valuation as of June 30 [1]

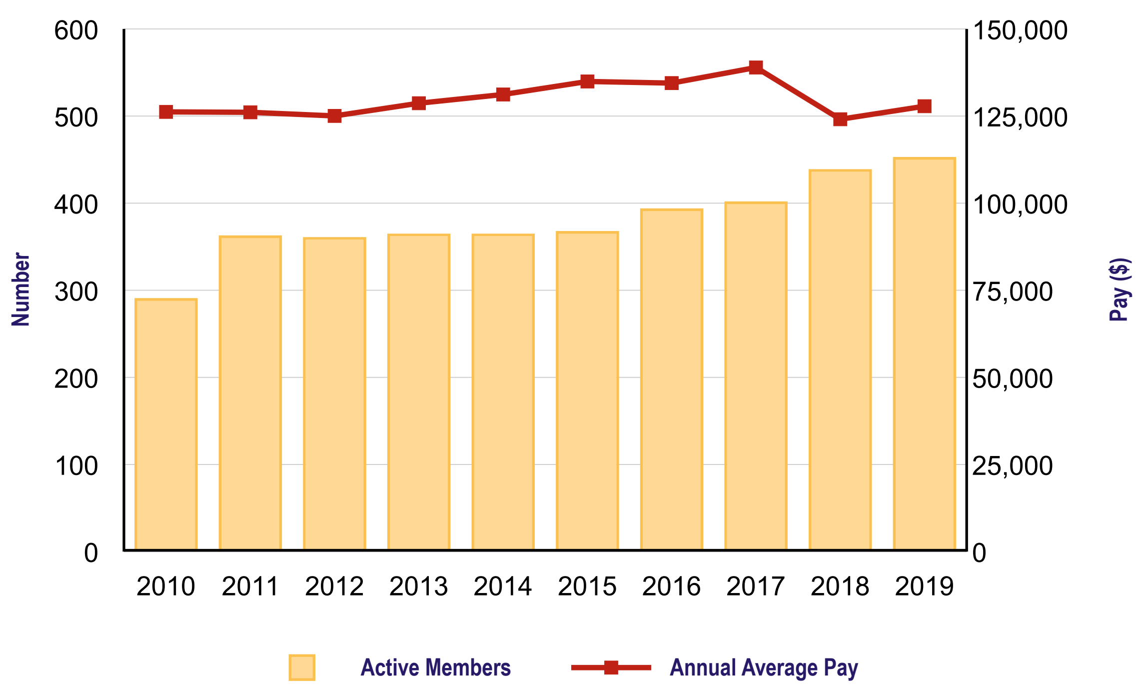
(dollars in thousands - except annual average pay)

	Active Members	Annual Payroll [2]	Annual Average Pay	Annual Percent Increase / (Decrease) In Average Pay
2019	453	$57,902	$127,819	3.0%
2018	439	54,470	124,078	(10.7)
2017	402	55,850	138,931	3.3
2016	394	52,975	134,454	(0.3)
2015	368	49,651	134,921	2.8
2014	365	47,883	131,186	2.0
2013	365	46,967	128,676	2.9
2012	361	45,138	125,036	(0.8)
2011	363	45,764	126,072	(0.1)
2010	291	36,722	126,192	0.4

[1] See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.

[2] Excludes payroll from members that are over the 22 year service cap.

Total Number of Active Members Per Year and Annual Average Pay



Schedule of Retirants and Beneficiaries

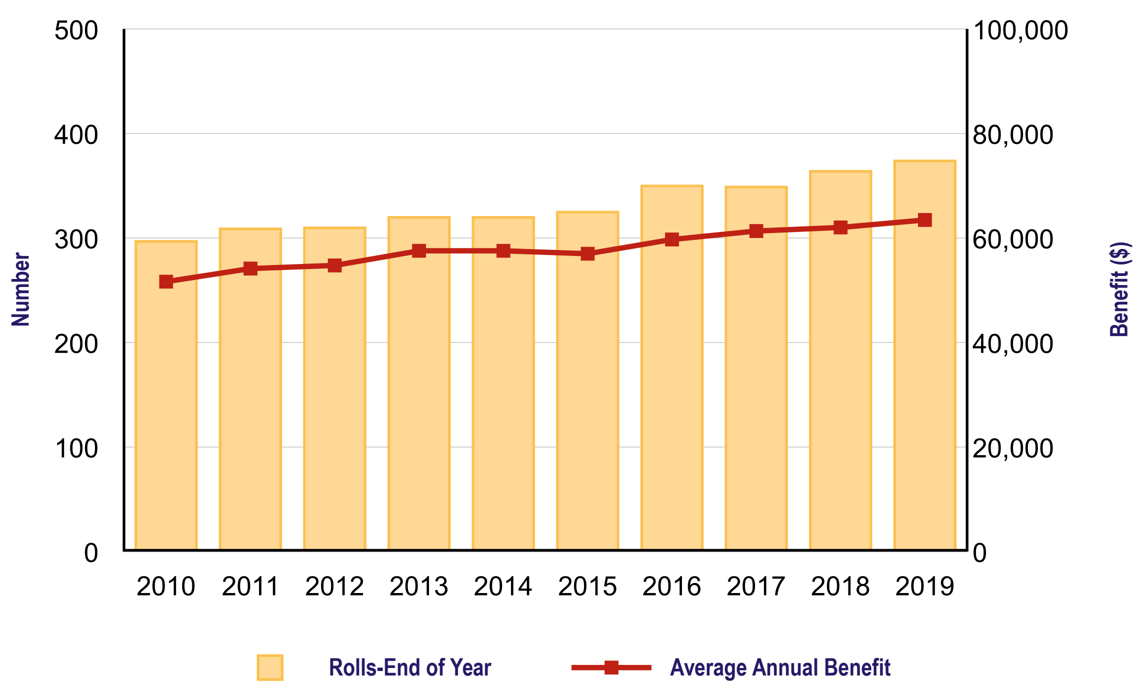
Actuarial Valuation as of June 30 [1]

(dollars in thousands -- except average annual benefit)

	Added to Rolls		Removed from Rolls		Rolls – End of Year		Percent Increase / (Decrease) In Total Annual Benefits	Average Annual Benefit	Percent Increase / (Decrease) in Average Annual Benefit
	Number	Annual Benefits	Number	Annual Benefits	Number	Total Annual Benefits			
2019	18	$1,340	8	$191	375	$23,794	5.1%	$63,450	2.3%
2018	22	1,723	7	309	365	22,637	5.5	62,019	1.1
2017	9	696	10	509	350	21,465	2.4	61,329	2.7
2016	34	2,520	9	340	351	20,959	12.8	59,714	4.8
2015	10	494	5	195	326	18,578	0.6	56,987	(1.0)
2014	—	—	—	—	321	18,474	—	57,551	—
2013	24	1,798	14	442	321	18,474	8.5	57,551	5.1
2012	7	444	6	194	311	17,028	1.4	54,751	1.1
2011	21	1,452	9	200	310	16,787	9.1	54,152	4.9
2010	11	627	6	339	298	15,390	1.1	51,644	(0.6)

[1] *See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.*

Total Number of Retirants and Beneficiaries Per Year and Average Annual Benefit



Historical Summary of Actuarial Valuation Results

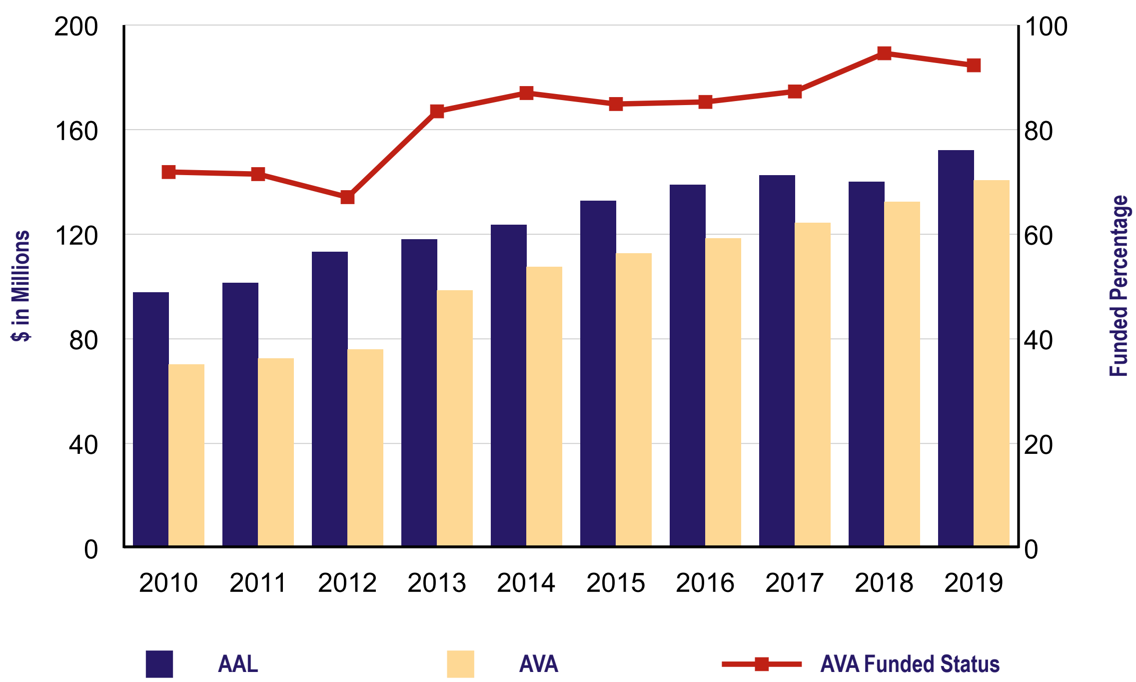
Actuarial Valuation as of June 30 [1]

The following table shows the history of the Unfunded Liability as a percentage of Covered Employee Payroll for EG&C.

(dollars in thousands)

	Actuarial Accrued Liability (AAL)	Actuarial Value of Assets (AVA)	Unfunded Liability (AAL-AVA)	AVA Funded Status (AVA/AAL)	Covered Employee Payroll	Unfunded Liability as a percentage of Covered Employee Payroll
2019	$152,207	$140,559	**$11,648**	**92.3%**	$33,272	35.0%
2018	140,056	132,441	**7,615**	**94.6**	29,387	25.9
2017	142,603	124,531	**18,072**	**87.3**	27,428	65.9
2016	138,965	118,515	**20,450**	**85.3**	25,526	80.1
2015	132,796	112,765	**20,031**	**84.9**	25,133	79.7
2014	123,601	107,563	**16,038**	**87.0**	25,825	62.1
2013	118,097	98,608	**19,489**	**83.5**	24,675	79.0
2012	113,283	76,007	**37,276**	**67.1**	24,300	153.5
2011	101,534	72,599	**28,935**	**71.5**	25,000	115.6
2010	97,862	70,327	**27,535**	**71.9**	25,300	108.7

[1] See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.



Summary of Actuarial Assumptions, Actuarial Methods, and Plan Provisions

The actuarial assumptions and methods used in the June 30, 2019 valuation of the Excise, Gaming and Conservation Officers' Retirement Fund were adopted by the INPRS Board in May 2019. The majority of the actuarial assumptions and methods are based on plan experience from July 1, 2010 through June 30, 2014, and were first used in the June 30, 2015 valuation. The INPRS Board adopted a funding policy in April 2014, and the policy was last updated in October 2018. The funding policy is available online at: https://www.in.gov/inprs/files/INPRS_Funding_Policy.pdf.

Changes in Actuarial Assumptions

There were no changes to the actuarial assumptions.

Changes in Actuarial Methods

There were no changes to the actuarial methods during the fiscal year.

Changes in Plan Provisions

There were no changes to the plan provisions.

Actuarial Assumptions

Actuarial assumptions used for funding purposes are the same as those used for accounting and financial reporting, except where noted.

Economic Assumptions

Interest Rate / Investment Return:	
Funding	6.75 percent (net of administrative and investment expenses)
Accounting & Financial Reporting	6.75 percent (net of investment expenses)
Interest on Member Contributions:	3.50 percent per year
Inflation:	2.25 percent per year
Cost of Living Increases:	A service-based 13th check will be paid in the 2020 and 2021 fiscal years. Thereafter, the following COLAs, compounded annually, are assumed:
	0.4 percent beginning on January 1, 2022
	0.5 percent beginning on January 1, 2034
	0.6 percent beginning on January 1, 2039
Future Salary Increases:	2.50 percent per year

Demographic Assumptions: Based on 2010-2014 Experience

Mortality (Healthy): RP-2014 Blue Collar Mortality Tables, with Social Security generational improvements from 2006 based on the Social Security Administration's 2014 Trustee Report.

Mortality (Disabled): RP-2014 Disability Mortality Tables, with Social Security generational improvements from 2006 based on the Social Security Administration's 2014 Trustee Report.

Retirement:

Age	Rate
45	3.0%
46-49	2.0
50	3.0
51-59	15.0
60-64	40.0
65+	100.0

Inactive vested members are assumed to commence their retirement benefit at their earliest eligible retirement date (age 45, or current age if greater).

Termination:

Years of Service	Rate	Years of Service	Rate
0-1	10.0%	6	5.0%
2	9.0	7	4.0
3	8.0	8	3.0
4	7.0	9	2.0
5	6.0	10+	1.0

Disability: 150 percent of 1964 OASDI Table. Illustrative rates shown below.

Age	Rate	Age	Rate
20	0.0900%	45	0.5400%
25	0.1275	50	0.9090
30	0.1650	55	1.5135
35	0.2205	60	2.4405
40	0.3300	65+	0.0000

Active members who become disabled are assumed to receive 20% of their salary if they have less than five years of service and 40% of their salary if they have five or more years of service.

Spouse / Beneficiary: 90 percent of members are assumed to be married or to have a dependent beneficiary. Males are assumed to be three years older than females.

Actuarial Methods

Funding uses the same Actuarial Methods as accounting and financial reporting, except where noted.

Actuarial Cost Method:	Entry Age Normal – Level Percent of Payroll The normal cost is calculated separately for each active member and is equal to the level percentage of payroll needed as an annual contribution from entry age to retirement age to fund projected benefits. The actuarial accrued liability on any valuation date is the accumulated value of such normal costs from entry age to the valuation date. This method produces a cost of future benefit accruals that is a level percent of pay over time, which is desirable for employers from a budgeting standpoint. Other actuarial cost methods are more volatile in their allocation of cost for each year of member service.
Amortization Method:	For funding, gains and losses occurring from census experience different than assumed, assumption changes, and benefit changes are amortized over a 20-year period with level payments each year. A new gain or loss base is established each year based on the additional gain or loss during that year and that base is amortized over a new 20-year period. However, when the plan is at or above 100 percent funded (based on Actuarial Value of Assets), the past amortization bases are considered fully amortized and a single amortization base equal to the surplus is amortized over a 30-year period with level payment each year. Effective June 30, 2018, the bases are calculated without regards to the COLA provisions. The purpose of the method is to give a smooth progression of the costs from year-to-year and, at the same time, provide for an orderly funding of the unfunded liabilities. For accounting and financial reporting, gains and losses occurring from census experience different than assumed and assumption changes are amortized into expense over the average expected future service of all plan participants. Gains and losses occurring from investment experience different than assumed are amortized into expense over a five-year period. The effect of plan changes on the plan liability are fully recognized in expense in the year in which they occur.
Data Measurement Date:	Member census data as of the prior year end was used in the valuation and adjusted, where appropriate, to reflect changes during the current fiscal year. Standard actuarial roll forward techniques were then used to project the liabilities computed as of prior year end to the current year measurement date.
COLA Surcharge:	The COLA Surcharge is developed by determining the assets needed at the start of the next biennium to fund the post-retirement benefit increases anticipated to be granted in that biennium. This amount is divided by the present value of expected payroll over which the accumulations will occur.
Asset Valuation Method:	Funding uses the Actuarial Value of Assets (AVA), which is equal to a five-year smoothing of gains and losses on the Fair Value of Assets (FVA), subject to a 20 percent corridor. Accordingly, the AVA is limited to no more than 20 percent greater than or 20 percent less than the FVA. Accounting and financial reporting uses the Fair Value of Assets (FVA) in accordance with GASB Statement No. 67.

Plan Provisions

Please refer to Note 1 of the Notes to the Financial Statements in the Financial Section, the actuarial valuation at https://www.in.gov/inprs/actuarialvaluation.htm, or the applicable Indiana Code at http://iga.in.gov/.

Analysis of Financial Experience

(dollars in thousands)	UAAL
Unfunded Actuarial Accrued Liability (UAAL): June 30, 2018	$7,615
Normal Cost and Interest, less Expected Contributions	401
Expected UAAL: June 30, 2019	8,016
UAAL (Gain) / Loss	
Actuarial Value of Assets Experience	(2,795)
Actuarial Accrued Liabilities Experience[1]	6,427
Actuarial Assumption & Methodology Changes	—
Plan Provision Changes	—
Total UAAL (Gain) / Loss	3,632
Unfunded Actuarial Accrued Liability (UAAL): June 30, 2019	**$11,648**

[1] *See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.*

Solvency Test [1,2]

The solvency test compares aggregate actuarial liabilities by various categories with the plan's assets.

(dollars in thousands)	Actuarial Accrued Liabilities					Portion of Actuarial Accrued Liabilities Covered by Assets			
Actuarial Valuation as of June 30	Active Member Contributions	Retirees and Beneficiaries	Active Member (Employer Financed Portion)	Total Actuarial Accrued Liabilities	Actuarial Value of Assets	Active Member Contributions	Retirees and Beneficiaries	Active Member (Employer Financed Portion)	Total Actuarial Accrued Liabilities
2019	$11,661	$68,652	$71,894	$152,207	$140,559	100%	100%	83.8%	92.3%
2018	10,715	68,750	60,591	140,056	132,441	100	100	87.4	94.6
2017	9,737	69,217	63,649	142,603	124,531	100	100	71.6	87.3
2016	9,085	67,424	62,456	138,965	118,515	100	100	67.3	85.3
2015	8,456	61,503	62,837	132,796	112,765	100	100	68.1	84.9
2014	8,042	54,626	60,933	123,601	107,563	100	100	73.7	87.0
2013	7,494	56,028	54,575	118,097	98,608	100	100	64.3	83.5
2012	6,532	53,929	52,822	113,283	76,007	100	100	29.4	67.1
2011	6,271	46,695	48,568	101,534	72,599	100	100	40.4	71.5
2010	6,220	36,044	55,598	97,862	70,327	100	100	50.5	71.9

[1] *See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.*

[2] *In accordance with Legislation passed during March 2012, the State appropriated $14,619 thousand during 2013 to reach a funded status of 80.0 percent based on the actuarial valuation as of June 30, 2012.*

Schedule of Active Members Valuation Data

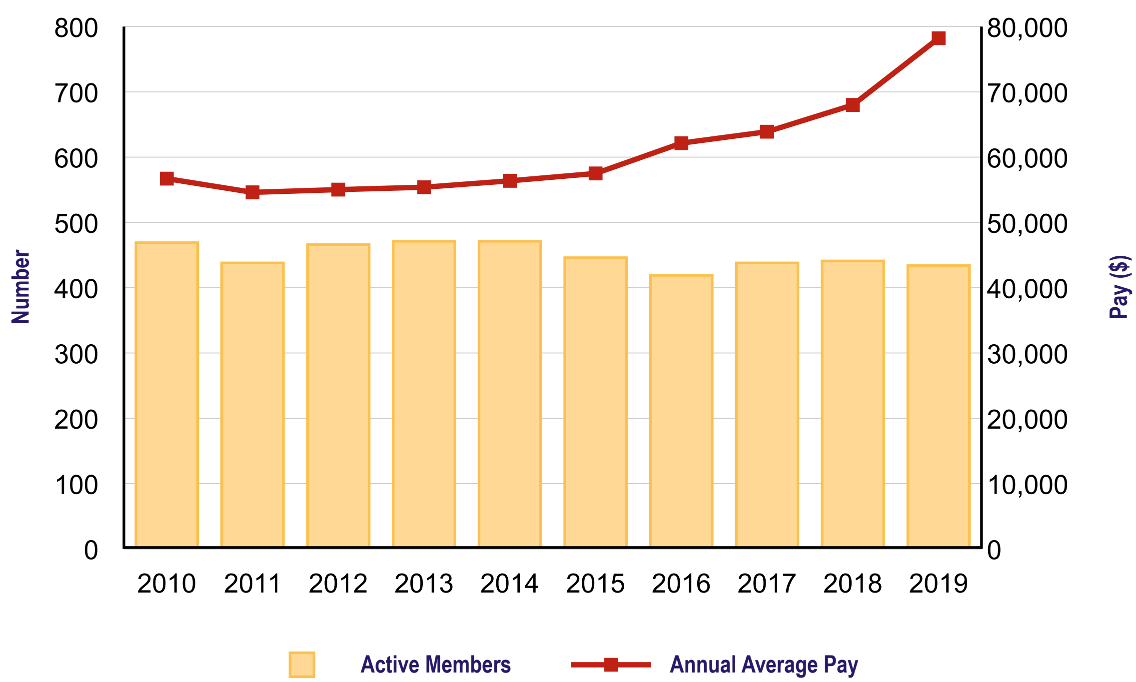
Actuarial Valuation as of June 30 [1]

(dollars in thousands - except annual average pay)

	Active Members	Annual Payroll	Annual Average Pay	Annual Percent Increase / (Decrease) In Average Pay
2019	436	$34,103	$78,219	15.0%
2018	443	30,121	67,994	6.4
2017	440	28,114	63,895	2.8
2016	421	26,164	62,147	8.1
2015	448	25,761	57,502	2.0
2014	473	26,664	56,372	1.8
2013	473	26,201	55,393	0.7
2012	468	25,752	55,026	0.8
2011	440	24,028	54,609	(3.7)
2010	471	26,709	56,707	(0.5)

[1] *See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.*

Total Number of Active Members Per Year and Annual Average Pay



Schedule of Retirants and Beneficiaries

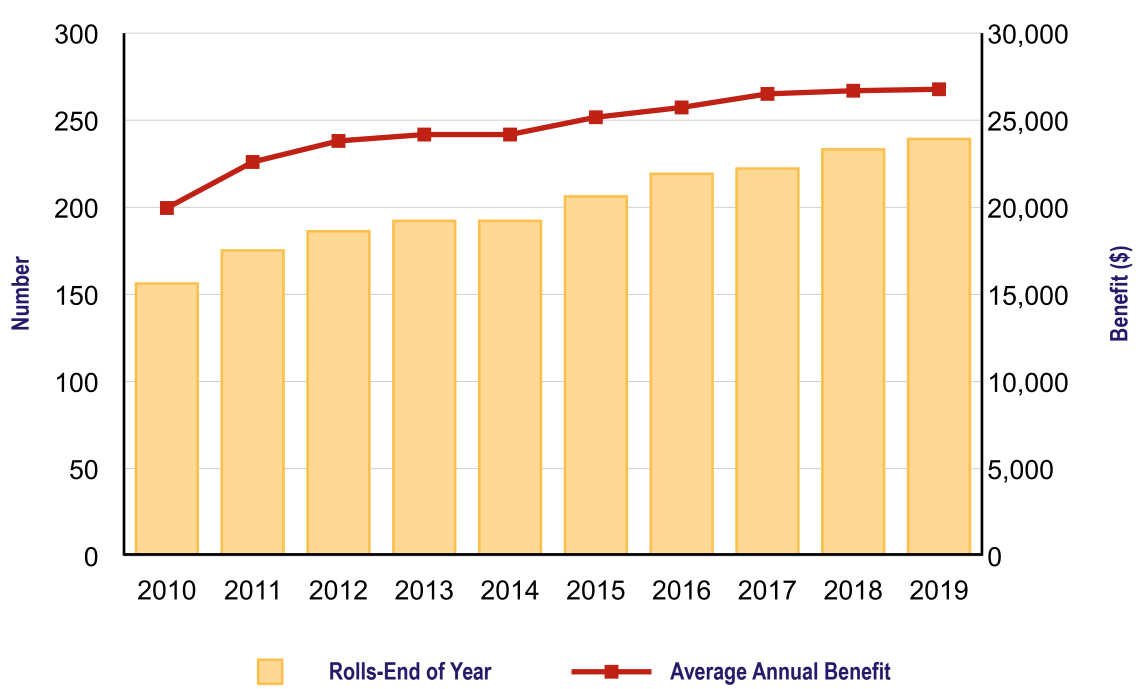
Actuarial Valuation as of June 30 [1]

(dollars in thousands -- except average annual benefit)

	Added to Rolls		Removed from Rolls		Rolls – End of Year		Percent Increase / (Decrease) In Total Annual Benefits	Average Annual Benefit	Percent Increase / (Decrease) in Average Annual Benefit
	Number	Annual Benefits	Number	Annual Benefits	Number	Total Annual Benefits			
2019	9	$216	3	$19	240	$6,426	2.9%	$26,776	0.3%
2018	13	404	2	23	234	6,246	5.6	26,692	0.7
2017	8	314	5	60	223	5,912	4.4	26,512	3.0
2016	14	506	1	4	220	5,661	8.7	25,733	2.2
2015	15	556	1	5	207	5,210	11.7	25,170	4.1
2014	—	—	—	—	193	4,666	—	24,177	—
2013	8	253	2	9	193	4,666	4.8	24,177	1.5
2012	14	495	3	14	187	4,452	11.9	23,810	5.3
2011	22	902	3	23	176	3,978	26.9	22,602	13.2
2010	6	136	6	49	157	3,134	2.6	19,962	2.6

[1] See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.

Total Number of Retirants and Beneficiaries Per Year and Average Annual Benefit



Historical Summary of Actuarial Valuation Results

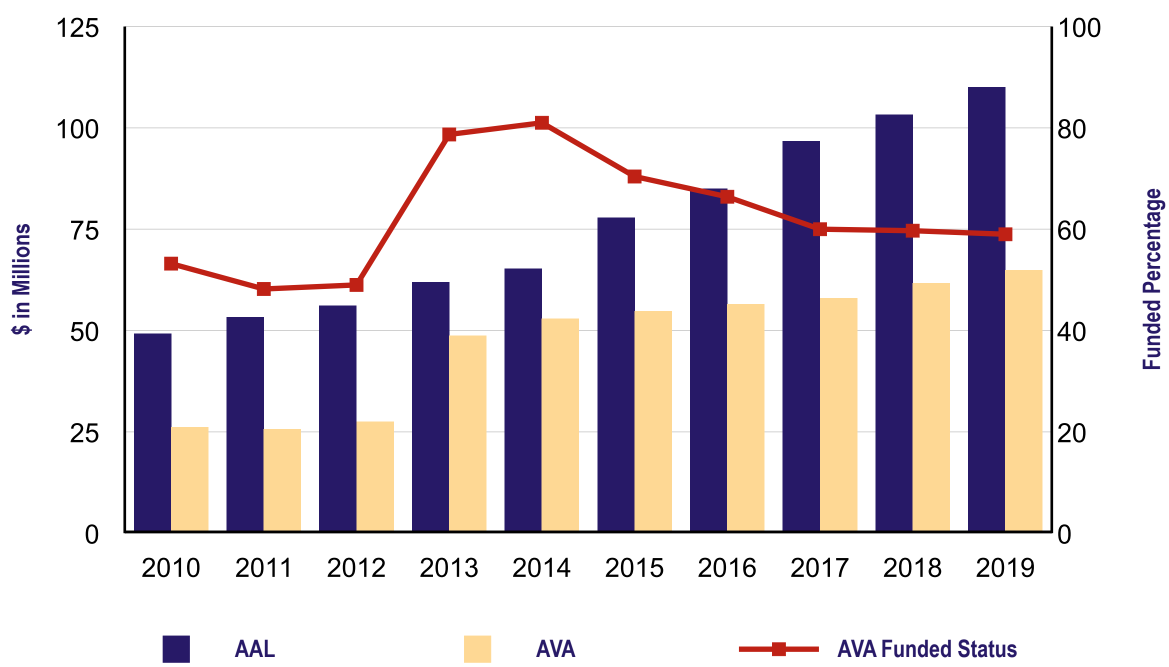
Actuarial Valuation as of June 30 [1]

The following table shows the history of the Unfunded Liability as a percentage of Covered Employee Payroll for PARF.

(dollars in thousands)

	Actuarial Accrued Liability (AAL)	Actuarial Value of Assets (AVA)	Unfunded Liability (AAL-AVA)	AVA Funded Status (AVA/AAL)	Covered Employee Payroll	Unfunded Liability as a percentage of Covered Employee Payroll
2019	$110,082	$64,909	**$45,173**	**59.0%**	$21,791	207.3%
2018	103,284	61,665	**41,619**	**59.7**	21,578	192.9
2017	96,655	57,967	**38,688**	**60.0**	22,635	170.9
2016	85,033	56,472	**28,561**	**66.4**	21,372	133.6
2015	77,861	54,848	**23,013**	**70.4**	21,145	108.8
2014	65,336	52,936	**12,400**	**81.0**	20,608	60.2
2013	61,940	48,762	**13,178**	**78.7**	18,805	70.2
2012	56,080	27,501	**28,579**	**49.0**	21,705	131.8
2011	53,252	25,651	**27,601**	**48.2**	18,082	152.6
2010	49,174	26,166	**23,008**	**53.2**	21,016	109.4

[1] See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.



Prosecuting Attorneys' Retirement Fund, continued

Summary of Actuarial Assumptions, Actuarial Methods, and Plan Provisions

The actuarial assumptions and methods used in the June 30, 2019 valuation of the Prosecuting Attorneys' Retirement Fund were adopted by the INPRS Board in May 2019. The majority of the actuarial assumptions and methods are based on plan experience from July 1, 2010 through June 30, 2014, and were first used in the June 30, 2015 valuation. The INPRS Board adopted a funding policy in April 2014, and the policy was last updated in October 2018. The funding policy is available at: https://www.in.gov/inprs/files/INPRS_Funding_Policy.pdf.

Changes in Actuarial Assumptions

There were no changes to the actuarial assumptions during the fiscal year.

Changes in Actuarial Methods

There were no changes to the actuarial methods during the fiscal year.

Changes in Plan Provisions

There were no changes to the plan provisions during the fiscal year.

Actuarial Assumptions

Except as noted below, actuarial assumptions used for funding purposes are the same as those used for accounting and financial reporting.

Economic Assumptions

Interest Rate / Investment Return:	
Funding	6.75 percent (net of administrative and investment expenses)
Account & Financial Reporting	6.75 percent (net of investment expenses)
Interest on Member Contributions	3.50 percent per year
Inflation	2.25 percent per year
Cost of Living Increases:	N/A
Future Salary Increases:	4.00 percent per year

Demographic Assumptions: Based on 2010-2014 Experience

Mortality (Healthy): RP-2014 White Collar Mortality Tables, with Social Security generational improvements from 2006 based on the Social Security Administration's 2014 Trustee Report.

Mortality (Disabled): RP-2014 Disability Mortality Tables, with Social Security generational improvements from 2006 based on the Social Security Administration's 2014 Trustee Report.

Retirement:

Ages	Service <22	Age	Service>=22
62-34	20.0%	55-64	70.0%
65+	100.0	65+	100.0

Inactive vested members are assumed to commence their retirement benefit at their earliest unreduced eligible retirement date (age 62, or current age if greater).

Termination: 10 percent per year for all members prior to retirement eligibility

Disability:

	Sample Rates	
Age	Male	Female
20	0.0067%	0.0050%
30	0.0208	0.0158
40	0.0646	0.0496
50	0.2005	0.1556
60	0.6220	0.4881
70	0.1000	0.1000
71+	0.0000	0.0000

Spouse / Beneficiary: 90 percent of members are assumed to be married or to have a dependent beneficiary. Males are assumed to be three years older than females.

Actuarial Methods

Funding uses the same Actuarial Methods as accounting and financial reporting, except where noted.

Actuarial Cost Method:	Entry Age Normal – Level Percent of Payroll The normal cost is calculated separately for each active member and is equal to the level percentage of payroll needed as an annual contribution from entry age to retirement age to fund projected benefits. The actuarial accrued liability on any valuation date is the accumulated value of such normal costs from entry age to the valuation date. This method produces a cost of future benefit accruals that is a level percent of pay over time, which is desirable for employers from a budgeting standpoint. Other actuarial cost methods are more volatile in their allocation of cost for each year of member service.
Amortization Method:	For funding, gains and losses occurring from census experience different than assumed, assumption changes, and benefit changes are amortized over a 20-year period with level payments each year. A new gain or loss base is established each year based on the additional gain or loss during that year and that base is amortized over a new 20-year period. However, when the plan is at or above 100 percent funded (based on Actuarial Value of Assets), the past amortization bases are considered fully amortized and a single amortization base equal to the surplus is amortized over a 30-year period with level payment each year. The purpose of the method is to give a smooth progression of the costs from year-to-year and, at the same time, provide for an orderly funding of the unfunded liabilities. For accounting and financial reporting, gains and losses occurring from census experience different than assumed and assumption changes are amortized into expense over the average expected future service of all plan participants. Gains and losses occurring from investment experience different than assumed are amortized into expense over a five-year period. The effect of plan changes on the plan liability are fully recognized in expense in the year in which they occur.
Data Measurement Date:	Member census data as of the prior year end was used in the valuation and adjusted, where appropriate, to reflect changes during the current fiscal year. Standard actuarial roll forward techniques were then used to project the liabilities computed as of prior year end to the current year measurement date.
Asset Valuation Method:	Funding uses the Actuarial Value of Assets (AVA), which is equal to a five-year smoothing of gains and losses on the Fair Value of Assets (FVA), subject to a 20 percent corridor. Accordingly, the AVA is limited to no more than 20 percent greater than or 20 percent less than the FVA. Accounting and financial reporting uses the Fair Value of Assets (FVA) in accordance with GASB Statement No. 67.

Plan Provisions

Please refer to Note 1 of the Notes to the Financial Statements in the Financial Section, the actuarial valuation at https://www.in.gov/inprs/actuarialvaluation.htm, or the applicable Indiana Code at http://iga.in.gov/.

Analysis of Financial Experience

(dollars in thousands)	UAAL
Unfunded Actuarial Accrued Liability (UAAL): June 30, 2018	$41,619
Normal Cost and Interest, less Expected Contributions	(951)
Expected UAAL: June 30, 2019	40,668
UAAL (Gain) / Loss	
Actuarial Value of Assets Experience	2,265
Actuarial Accrued Liabilities Experience[1]	2,240
Actuarial Assumption & Methodology Changes	—
Plan Provision Changes	—
Total UAAL (Gain) / Loss	4,505
Unfunded Actuarial Accrued Liability (UAAL): June 30, 2019	$45,173

[1] See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.

Solvency Test [1,2]

The solvency test compares aggregate actuarial liabilities by various categories with the plan's assets.

(dollars in thousands)	Actuarial Accrued Liabilities					Portion of Actuarial Accrued Liabilities Covered by Assets			
Actuarial Valuation as of June 30	Active Member Contributions	Retirees and Beneficiaries	Active Member (Employer Financed Portion)	Total Actuarial Accrued Liabilities	Actuarial Value of Assets	Active Member Contributions	Retirees and Beneficiaries	Active Member (Employer Financed Portion)	Total Actuarial Accrued Liabilities
2019	$ 27,471	$ 39,607	$ 43,004	$ 110,082	$ 64,909	100%	94.5%	—%	59.0%
2018	27,620	39,034	36,630	103,284	61,664	100	87.2	—	59.7
2017	26,327	38,504	31,824	96,655	57,967	100	82.2	—	60.0
2016	26,206	37,709	21,118	85,033	56,472	100	80.3	—	66.4
2015	25,479	26,636	25,746	77,861	54,848	100	100	10.6	70.4
2014	26,654	22,665	16,017	65,336	52,936	100	100	22.6	81.0
2013	25,371	22,004	14,565	61,940	48,762	100	100	9.5	78.7
2012	23,406	18,660	14,014	56,080	27,501	100	21.9	—	49.0
2011	21,592	16,806	14,854	53,252	25,651	100	24.2	—	48.2
2010	20,999	12,557	15,618	49,174	26,166	100	41.1	—	53.2

[1] See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.

[2] In accordance with Legislation passed during March 2012, the State appropriated $17,363 thousand during 2013 to reach a funded status of 80.0 percent based on the actuarial valuation as of June 30, 2012.

Schedule of Active Members Valuation Data

Actuarial Valuation as of June 30 [1]

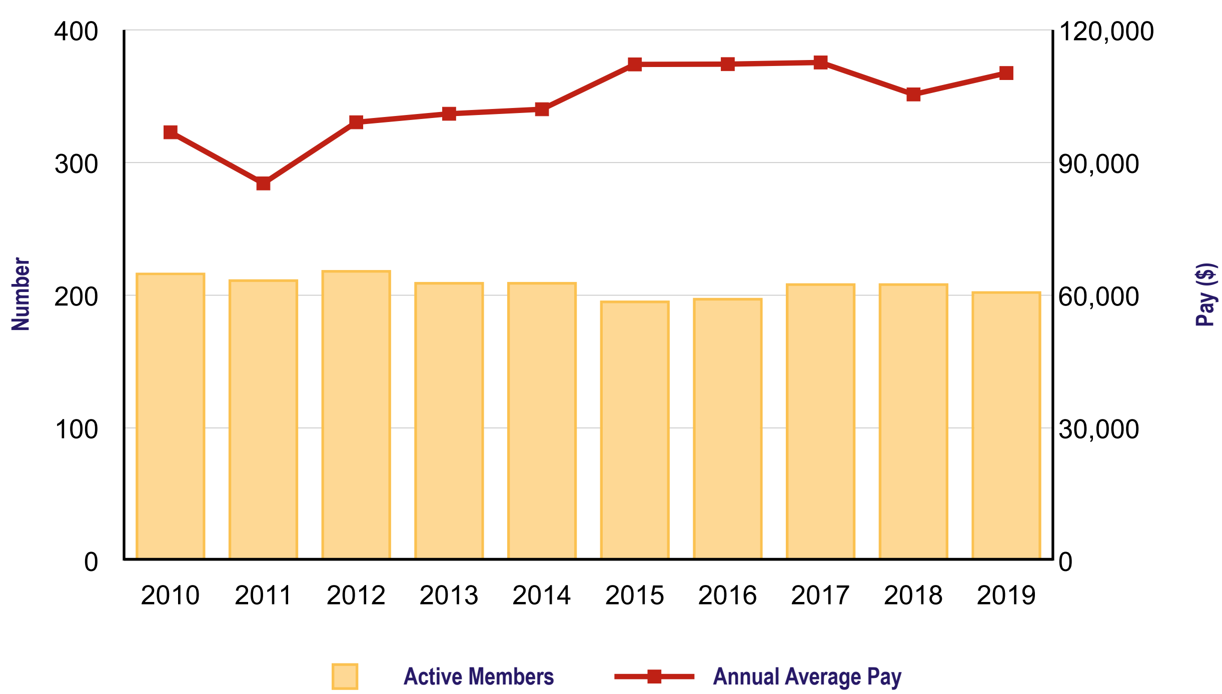
(dollars in thousands - except annual average pay)

	Active Members	Annual Payroll [2]	Annual Average Pay	Annual Percent Increase / (Decrease) In Average Pay
2019	203	$22,379	$110,242	4.6%
2018	209	22,031	105,413	(6.4)
2017	209	23,540	112,632	0.3
2016	198	22,227	112,257	0.1
2015	196	21,991	112,198	9.9
2014	210	21,432	102,057	1.0
2013	210	21,217	101,033	1.9
2012	219	21,705	99,110	16.2
2011	212	18,082	85,292	(11.9)
2010	217	21,016	96,848	3.0

[1] See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.

[2] Excludes payroll from members that are over the 22 year service cap.

Total Number of Active Members Per Year and Annual Average Pay



Schedule of Retirants and Beneficiaries

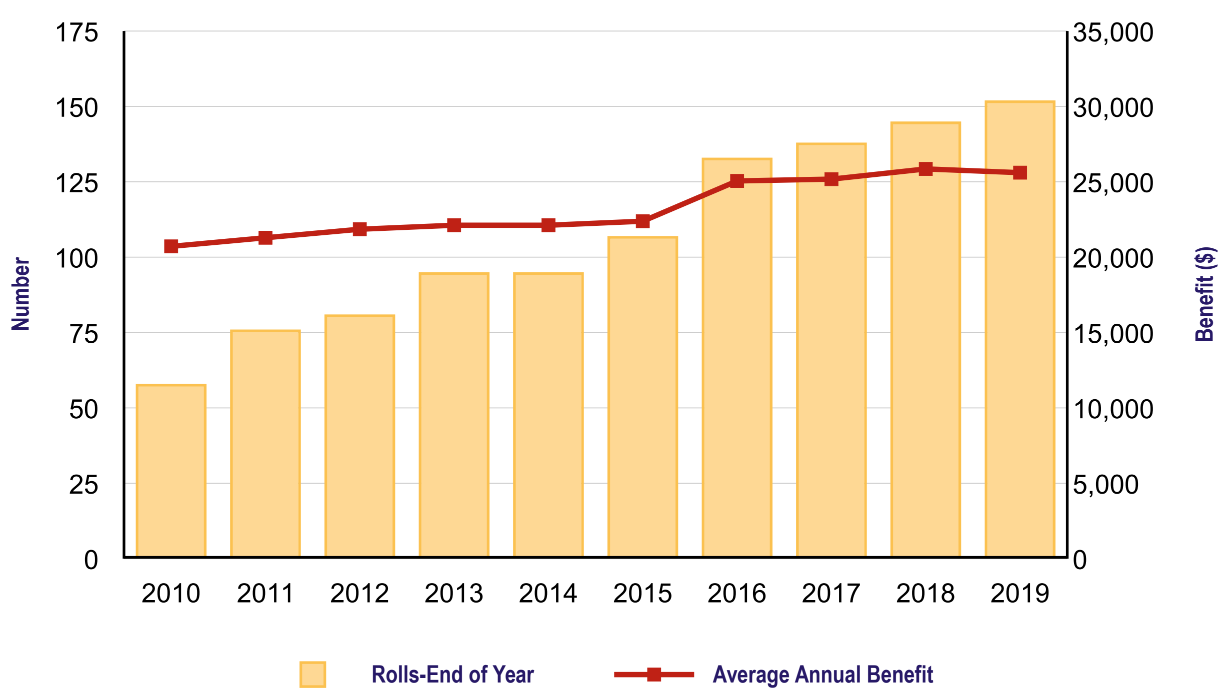
Actuarial Valuation as of June 30 [1]

(dollars in thousands -- except average annual benefit)

	Added to Rolls		Removed from Rolls		Rolls – End of Year		Percent Increase / (Decrease) In Total Annual Benefits	Average Annual Benefit	Percent Increase / (Decrease) in Average Annual Benefit
	Number	Annual Benefits	Number	Annual Benefits	Number	Total Annual Benefits			
2019	9	$168	2	$25	152	$3,892	3.8%	$25,605	(1.0)%
2018	9	307	2	28	145	3,749	7.9	25,853	2.7
2017	5	140	—	—	138	3,474	4.3	25,176	0.5
2016	26	937	—	—	133	3,332	39.1	25,056	11.9
2015	14	319	2	14	107	2,395	14.0	22,385	1.2
2014	—	—	—	—	95	2,101	—	22,118	—
2013	15	362	1	27	95	2,101	18.7	22,118	1.2
2012	6	178	1	27	81	1,770	9.4	21,853	2.7
2011	19	473	1	16	76	1,618	34.7	21,288	2.8
2010	9	187	1	16	58	1,201	16.4	20,715	0.4

[1] *See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.*

Total Number of Retirants and Beneficiaries Per Year and Average Annual Benefit



Legislators' Defined Benefit Fund

Historical Summary of Actuarial Valuation Results

Actuarial Valuation as of June 30 [1]

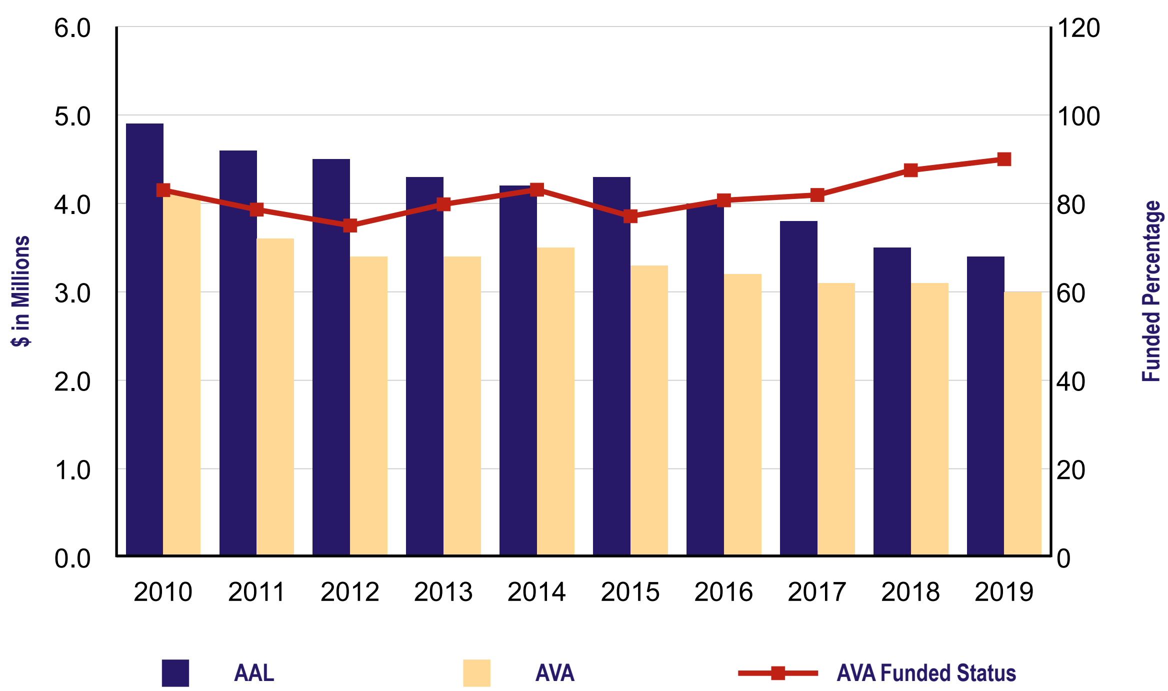
The following table shows the history of the Unfunded Liability for LE DB.

(dollars in thousands)

	Actuarial Accrued Liability (AAL)	Actuarial Value of Assets (AVA)	Unfunded Liability (AAL-AVA)	AVA Funded Status (AVA/AAL)	Covered Employee Payroll [2]	Unfunded Liability as a percentage of Covered Employee Payroll
2019	$3,362	$3,026	**$336**	**90.0%**	N/A	N/A
2018	3,485	3,050	**435**	**87.5**	N/A	N/A
2017	3,804	3,114	**690**	**81.9**	N/A	N/A
2016	4,016	3,241	**775**	**80.7**	N/A	N/A
2015	4,328	3,336	**992**	**77.1**	N/A	N/A
2014	4,173	3,467	**706**	**83.1**	N/A	N/A
2013	4,295	3,428	**867**	**79.8**	N/A	N/A
2012	4,503	3,377	**1,126**	**75.0**	N/A	N/A
2011	4,621	3,634	**987**	**78.6**	N/A	N/A
2010	4,909	4,075	**834**	**83.0**	N/A	N/A

[1] See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.

[2] LE DB is a closed plan with no Covered Employee Payroll.



Summary of Actuarial Assumptions, Actuarial Methods, and Plan Provisions

The actuarial assumptions and methods used in the June 30, 2019 valuation of the Legislators' Defined Benefit Fund were adopted by the INPRS Board in May 2019. The majority of the actuarial assumptions and methods are based on plan experience from July 1, 2010 through June 30, 2014, and were first used in the June 30, 2015 valuation. The INPRS Board adopted a funding policy in April 2014, and the policy was last updated in October 2018. The funding policy is available online at: https://www.in.gov/inprs/files/INPRS_Funding_Policy.pdf.

Changes in Actuarial Assumptions

There were no changes to the actuarial assumptions.

Changes in Actuarial Methods

There were no changes to the actuarial methods during the fiscal year.

Changes in Plan Provisions

There were no changes to the plan provisions.

Actuarial Assumptions

Except as noted below, actuarial assumptions used for funding purposes are the same as those used for accounting and financial reporting.

Economic Assumptions

Interest Rate / Investment Return:	
Funding	6.75 percent (net of administrative and investment expenses)
Accounting & Financial Reporting	6.75 percent (net of investment expenses)
Inflation:	2.25 percent per year
Cost of Living Increases:	No COLA or 13th check will be paid in the 2020 and 2021 fiscal years. Thereafter, the following COLAs, compounded annually, are assumed: 0.4 percent beginning on January 1, 2022 0.5 percent beginning on January 1, 2034 0.6 percent beginning on January 1, 2039
Future Salary Increases:	2.25 percent per year

Demographic Assumptions: Based on 2010-2014 Experience

Mortality (Healthy):	RP-2014 White Collar Mortality Tables, with Social Security generational improvements from 2006 based on the Social Security Administration's 2014 Trustee Report.
Mortality (Disabled):	RP-2014 Disability Mortality Tables, with Social Security generational improvements from 2006 based on the Social Security Administration's 2014 Trustee Report.

Retirement:

Age	Rate
55	10.0%
56-57	8.0
58-61	2.0
62-64	5.0
65+	100.0

Inactive vested members are assumed to commence their retirement benefit at their earliest eligible retirement date (age 55, or current age if greater).

Termination:

Sarason T-2 Tables. Sample rates:

Age	Rate	Age	Rate
20	5.4384%	40	3.5035%
25	5.2917	45	1.7686
30	5.0672	50	0.4048
35	4.6984	55+	0.0000

Disability:

75 percent of 1964 OASDI Tables. Sample rates:

Age	Rate	Age	Rate
20	0.045%	45	0.270%
25	0.064	50	0.454
30	0.083	55	0.757
35	0.111	60	1.220
40	0.165	65+	0.000

Spouse / Beneficiary:

90 percent of members are assumed to be married or to have a dependent beneficiary. Males are assumed to be three (3) years older than females.

Actuarial Methods

Actuarial Cost & Amortization Methods:

Funding:	Traditional Unit Credit The normal cost is calculated separately for each active member and is equal to actuarial present value of additional benefits expected to be accrued during the year following the valuation date. The actuarial accrued liability on any valuation date is the actuarial present value of the benefits earned for service prior to the valuation date. Since the benefits for all members of the Legislators' Defined Benefit Fund are fixed and no longer increasing with future service credit or future salary increases, applying the Traditional Unit Credit cost method results in the Actuarial Accrued Liability being equal to the Present Value of Future Benefits (i.e. all benefits are treated as though they are attributable to past service) and the Normal Cost being equal to $0. This is consistent with the actual status of member benefit accruals. Gains and losses occurring from census experience different than assumed, assumption changes, and benefit changes are amortized over a five-year period with level payments each year. A new gain or loss base base is established each year based on the additional gain or loss during that year and that base is amortized over a new five-year period. However, when the plan is at or above 100 percent funded (based on Actuarial Value of Assets), the past amortization bases are considered fully amortized and a single amortization base equal to the surplus is amortized over a 30-year period with level payment each year. The purpose of the method is to give a smooth progression of the costs from year-to-year and, at the same time, provide for an orderly funding of the unfunded liabilities.
Accounting & Financing Reporting:	Entry Age Normal - Level Percent of Payroll The normal cost is calculated separately for each active member and is equal to the level percentage of payroll needed as an annual contribution from entry age to retirement age to fund projected benefits. The actuarial accrued liability on any valuation date is the accumulated value of such normal costs from entry age to the valuation date. Gains and losses occurring from census experience different than assumed and assumption changes are amortized into expense over the average expected future service of all plan participants. Gains and losses occurring from investment experience different than assumed are amortized into expense over a five-year period. The effect of plan changes on the plan liability are fully recognized in expense in the year in which they occur.
Data Measurement Date:	Member census data as of the prior year end was used in the valuation and adjusted, where appropriate, to reflect changes during the current fiscal year. Standard actuarial roll forward techniques were then used to project the liabilities computed as of prior year end to the current year measurement date.
COLA Funding Amount:	The COLA may be funded by either direct State appropriations or by allocation of a portion of the lottery proceeds. The COLA Funding Amount is developed by determining the assets needed a the start of the next biennium to fund the post-retirement benefit increases anticipated to be granted in that biennium. This amount is divided by a present value factor over which the accumulations will occur.
Asset Valuation Method:	Funding uses the Actuarial Value of Assets (AVA), which is equal to a five-year smoothing of gains and losses on the Fair Value of Assets (FVA), subject to a 20 percent corridor. Accordingly, the AVA is limited to no more than 20 percent greater than or 20 percent less than the FVA. Accounting and financial reporting uses the Fair Value of Assets (FVA) in accordance with GASB Statement No. 67.

Plan Provisions

Please refer to Note 1 of the Notes to the Financial Statements in the Financial Section, the actuarial valuation at https://www.in.gov/inprs/actuarialvaluation.htm, or the applicable Indiana Code at http://iga.in.gov/.

Analysis of Financial Experience

(dollars in thousands)	UAAL
Unfunded Actuarial Accrued Liability (UAAL): June 30, 2018	$435
Normal Cost and Interest, less Expected Contributions	(134)
Expected UAAL: June 30, 2019	301
UAAL (Gain) / Loss	
Actuarial Value of Assets Experience	26
Actuarial Accrued Liabilities Experience[1]	9
Actuarial Assumption & Methodology Changes	—
Total UAAL (Gain) / Loss	35
Unfunded Actuarial Accrued Liability (UAAL): June 30, 2019	**$336**

[1] See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.

Solvency Test [1]

The solvency test compares aggregate actuarial liabilities by various categories with the plan's assets.

(dollars in thousands)	Actuarial Accrued Liabilities				Portion of Actuarial Accrued Liabilities Covered by Assets		
Actuarial Valuation as of June 30	Retirees and Beneficiaries	Active Member (Employer Financed Portion)	Total Actuarial Accrued Liabilities	Actuarial Value of Assets	Retirees and Beneficiaries	Active Member (Employer Financed Portion)	Total Actuarial Accrued Liabilities
2019	$2,747	$615	$3,362	$3,026	100%	45.3%	90.0%
2018	2,783	702	3,485	3,050	100	38.1	87.5
2017	3,013	791	3,804	3,114	100	12.9	81.9
2016	3,207	809	4,016	3,241	100	4.2	80.7
2015	3,213	1,115	4,328	3,336	100	11.1	77.1
2014	3,076	1,097	4,173	3,467	100	35.7	83.1
2013	3,192	1,103	4,295	3,428	100	21.4	79.8
2012	3,031	1,472	4,503	3,377	100	23.5	75.0
2011	3,037	1,584	4,621	3,634	100	37.7	78.6
2010	3,017	1,892	4,909	4,075	100	55.9	83.0

[1] See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.

Schedule of Active Members Valuation Data

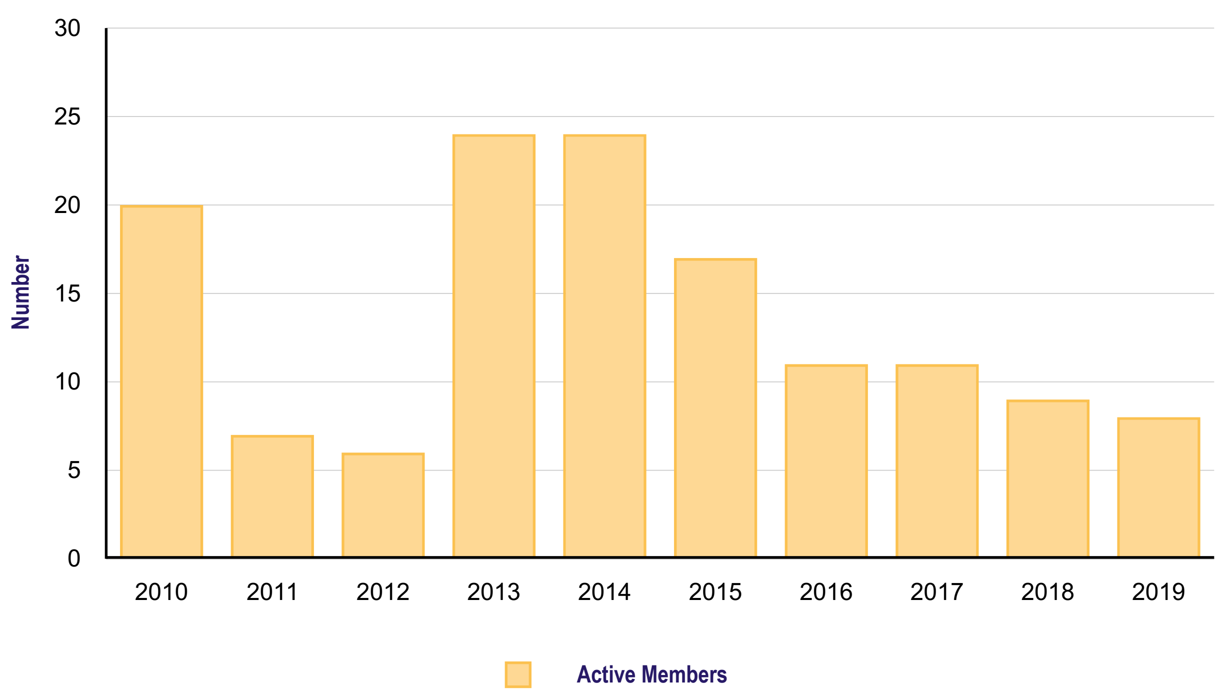
Actuarial Valuation as of June 30 [1]

(dollars in thousands - except annual average pay)

	Active Members	Annual Payroll	Annual Average Pay	Annual Percent Increase / (Decrease) In Average Pay
2019	8	N/A	N/A	N/A
2018	9	N/A	N/A	N/A
2017	11	N/A	N/A	N/A
2016	11	N/A	N/A	N/A
2015	17	N/A	N/A	N/A
2014	24	N/A	N/A	N/A
2013	24	N/A	N/A	N/A
2012	6	N/A	N/A	N/A
2011	7	N/A	N/A	N/A
2010	20	N/A	N/A	N/A

[1] *See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.*

Total Number of Active Members Per Year



Schedule of Retirants and Beneficiaries

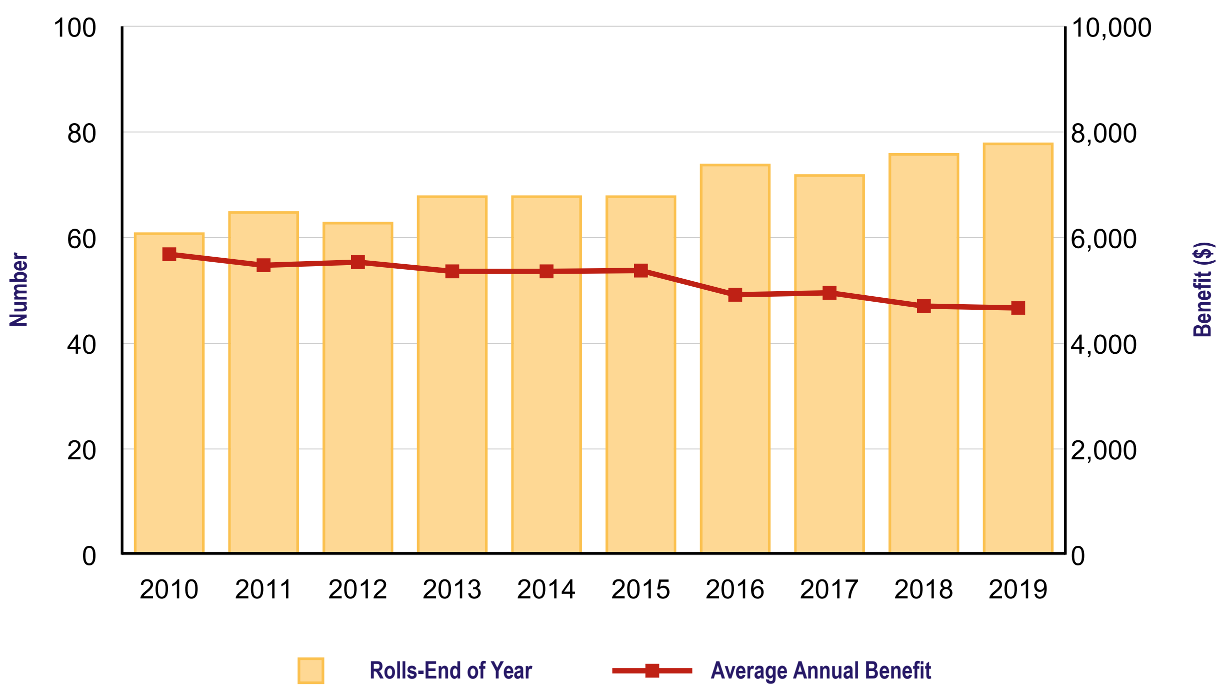
Actuarial Valuation as of June 30 [1]

(dollars in thousands -- except average annual benefit)

	Added to Rolls		Removed from Rolls		Rolls – End of Year		Percent Increase / (Decrease) In Total Annual Benefits	Average Annual Benefit	Percent Increase / (Decrease) in Average Annual Benefit
	Number	Annual Benefits	Number	Annual Benefits	Number	Total Annual Benefits			
2019	2	$7	—	$—	78	$364	2.0%	$4,669	(0.7)%
2018	4	16	—	—	76	357	—	4,704	(5.1)
2017	—	—	2	7	72	357	(1.9)	4,956	0.8
2016	8	23	2	14	74	364	(0.5)	4,919	(8.5)
2015	1	2	1	1	68	366	0.5	5,377	0.3
2014	—	—	—	—	68	364	—	5,362	—
2013	9	41	4	26	68	364	4.3	5,362	(3.1)
2012	2	13	4	20	63	349	(2.0)	5,536	1.1
2011	4	22	—	—	65	356	2.6	5,477	(3.7)
2010	5	9	3	27	61	347	(6.5)	5,685	(9.5)

[1] *See Accompanying Notes To The Actuarial Schedules, included in the Introduction to Actuarial Information.*

Total Number of Retirants and Beneficiaries Per Year and Average Annual Benefit



2019 COMPREHENSIVE ANNUAL FINANCIAL REPORT

For the Fiscal Year Ended June 30, 2019

Statistical Section

Trust and Collaboration

We are our stakeholders' trusted source of reliable information. We seek out stakeholder input when establishing goals and setting priorities.

1.4 Active Members

To annuitants

Unchanged Employer / Member Rates

Remained consistent to prior fiscal year

INPRS

INDIANA PUBLIC RETIREMENT SYSTEM

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Introduction to Statistical Information

Purpose of the Statistical Section

The objectives of the Statistical Section are to provide additional historical perspective, context, and relevant details to assist readers in using information in the financial statements, notes to the financial statements, and required supplementary information in order to understand and assess INPRS's overall financial condition.

Accompanying Notes to the Statistical Schedules

The following notes are intended to clarify certain information presented in various schedules in the Statistical Section.

- For several funds, 10 years of historical information was not presented. INPRS intends to reflect 10 years of historical data as it become available.
- Beginning June 30, 2014 and years subsequent, defined benefit membership is calculated using the prior year census data, which is adjusted for certain activity during the year.
- Annuitant data includes retirees, beneficiaries, and disabled members. Survivor benefits are reported beginning fiscal year ended June 30, 2013.
- Prior to June 30, 2013, survivor benefits were included with pension benefits.
- Within the Schedule of Benefit Recipients by Type of Benefit Option, members of PERF DB, TRF Pre-'96 DB, and TRF '96 DB may choose social security integration as a retiree between the ages of 50 and 62. Social security integration can be incorporated with Five-Year Certain & Life, Straight Life, Modified Cash Refund Plus Five-Year Certain & Life, Joint With 100% Survivor Benefits, Joint With Two-Thirds Survivor Benefits, or Joint With One-Half Survivor Benefits. The number of retirees electing social security integration is included in the number of retirees of the selected benefit option. The monthly benefit is reduced or terminated at age 62 depending on the estimated monthly benefit from social security at age 62.

Financial Schedules present trend information about the change in INPRS's assets for the past 10 years, including key sources of asset additions and deductions, which assist in providing a context framing how INPRS's financial position has changed over time. Financial trend schedules presented include:

- Schedule of Changes and Growth in Fiduciary Net Position
- Summary of Income Sources for a 10-Year Period (combined funds)
- Schedule of Historical Contribution Rates

Demographic and Economic Information is designed to assist in understanding the environment in which INPRS operates. The demographic and economic information presented include:

- Summary of Participating Employers
- Membership Data
- Ratio of Active Members to Annuitants
- Pension Benefits by Indiana County
- Retirees by Geographical Location
- Summary of Defined Benefit Retirement Benefits
- Schedule of Benefit Recipients by Type of Benefit Option
- Schedule of Average Benefit Payments
- Schedule of Participating Employers: Top 10
- Schedule of Average Death Benefit Payments

Schedule of Changes and Growth in Fiduciary Net Position

For the 10-Years Ended June 30

(dollars in thousands)	2019	2018	2017	2016	2015
Fiduciary Net Position Restricted - Beginning of Year	**$ 34,182,563**	**$ 31,847,149**	**$ 29,900,278**	**$ 29,892,379**	**$ 30,212,225**
Contributions / (Benefits and Expenses)					
Employer Contributions	1,161,582	984,332	967,011	1,012,012	923,759
Nonemployer Contributing Entity	1,145,125	1,124,814	1,088,559	1,100,433	1,080,665
Member Contributions	361,373	349,246	347,622	334,079	348,789
Member Reassignment Income	9,990	13,446	16,669	16,187	17,591
Miscellaneous Income	1,831	695	185	1,078	188
Total Contributions and Other	2,679,901	2,472,533	2,420,046	2,463,789	2,370,992
Pension Benefits	(2,185,371)	(2,297,332)	(2,275,134)	(2,212,132)	(2,220,957)
Disability Benefits	(47,576)	(46,056)	(42,115)	(62,234)	(64,172)
Survivor Benefits	(175,883)	(171,381)	(163,155)	(154,804)	(144,767)
Special Death Benefits	(2,001)	(1,634)	(1,209)	(924)	(1,610)
Distributions of Contributions and Interest	(447,103)	(179,575)	(70,332)	(80,385)	(88,659)
Distributions of Custodial Funds	(212,239)	(212,634)	(213,256)	(215,816)	(217,663)
Administrative Expenses	(41,398)	(38,991)	(38,365)	(38,502)	(40,486)
Member Reassignment Expenses	(9,990)	(13,446)	(16,669)	(16,187)	(17,591)
Miscellaneous Expenses	(284)	(437)	(13)	—	—
Total Benefits and Expenses	(3,121,845)	(2,961,486)	(2,820,248)	(2,780,984)	(2,795,905)
Net Contributions / (Benefits and Expenses)	**(441,944)**	**(488,953)**	**(400,202)**	**(317,195)**	**(424,913)**
Net Investment Income / (Loss)	2,327,734	2,824,367	2,347,073	325,094	105,067
Net Increase / (Decrease)	**1,885,790**	**2,335,414**	**1,946,871**	**7,899**	**(319,846)**
Fiduciary Net Position Restricted - End of Year	**$ 36,068,353**	**$ 34,182,563**	**$ 31,847,149**	**$ 29,900,278**	**$ 29,892,379**

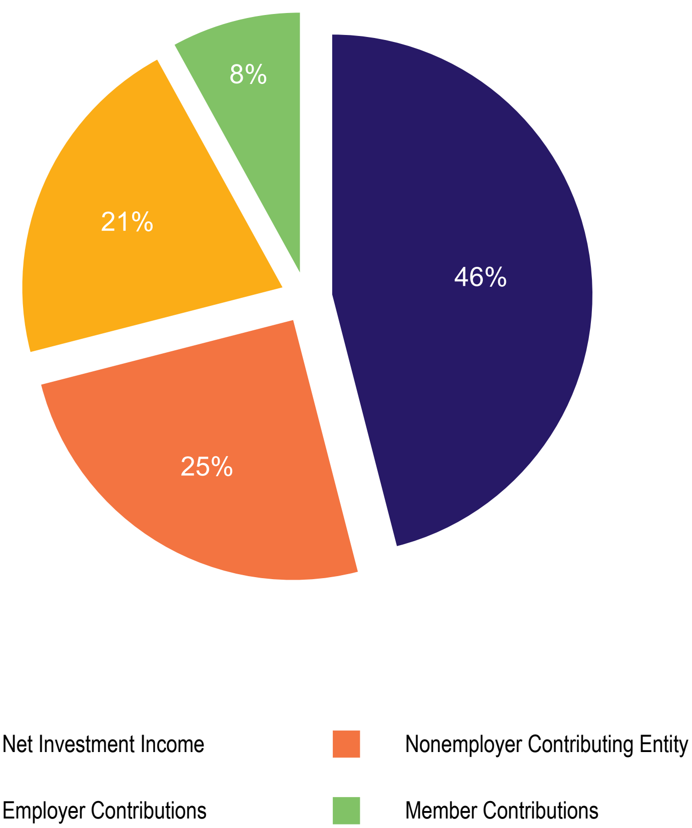
Schedule of Changes and Growth in Fiduciary Net Position, continued

For the 10-Years Ended June 30

(dollars in thousands)	2014	2013	2012	2011	2010
Fiduciary Net Position Restricted - Beginning of Year	**$ 27,080,402**	**$ 25,559,605**	**$ 25,750,906**	**$ 22,174,510**	**$ 19,614,487**
Contributions / (Benefits and Expenses)					
Employer Contributions	894,851	933,719	749,439	677,385	648,470
Nonemployer Contributing Entity	1,028,579	1,242,728	946,163	916,754	912,923
Member Contributions	341,609	326,518	335,548	330,314	335,244
Member Reassignment Income	15,582	14,759	13,025	15,410	8,176
Miscellaneous Income	172	106	100	166	154
Total Contributions and Other	2,280,793	2,517,830	2,044,275	1,940,029	1,904,967
Pension Benefits	(2,006,827)	(1,938,557)	(1,976,672)	(1,889,792)	(1,623,749)
Disability Benefits	(71,202)	(60,664)	(57,239)	(53,608)	(55,554)
Survivor Benefits	(138,027)	(131,468)	—	—	—
Special Death Benefits	(1,170)	(1,744)	(938)	(1,224)	(1,464)
Distributions of Contributions and Interest	(87,375)	(98,414)	(95,431)	(91,447)	(53,297)
Distributions of Custodial Funds	(219,440)	(219,814)	(224,220)	(219,425)	(213,035)
Administrative Expenses	(43,447)	(45,921)	(40,848)	(35,918)	(38,258)
Member Reassignment Expenses	(15,582)	(14,759)	(13,025)	(15,410)	(8,176)
Miscellaneous Expenses	—	—	—	—	—
Total Benefits and Expenses	(2,583,070)	(2,511,341)	(2,408,373)	(2,306,824)	(1,993,533)
Net Contributions / (Benefits and Expenses)	**(302,277)**	**6,489**	**(364,098)**	**(366,795)**	**(88,566)**
Net Investment Income / (Loss)	3,434,100	1,514,308	172,797	3,943,191	2,648,589
Net Increase / (Decrease)	**3,131,823**	**1,520,797**	**(191,301)**	**3,576,396**	**2,560,023**
Fiduciary Net Position Restricted - End of Year	**$ 30,212,225**	**$ 27,080,402**	**$ 25,559,605**	**$ 25,750,906**	**$ 22,174,510**

Summary of Income Sources for a 10-Year Period

Fiscal Years 2010 - 2019



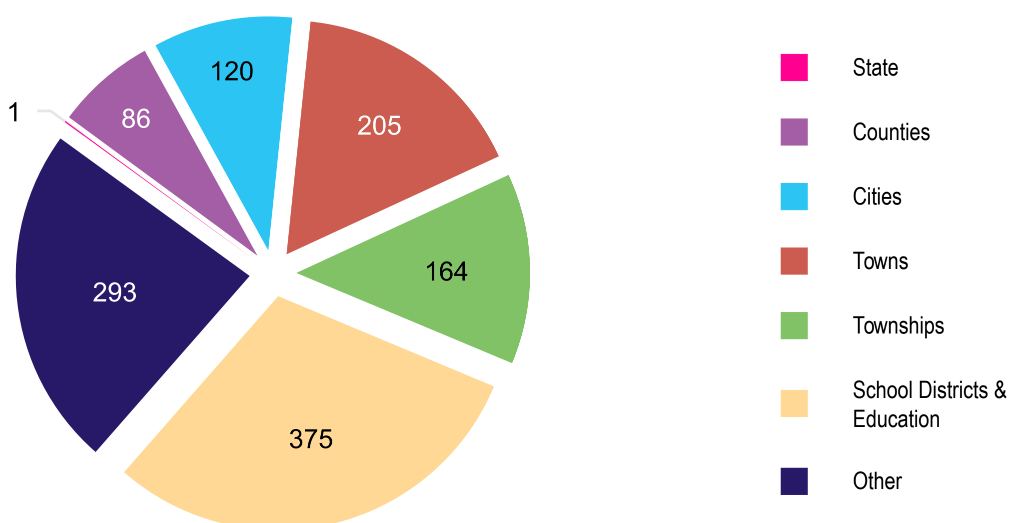
Combined Funds, continued

Summary of Participating Employers

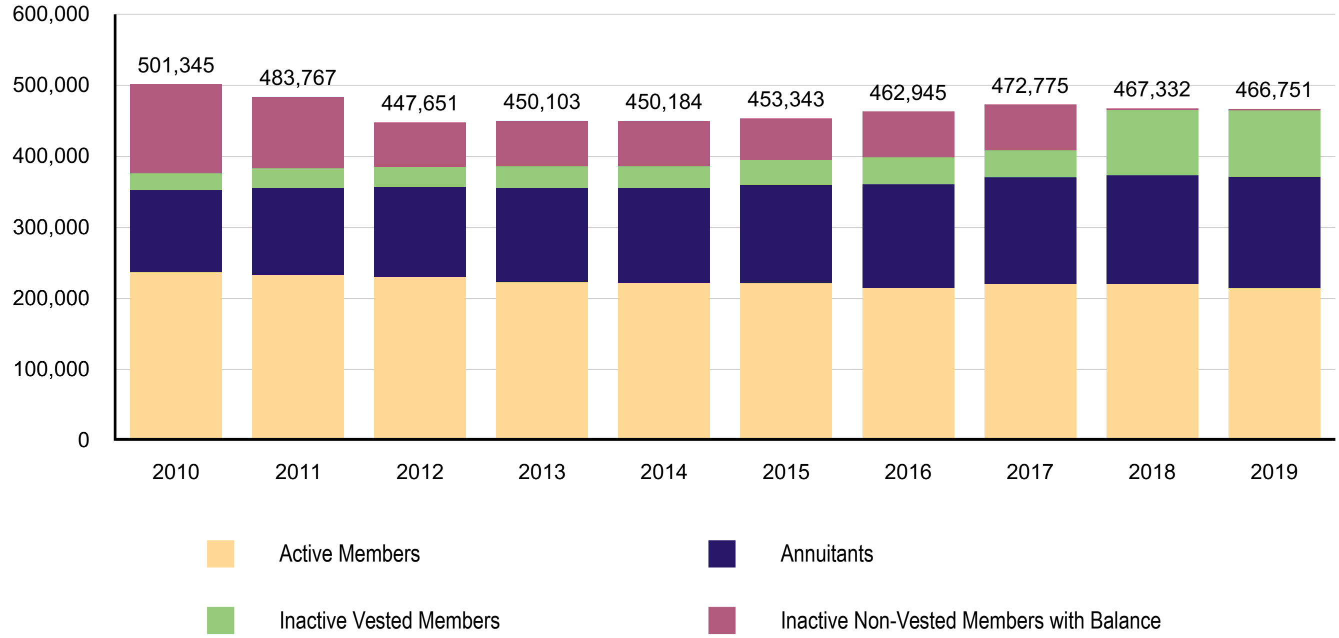
For the Year Ended June 30, 2019

		Defined Benefit (DB)									Defined Contribution (DC)				
Employers	**Total [1]**	**Total DB**	**PERF DB**	**TRF Pre-'96 DB**	**TRF '96 DB**	**77 Fund**	**JRS**	**EG&C**	**PARF**	**LE DB**	**Total DC**	**PERF DC**	**PERF MC DC**	**TRF DC**	**LE DC**
State	1	1	1	1	1	—	1	1	1	1	1	1	1	1	1
Counties	86	86	86	—	—	—	—	—	—	—	86	86	1	—	—
Cities	120	120	113	—	—	119	—	—	—	—	113	113	1	—	—
Towns	205	205	202	—	—	34	—	—	—	—	202	202	—	—	—
Townships	164	164	160	—	—	13	—	—	—	—	160	160	1	—	—
School Districts & Education	375	375	333	344	372	—	—	—	—	—	375	333	2	373	—
Other	293	293	292	—	—	2	—	—	—	—	293	293	3	—	—
Total	**1,244**	**1,244**	**1,187**	**345**	**373**	**168**	**1**	**1**	**1**	**1**	**1,230**	**1,188**	**9**	**374**	**1**

[1] Sum of employers does not equal total, as an employer may participate in multiple retirement funds.



Membership Data 10-Year Summary



Membership Data for the 10-Years Ended June 30

	2019				
Fund	Active Members	Annuitants	Inactive Vested Members	Inactive Non-Vested Members with Balance	Total Members
PERF DB	129,099	89,932	33,062	—	**252,093**
TRF Pre-'96 DB	10,497	53,498	2,382	—	**66,377**
TRF '96 DB	58,308	7,041	5,778	—	**71,127**
77 Fund	14,119	5,187	243	1,200	**20,749**
JRS	453	375	22	36	**886**
EG&C	436	240	4	137	**817**
PARF	203	152	92	132	**579**
LE DB	8	78	9	—	**95**
Total DB	213,123	156,503	41,592	1,505	**412,723**
PERF DC	127,189	—	87,128	—	**214,317**
PERF MC DC	1,489	—	1,846	—	**3,335**
TRF DC	69,193	—	25,218	—	**94,411**
LE DC	150	—	67	—	**217**
Total DC	198,021	—	114,259	—	**312,280**
Total INPRS [1,2]	**214,762**	**156,503**	**93,981**	**1,505**	**466,751**

[1] Total number of members based on adjusted prior year DB member census data and prior year DC member data, excluding duplicates as members may participate in more than one fund.

[2] DC member count is as of June 30, 2018.

Membership Data

For the 10-Years Ended June 30, continued

2018

Fund	Active Members	Annuitants	Inactive Vested Members	Inactive Non-Vested Members with Balance	Total Members
PERF DB	132,181	87,990	31,924	—	**252,095**
TRF Pre-'96 DB	11,710	53,227	2,635	—	**67,572**
TRF '96 DB	59,996	6,289	4,996	—	**71,281**
77 Fund	13,879	4,751	225	1,136	**19,991**
JRS	439	365	26	42	**872**
EG&C	443	234	5	141	**823**
PARF	209	145	87	134	**575**
LE DB	9	76	10	—	**95**
Total DB	218,866	153,077	39,908	1,453	**413,304**
PERF DC	128,678	—	88,974	—	**217,652**
TRF DC	69,193	—	25,218	—	**94,411**
LE DC	150	—	67	—	**217**
Total DC	198,021	—	114,259	—	**312,280**
Total INPRS [1,2]	**220,505**	**153,077**	**92,297**	**1,453**	**467,332**

2017

Fund	Active Members	Annuitants	Inactive Vested Members	Inactive Non-Vested Members with Balance	Total Members
PERF DB	134,909	85,130	30,816	50,312	**301,167**
TRF Pre-'96 DB	13,128	53,240	2,504	400	**69,272**
TRF '96 DB	58,097	5,796	4,252	12,494	**80,639**
77 Fund	13,587	4,374	195	1,005	**19,161**
JRS	402	350	67	39	**858**
EG&C	440	223	6	120	**789**
PARF	209	138	87	138	**572**
LE DB	11	72	12	—	**95**
Total DB	220,783	149,323	37,939	64,508	**472,553**
LE DC	150	—	—	72	**222**
Total DC	150	—	—	72	**222**
Total INPRS	**220,933**	**149,323**	**37,939**	**64,580**	**472,775**

[1] Total number of members based on adjusted prior year DB member census data and prior year DC member data, excluding duplicates as members may participate in more than one fund.

[2] DC member count is as of June 30, 2018.

Membership Data

For the 10-Years Ended June 30, continued

2016

Fund	Active Members	Annuitants	Inactive Vested Members	Inactive Non-Vested Members with Balance	Total Members
PERF DB	131,178	83,188	29,702	50,212	**294,280**
TRF Pre-'96 DB	14,327	52,575	3,119	394	**70,415**
TRF '96 DB	55,265	4,977	4,335	12,529	**77,106**
77 Fund	13,506	4,004	186	933	**18,629**
JRS	394	351	65	41	**851**
EG&C	421	220	7	121	**769**
PARF	198	133	100	151	**582**
LE DB	11	74	12	—	**97**
Total DB	215,300	145,522	37,526	64,381	**462,729**
LE DC	150	—	—	66	**216**
Total DC	150	—	—	66	**216**
Total INPRS	**215,450**	**145,522**	**37,526**	**64,447**	**462,945**

2015

Fund	Active Members	Annuitants	Inactive Vested Members	Inactive Non-Vested Members with Balance	Total Members
PERF DB	138,660	79,198	26,681	43,803	**288,342**
TRF Pre-'96 DB	16,310	50,214	4,545	408	**71,477**
TRF '96 DB	52,424	4,136	4,132	12,292	**72,984**
77 Fund	13,390	3,736	155	822	**18,103**
JRS	368	326	78	32	**804**
EG&C	448	207	3	101	**759**
PARF	196	107	97	153	**553**
LE DB	17	68	14	—	**99**
Total DB	221,813	137,992	35,705	57,611	**453,121**
LE DC	149	—	—	73	**222**
Total DC	149	—	—	73	**222**
Total INPRS	**221,962**	**137,992**	**35,705**	**57,684**	**453,343**

Membership Data

For the 10-Years Ended June 30, continued

2014

Fund	Active Members	Annuitants	Inactive Vested Members	Inactive Non-Vested Members with Balance	Total Members
PERF DB	137,567	75,950	24,013	50,997	**288,527**
TRF Pre-'96 DB	19,210	49,345	3,314	546	**72,415**
TRF '96 DB	51,204	3,665	3,103	11,147	**69,119**
77 Fund	13,295	3,491	129	796	**17,711**
JRS	365	321	67	32	**785**
EG&C	473	193	4	87	**757**
PARF	210	95	83	162	**550**
LE DB	24	68	9	—	**101**
Total DB	222,348	133,128	30,722	63,767	**449,965**
LE DC	149	—	—	70	**219**
Total DC	149	—	—	70	**219**
Total INPRS	**222,497**	**133,128**	**30,722**	**63,837**	**450,184**

2013

Fund	Active Members	Annuitants	Inactive Vested Members	Inactive Non-Vested Members with Balance	Total Members
PERF DB	137,937	75,950	23,504	51,057	**288,448**
TRF Pre-'96 DB	19,210	49,345	3,314	546	**72,415**
TRF '96 DB	51,204	3,665	3,103	11,147	**69,119**
77 Fund	13,287	3,491	129	796	**17,703**
JRS	365	321	67	32	**785**
EG&C	473	193	4	87	**757**
PARF	210	95	83	162	**550**
LE DB	24	68	9	—	**101**
Total DB	222,710	133,128	30,213	63,827	**449,878**
LE DC	167	—	—	58	**225**
Total DC	167	—	—	58	**225**
Total INPRS	**222,877**	**133,128**	**30,213**	**63,885**	**450,103**

Membership Data

For the 10-Years Ended June 30, continued

2012

Fund	Active Members	Annuitants	Inactive Vested Members	Inactive Non-Vested Members with Balance	Total Members
PERF DB	145,519	72,992	21,200	47,874	**287,585**
TRF Pre-'96 DB	22,688	47,000	3,382	794	**73,864**
TRF '96 DB	47,885	2,971	2,985	12,528	**66,369**
77 Fund	13,390	3,208	122	751	**17,471**
JRS	361	311	72	28	**772**
EG&C	468	187	4	61	**720**
PARF	219	81	84	165	**549**
LE DB	6	63	38	—	**107**
Total DB	230,536	126,813	27,887	62,201	**447,437**
LE DC	167	—	—	47	**214**
Total DC	167	—	—	47	**214**
Total INPRS	**230,703**	**126,813**	**27,887**	**62,248**	**447,651**

2011

Fund	Active Members	Annuitants	Inactive Vested Members	Inactive Non-Vested Members with Balance	Total Members
PERF DB	147,933	70,380	20,634	72,105	**311,052**
TRF Pre-'96 DB	24,710	45,421	3,921	3,595	**77,647**
TRF '96 DB	46,633	2,554	2,715	23,573	**75,475**
77 Fund	13,376	2,966	126	791	**17,259**
JRS	363	310	66	31	**770**
EG&C	440	176	5	59	**680**
PARF	212	76	85	177	**550**
LE DB	7	65	40	—	**112**
Total DB	233,674	121,948	27,592	100,331	**483,545**
LE DC	171	—	—	51	**222**
Total DC	171	—	—	51	**222**
Total INPRS	**233,845**	**121,948**	**27,592**	**100,382**	**483,767**

Membership Data

For the 10-Years Ended June 30, continued

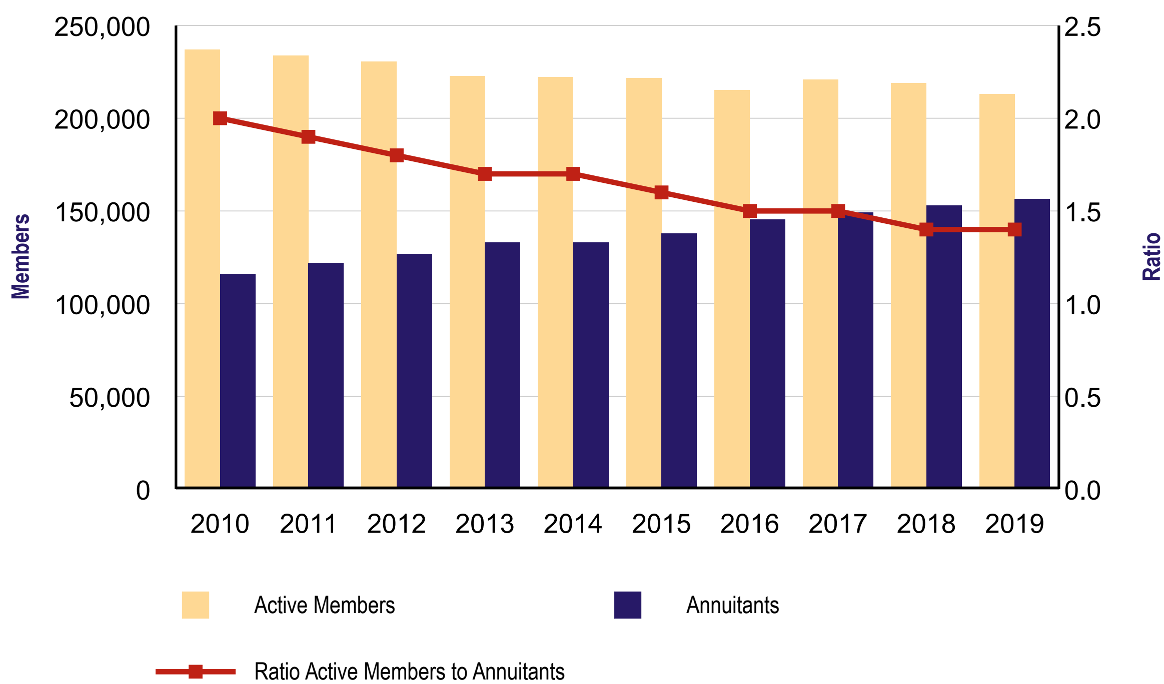
2010					
Fund	Active Members	Annuitants	Inactive Vested Members	Inactive Non-Vested Members with Balance	Total Members
PERF DB	149,877	67,166	14,759	88,234	**320,036**
TRF Pre-'96 DB	26,439	43,478	5,209	8,149	**83,275**
TRF '96 DB	46,433	2,181	2,461	27,698	**78,773**
77 Fund	13,362	2,782	111	771	**17,026**
JRS	291	298	73	31	**693**
EG&C	471	157	4	52	**684**
PARF	217	58	74	177	**526**
LE DB	20	61	34	—	**115**
Total DB	237,110	116,181	22,725	125,112	**501,128**
LE DC	169	—	—	48	**217**
Total DC	169	—	—	48	**217**
Total INPRS	**237,279**	**116,181**	**22,725**	**125,160**	**501,345**

Ratio of Active Members to Annuitants

For the 10-Years Ended June 30

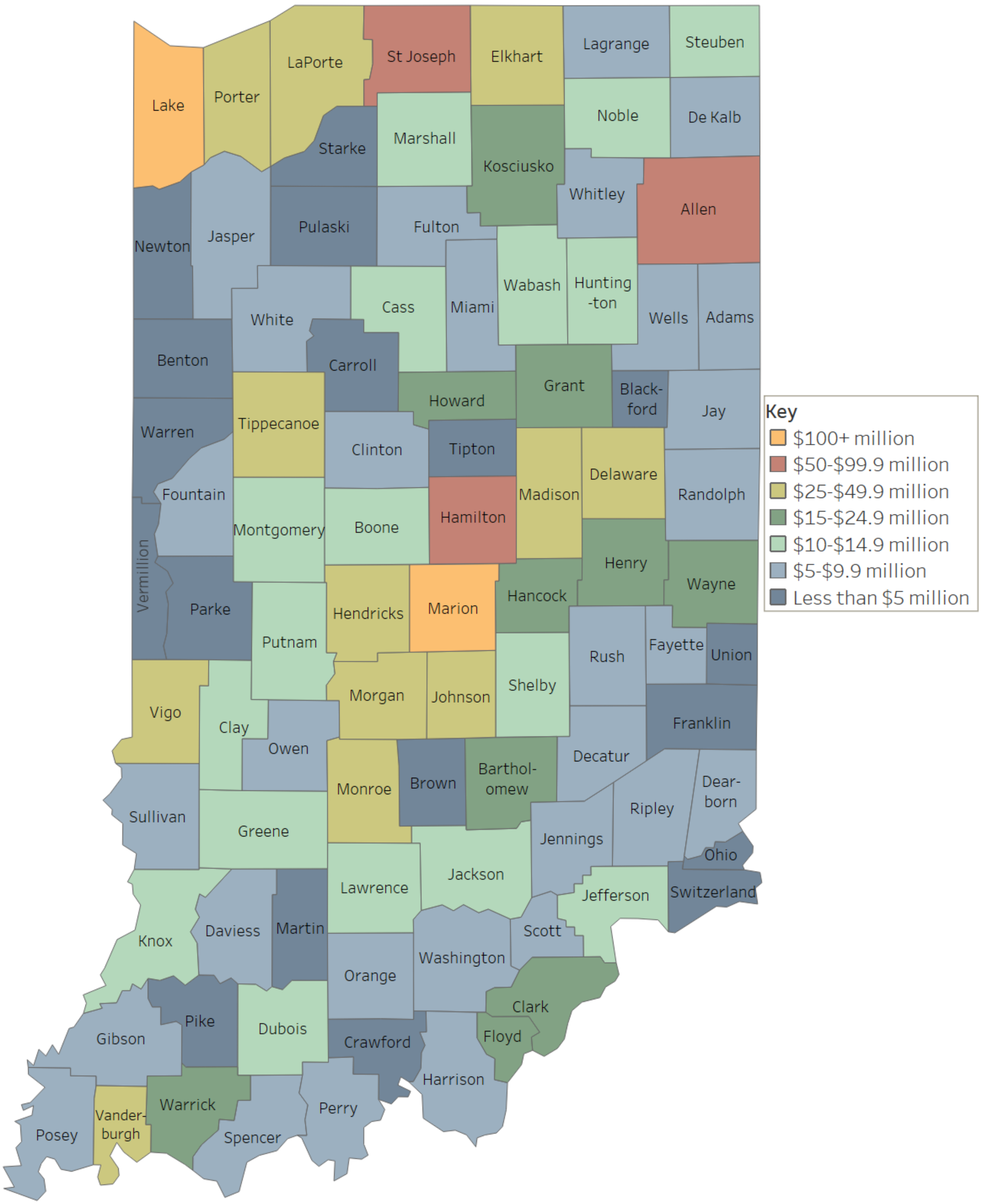
	Active Members [1]	Annuitants	Ratio Active Members to Annuitants
2019	213,123	156,503	1.4
2018	218,866	153,077	1.4
2017	220,783	149,323	1.5
2016	215,300	145,522	1.5
2015	221,813	137,992	1.6
2014	222,348	133,128	1.7
2013	222,710	133,128	1.7
2012	230,536	126,813	1.8
2011	233,674	121,948	1.9
2010	237,110	116,181	2.0

[1] DB Active Members only.



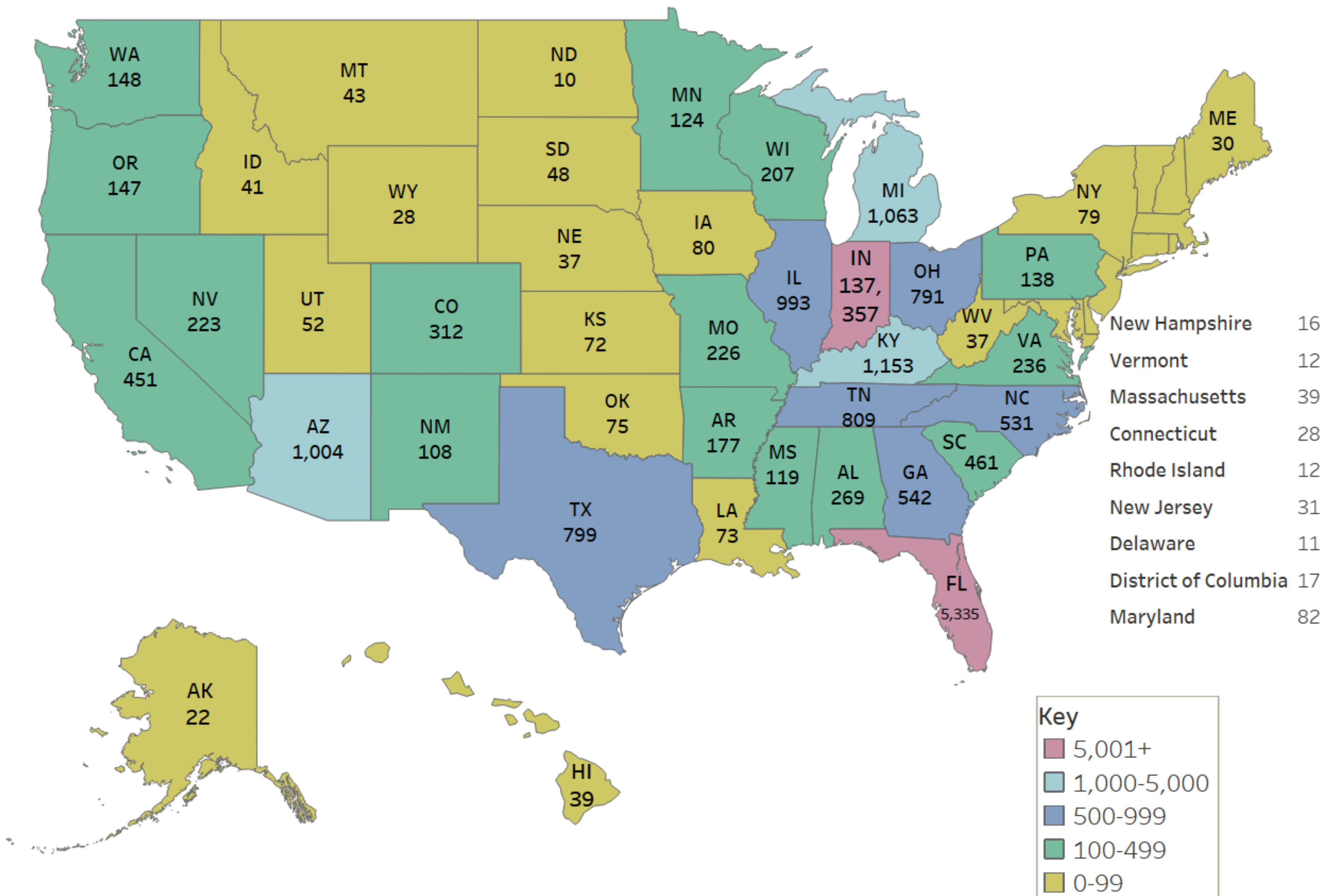
Pension Benefits by Indiana County (July 2017 - June 2018)

Approximately 89% of retirees or their beneficiaries reside in Indiana. This map illustrates how approximately $1.8B in pension benefit payments for the year ending June 30, 2018 were distributed amongst Indiana's counties, representing INPRS's economic impact on the state.



Retirees by Geographical Location (June 2018)

As of June 30, 2018, more than 154 thousand retirees or their beneficiaries received benefits from INPRS.



Retirees outside the United States:

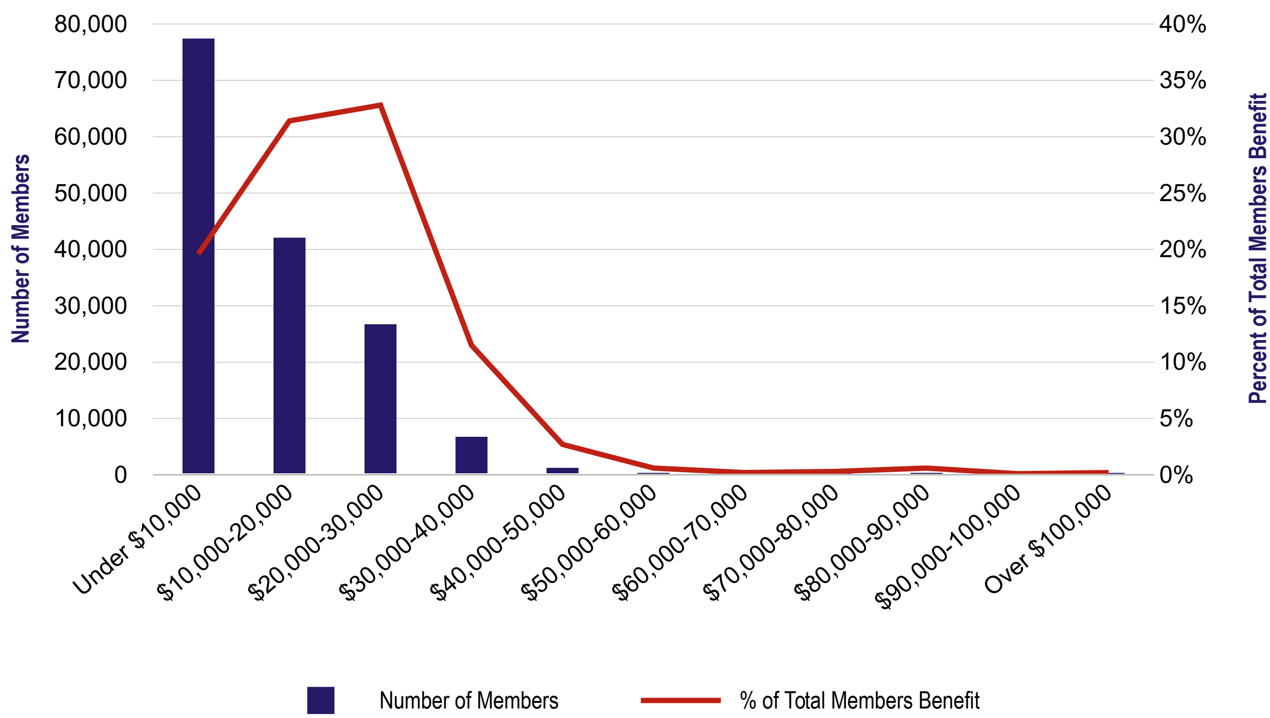
Armed Forces, Europe	1	Greece	1	Romania	1
Armed Forces, Pacific	1	India	1	Sweden	1
Australia	1	Israel	1	Thailand	1
Canada	11	Mexico	1	United Kingdom	2
Costa Rica	1	New Zealand	1		
Croatia	1	Philippines	1		
France	1	Puerto Rico	10		

Summary of Defined Benefit Retirement Benefits (June 30, 2018)

For the year ending June 30, 2018, more than 154 thousand beneficiaries received benefits from INPRS administered defined benefit (DB) retirement plans with an average DB benefit of $12,776. The median DB benefit was $9,994, which means half of all retirees receiving benefits are higher than $9,994 and half are lower. Retirees may also be eligible for Social Security.

	Members		Amount (in thousands)	
Annualized	#	%	$	%
Under $10,000	77,415	50.0	388,351	19.6
$10,000-20,000	42,082	27.2	620,055	31.4
$20,000-30,000	26,719	17.3	648,266	32.8
$30,000-40,000	6,774	4.4	227,649	11.5
$40,000-50,000	1,231	0.8	54,009	2.7
$50,000-60,000	222	0.1	11,881	0.6
$60,000-70,000	64	—	4,167	0.2
$70,000-80,000	77	0.1	5,748	0.3
$80,000-90,000	143	0.1	12,225	0.6
$90,000-100,000	24	—	2,263	0.1
Over $100,000	24	—	2,764	0.2
Grand Total	**154,775**	**100.0**	**1,977,378**	**100.0**

Annual Member Defined Benefits



Public Employees' Defined Benefit Account

Schedule of Changes and Growth in Fiduciary Net Position

For the 10-Years Ended June 30 [1]

(dollars in thousands)	2019	2018 [2]	2017	2016	2015
Fiduciary Net Position Restricted - Beginning of Year	**$ 12,694,328**	**$ 14,644,671**	**$ 13,870,502**	**$ 13,907,666**	**$ 14,104,288**
Contributions / (Benefits and Expenses)					
Employer Contributions	581,873	571,374	558,891	615,773	538,059
Member Contributions	296	83,112	168,112	161,905	169,731
Member Reassignment Income	2,101	3,208	6,118	5,543	4,184
Miscellaneous Income	882	121	55	905	83
Total Contributions and Other	585,152	657,815	733,176	784,126	712,057
Pension Benefits	(796,009)	(825,808)	(830,750)	(782,197)	(756,484)
Disability Benefits	(20,036)	(19,816)	(17,754)	(32,855)	(34,984)
Survivor Benefits [1]	(72,467)	(71,095)	(68,530)	(64,036)	(59,208)
Distributions of Contributions and Interest	—	(21,490)	(47,822)	(57,184)	(62,732)
Administrative Expenses	(18,472)	(20,844)	(24,483)	(24,098)	(25,506)
Transfer to Defined Contribution	—	(2,849,380)	—	—	—
Member Reassignment Expenses	(7,888)	(10,238)	(10,555)	(10,814)	(13,403)
Miscellaneous Expenses	—	(65)	—	—	—
Total Benefits and Expenses	(914,872)	(3,818,736)	(999,894)	(971,184)	(952,317)
Net Contributions / (Benefits and Expenses)	**(329,720)**	**(3,160,921)**	**(266,718)**	**(187,058)**	**(240,260)**
Net Investment Income / (Loss)	906,388	1,210,578	1,040,887	149,894	43,638
Net Increase / (Decrease)	**576,668**	**(1,950,343)**	**774,169**	**(37,164)**	**(196,622)**
Fiduciary Net Position Restricted - End of Year	**$ 13,270,996**	**$ 12,694,328**	**$ 14,644,671**	**$ 13,870,502**	**$ 13,907,666**

[1] *See Introduction to Statistical Information.*

[2] *PERF DC was split from the defined benefit plan effective January 1, 2018. As such, the DC plan contains only six months of DC activity for fiscal year 2018.*

Schedule of Changes and Growth in Fiduciary Net Position, continued

For the 10-Years Ended June 30

(dollars in thousands)	2014	2013	2012	2011	2010
Fiduciary Net Position Restricted - Beginning of Year	**$ 12,720,601**	**$ 12,243,755**	**$ 12,461,356**	**$ 10,581,319**	**$ 9,442,336**
Contributions / (Benefits and Expenses)					
Employer Contributions	526,090	455,658	397,843	342,779	331,090
Member Contributions	164,189	156,408	158,696	156,028	158,089
Member Reassignment Income	3,444	4,363	3,341	5,302	2,361
Miscellaneous Income	52	31	8	15	39
Total Contributions and Other	693,775	616,460	559,888	504,124	491,579
Pension Benefits	(668,789)	(625,526)	(628,522)	(600,797)	(539,540)
Disability Benefits	(39,837)	(42,905)	(40,659)	(37,663)	(40,171)
Survivor Benefits [1]	(56,701)	(54,154)	—	—	—
Distributions of Contributions and Interest	(63,031)	(68,775)	(69,879)	(65,178)	(39,632)
Administrative Expenses	(27,433)	(29,181)	(24,793)	(22,461)	(24,959)
Transfer to Defined Contribution	—	—	—	—	—
Member Reassignment Expenses	(7,690)	(10,405)	(9,684)	(10,078)	(5,837)
Miscellaneous Expenses	—	—	—	—	—
Total Benefits and Expenses	(863,481)	(830,946)	(773,537)	(736,177)	(650,139)
Net Contributions / (Benefits and Expenses)	**(169,706)**	**(214,486)**	**(213,649)**	**(232,053)**	**(158,560)**
Net Investment Income / (Loss)	1,553,393	691,332	(3,952)	2,112,090	1,297,543
Net Increase / (Decrease)	**1,383,687**	**476,846**	**(217,601)**	**1,880,037**	**1,138,983**
Fiduciary Net Position Restricted - End of Year	**$ 14,104,288**	**$ 12,720,601**	**$ 12,243,755**	**$ 12,461,356**	**$ 10,581,319**

[1] *See Introduction to Statistical Information.*

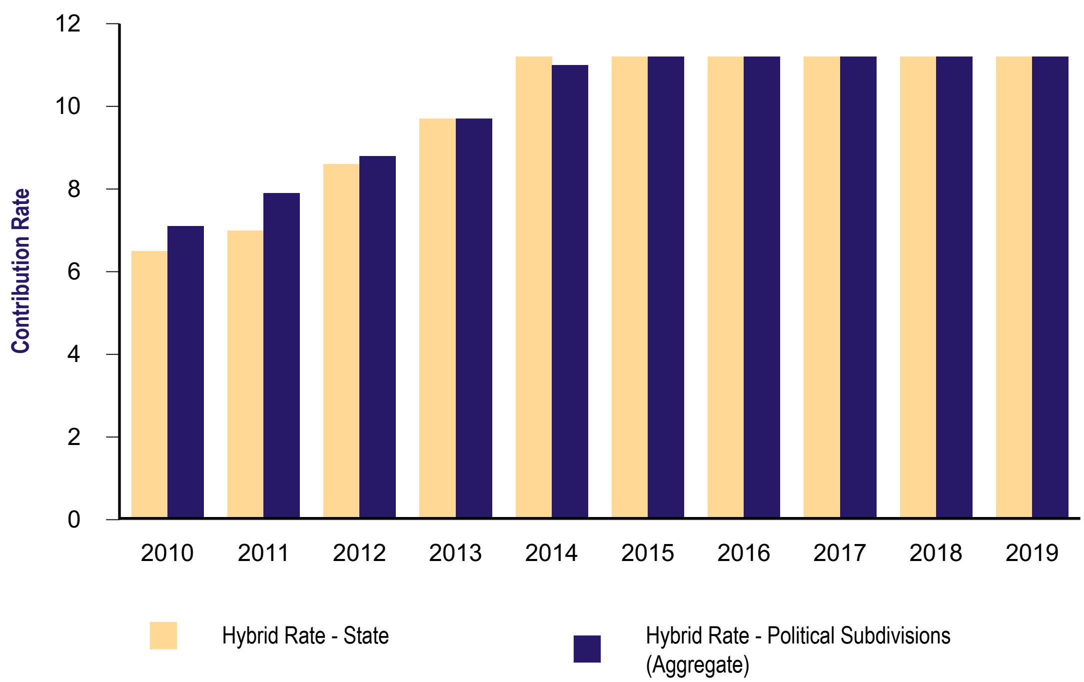
Public Employees' Defined Benefit Account, continued

Schedule of Historical Contribution Rates

For the 10-Years Ended June 30

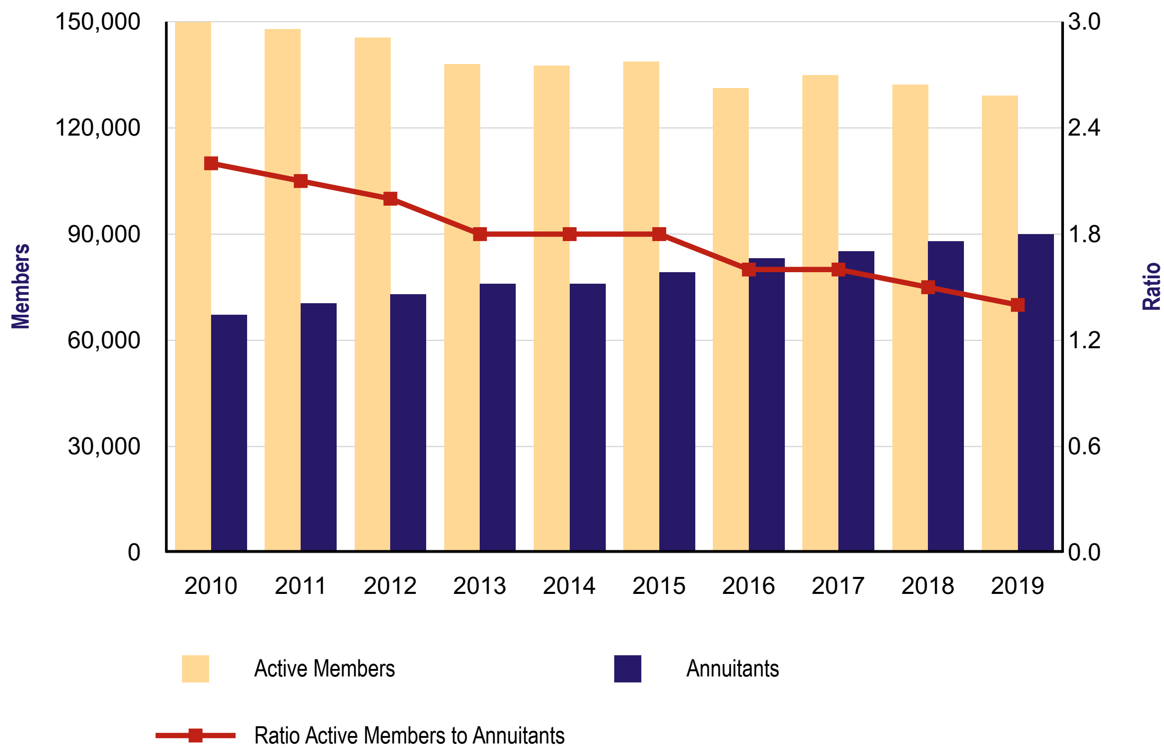
	PERF Hybrid DC Rate		PERF MC DC Supplemental Rate [1]	
	State	Political Subdivisions (Aggregate)	State	Political Subdivisions (Aggregate)
2019	11.2%	11.2%	8.2%	7.4%
2018	11.2	11.2	7.8	7.1
2017	11.2	11.2	7.9	7.2
2016	11.2	11.2	6.6	5.4
2015	11.2	11.2	6.6	N/A
2014	11.2	11.0	6.5	N/A
2013	9.7	9.7	6.5	N/A
2012	8.6	8.8	N/A	N/A
2011	7.0	7.9	N/A	N/A
2010	6.5	7.1	N/A	N/A
Memo:				
Effective Date	July 1	January 1	July 1	January 1

[1] Represents the portion of the Hybrid Rate that remains with PERF DB to cover the unfunded liability, with the difference potentially going to the member in PERF DC. New employers that only participate in My Choice are not required to pay the My Choice Supplemental Rate.



Ratio of Active Members to Annuitants
For the 10-Years Ended June 30

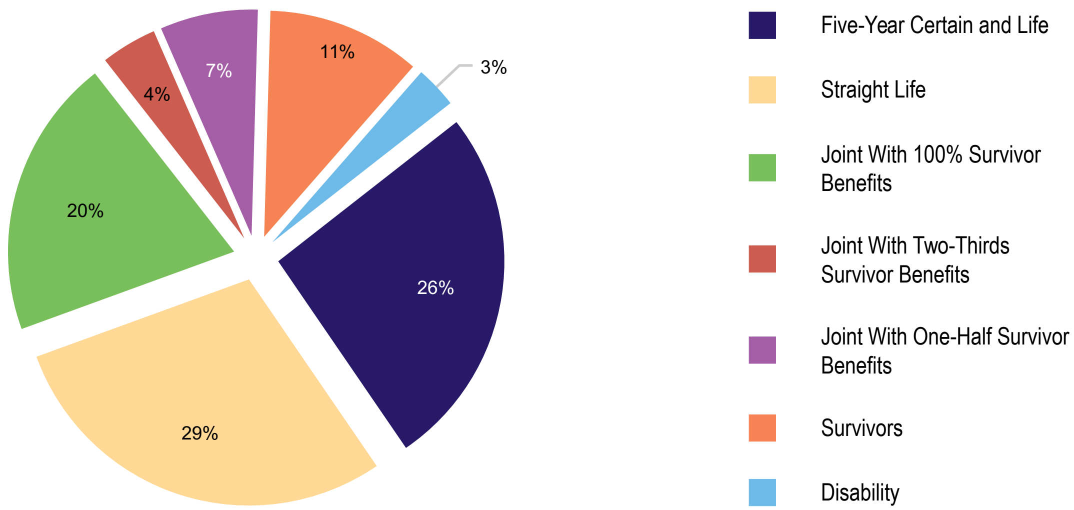
	Active Members	Annuitants	Ratio Active Members to Annuitants
2019	129,099	89,932	1.4
2018	132,181	87,990	1.5
2017	134,909	85,130	1.6
2016	131,178	83,188	1.6
2015	138,660	79,198	1.8
2014	137,567	75,950	1.8
2013	137,937	75,950	1.8
2012	145,519	72,992	2.0
2011	147,933	70,380	2.1
2010	149,877	67,166	2.2



Schedule of Defined Benefit Recipients by Type of Benefit Option

For the Year Ended June 30, 2019

Amount of Monthly Benefit (in dollars)	Number of Benefit Recipients by Benefit Option							
	Five-Year Certain & Life [1]	Straight Life [1]	Joint With 100% Survivor Benefits [1]	Joint With Two-Thirds Survivor Benefits [1]	Joint With One-Half Survivor Benefits [1]	Survivors	Disability	Total Benefit Recipients
$ 1 - 500	11,723	9,054	7,420	826	1,858	6,123	2,112	39,116
501 - 1,000	7,453	8,943	5,039	1,054	2,220	2,756	617	28,082
1,001 - 1,500	2,698	4,108	2,863	675	1,197	857	171	12,569
1,501 - 2,000	1,085	1,893	1,250	397	535	267	58	5,485
2,001 - 3,000	678	1,331	873	269	448	122	10	3,731
Over 3,000	123	377	197	107	118	24	3	949
Total	**23,760**	**25,706**	**17,642**	**3,328**	**6,376**	**10,149**	**2,971**	**89,932**



Members applying for retirement benefits will receive a monthly benefit for the rest of their life. Survivors or qualified designated beneficiaries are subject to the provisions of the benefit option as follows:

Five-Year Certain & Life — Benefit ceases upon death of the retiree if the benefit has been received for five years; otherwise, the beneficiary continues to receive the benefit, monthly or lump sum, for the remainder of the five year period.

Straight Life — Benefit ceases upon the death of the retiree.

Joint With 100% Survivor Benefits — Survivor receives 100 percent of the member's monthly benefit for remainder of the survivor's life.

Joint With Two-Thirds Survivor Benefits — Survivor receives 66 2/3 percent of the member's monthly benefit for the remainder of the survivor's life.

Joint With One-Half Survivor Benefits — Survivor receives 50 percent of the member's monthly benefit for the remainder of the survivor's life.

Survivors — Members receiving a survivor benefit in accordance with the applicable statute. Benefit ceases upon death of the survivor.

Disability — Members receiving a disability benefit in accordance with the applicable statute. Member must have five or more years of creditable service to be eligibility.

[1] See Accompanying Notes to the Statistical Schedules for discussion on social security integration options.

Schedule of Average Benefit Payments,

For the Nine-Years Ended June 30

	Years of Credited Service						
	< 10 [1]	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total
2019							
Average Monthly Defined Benefit	$ 151	$ 293	$ 407	$ 570	$ 799	$ 1,287	$ 646
Average Monthly ASA Annuity [2]	$ 47	$ 107	$ 147	$ 204	$ 276	$ 480	$ 235
Average Final Average Salary	$ 25,474	$ 25,891	$ 28,012	$ 30,306	$ 33,884	$ 41,510	$ 31,643
Number of Benefit Recipients	3,144	15,439	22,063	17,764	13,538	17,984	89,932
2018							
Average Monthly Defined Benefit	$ 150	$ 288	$ 400	$ 558	$ 784	$ 1,265	$ 633
Average Monthly ASA Annuity [2]	$ 46	$ 106	$ 144	$ 201	$ 273	$ 477	$ 232
Average Final Average Salary	$ 25,035	$ 25,253	$ 27,427	$ 29,637	$ 33,189	$ 40,726	$ 30,974
Number of Benefit Recipients	3,113	14,854	21,774	17,528	13,272	17,449	87,990
2017							
Average Monthly Defined Benefit	$ 155	$ 282	$ 392	$ 548	$ 765	$ 1,241	$ 618
Average Monthly ASA Annuity [2]	$ 45	$ 104	$ 142	$ 199	$ 273	$ 478	$ 230
Average Final Average Salary	$ 24,719	$ 24,631	$ 26,902	$ 29,142	$ 32,445	$ 39,990	$ 30,347
Number of Benefit Recipients	3,077	14,268	21,252	17,139	12,718	16,676	85,130
2016							
Average Monthly Defined Benefit	$ 153	$ 278	$ 385	$ 537	$ 751	$ 1,218	$ 604
Average Monthly ASA Annuity [2]	$ 46	$ 103	$ 140	$ 197	$ 274	$ 479	$ 229
Average Final Average Salary	$ 24,269	$ 24,024	$ 26,337	$ 28,523	$ 31,831	$ 39,261	$ 29,693
Number of Benefit Recipients	2,951	13,952	20,992	16,918	12,346	16,029	83,188
2015							
Average Monthly Defined Benefit	$ 149	$ 293	$ 378	$ 525	$ 732	$ 1,182	$ 583
Average Monthly ASA Annuity [2]	$ 43	$ 116	$ 129	$ 187	$ 255	$ 443	$ 211
Average Final Average Salary	$ 23,480	$ 23,252	$ 25,678	$ 27,754	$ 30,842	$ 37,941	$ 28,714
Number of Benefit Recipients	2,775	14,087	20,210	16,141	11,503	14,482	79,198
2014							
Average Monthly Defined Benefit	$ 154	$ 269	$ 370	$ 515	$ 715	$ 1,160	$ 569
Average Monthly ASA Annuity [2]	$ 42	$ 94	$ 124	$ 180	$ 244	$ 425	$ 199
Average Final Average Salary	$ 22,762	$ 22,669	$ 25,080	$ 27,190	$ 30,044	$ 37,145	$ 28,019
Number of Benefit Recipients	2,670	12,866	19,825	15,757	11,079	13,753	75,950
2013							
Average Monthly Defined Benefit	$ 154	$ 269	$ 370	$ 515	$ 715	$ 1,160	$ 569
Average Monthly ASA Annuity [2]	$ 42	$ 94	$ 124	$ 180	$ 244	$ 425	$ 199
Average Final Average Salary	$ 22,762	$ 22,669	$ 25,080	$ 27,190	$ 30,044	$ 37,145	$ 28,019
Number of Benefit Recipients	2,670	12,866	19,825	15,757	11,079	13,753	75,950
2012							
Average Monthly Defined Benefit	$ 156	$ 265	$ 363	$ 504	$ 701	$ 1,139	$ 555
Average Monthly ASA Annuity [2]	$ 42	$ 89	$ 116	$ 171	$ 233	$ 407	$ 188
Average Final Average Salary	$ 22,105	$ 21,993	$ 24,513	$ 26,534	$ 29,347	$ 36,331	$ 27,306
Number of Benefit Recipients	2,523	12,369	19,361	15,258	10,589	12,892	72,992
2011							
Average Monthly Defined Benefit	$ 159	$ 263	$ 358	$ 495	$ 687	$ 1,120	$ 542
Average Monthly ASA Annuity [2]	$ 39	$ 85	$ 110	$ 162	$ 223	$ 386	$ 176
Average Final Average Salary	$ 21,397	$ 21,487	$ 24,034	$ 25,883	$ 28,617	$ 35,542	$ 26,632
Number of Benefit Recipients	2,373	12,036	19,007	14,731	10,190	12,043	70,380

[1] Members with less than 10 years of service are: (1) a member receiving a disability benefit from INPRS; (2) a member who has at least eight years of creditable service as a county clerk, county auditor, county recorder, county treasurer, county sheriff or county coroner eligible for a normal retirement after reaching age 65 (applies to only members retiring after June 30, 2002); (3) a member who has at least eight years of creditable service as a state auditor, state treasurer, or secretary of state (whose term commences after the November 5, 2002 election).

[2] Represents those retirees who elected to receive their Defined Contribution Account as a supplemental monthly payment in addition to the monthly Defined Benefit payment. The option to annuitize the DC money with the monthly defined benefit is no longer available as of January 1, 2018.

Schedule of Participating Employers: Top 10

Top 10 Employers	June 30, 2019 Covered Members	June 30, 2019 Rank	June 30, 2019 Percentage of Total	June 30, 2010 Covered Members	June 30, 2010 Rank	June 30, 2010 Percentage of Total
State of Indiana	35,877	1	27.8%	46,864	1	31.3%
Health & Hospital Corporation Of Marion County	2,862	2	2.2	4,511	2	3.0
Marion County	2,007	3	1.6	2,964	3	2.0
Indianapolis Public Schools	1,696	4	1.3	2,348	4	1.6
Lake County	1,527	5	1.2	1,609	7	1.1
City Of Indianapolis	1,291	6	1.0	1,807	6	1.2
Evansville-Vanderburgh School Corporation	1,289	7	1.0	1,268	9	0.8
South Bend Community School Corporation	1,197	8	0.9	1,574	8	1.1
Fort Wayne Community Schools	1,049	9	0.8	2,059	5	1.4
St Joseph County	1,047	10	0.8	—	—	—
Allen County				1,260	10	0.8
Total -- Top 10 Employers	**49,842**		**38.6**	**66,264**		**44.3**
All Other *	79,257		61.4	83,613		55.7
Grand Total	**129,099**		**100.0%**	**149,877**		**100.0%**

1,187 Employers in 2018, and 1,202 in 2010

** As of June 30, 2019, "All Other" consisted of:*

Type of Employer	Number of Employers	Covered Members
Counties	83	19,518
Cities	112	11,662
Towns	202	3,013
Townships	160	864
School Districts & Education	329	38,702
Other	291	5,498
Total All Other	**1,177**	**79,257**

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Teachers' Pre-1996 Defined Benefit Account

Schedule of Changes and Growth in Fiduciary Net Position

For the Seven-Years Ended June 30

(dollars in thousands)	2019	2018 [1]	2017	2016	2015
Fiduciary Net Position Restricted - Beginning of Year	**$ 3,711,347**	**$ 4,817,630**	**$ 4,787,529**	**$ 5,099,910**	**$ 5,501,867**
Contributions / (Benefits and Expenses)					
Employer Contributions	3,505	4,168	4,525	5,048	5,811
Nonemployer Contributing Entity	943,900	917,900	871,000	887,500	845,616
Member Contributions	36	12,765	28,836	31,529	41,740
Member Reassignment Income	2,931	3,107	4,206	4,057	6,273
Miscellaneous Income	317	229	—	—	21
Total Contributions and Other	950,689	938,169	908,567	928,134	899,461
Pension Benefits	(1,081,875)	(1,167,057)	(1,175,344)	(1,185,321)	(1,242,792)
Disability Benefits	(2,143)	(2,463)	(2,412)	(8,505)	(9,567)
Survivor Benefits	(81,116)	(79,600)	(75,495)	(73,124)	(69,350)
Distributions of Contributions and Interest	—	(3,404)	(4,993)	(6,004)	(7,145)
Administrative Expenses	(5,329)	(5,385)	(6,226)	(6,564)	(6,530)
Transfer to Defined Contribution	—	(1,205,277)	—	—	—
Member Reassignment Expenses	(1,437)	(1,678)	(4,859)	(3,426)	(2,919)
Miscellaneous Expenses	—	(116)	—	—	—
Total Benefits and Expenses	(1,171,900)	(2,464,980)	(1,269,329)	(1,282,944)	(1,338,303)
Net Contributions / (Benefits and Expenses)	**(221,211)**	**(1,526,811)**	**(360,762)**	**(354,810)**	**(438,842)**
Net Investment Income / (Loss)	269,009	420,528	390,863	42,429	36,885
Net Increase / (Decrease)	**47,798**	**(1,106,283)**	**30,101**	**(312,381)**	**(401,957)**
Fiduciary Net Position Restricted - End of Year	**$ 3,759,145**	**$ 3,711,347**	**$ 4,817,630**	**$ 4,787,529**	**$ 5,099,910**

[1] TRF DC was split from the defined benefit plan effective January 1, 2018. As such, the DC plan contains only six months of DC activity for fiscal year 2018.

Schedule of Changes and Growth in Fiduciary Net Position, continued

For the Seven-Years Ended June 30

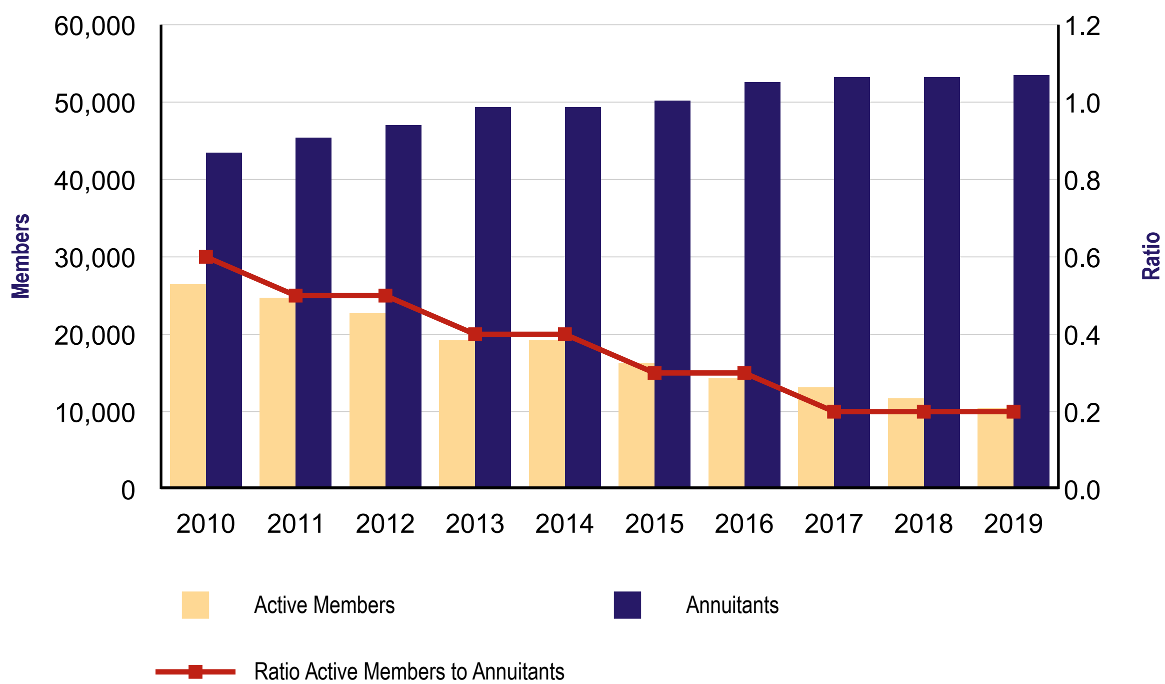
(dollars in thousands)	2014	2013 [2]
Fiduciary Net Position Restricted - Beginning of Year	**$ 5,215,202**	**$ 5,058,910**
Contributions / (Benefits and Expenses)		
Employer Contributions	6,325	9,484
Nonemployer Contributing Entity	825,617	1,003,596
Member Contributions	47,028	45,421
Member Reassignment Income	3,250	5,883
Miscellaneous Income	19	5
Total Contributions and Other	882,239	1,064,389
Pension Benefits	(1,143,154)	(1,137,783)
Disability Benefits	(11,562)	(45)
Survivor Benefits	(66,150)	(63,379)
Distributions of Contributions and Interest	(8,435)	(11,738)
Administrative Expenses	(7,010)	(7,926)
Transfer to Defined Contribution	—	—
Member Reassignment Expenses	(6,844)	(2,824)
Miscellaneous Expenses	—	—
Total Benefits and Expenses	(1,243,155)	(1,223,695)
Net Contributions / (Benefits and Expenses)	**(360,916)**	**(159,306)**
Net Investment Income / (Loss)	647,581	315,598
Net Increase / (Decrease)	**286,665**	**156,292**
Fiduciary Net Position Restricted - End of Year	**$ 5,501,867**	**$ 5,215,202**

[2] *June 30, 2013 was the first year to split the Teachers' Retirement Fund (TRF) into two, TRF Pre-1996 DB and TRF 1996 DB Accounts.*

Ratio of Active Members to Annuitants

For the 10-Years Ended June 30

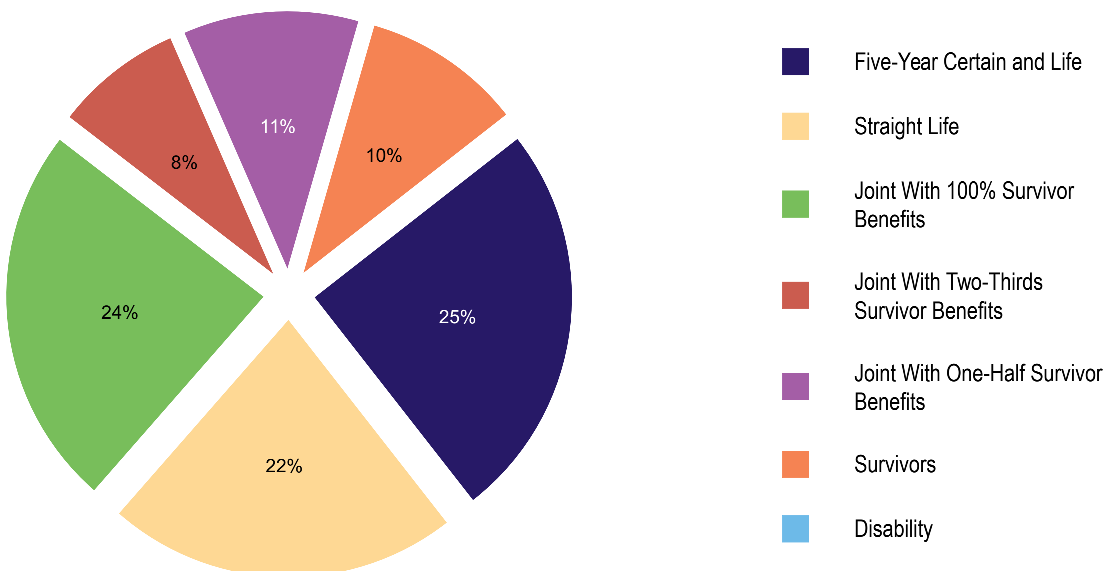
	Active Members	Annuitants	Ratio Active Members to Annuitants
2019	10,497	53,498	0.2
2018	11,710	53,227	0.2
2017	13,128	53,240	0.2
2016	14,327	52,575	0.3
2015	16,310	50,214	0.3
2014	19,210	49,345	0.4
2013	19,210	49,345	0.4
2012	22,688	47,000	0.5
2011	24,710	45,421	0.5
2010	26,439	43,478	0.6



Teachers' Pre-1996 Defined Benefit Account, continued

Schedule of Benefit Recipients by Type of Benefit Option; For the Year Ended June 30, 2019

Amount of Monthly Benefit (in dollars)	Number of Benefit Recipients by Benefit Option							
	Five-Year Certain & Life [1]	Straight Life [1]	Joint With 100% Survivor Benefits [1]	Joint With Two-Thirds Survivor Benefits [1]	Joint With One-Half Survivor Benefits [1]	Survivors	Disability	Total Benefit Recipients
$ 1 - 500	1,126	571	563	64	125	792	38	3,279
501 - 1,000	1,662	1,007	1,119	256	385	1,436	31	5,896
1,001 - 1,500	2,894	1,927	2,639	744	1,063	1,323	39	10,629
1,501 - 2,000	3,521	2,991	3,818	1,385	1,644	988	27	14,374
2,001 - 3,000	3,583	4,028	3,959	1,497	1,994	594	8	15,663
Over 3,000	789	1,046	873	398	454	97	—	3,657
Total	**13,575**	**11,570**	**12,971**	**4,344**	**5,665**	**5,230**	**143**	**53,498**



Members applying for retirement benefits will receive a monthly benefit for the rest of their life. Survivors or qualified designated beneficiaries are subject to the provisions of the benefit option as follows:

Five-Year Certain & Life — Benefit ceases upon death of the retiree if the benefit has been received for five years; otherwise, the beneficiary continues to receive the benefit, monthly or lump sum, for the remainder of the five year period.

Straight Life — Benefit ceases upon the death of the retiree.

Joint With 100% Survivor Benefits — Survivor receives 100 percent of the member's monthly benefit for remainder of the survivor's life.

Joint With Two-Thirds Survivor Benefits — Survivor receives 66 2/3 percent of the member's monthly benefit for the remainder of the survivor's life.

Joint With One-Half Survivor Benefits — Survivor receives 50 percent of the member's monthly benefit for the remainder of the survivor's life.

Survivors — Members receiving a survivor benefit in accordance with the applicable statute. The benefit ceases upon the death of the survivor.

Disability — Members receiving a disability benefit in accordance with the applicable statute. For TRF Pre-'96 DB, five or more years of creditable service is required to be eligible for a disability benefit. This includes the Classroom Disability which provides a benefit of $125 per month plus $5 for each additional year of TRF-covered service over five years.

[1] See Accompanying Notes to the Statistical Schedules for discussion on social security integration options.

Schedule of Average Benefit Payments

For the Nine-Years Ended June 30

	Years of Credited Service						
	< 10 [1]	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total
2019							
Average Monthly Defined Benefit	$ 136	$ 388	$ 556	$ 922	$ 1,306	$ 1,901	$ 1,571
Average Monthly ASA Annuity [2]	$ 23	$ 210	$ 208	$ 284	$ 382	$ 624	$ 488
Average Final Average Salary	$ 31,009	$ 25,539	$ 39,796	$ 49,609	$ 55,172	$ 60,697	$ 56,339
Number of Benefit Recipients	154	1,379	3,474	5,621	8,636	34,234	53,498
2018							
Average Monthly Defined Benefit	$ 169	$ 309	$ 550	$ 910	$ 1,286	$ 1,884	$ 1,550
Average Monthly ASA Annuity [2]	$ 47	$ 205	$ 202	$ 278	$ 374	$ 615	$ 478
Average Final Average Salary	$ 31,463	$ 25,025	$ 39,194	$ 48,790	$ 54,160	$ 59,913	$ 55,486
Number of Benefit Recipients	167	1,294	3,551	5,675	8,638	33,902	53,227
2017							
Average Monthly Defined Benefit	$ 122	$ 270	$ 542	$ 897	$ 1,270	$ 1,869	$ 1,532
Average Monthly ASA Annuity [2]	$ 31	$ 198	$ 196	$ 270	$ 366	$ 604	$ 468
Average Final Average Salary	$ 28,702	$ 23,692	$ 38,245	$ 47,641	$ 53,051	$ 59,073	$ 54,482
Number of Benefit Recipients	160	1,291	3,648	5,769	8,630	33,742	53,240
2016							
Average Monthly Defined Benefit	$ 577	$ 268	$ 539	$ 884	$ 1,247	$ 1,849	$ 1,512
Average Monthly ASA Annuity [2]	$ 249	$ 190	$ 191	$ 263	$ 357	$ 592	$ 458
Average Final Average Salary	$ 23,593	$ 23,432	$ 37,605	$ 46,482	$ 51,701	$ 58,014	$ 53,393
Number of Benefit Recipients	49	1,279	3,755	5,766	8,540	33,186	52,575
2015							
Average Monthly Defined Benefit	$ 449	$ 263	$ 530	$ 854	$ 1,214	$ 1,811	$ 1,471
Average Monthly ASA Annuity [3]	$ 73	$ 113	$ 106	$ 133	$ 163	$ 228	$ 195
Average Final Average Salary	$ 37,993	$ 23,424	$ 37,281	$ 45,256	$ 50,441	$ 56,938	$ 52,253
Number of Benefit Recipients	42	1,238	3,779	5,610	8,175	31,370	50,214
2014							
Average Monthly Defined Benefit	$ 405	$ 258	$ 517	$ 834	$ 1,187	$ 1,793	$ 1,453
Average Monthly ASA Annuity [3]	$ 57	$ 108	$ 104	$ 128	$ 159	$ 225	$ 191
Average Final Average Salary	$ 24,193	$ 22,426	$ 35,702	$ 43,604	$ 48,801	$ 55,636	$ 50,855
Number of Benefit Recipients	36	1,185	3,720	5,541	7,987	30,876	49,345
2013							
Average Monthly Defined Benefit	$ 405	$ 258	$ 517	$ 834	$ 1,187	$ 1,793	$ 1,453
Average Monthly ASA Annuity [3]	$ 57	$ 108	$ 104	$ 128	$ 159	$ 225	$ 191
Average Final Average Salary	$ 24,193	$ 22,426	$ 35,702	$ 43,604	$ 48,801	$ 55,636	$ 50,855
Number of Benefit Recipients	36	1,185	3,720	5,541	7,987	30,876	49,345
2012							
Average Monthly Defined Benefit	$ 311	$ 252	$ 503	$ 804	$ 1,150	$ 1,747	$ 1,405
Average Monthly ASA Annuity [3]	$ 14	$ 101	$ 101	$ 126	$ 156	$ 222	$ 187
Average Final Average Salary	$ 23,116	$ 21,575	$ 34,714	$ 41,788	$ 47,172	$ 54,014	$ 49,136
Number of Benefit Recipients	39	1,178	3,719	5,366	7,672	29,026	47,000
2011							
Average Monthly Defined Benefit	$ 239	$ 250	$ 493	$ 785	$ 1,130	$ 1,722	$ 1,376
Average Monthly ASA Annuity [3]	$ 15	$ 99	$ 96	$ 125	$ 154	$ 220	$ 185
Average Final Average Salary	$ 20,085	$ 21,205	$ 33,684	$ 40,472	$ 45,837	$ 52,751	$ 47,787
Number of Benefit Recipients	37	1,170	3,735	5,252	7,467	27,760	45,421

[1] Members with less than 10 years of service are primarily members receiving a disability benefit.

[2] Represents the average of only the retirees who elected to receive their Defined Contribution Account as a supplemental monthly payment in addition to the monthly Defined Benefit payment.

[3] Represents the average of all retirees, regardless if they elected to receive their Defined Contribution Account as a supplemental monthly payment in addition to the monthly Defined Benefit payment.

Teachers' Pre-1996 Defined Benefit Account, continued

Schedule of Participating Employers: Top 10

Top 10 Employers	June 30, 2019 — Covered Members — TRF Pre-'96 DB	TRF '96 DB	Total TRF	Rank	Percentage of Total	June 30, 2010 [1] — Total TRF Covered Members	Rank	Percentage of Total
Indianapolis Public Schools	258	2,063	2,321	1	3.4%	3,213	1	4.4%
Fort Wayne Community Schools	395	1,718	2,113	2	3.1	2,433	2	3.3
Evansville-Vanderburgh School Corporation	327	1,285	1,612	3	2.3	1,716	3	2.4
Hamilton Southeastern Schools	139	1,226	1,365	4	2.0	1,104	7	1.5
South Bend Community School Corporation	198	1,090	1,288	5	1.9	1,649	4	2.3
Wayne Township Metropolitan School District	117	1,011	1,128	6	1.6	1,165	6	1.6
Vigo County School Corporation	207	856	1,063	7	1.5	1,211	5	1.7
Carmel Clay Schools	102	950	1,052	8	1.5	1,075	9	1.5
Perry Township Metropolitan School District	109	896	1,005	9	1.5			
School City Of Hammond	162	787	949	10	1.4	1,077	8	1.5
Elkhart Community Schools						1,068	10	1.5
Total -- Top 10 Employers	**2,014**	**11,882**	**13,896**		**20.2**	**15,711**		**21.7**
All Other *	8,483	46,426	54,909		79.8	57,161		78.3
Grand Total	**10,497**	**58,308**	**68,805**		**100.0%**	**72,872**		**100.0%**

345 TRF Pre-'96 DB and 373 TRF '96 DB employers in 2018, and 360 Total TRF employers in 2010

** As of June 30, 2019, "All Other" consisted of:*

Type of Employer	TRF Pre-'96 DB Employers	TRF Pre-'96 DB Members	TRF '96 DB Employers	TRF '96 DB Members
State	1	96	1	569
School Districts & Education	334	8,387	362	45,857
Total All Other	**335**	**8,483**	**363**	**46,426**

[1] June 30, 2013 was the first year to split the Teachers' Retirement Fund (TRF) into two, TRF Pre-'96 DB and TRF '96 DB Accounts.

Teachers' 1996 Defined Benefit Account

Schedule of Changes and Growth in Fiduciary Net Position

For the Seven-Years Ended June 30

(dollars in thousands)	2019	2018 [1]	2017	2016	2015
Fiduciary Net Position Restricted - Beginning of Year	**$ 5,452,352**	**$ 6,252,040**	**$ 5,611,230**	**$ 5,379,113**	**$ 5,189,442**
Employer Contributions	393,172	235,819	227,207	215,626	205,763
Member Contributions	127	47,176	92,838	88,430	86,515
Member Reassignment Income	4,958	7,131	6,345	6,587	7,134
Miscellaneous Income	605	299	34	16	24
Total Contributions and Other	398,862	290,425	326,424	310,659	299,436
Pension Benefits	(126,636)	(140,199)	(127,618)	(119,754)	(112,533)
Disability Benefits	(1,805)	(1,700)	(1,717)	(1,942)	(1,692)
Survivor Benefits	(4,131)	(3,584)	(3,257)	(2,606)	(1,962)
Distributions of Contributions and Interest	—	(5,135)	(11,133)	(10,988)	(11,712)
Administrative Expenses	(5,038)	(5,208)	(5,553)	(5,603)	(6,184)
Transfer to Defined Contribution	—	(1,469,542)	—	—	—
Member Reassignment Expenses	(665)	(1,530)	(1,229)	(1,852)	(1,269)
Miscellaneous Expenses	—	(159)	—	—	—
Total Benefits and Expenses	(138,275)	(1,627,057)	(150,507)	(142,745)	(135,352)
Net Contributions / (Benefits and Expenses)	**260,587**	**(1,336,632)**	**175,917**	**167,914**	**164,084**
Net Investment Income / (Loss)	411,147	536,944	464,893	64,203	25,587
Net Increase / (Decrease)	**671,734**	**(799,688)**	**640,810**	**232,117**	**189,671**
Fiduciary Net Position Restricted - End of Year	**$ 6,124,086**	**$ 5,452,352**	**$ 6,252,040**	**$ 5,611,230**	**$ 5,379,113**

[1] *TRF DC was split from the defined benefit plan effective January 1, 2018. As such, the DC plan contains only six months of DC activity for fiscal year 2018.*

Schedule of Changes and Growth in Fiduciary Net Position, continued

For the Seven-Years Ended June 30

(dollars in thousands)	2014	2013 [2]
Fiduciary Net Position Restricted - Beginning of Year	**$ 4,433,677**	**$ 4,018,149**
Contributions / (Benefits and Expenses)		
Employer Contributions	194,751	180,714
Member Contributions	81,802	77,532
Member Reassignment Income	8,884	4,322
Miscellaneous Income	21	4
Total Contributions and Other	285,458	262,572
Pension Benefits	(94,615)	(84,814)
Disability Benefits	(1,790)	(6)
Survivor Benefits	(1,581)	(1,412)
Distributions of Contributions and Interest	(10,734)	(10,925)
Administrative Expenses	(6,707)	(6,482)
Transfer to Defined Contribution	—	—
Member Reassignment Expenses	(1,048)	(1,516)
Miscellaneous Expenses	—	—
Total Benefits and Expenses	(116,475)	(105,155)
Net Contributions / (Benefits and Expenses)	**168,983**	**157,417**
Net Investment Income / (Loss)	586,782	258,111
Net Increase / (Decrease)	**755,765**	**415,528**
Fiduciary Net Position Restricted - End of Year	**$ 5,189,442**	**$ 4,433,677**

[2] *June 30, 2013 was the first year to split the Teachers' Retirement Fund (TRF) into two, TRF Pre-1996 DB and TRF 1996 DB Accounts.*

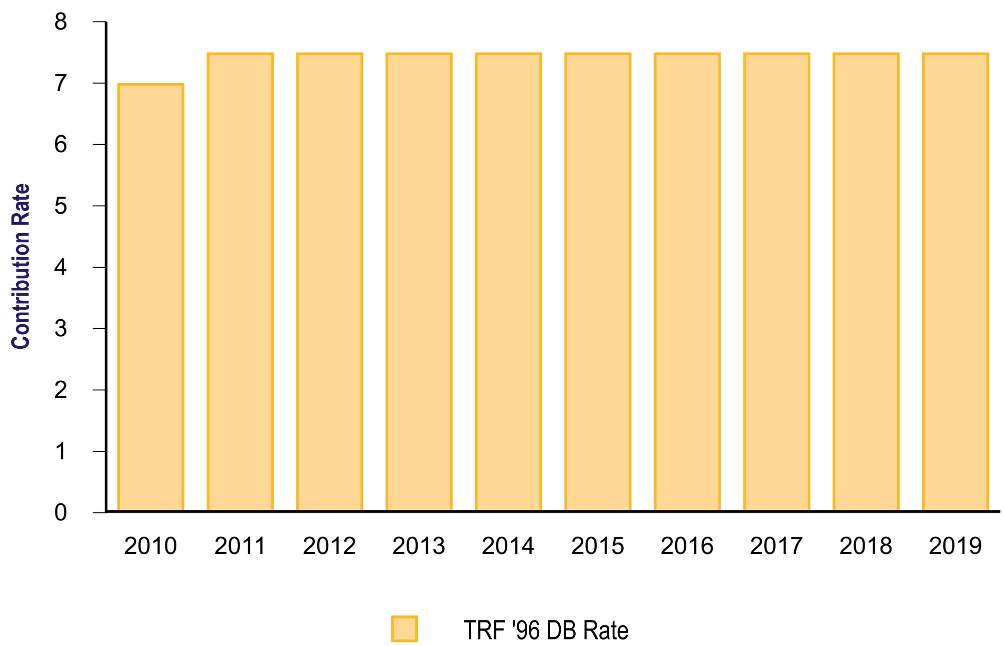
Schedule of Historical Contribution Rates

For the 10-Years Ended June 30

	TRF '96 DB Rate
2019	7.50%
2018	7.50
2017	7.50
2016	7.50
2015	7.50
2014	7.50
2013	7.50
2012	7.50
2011	7.50
2010	7.00

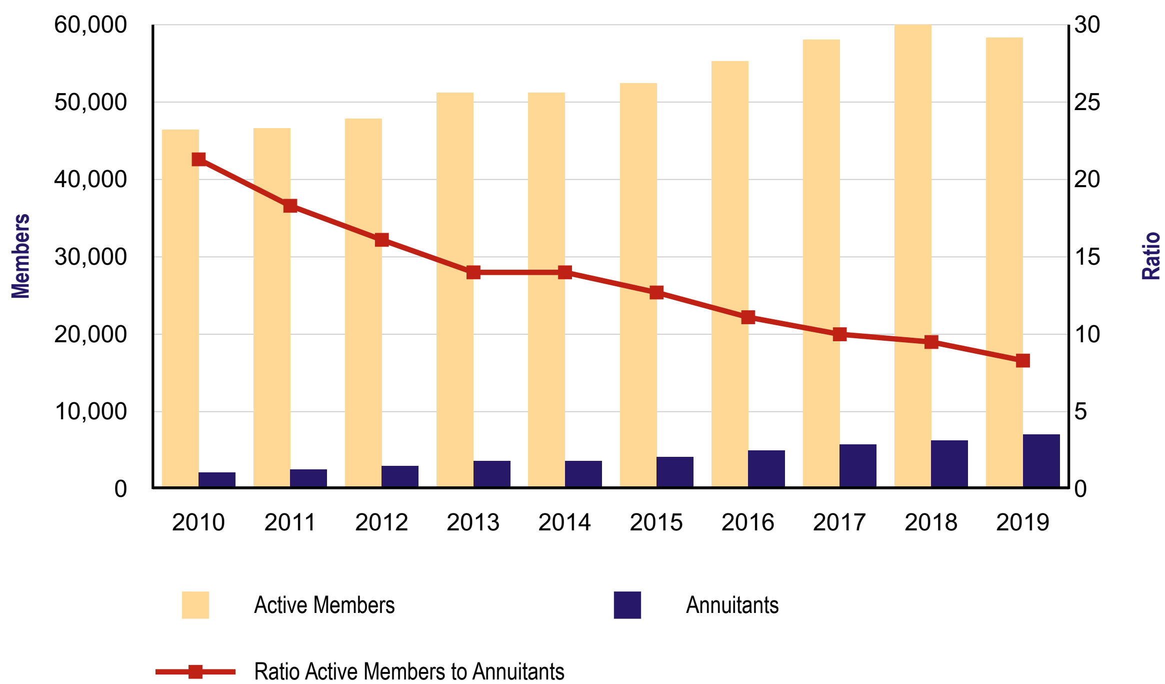
Memo:

Effective Date July 1



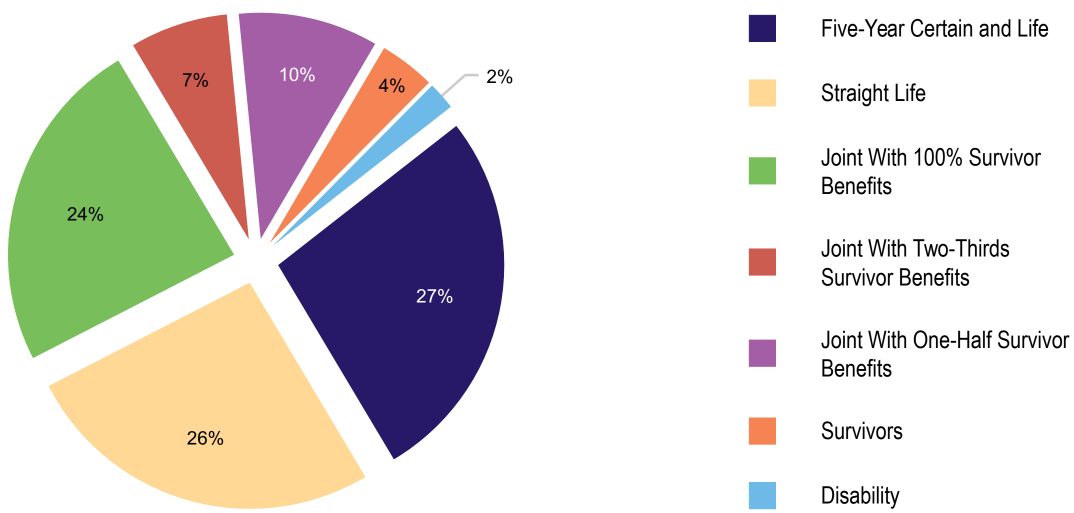
Ratio of Active Members to Annuitants
For the 10-Years Ended June 30

	Active Members	Annuitants	Ratio Active Members to Annuitants
2019	58,308	7,041	8.3
2018	59,996	6,289	9.5
2017	58,097	5,796	10.0
2016	55,265	4,977	11.1
2015	52,424	4,136	12.7
2014	51,204	3,665	14.0
2013	51,204	3,665	14.0
2012	47,885	2,971	16.1
2011	46,633	2,554	18.3
2010	46,433	2,181	21.3



Schedule of Benefit Recipients by Type of Benefit Option; For the Year Ended June 30, 2019

	Number of Benefit Recipients by Benefit Option							
Amount of Monthly Benefit (in dollars)	Five-Year Certain & Life [1]	Straight Life [1]	Joint With 100% Survivor Benefits [1]	Joint With Two-Thirds Survivor Benefits [1]	Joint With One-Half Survivor Benefits [1]	Survivors	Disability	Total Benefit Recipients
$ 1 - 500	268	213	150	29	42	73	55	830
501 - 1,000	557	481	426	94	157	91	64	1,870
1,001 - 1,500	438	439	374	116	153	45	23	1,588
1,501 - 2,000	310	285	281	87	123	34	3	1,123
2,001 - 3,000	239	275	330	94	150	30	5	1,123
Over 3,000	95	109	161	65	71	5	1	507
Total	**1,907**	**1,802**	**1,722**	**485**	**696**	**278**	**151**	**7,041**



Members applying for retirement benefits will receive a monthly benefit for the rest of their life. Survivors or qualified designated beneficiaries are subject to the provisions of the benefit option as follows:

Five-Year Certain & Life — Benefit ceases upon death of the retiree if the benefit has been received for five years; otherwise, the beneficiary continues to receive the benefit, monthly or lump sum, for the remainder of the five year period.

Straight Life — Benefit ceases upon the death of the retiree.

Joint With 100% Survivor Benefits — Survivor receives 100 percent of the member's monthly benefit for remainder of the survivor's life.

Joint With Two-Thirds Survivor Benefits — Survivor receives 66 2/3 percent of the member's monthly benefit for the remainder of the survivor's life.

Joint With One-Half Survivor Benefits — Survivor receives 50 percent of the member's monthly benefit for the remainder of the survivor's life.

Survivors — Members receiving a survivor benefit in accordance with the applicable statute. Benefit ceases upon death of the survivor.

Disability — Members receiving a disability benefit in accordance with the applicable statute. For TRF 1996 DB, five or more years of creditable service is required to be eligible for a disability benefit. This includes the Classroom Disability which provides a benefit of $125 per month plus $5 for each additional year of TRF-covered service over five years.

[1] See Accompanying Notes to the Statistical Schedules for discussion on social security integration options.

Schedule of Average Benefit Payments

For the Nine-Years Ended June 30

	Years of Credited Service						
	< 10 [1]	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total
2019							
Average Monthly Defined Benefit	$ 150	$ 505	$ 788	$ 1,151	$ 1,546	$ 2,302	$ 1,317
Average Monthly ASA Annuity [2]	$ 63	$ 151	$ 241	$ 336	$ 493	$ 741	$ 390
Average Final Average Salary	$ 38,401	$ 46,618	$ 55,639	$ 62,384	$ 67,164	$ 76,355	$ 62,506
Number of Benefit Recipients	181	907	1,845	1,218	957	1,933	7,041
2018							
Average Monthly Defined Benefit	$ 175	$ 493	$ 779	$ 1,133	$ 1,530	$ 2,278	$ 1,312
Average Monthly ASA Annuity [2]	$ 67	$ 150	$ 243	$ 334	$ 494	$ 742	$ 393
Average Final Average Salary	$ 38,058	$ 46,696	$ 55,207	$ 61,506	$ 66,412	$ 75,286	$ 61,952
Number of Benefit Recipients	181	790	1,645	1,019	873	1,781	6,289
2017							
Average Monthly Defined Benefit	$ 153	$ 484	$ 775	$ 1,131	$ 1,512	$ 2,266	$ 1,312
Average Monthly ASA Annuity [2]	$ 71	$ 151	$ 248	$ 343	$ 498	$ 745	$ 404
Average Final Average Salary	$ 35,860	$ 44,235	$ 54,609	$ 61,152	$ 65,476	$ 74,829	$ 61,121
Number of Benefit Recipients	179	748	1,478	898	794	1,699	5,796
2016							
Average Monthly Defined Benefit	$ 403	$ 478	$ 760	$ 1,113	$ 1,481	$ 2,263	$ 1,355
Average Monthly ASA Annuity [2]	$ 162	$ 152	$ 247	$ 346	$ 507	$ 735	$ 417
Average Final Average Salary	$ 35,250	$ 45,420	$ 52,554	$ 59,740	$ 64,060	$ 73,994	$ 61,008
Number of Benefit Recipients	59	611	1,267	764	688	1,588	4,977
2015							
Average Monthly Defined Benefit	$ 437	$ 467	$ 740	$ 1,085	$ 1,458	$ 2,225	$ 1,360
Average Monthly ASA Annuity [3]	$ 80	$ 74	$ 102	$ 130	$ 214	$ 240	$ 165
Average Final Average Salary	$ 35,509	$ 45,483	$ 52,501	$ 58,946	$ 62,883	$ 72,912	$ 60,815
Number of Benefit Recipients	45	499	998	614	570	1,410	4,136
2014							
Average Monthly Defined Benefit	$ 263	$ 450	$ 730	$ 1,041	$ 1,426	$ 2,158	$ 1,366
Average Monthly ASA Annuity [3]	$ 23	$ 71	$ 102	$ 124	$ 200	$ 230	$ 162
Average Final Average Salary	$ 39,665	$ 44,142	$ 51,558	$ 57,665	$ 61,752	$ 70,633	$ 59,995
Number of Benefit Recipients	36	406	822	537	504	1,360	3,665
2013							
Average Monthly Defined Benefit	$ 263	$ 450	$ 730	$ 1,041	$ 1,426	$ 2,158	$ 1,366
Average Monthly ASA Annuity [3]	$ 23	$ 71	$ 102	$ 124	$ 200	$ 230	$ 162
Average Final Average Salary	$ 39,665	$ 44,142	$ 51,558	$ 57,665	$ 61,752	$ 70,633	$ 59,995
Number of Benefit Recipients	36	406	822	537	504	1,360	3,665
2012							
Average Monthly Defined Benefit	$ 274	$ 444	$ 682	$ 995	$ 1,401	$ 2,124	$ 1,391
Average Monthly ASA Annuity [3]	$ 29	$ 72	$ 97	$ 125	$ 207	$ 223	$ 165
Average Final Average Salary	$ 39,141	$ 43,284	$ 48,634	$ 55,970	$ 60,295	$ 69,381	$ 59,171
Number of Benefit Recipients	33	308	577	411	420	1,222	2,971
2011							
Average Monthly Defined Benefit	$ 241	$ 419	$ 665	$ 963	$ 1,381	$ 2,080	$ 1,400
Average Monthly ASA Annuity [3]	$ 25	$ 76	$ 92	$ 122	$ 188	$ 216	$ 162
Average Final Average Salary	$ 37,883	$ 40,581	$ 47,337	$ 54,686	$ 59,531	$ 67,586	$ 58,202
Number of Benefit Recipients	27	247	453	341	363	1,123	2,554

[1] Members with less than 10 years of service are primarily members receiving a disability benefit.

[2] Represents the average of only the retirees who elected to receive their Defined Contribution Account as a supplemental monthly payment in addition to the monthly Defined Benefit payment.

[3] Represents the average of all retirees, regardless if they elected to receive their Defined Contribution Account as a supplemental monthly payment in addition to the monthly Defined Benefit payment.

Teachers' 1996 Defined Benefit Account, continued

Schedule of Participating Employers: Top 10

Top 10 Employers	June 30, 2019 Covered Members TRF Pre-'96 DB	TRF '96 DB	Total TRF	Rank	Percentage of Total	June 30, 2010 [1] Total TRF Covered Members	Rank	Percentage of Total
Indianapolis Public Schools	258	2,063	2,321	1	3.4%	3,213	1	4.4%
Fort Wayne Community Schools	395	1,718	2,113	2	3.1	2,433	2	3.3
Evansville-Vanderburgh School Corporation	327	1,285	1,612	3	2.3	1,716	3	2.4
Hamilton Southeastern Schools	139	1,226	1,365	4	2.0	1,104	7	1.5
South Bend Community School Corporation	198	1,090	1,288	5	1.9	1,649	4	2.3
Wayne Township Metropolitan School District	117	1,011	1,128	6	1.6	1,165	6	1.6
Vigo County School Corporation	207	856	1,063	7	1.5	1,211	5	1.7
Carmel Clay Schools	102	950	1,052	8	1.5	1,075	9	1.5
Perry Township Metropolitan School District	109	896	1,005	9	1.5			
School City Of Hammond	162	787	949	10	1.4	1,077	8	1.5
Elkhart Community Schools						1,068	10	1.5
Total -- Top 10 Employers	**2,014**	**11,882**	**13,896**		**20.2**	**15,711**		**21.7**
All Other *	8,483	46,426	54,909		79.8	57,161		78.3
Grand Total	**10,497**	**58,308**	**68,805**		**100.0%**	**72,872**		**100.0%**

345 TRF Pre-'96 DB and 373 TRF '96 DB employers in 2018, and 360 Total TRF employers in 2010

** As of June 30, 2019, "All Other" consisted of:*

Type of Employer	TRF Pre-'96 DB Employers	TRF Pre-'96 DB Members	TRF '96 DB Employers	TRF '96 DB Members
State	1	96	1	569
School Districts & Education	334	8,387	362	45,857
Total All Other	**335**	**8,483**	**363**	**46,426**

[1] June 30, 2013 was the first year to split the Teachers' Retirement Fund (TRF) into two, TRF Pre-'96 DB and TRF '96 DB Accounts.

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Schedule of Changes and Growth in Fiduciary Net Position

For the 10-Years Ended June 30

(dollars in thousands)	2019	2018	2017	2016	2015
Fiduciary Net Position Restricted - Beginning of Year	**$ 5,927,570**	**$ 5,401,179**	**$ 4,950,999**	**$ 4,828,415**	**$ 4,757,978**
Contributions / (Benefits and Expenses)					
Employer Contributions	155,051	147,094	150,857	151,674	146,697
Member Contributions	52,811	48,839	51,521	44,918	43,523
Member Reassignment Income	—	—	—	—	—
Miscellaneous Income	2	18	78	143	15
Total Contributions and Other	207,864	195,951	202,456	196,735	190,235
Pension Benefits	(147,752)	(133,791)	(112,282)	(97,445)	(83,239)
Disability Benefits	(23,328)	(21,805)	(19,950)	(18,647)	(17,620)
Survivor Benefits	(14,457)	(13,455)	(12,550)	(11,843)	(11,156)
Special Death Benefits	(951)	(884)	(809)	(774)	(860)
Distributions of Contributions and Interest	(3,463)	(2,973)	(3,274)	(4,037)	(3,615)
Administrative Expenses	(1,904)	(1,643)	(1,607)	(1,651)	(1,708)
Member Reassignment Expenses	—	—	—	(74)	—
Miscellaneous Expenses	(22)	—	—	—	—
Total Benefits and Expenses	(191,877)	(174,551)	(150,472)	(134,471)	(118,198)
Net Contributions / (Benefits and Expenses)	**15,987**	**21,400**	**51,984**	**62,264**	**72,037**
Net Investment Income / (Loss)	436,229	504,991	398,196	60,320	(1,600)
Net Increase / (Decrease)	**452,216**	**526,391**	**450,180**	**122,584**	**70,437**
Fiduciary Net Position Restricted- End of Year	**$ 6,379,786**	**$ 5,927,570**	**$ 5,401,179**	**$ 4,950,999**	**$ 4,828,415**

Schedule of Changes and Growth in Fiduciary Net Position, continued

For the 10-Years Ended June 30

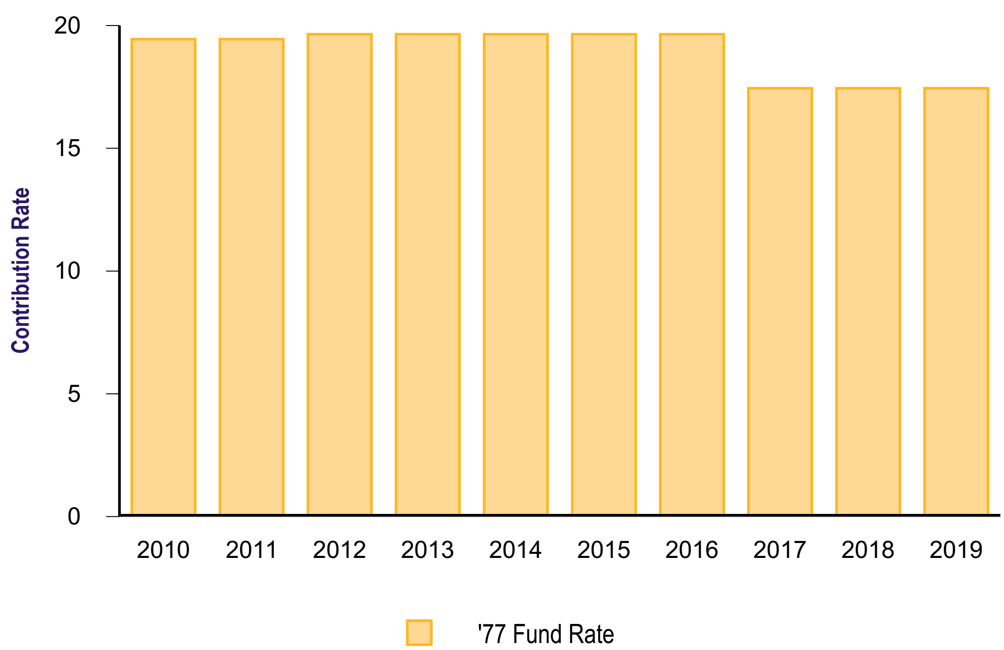
(dollars in thousands)	2014	2013	2012	2011	2010
Fiduciary Net Position Restricted - Beginning of Year	**$ 4,116,861**	**$ 3,817,013**	**$ 3,721,366**	**$ 3,033,285**	**$ 2,591,674**
Contributions / (Benefits and Expenses)					
Employer Contributions	140,119	137,111	135,605	133,726	130,774
Member Contributions	41,791	40,786	40,870	40,532	39,826
Member Reassignment Income	—	71	123	—	237
Miscellaneous Income	30	18	41	83	90
Total Contributions and Other	181,940	177,986	176,639	174,341	170,927
Pension Benefits	(76,462)	(68,622)	(67,920)	(56,503)	(47,150)
Disability Benefits	(17,767)	(17,429)	(16,288)	(15,710)	(15,199)
Survivor Benefits	(10,573)	(9,884)	—	—	—
Special Death Benefits	(720)	(794)	(738)	(624)	(564)
Distributions of Contributions and Interest	(3,572)	(3,074)	(3,101)	(2,662)	(2,304)
Administrative Expenses	(1,787)	(1,845)	(1,662)	(2,108)	(1,865)
Member Reassignment Expenses	—	—	(33)	(61)	—
Miscellaneous Expenses	—	—	—	—	—
Total Benefits and Expenses	(110,881)	(101,648)	(89,742)	(77,668)	(67,082)
Net Contributions / (Benefits and Expenses)	**71,059**	**76,338**	**86,897**	**96,673**	**103,845**
Net Investment Income / (Loss)	570,058	223,510	8,750	591,408	337,766
Net Increase / (Decrease)	**641,117**	**299,848**	**95,647**	**688,081**	**441,611**
Fiduciary Net Position Restricted- End of Year	**$ 4,757,978**	**$ 4,116,861**	**$ 3,817,013**	**$ 3,721,366**	**$ 3,033,285**

Schedule of Historical Contribution Rates

For the 10-Years Ended June 30

	'77 Fund Rate
2019	17.5%
2018	17.5
2017	17.5
2016	19.7
2015	19.7
2014	19.7
2013	19.7
2012	19.7
2011	19.5
2010	19.5

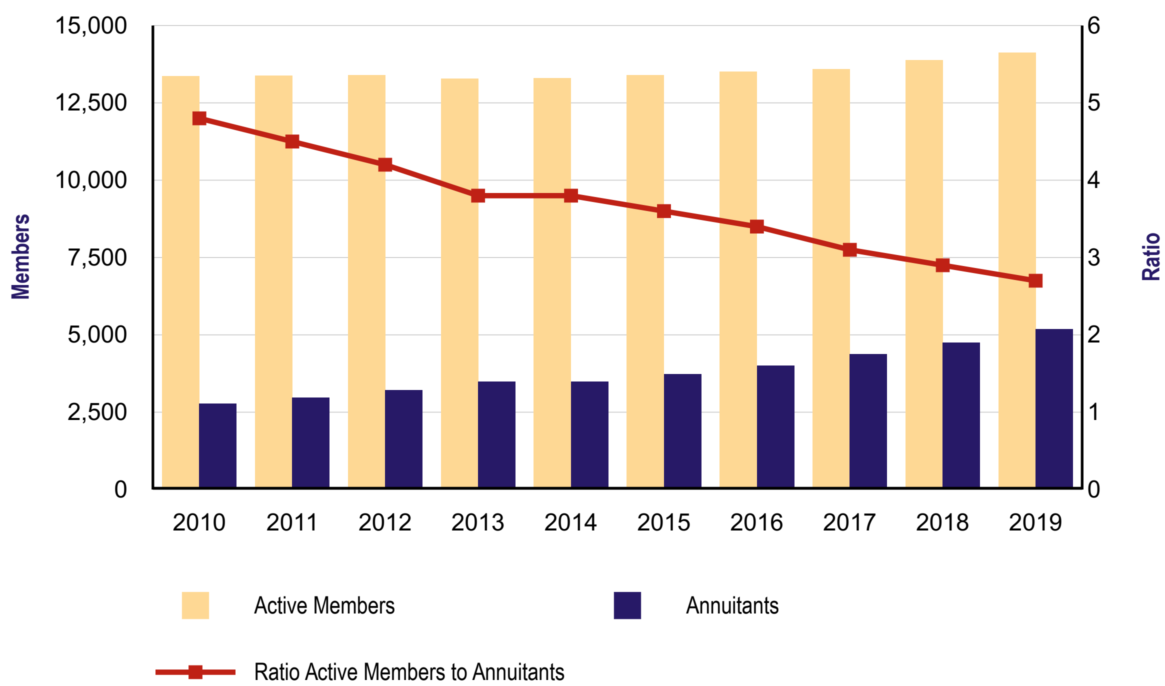
Memo:	
Effective Date	January 1



Ratio of Active Members to Annuitants

For the 10-Years Ended June 30

	Active Members	Annuitants	Ratio Active Members to Annuitants
2019	14,119	5,187	2.7
2018	13,879	4,751	2.9
2017	13,587	4,374	3.1
2016	13,506	4,004	3.4
2015	13,390	3,736	3.6
2014	13,295	3,491	3.8
2013	13,287	3,491	3.8
2012	13,390	3,208	4.2
2011	13,376	2,966	4.5
2010	13,362	2,782	4.8



Schedule of Benefit Recipients by Type of Benefit Option

For the Year Ended June 30, 2019

Amount of Monthly Benefit (in dollars)	Number of Benefit Recipients by Benefit Option			
	Retirees	Survivors	Disability	Total Benefit Recipients
$ 1 - 500	—	9	—	9
501 - 1,000	4	128	22	154
1,001 - 1,500	92	387	74	553
1,501 - 2,000	434	186	189	809
2,001 - 3,000	1,950	77	446	2,473
Over 3,000	1,073	8	108	1,189
Total	**3,553**	**795**	**839**	**5,187**

Retirees — Provides a monthly benefit for the retiree's life. Upon the death of the retiree, a surviving spouse receives 60 percent of the monthly benefit for life and each surviving child receives 20 percent of the monthly benefit until age 18 or 23 if enrolled in a secondary school or accredited college or university. If no eligible surviving spouse or children, a dependent parent(s) may receive 50 percent of the monthly benefit for life.

Survivors — Members receiving a survivor benefit in accordance with the applicable statute. The benefit ceases upon the death of the survivor.

Disability — Members receiving a disability benefit in accordance with the applicable statute. For the '77 Fund, there is no minimum creditable service requirement.

Schedule of Average Benefit Payments

For the Nine-Years Ended June 30

	Years of Credited Service						
	< 10 [1]	10 - 14 [1]	15 - 19 [1]	20 - 24	25 - 29	30+	Total
2019							
Average Monthly Defined Benefit	$ 1,971	$ 2,097	$ 2,018	$ 2,056	$ 2,693	$ 3,137	$ 2,431
Average Final Average Salary	$ 43,865	$ 50,968	$ 49,157	$ 47,583	$ 50,796	$ 53,933	$ 49,977
Number of Benefit Recipients	240	245	298	1,975	1,487	942	5,187
2018							
Average Monthly Defined Benefit	$ 1,924	$ 1,993	$ 1,938	$ 1,984	$ 2,589	$ 2,984	$ 2,319
Average Final Average Salary	$ 43,021	$ 50,113	$ 47,985	$ 46,569	$ 49,576	$ 52,614	$ 48,753
Number of Benefit Recipients	239	241	286	1,843	1,330	812	4,751
2017							
Average Monthly Defined Benefit	$ 1,643	$ 1,975	$ 1,893	$ 2,010	$ 2,546	$ 2,892	$ 2,257
Average Final Average Salary	$ 42,129	$ 48,847	$ 47,060	$ 45,714	$ 48,551	$ 51,649	$ 47,703
Number of Benefit Recipients	382	234	271	1,586	1,202	699	4,374
2016							
Average Monthly Defined Benefit	$ 1,624	$ 1,901	$ 1,839	$ 1,969	$ 2,498	$ 2,799	$ 2,190
Average Final Average Salary	$ 41,299	$ 47,438	$ 45,587	$ 44,846	$ 47,841	$ 51,017	$ 46,803
Number of Benefit Recipients	380	226	262	1,463	1,071	602	4,004
2015							
Average Monthly Defined Benefit	$ 1,709	$ 1,862	$ 1,812	$ 1,953	$ 2,473	$ 2,714	$ 2,149
Average Final Average Salary	$ 40,564	$ 46,871	$ 44,876	$ 43,912	$ 47,030	$ 50,367	$ 45,862
Number of Benefit Recipients	421	222	256	1,361	963	513	3,736
2014							
Average Monthly Defined Benefit	$ 1,841	$ 1,748	$ 1,734	$ 1,864	$ 2,362	$ 2,553	$ 2,084
Average Final Average Salary	$ 42,408	$ 45,969	$ 44,636	$ 43,120	$ 46,421	$ 48,656	$ 45,245
Number of Benefit Recipients	290	226	273	1,243	883	576	3,491
2013							
Average Monthly Defined Benefit	$ 1,841	$ 1,748	$ 1,734	$ 1,864	$ 2,362	$ 2,553	$ 2,084
Average Final Average Salary	$ 42,408	$ 45,969	$ 44,636	$ 43,120	$ 46,421	$ 48,656	$ 45,245
Number of Benefit Recipients	290	226	273	1,243	883	576	3,491
2012							
Average Monthly Defined Benefit	$ 1,766	$ 1,685	$ 1,685	$ 1,815	$ 2,284	$ 2,396	$ 1,999
Average Final Average Salary	$ 40,609	$ 45,578	$ 43,738	$ 42,368	$ 45,510	$ 47,219	$ 44,173
Number of Benefit Recipients	251	215	266	1,178	822	476	3,208
2011							
Average Monthly Defined Benefit	$ 1,708	$ 1,609	$ 1,636	$ 1,758	$ 2,206	$ 2,272	$ 1,916
Average Final Average Salary	$ 40,474	$ 44,601	$ 43,597	$ 41,438	$ 44,731	$ 47,365	$ 43,362
Number of Benefit Recipients	241	208	264	1,102	755	396	2,966

[1] Members with less than 20 years of service are primarily members receiving a disability benefit.

Schedule of Participating Employers: Top 10

	June 30, 2019			June 30, 2010		
Top 10 Employers	Covered Members	Rank	Percentage of Total	Covered Members	Rank	Percentage of Total
City of Indianapolis	2,617	1	18.5%	2,318	1	17.3%
City of Fort Wayne	814	2	5.8	795	2	5.9
City of Evansville	559	3	4.0	543	3	4.1
City of South Bend	479	4	3.4	476	4	3.6
City of Hammond	363	5	2.6	371	6	2.8
City of Gary	351	6	2.5	460	5	3.4
City of Lafayette	284	7	2.0	263	8	2.0
City of Terre Haute	281	8	2.0	274	7	2.1
City of Carmel	262	9	1.9	258	9	1.9
City of Elkhart	256	10	1.8	244	10	1.8
Total -- Top 10 Employers	**6,266**		**44.5**	**6,002**		**44.9**
All Other *	7,853		55.5	7,360		55.1
Grand Total	**14,119**		**100.0%**	**13,362**		**100.0%**

168 Employers in 2019 and 164 in 2010

** As of June 30, 2019, “All Other” consisted of:*

Type of Employer	Employers	Members
Cities	109	6,118
Towns	34	1,181
Townships	13	529
Other	2	25
Total All Other	**158**	**7,853**

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Schedule of Changes and Growth in Fiduciary Net Position

For the 10-Years Ended June 30

(dollars in thousands)	2019	2018	2017	2016	2015
Fiduciary Net Position Restricted - Beginning of Year	**$ 513,952**	**$ 475,055**	**$ 441,790**	**$ 437,352**	**$ 432,730**
Contributions / (Benefits and Expenses)					
Employer Contributions	16,031	15,117	16,824	16,946	21,020
Member Contributions	3,476	3,418	3,468	3,239	3,292
Member Reassignment Income	—	—	—	—	—
Miscellaneous Income	—	—	—	—	9
Total Contributions and Other	19,507	18,535	20,292	20,185	24,321
Pension Benefits	(22,107)	(20,312)	(19,223)	(18,194)	(16,613)
Disability Benefits	(115)	(126)	(136)	(90)	(230)
Survivor Benefits	(3,014)	(2,926)	(2,696)	(2,627)	(2,578)
Distributions of Contributions and Interest	(155)	(259)	(44)	(11)	(11)
Administrative Expenses	(108)	(119)	(124)	(148)	(165)
Total Benefits and Expenses	(25,499)	(23,742)	(22,223)	(21,070)	(19,597)
Net Contributions / (Benefits and Expenses)	**(5,992)**	**(5,207)**	**(1,931)**	**(885)**	**4,724**
Net Investment Income / (Loss)	37,371	44,104	35,196	5,323	(102)
Net Increase / (Decrease)	**31,379**	**38,897**	**33,265**	**4,438**	**4,622**
Fiduciary Net Position Restricted - End of Year	**$ 545,331**	**$ 513,952**	**$ 475,055**	**$ 441,790**	**$ 437,352**

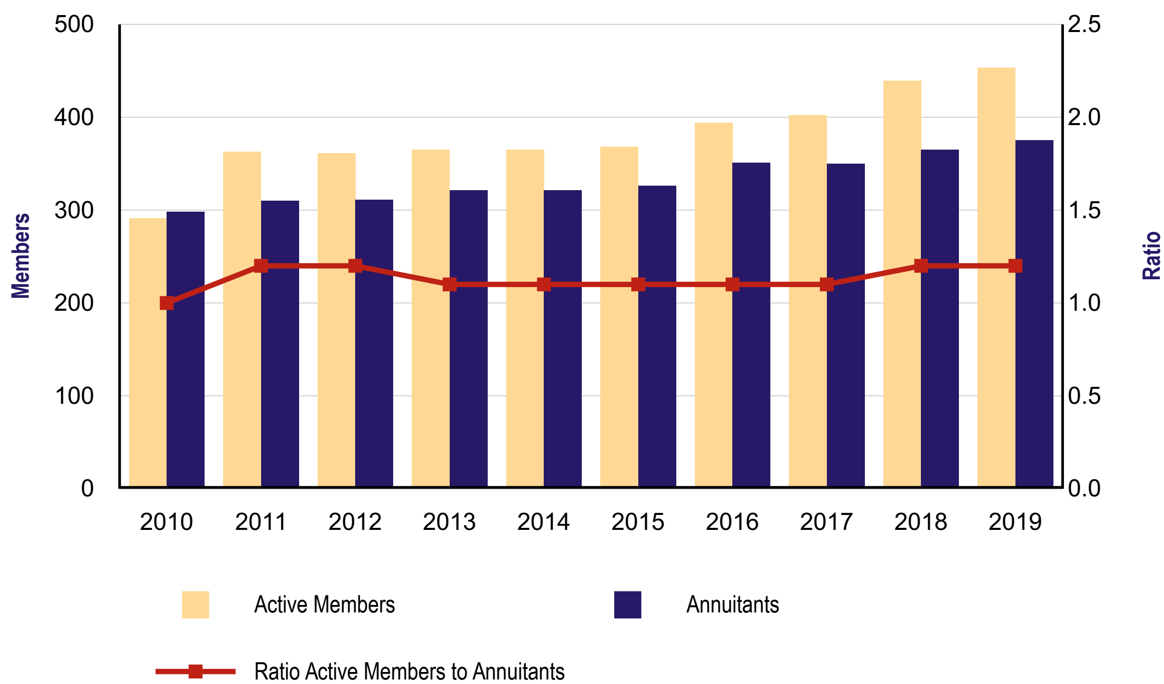
Schedule of Changes and Growth in Fiduciary Net Position, continued
For the 10-Years Ended June 30

(dollars in thousands)	2014	2013	2012	2011	2010
Fiduciary Net Position Restricted - Beginning of Year	**$ 375,752**	**$ 262,326**	**$ 256,986**	**$ 208,395**	**$ 179,428**
Contributions / (Benefits and Expenses)					
Employer Contributions	20,895	111,419	18,896	19,200	18,631
Member Contributions	2,856	2,631	2,468	3,492	2,229
Member Reassignment Income	4	121	257	1,281	59
Miscellaneous Income	6	5	2	—	—
Total Contributions and Other	23,761	114,176	21,623	23,973	20,919
Pension Benefits	(15,819)	(15,115)	(16,569)	(15,996)	(15,441)
Disability Benefits	(134)	(193)	(158)	(92)	(29)
Survivor Benefits	(2,574)	(2,218)	—	—	—
Distributions of Contributions and Interest	—	(53)	(19)	(5)	—
Administrative Expenses	(146)	(126)	(132)	(160)	(104)
Total Benefits and Expenses	(18,673)	(17,705)	(16,878)	(16,253)	(15,574)
Net Contributions / (Benefits and Expenses)	**5,088**	**96,471**	**4,745**	**7,720**	**5,345**
Net Investment Income / (Loss)	51,890	16,955	595	40,871	23,622
Net Increase / (Decrease)	**56,978**	**113,426**	**5,340**	**48,591**	**28,967**
Fiduciary Net Position Restricted - End of Year	**$ 432,730**	**$ 375,752**	**$ 262,326**	**$ 256,986**	**$ 208,395**

Ratio of Active Members to Annuitants

For the 10-Years Ended June 30

	Active Members	Annuitants	Ratio Active Members to Annuitants
2019	453	375	1.2
2018	439	365	1.2
2017	402	350	1.1
2016	394	351	1.1
2015	368	326	1.1
2014	365	321	1.1
2013	365	321	1.1
2012	361	311	1.2
2011	363	310	1.2
2010	291	298	1.0



Schedule of Benefit Recipients by Type of Benefit Option

For the Year Ended June 30, 2019

Amount of Monthly Benefit (in dollars)	Retirees	Survivors	Disability	Total Benefit Recipients
	Number of Benefit Recipients by Benefit Option			
$ 1 - 500	—	—	—	**—**
501 - 1,000	—	—	—	**—**
1,001 - 1,500	—	25	—	**25**
1,501 - 2,000	—	15	—	**15**
2,001 - 3,000	12	32	—	**44**
Over 3,000	253	36	2	**291**
Total	**265**	**108**	**2**	**375**

Retirees — Provides a monthly benefit for the retiree's life. Upon the death of the retiree, the qualified designated survivor receives 50 percent of the member's monthly benefit for the remainder of the survivor's life.

Survivors — Members receiving a survivor benefit in accordance with the applicable statute. The benefit ceases upon the death of the survivor.

Disability — Members receiving a disability benefit in accordance with the applicable statute. For the Judges' Retirement System, there is no minimum creditable service requirement.

Schedule of Average Benefit Payments

For the Nine-Years Ended June 30

	Years of Credited Service						
	< 10	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total
2019							
Average Monthly Defined Benefit	$ 2,017	$ 4,500	$ 5,619	$ 6,279	$ 6,775	$ 6,541	$ 5,288
Average Final Average Salary	$ 107,961	$ 122,249	$ 126,629	$ 128,644	$ 117,627	$ 125,976	$ 123,747
Number of Benefit Recipients	44	90	79	92	41	29	375
2018							
Average Monthly Defined Benefit	$ 2,035	$ 4,437	$ 5,613	$ 6,180	$ 6,640	$ 6,656	$ 5,168
Average Final Average Salary	$ 108,346	$ 120,668	$ 124,939	$ 126,707	$ 116,646	$ 125,976	$ 122,254
Number of Benefit Recipients	51	85	74	86	40	29	365
2017							
Average Monthly Defined Benefit	$ 2,095	$ 4,416	$ 5,589	$ 5,945	$ 6,804	$ 6,788	$ 5,130
Average Final Average Salary	$ 98,954	$ 117,996	$ 120,010	$ 121,926	$ 113,184	$ 124,489	$ 117,814
Number of Benefit Recipients	52	81	72	81	37	27	350
2016							
Average Monthly Defined Benefit	$ 2,158	$ 4,308	$ 5,125	$ 5,959	$ 6,695	$ 6,707	$ 4,989
Average Final Average Salary	$ 98,226	$ 117,568	$ 119,378	$ 120,551	$ 113,184	$ 123,658	$ 117,193
Number of Benefit Recipients	57	79	71	80	37	27	351
2015							
Average Monthly Defined Benefit	$ 2,046	$ 4,145	$ 5,297	$ 5,479	$ 6,555	$ 6,558	$ 4,749
Average Final Average Salary	$ 59,251	$ 116,014	$ 117,354	$ 114,577	$ 112,207	$ 122,815	$ 114,494
Number of Benefit Recipients	57	75	61	69	38	26	326
2014							
Average Monthly Defined Benefit	$ 3,519	$ 4,090	$ 5,039	$ 5,544	$ 6,538	$ 6,545	$ 4,796
Average Final Average Salary	$ 108,307	$ 113,994	$ 113,254	$ 114,783	$ 111,708	$ 122,579	$ 114,885
Number of Benefit Recipients	88	66	47	62	34	24	321
2013							
Average Monthly Defined Benefit	$ 3,519	$ 4,090	$ 5,039	$ 5,544	$ 6,538	$ 6,545	$ 4,796
Average Final Average Salary	$ 108,307	$ 113,994	$ 113,254	$ 114,783	$ 111,708	$ 122,579	$ 114,885
Number of Benefit Recipients	88	66	47	62	34	24	321
2012							
Average Monthly Defined Benefit	$ 2,508	$ 4,006	$ 4,999	$ 5,265	$ 6,212	$ 6,230	$ 4,478
Average Final Average Salary	$ 73,561	$ 114,043	$ 112,826	$ 114,625	$ 111,708	$ 122,579	$ 112,885
Number of Benefit Recipients	74	67	48	63	34	25	311
2011							
Average Monthly Defined Benefit	$ 2,495	$ 4,104	$ 5,043	$ 5,317	$ 6,337	$ 6,162	$ 4,513
Average Final Average Salary	$ 57,717	$ 113,387	$ 112,461	$ 113,606	$ 111,708	$ 120,715	$ 111,151
Number of Benefit Recipients	75	66	47	64	35	23	310

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Schedule of Changes and Growth in Fiduciary Net Position

For the 10-Years Ended June 30

(dollars in thousands)	2019	2018	2017	2016	2015
Fiduciary Net Position Restricted - Beginning of Year	**$ 131,491**	**$ 120,016**	**$ 111,329**	**$ 110,038**	**$ 110,657**
Contributions / (Benefits and Expenses)					
Employer Contributions	6,982	6,175	5,691	5,367	5,215
Member Contributions	1,368	1,172	1,102	1,016	1,004
Member Reassignment Income	—	—	—	—	—
Miscellaneous Income	—	10	—	—	—
Total Contributions and Other	8,350	7,357	6,793	6,383	6,219
Pension Benefits	(6,705)	(6,288)	(6,223)	(5,639)	(6,068)
Disability Benefits	(49)	(49)	(49)	(58)	(60)
Survivor Benefits	(495)	(483)	(437)	(435)	(395)
Distributions of Contributions and Interest	(76)	(115)	(117)	(113)	(85)
Administrative Expenses	(112)	(136)	(123)	(139)	(159)
Member Reassignment Expenses	—	—	(26)	(21)	—
Total Benefits and Expenses	(7,437)	(7,071)	(6,975)	(6,405)	(6,767)
Net Contributions / (Benefits and Expenses)	**913**	**286**	**(182)**	**(22)**	**(548)**
Net Investment Income / (Loss)	9,711	11,189	8,869	1,313	(71)
Net Increase / (Decrease)	**10,624**	**11,475**	**8,687**	**1,291**	**(619)**
Fiduciary Net Position Restricted - End of Year	**$ 142,115**	**$ 131,491**	**$ 120,016**	**$ 111,329**	**$ 110,038**

Schedule of Changes and Growth in Fiduciary Net Position, continued

For the Year Ended June 30

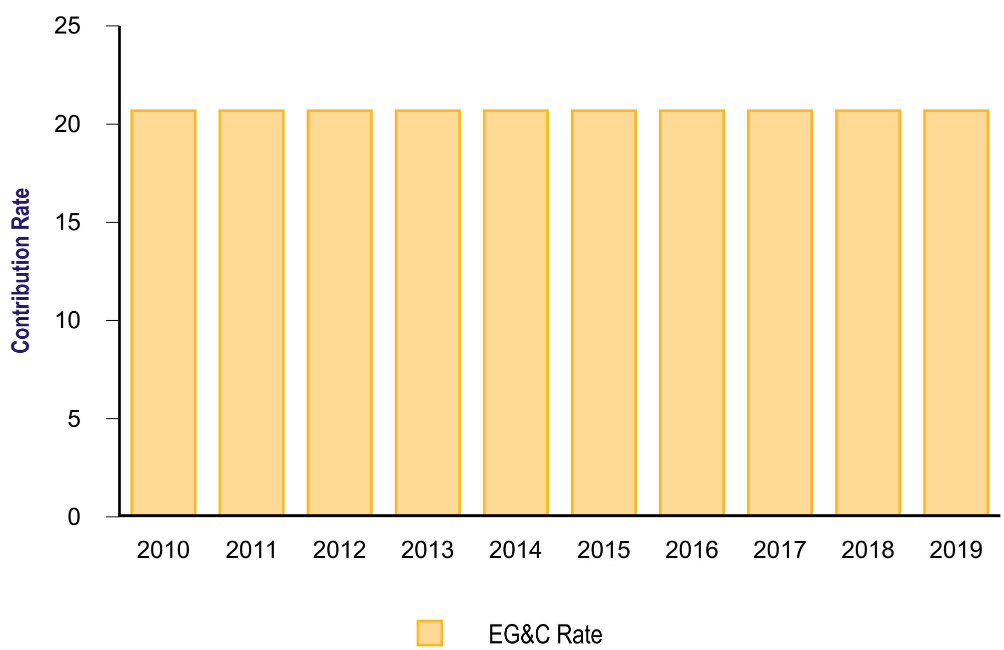
(dollars in thousands)	2014	2013	2012	2011	2010
Fiduciary Net Position Restricted - Beginning of Year	**$ 97,019**	**$ 76,543**	**$ 75,305**	**$ 61,174**	**$ 51,404**
Contributions / (Benefits and Expenses)					
Employer Contributions	5,359	19,740	5,054	5,197	5,256
Member Contributions	1,019	1,006	972	1,002	1,010
Member Reassignment Income	—	—	—	—	9
Miscellaneous Income	—	—	—	—	—
Total Contributions and Other	6,378	20,746	6,026	6,199	6,275
Pension Benefits	(5,379)	(4,393)	(4,656)	(3,851)	(3,092)
Disability Benefits	(92)	(64)	(61)	(58)	(58)
Survivor Benefits	(367)	(342)	—	—	—
Distributions of Contributions and Interest	(100)	(37)	(100)	(99)	(31)
Administrative Expenses	(141)	(121)	(131)	(112)	(73)
Member Reassignment Expenses	—	(15)	—	—	—
Total Benefits and Expenses	(6,079)	(4,972)	(4,948)	(4,120)	(3,254)
Net Contributions / (Benefits and Expenses)	**299**	**15,774**	**1,078**	**2,079**	**3,021**
Net Investment Income / (Loss)	13,339	4,702	160	12,052	6,749
Net Increase / (Decrease)	**13,638**	**20,476**	**1,238**	**14,131**	**9,770**
Fiduciary Net Position Restricted - End of Year	**$ 110,657**	**$ 97,019**	**$ 76,543**	**$ 75,305**	**$ 61,174**

Schedule of Historical Contribution Rates

For the 10-Years Ended June 30

	EG&C Rate
2019	20.75%
2018	20.75
2017	20.75
2016	20.75
2015	20.75
2014	20.75
2013	20.75
2012	20.75
2011	20.75
2010	20.75

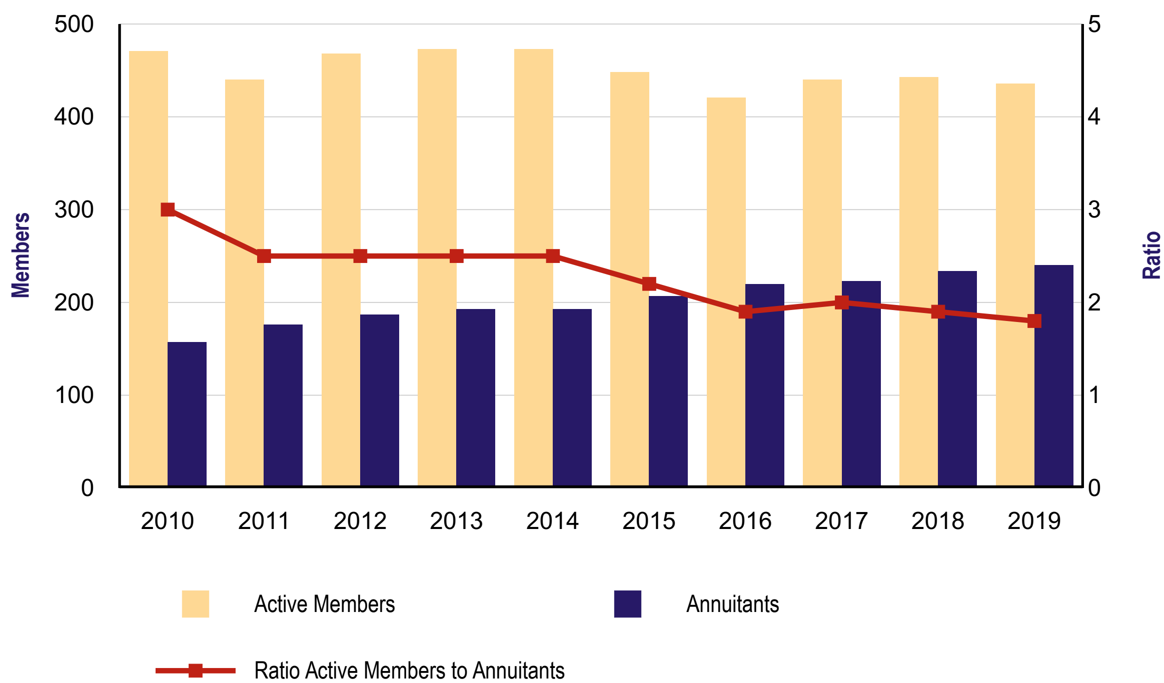
Memo:	
Effective Date	January 1



Ratio of Active Members to Annuitants

For the 10-Years Ended June 30

	Active Members	Annuitants	Ratio Active Members to Annuitants
2019	436	240	1.8
2018	443	234	1.9
2017	440	223	2.0
2016	421	220	1.9
2015	448	207	2.2
2014	473	193	2.5
2013	473	193	2.5
2012	468	187	2.5
2011	440	176	2.5
2010	471	157	3.0



Schedule of Benefit Recipients by Type of Benefit Option

For the Year Ended June 30, 2019

Amount of Monthly Benefit (in dollars)	Number of Benefit Recipients by Benefit Option			
	Retirees	Survivors	Disability	Total Benefit Recipients
$ 1 - 500	2	10	1	**13**
501 - 1,000	12	20	—	**32**
1,001 - 1,500	21	13	1	**35**
1,501 - 2,000	10	3	—	**13**
2,001 - 3,000	81	1	1	**83**
Over 3,000	64	—	—	**64**
Total	**190**	**47**	**3**	**240**

Retirees — Provides a monthly benefit for the retiree's life. Upon the death of the retiree, the qualified designated survivor receives 50 percent of the member's monthly benefit for the remainder of the survivor's life.

Survivors — Members receiving a survivor benefit in accordance with the applicable statute. The benefit ceases upon the death of the survivor.

Disability — Members receiving a disability benefit in accordance with the applicable statute. For EG&C, there is no minimum creditable service requirement.

Schedule of Average Benefit Payments

For the Nine-Years Ended June 30

	Years of Credited Service						
	< 10	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total
2019							
Average Monthly Defined Benefit	$ 851	$ 1,366	$ 594	$ 1,064	$ 2,177	$ 2,830	$ 2,231
Average Final Average Salary	$ 51,086	$ 64,944	$ 33,535	$ 39,323	$ 53,322	$ 57,149	$ 53,507
Number of Benefit Recipients	2	7	21	19	75	116	240
2018							
Average Monthly Defined Benefit	$ 851	$ 1,421	$ 561	$ 1,020	$ 2,162	$ 2,814	$ 2,224
Average Final Average Salary	$ 51,086	$ 67,123	$ 29,132	$ 39,323	$ 52,606	$ 56,496	$ 52,758
Number of Benefit Recipients	2	4	20	20	73	115	234
2017							
Average Monthly Defined Benefit	$ 504	$ 1,386	$ 615	$ 999	$ 2,101	$ 2,810	$ 2,209
Average Final Average Salary	$ 33,205	$ 66,535	$ 26,878	$ 37,858	$ 51,105	$ 56,019	$ 51,549
Number of Benefit Recipients	15	1	7	19	68	113	223
2016							
Average Monthly Defined Benefit	$ 504	$ —	$ 589	$ 983	$ 2,073	$ 2,746	$ 2,144
Average Final Average Salary	$ 33,205	$ —	$ 26,025	$ 37,093	$ 50,468	$ 54,912	$ 50,294
Number of Benefit Recipients	15	—	8	21	66	110	220
2015							
Average Monthly Defined Benefit	$ 504	$ —	$ 562	$ 983	$ 2,031	$ 2,729	$ 2,097
Average Final Average Salary	$ 33,205	$ —	$ 26,025	$ 37,093	$ 48,424	$ 54,007	$ 49,010
Number of Benefit Recipients	15	—	9	21	59	103	207
2014							
Average Monthly Defined Benefit	$ 2,141	$ —	$ 439	$ 886	$ 1,816	$ 2,571	$ 2,015
Average Final Average Salary	$ 58,827	$ —	$ 22,436	$ 36,499	$ 45,830	$ 52,650	$ 47,776
Number of Benefit Recipients	14	—	11	22	54	92	193
2013							
Average Monthly Defined Benefit	$ 2,141	$ —	$ 439	$ 886	$ 1,816	$ 2,571	$ 2,015
Average Final Average Salary	$ 58,827	$ —	$ 22,436	$ 36,499	$ 45,830	$ 52,650	$ 47,776
Number of Benefit Recipients	14	—	11	22	54	92	193
2012							
Average Monthly Defined Benefit	$ 1,498	$ —	$ 439	$ 923	$ 1,791	$ 2,593	$ 1,984
Average Final Average Salary	$ —	$ —	$ 22,436	$ 37,858	$ 45,830	$ 52,589	$ 47,203
Number of Benefit Recipients	7	—	11	23	55	91	187
2011							
Average Monthly Defined Benefit	$ 1,339	$ —	$ 439	$ 894	$ 1,757	$ 2,507	$ 1,884
Average Final Average Salary	$ —	$ —	$ 22,436	$ 35,889	$ 45,638	$ 50,797	$ 45,695
Number of Benefit Recipients	8	—	11	23	54	80	176

Schedule of Changes and Growth in Fiduciary Net Position

For the 10-Years Ended June 30

(dollars in thousands)	2019	2018	2017	2016	2015
Fiduciary Net Position Restricted - Beginning of Year	**$ 61,019**	**$ 55,575**	**$ 52,792**	**$ 53,424**	**$ 54,507**
Contributions / (Benefits and Expenses)					
Employer Contributions	3,216	3,014	1,486	1,440	1,063
Member Reassignment Income Contributions	1,307	1,294	1,357	1,279	1,269
Miscellaneous Income	—	—	—	—	—
Total Contributions and Other	4,523	4,308	2,843	2,719	2,332
Pension Benefits	(3,985)	(3,575)	(3,390)	(3,270)	(2,898)
Disability Benefits	(97)	(97)	(97)	(136)	(19)
Survivor Benefits	(152)	(181)	(137)	(87)	(78)
Distributions of Contributions and Interest	(199)	(142)	(445)	(254)	(259)
Administrative Expenses	(75)	(87)	(158)	(193)	(127)
Member Reassignment Expenses	—	—	—	—	—
Total Benefits and Expenses	(4,508)	(4,082)	(4,227)	(3,940)	(3,381)
Net Contributions / (Benefits and Expenses)	**15**	**226**	**(1,384)**	**(1,221)**	**(1,049)**
Net Investment Income / (Loss)	4,489	5,218	4,167	589	(34)
Net Increase / (Decrease)	**4,504**	**5,444**	**2,783**	**(632)**	**(1,083)**
Fiduciary Net Position Restricted - End of Year	**$ 65,523**	**$ 61,019**	**$ 55,575**	**$ 52,792**	**$ 53,424**

Schedule of Changes and Growth in Fiduciary Net Position, continued

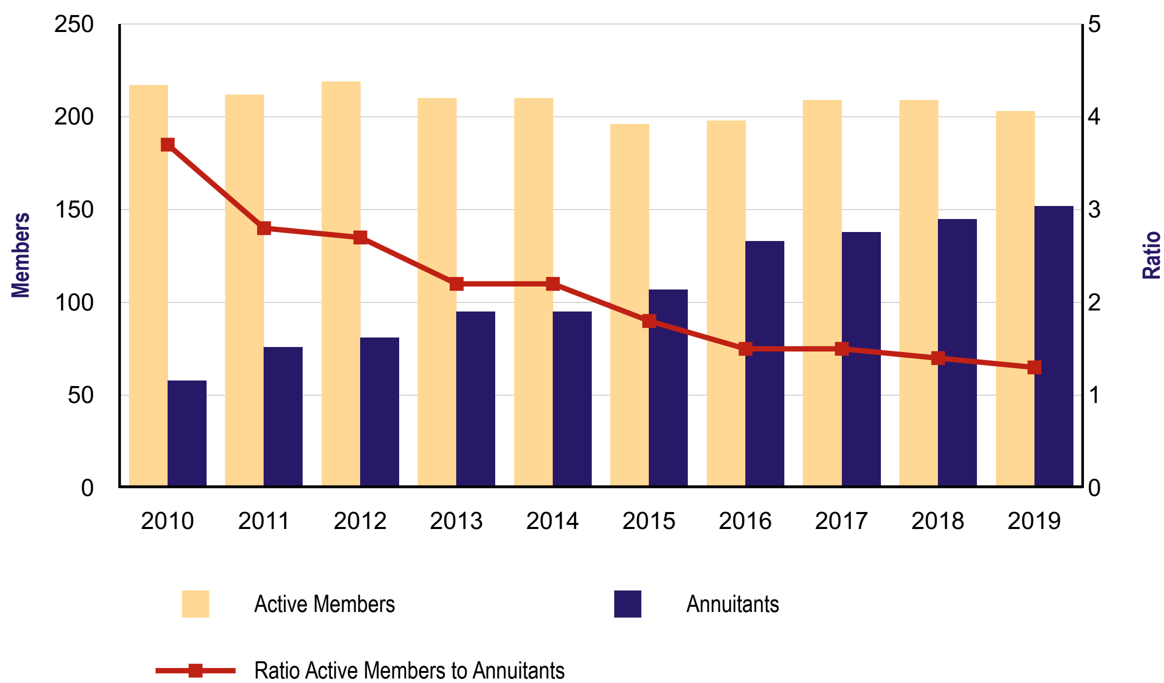
For the Year Ended June 30

(dollars in thousands)	2014	2013	2012	2011	2010
Fiduciary Net Position Restricted - Beginning of Year	**$ 47,920**	**$ 27,689**	**$ 26,478**	**$ 22,431**	**$ 19,696**
Contributions / (Benefits and Expenses)					
Employer Contributions	1,174	19,443	1,839	170	170
Member Reassignment Income Contributions	1,334	1,271	1,277	1,271	1,268
Miscellaneous Income	4	—	—	—	—
Total Contributions and Other	2,512	20,714	3,116	1,441	1,438
Pension Benefits	(2,283)	(1,982)	(1,783)	(1,372)	(1,143)
Disability Benefits	(20)	(19)	(19)	(19)	(20)
Survivor Benefits	(44)	(39)	—	—	—
Distributions of Contributions and Interest	(51)	(195)	(63)	(263)	(80)
Administrative Expenses	(108)	(145)	(82)	(78)	(55)
Member Reassignment Expenses	—	—	—	(32)	—
Total Benefits and Expenses	(2,506)	(2,380)	(1,947)	(1,764)	(1,298)
Net Contributions / (Benefits and Expenses)	**6**	**18,334**	**1,169**	**(323)**	**140**
Net Investment Income / (Loss)	6,581	1,897	42	4,370	2,595
Net Increase / (Decrease)	**6,587**	**20,231**	**1,211**	**4,047**	**2,735**
Fiduciary Net Position Restricted - End of Year	**$ 54,507**	**$ 47,920**	**$ 27,689**	**$ 26,478**	**$ 22,431**

Ratio of Active Members to Annuitants

For the 10-Years Ended June 30

	Active Members	Annuitants	Ratio Active Members to Annuitants
2019	203	152	1.3
2018	209	145	1.4
2017	209	138	1.5
2016	198	133	1.5
2015	196	107	1.8
2014	210	95	2.2
2013	210	95	2.2
2012	219	81	2.7
2011	212	76	2.8
2010	217	58	3.7



Schedule of Benefit Recipients by Type of Benefit Option

For the Year Ended June 30, 2019

Amount of Monthly Benefit (in dollars)	Number of Benefit Recipients by Benefit Option			
	Retirees	Survivors	Disability	Total Benefit Recipients
$ 1 - 500	7	3	—	**10**
501 - 1,000	17	6	—	**23**
1,001 - 1,500	24	3	—	**27**
1,501 - 2,000	18	2	1	**21**
2,001 - 3,000	35	—	—	**35**
Over 3,000	35	—	1	**36**
Total	**136**	**14**	**2**	**152**

Retirees — Provides a monthly benefit for the retiree's life. Upon the death of the retiree, the qualified designated survivor receives 50 percent of the member's monthly benefit for the remainder of the survivor's life.

Survivors — Members receiving a survivor benefit in accordance with the applicable statute. The benefit ceases upon the death of the survivor.

Disability — Members receiving a disability benefit in accordance with the applicable statute. For PARF, five or more years of creditable service is required to be eligible for a disability benefit.

Schedule of Average Benefit Payments

For the Nine-Years Ended June 30

	Years of Credited Service						
	< 10	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total
2019							
Average Monthly Defined Benefit	$ 1,193	$ 1,776	$ 2,284	$ 2,705	$ 2,977	$ 2,307	$ 2,134
Average Final Average Salary	$ 73,391	$ 72,191	$ 81,704	$ 91,833	$ 108,040	$ 124,231	$ 83,509
Number of Benefit Recipients	12	57	34	27	11	11	152
2018							
Average Monthly Defined Benefit	$ 1,277	$ 1,802	$ 2,202	$ 2,651	$ 2,977	$ 2,307	$ 2,154
Average Final Average Salary	$ 69,684	$ 71,503	$ 81,176	$ 92,089	$ 108,040	$ 124,231	$ 83,440
Number of Benefit Recipients	9	51	36	27	11	11	145
2017							
Average Monthly Defined Benefit	$ 1,013	$ 1,735	$ 2,128	$ 2,704	$ 2,977	$ 2,423	$ 2,098
Average Final Average Salary	$ 64,922	$ 69,798	$ 77,790	$ 91,342	$ 108,040	$ 126,756	$ 81,499
Number of Benefit Recipients	10	50	32	25	11	10	138
2016							
Average Monthly Defined Benefit	$ 1,013	$ 1,729	$ 2,136	$ 2,665	$ 2,901	$ 2,423	$ 2,088
Average Final Average Salary	$ 64,922	$ 68,303	$ 77,439	$ 90,943	$ 108,734	$ 126,756	$ 80,869
Number of Benefit Recipients	10	47	31	24	11	10	133
2015							
Average Monthly Defined Benefit	$ 1,163	$ 1,498	$ 1,969	$ 2,467	$ 2,589	$ 1,693	$ 1,865
Average Final Average Salary	$ 83,896	$ 62,194	$ 73,614	$ 86,752	$ 99,686	$ 113,499	$ 76,315
Number of Benefit Recipients	8	38	27	20	8	6	107
2014							
Average Monthly Defined Benefit	$ 1,694	$ 1,445	$ 1,875	$ 2,340	$ 2,626	$ 2,187	$ 1,843
Average Final Average Salary	$ 77,001	$ 54,908	$ 71,821	$ 83,707	$ 103,220	$ 110,167	$ 72,709
Number of Benefit Recipients	28	22	22	14	5	4	95
2013							
Average Monthly Defined Benefit	$ 1,694	$ 1,445	$ 1,875	$ 2,340	$ 2,626	$ 2,187	$ 1,843
Average Final Average Salary	$ 77,001	$ 54,908	$ 71,821	$ 83,707	$ 103,220	$ 110,167	$ 72,709
Number of Benefit Recipients	28	22	22	14	5	4	95
2012							
Average Monthly Defined Benefit	$ 1,541	$ 1,421	$ 1,874	$ 2,283	$ 2,488	$ 2,496	$ 1,821
Average Final Average Salary	$ 63,714	$ 54,908	$ 72,709	$ 83,534	$ 103,220	$ 110,167	$ 72,130
Number of Benefit Recipients	17	21	21	13	5	4	81
2011							
Average Monthly Defined Benefit	$ 1,541	$ 1,413	$ 1,831	$ 2,252	$ 2,219	$ 2,615	$ 1,774
Average Final Average Salary	$ 58,939	$ 55,721	$ 69,668	$ 79,113	$ 95,745	$ 101,967	$ 68,573
Number of Benefit Recipients	17	20	20	12	4	3	76

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Legislators' Defined Benefit Fund

Schedule of Changes and Growth in Fiduciary Net Position

For the 10-Years Ended June 30

(dollars in thousands)	2019	2018	2017	2016	2015
Fiduciary Net Position Restricted - Beginning of Year	**$ 2,942**	**$ 2,865**	**$ 2,919**	**$ 3,174**	**$ 3,489**
Contributions / (Benefits and Expenses)					
Employer Contributions	269	237	135	138	131
Total Contributions and Other	269	237	135	138	131
Pension Benefits	(302)	(303)	(304)	(311)	(331)
Disability Benefits	(3)	—	—	—	—
Survivor Benefits [1]	(51)	(56)	(53)	(48)	(39)
Administrative Expenses	(38)	(64)	(53)	(61)	(71)
Total Benefits and Expenses	(394)	(423)	(410)	(420)	(441)
Net Contributions / (Benefits and Expenses)	**(125)**	**(186)**	**(275)**	**(282)**	**(310)**
Net Investment Income / (Loss)	209	263	221	27	(5)
Net Increase / (Decrease)	**84**	**77**	**(54)**	**(255)**	**(315)**
FIduciary Net Position Restricted - End of Year	**$ 3,026**	**$ 2,942**	**$ 2,865**	**$ 2,919**	**$ 3,174**

[1] *See Introduction to Statistical Information.*

Schedule of Changes and Growth in Fiduciary Net Position, continued

For the 10-Years Ended June 30

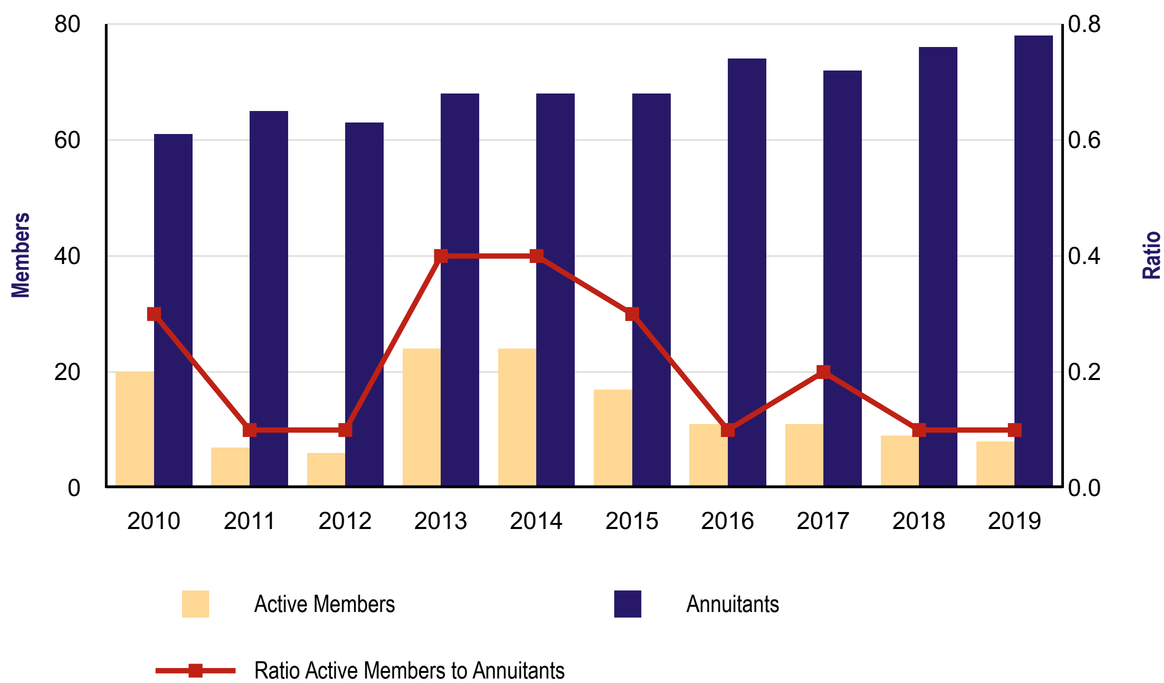
(dollars in thousands)	2014	2013	2012	2011	2010
Fiduciary Net Position Restricted - Beginning of Year	**$ 3,337**	**$ 3,385**	**$ 3,645**	**$ 3,396**	**$ 3,368**
Contributions / (Benefits and Expenses)					
Employer Contributions	138	150	112	—	—
Total Contributions and Other	138	150	112	—	—
Pension Benefits	(324)	(321)	(335)	(337)	(353)
Disability Benefits	(2)	(3)	(3)	(3)	(3)
Survivor Benefits [1]	(37)	(41)	—	—	—
Administrative Expenses	(62)	(34)	(37)	(50)	(35)
Total Benefits and Expenses	(425)	(399)	(375)	(390)	(391)
Net Contributions / (Benefits and Expenses)	**(287)**	**(249)**	**(263)**	**(390)**	**(391)**
Net Investment Income / (Loss)	439	201	3	639	419
Net Increase / (Decrease)	**152**	**(48)**	**(260)**	**249**	**28**
FIduciary Net Position Restricted - End of Year	**$ 3,489**	**$ 3,337**	**$ 3,385**	**$ 3,645**	**$ 3,396**

[1] *See Introduction to Statistical Information.*

Ratio of Active Members to Annuitants

For the 10-Years Ended June 30

	Active Members	Annuitants	Ratio Active Members to Annuitants
2019	8	78	0.1
2018	9	76	0.1
2017	11	72	0.2
2016	11	74	0.1
2015	17	68	0.3
2014	24	68	0.4
2013	24	68	0.4
2012	6	63	0.1
2011	7	65	0.1
2010	20	61	0.3



Schedule of Benefit Recipients by Type of Benefit Option

For the Year Ended June 30, 2019

Amount of Monthly Benefit (in dollars)	Number of Benefit Recipients by Benefit Option			
	Retirees	Survivors	Disability	Total Benefit Recipients
$ 1 - 500	37	16	—	**53**
501 - 1,000	22	2	—	**24**
1,001 - 1,500	1	—	—	**1**
1,501 - 2,000	—	—	—	**—**
2,001 - 3,000	—	—	—	**—**
Over 3,000	—	—	—	**—**
Total	**60**	**18**	**—**	**78**

Retirees — Provides a monthly benefit for the retiree's life. Upon the death of the retiree, the qualified designated survivor receives 50 percent of the member's monthly benefit for the remainder of the survivor's life.

Survivors — Members receiving a survivor benefit in accordance with the applicable statute. The benefit ceases upon the death of the survivor.

Disability — Members receiving a disability benefit in accordance with the applicable statute. For LE DB, five or more years of creditable service is required to be eligible for a disability benefit.

Schedule of Average Benefit Payments

For the Nine-Years Ended June 30

	Years of Credited Service						
	< 10	10 - 14	15 - 19	20 - 24	25 - 29	30+	Total
2019							
Average Monthly Defined Benefit [1]	$ 186	$ 393	$ 646	$ 1,008	$ 577	$ 784	$ 389
Average Final Average Salary	$ 24,040	$ 26,330	$ 24,244	N/A	N/A	N/A	$ 24,709
Number of Benefit Recipients	31	26	17	2	1	1	78
2018							
Average Monthly Defined Benefit [1]	$ 191	$ 388	$ 646	$ 1,008	$ 577	$ 784	$ 392
Average Final Average Salary	$ 24,040	$ 26,330	$ 24,244	N/A	N/A	N/A	$ 24,709
Number of Benefit Recipients	30	25	17	2	1	1	76
2017							
Average Monthly Defined Benefit [1]	$ 247	$ 451	$ 667	$ 1,008	$ 577	$ 784	$ 413
Average Final Average Salary	$ 25,847	$ 22,383	$ 24,244	N/A	N/A	N/A	$ 24,709
Number of Benefit Recipients	37	16	15	2	1	1	72
2016							
Average Monthly Defined Benefit [1]	$ 250	$ 451	$ 667	$ 1,008	$ 577	$ 784	$ 410
Average Final Average Salary	$ 25,932	$ 22,383	$ 24,244	N/A	N/A	N/A	$ 24,785
Number of Benefit Recipients	39	16	15	2	1	1	74
2015							
Average Monthly Defined Benefit [1]	$ 255	$ 443	$ 679	$ 1,008	$ 577	$ 1,568	$ 448
Average Final Average Salary	$ 25,872	$ 22,383	$ 24,244	N/A	N/A	N/A	$ 24,781
Number of Benefit Recipients	31	17	16	2	1	1	68
2014							
Average Monthly Defined Benefit [1]	$ 386	$ 351	$ 459	$ 629	$ 472	$ 669	$ 447
Average Final Average Salary	$ 12,154	$ 19,636	$ 29,430	$ 32,868	$ 27,614	$ 31,870	$ 24,372
Number of Benefit Recipients	17	21	14	7	2	7	68
2013							
Average Monthly Defined Benefit [1]	$ 386	$ 351	$ 459	$ 629	$ 472	$ 669	$ 447
Average Final Average Salary	$ 12,154	$ 19,636	$ 29,430	$ 32,868	$ 27,614	$ 31,870	$ 24,372
Number of Benefit Recipients	17	21	14	7	2	7	68
2012							
Average Monthly Defined Benefit [1]	$ 341	$ 356	$ 458	$ 629	$ 699	$ 669	$ 461
Average Final Average Salary	$ 7,078	$ 19,636	$ 27,391	$ 32,868	$ 27,614	$ 31,870	$ 27,195
Number of Benefit Recipients	8	22	16	7	3	7	63
2011							
Average Monthly Defined Benefit [1]	$ 341	$ 348	$ 448	$ 563	$ 699	$ 645	$ 456
Average Final Average Salary	$ 7,078	$ 18,880	$ 30,641	$ 32,804	$ 27,614	$ 32,151	$ 28,439
Number of Benefit Recipients	8	21	15	10	3	8	65

[1] *Benefit calculations for the LE DB benefit recipients are based on years of service, not final average salary.*

Public Employees' Defined Contribution Account

Schedule of Changes and Growth in Fiduciary Net Position

For the Two-Years Ended June 30

(dollars in thousands)	2019	2018 [1]
Fiduciary Net Position Restricted - Beginning of Year	**$ 2,867,731**	**$ —**
Contributions / (Benefits and Expenses)		
Member Contributions	178,108	88,052
Transfer from Defined Benefit	—	2,849,380
Total Contributions and Other	178,108	2,937,432
Distributions of Contributions and Interest	(230,340)	(106,749)
Administrative Expenses	(7,186)	(3,839)
Miscellaneous Expenses	(155)	(50)
Total Benefits and Expenses	(237,681)	(110,638)
Net Contributions / (Benefits and Expenses)	**(59,573)**	**2,826,794**
Net Investment Income / (Loss)	119,312	40,937
Net Increase / (Decrease)	**59,739**	**2,867,731**
Fiduciary Net Position Restricted - End of Year	**$ 2,927,470**	**$ 2,867,731**

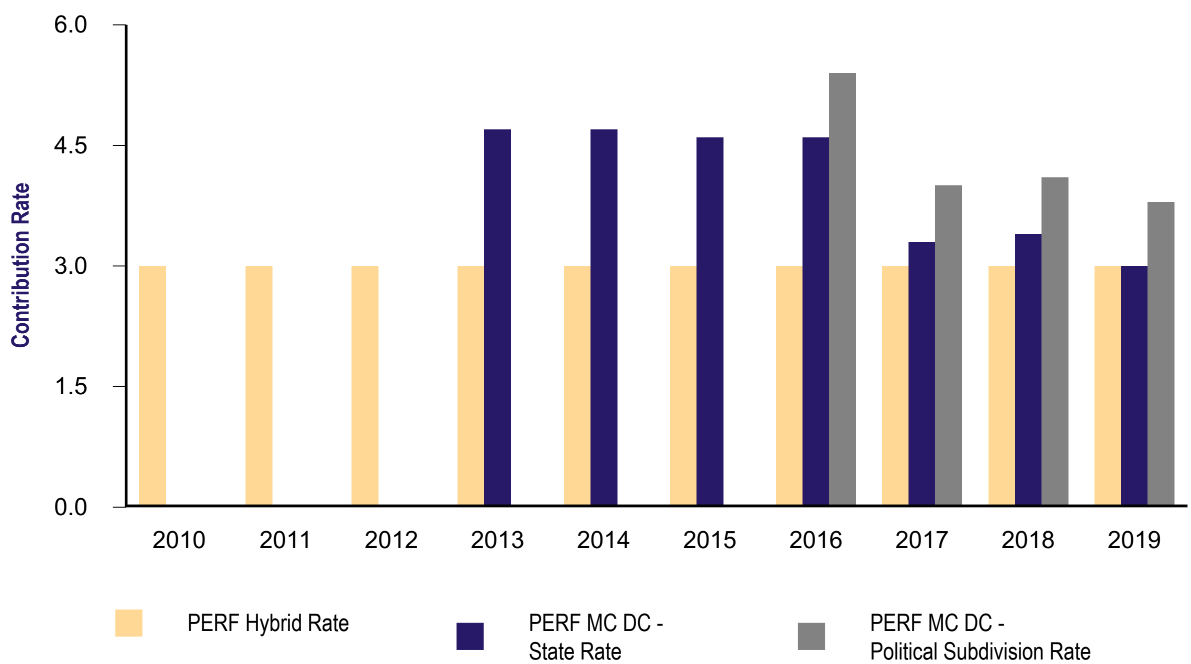
[1] *PERF DC was split from PERF DB as of January 1, 2018. 2018 represents only a half year of activity.*

Schedule of Historical Contribution Rates
For the 10-Years Ended June 30

		PERF MC DC	
	PERF Hybrid DC[1]	State	Political Subdivision [2]
2019	3.0%	3.0%	3.8%
2018	3.0	3.4	4.1
2017	3.0	3.3	4.0
2016	3.0	4.6	5.4
2015	3.0	4.6	N/A
2014	3.0	4.7	N/A
2013	3.0	4.7	N/A
2012	3.0	N/A	N/A
2011	3.0	N/A	N/A
2010	3.0	N/A	N/A
Memo:			
Effective Date	July 1	July 1	January 1

[1] Represents the member's portion of the PERF Hybrid Rate.

[2] Represents the maximum rate employers may provide their member's.



Teachers' Defined Contribution Account

Schedule of Changes and Growth in Fiduciary Net Position

For the Two-Years Ended June 30

(dollars in thousands)	2019	2018 [1]
Fiduciary Net Position Restricted - Beginning of Year	**$ 2,744,103**	**$ —**
Contributions / (Benefits and Expenses)		
Member Contributions	123,437	63,026
Transfer from Defined Benefit	—	2,674,819
Total Contributions and Other	123,437	2,737,845
Distributions of Contributions and Interest	(209,642)	(37,514)
Administrative Expenses	(3,127)	(1,652)
Miscellaneous Expenses	(70)	(22)
Total Benefits and Expenses	(212,839)	(39,188)
Net Contributions / (Benefits and Expenses)	**(89,402)**	**2,698,657**
Net Investment Income / (Loss)	129,425	45,446
Net Increase / (Decrease)	**40,023**	**2,744,103**
Fiduciary Net Position Restricted - End of Year	**$ 2,784,126**	**$ 2,744,103**

[1] TRF DC was split from the TRF Pre-'96 DB and TRF '96 DB plans as of January 1, 2018, therefore 2018 represents only a half year of activity.

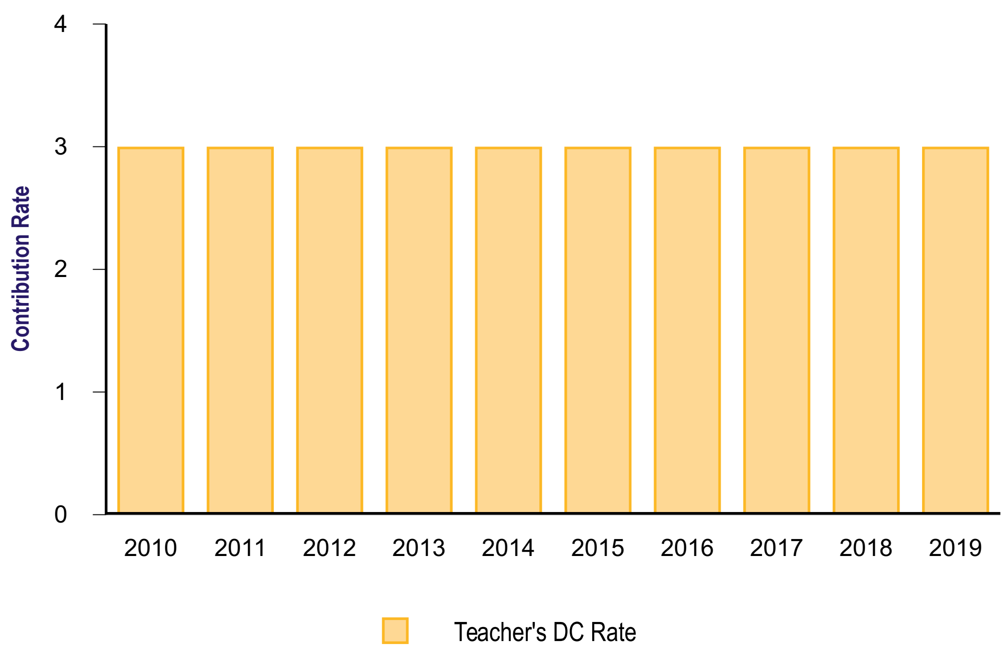
Teachers' Defined Contribution Account, continued

Schedule of Historical Contribution Rates

For the 10-Years Ended June 30

	Teachers' DC Rate
2019	3.0%
2018	3.0
2017	3.0
2016	3.0
2015	3.0
2014	3.0
2013	3.0
2012	3.0
2011	3.0
2010	3.0

Memo:	
Effective Date	July 1



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Schedule of Changes and Growth in Fiduciary Net Position

For the 10-Years Ended June 30

(dollars in thousands)	2019	2018	2017	2016	2015
Fiduciary Net Position Restricted - Beginning of Year	**$ 33,596**	**$ 30,772**	**$ 28,410**	**$ 28,288**	**$ 29,103**
Contributions / (Benefits and Expenses)					
Employer Contributions	1,483	1,334	1,395	—	—
Member Contributions	407	392	388	1,763	1,715
Miscellaneous Income	25	18	18	14	36
Total Contributions and Other	1,915	1,744	1,801	1,777	1,751
Distributions of Contributions and Interest	(3,228)	(1,794)	(2,504)	(1,794)	(3,100)
Administrative Expenses	(8)	(12)	(7)	(12)	(6)
Total Benefits and Expenses	(3,236)	(1,806)	(2,511)	(1,806)	(3,106)
Net Contributions / (Benefits and Expenses)	**(1,321)**	**(62)**	**(710)**	**(29)**	**(1,355)**
Net Investment Income / (Loss)	1,622	2,886	3,072	151	540
Net Increase / (Decrease)	**301**	**2,824**	**2,362**	**122**	**(815)**
Fiduciary Net Position Restricted - End of Year	**$ 33,897**	**$ 33,596**	**$ 30,772**	**$ 28,410**	**$ 28,288**

Schedule of Changes and Growth in Fiduciary Net Position, continued

For the 10-Years Ended June 30

(dollars in thousands)	2014	2013	2012	2011	2010
Fiduciary Net Position Restricted - Beginning of Year	**$ 25,322**	**$ 25,579**	**$ 24,755**	**$ 22,356**	**$ 19,778**
Contributions / (Benefits and Expenses)					
Employer Contributions	—	—	—	—	—
Member Contributions	1,590	1,463	1,303	1,205	1,146
Miscellaneous Income	40	42	49	68	25
Total Contributions and Other	1,630	1,505	1,352	1,273	1,171
Distributions of Contributions and Interest	(1,452)	(3,616)	(1,033)	(2,675)	(803)
Administrative Expenses	(5)	(4)	(22)	(39)	(33)
Total Benefits and Expenses	(1,457)	(3,620)	(1,055)	(2,714)	(836)
Net Contributions / (Benefits and Expenses)	**173**	**(2,115)**	**297**	**(1,441)**	**335**
Net Investment Income / (Loss)	3,608	1,858	527	3,840	2,243
Net Increase / (Decrease)	**3,781**	**(257)**	**824**	**2,399**	**2,578**
Fiduciary Net Position Restricted - End of Year	**$ 29,103**	**$ 25,322**	**$ 25,579**	**$ 24,755**	**$ 22,356**

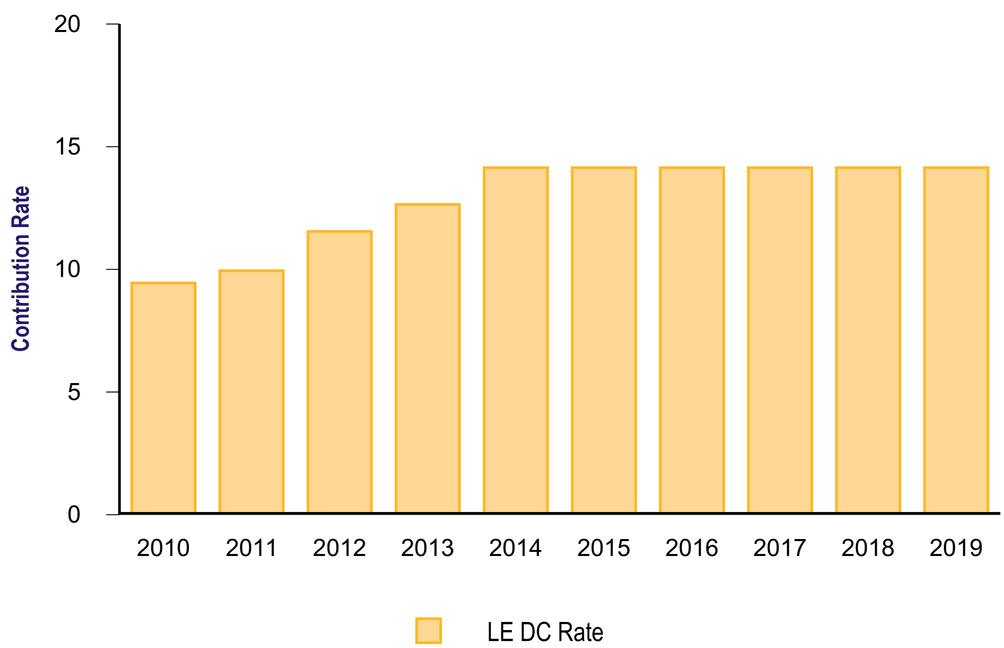
Schedule of Historical Contribution Rates

For the 10-Years Ended June 30

	LE DC Rate
2019	14.2%
2018	14.2
2017	14.2
2016	14.2
2015	14.2
2014	14.2
2013	12.7
2012	11.6
2011	10.0
2010	9.5

Memo:

Effective Date	January 1



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Special Death Benefit Fund

Schedule of Changes and Growth in Fiduciary Net Position

For the 10-Years Ended June 30 [1]

(dollars in thousands)	2019	2018	2017	2016	2015
Fiduciary Net Position Restricted - Beginning of Year	**$ 14,779**	**$ 15,098**	**$ 14,651**	**$ 13,609**	**$ 13,091**
Contributions / (Benefits and Expenses)					
Nonemployer Contributing Entity	515	506	564	611	506
Total Contributions and Other	515	506	564	611	506
Special Death Benefits	(1,050)	(750)	(100)	(150)	(150)
Administrative Expenses	(1)	—	—	—	—
Total Benefits and Expenses	(1,051)	(750)	(100)	(150)	(150)
Net Contributions / (Benefits and Expenses)	**(536)**	**(244)**	**464**	**461**	**356**
Net Investment Income / (Loss)	990	(75)	(17)	581	162
Net Increase / (Decrease)	**454**	**(319)**	**447**	**1,042**	**518**
Fiduciary Net Position Restricted - End of Year	**$ 15,233**	**$ 14,779**	**$ 15,098**	**$ 14,651**	**$ 13,609**

[1] Effective July 1, 2017, the State Employees' Death Benefit and the Public Safety Officers' Special Death Benefit Fund were merged into the new Special Death Benefit Fund. The death benefit of the Local Public Safety Pension Relief Fund was also transferred to the Special Death Benefit Fund.

Schedule of Changes and Growth in Fiduciary Net Position, continued

For the 10-Years Ended June 30 [1]

(dollars in thousands)	2014	2013	2012	2011	2010
Fiduciary Net Position Restricted - Beginning of Year	**$ 12,336**	**$ 12,366**	**$ 11,105**	**$ 10,335**	**$ 9,408**
Contributions / (Benefits and Expenses)					
Nonemployer Contributing Entity	525	544	716	548	626
Total Contributions and Other	525	544	716	548	626
Special Death Benefits	(150)	(650)	(50)	(150)	(450)
Administrative Expenses	—	—	—	—	—
Total Benefits and Expenses	(150)	(650)	(50)	(150)	(450)
Net Contributions / (Benefits and Expenses)	**375**	**(106)**	**666**	**398**	**176**
Net Investment Income / (Loss)	380	76	595	372	751
Net Increase / (Decrease)	**755**	**(30)**	**1,261**	**770**	**927**
Fiduciary Net Position Restricted - End of Year	**$ 13,091**	**$ 12,336**	**$ 12,366**	**$ 11,105**	**$ 10,335**

[1] Effective July 1, 2017, the State Employees' Death Benefit and the Public Safety Officers' Special Death Benefit Fund were merged into the new Special Death Benefit Fund. The death benefit of the Local Public Safety Pension Relief Fund was also transferred to the Special Death Benefit Fund.

Special Death Benefit Fund, continued

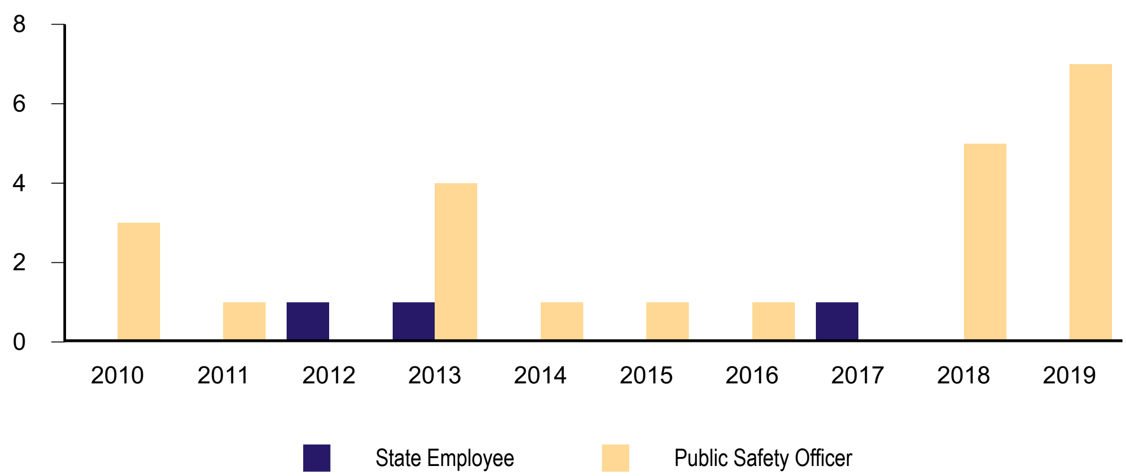
Schedule of Average Death Benefit Payments

For the Year Ended June 30, 2019	State Employee [1]	Public Safety Officer [2]
Average Death Benefit	$ —	$ 150,000
Number of Benefit Recipients	—	7
For the Year Ended June 30, 2018		
Average Death Benefit	$ —	$ 150,000
Number of Benefit Recipients	—	5
For the Year Ended June 30, 2017		
Average Death Benefit	$ 100,000	$ —
Number of Benefit Recipients	1	—
For the Year Ended June 30, 2016		
Average Death Benefit	$ —	$ 150,000
Number of Benefit Recipients	—	1
For the Year Ended June 30, 2015		
Average Death Benefit	$ —	$ 150,000
Number of Benefit Recipients	—	1
For the Year Ended June 30, 2014		
Average Death Benefit	$ —	$ 150,000
Number of Benefit Recipients	—	1
For the Year Ended June 30, 2013		
Average Death Benefit	$ 50,000	$ 150,000
Number of Benefit Recipients	1	4
For the Year Ended June 30, 2012		
Average Death Benefit	$ 50,000	$ —
Number of Benefit Recipients	1	—
For the Year Ended June 30, 2011		
Average Death Benefit	$ —	$ 150,000
Number of Benefit Recipients	—	1
For the Year Ended June 30, 2010		
Average Death Benefit	$ —	$ 150,000
Number of Benefit Recipients	—	3

[1] *Lump sum death benefit of $100,000 paid to the survivng spouse or child(ren) of a state employee who dies in the line of duty as defined in statute (IC 5-10-11).*

[2] *Lump sum death benefit of $150,000 paid to the surviving spouse or child(ren) of a member of the 1977 Fund who dies in the line of duty as defined in statue (IC 36-8-8-20). If there is no surviving spouse or child(ren), the benefit is paid to the parent(s).*

Number of Death Benefit Recipients



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Schedule of Changes and Growth in Fiduciary Net Position
For the 10-Years Ended June 30

(dollars in thousands)	2019	2018	2017	2016	2015
Fiduciary Net Position Restricted - Beginning of Year	**$ 27,353**	**$ 32,248**	**$ 28,127**	**$ 31,390**	**$ 15,073**
Contributions / (Benefits and Expenses)					
Nonemployer Contributing Entity	200,710	206,408	216,995	212,322	234,543
Total Contributions and Other	200,710	206,408	216,995	212,322	234,543
Special Death Benefits	—	—	(300)	—	(600)
Distributions of Custodial Funds	(212,239)	(212,634)	(213,256)	(215,816)	(217,663)
Administrative Expenses	—	(2)	(31)	(33)	(30)
Miscellaneous Expenses	(37)	(25)	(13)	—	—
Total Benefits and Expenses	(212,276)	(212,661)	(213,600)	(215,849)	(218,293)
Net Contributions / (Benefits and Expenses)	**(11,566)**	**(6,253)**	**3,395**	**(3,527)**	**16,250**
Net Investment Income / (Loss)	1,832	1,358	726	264	67
Net Increase / (Decrease)	**(9,734)**	**(4,895)**	**4,121**	**(3,263)**	**16,317**
Fiduciary Net Position Restricted - End of Year	**$ 17,619**	**$ 27,353**	**$ 32,248**	**$ 28,127**	**$ 31,390**

Schedule of Changes and Growth in Fiduciary Net Position, continued
For the 10-Years Ended June 30

(dollars in thousands)	2014	2013	2012	2011	2010
Fiduciary Net Position Restricted - Beginning of Year	**$ 32,375**	**$ 13,890**	**$ 48,172**	**$ 91,050**	**$ 98,257**
Contributions / (Benefits and Expenses)					
Nonemployer Contributing Entity	202,437	238,588	190,047	176,908	194,991
Total Contributions and Other	202,437	238,588	190,047	176,908	194,991
Special Death Benefits	(300)	(300)	(150)	(450)	(450)
Distributions of Custodial Funds	(219,440)	(219,814)	(224,220)	(219,425)	(213,035)
Administrative Expenses	(48)	(57)	(35)	(70)	(58)
Miscellaneous Expenses	—	—	—	—	—
Total Benefits and Expenses	(219,788)	(220,171)	(224,405)	(219,945)	(213,543)
Net Contributions / (Benefits and Expenses)	**(17,351)**	**18,417**	**(34,358)**	**(43,037)**	**(18,552)**
Net Investment Income / (Loss)	49	68	76	159	11,345
Net Increase / (Decrease)	**(17,302)**	**18,485**	**(34,282)**	**(42,878)**	**(7,207)**
Fiduciary Net Position Restricted - End of Year	**$ 15,073**	**$ 32,375**	**$ 13,890**	**$ 48,172**	**$ 91,050**

Schedule of Average Death Benefit Payments [1]

For the Year Ended June 30, 2019 [2]	
Average Death Benefit	N/A
Number of Benefit Recipients	N/A

For the Year Ended June 30, 2018 [2]	
Average Death Benefit	N/A
Number of Benefit Recipients	N/A

For the Year Ended June 30, 2017	
Average Death Benefit	$ 150,000
Number of Benefit Recipients	2

For the Year Ended June 30, 2016	
Average Death Benefit	$ —
Number of Benefit Recipients	—

For the Year Ended June 30, 2015	
Average Death Benefit	$ 150,000
Number of Benefit Recipients	4

For the Year Ended June 30, 2014	
Average Death Benefit	$ 150,000
Number of Benefit Recipients	2

For the Year Ended June 30, 2013	
Average Death Benefit	$ 150,000
Number of Benefit Recipients	2

For the Year Ended June 30, 2012	
Average Death Benefit	$ 150,000
Number of Benefit Recipients	1

For the Year Ended June 30, 2011	
Average Death Benefit	$ 150,000
Number of Benefit Recipients	3

For the Year Ended June 30, 2010	
Average Death Benefit	$ 150,000
Number of Benefit Recipients	3

[1] Lump sum death benefit of $150,000 paid to the surviving spouse or child(ren) of a member of the 1977 Fund who dies in the line of duty as defined in statue (IC 36-8-8-20). If there is no surviving spouse or child(ren), the benefit is paid to the parent(s).

[2] Effective July 1, 2017 the death benefit was combined into the Special Death Benefit Fund.

Number of Death Benefit Recipients