## 2017

For the Fiscal Year Ended June 30, 2017


## COMPREHENSIVE ANNUAL FINANCIAL REPORT




INDIANA PUBLIC RETIREMENT SYSTEM
The Indiana Public Retirement System is a pension trust fund of the State of Indiana.

## 2017

COMPREHENSIVE ANNUAL FINANCIAL REPORT

For the Fiscal Year Ended June 30, 2017

Public Employees' Retirement Fund | Teachers' Retirement Fund: Pre-1996 Account and 1996 Account | 1977 Police Officers' and Firefighters' Retirement Fund | Judges' Retirement System | Excise, Gaming and Conservation Officers' Retirement Fund | Prosecuting Attorneys' Retirement Fund | Legislators' Retirement System: Defined Benefit Fund and Defined Contribution Fund | State Employees' Death Benefit Fund | Public Safety Officers' Special Death Benefit Fund | Local Public Safety Pension Relief Fund

INPRS | One North Capitol, Suite 001 | Indianapolis, IN 46204
Toll-free: (888) 526-1687 | www.inprs.in.gov | questions@inprs.in.gov

# Table of Contents 

## 2017 COMPREHENSIVE ANNUAL FINANCIAL REPORT

For the Fiscal Year Ended June 30, 2017

## INTRODUCTORY SECTION

7 Letter of Transmittal
12 Government Finance Officers Association Certificate of Achievement
13 Public Pension Coordinating Council Public Pension Standards Award
14 Administrative Organization
16 Summary of Key Data as of June 30, 2017

## Fund Highlights

17 Public Employees' Retirement Fund
18 Teachers' Retirement Fund
191977 Police Officers' and Firefighters' Retirement Fund
20 Judges' Retirement System
21 Excise, Gaming and Conservation Officers' Retirement Fund
22 Prosecuting Attorneys' Retirement Fund
23 Legislators' Retirement System - Defined Benefit Fund

## FINANCIAL SECTION

26 Independent Auditor's Report
28 Management's Discussion and Analysis (Unaudited)

## Financial Statements

36 Statement of Fiduciary Net Position
38 Statement of Changes in Fiduciary Net Position
40 Notes to the Financial Statements

## Required Supplementary Information (Unaudited)

92 Introduction to Required Supplementary Information (Unaudited) and Other Supplementary Schedules
93 Schedules of Changes in Net Pension Liability and Net Pension Liability
101 Schedule of Contributions
103 Schedule of Investment Returns
104 Schedule of Notes to Required Supplementary Information

## Other Supplementary Schedules

105 Local Public Safety Pension Relief Fund Statement of Changes in Assets and Liabilities

106 Schedule of Administrative Expenses
107 Schedule of Administrative Expenses Contractual and Professional Services
108 Schedule of Investment Expenses
INVESTMENT SECTION
111 Report on Investment Activities
114 Report from the Chief Investment Officer
124 Outline of Investment Policies
126 Investment Summary
Investment Results - Consolidated Defined Benefit Assets

127 Assets by Retirement Plan
128 Asset Allocation Summary: June 30, 2017 Actual vs. June 30, 2016 Actual
129 Asset Allocation Summary: June 30, 2017 Actual vs. Target
130 Annualized Time-Weighted Rate of Return by Asset Class vs. Benchmark Returns
131 Asset Class Summaries
139 Historical Comparative Investment Results
140 Ten-Year Time-Weighted Investment Rates of Return
141 Statistical Performance
Investment Results - Annuity
Savings Accounts, My Choice and Legislators'Defined Contribution Fund

142 Assets by Investment Option
143 Historical Annualized Time-Weighted Rate of Return by Investment Option vs. Benchmark Returns
144 Historical Annual Interest Crediting Rates
Investment Information
145 Top Ten Equity Holdings by Fair Value
145 Top Ten Fixed Income Holdings by Fair Value
146 Top Ten Brokers' Commission Fees
146 Investment Management Fees
147 Investment Professionals

## ACTUARIAL SECTION

## Indiana Public Retirement System

153 Introduction
154 Actuaries' Certification Letters
160 Summary of Funded Status
161 Analysis of Financial Experience
162 Ten-Year Schedule of Participating Employers
Public Employees' Retirement Fund

163 Historical Summary of Actuarial Valuation Results
164 Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions
169 Analysis of Financial Experience and Solvency Test
170 Schedule of Active Members Valuation Data
171 Schedule of Retirants and Beneficiaries
Teachers' Pre-1996 Account
172 Historical Summary of Actuarial Valuation Results
173 Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions
177 Analysis of Financial Experience and Solvency Test
178 Schedule of Active Members Valuation Data
179 Schedule of Retirants and Beneficiaries

## Teachers' 1996 Account

180 Historical Summary of Actuarial Valuation Results
181 Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions
185 Analysis of Financial Experience and Solvency Test
186 Schedule of Active Members Valuation Data
187 Schedule of Retirants and Beneficiaries

## 1977 Police Officers' and Firefighters' Retirement Fund

188 Historical Summary of Actuarial Valuation Results
189 Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions

192 Analysis of Financial Experience and Solvency Test
193 Schedule of Active Members Valuation Data
194 Schedule of Retirants and Beneficiaries

## Judges' Retirement System

195 Historical Summary of Actuarial Valuation Results
196 Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions
199 Analysis of Financial Experience and Solvency Test
200 Schedule of Active Members Valuation Data
201 Schedule of Retirants and Beneficiaries

## Excise, Gaming and Conservation Officers' Retirement Fund

202 Historical Summary of Actuarial Valuation Results
203 Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions
206 Analysis of Financial Experience and Solvency Test
207 Schedule of Active Members Valuation Data
208 Schedule of Retirants and Beneficiaries

## Prosecuting Attorneys' Retirement Fund

209 Historical Summary of Actuarial Valuation Results

210 Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions

213 Analysis of Financial Experience and Solvency Test
214 Schedule of Active Members Valuation Data
215 Schedule of Retirants and Beneficiaries

## Legislators' Defined Benefit Fund

216 Historical Summary of Actuarial Valuation Results

217 Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions

220 Analysis of Financial Experience and Solvency Test
221 Schedule of Active Members Valuation Data
222 Schedule of Retirants and Beneficiaries

## STATISTICAL SECTION

## Indiana Public Retirement System

225 Summary of Statistical Section
226 Schedule of Changes and Growth in Fiduciary Net Position
227 Summary of Income Sources for a Ten-Year Period
228 Summary of Participating Employers
229 Membership Data Summary
233 Ratio of Active Members to Annuitants
234 Pension Benefits by Indiana County
235 Retirees by Geographical Location
236 Summary of Defined Benefit Retirement Benefits

## Public Employees' Retirement Fund

237 Schedule of Changes and Growth in Fiduciary Net Position
238 Schedule of Historical Contribution Rates
239 Ratio of Active Members to Annuitants
240 Schedule of Benefit Recipients by Type of Benefit Option
241 Schedule of Average Benefit Payments
242 Schedule of Participating Employers: Top 10
Teachers' Pre-1996 Account
243 Schedule of Changes and Growth in Fiduciary Net Position
244 Ratio of Active Members to Annuitants
245 Schedule of Benefit Recipients by Type of Benefit Option
246 Schedule of Average Benefit Payments
247 Schedule of Participating Employers: Top 10

## Teachers’ 1996 Account

248 Schedule of Changes and Growth in Fiduciary Net Position
249 Schedule of Historical Contribution Rates
250 Ratio of Active Members to Annuitants
251 Schedule of Benefit Recipients by Type of Benefit Option
252 Schedule of Average Benefit Payments
253 Schedule of Participating Employers: Top 10

## 1977 Police Officers' and Firefighters' Retirement Fund

254 Schedule of Changes and Growth in Fiduciary Net Position
255 Schedule of Historical Contribution Rates
256 Ratio of Active Members to Annuitants
257 Schedule of Benefit Recipients by Type of Benefit Option
258 Schedule of Average Benefit Payments
259 Schedule of Participating Employers: Top 10

## Judges' Retirement System

260 Schedule of Changes and Growth in Fiduciary Net Position
261 Ratio of Active Members to Annuitants
262 Schedule of Benefit Recipients by Type of Benefit Option
263 Schedule of Average Benefit Payments

## Excise, Gaming and Conservation Officers' Retirement Fund

264 Schedule of Changes and Growth in Fiduciary Net Position
265 Schedule of Historical Contribution Rates
266 Ratio of Active Members to Annuitants
267 Schedule of Benefit Recipients by Type of Benefit Option
268 Schedule of Average Benefit Payments

## Prosecuting Attorneys' <br> Retirement Fund

269 Schedule of Changes and Growth in Fiduciary Net Position
270 Ratio of Active Members to Annuitants
271 Schedule of Benefit Recipients by Type of Benefit Option
272 Schedule of Average Benefit Payments
Legislators' Defined Benefit Fund
273 Schedule of Changes and Growth in Fiduciary Net Position
274 Ratio of Active Members to Annuitants
275 Schedule of Benefit Recipients by Type of Benefit Option
276 Schedule of Average Benefit Payments

## Legislators' Defined Contribution Fund

277 Schedule of Changes and Growth in Fiduciary Net Position
278 Schedule of Historical Contribution Rates
State Employees' Death Benefit Fund

279 Schedule of Changes and Growth in Fiduciary Net Position
280 Schedule of Average Death Benefit Payments
Public Safety Officers' Special Death Benefit Fund

281 Schedule of Changes and Growth in Fiduciary Net Position
282 Schedule of Average Death Benefit Payments

## Local Public Safety Pension Relief Fund

283 Schedule of Average Death Benefit Payments

## Introductory Section

## 2017 COMPREHENSIVE ANNUAL FINANCIAL REPORT

For the Fiscal Year Ended June 30, 2017
indiana public retirement system

Letter of Transmittal
Government Finance Officers Association

- Certificate of Achievement

Public Pension Coordinating Council

- Public Pension Standards Award

Administrative Organization
Summary of Key Data as of June 30, 2017
Fund Highlights

## Letter of Transmittal



November 17, 2017

Dear Board Members:

We are pleased to present the Comprehensive Annual Financial Report (CAFR) of the Indiana Public Retirement System (INPRS) for the year ended June 30, 2017.

## About the System

As of June 30, 2017, INPRS was responsible for the investment of approximately $\$ 31.8$ billion in net position. For the year, INPRS paid approximately $\$ 2.5$ billion in retirement, disability and survivor benefits to 149,323 benefit recipients. INPRS received contributions of approximately $\$ 2.2$ billion from 220,933 members actively employed in public service and 1,234 participating employers statewide, and a nonemployer contributing entity (State of Indiana). INPRS also maintains accounts for 102,519 inactive members for a total membership of 472,775. Details about INPRS' members and employers are in the Statistical Section of this report.

This report provides detailed information on the performance of nine retirement plans administered by INPRS, including:

```
\square Public Employees' Retirement Fund (PERF)
■ Teachers' Retirement Fund (TRF)
    - Teachers' Pre-1996 Account (TRF Pre-'96)
    - Teachers' }1996\mathrm{ Account (TRF '96)
■ }1977\mathrm{ Police Officers' and Firefighters' Retirement Fund ('77 Fund)
■ Judges' Retirement System (JRS)
■ Excise, Gaming and Conservation Officers' Retirement Fund (EG&C)
\square Prosecuting Attorneys' Retirement Fund (PARF)
\square Legislators' Defined Benefit Fund (LE DB)
- Legislators' Defined Contribution Fund (LE DC)
```

INPRS administers two other postemployment benefit funds. Both are special death benefit funds for public safety officers and state employees who die in the line of duty. In addition, INPRS manages an agency fund. The agency fund is the Pension Relief Fund, which was created by the Indiana General Assembly to address the unfunded pension obligations of the police officers' and firefighters' pension systems of Indiana's cities and towns. INPRS is not responsible for the administration of those local pension funds, which have been closed to new membership since the creation of the 1977 Police Officers' and Firefighters' Retirement Fund. However, INPRS makes disbursements from funds provided by the General Assembly to the local police and firefighter plans that are still obligated to pay benefits.

Letter of Transmittal, continued

Since their establishment, the laws governing the administration of INPRS-administered funds have changed and expanded in response to the needs of our members, employers, and citizens.

In 1955, the Annuity Savings Account (ASA) was established as a supplemental benefit to members of the PERF and TRF defined benefit plans. With this change, these plans became among the first in the nation to adopt a hybrid design. Employers pay the necessary contributions to fund the defined benefit, while employees are required to contribute to the member-managed account. Members are immediately vested in their ASAs. Upon retirement, PERF and TRF members can withdraw their ASA balance in a lump sum, roll it over, or convert to an annuitized amount. Non-vested inactive members (i.e., members who have not met the requirements for a defined pension benefit) may elect to withdraw their ASA balances upon termination of employment.

The 1995 legislative session brought several significant changes to TRF. Legislation was passed that closed the pay-as-you-go plan - the Teachers' Pre-1996 Account (TRF Pre-'96) - to newly hired members and created a new 1996 Account. All teachers hired after June 30,1995 , are members of the Teachers' 1996 Account (TRF '96). TRF '96 is actuarially prefunded, requiring school corporations to set aside a fixed percentage of payrolls for teacher retirement benefits. Also in 1995, the General Assembly passed legislation creating the Pension Stabilization Fund (PSF), designed to partially fund the unfunded liability of TRF Pre-'96. Initially, the PSF was funded from $\$ 425$ million of employer reserves from TRF Pre-'96. Since that time, the PSF has received contributions from the Indiana State General Fund, the Indiana State Lottery and interest earned from the investment of PSF assets. As of June 30,2017 , the PSF had a balance of $\$ 2.9$ billion.

A public referendum held in 1996 approved an amendment to the Indiana Constitution allowing the funds to invest in equities. Since that time, INPRS has been able to diversify its investment asset classes and grow its asset base.

In 2000, legislation established that the fund's administrative bodies would no longer be state agencies, but each would be an "independent body corporate and politic." This means INPRS is not a department or agency of the State but is an independent instrument exercising essential government functions. Under Indiana law, INPRS is under the jurisdiction of the State Ethics Commission.

Effective July 1, 2011, the administration of the Indiana State Teachers' Retirement Fund (TRF), established in 1921, and the funds previously administered by the Indiana Public Employees' Retirement Fund (PERF), established in 1945, were consolidated as the Indiana Public Retirement System (INPRS).

## Benefit Plan and Other Legislative Changes during Fiscal Year 2017

Major changes passed in the fiscal year 2016 that became effective in the fiscal year 2017:

- Legislation provided a one-time check (a.k.a. 13th check) to certain benefit recipients of PERF, TRF and the EG\&C Plan in various amounts based on years of service. In addition, benefit recipients of the 1977 Fund and JRS are to receive a COLA increase.
- Legislation that allowed the My Choice plan to be offered by political subdivisions to their employees, in lieu of the PERF Hybrid plan, removes the requirement that prior service would be used to dictate whether a PERF member would go into the PERF Hybrid plan or the My Choice plan. This occurs when the employer gives new hires the option to choose between the PERF Hybrid plan and the My Choice plan. This also allows members that retire from the PERF Hybrid plan to begin or continue receiving contributions into their My Choice plan.
■ Legislation allowed ASA accounts inactive for five years to become suspended. Accounts less than $\$ 1,000$ are to be disbursed to the member. Accounts greater than $\$ 1,000$ will continue to be invested as the member selected and may be charged an administrative fee.
- Legislation eliminated the life-event requirement in order to change the beneficiary after receiving retirement benefits, except for when the spouse is named as a beneficiary.
- Legislation replaced the Guaranteed Fund with a Stable Value Fund on January 1, 2017 and also defaulted all existing funds in the Guaranteed Fund to a Stable Value Fund by December 31, 2016.
- Legislation required the public retirement system to divest from businesses that engage in action or inaction to boycott, divest from, or sanction Israel.

Major changes passed in the fiscal year 2017 that become effective in the fiscal year 2018:

- Legislation provided a one-time check (a.k.a. 13th check) to certain benefit recipients of PERF, TRF, and EG\&C in various amounts based on years of service. In addition, benefit recipients of the ' 77 Fund and JRS are to receive a COLA increase.
- TRF members who are newly hired will have a My Choice Retirement Savings Plan option.
- Legislation provided a town police reserve officer special death benefit to law enforcement officers, who after June 30, 2017, die in the line of duty. Town police reserve officers work less than 1,000 hours and cannot participate in police pension plans.
- Legislation allows a '77 Fund member to receive, after July 1, 2017, for the remainder of his or her life a disability equal to the monthly salary of a first-class patrolman or fire fighter based on certain guidelines.
- A special death benefit fund to pay death claims to the beneficiaries of public safety officers or other state public employees who die in the line of duty. Effective July 1, 2017, SE and PSO, and the portion of the special death benefit component for LPSPR will be consolidated into one fund.
- For a '77 Fund member who retires after January 1, 2015, because of disability at least 12 months after the member enters the DROP (Deferred Retirement Option Plan) to use a different DROP date. The member's retirement benefit will be calculated using the DROP entry date, not the DROP retirement date.
- Legislation provides a public safety officer special death benefit to an emergency medical services employee, who after June 30, 2017, dies as a direct result of personal injury or illness while performing duties as an air ambulance services provider. To receive this benefit, the air ambulance services employer, maintained by a health care system affiliated with a state educational institution, must purchase coverage at $\$ 100$ per year through INPRS for their employees.
- Legislation provides that the PARF benefit is offset by the actual PERF retirement benefit if a member is receiving a PERF retirement benefit when retiring from PARF. In other words, if there is an actual PERF retirement, that PERF benefit is used as an offset. If there is not an actual PERF retirement, a hypothetical PERF retirement benefit is used as an offset until there is an actual PERF retirement.


## Management's Responsibility for Financial Reporting

INPRS management has the fiduciary responsibility to safeguard the system and is responsible for the contents of this report. INPRS management is also responsible for establishing and maintaining a system of adequate internal accounting controls designed to provide reasonable assurance that transactions are executed in accordance with management's general or specific authorization. INPRS management is responsible for ensuring that an adequate internal control structure is in place to provide reasonable, but not absolute, assurance regarding: (1) the safeguarding of assets against loss from unauthorized user disposition and (2) the reliability of financial records for preparing financial statements and maintaining accountability for assets. The concept of reasonable assurance recognizes that the cost of internal control should not exceed the benefits likely to be derived and that the evaluation of costs and benefits requires management to make estimates and judgments. The internal control structure is subject to periodic evaluation by management and the internal audit staff to ensure compliance with applicable laws and regulations.

Letter of Transmittal, continued

INPRS' unmodified opinion, as expressed in the independent auditor's report regarding the fair presentation of the financial statements, is in the Financial Section. In addition, the Financial Section contains the Management's Discussion and Analysis, which provides in depth discussion and analysis of the fiduciary net position, additions and deductions to net position and funding progress.

## Economic Condition

The economic condition of INPRS is based primarily upon investment results and contributions from members, employers and nonemployer contributing entities. Verus, the general investment management consultant for INPRS, and INPRS' Chief Investment Officer (CIO) evaluated the impact of economic conditions on the investments of INPRS. The Verus Report on Investment Activities and the CIO Report are in the Investment Section of this report. In aggregate, the fiscal year 2017 contributions from members, employers, and nonemployer contributing entities to all of the INPRS administered plans were 109.1 percent of the Actuarial Determined Contribution.

## Investments

In the fiscal year 2017, INPRS Consolidated Defined Benefit Assets time-weighted rate of return was 8.0 percent, net of fees, outperformed the actuarial assumed rate of return of 6.75 percent and the target asset allocation benchmark of 6.5 percent. Both the tactical asset allocation and manager selection decisions made by the team this year added value to the plan. The three-year return rate of 3.0 percent, the five-year rate of return of 5.7 percent and the 10 -year rate of return of 2.9 percent are below the long term actuarial assumed rate of 6.75 percent. INPRS implemented a risk-based asset allocation beginning in 2011. Since that time, the portfolio has performed as expected given U.S. and global market conditions. As with any long-term, forward-looking asset allocation, the true test will be time as the portfolio weathers everchanging economic environments.

The foundation of any successful investment program is the commitment to, and execution of, disciplined decision-making policies and processes conducted by competent investment professionals. The INPRS Investment Policy Statement is an essential element of our commitment to investments excellence. Detailed investment policies and results are in the Investment Section of this report.

## Funding

An actuarial analysis of all INPRS-administered retirement plans is performed on an annual basis. An assumption experience study is performed every three to five years. PricewaterhouseCoopers (PwC) completed an experience study for all DB retirement plans except TRF and Nyhart completed an experience study for both TRF Pre-'96 and TRF '96 during the fiscal year 2015.

One purpose of the annual actuarial analysis is to measure the funding status, typically referred to as the funded percentage. The percentage is computed by dividing the actuarial value of assets by the actuarial accrued liability. This ratio indicates the funding status of the plan. Generally, the greater this percentage, the stronger the plan.

As discussed earlier in this letter, INPRS administers eight separate DB retirement plans. The aggregate funded status percentage for all of the pre-funded plans in FY 2017 is 86.3 percent compared to 86.1 percent in FY 2016. The TRF Pre'96 pay-as-you-go account, designed in 1921 for a zero funded status, has a funded status of 29.6 percent thanks to the underpinning of the Pension Stabilization Fund and member ASA account balances. Actuarial standards consider a funded percentage of 80 percent or better as being healthy. We are pleased with our overall funded status and continue to work to achieve 100 percent funding.

Letter of Transmittal, continued

Details of the actuarial analysis are in the Actuarial Section of this report. The supporting statistics are in the Statistical Section. In the Statement of Changes in Fiduciary Net Position the accumulated balance of funds derived from the excess of additions over deductions is the net position restricted for pension benefits. This is in the Financial Section of this report. The actuarial accrued liability is not disclosed in the Statement of Fiduciary Net Position but is in the Summary of INPRS' Funded Status in the Actuarial Section.

## Accomplishments in 2017

The INPRS strategic plan provides the foundation from which INPRS moves towards its vision to be a 100 percent funded public retirement system trusted and valued by stakeholders. A copy of the INPRS strategic plan that includes details of accomplishments in the fiscal year 2017 can be found on the INPRS website, www.inprs.in.gov.

## Acknowledgements

The compilation of this report reflects the combined efforts of INPRS staff and advisors. It is intended to demonstrate the spirit of full disclosure and to provide information for use as the basis for making management decisions, as a means of determining compliance with legal provisions, and as a means of determining responsible stewardship of the assets contributed by our members and employers.

If, after reviewing this report, you would like more information, please feel free to contact us at questions@inprs.in.gov.

We express our gratitude to the staff, advisors, and all who have contributed to the preparation of this report. 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
Executive Director

## GFOA Certificate



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, 2016


Executive Director/CEO

# Public Pension Coordinating Council 

## Public Pension Standards Award For Funding and Administration 2017

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
Program Administrator

Board of Trustees ${ }^{2}$


Executive Team


Steve Russo
Executive Director


## VISION:

To be a 100 percent funded public retirement system trusted and valued by stakeholders.

## MISSION:

Efficiently collect contributions, effectively engage members, and prudently invest stakeholder assets to pay earned benefits.

## PRINCIPLES:

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

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

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

TRUST. We are our stakeholders' trusted source of reliable information.

COLLABORATION. We seek out stakeholder input when establishing goals and setting priorities.

## Eric Holcomb

Governor

Suzanne Crouch
Lt. Governor

## Executive Team ${ }^{1}$

## Steve Russo

Executive Director

## Steven Barley

Chief Operations Officer
and Deputy Director

## Scott Davis

Chief Investment Officer

## Tom Farrer

Director of Strategic Initiatives

## 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 ${ }^{2}$

Groom Law Group
1701 Pennsylvania Ave., N.W. Washington, DC 20006-5811

Ice Miller LLP
One American Square, Suite 2900
Indianapolis, IN 46282

## Krieg DeVault LLP

One Indiana Square, Suite 2800
Indianapolis, IN 46204
Nyhart
8415 Allison Pointe Blvd., Suite 300
Indianapolis, IN 46250
PricewaterhouseCoopers LLP
One North Wacker Drive
Chicago, IL 60606

## Verus

999 Third Avenue, Suite 4200
Seattle, WA 98104

[^0]Summary of Key Data as of June 30, 2017

■ PERF = Public Employees' Retirement Fund
■ TRF Pre-'96 = Teachers' Pre-1996 Account

- TRF '96 = Teachers' 1996 Account

■ '77 Fund = 1977 Police Officers' and Firefighters' Retirement Fund

- JRS = Judges' Retirement System
- EG\&C = Excise, Gaming and Conservation Officers' Retirement Fund
- PARF = Prosecuting Attorneys' Retirement Fund
- LE DB = Legislators' Defined Benefit Fund
- LE DC = Legislators' Defined Contribution Fund
(dollars in millions)

| Fund | Number of Employers ${ }^{1}$ | Total Number of Members | Fiduciary Net Position | Actuarial Valuation |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Actuarial Value of Assets (AVA) | Actuarial Accrued Liability (AAL) | Unfunded AAL (UAAL) | Funded Status (AVA/AAL) |
| PERF | 1,183 | 301,167 | \$14,644 | \$15,099 | \$19,106 | \$4,007 | 79.0 \% |
| TRF Pre-'96 | 341 | 69,272 | 4,818 | 4,951 | 16,737 | 11,786 | 29.6 |
| TRF '96 | 368 | 80,639 | 6,252 | 6,414 | 6,914 | 500 | 92.8 |
| ${ }^{\prime} 77$ Fund | 167 | 19,161 | 5,401 | 5,588 | 5,386 | (202) | 103.7 |
| JRS | 1 | 858 | 475 | 492 | 524 | 32 | 93.9 |
| EG\&C | 1 | 789 | 120 | 124 | 142 | 18 | 87.3 |
| PARF | 1 | 572 | 56 | 58 | 97 | 39 | 60.0 |
| LE DB | 1 | 95 | 3 | 3 | 4 | 1 | 81.9 |
| LE DC | 1 | 222 | 31 | - | - | - | - |
| Other ${ }^{2}$ | - | - | 15 | - | - | - | - |
| Total | 1,234 | 472,775 | \$31,815 | \$32,729 | \$48,910 | \$16,181 | 86.3 \% ${ }^{3}$ |

[^1]
## Hybrid Plan

The membership of the Public Employees' Retirement Fund (PERF) Hybrid plan includes eligible state and local government entities.

## Eligibility for Pension Benefit Payment ${ }^{1}$

- Early retirement with reduced benefits between ages $50-59$ with 15 years of service
- At age 55 if age and creditable service total at least 85 ("Rule of 85 ")
- Age 60 with 15 years of service
- Age 65 with 10 years of service
- Age 65 with 8 years of service ${ }^{2}$

■ Age 70 with 20 years of service ${ }^{3}$

## Contribution Rates

- Employer contribution rates for the Defined Benefit (pension) are determined annually by the INPRS Board based on recommendations by the INPRS actuary.
- Members are required to contribute three percent of gross wages to their Annuity Savings Account. Employers have the option of making all or part of this contribution on behalf of the member. Members may also make voluntary contributions to the Annuity Savings Account up to an additional 10 percent of their gross wages, under certain limitations.


## Benefit Formula

Lifetime Annual Benefit = (Years of Creditable Service
x Average Highest 20 Quarters of Salary x .011) + Annuity Savings Account ${ }^{4}$

## Cost of Living Allowance (COLA)

Cost of living adjustments are granted by the Indiana General Assembly on an ad hoc basis.

## My Choice Plan

Established on March 1, 2013, the membership of the Public Employees' Retirement Fund (PERF) My Choice plan includes eligible full-time employees of the State of Indiana and quasi agencies.

## Eligibility for Plan Payment

- Members are fully vested in the three percent employee share (Annuity Savings Account) upon hire
- The member's share of the employer contribution is based on full years of participation:

> 1 year $=20$ percent
> 2 years $=40$ percent
> 3 years $=60$ percent
> 4 years $=80$ percent
> 5 years $=100$ percent

## Contribution Rates

Mandatory three percent employee share of gross wages paid by employer, employee, or is shared by the employer and employee.

- The employer share is also paid by the employer, but the member must meet vesting requirements. ${ }^{5}$


## Benefit Formula

Not applicable

## Cost of Living <br> Allowance (COLA)

Not applicable

[^2]Fund Highlights, continued

The membership of the Indiana State Teachers' Retirement Fund (TRF Pre-1996 and 1996 Accounts) includes eligible educators and administrators.

## Eligibility for Pension Benefit Payment ${ }^{1}$

- Early retirement with reduced benefits between ages 50-59 with 15 years of service.
- At age 55 if age and creditable service total at least 85 ("Rule of 85 ").
- Age 60 with 15 years of service.
- Age 65 with 10 years of service.
- Age 70 with 20 years of service. ${ }^{2}$


## Contribution Rates

- The Pre-1996 Account is funded primarily by State General Fund appropriations and state lottery proceeds.
- Employer contribution rates for the 1996 Account are determined annually by the INPRS Board based on recommendations by the INPRS actuary.
- Members are required to contribute three percent of gross wages to their Annuity Savings Account. Employers have the option of making all or part of this contribution on behalf of the member. Members may also make voluntary contributions to the Annuity Savings Account up to an additional 10 percent of their wages, under certain limitations.


## Benefit Formula

Lifetime Annual Benefit =
(Years of Creditable Service
x Average Highest Five-Year Annual Salary
x .011) + Annuity Savings Account ${ }^{3}$

## Cost of Living Allowance (COLA)

Cost of living adjustments are granted by the Indiana General Assembly on an ad-hoc basis.

[^3]Fund Highlights, continued

1977 Police Officers' and Firefighters' Retirement Fund provides coverage to full-time sworn officers of a police force of an Indiana city or town and full-time firefighters employed by an Indiana city, town or township.

## Eligibility for Pension Benefit Payment

- Early retirement with reduced benefits at age 50.
- Age 52 with 20 years of service.
- Deferred Retirement Option Plan (DROP) available to members who are eligible for an unreduced retirement - members continue to work and earn a salary while accumulating a DROP benefit.


## Contribution Rates

- Employer contribution rate is adopted by the INPRS Board of Trustees based on recommendations by the INPRS actuary.
- Member must also contribute six percent of first-class salary for the term of the member's employment up to 32 years.
- Employers have the option of making all or part of this contribution on behalf of the member.


## Benefit Formula

Annual Benefit $=50$ percent of first-class salary for 20 years of service. ${ }^{1}$

## Cost of Living Allowance (COLA)

Cost of living adjustment is a percentage determined by statute equal to the change in the Consumer Price Index but not in excess of a three percent increase.
${ }^{1}$ This 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).

Fund Highlights, continued

The Judges' Retirement System includes any person who has served, is serving or shall serve as a regular judge or justice of the Supreme Court of the state of Indiana, Court of Appeals, Indiana Tax Court, Circuit Court of a Judicial Court, or County Courts including: Superior, Criminal, Probate, Juvenile, Municipal and County Courts. Beginning Jan. 1, 2011, full-time magistrates who are serving on July 1, 2010, may elect to be members of the 1985 System. The 1985 System is mandatory for all new judges and beginning Jan.1, 2011, all new full-time magistrates.

## Eligibility for Pension Benefit Payment

■ Early retirement with reduced benefits at age 62 and at least eight years of service credit.

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


## Contribution Rates

- Employer contributions are actuarially determined appropriations from the state's General Fund and certain court and docket fees.
■ A member of either the 1977 or 1985 Judges' Retirement System is required to contribute six percent of the member's salary for a maximum period of 22 years.
- No contributions are due to either retirement system during the time that a member is not employed as a judge or for any period of service as a senior judge.


## Benefit Formula

Annual Benefit $=$ Salary at Retirement ${ }^{1}$
x Percentage Below

| Years of Service |  | Percentages |  | Years of Service |
| :---: | :---: | :---: | :---: | :---: | | Percentages |
| :---: |
|  |
| 9 |

## Cost of Living Allowance (COLA)

For participants of the 1977 System and the 1985 System (who apply for a benefit after 12/31/09), the cost of living allowance is a percentage increase equal to the increase in the salary of the participant's position from which the participant retired. after August 31, 1985) uses the applicable salary determined by statute.

Fund Highlights, continued

Excise, Gaming and Conservation Officers' Retirement Fund includes members engaged exclusively in the performance of law enforcement duties of the (1) Indiana Department of Natural Resources, (2) Indiana Alcohol and Tobacco Commission and (3) any Indiana state excise police officer, Indiana state conservation enforcement officer or gaming agent.

## Eligibility for Pension Benefit Payment

- Early retirement with reduced benefits at age 45 with at least 15 years of creditable service.
- Age 50 with 25 years of service.
- At age 55 if age and creditable service total at least 85 ("Rule of 85 ").
- Deferred Retirement Option Plan (DROP) - continue to work and earn a salary while accumulating a DROP benefit.
- If members were employed by age 50, the mandatory retirement age is 65 , and they must have 15 years of creditable service.
- If members were employed after age 50, their retirement must occur the 1st day of the month following their 65th birthday or 1st day of the month following completion of 15 years of creditable service.


## Contribution Rates

- Employer contribution rate is adopted by the INPRS Board of Trustees based on recommendations by the INPRS actuary.
- Member is required to contribute four percent of member's annual salary. The contribution is made through payroll deduction and is deposited in member's account.


## Benefit Formula

Annual Benefit $=25$ percent $^{1} \times$ Average Annual Salary ${ }^{2}$

## Cost of Living Allowance (COLA)

Cost of living allowance is applied at the same rate as was granted by the Indiana General Assembly for the Public Employees' Retirement Fund.

[^4]Fund Highlights, continued

The Prosecuting Attorneys' Retirement Fund (PARF) includes prosecuting attorneys, chief deputy prosecuting attorneys and other deputy prosecuting attorneys paid by the state. PARF members are also members of the PERF Plan. According to statute, benefits payable from PARF are reduced by any benefits payable from the PERF Plan.

## Eligibility for Pension Benefit Payment

- Early retirement with reduced benefits at age 62 and at least eight years of service credit.
- At age 55 if age and creditable service total at least 85 ("Rule of 85 ").
- Age 65 with at least eight years of service credit.


## Contribution Rates

- Actuarially determined State General Fund appropriations.
- A prosecuting attorney or chief deputy prosecuting attorney must contribute six percent of the state-paid portion of member's salary. The State of Indiana has the option of making this contribution on behalf of the member. This six percent contribution will be withheld by the Auditor of the State.
- Prosecuting attorneys and chief deputy prosecuting attorneys are also PERF members, and the member's mandatory three percent PERF ASA contributions are paid on member's behalf by the state.


## Benefit Formula

Annual Benefit $=$ Highest Annual Salary
(state-paid portion only) at Retirement
x Percentage Below

| Years of Service | Percentages | Years of Service | Percentages |
| :---: | :---: | :---: | :---: |
| Less than 8 | 0\% | 15 | 53\% |
| 8 | 24\% | 16 | 54\% |
| 9 | 27\% | 17 | 55\% |
| 10 | 30\% | 18 | 56\% |
| 11 | 33\% | 19 | 57\% |
| 12 | 50\% | 20 | 58\% |
| 13 | 51\% | 21 | 59\% |
| 14 | 52\% | 22 or more | 60\% |

## Cost of Living Allowance (COLA)

No cost of living allowance is provided.

Fund Highlights, continued

The Legislators' Retirement System Defined Benefit Fund (LE DB) includes only legislators of the state of Indiana who were serving on April 30, 1989, and elected participation. Legislators elected or appointed after April 30, 1989, participate in the Legislators' Defined Contribution Fund (LE DC).

## Eligibility for Pension Benefit Payment

- Early retirement at least age 55 with 10 years of creditable service, when 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.
- At age 55 if age and creditable service equal at least 85 ("Rule of 85 ").
- Age 60 with at least 15 years of service as a member of the General Assembly.
- Age 65 with 10 years or more of creditable service as a member of the General Assembly (or meet the requirements for disability benefits under this plan).


## Contribution Rates

- The LE DB employer contributions are actuarially determined State General Fund appropriations. There are no member contributions for the defined benefit plan.
- For LE DC, the state contribution is determined by multiplying the member's salary for that year by a percentage determined by the INPRS Board and confirmed by the State Budget Agency not to exceed the total contribution rate paid that year by the state to INPRS for state members. The member must contribute five percent of member's salary for service after June 30, 1989.


## Benefit Formula

## The lesser of:

- $\$ 40 \times$ Years of service before November 8, 1989 or
- Highest consecutive three-year average annual salary at termination $\div 12$


## Cost of Living Allowance (COLA)

Cost of living allowance is applied at the same rate as was granted by the Indiana General Assembly for the Public Employees' Retirement Fund.


## Financial Section



## 2017 COMPREHENSIVE ANNUAL FINANCIAL REPORT For the Fiscal Year Ended June 30, 2017

| 26 | Independent Auditor's Report |
| :--- | :--- |
| 28 | Management's Discussion and Analysis |
| (Unaudited) |  |

## Financial Statements

36 Statement of Fiduciary Net Position
38 Statement of Changes in Fiduciary
Net Position
Notes to the Financial Statements
Required Supplementary Information (Unaudited)

92 Introduction to Required Supplementary Information (Unaudited) and Other Supplementary Schedules
93 Schedules of Changes in Net Pension
Liability and Net Pension Liability
101 Schedule of Contributions
103 Schedule of Investment Returns
104 Schedule of Notes to Required
Supplementary Information
Other Supplementary Schedules
105 Local Public Safety Pension Relief
Fund Statement of Changes in Assets and Liabilities
106 Schedule of Administrative Expenses
107 Schedule of Administrative Expenses -
Contractual and Professional Services
108 Schedule of Investment Expenses

## 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, 2017, and the related Statement of Changes in its Fiduciary Net Position for the year then ended, and the related notes to the 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, 2017, 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 2016 financial statements, and we expressed an unmodified opinion in our report dated November 30, 2016. In our opinion, the summarized comparative information presented herein as of and for the year ended June 30, 2016, 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 28 through 34 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 93 through 104 be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the 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 financial statements, and other knowledge we obtained during our audit of the 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, 2017 was conducted for the purpose of forming an opinion on the System's 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 financial statements.

The other supplementary information for the year ended June 30, 2017 (pages 105 through 108) is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. The supporting schedules in the financial section have been subjected to the auditing procedures applied in the audit of the financial statements for the year ended June 30, 2017 and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements, or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supporting schedules in the financial section, are fairly stated in all material respects, in relation to the financial statements as a whole as of and for the year ended June 30, 2017.

We have also previously audited, in accordance with auditing standards generally accepted in the United States of America, the System's financial statements as of and for the year ended June 30, 2016 (not presented herein), and have issued our report thereon dated November 30, 2016, which contained an unmodified opinion on those financial statements. The accompanying supplementary information which consists of supporting schedules in the financial section, for the year ended June 30, 2016 is presented for purposes of additional analysis and is not a required part of the 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 2016 financial statements. The supporting schedules in the financial section have been subjected to the auditing procedures applied in the audit of the 2016 financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare those financial statements or to those 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 financial statements as a whole for the year ended June 30, 2016.

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.

$$
\text { Rom us } \angle L P
$$

Indianapolis, Indiana
November 17, 2017

Management's Discussion and Analysis (Unaudited)

Management's Discussion and Analysis (MD\&A) of the Indiana Public Retirement System (INPRS) provides a narrative overview of the financial position and performance for the fiscal year ended June 30, 2017. This includes comparative data, financial and investment highlights, and actuarial funding progress. The MD\&A is presented as required supplementary information to the financial statements of the INPRS Comprehensive Annual Financial Report (CAFR). The MD\&A should be read in conjunction with the Letter of Transmittal included in the Introductory Section along with the Financial Statements, the Notes to the Financial Statements, the Required Supplementary Information, and the Other Supplementary Schedules presented in the Financial Section.

## Overview of the Financial Statements

INPRS is an independent instrumentality of the State of Indiana, administering nine pension trust funds including eight defined benefit retirement plans and one defined contribution retirement plan, two other postemployment benefit funds (death benefits), and one agency fund. The following retirement plans and non-retirement funds are included in the INPRS financial statements. Refer to the Notes to the Financial Statements for descriptions of these retirement plans and nonretirement funds.

## Defined Benefit Retirement Plans:

- Public Employees' Retirement Fund (PERF)
- Teachers' Pre-1996 Account (TRF Pre-'96)
- Teachers' 1996 Account (TRF '96)
- 1977 Police Officers' and Firefighters' Retirement Fund ('77 Fund)
- Judges' Retirement System (JRS)
- Excise, Gaming, and Conservation Officers' Retirement Fund (EG\&C)
- Prosecuting Attorneys' Retirement Fund (PARF)
- Legislators' Defined Benefit Fund (LE DB)


## Defined Contribution Retirement Plan:

Legislators' Defined Contribution Fund (LE DC)

## Other Postemployment Benefit Funds:

- State Employees' Death Benefit Fund (SE)
- Public Safety Officers' Special Death Benefit Fund (PSO)


## Agency Fund:

Local Public Safety Pension Relief Fund (LPSPR)

The Financial Section includes the following information, for the fiscal year ended June 30, 2017, with combined total comparative information for the fiscal year ended June 30, 2016.

Management's Discussion and Analysis (Unaudited), continued

## - Financial Statements

The Statement of Fiduciary Net Position is a point-in-time snapshot of the assets and liabilities and the resulting restricted net position. This statement reflects investments, at fair value and contract value, along with cash, receivables, and other assets and liabilities.

The Statement of Changes in Fiduciary Net Position presents the changes in the restricted net position during the fiscal year. Additions are primarily contributions from employers, members, and a nonemployer contributing entity, which include state appropriations, lottery proceeds, and taxes, as well as net investment income. Deductions primarily include pension, disability and death benefit disbursements, refunds of member contributions and interest, and administrative expenses.

## - Notes to the Financial Statements

The Notes to the Financial Statements are an integral part of the financial statements and provide additional detailed information that is essential for a comprehensive understanding of the data provided in the financial statements.

## - Required Supplementary Information

Due to the long-term nature of public defined benefit pension funds, financial statements for the past fiscal year alone cannot provide sufficient information to properly reflect the fiduciary net position as a percent of the total pension liability of the funds. Therefore, additional schedules give historical trend information that is designed to provide value for assessing accountability and increasing transparency related to measures of fiduciary net position.

## ■ Other Supplementary Schedules

The Other Supplementary Schedules consist of the Local Public Safety Pension Relief Fund Statement of Changes in Assets and Liabilities, Schedule of Administrative Expenses, Schedule of Administrative Expenses - Contractual and Professional Services, and Schedule of Investment Expenses.

## Indiana Public Retirement System

Management's Discussion and Analysis (Unaudited), continued

## Financial Information

The following schedules compare INPRS' financial results for the fiscal years of 2017 and 2016. It is important to note that the change from year to year in the investment category is attributable not only to the change in fair value but also to purchases and sales or maturities of those investments.

Statement of Fiduciary Net Position

| (dollars in millions) | As of June 30 |  |  |  | Net Change |  | Percentage Change |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2017 |  | 2016 |  |  |  |  |
| Pooled Investments |  |  |  |  |  |  |  |
| Consolidated Defined Benefit Assets | \$ | 26,365 | \$ | 24,776 | \$ | 1,589 | 6.4 \% |
| ASA and Defined Contribution Assets |  | 5,412 |  | 5,127 |  | 285 | 5.6 |
| Death Benefit Assets |  | 15 |  | 15 |  | - | - |
| Total Pooled Investments |  | 31,792 |  | 29,918 |  | 1,874 | 6.3 |
| Net Other Assets and Liabilities |  | 23 |  | (46) |  | 69 | 150.0 |
| Total Fiduciary Net Position | \$ | 31,815 | \$ | 29,872 | \$ | 1,943 | 6.5 |

Statement of Changes in Fiduciary Net Position

| (dollars in millions) | As of June 30 |  |  |  | Net Change |  | Percentage Change |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2017 |  | 2016 |  |  |  |  |
| Net Investment Income | \$ | 2,346 | \$ | 325 | \$ | 2,021 | 621.8 \% |
| Contributions |  | 2,186 |  | 2,234 |  | (48) | (2.1) |
| Benefits and Refunds |  | $(2,551)$ |  | $(2,510)$ |  | (41) | (1.6) |
| Net Other Additions / Deductions |  | (38) |  | (38) |  | - | - |
| Net Increase I (Decrease) in Fiduciary Net Position | \$ | 1,943 | \$ | 11 | \$ | 1,932 | 17,563.6 |

Management's Discussion and Analysis (Unaudited), continued

## Financial and Investment Highlights

The total fiduciary net position of INPRS increase of $\$ 1.9$ billion for fiscal year 2017 was primarily driven by net investment income of $\$ 2.3$ billion, partially offset by net operational outflows of $\$ 0.4$ billion.

Net investment income increased from the prior year by $\$ 2.0$ billion. The money-weighted rate of return for fiscal year 2017 was 7.9 percent compared to a money-weighted rate of return in fiscal year 2016 of 1.1 percent.

Contributions decreased from the prior year by $\$ 48$ million. Primarily due to one-time contributions by employers electing to reduce their participation in the fund in the prior year.

Benefits and refunds increased by $\$ 41$ million primarily due to an increase in the volume of retirees which resulted in $\$ 92$ million more in benefits offset by a reduction of disability payments of $\$ 20$ million and a decrease in retiree lump sum payments of $\$ 29$ million.

Net remaining additions and deductions, which include administrative expenses, remained flat year over year.

## Pooled Investment Performance - Consolidated Defined Benefit Assets

Pooled investments include $\$ 26.4$ billion of assets in the consolidated defined benefit unit trust for fiscal year 2017. The increase of $\$ 1.6$ billion from fiscal year 2016 was primarily due to investment income of $\$ 2.0$ billion, partially offset by operational cash outflows of $\$ 0.4$ billion. The time weighted rate of return of 8.0 percent exceeded the benchmark index by 1.5 percentage points and was 1.25 percentage points over the long-term actuarial-assumed rate of return for defined benefit assets of 6.75 percent.

A summary of the rate of return for each asset class for fiscal year 2017, compared to the respective benchmark for each asset class is provided below. Refer to the investment section of the Comprehensive Annual Financial Report (CAFR) for additional information.

■ Public Equity seeks to provide long-term capital appreciation and income through exposure to public equity securities. The public equity portfolio had an investment rate of return of 21.0 percent for fiscal year 2017, which outperformed the asset class benchmark by 2.0 percentage points over the same period.

■ Private Markets seeks to provide risk-adjusted returns in excess of the public equity markets while simultaneously decreasing the volatility of the investment portfolio through diversification. The private markets portfolio had an investment rate of return of 12.7 percent for fiscal year 2017, which underperformed the asset class benchmark by 8.8 percentage points over the same period.

- Fixed Income - Ex Inflation-Linked seeks to generate current income and long-term risk-adjusted returns through investments in debt securities. The fixed income - ex inflation-linked portfolio had an investment rate of return of 1.9 percent for fiscal year 2017, which outperformed the asset class benchmark by 1.3 percentage points over the same period.

Management's Discussion and Analysis (Unaudited), continued

- Fixed Income - Inflation-Linked seeks to generate a long-term risk-adjusted return as well as provide protection against unanticipated inflation. The fixed income - inflation linked portfolio had an investment rate of return of (0.2) percent for fiscal year 2017, which outperformed the asset class benchmark by 1.1 percentage points over the same period.
- Commodities seek to enhance long-term risk-adjusted returns by preserving investment capital, lowering overall portfolio volatility, and providing a hedge against unanticipated inflation. The commodities portfolio had an investment rate of return of (6.7) percent for the fiscal year, which outperformed the asset class benchmark by 0.8 percentage points over the same period.
- Real Estate seeks to generate attractive risk-adjusted returns by providing stable current income, preserving investment capital, and curtailing volatility by serving as a hedge against unanticipated inflation. The real estate portfolio had an investment rate of return of 10.4 percent for fiscal year 2017, which outperformed the asset class benchmark by 3.0 percentage points over the same period.
- Absolute Return seeks to enhance the long-term risk-adjusted returns by providing diversification benefits while preserving capital and reducing volatility. The absolute return portfolio had an investment rate of return of 7.8 percent for fiscal year 2017, which outperformed the asset class benchmark by 2.9 percentage points over the same period.
- Risk Parity seeks a risk-balancing methodology capable of delivering consistent and high risk-adjusted returns in several macro-economic environments. The risk parity portfolio had an investment rate of return of 4.6 percent for fiscal year 2017, which underperformed the asset class benchmark by 6.3 percentage points over the same period.


## Pooled Investment Performance - ASA, Defined Contribution and Death Benefit Assets

The annuity savings account (ASA) and defined contribution assets increased by $\$ 285$ million. This was primarily due to net investment income of $\$ 362$ million partially offset by operational cash outflows of $\$ 74$ million. Investments in the members' ASA and defined contribution assets are self-directed, as participants direct their investment allocation to the various investment options. Therefore, the impact to the net investment income is a result of the member's investment choices with varying degrees of risk and return potential. Refer to the Investment Section of the Comprehensive Annual Financial Report (CAFR) for additional information.

Death benefit assets of $\$ 15$ million remained flat year to year.

## Net Other Assets and Liabilities

The $\$ 69$ million change was primarily driven by decreases of $\$ 114$ million in accrued benefits and distributions from fiscal year 2016 due to the timing of benefit payment funding. These were partially offset by a $\$ 48$ million reduction in employer contribution receivables due to fewer employers limiting their participation in the plan during fiscal year 2017 compared to fiscal year 2016.

Management's Discussion and Analysis (Unaudited), continued

## Liquidity

Liquidity is critically important because the INPRS' defined benefit fund has a fiduciary responsibility to disburse monthly benefit payments. Liquidity needs are met through employers, members, a nonemployer contributing entity, and other contributions, as well as earnings from investments, and the diversified investment portfolio. Having sufficient cash on hand and/or the ability to quickly convert securities to cash is important for several reasons: 1) sufficient liquidity ensures INPRS does not sell high-quality, long-term assets in order to meet short-term funding needs, 2) liquidity ensures INPRS can tactically react to market opportunities and 3) liquidity enables INPRS to invest in long-term assets (private market, real estate). As of June 30, 2017, INPRS estimates 29 percent of the Consolidated Defined Benefit assets could be liquidated in one week, 67 percent of the assets could be liquidated within one month, and 74 percent of the assets could be liquidated within six months without a significant market impact.

Fiduciary Net Position Summary by Fund

| (dollars in millions) | As of June 30 |  |  |  | Increase / <br> (Decrease) |  | Percentage Change |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2017 |  | 2016 |  |  |  |  |
| PERF | \$ | 14,644 | \$ | 13,871 | \$ | 773 | 5.6 \% |
| TRF Pre-'96 |  | 4,818 |  | 4,788 |  | 30 | 0.6 |
| TRF '96 |  | 6,252 |  | 5,611 |  | 641 | 11.4 |
| '77 Fund |  | 5,401 |  | 4,951 |  | 450 | 9.1 |
| JRS |  | 475 |  | 442 |  | 33 | 7.5 |
| EG\&C |  | 120 |  | 111 |  | 9 | 8.1 |
| PARF |  | 56 |  | 53 |  | 3 | 5.7 |
| LE DB |  | 3 |  | 3 |  | - | - |
| LE DC |  | 31 |  | 28 |  | 3 | 10.7 |
| SE |  | 8 |  | 8 |  | - | - |
| PSO |  | 7 |  | 6 |  | 1 | 16.7 |
| Total Fiduciary Net Position | \$ | 31,815 | \$ | 29,872 | \$ | 1,943 | 6.5 |

Management's Discussion and Analysis (Unaudited), continued

## Actuarial Progress

The overall objective of a pension fund is to accumulate sufficient funds to meet all expected future obligations to members. A pension fund is fully funded when it has enough money in reserve to meet all expected future obligations to participants. The goal for the defined benefit retirement plans is to make progress toward achieving full funding.

With the implementation of GASB Statement No. 67, the actuarial value of assets is no longer to be used for financial reporting purposes. The fair value of assets is required 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 ratios of the defined benefit retirement plans administered by INPRS as of the latest actuarial valuations were as follows:

| Pre-Funded DB Pension Funds | As of June 30 |  |
| :---: | :---: | :---: |
|  | 2017 | 2016 |
| PERF | 76.6 \% | 75.3 \% |
| TRF '96 | 90.4 | 87.8 |
| '77 Fund | 100.3 | 98.2 |
| JRS | 90.7 | 88.2 |
| EG\&C | 84.2 | 80.1 |
| PARF | 57.5 | 62.1 |
| LE DB | 75.3 | 72.7 |
| Pay-As-You-Go DB Pension Fund |  |  |
| TRF Pre-'96 | 28.8 | 28.4 |

An analysis of the funding progress, contributions and a discussion of actuarial assumptions and methods is outlined in Note 7 and the Required Supplementary Information of the Financial Section. For additional actuarial-related information on a funding basis, refer to the Actuarial Section of the CAFR.


## Indiana Public Retirement System

Statement of Fiduciary Net Position
As of June 30, 2017 (with Comparative Totals as of June 30, 2016) ${ }^{1}$

|  | PERF | TRF Pre-'96 | TRF '96 | '77 Fund | JRS |  | EG\&C |  | PARF |  | LE DB |  | LE DC |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assets |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cash | \$ 3,332 | \$ 599 | \$ 2,050 | \$ 1,541 | \$ | 3 | \$ | 40 | \$ | - | \$ | - | \$ | 3 |  |
| Receivables: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Contributions and Miscellaneous | 9,867 | 3,285 | 3,566 | 3,181 |  | 62 |  | - |  | 25 |  | - |  | 414 |  |
| Investments | 84,318 | 26,559 | 35,305 | 34,772 |  | 3,060 |  | 773 |  | 358 |  | 19 |  | 120 |  |
| Foreign Exchange Contracts | 3,312,934 | 998,717 | 1,360,909 | 1,504,522 |  | 132,385 |  | 33,441 |  | 15,492 |  | 799 |  | 2,629 |  |
| Interest and Dividends | 37,932 | 12,430 | 16,165 | 14,153 |  | 1,245 |  | 315 |  | 145 |  | 8 |  | 76 |  |
| Due From Other Funds | 2,222 | 500 | 531 | 17 |  | 1 |  | 1 |  | 1 |  | - |  | - |  |
| Total Receivables | 3,447,273 | 1,041,491 | 1,416,476 | 1,556,645 |  | 136,753 |  | 34,530 |  | 16,021 |  | 826 |  | 3,239 |  |
| Investments: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Short Term | 8,675 | 16,059 | 7,059 | - |  | - |  | - |  | - |  | - |  | 106 |  |
| Pooled Investments: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Repurchase Agreements | 846 | 255 | 347 | 385 |  | 34 |  | 9 |  | 4 |  | - |  | 1 |  |
| Short Term | 682,121 | 223,654 | 290,764 | 254,126 |  | 22,361 |  | 5,649 |  | 2,617 |  | 135 |  | 1,378 |  |
| Fixed Income | 4,109,420 | 1,271,821 | 1,707,432 | 1,764,339 |  | 155,246 |  | 39,216 |  | 18,168 |  | 938 |  | 4,793 |  |
| Equities | 3,887,014 | 1,327,037 | 1,687,725 | 1,285,758 |  | 113,135 |  | 28,579 |  | 13,240 |  | 683 |  | 10,295 |  |
| Alternative | 4,751,365 | 1,430,790 | 1,950,879 | 2,162,537 |  | 190,260 |  | 48,061 |  | 22,265 |  | 1,149 |  | 3,705 |  |
| Derivatives | $(1,358)$ | (299) | (686) | (662) |  | (58) |  | (15) |  | (7) |  | - |  | - |  |
| Total Pooled Investments | 13,429,408 | 4,253,258 | 5,636,461 | 5,466,483 |  | 480,978 |  | 121,499 |  | 56,287 |  | 2,905 |  | 20,172 |  |
| Pooled Synthetic GIC's at Contract Value | 1,348,310 | 604,633 | 670,206 | - |  | - |  | - |  | - |  | - |  | 10,271 |  |
| Securities Lending Collateral | 129,604 | 39,028 | 53,215 | 58,986 |  | 5,190 |  | 1,311 |  | 607 |  | 31 |  | 101 |  |
| Total Investments | 14,915,997 | 4,912,978 | 6,366,941 | 5,525,469 |  | 486,168 |  | 122,810 |  | 56,894 |  | 2,936 |  | 30,650 |  |
| Other Assets | 102 | - | - | - |  | - |  | - |  | - |  | - |  | - |  |
| Gross Capital Assets | 15,442 | 2,583 | 2,382 | 579 |  | 23 |  | 22 |  | 17 |  | 1 |  | - |  |
| Less: Accumulated Depreciation and Amortization | $(9,622)$ | $(2,444)$ | $(2,254)$ | (546) |  | (21) |  | (21) |  | (16) |  | (1) |  | - |  |
| Net Capital Assets | 5,820 | 139 | 128 | 33 |  | 2 |  | 1 |  | 1 |  | - |  | - |  |
| Total Assets | 18,372,524 | 5,955,207 | 7,785,595 | 7,083,688 |  | 622,926 |  | 157,381 |  | 72,916 |  | 3,762 |  | 33,892 |  |
| Liabilities |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Administrative Payable | 6,662 | 253 | 258 | 33 |  | 6 |  | 7 |  | 32 |  | 3 |  | - |  |
| Retirement Benefits Payable | 9,894 | 16,508 | 7,155 | 1,907 |  | - |  | - |  | - |  | - |  | 106 |  |
| Investments Payable | 131,357 | 41,175 | 54,884 | 54,789 |  | 4,821 |  | 1,218 |  | 564 |  | 30 |  | 177 |  |
| Foreign Exchange Contracts Payable | 3,324,759 | 1,002,277 | 1,365,764 | 1,509,906 |  | 132,858 |  | 33,561 |  | 15,548 |  | 802 |  | 2,638 |  |
| Securities Lending Obligations | 129,604 | 39,028 | 53,215 | 58,986 |  | 5,190 |  | 1,311 |  | 607 |  | 31 |  | 101 |  |
| Obligations Under Reverse Repurchase Agreement | 124,527 | 37,499 | 51,130 | 56,678 |  | 4,987 |  | 1,260 |  | 584 |  | 30 |  | 97 |  |
| Due to Other Funds | 1,050 | 837 | 1,149 | 210 |  | 9 |  | 8 |  | 6 |  | 1 |  | 1 |  |
| Due to Other Governments | - | - | - | - |  | - |  | - |  | - |  | - |  | - |  |
| Total Liabilities | 3,727,853 | 1,137,577 | 1,533,555 | 1,682,509 |  | 147,871 |  | 37,365 |  | 17,341 |  | 897 |  | 3,120 |  |
| Total Net Position Restricted | \$14,644,671 | \$ 4,817,630 | \$ 6,252,040 | \$ 5,401,179 | \$ | 475,055 | \$ | 120,016 | \$ | 55,575 | \$ | 2,865 | \$ | 30,772 |  |

[^5]
## Indiana Public Retirement System

Statement of Fiduciary Net Position, continued
As of June 30, 2017 (with Comparative Totals as of June 30, 2016) ${ }^{1}$

| (dollars in thousands) | Other Postemployment Benefit Funds (OPEB) |  |  |  | Pension Trust and OPEB Funds 2017 Totals |  | Pension Trust and OPEB Funds 2016 Totals |  | Agency Fund LPSPR |  |  |  | INPRS Totals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | SE |  | PSO |  |  |  | 2017 | 2016 |  |  |  |  |
|  |  |  | 2017 | 2016 |  |  |  |  |  |  |  |
| Assets |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cash | \$ | 1 |  |  | \$ | 114 | \$ | 7,683 | \$ | 7,236 | \$ | 722 | \$ | 339 | \$ 8,405 | \$ 7,575 |
| Receivables: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Contributions and Miscellaneous |  | - |  | 3 |  |  |  | 20,403 |  | 68,209 |  | 2,500 |  | 2,500 | 22,903 | 70,709 |
| Investments |  | - |  | - |  | 185,284 |  | 414,262 |  | - |  | - | 185,284 | 414,262 |
| Foreign Exchange Contracts |  | - |  | - |  | 7,361,828 |  | 5,970,711 |  | - |  | - | 7,361,828 | 5,970,711 |
| Interest and Dividends |  |  |  | - |  | 82,469 |  | 79,573 |  | - |  | - | 82,469 | 79,573 |
| Due From Other Funds |  | - |  | - |  | 3,273 |  | 3,808 |  | - |  | - | 3,273 | 3,808 |
| Total Receivables |  | - |  | 3 |  | 7,653,257 |  | 6,536,563 |  | 2,500 |  | 2,500 | 7,655,757 | 6,539,063 |
| Investments: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Short Term |  | - |  | - |  | 31,899 |  | 24,564 |  | 30,859 |  | 26,957 | 62,758 | 51,521 |
| Pooled Investments: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Repurchase Agreements |  | - |  | - |  | 1,881 |  | 6,433 |  | - |  | - | 1,881 | 6,433 |
| Short Term |  | 74 |  | 61 |  | 1,482,940 |  | 1,773,522 |  | - |  | - | 1,482,940 | 1,773,522 |
| Fixed Income |  | 8,166 |  | 6,688 |  | 9,086,227 |  | 11,212,311 |  | - |  | - | 9,086,227 | 11,212,311 |
| Equities |  | - |  | - |  | 8,353,466 |  | 7,336,279 |  | - |  | - | 8,353,466 | 7,336,279 |
| Alternative |  | - |  | - |  | 10,561,011 |  | 10,113,176 |  | - |  | - | 10,561,011 | 10,113,176 |
| Derivatives |  | - |  | - |  | $(3,085)$ |  | (964) |  | - |  | - | $(3,085)$ | (964) |
| Total Pooled Investments |  | 8,240 |  | 6,749 |  | 29,482,440 |  | 30,440,757 |  | - |  | - | 29,482,440 | 30,440,757 |
| Pooled Synthetic GIC's at Contract Value |  | - |  | - |  | 2,633,420 |  | - |  | - |  | - | 2,633,420 | - |
| Securities Lending Collateral |  | - |  | - |  | 288,073 |  | 379,493 |  | - |  | - | 288,073 | 379,493 |
| Total Investments |  | 8,240 |  | 6,749 |  | 32,435,832 |  | 30,844,814 |  | 30,859 |  | 26,957 | 32,466,691 | 30,871,771 |
| Other Assets |  | - |  | - |  | 102 |  | 435 |  | - |  | - | 102 | 435 |
| Gross Capital Assets |  | - |  | - |  | 21,049 |  | 16,393 |  | 2 |  | 2 | 21,051 | 16,395 |
| Less: Accumulated Depreciation and Amortization |  | - |  | - |  | $(14,925)$ |  | $(12,976)$ |  | (2) |  | (2) | $(14,927)$ | $(12,978)$ |
| Net Capital Assets |  | - |  | - |  | 6,124 |  | 3,417 |  | - |  | - | 6,124 | 3,417 |
| Total Assets |  | 8,241 |  | 6,866 |  | 40,102,998 |  | 37,392,465 |  | 34,081 |  | 29,796 | 40,137,079 | 37,422,261 |
| Liabilities |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Administrative Payable |  | - |  | - |  | 7,254 |  | 6,785 |  | 163 |  | 12 | 7,417 | 6,797 |
| Retirement Benefits Payable |  | - |  | - |  | 35,570 |  | 142,453 |  | . |  | - | 35,570 | 142,453 |
| Investments Payable |  | 5 |  | 4 |  | 289,024 |  | 769,934 |  | - |  | - | 289,024 | 769,934 |
| Foreign Exchange Contracts Payable |  | - |  | - |  | 7,388,113 |  | 5,949,517 |  | - |  | - | 7,388,113 | 5,949,517 |
| Securities Lending Obligations |  | - |  | - |  | 288,073 |  | 379,493 |  | - |  | - | 288,073 | 379,493 |
| Obligations Under Reverse Repurchase Agreement |  | - |  | - |  | 276,792 |  | 268,327 |  | - |  | - | 276,792 | 268,327 |
| Due to Other Funds |  | - |  | - |  | 3,271 |  | 3,805 |  | 2 |  | 3 | 3,273 | 3,808 |
| Due to Other Governments |  | - |  | - |  | - |  | - |  | 33,916 |  | 29,781 | 33,916 | 29,781 |
| Total Liabilities |  | 5 |  | 4 |  | 8,288,097 |  | 7,520,314 |  | 34,081 |  | 29,796 | 8,322,178 | 7,550,110 |
| Total Net Position Restricted | \$ | 8,236 | \$ | 6,862 | \$ | 31,814,901 | \$ | 29,872,151 | \$ | - | \$ | - | \$ 31,814,901 | \$ 29,872,151 |

[^6]
## Indiana Public Retirement System

Statement of Changes in Fiduciary Net Position
For the Year Ended June 30, 2017 (with Comparative Totals for the Year Ended June 30, 2016) ${ }^{1}$

| (dollars in thousands) | Pension Trust Funds |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | PERF |  | TRF Pre-'96 |  | TRF '96 |  | '77 Fund |  | JRS |  | EG\&C |  | PARF |  |
| Additions |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Contributions: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Employer | \$ | 558,891 | \$ | 4,525 | \$ | 227,207 | \$ | 150,857 | \$ | 16,824 | \$ | 5,691 | \$ | 1,486 |
| Nonemployer Contributing Entity |  | - |  | 871,000 |  | - |  | - |  | - |  | - |  | - |
| Member |  | 168,112 |  | 28,836 |  | 92,838 |  | 51,521 |  | 3,468 |  | 1,102 |  | 1,357 |
| Total Contributions |  | 727,003 |  | 904,361 |  | 320,045 |  | 202,378 |  | 20,292 |  | 6,793 |  | 2,843 |
| Investment Income: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Net Appreciation / (Depreciation) Fair Value of Investments |  | 935,664 |  | 352,530 |  | 420,198 |  | 361,658 |  | 31,943 |  | 8,068 |  | 3,793 |
| Other Net Investment Income |  | 1,677 |  | 572 |  | 680 |  | 737 |  | 65 |  | 16 |  | 8 |
| Net Interest and Dividends Income |  | 196,889 |  | 66,742 |  | 80,661 |  | 73,117 |  | 6,457 |  | 1,623 |  | 766 |
| Securities Lending Income |  | 1,415 |  | 466 |  | 569 |  | 635 |  | 56 |  | 14 |  | 7 |
| Total Net Investment Income |  | 1,135,645 |  | 420,310 |  | 502,108 |  | 436,147 |  | 38,521 |  | 9,721 |  | 4,574 |
| Less Direct Investment Expenses: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Investment Management Fees |  | $(84,646)$ |  | $(27,149)$ |  | $(33,475)$ |  | $(36,238)$ |  | $(3,199)$ |  | (805) |  | (379) |
| Securities Lending Fees |  | (277) |  | (91) |  | (111) |  | (124) |  | (11) |  | (3) |  | (1) |
| Direct Investment Expenses |  | $(9,835)$ |  | $(2,207)$ |  | $(3,629)$ |  | $(1,589)$ |  | (115) |  | (44) |  | (27) |
| Total Direct Investment Expenses |  | $(94,758)$ |  | $(29,447)$ |  | $(37,215)$ |  | $(37,951)$ |  | $(3,325)$ |  | (852) |  | (407) |
| Net Investment Income / (Loss) |  | 1,040,887 |  | 390,863 |  | 464,893 |  | 398,196 |  | 35,196 |  | 8,869 |  | 4,167 |
| Other Additions: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Miscellaneous Income |  | 55 |  | - |  | 34 |  | 78 |  | - |  | - |  | - |
| Member Reassignments |  | 6,118 |  | 4,206 |  | 6,345 |  | - |  | - |  | - |  | - |
| Total Other Additions |  | 6,173 |  | 4,206 |  | 6,379 |  | 78 |  | - |  | - |  | - |
| Total Additions |  | 1,774,063 |  | 1,299,430 |  | 791,317 |  | 600,652 |  | 55,488 |  | 15,662 |  | 7,010 |
| Deductions |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Pension and Disability Benefits |  | 917,034 |  | 1,253,251 |  | 132,592 |  | 144,782 |  | 22,055 |  | 6,709 |  | 3,624 |
| Special Death Benefits |  | - |  | - |  | - |  | 809 |  | - |  | - |  | - |
| Distribution of Contributions and Interest |  | 47,822 |  | 4,993 |  | 11,133 |  | 3,274 |  | 44 |  | 117 |  | 445 |
| Administrative Expenses |  | 24,483 |  | 6,226 |  | 5,553 |  | 1,607 |  | 124 |  | 123 |  | 158 |
| Member Reassignments |  | 10,555 |  | 4,859 |  | 1,229 |  | - |  | - |  | 26 |  | - |
| Total Deductions |  | 999,894 |  | 1,269,329 |  | 150,507 |  | 150,472 |  | 22,223 |  | 6,975 |  | 4,227 |
| Net Increase I (Decrease) |  | 774,169 |  | 30,101 |  | 640,810 |  | 450,180 |  | 33,265 |  | 8,687 |  | 2,783 |
| Beginning Net Position Restricted |  | 13,870,502 |  | 4,787,529 |  | 5,611,230 |  | 4,950,999 |  | 441,790 |  | 111,329 |  | 52,792 |
| Ending Net Position Restricted | \$ | 14,644,671 | \$ | 4,817,630 | \$ | 6,252,040 | \$ | 5,401,179 | \$ | 475,055 | \$ | 120,016 | \$ | 55,575 |

${ }^{1}$ The accompanying notes are an integral part of the financial statements.

## Indiana Public Retirement System

Statement of Changes in Fiduciary Net Position, continued
For the Year Ended June 30, 2017 (with Comparative Totals for the Year Ended June 30, 2016) ${ }^{1}$

| (dollars in thousands) | Pension Trust Funds |  |  |  | Other Postemployment Benefit Funds (OPEB) |  |  |  | INPRS Totals ${ }^{2}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | LE DB |  | LE DC |  | SE |  | PSO |  | Pension Trust and OPEB Funds 2017 Totals |  | Pension Trust and OPEB Funds 2016 Totals |  |
| Additions |  |  |  |  |  |  |  |  |  |  |  |  |
| Contributions: |  |  |  |  |  |  |  |  |  |  |  |  |
| Employer | \$ | 135 | \$ | 1,395 | \$ | - | \$ | - | \$ | 967,011 | \$ | 1,012,012 |
| Nonemployer Contributing Entity |  | - |  | - |  | - |  | 564 |  | 871,564 |  | 888,111 |
| Member |  | - |  | 388 |  | - |  | - |  | 347,622 |  | 334,079 |
| Total Contributions |  | 135 |  | 1,783 |  | - |  | 564 |  | 2,186,197 |  | 2,234,202 |
| Investment Income: |  |  |  |  |  |  |  |  |  |  |  |  |
| Net Appreciation / (Depreciation) Fair Value of Investments |  | 202 |  | 2,871 |  | (7) |  | - |  | 2,116,920 |  | 84,586 |
| Other Net Investment Income |  | - |  | 2 |  | - |  | - |  | 3,757 |  | 3,158 |
| Net Interest and Dividends Income |  | 41 |  | 286 |  | - |  | - |  | 426,582 |  | 410,077 |
| Securities Lending Income |  | - |  | 1 |  | - |  | - |  | 3,163 |  | 4,168 |
| Total Net Investment Income |  | 243 |  | 3,160 |  | (7) |  | - |  | 2,550,422 |  | 501,989 |
| Less Direct Investment Expenses: |  |  |  |  |  |  |  |  |  |  |  |  |
| Investment Management Fees |  | (20) |  | (79) |  | (5) |  | (5) |  | $(186,000)$ |  | $(160,565)$ |
| Securities Lending Fees |  | - |  | - |  | - |  | - |  | (618) |  | (772) |
| Direct Investment Expenses |  | (2) |  | (9) |  | - |  | - |  | $(17,457)$ |  | $(15,822)$ |
| Total Direct Investment Expenses |  | (22) |  | (88) |  | (5) |  | (5) |  | $(204,075)$ |  | $(177,159)$ |
| Net Investment Income / (Loss) |  | 221 |  | 3,072 |  | (12) |  | (5) |  | 2,346,347 |  | 324,830 |
| Other Additions: |  |  |  |  |  |  |  |  |  |  |  |  |
| Miscellaneous Income |  | - |  | 18 |  | - |  | - |  | 185 |  | 1,078 |
| Member Reassignments |  | - |  | - |  | - |  | - |  | 16,669 |  | 16,187 |
| Total Other Additions |  | - |  | 18 |  | - |  | - |  | 16,854 |  | 17,265 |
| Total Additions |  | 356 |  | 4,873 |  | (12) |  | 559 |  | 4,549,398 |  | 2,576,297 |
| Deductions |  |  |  |  |  |  |  |  |  |  |  |  |
| Pension and Disability Benefits |  | 357 |  | - |  | - |  | - |  | 2,480,404 |  | 2,429,170 |
| Special Death Benefits |  | - |  | - |  | 100 |  | - |  | 909 |  | 924 |
| Distribution of Contributions and Interest |  | - |  | 2,504 |  | - |  | - |  | 70,332 |  | 80,385 |
| Administrative Expenses |  | 53 |  | 7 |  | - |  | - |  | 38,334 |  | 38,469 |
| Member Reassignments |  | - |  | - |  | - |  | - |  | 16,669 |  | 16,187 |
| Total Deductions |  | 410 |  | 2,511 |  | 100 |  | - |  | 2,606,648 |  | 2,565,135 |
| Net Increase I (Decrease) |  | (54) |  | 2,362 |  | (112) |  | 559 |  | 1,942,750 |  | 11,162 |
| Beginning Net Position Restricted |  | 2,919 |  | 28,410 |  | 8,348 |  | 6,303 |  | 29,872,151 |  | 29,860,989 |
| Ending Net Position Restricted | \$ | 2,865 | \$ | 30,772 | \$ | 8,236 | \$ | 6,862 | \$ | 31,814,901 | \$ | 29,872,151 |

${ }^{1}$ The accompanying notes are an integral part of the financial statements.
${ }^{2}$ The Local Public Safety Pension Relief Fund is an Agency Fund, and is not included in the Statement of Changes in Fiduciary Net Position.

Notes to the Financial Statements
June 30, 2017

## Note 1. Descriptions of System and Plans

## Administration of System and Plans

The Indiana Public Retirement System (INPRS) administers nine pension trust funds including eight Defined Benefit retirement plans and one Defined Contribution retirement plan, two Other Postemployment Benefit funds and one Agency fund. INPRS is governed by a nine-member Board of Trustees, appointed by the Governor pursuant to the following criteria: one trustee with experience in economics, finance, or investments, one trustee with experience in executive management of 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, and Treasurer of State, or nominee.

## (A) Public Employees' Retirement Fund

## Plan Description

The Public Employees' Retirement Fund (PERF) is a cost-sharing, multiple-employer defined benefit plan based on 35 IAC 21-1-1, 35 IAC 21-1-2 and amended IC 5-10.2-2-11(b). PERF was established to provide retirement, disability, and survivor benefits to full-time employees of the State of Indiana not covered by another plan, those political subdivisions that elect to participate in the retirement plan, and certain INPRS employees. Political subdivisions mean a county, city, town, township, political body corporate, public school corporation, public library, public utility of a county, city, town, or township, and any department of, or associated with, a county, city, town, or township, which department receives revenue independently of, or in addition to, funds obtained from taxation. There are two tiers to PERF. The first is the Public Employees' Defined Benefit Plan (PERF Hybrid) and the second is the My Choice: Retirement Savings Plan for Public Employees (My Choice), formerly known as the Public Employees' Annuity Savings Account Only Plan. Details of PERF Hybrid and My Choice are described below.

## Membership

PERF members are officers and employees of units of State and local governments in Indiana (referred to as political subdivisions), including counties, cities, towns, townships, libraries, and school corporations. The political subdivisions become participants by ordinance or resolution of the governing body, which specifies the classifications of employees who will become members of the plan. The ordinance or resolution is filed with and approved by INPRS. To be a member, employees hired after June 30, 1982, except employees of a participating school corporation, must occupy positions normally requiring performance of service of more than 1,000 hours during a year. Effective July 1, 2008, members who have at least one year of service in both PERF and TRF have the option of choosing from which of these funds they would like to retire.

As of June 30, $2017^{1}$, there were 1,182 participating political subdivisions in addition to the State, and membership consisted of:

| Retired Members, Beneficiaries, and Disabled Members Receiving Benefits | 85,130 |
| :--- | ---: |
| Inactive Vested Members Entitled To But Not Yet Receiving Benefits | 30,816 |
| Inactive Non-Vested Members Entitled To a Distribution of ASA Balance | 50,312 |
| Active Members: Vested and Non-Vested | 134,909 |
| Total | 301,167 |

${ }^{1}$ Census data as of June 30, 2016 used for June 30, 2017 actuarial valuation.

Notes to the Financial Statements, continued
June 30, 2017

## Contributions

The State of Indiana is obligated by statute to make contributions to PERF Hybrid or My Choice. Any political subdivision that elects to participate in PERF Hybrid is obligated by statute to make contributions to the plan. The required contributions are determined by the INPRS Board of Trustees based on actuarial investigation and valuation in accordance with IC 5-10.2-2-11. The funding policy provides for periodic employer contributions at actuarially determined rates that, expressed as percentages of annual covered payroll, are sufficient to fund the pension benefits when they become due. As PERF is a costsharing plan, all risks and costs, including benefit costs, are shared proportionately by the participating employers. During the year ended June 30, 2017, participating employers were required to contribute 11.2 percent of covered payroll for members employed by the State and Political Subdivisions.

For My Choice, the State was also required to contribute 11.2 percent of covered payroll. In accordance with IC 5-10.3-12-24, the amount credited from the employer's contribution rate to the member's account shall not be less than three percent and not be greater than the normal cost of the fund which was 3.3 percent for the State for the year ended June 30, 2017 and any amount not credited to the member's account shall be applied to the pooled assets of PERF Hybrid. The political subdivisions were required to contribute a supplemental cost of 5.4 percent of covered payroll as of July 1,2016 , which increased to 7.2 percent as of January 1, 2017. In addition, for political subdivisions, the amount credited to the member's account for the normal cost ranged up to 5.8 percent as of July 1, 2016, and up to four percent as of January 1, 2017.

PERF Hybrid and My Choice members contribute three percent of covered payroll to their annuity savings account, which is not used to fund the defined benefit pension for PERF Hybrid. For PERF Hybrid, the employer may elect to make the contributions on behalf of the member. The State pays the member's contributions on behalf of the member employed by the State that participate in My Choice. Political subdivisions may choose to pay part or all of the member's contributions on behalf of the member for My Choice. In addition, members of PERF Hybrid and My Choice may elect to make additional voluntary contributions, under certain criteria, of up to 10 percent of their compensation into their annuity savings accounts. Political subdivisions that participate in My Choice may elect to match voluntary contributions at a rate of 50 percent.

## PERF Hybrid

## Plan Description

PERF Hybrid was established by the Indiana Legislature in 1945 and is governed by the INPRS Board of Trustees in accordance with Indiana Code (IC) 5-10.2, IC 5-10.3, and IC 5-10.5. There are two aspects to PERF Hybrid defined benefit structure. The first portion is the monthly defined benefit pension that is funded by the employer. The second portion of PERF Hybrid benefit structure is the annuity savings account (ASA) that supplements the defined benefit at retirement.

## Retirement Benefits - Defined Benefit Pension

PERF Hybrid retirement benefit consists of the sum of a defined pension benefit provided by employer contributions plus the amount credited to the member's annuity savings account. Pension benefits (non ASA) vest after 10 years of creditable service. The vesting period is eight years for certain elected officials. Members are immediately vested in their annuity savings account. At retirement, a member may choose to receive a lump sum payment of the amount credited to the member's annuity savings account, receive the amount as an annuity, or leave the contributions invested with INPRS. Vested PERF members leaving a covered position, who wait 30 days after termination, may withdraw their annuity savings account and will not forfeit creditable service or a full retirement benefit. However, if a member is eligible for a full retirement at the time of the withdrawal request, he/she will have to begin drawing his/her pension benefit to withdraw the annuity savings account. A non-vested member who terminates employment before retirement may withdraw his/her annuity savings account

Notes to the Financial Statements, continued
June 30, 2017
after 30 days, but by doing so, forfeits his/her creditable service. A member who returns to covered service and works no less than six months in a covered position may reclaim his/her forfeited creditable service.

A member who has reached age 65 and has at least 10 years of creditable service is eligible for normal retirement and is entitled to 100 percent of the pension benefit component. This annual pension benefit is equal to 1.1 percent times the average annual compensation times the number of years of creditable service. The average annual compensation in this calculation uses the highest 20 calendar quarters of salary in a covered position. All 20 calendar quarters do not need to be continuous, but they must be in groups of four consecutive calendar quarters. The same calendar quarter may not be included in two different groups. For PERF members who serve as an elected official, the highest one year (total of four consecutive quarters) of annual compensation is used. Member contributions paid by the employer on behalf of the member and severance pay up to $\$ 2,000$ are included as part of the member's annual compensation.

A member who has reached age 60 and has at least 15 years of creditable service is eligible for normal retirement and, as such, is entitled to 100 percent of the pension benefit. A member who is at least 55 years old and whose age plus number of years of creditable service is at least 85 is entitled to 100 percent of the benefits as described above.

A member who has reached at least age 50 and has at least 15 years of creditable service is eligible for early retirement with a reduced pension. A member retiring early receives a percentage of the normal annual pension benefit. The percentage of the pension benefit at retirement remains the same for the member's lifetime. For age 59, the early retirement percentage of the normal annual pension benefit is 89 percent. This amount is reduced five percentage points per year (e.g., age 58 is 84 percent) to age 50 being 44 percent.

The monthly pension benefits for members in pay status may be increased periodically as cost of living adjustments (COLA). Such increases are not guaranteed by statute and have historically been provided on an "ad hoc" basis and can only be granted by the Indiana General Assembly. There was no COLA for the year ended June 30, 2017; however, eligible members received a one-time check (a.k.a. 13th check) in September 2016. The amount of the one-time check ranged from $\$ 150$ to $\$ 450$, depending upon a member's years of service, and was for a member who retired or was disabled on or before December 1, 2015, and who was entitled to receive a monthly benefit on July 1, 2016.

## Disability and Survivor Benefits

PERF Hybrid also provides disability and survivor benefits. A member who has at least five years of creditable service and becomes disabled while in active service, on FMLA leave, receiving workers' compensation benefits, or receiving employerprovided disability insurance benefits may retire for the duration of the disability, if the member has qualified for social security disability benefits and has furnished proof of the qualification. The disability benefit is calculated the same as that for a normal retirement without reduction for early retirement. The minimum benefit is $\$ 180$ per month or the actuarial equivalent.

Upon the death in service of a member with 15 or more years of creditable service as of January 1, 2007, a survivor benefit may be paid to the surviving spouse to whom the member had been married for two or more years, or surviving dependent children under the age of 18 . This payment is equal to the benefit which would have been payable to a beneficiary if the member had retired at age 50 or at death, whichever is later, under an effective election of the joint and survivor option available for retirement benefits. A surviving spouse or surviving dependent children are also entitled to a survivor benefit upon the death in service after January 1, 2007, of a member who was at least 65 years of age and had at least 10 but not more than 14 years of creditable service.

Notes to the Financial Statements, continued
June 30, 2017

## Retirement Benefits - Annuity Savings Account

Members are required to participate in an Annuity Savings Account (ASA). The ASA consists of the member's contributions, set by statute at three percent of compensation as defined by IC 5-10.2-3-2 for PERF, plus the interest/earnings or losses credited to the member's account. The employer may elect to make the contributions on behalf of the member. In addition, under certain conditions, members may elect to make additional voluntary contributions of up to 10 percent of their compensation into their annuity savings accounts. A member's contributions and investment earnings belong to the member and do not belong to the State or political subdivision.

Investments in the members' annuity savings accounts are self-directed, as participants direct the investment of their account balances among the following eight investment options, with varying degrees of risk and return potential:

- Stable Value Fund - This fund's objective is to provide a market rate of return consistent with the preservation of principal through a shorter maturity, high quality portfolio. Effective January 1, 2017, the Guaranteed Fund was replaced by the Stable Value Fund (IC 5-10.2-2-3).
- Large Cap Equity Index Fund - This fund's objective is to seek investment growth/capital appreciation through passive investment in the stocks of the 500 largest U.S. companies. Market risk is assumed by the member.
- Small/Mid Cap Equity Fund - This fund's objective is to seek investment growth/capital appreciation through both active and passive investment in stocks of small- and mid-sized U.S. companies. Market risk is assumed by the member.
- International Equity Fund - This fund's objective is to seek investment growth/capital appreciation through both active and passive investment in stocks of non-U.S. companies in both developed and emerging markets. Market risk is assumed by the member.
- Fixed Income Fund - This fund's objective is to seek total return, consisting of income and capital appreciation. Market risk is assumed by the member.
- Inflation-Linked Fixed Income Fund - This fund's objective is to provide investors inflation protection and income consistent with investment in inflation-indexed securities. Principal and interest payments are adjusted in response to changes in inflation. Market risk is assumed by the member.
- Target Date Funds - The fund's are designed to seek an appropriate amount of total return, commensurate with risk, given the specific time horizon of each fund. The Target Date Funds provide participants with a one-stop shop for investing. Participants simply choose the fund most appropriate for them based on the year in which they plan to withdraw their money (usually their retirement year). Once a participant selects the appropriate fund, the underlying asset allocation automatically adjusts over time. Market risk is assumed by the member.
- Money Market Fund - This fund's objective is to provide a market rate of return consistent with the preservation of capital through a shorter maturity, high quality portfolio. Market risk is assumed by the member.

Members may direct changes to their investment fund allocations daily and investments are reported at fair value.

Notes to the Financial Statements, continued
June 30, 2017

## My Choice

## Plan Description

My Choice: Retirement Savings Plan for Public Employees (My Choice) was formerly known as the PERF ASA Only Plan. My Choice was established by the Indiana Legislature in 2011 and is governed by the INPRS Board of Trustees in accordance with IC 5-10.3-12, and IC 5-10.5. This plan is funded by an employer and a member for the use of the member, or the member's beneficiaries or survivors, after the member's retirement. My Choice members are full-time employees of the State of Indiana (as defined in IC 5-10.3-7-1(d)), or a political subdivision who elected to participate in My Choice, and are in a position eligible for membership in the PERF Hybrid Plan and who elect to become members of My Choice. Any government agency that pays employees through the Auditor of the State is a mandatory participant in My Choice and must offer eligible employees the My Choice option. Quasi-government agencies (created by statute and are separate from the State in their corporate and sovereign capacity) and State educational institutions may choose to offer My Choice as an option to their employees.

## Retirement Account

My Choice maintains an annuity savings account for each member. Each member's account consists of a member and an employer contribution subaccount within the annuity savings account structure.

The member's contribution subaccount consists of the member's contributions, set by statute at three percent of covered payroll as defined by IC 5-10.3-12-23 plus the interest/earnings or losses credited to the member's contribution subaccount. The State pays the member's contributions on behalf of their employees. Political subdivisions may elect to match 50 percent of a member's voluntary contributions, and these matching contributions are subject to the vesting schedule later in the note. The employer contribution subaccount consists of the employer's contributions and the earnings on the employer's contributions. The employer contribution rate is set by INPRS Board of Trustees in accordance with IC 5-10.2-2-11.

My Choice allows members to actively participate in managing their retirement benefits through self-directed investment options. All contributions made to a member's account (member contribution subaccount and employer contribution subaccount) are invested as a combined total according to the member's investment elections. The members can direct their investments among the following aforementioned eight investment options: Large Cap Equity Index Fund, Small/Mid Cap Equity Fund, International Equity Fund, Fixed Income Fund, Inflation-Linked Fixed Income Fund, Money Market Fund, Stable Value Fund, and Target Date Funds. A description of each of these Funds is earlier in this note in the PERF Hybrid Retirement Benefits - Annuity Savings Account section.

A member is immediately vested in the member contribution subaccount except for the voluntary match contributions. To receive contributions and earnings from the employer contribution subaccount or the voluntary contribution match, a member must meet vesting requirements (full years of participation) to qualify for a distribution. The vesting schedule is as follows:

> One year of participation $=20 \%$
> Two years of participation $=40 \%$
> Three years of participation $=60 \%$
> Four years of participation $=80 \%$
> Five years of participation $=100 \%$

A member who terminates service with their employer is entitled to withdraw the total amount in the member contribution subaccount. In addition, the member is entitled to withdraw amounts in the employer contribution subaccount to the extent

Notes to the Financial Statements, continued
June 30, 2017
the member is vested in this account. The member must be separated from employment for at least 30 days before the member may take a withdrawal from the member's account. The amount available for withdrawal is the fair value of the participant's account on the processing date. The withdrawal amount can be paid in a lump sum, a direct rollover to another eligible retirement plan, or if the member has attained normal retirement age and met other criteria established by the INPRS Board of Trustees as a monthly annuity provided through INPRS.

If a member becomes disabled while in active service, subject to the member providing proof of the member's qualification for social security disability benefits to the Board of Trustees, a member may withdraw the total amount in the member contribution subaccount. To the extent that the member is vested, the member may make a withdrawal from the member's employer subaccount. The withdrawal amount can be paid in a lump sum, a direct rollover to another eligible retirement plan, or a monthly annuity provided through INPRS if the member has attained normal retirement age and met other criteria established by the INPRS Board of Trustees.

If a member dies while in active service or after terminating service in a position covered by the Plan, but before withdrawing the member's account, all of the member's contribution subaccount, and to the extent that the member is vested, the employer contribution subaccount, will be paid to the beneficiary or beneficiaries designated by the member. The amount available for payment is the fair value of the participant's account. The beneficiary may elect to the have member's account paid as a lump sum, a direct rollover to another eligible retirement plan, or as a monthly annuity in accordance with the rules of the INPRS Board of Trustees. The monthly annuity is an option only on or after the beneficiary attains normal retirement age and meets other criteria established by the INPRS Board of Trustees. If a member dies in the line of duty while in active service, the designated beneficiary or beneficiaries or surviving spouse or dependents, are entitled to payment of the member's account as described above. In addition, if the member was not fully vested in the employer contribution subaccount, the account is deemed to be fully vested for purposes of withdrawal.

## (B) Teachers' Retirement Funds

The Indiana State Teachers' Retirement Fund (TRF) was established by the Indiana General Assembly in 1921. In 1955, TRF was designed as a pay-as-you-go defined benefit retirement plan. In 1995, legislation was passed that closed the pay-as-yougo plan (renamed the Teachers' Pre-1996 Account) to newly hired members and created a new account (named the Teachers' 1996 Account) for all members hired after June 30, 1995. Both TRF Accounts are cost-sharing, multiple-employer defined benefit plans. TRF is governed by the INPRS Board of Trustees in accordance with IC 5-10.2, IC 5-10.4, and IC 5-10.5.

## Teachers' Pre-1996 Account

## Plan Description

The Teachers' Pre-1996 Account (TRF Pre-'96) is a pay-as-you-go cost-sharing, multiple-employer defined benefit plan established to provide retirement, disability, and survivor benefits. Membership consists of public school teachers and administrators, regularly employed licensed teachers at certain State universities and other educational institutions, and certain INPRS employees hired before July 1, 1995, and who have maintained continuous employment with the same school corporation or covered institution since that date to June 30, 2005. There are two aspects to the TRF Pre-' 96 defined benefit structure. The first portion is the monthly defined benefit pension that is funded by the State of Indiana. The second portion of the TRF Pre-' 96 benefit structure is the annuity savings account that supplements the defined benefit at retirement and was described in the PERF Hybrid Retirement Benefits - Annuity Savings Account section. Investment options are similar to PERF Hybrid.

Notes to the Financial Statements, continued
June 30, 2017

## Membership

Membership in TRF Pre-'96 is closed to new entrants. 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 employees hired before July 1, 2011, are required to participate in TRF as a condition of employment. Generally, members hired prior to 1996 participate in TRF Pre-'96 and members hired after 1996 participate in TRF '96 (IC 5-10.2-2-2; IC 5-10.4-4-1; IC 5-10.4-7-1; 35 IAC 14-4-16(a)).

As of June $30,2017^{2}$, the number of participating employers was 340 in addition to the State. The State of Indiana makes contributions as the sole nonemployer contributing entity. TRF Pre-'96 membership consisted of:

| Retired Members, Beneficiaries, and Disabled Members Receiving Benefits | 53,240 |
| :--- | ---: |
| Inactive Vested Members Entitled To But Not Yet Receiving Benefits | 2,504 |
| Inactive Non-Vested Members Entitled To a Distribution of ASA Balance | 400 |
| Active Members: Vested and Non-Vested | 13,128 |
| Total | 69,272 |

${ }^{2}$ Census data as of June 30, 2016 used for June 30, 2017 actuarial valuation.

## Contributions

State appropriations are made in accordance with IC 5-10.4-2-4 for each fiscal year. Currently, a three percent year-overyear increase is being provided through State appropriations. If the actual pension benefit payout for the fiscal year exceeds the amount appropriated, the difference is paid from the Pension Stabilization Fund as part of the assets of the TRF Pre-'96, which was established according to IC 5-10.4-2-5. As a nonemployer contributing entity, the State of Indiana contributed $\$ 871$ million in fiscal year 2017 to TRF Pre-'96. The actuarially determined contribution (ADC) for TRF Pre-'96 was $\$ 2,728$ million. In fiscal year 2016, the State pre-funded one-time checks (a.k.a.13th check) in accordance with 2016 HEA 1161 for $\$ 20.7$ million (which went into the Pension Stabilization Fund). Employers contributed $\$ 4.5$ million in fiscal year 2017.

TRF Pre-'96 members contribute three percent of covered payroll to their annuity savings account, which is not used to fund the defined benefit pension. The employer may elect to make the contributions on behalf of the member. In addition, members may elect to make additional voluntary contributions, under certain criteria, of up to 10 percent of their compensation into their annuity savings accounts.

## Teachers' 1996 Account

## Plan Description

The Teachers' 1996 Account (TRF '96) is a cost-sharing, multiple-employer defined benefit plan established to provide retirement, disability, and survivor benefits to public school teachers and administrators, regularly employed licensed teachers at certain State universities and other educational institutions, and certain INPRS employees (hired before July 1 , 2011) hired after June 30,1995 . Members who were hired before July 1,1995 , were members of TRF Pre-'96. However, under the law in place before July 1,2005 , if a member of TRF Pre-'96 left employment and re-employed after June 30,1995 , the member and the liability were transferred to TRF ' 96 . There are two aspects to the TRF ' 96 defined benefit structure. The first portion is the monthly defined benefit pension that is funded by the employer. The second portion of the TRF ' 96 benefit structure is the annuity savings account that supplements the defined benefit at retirement and was described in the PERF Hybrid Retirement Benefits - Annuity Savings Account section. Investment options are similar to PERF Hybrid.

Notes to the Financial Statements, continued
June 30, 2017

## Membership

Membership in TRF '96 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 employees. Additionally, faculty members and professional employees at Ball State University and Vincennes University have the option of selecting membership in the Fund or the alternate University Plan not administered by INPRS. Membership in TRF ' 96 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.

As of June $30,2017^{3}$, the number of participating employers was 367 in addition to the State, and TRF ' 96 membership consisted of:

| Retired Members, Beneficiaries, and Disabled Members Receiving Benefits | 5,796 |
| :--- | ---: |
| Inactive Vested Members Entitled To But Not Yet Receiving Benefits | 4,252 |
| Inactive Non-Vested Members Entitled To a Distribution of ASA Balance | 12,494 |
| Active Members: Vested and Non-Vested | 58,097 |
| Total | 80,639 |

${ }^{3}$ Census data as of June 30, 2016 used for June 30, 2017 actuarial valuation

## Contributions

The required contributions are determined by the INPRS Board of Trustees based on actuarial investigation and valuation in accordance with IC 5-10.2-2-11. The funding policy provides for periodic employer contributions at actuarially determined rates that, expressed as percentages of annual covered payroll, are sufficient to fund the pension benefits when they become due. As TRF ' 96 is a cost-sharing system, all risks and costs, including benefit costs, are shared proportionally by the participating employers. During the year ended June 30, 2017, all participating employers in TRF ' 96 were required to contribute 7.5 percent of covered payroll.

TRF '96 members contribute three percent of covered payroll to their annuity savings account, which is not used to fund the defined benefit pension. The employer may elect to make the contributions on behalf of the member. In addition, members may elect to make additional voluntary contributions, under certain criteria, of up to 10 percent of their compensation into their annuity savings accounts.

## TRF Pre-'96 and TRF '96 Retirement Benefits

The TRF retirement benefit consists of the sum of a defined pension benefit provided by employer contributions plus the amount credited to the member's annuity savings account as described earlier in this note above. Pension benefits (non ASA) vest after 10 years of creditable service. At retirement, a member may choose to receive a lump sum payment of the amount credited to the member's annuity savings account, receive the amount as an annuity provided through INPRS, or leave the contributions invested with INPRS. Vested TRF members terminating service with an employer, who wait 30 days after termination, may withdraw their annuity savings account and will not forfeit creditable service or a future retirement benefit. However, if a member is eligible for a full retirement at the time of the withdrawal request, he/she will have to begin drawing his/her pension benefit to withdraw the annuity savings account. A non-vested member who terminates employment before retirement may withdraw his/her annuity savings account after 30 days, but by doing so forfeit his/her creditable service. A member who returns to covered service and works no less than six months in a covered position may reclaim his/her forfeited creditable service.

Notes to the Financial Statements, continued
June 30, 2017
A member who has reached age 65 and has at least 10 years of creditable service is eligible for normal retirement and, as such, is entitled to 100 percent of the pension benefit component. This annual pension benefit is equal to 1.1 percent times the average annual compensation times the number of years of creditable service. Generally, the average annual compensation in this calculation is the average of the highest five years of annual compensation in a covered position. For TRF members who take a leave of absence to serve as an elected official, the highest one year of salary is used. For a salary year to be included as one of the five years, the member must have received at least one-half year of service credit for that year as stated in IC 5-10.4-4-2. The five years do not have to be continuous. Member contributions paid by the employer on behalf of the member and severance pay up to $\$ 2,000$ are included as part of the member's salary.

A member who has reached age 60 and has at least 15 years of creditable service is eligible for normal retirement and, as such, is entitled to 100 percent of the pension benefit. A member who is at least 55 years old and whose age plus number of years of creditable service is at least 85 is entitled to 100 percent of the benefits as described above.

A member who has reached at least age 50 and has at least 15 years of creditable service is eligible for early retirement with a reduced pension. A member retiring early receives a percentage of the normal annual pension benefit. The percentage of the pension benefit at retirement remains the same for the member's lifetime. For age 59 , the early retirement percentage of the normal annual pension benefit is 89 percent. This amount is reduced five percentage points per year (e.g., age 58 is 84 percent) to age 50 being 44 percent.

Monthly pension benefits for members in pay status may be increased as COLA. Such increases are not guaranteed by statute, have historically been provided on an "ad hoc" basis and can only be granted by the Indiana General Assembly. There was no COLA for the year ended June 30, 2017; however, eligible members did receive a one-time check (a.k.a. 13th check) in September 2016. The amount of the one-time check ranged from $\$ 150$ to $\$ 450$, depending upon a member's years of service, and was for a member who retired or was disabled on or before December 1, 2015, and who was entitled to receive a monthly benefit on July $1,2016$.

## TRF Pre-'96 and TRF '96 Disability and Survivor Benefits

TRF also provides disability and survivor benefits. A member who has at least five years of creditable service and becomes disabled while in active service, on FMLA leave, receiving workers' compensation benefits, or receiving employer-provided disability insurance benefits, may retire for the duration of the disability if the member has qualified for social security disability benefits and has furnished proof of the qualification. The disability benefit is calculated the same as that for a normal retirement without reduction for early retirement.

Members are eligible for a classroom disability benefit once they have earned five years of service, have a temporary or permanent disability that continues for six months or more, and applies for classroom disability benefits within one year of the disability. Classroom disability refers to a medically confirmed inability to continue classroom teaching due to a mental or physical condition that is not necessarily of sufficient severity to meet social security disability guidelines. The eligible members may receive $\$ 125$ per month plus $\$ 5$ for each additional year of service credit over five years.

Upon the death in service of a member with 15 or more years of creditable service, a survivor benefit may be paid to the surviving spouse to whom the member had been married for two or more years, or surviving dependent children under the age of 18 . This payment is equal to the benefit which would have been payable to a beneficiary if the member had retired at age 50 or at death, whichever is later, under an effective election of the joint and survivor option available for retirement benefits. A surviving spouse or surviving dependent children are also entitled to a survivor benefit upon the death in service

Notes to the Financial Statements, continued
June 30, 2017
after March 31, 1990, of a member who was at least 65 years of age and had at least 10 but not more than 14 years of creditable service.

## (C) 1977 Police Officers' and Firefighters' Retirement Fund

## Plan Description

The 1977 Police Officers' and Firefighters' Retirement Fund ('77 Fund) is a cost-sharing, multiple-employer defined benefit plan established to provide retirement, disability, and survivor benefits to all full-time police officers and firefighters hired (or rehired) after April 30, 1977. The '77 Fund was established in 1977 and is governed by the INPRS Board of Trustees in accordance with IC 36-8-8 to provide coverage to full-time sworn officers of a police force of an Indiana city or town and fulltime firefighters employed by an Indiana city, town, township or county.

## Membership

As of June 30, 20174, the number of participating employers totaled 167, and the '77 Fund membership consisted of:

| Retired Members, Beneficiaries, and Disabled Members Receiving Benefits | 4,374 |
| :--- | ---: |
| Inactive Vested Members Entitled To But Not Yet Receiving Benefits | 195 |
| Inactive Non-Vested Members Entitled To a Distribution of ASA Balance | 1,005 |
| Active Members: Vested and Non-Vested | 13,587 |
| Total | 19,161 |

${ }^{4}$ Census data as of June 30, 2016 used for June 30, 2017 actuarial valuation.

## Contributions

The funding policy for the ' 77 Fund requires remittances of member and employer contributions based on percentages of the salary of a first class officer or firefighter rather than actual payroll. The employer contribution rate is actuarially determined. The required contributions are approved by the INPRS Board of Trustees based on actuarial investigation and valuation in accordance with IC 36-8-8-6. As the '77 Fund is a cost-sharing system, all risks and costs, including benefit costs, are shared proportionally by the participating employers. During the year ended June 30, 2017, all participating employers were required to contribute 19.7 percent of the salary of a first class officer or firefighter, and the rate was reduced to 17.5 percent effective January 1, 2017.

The member contribution rate is established by statute IC 36-8-8-8 at six percent of the salary of a first class officer or firefighter. Each fund member shall contribute during the period of the fund member's employment or for 32 years, whichever is shorter. The employer may pay all or a part of the contribution for the member. Member contributions are used to fund a portion of the defined benefit payment unless the member ends employment other than by death or disability before the fund member completes 20 years of active service. The accumulated value of the member's contribution, including interest at a rate set by the Board, may be withdrawn if the member terminates employment before completing 20 years of service. The INPRS Board of Trustees shall return to the fund member in a lump sum the fund member's contributions plus interest as determined by the INPRS Board of Trustees in accordance with IC 36-8-8-8.

## Retirement Benefits

A member vests after 20 years of service. If the member retires at or after the age of 52 with 20 years of service, the benefit is equal to 50 percent of the salary of a first class officer, as reported by the employer in the year the ' 77 Fund member ended service plus one percent of that salary for each six months of active service over 20 years to a maximum of 12 years. At

Notes to the Financial Statements, continued
June 30, 2017
age 50 and with 20 years of service, a member may elect to receive a reduced benefit by a factor established by the fund's actuary (IC 36-8-8-11). Currently, benefits are reduced seven percent per year from age 52 to 50 .

The monthly pension benefits for members in pay status may be increased annually in accordance with the cost of living adjustment (COLA) statute (IC 36-8-8-15). A member is entitled to an annual increase in the member's benefit based on the percentage increase in the Consumer Price Index (January-March); however, the maximum increase is 3.0 percent. The COLA increase effective July 1, 2016, was 1.1 percent.

## Disability and Survivor Benefits

The '77 Fund also provides disability and survivor benefits. An active member may apply for disability benefits. A determination is then made by the local pension board, and reviewed by the INPRS Board of Trustees, as to whether the member has a covered impairment and whether the impairment was incurred in the line of duty or not. The calculation for disability benefits is based on when the member was first hired, the type of impairment and other factors. In addition, the heirs or estate of a fund member may be entitled to receive $\$ 12,000$ upon the member's death.

If a member dies while receiving retirement or disability benefits, there are provisions for the surviving spouse and child(ren) to receive a portion of the benefits. The member's surviving spouse is entitled to a monthly benefit equal to 60 percent of the member's monthly benefit during the spouse's lifetime. Each of the member's surviving child(ren) is entitled to a monthly benefit equal to 20 percent of the member's monthly benefit until the age of 18 , or age 23 , if a full-time student. If there is no eligible surviving spouse or child(ren), a dependent parent(s) may receive 50 percent of the member's monthly benefit during their lifetime.

## Deferred Retirement Option Plan

The Deferred Retirement Option Plan (DROP) for the '77 Fund was established by the Indiana Legislature in 2002 and is governed by the INPRS Board of Trustees in accordance with Indiana Code (IC) 36-8-8.5. Members of the ' 77 Fund that are eligible to retire may elect to accumulate a DROP benefit while continuing to work. At the time of their election, the member executes an irrevocable election to retire on a DROP retirement date and remains in active service 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 not after the date they reach any mandatory retirement age that may apply. The member may make an election to enter the DROP only once in their lifetime. The DROP and future retirement monthly benefit are calculated as of the member's DROP entry date. At the time of retirement, the member must choose among the available options for distribution of the accumulated benefit under the DROP. As of June 30, 2017, the amount held by the plan under the DROP is $\$ 79.9$ million.

## (D) Judges' Retirement System

## Plan Description

The Judges' Retirement System (JRS) is a single-employer (the State of Indiana) defined benefit plan established to provide retirement, disability, and survivor benefits to judges and magistrates. JRS was established in 1985 and is governed through the INPRS Board of Trustees by IC 33-38-6, IC 33-38-7 (judges beginning service before September 1, 1985) and IC 33-38-8 (judges beginning service after August 31, 1985). Coverage is for any person who has served, is 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.

Notes to the Financial Statements, continued
June 30, 2017


#### Abstract

Membership The Judges' Retirement System consists of two classes of members (the 1977 Fund and the 1985 Fund). The 1977 Fund includes all individuals who began service as a judge before September 1, 1985, unless the individual, within twenty days after becoming a judge, filed an irrevocable election not to participate in the 1977 Fund. The 1985 Fund covers all individuals who: (1) began service as a judge after August 31,1985 ; and (2) are not participants in the 1977 Fund. Beginning January 1, 2011, full-time magistrates who were serving on July 1, 2010, may elect to be members of the 1985 Fund. The 1985 Fund is for all new judges, and beginning January 1, 2011, all new full-time magistrates (IC 33-38-8-10).


As of June 30, 20175, the Judges' Retirement System membership consisted of:

| Retired Members, Beneficiaries, and Disabled Members Receiving Benefits | 350 |
| :--- | ---: |
| Inactive Vested Members Entitled To But Not Yet Receiving Benefits | 67 |
| Inactive Non-Vested Members Entitled To a Distribution of ASA Balance | 39 |
| Active Members: Vested and Non-Vested | 402 |
| Total | 858 |

${ }^{5}$ Census data as of June 30, 2016 used for June 30, 2017 actuarial valuation.

## Contributions

The funding policy for the Judges' Retirement System is in accordance with statute IC 33-38-6-17 that requires an appropriation by the Indiana General Assembly, determined by the INPRS Board of Trustees from the State of Indiana General Fund, for each biennium to the Judges' Retirement System computed on an actuarially funded basis and the recommendation of the actuary. The statute also provides for remittance of docket fees and court fees which are considered employer contributions. For the year ended June 30, 2017, the State of Indiana paid $\$ 16.8$ million in employer contributions. The actuarially determined contribution (ADC) for JRS was $\$ 13.3$ million.

The member contribution rate is established by statute IC 33-38-7-10 (1977 System) and IC 33-38-8-11 (1985 Fund) at six percent of salary. Each fund member shall contribute during the period of the fund member's employment, or for 22 years, whichever is shorter. The employer may pay all or a part of the contributions for the member. Member contributions are used to fund a portion of the defined benefit payment unless the member ends employment other than by death or disability before being eligible for a retirement benefit. The INPRS Board of Trustees shall return to the fund member an amount equal to the total sum contributed to the fund plus interest at a rate specified by the INPRS Board of Trustees in accordance with IC 33-38-7-13 (1977 Fund) and IC 33-38-8-12 (1985 Fund).

## Retirement Benefits

A member vests after eight years of creditable service. Judges who retire at or after age 65 with eight years of creditable service (or are at least 55 years of age and the participant's age in years plus the participant's years of service total 85 or more) are entitled to an annual retirement benefit, payable monthly for life, in an amount calculated in accordance with the statute.

The annual retirement benefit for a participant equals the product of the salary that was paid to the participant at the time of separation from service, multiplied by a percentage for years of service as defined in the statute. The salary for participants in the Judges' 1985 Fund is defined in IC 33-38-8-14(e). The pension benefit for participants of the Judges' 1977 Fund is based on the salary being paid for the office that the participant held at the time of separation from service [IC 33-38-711(d)]. The statute provides for the percentage to be prorated for partial years of service. If the annual retirement benefit

Notes to the Financial Statements, continued
June 30, 2017
of a participant who began service as a judge before July 1, 1977, as computed per IC 33-38-7-11, is less than the benefit the participant would have received under IC 33-38-6 as in effect on June 30, 1977, the participant is entitled to receive the greater amount as the participant's annual retirement benefit.

A member may retire at age 62 with the requisite years of service; however, the participant's benefit is reduced by 0.1 percent for each month the member's age on the date the participant begins receiving a retirement benefit precedes the participant's 65th birthday.

The monthly pension benefits of the retired judges that were former participants in the 1977 Fund receive benefit increases whenever the salary of the position the retiree held at separation from service increases. Before fiscal year 2011, benefits of judges who are members of the 1985 Fund were tied to the salary of the position at the time the participant separated from service and did not increase if the salary of the position increased after the participant separated from service. Before fiscal year 2011, the General Assembly provided COLA increases to participants in the 1985 Fund on an "ad hoc" basis. Beginning after June 30, 2010, a participant in the 1985 Fund receives an increase in the monthly benefit of the same percentage by which the salary of the office of the participant held at separation from service increases. The percentage increase to the monthly benefit takes effect at the same time the salary increase takes effect (IC 33-38-8-25). There was a COLA increase of 3.1 percent effective July 1, 2016, for eligible participants in the 1977 Fund and 1985 Fund.

## Disability and Survivor Benefits

There is no vesting requirement for permanent disability benefits. For both the 1977 Fund and the 1985 Fund, a participant is considered permanently disabled if the INPRS Board of Trustees receives a written certification by at least two licensed and practicing physicians appointed by the INPRS Board of Trustees. A participant receiving disability benefits must be reexamined at least once a year by at least two physicians appointed by the INPRS Board of Trustees.

Surviving spouses or dependent child(ren) are entitled to benefits if the participant had qualified to receive a retirement or disability benefit, or had completed at least eight years of service and was in service as a judge. The minimum survivor benefit is $\$ 12,000$.

## (E) Excise, Gaming and Conservation Officers' Retirement Fund

## Plan Description

The State Excise, Gaming and Conservation Officers' Retirement Fund (EG\&C) is a single-employer (the State of Indiana) defined benefit plan established to provide retirement, disability, and survivor benefits to certain employees of the (1) 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. EG\&C was established in 1972 and is governed by the INPRS Board of Trustees in accordance with IC 5-10-5.5.

Notes to the Financial Statements, continued
June 30, 2017

## Membership

As of June 30, 2017 ${ }^{6}$, EG\&C membership consisted of:

| Retired Members, Beneficiaries, and Disabled Members Receiving Benefits | 223 |
| :--- | ---: |
| Inactive Vested Members Entitled To But Not Yet Receiving Benefits | 6 |
| Inactive Non-Vested Members Entitled To a Distribution of ASA Balance | 120 |
| Active Members: Vested and Non-Vested | 440 |
| Total | 789 |

${ }^{6}$ Census data as of June 30, 2016 used for June 30, 2017 actuarial valuation.

## Contributions

The funding policy for EG\&C is in accordance with statute IC 5-10-5.5-8.5. The employer contribution rate is actuarially determined. The required contributions are approved by the INPRS Board of Trustees based on actuarial investigation and valuation. During the year ended June 30, 2017, the State of Indiana was required to contribute 20.75 percent of covered payroll.

The member contribution rate is established by statute IC 5-10-5.5-8 at four percent of a participant's salary to be contributed to the participant's savings account. The employer may pay all or a part of the contribution for the participant. Member contributions are used to fund a portion of the defined benefit payment. Any participant who terminates employment before accumulating 15 years of creditable service and before attaining the age of 45 shall be entitled to a lump sum refund of all contributions in the participant's savings account plus accumulated interest as determined by the INPRS Board of Trustees in accordance with IC 5-10-5.5-17.

## Retirement Benefits

Generally, pension benefits vest after 15 years of creditable service. Officers becoming participants after age 50 are vested after completion of 10 years of service. A participant is entitled to an annual pension benefit, paid in equal monthly installments beginning on the participant's normal retirement date, equal to 25 percent of the participant's average annual salary. A participant who completes more than 10 years of creditable service is entitled to receive an additional amount equal to 1.67 percent of the participant's average annual salary for each completed year of creditable service over 10 years. However, a participant's annual pension benefit may not exceed 75 percent of the participant's average annual salary.

Each participant is required to retire on or before the first day of the month following the participant's 65th birthday. However, a participant who is hired after age 50 must retire upon the earlier of: (1) the first day of the month following the participant's 65th birthday; or (2) the first day of the month following the date the participant completes 15 years of creditable service. A participant, who is at least 55 years of age and the sum of the participant's years of creditable service and age in years, equals at least 85 , may retire and become eligible for full retirement benefits. In addition, a participant may elect full retirement benefits at age 50 with 25 years of service. A reduced benefit is provided for early retirements that are elected upon attainment of age 45 with at least 15 years of creditable service. The monthly benefit is reduced by 0.25 percent for each full month by which the participant's early retirement date precedes the participant's 60th birthday.

Any participant who terminates service before accumulating 15 years of creditable service may become a member of the Public Employees' Retirement Fund (PERF). Upon payment of contributions and interest required by the INPRS Board of Trustees, the withdrawing participant shall be entitled to transfer creditable service to PERF.

Notes to the Financial Statements, continued
June 30, 2017
The monthly pension benefits for members in pay status may be increased periodically as COLA. Such increases are not guaranteed by statute and have historically been provided on an "ad hoc" basis and can only be granted by the Indiana General Assembly. There was no COLA for the year ended June 30, 2017; however, eligible members did receive a one-time check (a.k.a. 13th check) in September 2016. The amount of the one-time check ranged from $\$ 125$ to $\$ 400$, depending upon a member's years of service, and was for a member who retired or was disabled on or before December 1, 2015, and who was entitled to receive a monthly benefit on July 1, 2016.

## Disability and Survivor Benefits

A participant who becomes permanently or temporarily disabled from performing all suitable and available work "on the force" for which the participant is or may be capable of becoming qualified, considering reasonable accommodation to the extent required by the Americans and Disability Act, is entitled to receive a disability benefit. The amount of the disability benefit paid to a participant depends on whether the disability arose in the line of duty, the degree of impairment as determined by INPRS Board of Trustees' medical authority, and the participant's monthly salary. A participant is entitled to receive creditable service for the time the participant receives disability benefits under a State disability plan established under IC 5-10-8-7.

If a participant has more than 15 years of creditable service at the time of death, survivor benefits are payable to the surviving spouse, parents, or dependent children, as nominated by the participant's written direction, acknowledged, and filed with the INPRS Board of Trustees. The surviving spouse or the parent(s) is entitled to an annual survivor's allowance for life equal to 50 percent of the amount the participant would have been entitled to if he/she had retired on the date of death. If nominated and eligible, surviving unmarried minor child(ren) are entitled to an annual survivor's allowance equal to 50 percent of the amount the participant would have been entitled to if he/she had retired, divided equally between or among all nominated and eligible children. This benefit will continue until the child reaches 18 years of age or marries, whichever occurs first.

## Deferred Retirement Option Plan

The DROP for EG\&C was established by the Indiana Legislature in 2008 and is governed by the INPRS Board of Trustees in accordance with Indiana Code (IC) 5-10-5.5-22. Members of EG\&C that are eligible to retire at an unreduced annual retirement allowance may elect to accumulate a DROP benefit while continuing to work. At the time of their election, the member executes an irrevocable election to retire on a DROP retirement date and remains in active service contributing to the plan 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 not after the date they reach any mandatory retirement age that may apply. The member may make an election to enter the DROP only once in their lifetime. The DROP and future retirement monthly benefit are calculated as of the member's DROP entry date. At the time of retirement, the member must choose among the available options for distribution of the accumulated benefit under the DROP. As of June 30,2017 , the amount held by the plan under the DROP is $\$ 1.8$ million.

## (F) Prosecuting Attorneys' Retirement Fund

## Plan Description

The Prosecuting Attorneys' Retirement Fund (PARF) is a single-employer (the State of Indiana) defined benefit plan established to provide retirement, disability, and survivor benefits to prosecuting attorneys. PARF was established in 1989 and is governed through the INPRS Board of Trustees by IC 33-39-7. Coverage is for individuals who: (1) serve as a prosecuting attorney or a chief deputy prosecuting attorney; or (2) serve as the executive director or assistant executive director of the Indiana Prosecuting Attorneys Council or as a State-paid deputy prosecuting attorney. These individuals' salaries are paid from the General Fund of the State of Indiana.

Notes to the Financial Statements, continued
June 30, 2017

## Membership

As of June 30, 20177, the PARF membership consisted of:

| Retired Members, Beneficiaries, and Disabled Members Receiving Benefits | 138 |
| :--- | ---: |
| Inactive Vested Members Entitled To But Not Yet Receiving Benefits | 87 |
| Inactive Non-Vested Members Entitled To a Distribution of ASA Balance | 138 |
| Active Members: Vested and Non-Vested | 209 |
| Total | 572 |

${ }^{7}$ Census data as of June 30, 2016 used for June 30, 2017 actuarial valuation.

## Contributions

The funding policy for PARF is in accordance with statute IC 33-39-7-23 that requires an appropriation, determined by the INPRS Board of Trustees from the State of Indiana General Fund, for each biennium to PARF computed on an actuarially funded basis and the recommendation of the actuary. For the year ended June 30, 2017, the State of Indiana appropriated $\$ 1.5$ million for employer contributions. The actuarially determined contribution (ADC) for PARF was $\$ 2.2$ million.

The member contribution rate is established by statute IC 33-39-7-12 at six percent of salary for their first 22 years of service. The employer may elect to pay the contributions for a member. Members receive interest earnings at a rate specified by the INPRS Board of Trustees in accordance with IC 33-39-7-14. Member contributions are used to fund a portion of the defined benefit payment unless the member ends employment other than by death or disability before the member completes eight years of creditable service. The INPRS Board of Trustees shall return to the fund member an amount equal to the total sum contributed to the fund plus interest as determined by the INPRS Board of Trustees in accordance with IC 33-39-7-13.

## Retirement Benefits

A participant is entitled to a retirement benefit if the participant: (1) is at least age 62 and has at least eight years of service credit; (2) is at least age 55 and whose years of service as a member of PARF plus years of age equal at least 85 ; and (3) is not receiving salary for services currently performed. A member whose service ended before July 1, 2006 must have at least 10 years of service. The retirement benefit of a participant who is at least age 65 (or are at least 55 years of age and the participant's age in years plus the participant's years of service total 85 or more) is calculated by multiplying: (1) the highest annual salary paid to the participant before the participant's separation from service; by (2) a percentage based on the participant's years of service. The percentages range from 24 percent for eight years of service to 60 percent for 22 or more years of service. If a participant is at least 62 years of age with at least eight years of creditable service, a participant is entitled to receive a reduced annual retirement benefit that equals the benefit, as calculated above, reduced by 0.25 percent per month for each month the participant retires before age 65.

In addition, a PARF participant is a member of PERF. A PARF participant's retirement benefit is reduced by the amount of the employer-financed pension benefit that would be payable to the participant had the participant retired from PERF on the date of the participant's retirement from the fund. However, the benefits payable to a participant from the fund are not reduced by any payments made to the participant from the participant's PERF annuity savings account. The employer may elect to make the contributions on behalf of the member.

Notes to the Financial Statements, continued
June 30, 2017

## Disability and Survivor Benefits

PARF also provides disability and survivor benefits. A participant who has at least five years of creditable service and becomes disabled while in active service may retire for the duration of the disability if the participant has qualified for social security disability benefits and has furnished proof of the qualification. The amount of the annual benefit payable to a participant for disability benefits is equal to the product of the annual salary that was paid to the participant at the time of separation from service multiplied by a percentage based on the participant's years of service. The percentages range from 40 percent for 5 to 10 years of service to 50 percent for 20 or more years of service. These benefits are reduced by any benefits payable to the participant from PERF.

The surviving spouse or designated beneficiary of a participant is entitled to a benefit if, on the date of the participant's death, the participant: (1) was receiving benefits; (2) has completed at least eight years of service and was in service as a prosecuting attorney or chief deputy prosecuting attorney, executive director or assistant executive director of the Indiana Prosecuting Attorneys Council, or as a State-paid deputy prosecuting attorney; or (3) had met the requirements for a disability benefit.

Regardless of the participant's age at death, the surviving spouse's benefit is equal to the greater of: (1) $\$ 7,000$ annually; or (2) 50 percent of the amount of retirement benefit the participant was drawing at the time of death, or to which the participant would have been entitled had the participant retired and begun receiving retirement benefits on the date of death. Survivor benefits are not subject to reduction for early retirement. If there is not a surviving spouse, there are provisions for dependents to receive benefits.

## (G) Legislators' Retirement System

## Plan Description

The Legislators' Retirement System was established in 1989 by IC 2-3.5 and accordingly is governed by the INPRS Board of Trustees. The retirement system is for certain members of the General Assembly of the State of Indiana as specified by the provisions of the statute.

The Legislators' Retirement System is comprised of two separate and distinct plans. The Legislators' Defined Benefit Fund (LE DB) (IC 2-3.5-4), a single-employer (the State of Indiana) defined benefit plan, applies to members of the General Assembly who were serving on April 30, 1989, and who filed an election under IC 2-3.5-3-1(b). The Legislators' Defined Contribution Fund (LE DC) (IC 2-3.5-5) applies to: (1) members of the General Assembly who were serving on April 30, 1989, and who filed an election under IC 2-3.5-3-1(b); (2) members of the General Assembly who are first elected or appointed after April 30, 1989; and (3) members of the General Assembly who: (a) served before April 30, 1989; (b) were not serving on April 20, 1989; and (c) are subsequently reelected or reappointed to the General Assembly.

Notes to the Financial Statements, continued
June 30, 2017

## Membership

As of June 30, 2017, the Legislators' Retirement System membership consisted of:

|  | Defined Benefit Plan ${ }^{8}$ | Defined Contribution Plan |
| :---: | :---: | :---: |
| Retired Members, Beneficiaries, and Disabled Members Receiving Benefits | 72 |  |
| Inactive Vested Members Entitled To But Not Yet Receiving Benefits | 12 | - |
| Inactive Non-Vested Members Entitled To a Distribution of ASA Balance | - | 72 |
| Active Members: Vested and Non-Vested | 11 | 150 |
| Total | 95 | 222 |

${ }^{8}$ Census data as of June 30, 2016 used for June 30, 2017 actuarial valuation.

A member of LE DB under certain circumstances, may also be a member of LE DC.

## Legislators' Defined Benefit Fund

The LE DB Plan provides retirement, disability and survivor benefits. The LE DB Plan is closed to new entrants, as members of the General Assembly who began service after April 30, 1989, are not members of this plan.

## Contributions

For LE DB, the funding policy is in accordance with statute IC 2-3.5-4-9 and IC 2-3.5-4-10. The amount required to actuarially fund participants' retirement benefits, as determined by the INPRS Board of Trustees on the recommendation of the actuary, is to be appropriated from the State of Indiana General Fund for each biennium. For the year ended June 30, 2017, the State of Indiana appropriated $\$ 0.1$ million for employer contributions. The actuarially determined contribution (ADC) for LE DB was $\$ 0.2$ million.

## Retirement Benefits

A participant is entitled to an unreduced monthly retirement benefit if the participant is: (1) at least age 65 and has at least 10 years of service as a member of the General Assembly; (2) at least age 55 and whose years of service as a member of the General Assembly plus years of age equal at least 85 ; or (3) at least age 60 and has at least 15 years of service as a member of the General Assembly. To qualify for a monthly retirement benefit, the member: (1) must have terminated service as a member of the General Assembly; (2) has at least 10 years of service as a member of the General Assembly; and (3) is not receiving and is not entitled to receive a salary from the State.

The monthly retirement benefit is equal to the lesser of: (1) $\$ 40$ multiplied by the number of years of service in the General Assembly completed before November 8,1989 , or (2) the highest consecutive three-year average annual salary of the participant under IC 2-3-1-1 at the date the participant's service as a member of the General Assembly is terminated, divided by 12.

A participant who has reached at least age 55, has terminated service as a member of the General Assembly, has at least 10 years of service as a member of the General Assembly, and is not receiving, nor is entitled to receive, a salary from the State of Indiana, is eligible for early retirement with a reduced benefit. The reduction in the benefit is equal to: (1) 0.1 percent per month between ages 60 and 65 ; and (2) $5 / 12$ percent per month between ages 55 and 60 .

Notes to the Financial Statements, continued
June 30, 2017
The monthly pension benefits for members in pay status are increased periodically as a COLA. COLA increases for LE DB are equal to the increase for the PERF Plan in accordance with IC 2-3.5-4-13 on an "ad hoc" basis and are generally based on the date of retirement, and other eligibility factors. There was no COLA for the year ended June 30, 2017.

LE DB also provides disability and survivor benefits. A member who has at least five years of creditable service and becomes disabled while in active service may retire for the duration of the disability if the member has qualified for social security disability and has furnished proof of the qualification. The disability benefit is calculated the same as that for a normal retirement without reduction for early retirement. If a participant dies while receiving retirement benefits, or had completed at least 10 years of service as a member of the General Assembly, or was permanently disabled and receiving disability benefits from the system, the surviving spouse is entitled to receive survivor benefits. The benefits are for life and are equal to 50 percent of the amount of retirement benefits that the participant was receiving at the time of death or that the participant would have been entitled to receive at 55 years of age, or at the date of death, whichever is later. If there is not a surviving spouse, there are provisions for dependents to receive benefits.

## Legislators' Defined Contribution Fund

For LE DC, each participant is required to contribute five percent of annual salary in accordance with statute IC 2-3.5-5-4. In addition, the State of Indiana is required by statute IC 2-3.5-5-5.5 to contribute a percentage of the member's annual salary on behalf of the participant as determined by INPRS Board of Trustees and confirmed by the State Budget Agency each year. This rate, by statute, cannot exceed the total contribution rate paid that year by the State to PERF for State employees. The State contribution rate is the sum of: (1) the State's employer contribution rate for State employees, and (2) the rate the State pays on behalf of State employees to their annuity savings accounts ( 3.0 percent). The contribution rate for the calendar year 2016 was 14.2 percent and the rate for the calendar year 2017 is 14.2 percent.

Investments in the members' accounts are self-directed as participants direct the investment of their account balances among several investment options of varying degrees of risk and return potential. There are nine investment options available to LE DC members: Consolidated Defined Benefit Assets, Stable Value Fund, Fixed Income Fund, Inflation-Linked Fixed Income Fund, Money Market Fund, Small/Mid Cap Equity Fund, Large Cap Equity Index Fund, International Equity Fund and Target Date Funds. Members may make changes to their investment directions daily, and investments of the plan are reported at fair value.

A participant of LE DC who terminates service as a member of the General Assembly is entitled to withdraw both the employee and employer contributions to LE DC. The amount available for withdrawal is the fair value of the participant's account on the processing date. Account balances are fully vested to the participants. The withdrawn amount can be paid in a lump sum, a partial lump sum, a monthly annuity, or a series of monthly installment payments over 60,120 , or 180 months as elected by the participant.

If a participant dies while a member of the General Assembly or after terminating service as a member, but prior to withdrawing from LE DC, the participant's account is to be paid to the beneficiary(ies) or the survivor(s) if there is no properly designated beneficiary, or if no beneficiary survives the participant. The amount to be paid is the fair value of the participant's account (employer and employee contributions) on the processing date.

## (H) Non-Retirement Plans

## State Employees' Death Benefit Fund

Indiana Code 5-10-11 established the State Employees' Death Benefit (SE) program, which is an Other Postemployment Benefit plan (OPEB). Under the program as of July 1, 2013, a death benefit of $\$ 100,000$ is to be paid in a lump sum to the

Notes to the Financial Statements, continued
June 30, 2017
surviving spouse, or if there is no surviving spouse, to the surviving child(ren) and stepchildren (to be shared equally) of a State of Indiana employee who dies in the line of duty as defined in the statute. The children and stepchildren must also be dependent on the State employee who died in the line of duty.

The law provides that "the State may provide these benefits by purchasing group life insurance or by establishing a program of self-insurance." It was determined that a program of self-insurance would be established, and effective with the State's pay period ended October 23, 1993, the State assessed State agencies 0.1 percent of gross pay to fund this program. Due to the size of the fund and the infrequency of payments, collection of the assessment ended in November 1999. 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.

## Public Safety Officers' Special Death Benefit Fund

Indiana Code 5-10-10 established the Public Safety Officers' Special Death Benefit Fund (PSO), which is an Other Postemployment Benefit plan (OPEB). The fund was established to pay a lump sum death benefit of $\$ 150,000$ to the surviving spouse or child(ren) of a public safety officer (as defined by IC 5-10-10-4) or other eligible officers (as defined by IC 5-10-10-4.5) who die in the line of duty. If there is no surviving spouse or child(ren), the benefit is paid to the parent(s) in equal shares. The fund consists of bail bond fees remitted under IC 35-33-8-3.2, payments under IC 5-10-10-4.5, and investment earnings of the fund. 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.

## Local Public Safety Pension Relief Fund

The Local Public Safety Pension Relief Fund (LPSPR) was created by the Indiana General Assembly in 1980 (IC 5-10.311) and is an Agency fund. The purpose of LPSPR is to give financial relief to pension funds maintained by units of local government for their police officers' and firefighters' retirement plan benefits.

Funding for LPSPR 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. Effective January 1, 2009, the distribution is determined by an estimate of the total amount of pension, disability and survivors benefits from the 1925 Police Pension Fund (IC 36-8-6), the 1937 Firefighters' Pension Fund (IC 36-8-7), and the 1953 Police Pension Fund (IC 36-8-7.5). The estimate is prepared by the actuary on a city-by-city basis, and on a departmental basis.

As defined by IC 36-8-8-20, LPSPR also pays a lump sum line of duty death benefit of $\$ 150,000$. As defined by IC 36-8-814.1, the benefit is paid to the following relative(s) of a fund member who dies in the line of duty: (1) to the surviving spouse; (2) if there is no surviving spouse, to the surviving child(ren) (to be shared equally); (3) if there is no surviving spouse or child(ren), to the parent(s) in equal shares.

In accordance with IC 5-10.3-11-6, separate accounts are maintained for local government units. The amounts remain invested in the fund and are available for withdrawal at their request. As of June 30, 2017, the investments had a fair value of approximately $\$ 1.7$ million.

Notes to the Financial Statements, continued
June 30, 2017

## Note 2. Summary of Significant Accounting Policies

## (A) Reporting Entity

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

The financial statements presented in this report represent the funds for which the INPRS Board of Trustees has responsibility, and are not intended to present the financial position or results of operations for the State of Indiana or for the retirement and benefit plans administered by the State.

The INPRS Board of Trustees administers nine pension trust funds [eight defined benefit plans and one defined contribution plan], two death benefit funds accounted for as other postemployment benefit funds, and an agency fund. These fiduciary funds account for assets held by the government in a trustee capacity or as an agent on behalf of others.

The following funds are included in the financial statements:

- Public Employees' Retirement Fund (PERF)
- Teachers' Pre-1996 Account (TRF Pre-'96)
- Teachers' 1996 Account (TRF '96)
- 1977 Police Officers' and Firefighters' Retirement Fund ('77 Fund)

■ Judges' Retirement System (JRS)

- Excise, Gaming and Conservation Officers' Retirement Fund (EG\&C)
- Prosecuting Attorneys' Retirement Fund (PARF)
- Legislators' Defined Benefit Fund (LE DB)
- Legislators' Defined Contribution Fund (LE DC)
- State Employees' Death Benefit Fund (SE)
- Public Safety Officers' Special Death Benefit Fund (PSO)
- Local Public Safety Pension Relief Fund (LPSPR)

See Note 1 for descriptions of these funds.

## (B) Basis of Accounting

The financial statements of INPRS have been prepared using the accrual basis of accounting in conformity with generally accepted accounting principles (GAAP) as applied to governmental units. Under the accrual basis, revenues are recognized when earned, and expenses are recognized when liabilities are incurred, regardless of the timing of related cash flows. The Governmental Accounting Standards Board (GASB) is the accepted standards setting body for established governmental accounting and financial reporting principles. INPRS adopts all applicable GASB pronouncements in accounting and reporting for its operations.

## (C) Use of Estimates

In preparing the financial statements to conform to generally accepted accounting principles, INPRS makes estimates and assumptions. These estimates and assumptions affect the reported amounts of assets and liabilities and disclosures

Notes to the Financial Statements, continued
June 30, 2017
of contingent assets and liabilities at the date of the financial statements, as well as the reported amounts of revenue and expenses during the reporting period. Actual results could differ from estimates and assumptions.

## (D) Reclassifications

The financial statements include summarized comparative totals from the prior fiscal year, but do not include all comparative disclosures to constitute comparative financial reporting. There were no reclassifications made within the fiscal year 2016 financial statements to conform to the classifications for fiscal year 2017. Asset and liability descriptions in the Statement of Fiduciary Net Position were consolidated in fiscal year 2017 when compared to the prior year financial statements. Contribution and miscellaneous receivables were combined into a single description. In addition, accounts payable and salary and benefits payable were combined into administrative payable.

## (E) Contributions and Miscellaneous Receivables

Contributions receivables represent employer and member contributions due at and received after year-end, for wages paid before year-end, based upon employers' payroll date. The estimate for contributions receivable at year-end was calculated utilizing employer and member contributions from the last reported payroll period before year-end. If an employer subsequently elects to limit participation in their pension plan, an unfunded actuarial liability is calculated and recognized at that time.

Miscellaneous receivables include defined contribution member loans and service purchases contracts. Service purchase revenues are recognized in full when employers elect to participate in a fund or enlarge participation, or members elect to purchase additional service. Service purchase contracts allow for payment of the actuarially determined cost, with interest, over a specified period.

As of June 30, 2017, the miscellaneous receivables primarily represents an outstanding balance of $\$ 978$ thousand for a service purchase contract. The employer makes quarterly installment payments, including interest at 7.25 percent per year. This agreement was effective July 1, 2000, and is amortized over 40 years.

## (F) Deposit and Investment Policies and Provisions

The oversight of assets is the responsibility of the INPRS Board of Trustees. Indiana law requires 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. The INPRS Board of Trustees is required to diversify investments in accordance with the prudent investor standards.

At June 30, 2017, cash and investments of the funds were held by banks or trust companies under custodial agreements with INPRS. The INPRS Board of Trustees contracts with investment counsel, trust companies or banks to assist INPRS in its investment program. The Investment Policy Statement adopted by the INPRS Board of Trustees includes target asset allocations and allowable ranges that are expected to meet rates of return over a period, while minimizing risk. See Note 3 for more information.

On December 16, 2016, the Board approved a revision to the Investment Policy Statement incorporating a change to the asset allocation targets. In addition, the private equity asset class was renamed to private markets.

Investment purchases and sales of securities are recorded as of their trade date.

Notes to the Financial Statements, continued
June 30, 2017

## (G) Method Used to Value Investments

Investments are generally reported at fair value. Fair value is the price that would be received to sell an asset in an orderly transaction between market participants at the measurement date.

Short-term investments consist primarily of cash, money market funds, certificates of deposits and fixed income instruments with maturities of less than one year. Short-term investments are generally reported using cost-based measures, which approximates fair value.

Fixed income securities consist primarily of the U.S. government, U.S. government-sponsored agencies, publicly traded debt and commingled investment debt instruments. Equity securities consist primarily of domestic and international stocks in addition to commingled equity instruments. Fixed income and equity securities are generally valued based on published market prices and quotations from national security exchanges and security pricing services. Securities that are not traded on a national security exchange are valued using modeling techniques that include market observable inputs. Commingled funds are valued using the net asset value (NAV) of the entity.

Alternative investments include limited partnership interests in private market, absolute return, real estate and risk parity investment strategies. Publicly traded alternative investments are valued based on quoted market prices. In the absence of readily determinable public fair values, alternative 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. Valuation assumptions are based upon the nature of the investment and the underlying business. Additionally, valuation techniques will vary by investment type and involve a certain degree of expert judgment. Alternative investments, such as investments in private market or real estate, are generally considered to be illiquid long-term investments. Due to the inherent uncertainty that exists in the valuation of alternative investments, the realized value upon the sale of an asset may differ significantly from the fair value.

Derivative instruments are marked to market daily with changes in fair value recognized as part of investments and investment income.

Fully benefit-responsive synthetic guaranteed investment contracts are reported at contract value.

## (H) Pooled Investment Unit Trust Accounting

Pooled unit trust accounting involves assigning units to each fund based on the share of the fund's investment fair value to the total fair value of the consolidated investments. The per-unit net asset value of all participating funds will increase or (decrease) based on investment earnings or (losses) and appreciation or (depreciation). Deposits and withdrawals for each fund change the number of units held by each fund. These changes are recorded at the unit value on the transaction date. Investment earnings or losses and fees for the total consolidated fund are allocated to each of the pension funds on a daily basis.

In accordance with GAAP, the assets and liabilities for internal investment pools are allocated pro rata to each of the funds within the pool. This includes investments receivables, foreign exchange contracts receivables, interest and dividends receivables, securities lending collateral, investments payable, foreign exchange contracts payable, securities lending obligations, obligations under reverse repurchase agreement and the pooled investment holdings.

## Indiana Public Retirement System

Notes to the Financial Statements, continued
June 30, 2017
The INPRS Board of Trustees approved unitizing investment assets to provide for a consolidated rate of return and to invest in a diversified manner. The INPRS Board of Trustees unitized, into a consolidated pool, the defined benefit assets of the following retirement funds and pension systems known collectively as the Consolidated Defined Benefit Assets:

■ Public Employees' Retirement Fund (PERF)

- Teachers' Pre-1996 Account (TRF Pre-'96)
- Teachers' 1996 Account (TRF '96)
- 1977 Police Officers' and Firefighters' Retirement Fund ('77 Fund)

■ Judges' Retirement System (JRS)

- Excise, Gaming and Conservation Officers' Retirement Fund (EG\&C)
- Prosecuting Attorneys' Retirement Fund (PARF)

■ Legislators' Defined Benefit Fund (LE DB)

The INPRS Board of Trustees also unitized the annuity savings account (ASA) investment assets of PERF, TRF Pre-'96 and TRF '96 and the defined contribution assets of Legislators' Defined Contribution Fund (LE DC) into an asset pool.

The State Employees' Death Benefit Fund and the Public Safety Officers' Special Death Benefit Fund are pooled into the Death Benefit Unit Trust.

A summary of the pooled unit trust investments held by unitized value and fund is as follows:

| Trust Fund | Consolidated Defined Benefit Assets |  | Defined Contribution Assets ${ }^{1}$ |  | Death Benefit Funds |  | Pooled Unit Trust Investments |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PERF | \$ | 11,861,275 | \$ | 2,770,984 | \$ | - | \$ | 14,632,259 |
| TRF Pre-'96 |  | 3,571,826 |  | 1,242,820 |  | - |  | 4,814,646 |
| TRF '96 |  | 4,870,174 |  | 1,377,094 |  |  |  | 6,247,268 |
| '77 Fund |  | 5,398,557 |  | - |  | - |  | 5,398,557 |
| JRS |  | 475,002 |  | - |  | - |  | 475,002 |
| EG\&C |  | 119,989 |  | - |  | - |  | 119,989 |
| PARF |  | 55,586 |  | - |  | - |  | 55,586 |
| LE DB |  | 2,869 |  | - |  | - |  | 2,869 |
| LE DC ${ }^{1}$ |  | 9,232 |  | 21,124 |  | - |  | 30,356 |
| SE |  | - |  | - |  | 8,235 |  | 8,235 |
| PSO |  | - |  | - |  | 6,745 |  | 6,745 |
| Total Unitized Investments | \$ | 26,364,510 | \$ | 5,412,022 | \$ | 14,980 | \$ | 31,791,512 |

${ }^{1}$ The LE DC Plan allows members to invest in the Consolidated Defined Benefit Assets.

## Indiana Public Retirement System

Notes to the Financial Statements, continued
June 30, 2017

## (I) Investments and Foreign Exchange Contracts Receivables and Investments and Foreign Exchange Contracts Payable

Investments and foreign exchange contracts receivable in addition to investments and foreign exchange contracts payable consist primarily of receivables or payables for securities purchased or sold, but not settled as of June 30, 2017.

See Note 4 for additional information related to foreign exchange contract receivables and payables.

## (J) Capital Assets

Assets are capitalized if the expense is $\$ 50$ thousand or more. The cost of maintenance and repairs that add service capacity to the asset or materially extend the life of the asset are capitalized. Depreciation is calculated using the straight-line method over the estimated useful life of the asset.

Amortization of software is computed over five years when assets are placed in service. Costs for purchase and development of computer software meeting minimum cost and service life estimates are capitalized as incurred.

Buildings and related improvements are depreciated over their useful life or 20 years, whichever is less. Land is not treated as a depreciable asset.

Depreciation and amortization are recognized as administrative expenses when the asset is placed in service. Capital assets are disposed of when no longer in service.

In fiscal year 2017, the portion of the land and the building that is occupied by INPRS was recorded as a capital asset.

A summary of capital asset values compared to the prior fiscal year is as follows:
(dollars in thousands)

| Capital Assets | June 30, 2016 |  | Additions |  | Disposals |  | June 30, 2017 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Equipment | \$ | 87 | \$ | - | \$ | 22 | \$ | 65 |
| Software |  | 15,926 |  | 63 |  | - |  | 15,989 |
| Building and Related Improvements |  | 382 |  | 3,759 |  | - |  | 4,141 |
| Land |  | - |  | 856 |  | - |  | 856 |
| Total Capital Assets |  | 16,395 |  | 4,678 |  | 22 |  | 21,051 |
| Less Accumulated Depreciation / Amortization: |  |  |  |  |  |  |  |  |
| Equipment |  | 87 |  | - |  | 22 |  | 65 |
| Software |  | 12,853 |  | 1,932 |  | - |  | 14,785 |
| Building and Related Improvements |  | 38 |  | 39 |  | - |  | 77 |
| Total Accumulated Depreciation / Amortization |  | 12,978 |  | 1,971 |  | 22 |  | 14,927 |
| Total Net Capital Assets | \$ | 3,417 | \$ | 2,707 | \$ | - | \$ | 6,124 |

Notes to the Financial Statements, continued
June 30, 2017

## (K) Administrative Payable

The PERF plan pays the administrative and direct investment expenses of all the funds. A receivable is recognized for the PERF plan and a payable is recognized for the other funds in the amount due to the PERF plan for the other funds' share of expenses. The receivable and payable are routinely funded.

Full-time employees accumulate earned but unused vacation, sick pay, compensatory time, and personal time each pay period. Upon separation from service, employees in good standing will be paid for a maximum of 225 vacation hours. No liability is calculated for unpaid accumulated sick leave since it is not probable that sick leave will be paid.

## (L) Benefits and Distributions

Retirement benefits (pension, disability, special death benefits, and distribution of contributions) and interest are recognized when due and payable to members or beneficiaries. Retirement benefits are paid upon approval of the benefit application.

Distribution of contributions and interest are refunds from non-vested inactive members' annuity savings accounts (ASA). These distributions may be requested by members or are automatically distributed by the fund when certain criteria are met.

## (M) Due To/From Other Funds and Member Reassignments

Total due to/from other funds represent transfers between funds for retirements and payments of shared administrative expenses as part of the agency's operations. Interfund balances are routinely funded.

When statute allows, member reassignments result in the transfer of member and employer reserves between funds when a retiring member has service in multiple funds. Once the member selects the fund to retire from, the cost of creditable service and the annuity savings account (ASA) balance are transferred to the applicable fund.

## ( N ) Due to Other Governments

Represents funds payable to local police and fire departments. No additional loans are allowed and interest is payable monthly based on current money market rates.

## (0) Administrative and Direct Investment Expenses

An annual budget for the administrative and direct investment expenses of INPRS is reviewed and approved by the INPRS Board of Trustees. Expenses are paid from plan assets and investment earnings and are allocated to each of the funds based on the respective portion of total assets or member counts.

## (P) Federal Income Tax Status

The funds qualify under Section 401(a) of the Internal Revenue Code (IRC) and are exempt from federal income taxes under Section 501(a) of the IRC.

Notes to the Financial Statements, continued
June 30, 2017

## (Q) Reserves and Designations

The required reserves per IC 5-10.5-4-2 for the pension trust funds are as follows:

## Benefits in Force

The reserve represents the actuarially determined present value of future benefits for all members who are currently retired or disabled and survivors of the members who died in service. Also represents accumulated contributions of the PERF, TRF Pre-'96, and TRF '96 members who elect to annuitize their annuity savings accounts and the actuarial pension cost are transferred to the reserve upon retirement, disability, or death.

## Employer Reserve

This reserve consists of total contributions from employers and includes investment earnings / (losses), less transfers made to the Benefits in Force reserve for retirement benefits.

## Member Reserve

The member reserve represents total contributions made by or on behalf of the members and include investment earnings / (losses), net of amounts distributed or transferred to the Benefits in Force reserve. For the PERF, TRF Pre-'96 and TRF '96 plans, this reserve includes the members' annuity savings accounts.

The following are the balances of the reserves as of June 30, 2017:
(dollars in thousands)

| Pension Trust Funds | Benefit in Force |  | Employer Reserve |  | Member Reserve |  | Total Reserves |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PERF ${ }^{1}$ | \$ | 6,853,293 | \$ | 5,018,677 | \$ | 2,772,701 | \$ | 14,644,671 |
| TRF Pre-'96 ${ }^{2}$ |  | 3,575,400 |  | N/A |  | 1,242,230 |  | 4,817,630 |
| TRF '96 |  | 1,228,828 |  | 3,645,069 |  | 1,378,143 |  | 6,252,040 |
| '77 Fund |  | 1,436,263 |  | 3,106,068 |  | 858,848 |  | 5,401,179 |
| JRS |  | 224,925 |  | 213,730 |  | 36,400 |  | 475,055 |
| EG\&C |  | 61,190 |  | 49,089 |  | 9,737 |  | 120,016 |
| PARF |  | 35,352 |  | $(6,104)$ |  | 26,327 |  | 55,575 |
| LE DB |  | 2,850 |  | 15 |  | N/A |  | 2,865 |
| LE DC |  | N/A |  | N/A |  | 30,772 |  | 30,772 |

${ }^{1}$ The PERF member reserve includes $\$ 2,228$ thousand reserved for unvested employer contributions.
${ }^{2}$ The employer reserve for TRF Pre-'96 is a pay-as-you-go plan funded by the State through appropriations. The appropriations are recorded to Benefits in Force.

## (R) Future GASB Accounting Statements

GASB Statement No. 74, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans Improves the usefulness of information about postemployment benefits. It establishes financial reporting standards for state and local governmental other postemployment benefit (OPEB) plans that are administered through trusts or equivalent arrangements. The requirements of this Statement are effective for financial reporting periods beginning after June 15, 2016. Management has evaluated GASB Statement No. 74, and although applicable, the measurement of potential liability and the related disclosures have been excluded as they are not material to INPRS.

Notes to the Financial Statements, continued
June 30, 2017
GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pension Improves accounting and financial reporting by state and local governments for postemployment benefits other than pensions (OPEB). The requirements of this Statement are effective for financial reporting periods beginning after June 15, 2017. Management is currently evaluating GASB Statement No. 75 and, if applicable, will implement in the appropriate period.

GASB Statement No. Statement No. 77, Tax Abatement Disclosures
Establishes financial reporting standards for tax abatement agreements entered into by state and local governments. The requirements of this Statement are effective for financial reporting periods beginning after December 15, 2015. Management has evaluated GASB Statement No. 77 and determined the statement does not apply to INPRS' financial statements as presented.

GASB Statement No. 78, Pensions Provided through Certain Multiple-Employer Defined Benefit Pension Plans
Establishes accounting and financial reporting standards for defined benefit pensions provided to the employees of state or local governmental employers through a cost-sharing multiple-employer defined benefit pension plan (cost-sharing pension plan) that meets certain criteria. The requirements for this Statement are effective for financial reporting periods beginning after December 15, 2015. Management has evaluated GASB Statement No. 78 and determined the statement does not apply to INPRS' financial statements as presented.

GASB Statement No. 79, Certain External Investment Pools and Pool Participants
Establishes accounting and financial reporting standards for qualifying external investment pools that elect to measure for financial reporting purposes all of their investments at amortized cost. The requirements for this Statement are effective for financial reporting periods beginning after June 15, 2015, except for certain provisions on portfolio quality, custodial credit risk, and shadow pricing. Those provisions are effective reporting periods beginning after December 15, 2015. Management has evaluated GASB Statement No. 79 and determined the statement does not apply to INPRS' financial statements as presented.

GASB Statement No. 80, Blending Requirements for Certain Component Units Improves financial reporting by clarifying the financial statement presentation requirements for certain component units. The requirements of this Statement are effective for reporting periods beginning after June 15, 2016. Management has evaluated GASB Statement No. 80 and determined the statement does not apply to INPRS' financial statements as presented.

GASB Statement No. 81, Irrevocable Split-Interest Agreements
Improves financial reporting for irrevocable split-interest agreements by providing recognition and measurement guidance for situations in which a government is beneficiary of the agreement. The requirements of this Statement are effective for financial statements for periods beginning after December 15, 2016. Management is currently evaluating GASB Statement No. 81 and, if applicable, will implement in the appropriate period.

GASB Statement No. 82, Pension Issues
Improves consistency in the application of pension accounting and financial reporting requirements by addressing certain issues that have been raised with respect to Statements No. 67, "Financial Reporting for Pension Plans", No. 68, "Accounting and Financial Reporting for Pensions", and No. 73, "Accounting and Financial Reporting for Pensions and Related Assets That Are Not Within the Scope of GASB Statement No. 68, and Amendments to Certain Provisions of GASB Statements No. 67 and No. 68." The requirements of this Statement are effective for reporting periods beginning after June 15, 2016. Management has evaluated GASB Statement No. 82 and early adopted its requirements in the FY2016 financial statements as presented.

Notes to the Financial Statements, continued
June 30, 2017

## GASB Statement No. 83, Certain Asset Retirement Obligations

Addresses accounting and financial reporting for certain asset retirement obligations. An asset retirement obligation is a legally enforceable liability associated with the retirement of a tangible capital asset. The requirements of this Statement are effective for reporting periods beginning after June 15, 2018. Management is currently evaluating GASB Statement No. 83 and, if applicable, will implement in the appropriate period.

## GASB Statement No. 84, Fiduciary Activities

Improves guidance regarding the identification of fiduciary activities for accounting and financial reporting purposes and how those activities should be reported. The primary purpose is to enhance consistency and comparability by (1) establishing specific criteria for identifying activities that should be reported as fiduciary activities and (2) clarifying whether and how business-type activities should report their fiduciary activities. The requirements of this Statement are effective for reporting periods beginning after December 15, 2018. Management is currently evaluating GASB Statement No. 84 and will implement in the appropriate period.

GASB Statement No. 85, Omnibus 2017
Addresses practice issues that have been identified during implementation and application of certain GASB Statements. This Statement addresses a variety of topics including issues related to blending component units, goodwill, fair value measurement and application, and postemployment benefits (pensions and other postemployment benefits [OPEB]). The provisions of this Statement are effective for periods beginning after June 15, 2017. Management is currently evaluating GASB Statement No. 85 and will implement in the appropriate period.

GASB Statement No. 86, Certain Debt Extinguishment Issues Increases consistency in accounting and financial reporting for debt extinguishments by establishing uniform guidance for derecognizing debt. The requirements of this Statement are effective for reporting periods beginning after June 15, 2017. Management is currently evaluating GASB Statement No. 86 and, if applicable, will implement in the appropriate period.

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 will implement in the appropriate period.

Notes to the Financial Statements, continued
June 30, 2017

## Note 3. Cash and Investments

## (A) Investment Guidelines and Limitations

The Indiana General Assembly enacted the prudent investor standard to apply to the INPRS Board of Trustees and govern all its investments. Under statutes (IC 5-10.3-5-3(a)) and (IC 5-10.4-3-10(a)), the Board of Trustees must "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." The Board of Trustees is also required to diversify such investments in accordance with the prudent investor standard.

Within these governing statutes, the INPRS Board of Trustees has broad authority to invest the assets of the funds. The INPRS Board of Trustees contracts with external investment managers, to collectively achieve the investment objectives of the fiduciary funds. Depending on the contractual agreement with the investment manager, investments may be managed in separate accounts, commingled accounts, mutual funds or other structures acceptable to the INPRS Board of Trustees. An asset allocation review is conducted every five years.

The INPRS Board of Trustees adopted a revised Investment Policy Statement (IPS), effective December 16, 2016. The Board approved a revision to the asset allocation incorporating changes to the asset allocation targets. A new asset class, private markets, includes the existing private equity target allocation of 10.0 percent and the private credit target allocation of 4.0 percent previously included in fixed income - ex inflation-linked asset class.

The new strategic asset allocation for the consolidated defined benefit asset unit trust is as follows:

| 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 |

The asset allocations shown above will differ for the ASA investments for PERF, TRF Pre-'96, TRF '96 and LE DC, as these plan allocations are self-directed by the members.

LPSPR is invested in high-quality, short-term money market instruments, including, but not limited to, high-quality commercial paper and securities issued or guaranteed by the U.S. government.

The SE and PSO death benefit funds are invested in short-term and fixed income investments in a commingled fund.

Notes to the Financial Statements, continued
June 30, 2017

## (B) Rate of Return

The money-weighted rate of return expresses investment performance, net of investment expenses, adjusted for the changing amounts actually invested. For the year ended June 30, 2017, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expenses is as follows:

| Pension Trust Funds ${ }^{1}$ | 2017 Annual <br> Money Weighted <br> Rate of Return |
| :--- | :---: | :---: |
| PERF | $7.60 \%$ |
| TRF Pre-'96 ${ }^{2}$ | 8.14 |
| TRF '96² | 8.14 |
| '77 Fund | 7.97 |
| JRS | 7.96 |
| EG\&C | 7.97 |
| PARF | 7.94 |
| LE DB | 7.91 |
| Total INPRS ${ }^{3}$ | 7.85 |

${ }^{1}$ Excludes LE DC.
${ }^{2}$ The Teachers' Retirement Fund Accounts are combined for investment purposes.
${ }^{3}$ Rate of return also includes LE DC, SE and PSO Death Benefit Funds, and LPSPR.

## (C) Cash in Bank and Deposits

Cash balances represent both operational demand deposit accounts held at the bank, and investment related cash and short-term investments on deposit with the investment custodian. To maximize investment income, the float caused by outstanding checks is invested in a short-term investment account, thus causing a possible negative book balance. Negative book balances are reflected in the liabilities section of the Statement of Fiduciary Net Position.

The table below presents total cash deposits, which includes short-term investment funds as of June 30, 2017.
(dollars in thousands)

| Cash Deposits | Total |  |
| :---: | :---: | :---: |
| Demand Deposit Account - Bank Balances (Insured by FDIC up to $\$ 250$ thousand per financial institution) | \$ | 7,312 |
| Held with Indiana Treasurer of State (Fully Insured) |  | 843 |
| Demand Deposit - Outstanding Check Float |  | $(31,899)$ |
| Held with Custodian Bank (Uncollateralized) |  | 261,585 |
| Short Term Investment Funds held at Bank (Collateralized) |  | 1,139,697 |
| Total | \$ | 1,377,538 |

Notes to the Financial Statements, continued
June 30, 2017

## (D) Custodial Credit Risk

Deposits, investment securities, and collateral securities are exposed to custodial credit risk if they are uninsured and uncollateralized. Custodial credit risk is the risk that, in the event of a failure of the counterparty, INPRS will not be able to recover the value of its deposits, investments or collateral securities that are in the possession of an outside party. Investment securities are exposed to risk if the securities are uninsured and held by either the counterparty or the counterparty trust department's agent, and are not registered in the name of INPRS.

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 30,2017 , there was $\$ 268.9$ million of cash on deposit which was uninsured and uncollateralized and therefore exposed to credit risk as disclosed in (C) Cash in Bank and Deposits.

Per IC 5-10.3-5-4(a) and IC 5-10.3-5-5, IC 5-10.4-3-14(a) and IC 5-10.4-3-13, securities are required to be held for the fund under custodial agreements. INPRS' custody agreement with the custodian requires the custodian to segregate the securities on the custodian's books and records from the custodian's own property. In addition, investment managers are not allowed, under any circumstances, to take possession, custody, title, or ownership of any managed assets.

## (E) Interest Rate Risk

Interest rate risk is the risk 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. INPRS does not have a formal stated policy regarding interest rate risk. The Investment Policy Statement recognizes interest rate risk as a market risk factor. INPRS reviews and monitors market risk factors within investment mandates regularly as part of achieving the actuarial long-term rate of return.

As of June 30, 2017 debt security duration is as follows:
(dollars in thousands)

| Debt Security Type | Fair Value |  | \% of All Debt Securities | Portfolio Weighted Average Effective Duration (Years) |
| :---: | :---: | :---: | :---: | :---: |
| Short Term Investments |  |  |  |  |
| Short Term Investment Fund | \$ | 1,050,848 | 9.9 \% | 0.01 |
| Certificate of Deposit |  | 3,806 | - | 0.24 |
| U.S. Treasury Obligations |  | 193,486 | 1.8 | 0.22 |
| Non-U.S. Governments |  | 7,880 | 0.1 | 0.21 |
| Duration Not Available ${ }^{1}$ |  | 289,678 | 2.7 | N/A |
| Total Short Term Investments |  | 1,545,698 | 14.5 |  |
| Fixed Income Investments |  |  |  |  |
| U.S. Governments |  | 3,746,994 | 35.2 | 12.35 |
| Non-U.S. Governments |  | 2,729,545 | 25.7 | 7.93 |
| U.S. Agencies |  | 239,279 | 2.3 | 6.90 |
| Corporate Bonds |  | 1,172,924 | 11.0 | 9.57 |
| Asset-Backed Securities |  | 199,301 | 1.9 | 1.74 |
| Duration Not Available ${ }^{1}$ |  | 998,184 | 9.4 | N/A |
| Total Fixed Income Investments |  | 9,086,227 | 85.5 |  |
| Total Debt Securities | \$ | 10,631,925 | 100.0 \% |  |

[^7]Notes to the Financial Statements, continued
June 30, 2017

## (F) Credit Risk

The credit risk of investments is the risk the issuer will default and will no longer meet their obligations. INPRS does not have a formal stated policy regarding credit (quality) risk. The Investment Policy Statement recognizes credit (quality) risk as a market risk factor. INPRS reviews and monitors market risk factors within investment mandates regularly as part of achieving the actuarial long-term rate of return.

Three rating investment services are used in priority order, Standard and Poor's, Moody's, and Fitch.

| Credit Rating | Short Term Investments ${ }^{1}$ |  | Fixed Income Securities |  | Total |  | \% of All Debt Securities |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| AAA | \$ | - | \$ | 657,009 | \$ | 657,009 | 6.4 \% |
| U.S. Government Guaranteed |  | - |  | 3,994,764 |  | 3,994,764 | 38.5 |
| AA |  | 139,039 |  | 1,169,325 |  | 1,308,364 | 12.6 |
| A |  | - |  | 819,727 |  | 819,727 | 7.9 |
| BBB |  | - |  | 902,996 |  | 902,996 | 8.7 |
| BB |  | - |  | 248,999 |  | 248,999 | 2.4 |
| B |  | - |  | 219,112 |  | 219,112 | 2.1 |
| Below B |  | - |  | 176,815 |  | 176,815 | 1.7 |
| Unrated ${ }^{2}$ |  | 1,147,577 |  | 897,480 |  | 2,045,057 | 19.7 |
| Total | \$ | 1,286,616 | \$ | 9,086,227 | \$ | 10,372,843 | 100.0 \% |

${ }^{1}$ Excludes cash with brokers of $\$ 259.1$ million.
${ }^{2}$ Primarily consists of the following security types: money market sweep vehicles, private placement, term loans and asset-backed securities, commercial mortgages, CMO/REMIC's and commingled debt funds.

Concentration of credit risk is the risk of loss which may arise in the event of default by a single issuer. The INPRS Investment Policy Statement recognizes issuer risk as a strategic risk factor that is monitored on an absolute and relative basis. At June 30, 2017, single issuer exposure in the portfolio did not exceed 5.0 percent of the Fiduciary Net Position.

INPRS' Investment Policy Statement places concentration limits on assets placed with an investment manager. The concentration limits are as follows:

- No investment manager will manage more than 10.0 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 in excess of 15.0 percent of the system's assets in actively managed portfolios without Board approval.
- No investment manager will manage more than 15.0 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 in excess of 20.0 percent of the system's assets in passively managed portfolios without Board approval.
- No investment manager will manage more than 25.0 percent of the assets in a combination of actively and passively managed portfolios.


## (G) Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates adversely affect the fair value of an investment or a deposit. Foreign currency exposure is focused primarily in international fixed income and equity holdings.

## Indiana Public Retirement System

Notes to the Financial Statements, continued
June 30, 2017

At June 30, 2017, there was no currency hedging program at the total fund level. At the manager level, hedging currency risk is allowed and certain managers actively manage currency exposure. INPRS monitors currency risk at the total fund level, portfolio level, and asset class level.

The foreign currency exposure consists of unhedged assets within the investment portfolio. The short term investment, debt securities and equity securities include income accruals. Other investments include foreign holdings of other investments, derivatives and receivables/payables.

Exposure to foreign currency risk at June 30, 2017, is as follows:
(dollars in thousands)
Foreign Currency Held at June 30, 2017

| Currency | Short Term |  | Fixed Income |  | Equity |  | Other Investments |  | Total |  | \% of Total ${ }^{1}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Argentina Peso | \$ | 395 | \$ | 7,016 | \$ | - | \$ | (754) | \$ | 6,657 | - \% |
| Australian Dollar |  | 509 |  | 96,666 |  | 111,205 |  | $(102,076)$ |  | 106,304 | 0.3 |
| Brazilian Real |  | 25 |  | 33,561 |  | 25,054 |  | 11,773 |  | 70,413 | 0.2 |
| Canadian Dollar |  | 1,583 |  | 136,366 |  | 170,577 |  | $(135,185)$ |  | 173,341 | 0.5 |
| Chilean Peso |  | - |  | 5,488 |  | 837 |  | 1,219 |  | 7,544 | - |
| Chinese R Yuan HK |  | - |  |  |  | - |  | $(3,034)$ |  | $(3,034)$ | - |
| China Yuan Renminbi |  | - |  | (358) |  | - |  | 910 |  | 552 | - |
| Colombian Peso |  | 588 |  | 26,199 |  | - |  | 1,877 |  | 28,664 | 0.1 |
| Czech Koruna |  | (110) |  | 5,350 |  | 728 |  | 22,834 |  | 28,802 | 0.1 |
| Danish Krone |  | 833 |  | 18,397 |  | 58,584 |  | $(16,140)$ |  | 61,674 | 0.2 |
| Dominican Rep Peso |  | - |  | 742 |  | - |  | - |  | 742 | - |
| Egyptian Pound |  | 3,744 |  | 2,188 |  | 689 |  | 1,262 |  | 7,883 | - |
| Euro Currency Unit |  | 9,102 |  | 1,095,906 |  | 726,732 |  | $(1,045,145)$ |  | 786,595 | 2.5 |
| Hong Kong Dollar |  | 718 |  | (341) |  | 161,629 |  | $(25,725)$ |  | 136,281 | 0.4 |
| Hungarian Forint |  | 388 |  | 12,656 |  | 5,633 |  | $(1,725)$ |  | 16,952 | 0.1 |
| Indian Rupee |  | 766 |  | (34) |  | 17,404 |  | 19,449 |  | 37,585 | 0.1 |
| Indonesian Rupiah |  | 185 |  | 33,878 |  | 2,058 |  | 2,439 |  | 38,560 | 0.1 |
| Israeli Shekel |  | 20 |  | (112) |  | 3,611 |  | - |  | 3,519 | - |
| Japanese Yen |  | 12,429 |  | 361,365 |  | 576,328 |  | $(374,476)$ |  | 575,646 | 1.8 |
| Malaysian Ringgit |  | 265 |  | 21,011 |  | - |  | $(1,269)$ |  | 20,007 | 0.1 |
| Mexican Peso |  | (370) |  | 51,106 |  | 795 |  | $(7,140)$ |  | 44,391 | 0.1 |
| Taiwan New Dollar |  | - |  | - |  | 82,285 |  | $(20,580)$ |  | 61,705 | 0.2 |
| New Zealand Dollar |  | 102 |  | 24,818 |  | 4,917 |  | $(29,227)$ |  | 610 | - |
| Norwegian Krone |  | 210 |  | 3,729 |  | 9,277 |  | 12,806 |  | 26,022 | 0.1 |
| Peruvian Nuevo Sol |  | - |  | 9,801 |  | - |  | $(3,148)$ |  | 6,653 | - |
| Philippines Peso |  | 15 |  | - |  | - |  | 4,733 |  | 4,748 | - |
| Polish Zloty |  | 469 |  | 42,575 |  | 6,869 |  | 10,416 |  | 60,329 | 0.2 |
| British Pound Sterling |  | 2,876 |  | 508,535 |  | 374,954 |  | $(514,443)$ |  | 371,922 | 1.2 |
| Romania Leu |  | - |  | - |  | - |  | 5,180 |  | 5,180 | - |
| Russian Ruble |  | 29 |  | 29,467 |  | - |  | $(4,039)$ |  | 25,457 | 0.1 |
| Singapore Dollar |  | 446 |  | 4,932 |  | 23,425 |  | $(9,710)$ |  | 19,093 | 0.1 |
| South African Rand |  | 314 |  | 41,992 |  | 31,508 |  | $(15,525)$ |  | 58,289 | 0.2 |
| South Korean Won |  | 576 |  | (58) |  | 118,098 |  | 4,724 |  | 123,340 | 0.4 |
| Swedish Krona |  | 401 |  | 77,310 |  | 87,499 |  | $(49,667)$ |  | 115,543 | 0.4 |
| Swiss Franc |  | 3,547 |  | 2,937 |  | 187,130 |  | $(3,355)$ |  | 190,259 | 0.6 |
| Thai Baht |  | 16 |  | 14,519 |  | 14,526 |  | 3,083 |  | 32,144 | 0.1 |
| Turkish Lira |  | 2 |  | 25,461 |  | 13,357 |  | 7,427 |  | 46,247 | 0.2 |
| UAE Dirham |  | - |  | - |  | 2,939 |  | - |  | 2,939 | - |
| Uruguayan Peso |  | - |  | 619 |  | - |  | 1,164 |  | 1,783 | - |
| Held in Foreign Currency | \$ | 40,073 | \$ | 2,693,687 | \$ | 2,818,648 | \$ | $(2,251,067)$ | \$ | 3,301,341 | 10.4 \% |

[^8]Notes to the Financial Statements, continued
June 30, 2017

## (H) Securities Lending

Indiana Code 5-10.2-2-13(d) provides the INPRS Board of Trustees to authorize its custodian bank to enter into a securities lending program agreement under which certain securities held by the custodian on behalf of INPRS may be loaned. The statute requires collateral pledged to be in excess of the total fair value of the loaned securities at all times.

The purpose of such a program is to provide additional revenue for the consolidated defined benefit assets. The Investment Policy Statement requires that collateral securities and/or cash be initially pledged at 102.0 percent of the fair value of the securities lent for domestic securities and 105.0 percent for international securities. No more than 40.0 percent of the consolidated defined benefit assets may be lent in aggregate. The custodian bank and/or its securities lending sub-agents provide 100.0 percent indemnification of the assets against borrower default, overnight market risk and failure to return loaned securities. Securities received as collateral cannot be pledged or sold unless the borrower defaults.

At June 30,2017 , there was no security lending credit risk exposure as the collateral pledged of $\$ 959$ million exceeded the fair value of securities on loan, as shown below.

| Security Type | Fair Value of Securities on Loan |  |
| :---: | :---: | :---: |
| U.S. Governments | \$ | 597,687 |
| Corporate Bonds |  | 12,185 |
| International Bonds |  | 5,888 |
| Domestic Equities |  | 289,566 |
| International Equities |  | 32,529 |
| Total | \$ | 937,855 |

Cash collateral can be reinvested and is subject to the investment guidelines specified by the Investment Policy Statement. It states all collateral investments will have a maturity of the next business day. INPRS retains the fair value risk with respect to the investment of the cash collateral. However, the custodian bank provides 100 percent indemnification to INPRS of all collateral invested in repurchase agreements against borrower default and overnight market risk.

All reinvested cash collateral investments consist of repurchase agreements which are not rated by any of the rating agencies.

## (I) Repurchase Agreements

A repurchase agreement is an agreement in which cash is transferred to a broker-dealer or financial institution. The brokerdealer or financial institution transfers securities as collateral to our custodian and promises to repay cash plus interest. Repurchase agreements are assets whereby security collateral is held by our custodian.

An obligation under reverse repurchase agreement is the same as a repurchase agreement, but from the perspective of the buyer rather than the seller. Obligations under reverse repurchase agreements are liabilities whereby security collateral is held at the broker dealer or financial institution's custodian bank.

## Indiana Public Retirement System

Notes to the Financial Statements, continued
June 30, 2017
Cash received and reinvested in securities is not required to match the maturities of the securities posted as collateral.

Repurchase agreements and obligations and reverse repurchase agreements are considered allowable investments. Moreover, investment managers that possess recognized expertise in managing these types of investments will be permitted to utilize these investment tools as part of the overall investment mandate for the benefit of INPRS.

The amounts held at June 30, 2017, exclusive of securities lending reinvested cash collateral, are as follows:
(dollars in thousands)

| Repurchase Agreements by Collateral Type | Cash Collateral Received |  | Fair Value |  |
| :---: | :---: | :---: | :---: | :---: |
| U.S. Treasury | \$ | 1,881 | \$ | 1,881 |
| Obligations Under Reverse Repurchase Agreements by Collateral Type | Cash Collateral Posted |  | Fair Value |  |
| U.S. Treasury | \$ | 276,792 | \$ | 279,962 |

At June 30,2017 , there was no reverse repurchase credit risk exposure since the cash collateral value posted was less than the fair value of the liability held.

## (J) Fair Value Measurement

In accordance with GASB Statement No. 72, investments are measured and generally reported at fair value and are classified according to the following hierarchy:

Level 1 - Investments reflect prices quoted in active markets for identical assets.
Level 2 - Investments reflect prices that are based on a similar observable asset either directly or indirectly in an active market, and inputs in markets that are not considered to be active for identical or similar assets.

Level 3 - Investments reflect prices based upon unobservable inputs.
The categorization of investments within the hierarchy is based upon the pricing transparency of the instrument and should not be perceived as the particular investment's risk.

Short term investment funds (STIF's) are classified at amortized cost.
Equity and fixed income securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities. Equity and fixed income securities classified in Level 2 of the fair value hierarchy are valued using a matrix pricing technique. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices. Corporate bonds classified in Level 3 are valued using discounted cash flow techniques. International equities classified in Level 3 are not traded in an active market and are valued using internally generated unobservable inputs.

Derivative instruments classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities. Derivative instruments classified as Level 2 are valued using a market approach that considers benchmarks.

## Indiana Public Retirement System

Notes to the Financial Statements, continued
June 30, 2017
At June 30, 2017, the fair value of investments categorized by Level 1,2 and 3 is as follows:
(dollars in thousands)

| June 30, 2017 | 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) |
| 62,758 |  |  |  |
| 257,779 |  |  |  |
| 1,881 |  |  |  |
| 989,056 |  |  |  |
| 1,311,474 |  |  |  |

## Investments by Fair Value Level

Pooled Short Term Investments ${ }^{2}$

| BNY - Mellon Cash Reserves | 22,343 | \$ | - | \$ | 22,343 | \$ | - |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Certificate of Deposit | 3,806 |  | - |  | 3,806 |  | - |
| Corporate Bonds (Short Term) | 3,744 |  | - |  | 3,744 |  | - |
| U.S. Treasury Obligations | 193,486 |  | 193,486 |  | - |  | - |
| Non-U.S. Governments | 4,136 |  | - |  | 4,136 |  | - |
| al Pooled Short Term Investments | 227,515 |  | 193,486 |  | 34,029 |  | - |
| ncome Investments |  |  |  |  |  |  |  |
| U.S. Governments | 3,747,283 |  | 3,746,994 |  | 289 |  | - |
| Non-U.S. Governments | 3,043,740 |  | - |  | 3,043,740 |  | - |
| U.S. Agencies | 228,832 |  | - |  | 228,832 |  | - |
| Corporate Bonds | 1,129,583 |  | - |  | 1,128,623 |  | 960 |
| Asset-Backed Securities | 226,709 |  | - |  | 226,709 |  | - |
| al Fixed Income Investments | 8,376,147 |  | 3,746,994 |  | 4,628,193 |  | 960 |
| Investments |  |  |  |  |  |  |  |
| Domestic Equities | 3,473,186 |  | 3,472,155 |  | 1,031 |  | - |
| International Equities | 3,420,144 |  | 3,419,343 |  | 794 |  | 7 |
| al Equity Investments | 6,893,330 |  | 6,891,498 |  | 1,825 |  | 7 |
| vestments by Fair Value Level | 15,496,992 |  | 10,831,978 |  | 4,664,047 |  | 967 |



[^9]Notes to the Financial Statements, continued
June 30, 2017
The valuation method for investments measured at the net asset value (NAV) per share or equivalent, at June 30, 2017, is presented as follows:

| (dollars in thousands) | Fair Value |  | Unfunded Commitments |  | Redemption Frequency <br> (if Currently Eligible) | Redemption Notice Period |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Commingled Short Term Funds | \$ | 8,590 | \$ | - | Daily | 1 day |
| Commingled Fixed Income Funds |  | 710,080 |  | - | Daily | 1 day |
| Commingled Equity Funds |  | 1,460,136 |  | - | Daily | 1 day |
| Private Markets |  | 3,450,039 |  | 1,720,159 | Not Eligible | N/A |
| Absolute Return |  | 2,597,143 |  | - | Monthly, Quarterly, Semi-Annually | 30-120 days |
| Real Estate Funds |  | 1,599,209 |  | 549,401 | Quarterly | 30-90 days |
| Risk Parity |  | 2,914,620 |  | - | Daily, Weekly, Monthly | 3-5 days |
| Total | \$ | 12,739,817 | \$ | 2,269,560 |  |  |

## Commingled Funds

There are three short term funds, 16 fixed income funds, and three equity funds which are considered to be commingled in nature. Comingled fund strategies include short term, fixed income, and equity fund investments. These investments are valued at the net asset value of the units held at June 30, 2017, based upon fair value of the underlying securities.

## Private Markets

Private markets consist of 265 private market funds that invest across a range of strategies, geographies, and industries. Portfolio strategies include venture capital, buyout, special situations, real assets, and growth capital fund investments. 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 average 10 year life of the fund.

## Absolute Return

The absolute return strategy portfolio attempts 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). The portfolio tends to rely less heavily on traditional long/short equity and event-driven strategies, but instead focuses on relative value/arbitrage and tactical trading strategies. The portfolio consists of 35 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. 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. Most of the funds' investments are classified as fair value Level 1 and 2 assets, which allow for independent verification of NAV's/fair values by the funds' administrators. Funds with a drawdown strategy represent 7.8 percent of the absolute return portfolio and the majority of the fund's investments consists of Level 3 assets. The valuation process for the funds are comparable to private market valuations, with quarterly valuations.

## Real Estate Funds

Real estate funds consists of 32 real estate funds that invest primarily in U.S. commercial real estate. There are 26 real estate funds classified as illiquid as these investments cannot be redeemed directly with those real estate funds. Distributions of capital from illiquid real estate funds will be received as the underlying real estate assets are liquidated over the average 10 year life of the fund. There are six real estate funds that have been classified as liquid real estate funds 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. Illiquid real estate funds represent approximately 48.0 percent of the value of the real estate fund investments.

Notes to the Financial Statements, continued
June 30, 2017

## Risk Parity

Consisting of three fund investments, this portfolio is constructed to accrue various asset class risk premiums, including equity, without long-term dominance from 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. The risk parity fund 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 30,2017 , it is probable $\$ 3.5$ billion and $\$ 1.6$ 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 nonbinding bids received from potential buyers of the investments (one quarter in arrears plus current quarter cash flows). As of June 30, 2017, 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.

## (K) Synthetic GIC's

PERF, TRF Pre-'96, TRF '96 and LE DC members are able to participate in a stable value fund investment option that consists of fully benefit-responsive synthetic guaranteed investment contracts (GIC's). 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, 2017, the stable value fund portfolio of well diversified high quality investment grade fixed income securities had a fair value of $\$ 2.6$ billion that was $\$ 12.8$ million in excess of the fair value protected by the wrap contract.

Notes to the Financial Statements, continued
June 30, 2017

## Note 4. Derivative Financial Instruments

## (A) Overview of Derivatives

Derivative instruments are financial contracts whose values depend on the values of one or more underlying assets, reference rates, or financial indices. The fair value of all derivative financial instruments is reported in the Statement of Fiduciary Net Position as either assets or liabilities, and the change in the fair value is recorded in the Statement of Changes in Fiduciary Net Position as investment income. A derivative instrument could be a contract negotiated on behalf of the Master Trust and a specific counterparty. This would typically be referred to as an "OTC contract" (Over the Counter) such as swaps and forward contracts. Alternatively, a derivative instrument, such as futures, could be listed and traded on an exchange and referred to as "exchange traded." Due to the level of risk associated with certain derivative investment securities, it is reasonably possible that changes in the value of investment securities will occur in the near term, and such changes could affect the amounts reported in the financial statements. Investments in limited partnerships may include derivatives that are not shown in the derivative total.

The derivative instruments are considered investments and not hedges for accounting purposes. The gains and losses arising from this activity are recognized as incurred in the Statement of Changes in Fiduciary Net Position.

All investment derivatives discussed below are included within the investment risk schedules, which precede this section. Investment derivative instruments are disclosed separately to provide a comprehensive and distinct view of this activity and its impact on the overall investment portfolio. INPRS holds investments in limited partnership and commingled investment funds, which may utilize derivatives from time to time for hedging purposes, and any derivatives held by these types of investment vehicles are not included in the information describing the derivatives.

## 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. Investment managers use financial futures to replicate an underlying security or index they intend to hold or sell in the portfolio. In certain instances, it may be beneficial to own a futures contract rather than the underlying security. Additionally, investment managers use futures contracts to adjust the portfolio risk exposure. Futures contracts may be used for the purpose of investing cash flows or modifying duration, but in no event may leverage be created by any individual security or combination of securities. No short sales of equity securities or equity index derivatives are permitted.

As the fair value of the futures contract varies from the original contract price, a gain or loss is recognized and paid to, or received from, the clearinghouse. The cash or securities to fulfill these obligations are held in the investment portfolio.

## Options

Options are agreements that give the owner of the option the right, but not 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 a specific price on or before a specified expiration date.

The purchaser of put options pays a premium at the outset of the agreement and stands to gain from an unfavorable change (i.e., a decrease) in the price of the instrument underlying the option. The writer of a call option receives a premium at the outset of the agreement and bears the risk of an unfavorable change (i.e., an increase) in the price of the instrument underlying the option. An interest rate swaption is the option to enter into an interest rate swap based off a set of predetermined conditions.

Options are generally used to manage interest rate risk, adjust portfolio duration, or rebalance the total portfolio to the target asset allocation. The fair value of exchange-traded options is determined based upon quoted market prices.

Notes to the Financial Statements, continued
June 30, 2017

The fair value of over the counter options is determined by external pricing services, using various proprietary methods, based upon the type of option.

## Swaps

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

Interest rate swaps are generally used to manage interest rate risk, adjust portfolio duration, or rebalance the total portfolio to the target asset allocation. The fair value is determined by external pricing services using various proprietary methods.

An inflation swap is a derivative used to transfer inflation risk from one party to another through an exchange of cash flows. In an inflation swap, one party pays a fixed rate on a notional principal amount, while the other party pays a floating rate linked to an inflation index, such as the Consumer Price Index (CPI) or an inflation bond.

Credit default swap agreements involve one party (referred to as the buyer of protection) making a stream of payments to another party (the seller of protection) in exchange for the right to receive a specified return in the event of a default or other predetermined credit event for the referenced entity, obligation or index.

Credit default swaps are used to achieve the desired credit exposure of a security or basket of securities. One of the main advantages of a credit default swap is it allows for exposure to credit risk while limiting exposure to other risks, such as interest rate and currency risk. The fair value is determined by external pricing services using various proprietary methods.

## Forwards

A forward currency exchange 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. Risks associated with such contracts include movement in the value of a foreign currency relative to the U.S. dollar. The contracts are valued at forward exchange rates and include net appreciation / depreciation in the Statement of Fiduciary Net Position. Realized gains or losses on forward currency contracts is the difference between the original contract and the closing value of such contract and is included in the Statement of Changes in Fiduciary Net Position.

Foreign currency forwards are used to manage exposure to fluctuations in foreign currency exchange rates on portfolio holdings and to settle future obligations.

Notes to the Financial Statements, continued
June 30, 2017

## (B) Derivative Contracts

The table below summarizes the derivative contracts for the fiscal year ended June 30,2017 :

| Investment Derivatives | Change in Fair Value |  | Fair Value |  | Notional |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Futures |  |  |  |  |  |  |
| Index Futures - Long | \$ | 1,404 | \$ | 1,404 | \$ | 761,901 |
| Commodity Futures - Long |  | $(8,757)$ |  | $(8,757)$ |  | 1,432,867 |
| Fixed Income Futures - Long |  | (267) |  | (267) |  | 450,047 |
| Fixed Income Futures - Short |  | 1,596 |  | 1,596 |  | $(614,485)$ |
| Total Futures |  | $(6,024)$ |  | $(6,024)$ |  | 2,030,330 |
| Options |  |  |  |  |  |  |
| Currency Spot Options Bought |  | (15) |  | 22 |  | 5,785 |
| Currency Spot Options Written |  | 9 |  | (9) |  | 4,545 |
| Interest Rate Options Bought |  | $(1,476)$ |  | 3,335 |  | 709,400 |
| Interest Rate Options Written |  | 821 |  | $(3,280)$ |  | 546,940 |
| Fixed Income Options Bought |  | (60) |  | 14 |  | 14 |
| Fixed Income Options Written |  | 35 |  | (13) |  | (13) |
| Total Options |  | (686) |  | 69 |  | 1,266,671 |
| Swaps |  |  |  |  |  |  |
| Interest Rate Swaps - Pay Fixed Receive Variable |  | 3,580 |  | 5,699 |  | 487,349 |
| Interest Rate Swaps - Pay Variable Receive Fixed |  | (31) |  | (654) |  | 492,341 |
| Overnight Index Interest Rate Swaps - Pay Fixed Receive Variable |  | (888) |  | (888) |  | 66,774 |
| Overnight Index Interest Rate Swaps - Pay Variable Receive Fixed |  | 798 |  | 798 |  | 50,535 |
| Inflation Swaps- Pay Fixed Receive Variable |  | 40 |  | (61) |  | 2,428 |
| Inflation Swaps- Pay Variable Receive Fixed |  | 38 |  | 35 |  | 6,775 |
| Currency Swaps |  | $(1,688)$ |  | $(1,680)$ |  | 43,237 |
| Total Return Swaps |  | 2,489 |  | 2,489 |  | 4,162 |
| Credit Default Swaps Single Name - Buy Protection |  | $(1,147)$ |  | (810) |  | 59,200 |
| Credit Default Swaps Single Name - Sell Protection |  | 166 |  | (29) |  | 8,069 |
| Credit Default Swaps Index - Buy Protection |  | (203) |  | (369) |  | 27,679 |
| Credit Default Swaps Index - Sell Protection |  | (598) |  | $(1,660)$ |  | 47,235 |
| Total Swaps |  | 2,556 |  | 2,870 |  | 1,295,784 |
| Total Derivatives | \$ | $(4,154)$ | \$ | $(3,085)$ | \$ | 4,592,785 |

Notes to the Financial Statements, continued
June 30, 2017

The table below summarizes the swap maturity profile as of June 30, 2017.

| (dollars in thousands) | Swap Maturity Profile at June 30, 2017 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Swap Type | $<1 \mathrm{yr}$ |  | 1-5 yrs |  | 5-10 yrs |  | 10-20 yrs |  | $20+\mathrm{yrs}$ |  | Total |  |
| Interest Rate Swaps - Pay Fixed Receive Variable | \$ | (203) | \$ | (331) | \$ | 5,973 | \$ | (52) | \$ | 312 | \$ | 5,699 |
| Interest Rate Swaps - Pay Variable Receive Fixed |  | 105 |  | 2 |  | 527 |  | 71 |  | $(1,359)$ |  | (654) |
| Overnight Index Interest Rate Swaps - Pay Fixed Receive Variable |  | (110) |  | (778) |  | - |  | - |  | - |  | (888) |
| Overnight Index Interest Rate Swaps - Pay Variable Receive Fixed |  | 4 |  | 828 |  | (34) |  | - |  | - |  | 798 |
| Inflation Swaps - Pay Fixed Receive Variable |  | - |  | - |  | (3) |  | (51) |  | (7) |  | (61) |
| Inflation Swaps - Pay Variable Receive Fixed |  | 1 |  | (5) |  | 13 |  | (48) |  | 74 |  | 35 |
| Currency Swaps |  | $(1,529)$ |  | (54) |  | (97) |  | - |  | - |  | $(1,680)$ |
| Total Return Swaps |  | 2,489 |  | - |  | - |  | - |  | - |  | 2,489 |
| Credit Default Swaps Single Name - Buy Protection |  | - |  | (810) |  | - |  | - |  | - |  | (810) |
| Credit Default Swaps Single Name - Sell Protection |  | 1 |  | (8) |  | (22) |  | - |  | - |  | (29) |
| Credit Default Swaps Index - Buy Protection |  | - |  | (369) |  | - |  | - |  | - |  | (369) |
| Credit Default Swaps Index - Sell Protection |  | - |  | $(1,605)$ |  | - |  | - |  | (55) |  | $(1,660)$ |
| Total Swap Fair Value | \$ | 758 | \$ | $(3,130)$ | \$ | 6,357 | \$ | (80) | \$ | $(1,035)$ | \$ | 2,870 |

## (C) Credit Risk

Counterparty credit risk exists on all open OTC positions. Counterparty credit risk is the risk that a derivative counterparty may fail to meet its payment obligation under the derivative contract.

Investment managers use International Swaps and Derivative Association (ISDA) master agreements to further reduce counterparty risk by specifying credit protection mechanisms and providing standardization that improves legal certainty, thereby reducing the probability of unforeseen losses. Furthermore, the master agreements can provide additional credit protection through the requirement of collateral exchange and certain event of default and mutual termination provisions. Securities eligible as collateral are typically United States government bills and U.S. dollar cash.

The maximum amount of loss due to credit risk that the agency would incur if the counterparty to the derivative instrument failed to perform according to the terms of the contract, without respect to any collateral or other security, or netting arrangements, is the total unrealized gain of derivatives at the end of the reporting period. The aggregate fair value of investment derivative instruments in an unrealized gain position at June 30 , 2017, was $\$ 18.1$ million, of which $\$ 16.4$ million was uncollateralized.

Notes to the Financial Statements, continued
June 30, 2017

The table below summarizes the counterparty positions as of June 30, 2017:

| (dollars in thousands) <br> Swaps Counterparty | $\begin{gathered} \text { S\&P } \\ \text { Rating } \end{gathered}$ | Fair Value |  |  |  |  |  | Collateral |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Receivable Unrealized Gain |  | $\begin{gathered} \text { Payable } \\ \text { (Unrealized } \\ \text { Loss) } \end{gathered}$ |  | Total <br> Fair Value |  | Posted |  | Received |  |
| Bank of America | BBB+ | \$ | 423 | \$ | (257) | \$ | 215 | \$ | 640 | \$ | (540) |
| Banque Nationale De Paris | A |  | 3 |  | - |  |  |  | 710 |  |  |
| Barclays | BBB |  | 63 |  | (155) |  | (145) |  | - |  | - |
| Citigroup Inc. | BBB+ |  | 2,730 |  | (705) |  | 1,914 |  | 707 |  | $(1,070)$ |
| CME Group | AA- |  | 5,012 |  | $(2,853)$ |  | 2,394 |  | - |  | - |
| Credit Suisse | BBB+ |  | - |  | (91) |  | (90) |  | 2,324 |  | (51) |
| Deutsche Bank | A- |  | 2,546 |  | $(3,333)$ |  | (644) |  | 750 |  | (110) |
| Goldman Sachs | BBB+ |  | 85 |  | (77) |  | (77) |  | 730 |  | (570) |
| HSBC Securities Inc. | A |  | 60 |  | (54) |  | (54) |  | 1,520 |  | (10) |
| Intercontinental Exchange Inc. | A |  | 2,079 |  | $(2,851)$ |  | $(2,038)$ |  | 1,135 |  | - |
| JPMorgan Chase Bank | A- |  | 127 |  | $(2,303)$ |  | $(2,007)$ |  | 1,829 |  | - |
| London Clearing House | A- |  | 4,619 |  | $(2,201)$ |  | 3,690 |  | 376 |  | - |
| Morgan Stanley | BBB+ |  | 349 |  | (660) |  | (288) |  | 50 |  | - |
| Total |  | \$ | 18,096 | \$ | $(15,540)$ | \$ | 2,870 |  | 10,771 | \$ | $(2,351)$ |

Notes to the Financial Statements, continued
June 30, 2017

## (D) Interest Rate Risk

INPRS has exposure to interest rate risk due to investments in interest rate and inflation swaps and forward mortgagebacked securities (TBAs). The required risk disclosures are included in the Interest Rate Risk schedule in Note 3 (E).

The table below summarizes investments that are highly sensitive to interest rate changes:
(dollars in thousands)

| Reference Currency | Pays | Receives | Fair Value |  | Notional |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Interest Rate Swap - Pay Fixed Receive Variable |  |  |  |  |  |  |
| U.S. Dollar | 1.25\% to 2.79\% | 3M USD LIBOR | \$ | 7,131 | \$ | 329,560 |
| Pound Sterling | 0.74\% to 2.00\% | 6M GBP LIBOR BBA |  | (204) |  | 32,558 |
| Euro Currency Unit | 0.00\% to 1.50\% | 6M EURIBOR REUTERS |  | 191 |  | 25,286 |
| Israeli Shekel | 0.65\% | 3M ILS TELBOR REFERENCE BANKS |  | (112) |  | 14,385 |
| Hong Kong Dollar | 2.25\% | 3M HIBOR BLOOMBERG |  | (336) |  | 12,930 |
| Brazilian Real | 8.77\% to 13.93\% | 1D BRL CDI |  | (855) |  | 10,850 |
| Japanese Yen | 0.30\% to 0.75\% | 6M JPY LIBOR BBA |  | (75) |  | 10,780 |
| Mexican Peso | 7.25\% | 1M MXN TIIE BANXICO |  | (5) |  | 10,338 |
| Australian Dollar | 1.80\% | 3M AUD BBR BBSW |  | 34 |  | 9,404 |
| Czech Koruna | 0.37\% to 1.04\% | 6M CZK PRIBOR PRBO |  | 189 |  | 8,067 |
| Hungarian Forint | 1.38\% to $2.42 \%$ | 6M BUBOR REUTERS |  | (294) |  | 7,289 |
| Brazilian Real | $8.77 \%$ to 9.97\% | 1M BRL CDI |  | (15) |  | 6,643 |
| Indian Rupee | 6.20\% to 6.50\% | INR MIBOR OIS COMPOUND |  | (34) |  | 6,204 |
| Mexican Peso | 5.18\% to 5.86\% | 28D MXN TIIE BANXICO |  | 75 |  | 1,811 |
| Colombian Peso | 5.11\% | 90 DAYS DTF RATE |  | (1) |  | 406 |
| Polish Zloty | 1.77\% | 6M PLN WIBOR WIBO |  | 8 |  | 402 |
| Australian Dollar | 1.80\% | 6M AUD BBR BBSW |  | 3 |  | 222 |
| Colombian Peso | 5.19\% | 1D COP COOVIBR |  | (1) |  | 214 |
|  |  |  | \$ | 5,699 | \$ | 487,349 |
| Interest Rate Swap - Pay Variable Receive Fixed |  |  |  |  |  |  |
| U.S. Dollar | 3M USD LIBOR BBA | 1.50\% to 2.68\% | \$ | (781) | \$ | 99,140 |
| Pound Sterling | 3M GBP LIBOR BBA | 0.59\% |  | 2 |  | 70,676 |
| Euro Currency Unit | 6M EURIBOR REUTERS | 0.01\% to 1.33\% |  | (95) |  | 67,224 |
| Canadian Dollar | 3M CAD BA CDOR | 1.25\% to 1.50\% |  | (169) |  | 66,216 |
| Mexican Peso | 28D MXN TIIE BANXICO | 5.43\% to $7.74 \%$ |  | 582 |  | 34,663 |
| South Korean Won | 3M KRW CD KSDA | 1.23\% to 1.50\% |  | (36) |  | 24,021 |
| Brazilian Real | 1D BRL CDI | 11.45\% to 14.56\% |  | 385 |  | 21,281 |
| Thailand Baht | 6M THB THBFIX REUTERS | 1.52\% to 1.90\% |  | 1 |  | 18,899 |
| South Korean Won | 3M KRW KWCDC COD | 1.21\% to 2.06\% |  | (22) |  | 17,897 |
| Swedish Krona | 3M SEK STIBOR SIDE | 0.05\% to 0.33\% |  | (73) |  | 17,037 |
| Chinese Yuan Renminbi | 7D CHINA FIXING REPO RATES | 2.80\% to 4.00\% |  | (358) |  | 15,686 |
| Swiss Franc | 6M SWISS LIBOR BBA | 0.55\% |  | (7) |  | 15,329 |
| Brazilian Real | 1M BRL CDI | 9.12\% to 11.15\% |  | (81) |  | 9,009 |
| Pound Sterling | 6M GBP LIBOR BBA | 1.40\% to 1.60\% |  | (52) |  | 8,515 |
| Mexican Peso | 1M MXN TIIE BANXICO | $5.50 \%$ to $7.73 \%$ |  | 64 |  | 4,583 |
| Norwegian Krone | 6M NOK NIBOR BBG CM | 1.00\% |  | (6) |  | 1,763 |
| Polish Zloty | 6M WIBOR WIBO | 1.77\% |  | (8) |  | 402 |
|  |  |  | \$ | (654) | \$ | 492,341 |

## Indiana Public Retirement System

Notes to the Financial Statements, continued
June 30, 2017

## (E) Foreign Currency Risk

Foreign currency forward contracts and futures contracts are exposed to foreign currency risk. The required risk disclosures are included in the Foreign Currency Risk schedule in Note 3 (G).

At June 30, 2017, investments included a foreign currency contract receivable balance of $\$ 7.4$ billion and an off-setting foreign currency contract payable of $\$ 7.4$ billion

The net gain recognized for the fiscal year ended June 30, 2017 due to foreign currency transactions was $\$ 380$ thousand.

## Note 5. Risk Management

INPRS is exposed to various risks that could lead to loss and disruption to its operations, including damage to property owned by INPRS; personal injury or property damage liabilities; errors, omissions and theft by employees; certain employee death benefits, employee health benefits and unemployment and worker's compensation costs for INPRS employees; and breach of fiduciary responsibility.

For risks related to physical loss and liability, employee benefits and fiduciary responsibility, INPRS purchases commercial insurance for property, general liability, employee crime, employee health and unemployment, and fiduciary responsibility. No settlements have exceeded the insurance coverage for each of the past three years. INPRS records expenses for losses, if any, as the liabilities are incurred or replacement items are purchased.

## Note 6. Contingent Liabilities

INPRS is subject to lawsuits that, in management's opinion, will not have a material effect on the financial statements.

## Note 7. Net Pension Liability and Actuarial Information - Defined Benefit Plans

The components of the net pension liability of each defined benefit retirement plan as of June 30, 2017:

## (dollars in thousands)

| Pre-Funded Defined Benefit Pension Trust Funds | Total Pension Liability <br> (a) |  | Fiduciary Net Position (b) |  | Net Pension Liability <br> (a) - (b) |  | Fiduciary Net Position as a Percent of Total Pension Liability (b) I (a) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PERF | \$ | 19,106,215 | \$ | 14,644,671 | \$ | 4,461,544 | 76.6 \% |
| TRF '96 |  | 6,914,237 |  | 6,252,040 |  | 662,197 | 90.4 |
| '77 Fund |  | 5,385,753 |  | 5,401,179 |  | $(15,426)$ | 100.3 |
| JRS |  | 523,735 |  | 475,055 |  | 48,680 | 90.7 |
| EG\&C |  | 142,603 |  | 120,016 |  | 22,587 | 84.2 |
| PARF |  | 96,655 |  | 55,575 |  | 41,080 | 57.5 |
| LE DB |  | 3,804 |  | 2,865 |  | 939 | 75.3 |

Pay-As-You-Go Defined Benefit Pension Trust Fund

| TRF Pre-'96 | $\$ 16,736,769$ | $\$ 4,817,630$ | $\$$ | $11,919,139$ | 28.8 |
| :--- | :--- | :--- | :--- | :--- | :--- |

Notes to the Financial Statements, continued
June 30, 2017

The total pension liability is determined by 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) and assumptions about the probability of occurrence of events far into the future (e.g., mortality, disabilities, retirements, employment terminations). Actuarially determined amounts are subject to continual review and potential modifications, as actual results are compared with past expectations and new estimates are made about the future. In 2017, the following actuarial assumptions and methods were changed: updated the mortality tables to include both a healthy and disabled table for each plan, implemented changes due to the actuarial audits for consistency across all plans, and added a load on final average salary of $\$ 400$ to reflect unused sick leave accumulated at termination of employment for active and inactive PERF and TRF members.

The accompanying 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 (or funding excess).

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 the time of each valuation and the historical pattern of sharing benefit costs between the employers and plan members to that point. 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.

Notes to the Financial Statements, continued
June 30, 2017

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

| Description | PERF | $\begin{gathered} \text { TRF } \\ \text { Pre-'96 } \end{gathered}$ | TRF '96 | '77 Fund | JRS | EG\&C | PARF | LE DB |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Valuation Date: <br> 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 (Accounting) | Entry Age Normal (Level Percent of Payroll) |  |  |  |  |  |  |  |
| Actuarial Assumptions: |  |  |  | Period of four years ended June 30, 2014 |  |  |  |  |
| Experience Study Date | Period of four years ended June 30, 2014 | Period of ended Ju | $\begin{aligned} & \text { ree years } \\ & 30,2014 \end{aligned}$ |  |  |  |  |  |
| Investment Rate of Return (Accounting) | 6.75\%, includes inflation and net of investment expenses |  |  |  |  |  |  |  |
| Cost of Living Increases (COLA) or "Ad Hoc" COLA (see Note 1.) | 1.0\% | 1.0\% |  | 2.0\% | 2.5\% | 1.0\% | N/A | 1.0\% |
| Future Salary Increases, including Inflation | 2.50\% - 4.25\% | 2.50\% - 12.50\% |  | 2.50\% | 2.50\% | 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. Various real return premiums over the baseline inflation rate have been established for each asset class. The long-term expected nominal rate of return has been determined by calculating a weighted average of the expected real return premiums for each asset class, adding the projected inflation rate, and adding the expected return from rebalancing uncorrelated asset classes.

Notes to the Financial Statements, continued
June 30, 2017

|  | Geometric Basis <br>  <br> Public Equity <br> Long-Term Expected <br> Real Rate of Return | Target Asset <br> Allocation |
| :--- | :---: | :---: |
| Private Equity | $4.9 \%$ | $22.0 \%$ |
| Fixed Income - Ex Inflation-Linked | 5.7 | 14.0 |
| Fixed Income - Inflation-Linked | 2.3 | 20.0 |
| Commodities | 0.6 | 7.0 |
| Real Estate | 2.2 | 8.0 |
| Absolute Return | 3.7 | 7.0 |
| Risk Parity | 3.9 | 10.0 |
|  | 5.1 | 12.0 |

Total pension liability for each defined benefit pension plan was calculated using the discount rate of $6.75 \%$. The projection of cash flows used to determine the discount rate assumed the contributions from employers and where applicable from the 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 State 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 total pension liability for each plan.

Net pension liability is sensitive to changes in the discount rate. To illustrate the potential impact, the following table presents the net pension liability of the defined benefit pension plans calculated using the discount rate of $6.75 \%$, as well as what each plan's net pension liability 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 | $\begin{gathered} \text { 1\% Decrease } \\ 5.75 \% \end{gathered}$ |  | $\begin{aligned} & \text { Current } \\ & 6.75 \% \end{aligned}$ |  | $\begin{gathered} \text { 1\% Increase } \\ 7.75 \% \end{gathered}$ |  |
| PERF | \$ | 6,506,981 | \$ | 4,461,544 | \$ | 2,761,215 |
| TRF '96 |  | 1,654,941 |  | 662,197 |  | $(138,242)$ |
| '77 Fund |  | 843,547 |  | $(15,426)$ |  | $(709,503)$ |
| JRS |  | 109,027 |  | 48,680 |  | $(1,981)$ |
| EG\&C |  | 41,921 |  | 22,587 |  | 6,721 |
| PARF |  | 53,414 |  | 41,080 |  | 30,918 |
| LE DB |  | 1,218 |  | 939 |  | 695 |

Pay-As-You-Go Defined
Benefit Pension Trust Fund

| TRF Pre-'96 | $\$ 13,449,616 \quad \$ \quad 11,919,139 \quad \$ \quad 10,610,092$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Notes to the Financial Statements, continued
June 30, 2017

## Note 8. Subsequent Events: Financial Statement and Legislative Changes

## Financial Statement

There were no events or transactions that were known before the date the financial statements were issued that provided additional evidence about conditions that existed at June 30, 2017 that were material to the financial statements, and not recognized or disclosed in the financial statements for the year ended June 30, 2017.

## Legislative Changes

Below is a summary of significant legislative changes that are effective July 1, 2017. These changes have been reflected in the actuarial valuations as of June 30, 2017.

House Enrolled Act (HEA) 1001
TRF members who are newly hired will have an ASA only option similar to PERF My Choice.

House Enrolled Act (HEA) 1537
PERF, TRF Pre-'96, TRF '96 and EG\&C members, beneficiaries and survivors will receive a 13th check by October 1, 2017. Members must be retired or disabled on or before December 1, 2016 and must be eligible for a monthly benefit on July 1, 2017. The amount of the check will be based on the members' years of creditable service at retirement.

- At least five years, but less than 10 years (disability): $\$ 150$
- At least 10 years, but less than 20 years: $\$ 275$

■ At least 20 years, but less than 30 years: $\$ 375$

- At least 30 years: $\$ 450$

House Enrolled Act (HEA) 1555
Provides a town police reserve officer a special death benefit to law enforcement officers, who after June 30, 2017, die in the line of duty. Town police reserve officers work less than 1,000 hours and cannot participate in police pension plans.

House Enrolled Act (HEA) 1617
Provides that a ' 77 Fund member shall receive, after July 1, 2017, for the remainder of his or her life a disability equal to the monthly salary of a first-class patrolman or fire fighter based on these guidelines:

- has a permanent and total disability;
- that is a direct result of a catastrophic physical personal injury (67 percent degree of impairment);
- that occurs in the line of duty after July 1, 2008;
- and, that permanently prevents the fund member from performing any gainful work

There will be no retroactive benefit payments. Any members suffering a 67 percent degree impairment since July 1, 2008, should have their benefit adjusted as of July 1, 2017. Disability increases at a rate equal to the increases in the monthly salary of a first-class patrolman or fire fighter.

Notes to the Financial Statements, continued
June 30, 2017

## Senate Enrolled Act (SEA) 46

The act addresses various pension matters:
Provides for a special death benefit fund to pay death claims to the beneficiaries of public safety officers or other state public employees who die in the line of duty. Effective July 1, 2017, SE and PSO, and the portion of the special death benefit component for LPSPR, will be consolidated into a fund.

The minimum pension benefit for a regularly retired TRF member who receives an unreduced pension benefit is $\$ 185$ per month.

PERF or TRF ASA benefits that are not claimed by a survivor within three years of death of a member, must be credited in the manner provided by the Indiana Public Retirement System Board of Trustees.

## Senate Enrolled Act (SEA) 47

Allows EG\&C members to make deductions from their monthly retirement benefit to pay insurance premiums, charitable or non-profit contributions, or labor organization dues. Allowable insurance premiums include only those for life, medical, surgical, hospitalization, dental, vision, long-term care, or Medicare supplement coverage offered by the member's employer, state or the INPRS board.

Senate Enrolled Act (SEA) 80
Changes the benefit calculation for a ' 77 Fund member who retires after January 1, 2015, because of a disability at least 12 months after the member enters the DROP (Deferred Retirement Option Plan) to use a different DROP date. The member's retirement benefit will be calculated using the DROP entry date, not the DROP retirement date.

## Senate Enrolled Act (SEA) 119

Provides a public safety officer special death benefit to an emergency medical services employee, who after June 30 , 2017, dies as a direct result of personal injury or illness while performing duties as an air ambulance services provider. To receive this benefit, the air ambulance services employer, maintained by a health care system affiliated with a state educational institution, must purchase coverage at $\$ 100$ per year through INPRS for their employees.

## Senate Enrolled Act (SEA) 265

Modifies the benefit calculation of the PARF benefit to be offset by the actual PERF retirement benefit when the member retires from PARF. If there is an actual PERF retirement, the actual PERF benefit will be used as the offset. If the member has not retired from PERF, a hypothetical PERF benefit is to be used as the offset to the PARF benefit. When the member retires from PERF, the members PARF benefit is updated for the new PERF offset.


Introduction to Required Supplementary Information (Unaudited) and Other Supplementary Information

Historical trend information is designed to provide decision-usefulness of the financial reports, improved value for assessing accountability, and greater transparency related to measures of net pension liabilities impacting INPRS. The Schedules of Changes in Net Pension Liability and Net Pension Liability, Schedule of Contributions, Schedule of Investment Returns, and Schedule of Notes to Required Supplemental Information are required in addition to the Financial Statements. Other Supplementary Schedules are presented for the purpose of additional analysis and are not required for the Financial Statements. These supplemental reports are the Pension Relief Statement of Changes in Assets and Liabilities, Schedule of Administrative Expenses, Schedule of Administrative Expenses - Contractual and Professional Services, and the Schedule of Investment Expenses.

## Indiana Public Retirement System

Required Supplementary Information (Unaudited)
For the Year Ended June 30
Schedules of Changes in Net Pension Liability and Net Pension Liability ${ }^{1}$ Public Employees' Retirement Fund
(dollars in thousands)

| Changes in Net Pension Liability | 2017 |  | 2016 | 2015 | 2014 | 2013 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Pension Liability - Beginning of Year | \$ 18,408,947 | \$ | 17,980,568 | \$ 16,732,223 | \$ 16,145,681 | \$ 15,784,240 |
| Annuity Savings Account (ASA) - Beginning of Year | 2,656,892 |  | 2,717,173 | 2,851,501 | 2,796,103 | 2,749,449 |
| Excluding ASA - Beginning of Year | 15,752,055 |  | 15,263,395 | 13,880,722 | 13,349,578 | 13,034,791 |
| Service Cost | 194,101 |  | 191,055 | 273,910 | 258,070 | 270,974 |
| Interest Cost | 1,051,217 |  | 1,018,993 | 936,404 | 895,454 | 875,616 |
| Experience (Gains) / Losses | 82,964 |  | $(4,870)$ | 247,978 | $(15,161)$ | $(104,471)$ |
| Assumption Changes | 22,809 |  |  | 488,354 |  |  |
| Plan Amendments | $(22,766)$ |  |  |  | $(42,985)$ | $(167,486)$ |
| Benefit Payments ${ }^{2}$ | $(820,721)$ |  | $(786,607)$ | $(752,896)$ | $(680,203)$ | $(662,283)$ |
| ASA Annuitizations | 78,793 |  | 75,036 | 196,788 | 119,094 | 107,520 |
| Net Member Reassignment ${ }^{3}$ | $(3,618)$ |  | $(5,441)$ | $(8,155)$ | $(3,125)$ | $(5,083)$ |
| Other | 419 |  | 494 | 290 | - |  |
| Net Change in Total Pension Liability - Excluding ASA | 583,198 |  | 488,660 | 1,382,673 | 531,144 | 314,787 |
| Net Change in Total Pension Liability - ASA | 114,070 |  | $(60,281)$ | $(134,328)$ | 55,398 | 46,654 |
| Net Change in Total Pension Liability | 697,268 |  | 428,379 | 1,248,345 | 586,542 | 361,441 |
| Total Pension Liability - Excluding ASA - End of Year | 16,335,253 |  | 15,752,055 | 15,263,395 | 13,880,722 | 13,349,578 |
| Total Pension Liability - ASA - End of Year | 2,770,962 |  | 2,656,892 | 2,717,173 | 2,851,501 | 2,796,103 |
| Total Pension Liability - End of Year | \$ 19,106,215 |  | 18,408,947 | \$ 17,980,568 | \$ 16,732,223 | \$ 16,145,681 |
| Fiduciary Net Position - Beginning of Year | \$ 13,870,502 |  | 13,907,666 | \$ 14,104,288 | \$ 12,720,601 | \$ 12,243,755 |
| Employer Contributions ${ }^{4}$ | 558,891 |  | 615,773 | 538,059 | 526,090 | 455,658 |
| Member Contributions | 168,112 |  | 161,905 | 169,731 | 164,189 | 156,408 |
| Net Investment Income / (Loss) | 1,040,887 |  | 149,894 | 43,638 | 1,553,393 | 691,332 |
| Benefit Payments ${ }^{5}$ | $(964,856)$ |  | $(936,272)$ | $(913,408)$ | $(828,358)$ | $(791,360)$ |
| Net Member Reassignment ${ }^{6}$ | $(4,437)$ |  | $(5,271)$ | $(9,219)$ | $(4,246)$ | $(6,042)$ |
| Administrative Expenses ${ }^{7}$ | $(24,483)$ |  | $(24,098)$ | $(25,506)$ | $(27,433)$ | $(29,181)$ |
| Other | 55 |  | 905 | 83 | 52 | 31 |
| Net Change in Fiduciary Net Position | 774,169 |  | $(37,164)$ | $(196,622)$ | 1,383,687 | 476,846 |
| Fiduciary Net Position - End of Year | \$ 14,644,671 |  | \$ 13,870,502 | \$ 13,907,666 | \$ 14,104,288 | \$ 12,720,601 |

## Net Pension Liability

Total Pension Liability
Fiduciary Net Position
Net Pension Liability

| \$ | 19,106,215 | \$ | 18,408,947 |  | ,56 |  | 16,732,223 |  | \$16,145,681 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 14,644,671 |  | 13,870,502 |  | 13,907,666 |  | 14,104,288 |  | 12,720,601 |
| \$ | 4,461 | \$ | 4538 | \$ |  | \$ | 2,627,935 | \$ | 3,425 |

Fiduciary Net Position as a Percentage of the Total Pension Liability

Covered Payroll ${ }^{8}$

|  | 76.6 | $75.3 \%$ | $77.3 \%$ | $84.3 \%$ | $78.8 \%$ |  |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| $\$$ | $4,997,555$ | $\$$ | $4,868,709$ | $\$$ | $4,804,145$ | $\$$ |
|  | $4,896,635$ | $\$ 4,700,000$ |  |  |  |  |
|  | $89.3 \%$ | $93.2 \%$ | $84.8 \%$ | $53.7 \%$ | $72.9 \%$ |  |

[^10]
## Indiana Public Retirement System

Required Supplementary Information (Unaudited), continued
For the Year Ended June 30
Schedules of Changes in Net Pension Liability and Net Pension Liability ${ }^{1}$ Teachers' Pre-1996 Account
(dollars in thousands)
Changes in Net Pension Liability
Total Pension Liability - Beginning of Year
Annuity Savings Account (ASA) - Beginning of Year
Excluding ASA - Beginning of Year

| $\mathbf{2 0 1 7}$ |  | $\mathbf{2 0 1 6}$ |
| ---: | ---: | ---: |
|  |  | $\$ 17,017,747$ |
| $1,265,128$ |  |  |
|  |  | $1,421,455$ |
| $15,575,072$ |  | $15,596,292$ |


| 2015 |
| ---: |
| $\$ 16,355,21$ |
| $1,715,34$ |
| $14,639,87$ |

Service Cost
Interest Cost
Experience (Gains) / Losses
$\begin{array}{rr}43,204 & 46,787 \\ 1,016,915 & 1,019,403\end{array}$

> 57,751 959,895 $(140,466)$ 1033158

Plan Amendments
$(61,548)$
Benefit Payments ${ }^{2}$
4,213

ASA Annuitizations
$(1,135,662) \quad(1,118,122)$
30,502 35,185
68,860
961,628
$\frac{2014}{\$ 16,463,598}$

| 2013 |
| ---: |
| $\$ 16,522,015$ |
| $1,974,076$ |
| $14,547,939$ |

Net Member Reassignment ${ }^{3}$
Other
Net Change in Total Pension Liability - Excluding ASA
Net Change in Total Pension Liability - ASA
Net Change in Total Pension Liability
Total Pension Liability - Excluding ASA - End of Year
Total Pension Liability - ASA - End of Year
Total Pension Liability - Ending
Fiduciary Net Position - Beginning of Year
Employer Contributions
Nonemployer Contributing Entity Contributions
Member Contributions
Net Investment Income / (Loss)
Benefit Payments ${ }^{4}$
Net Member Reassignment ${ }^{5}$
Administrative Expenses
Other
Net Change in Fiduciary Net Position
Fiduciary Net Position - End of Year
Net Pension Liability
Total Pension Liability
Fiduciary Net Position
Net Pension Liability
Fiduciary Net Position as a Percentage of the Total Pension Liability

Covered Payroll ${ }^{6}$
Net Pension Liability as a Percentage of Covered Payroll

[^11]
## Indiana Public Retirement System

Required Supplementary Information (Unaudited), continued
For the Year Ended June 30
Schedules of Changes in Net Pension Liability and Net Pension Liability ${ }^{1}$ Teachers' 1996 Account
(dollars in thousands)

| Changes in Net Pension Liability | 2017 |  | 2016 |  | 2015 |  | 2014 |  | 2013 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Pension Liability - Beginning of Year | \$ | 6,391,750 | \$ | 5,905,691 | \$ | 5,236,993 | \$ | 4,748,149 | \$ | 4,338,309 |
| Annuity Savings Account (ASA) - Beginning of Year |  | 1,217,433 |  | 1,170,915 |  | 1,120,729 |  | 990,705 |  | 899,339 |
| Excluding ASA - Beginning of Year |  | 5,174,317 |  | 4,734,776 |  | 4,116,264 |  | 3,757,444 |  | 3,438,970 |
| Service Cost |  | 168,651 |  | 167,836 |  | 170,892 |  | 155,314 |  | 147,337 |
| Interest Cost |  | 357,392 |  | 328,018 |  | 287,264 |  | 262,263 |  | 240,282 |
| Experience (Gains) / Losses |  | 46,460 |  | 29,876 |  | $(40,857)$ |  | 504 |  | $(15,995)$ |
| Assumption Changes |  | $(115,506)$ |  |  |  | 263,991 |  |  |  |  |
| Plan Amendments |  | 1,353 |  |  |  |  |  | $(4,504)$ |  |  |
| Benefit Payments ${ }^{2}$ |  | $(109,335)$ |  | $(99,507)$ |  | $(90,267)$ |  | $(77,253)$ |  | $(68,793)$ |
| ASA Annuitizations |  | 8,504 |  | 8,932 |  | 22,575 |  | 15,151 |  | 11,621 |
| Net Member Reassignment ${ }^{3}$ |  | 4,258 |  | 4,370 |  | 4,890 |  | 6,922 |  |  |
| Other |  | - |  | 16 |  | 24 |  | 423 |  | 4,022 |
| Net Change in Total Pension Liability - Excluding ASA |  | 361,777 |  | 439,541 |  | 618,512 |  | 358,820 |  | 318,474 |
| Net Change in Total Pension Liability - ASA |  | 160,710 |  | 46,518 |  | 50,186 |  | 130,024 |  | 91,366 |
| Net Change in Total Pension Liability |  | 522,487 |  | 486,059 |  | 668,698 |  | 488,844 |  | 409,840 |
| Total Pension Liability - Excluding ASA - End of Year |  | 5,536,094 |  | 5,174,317 |  | 4,734,776 |  | 4,116,264 |  | 3,757,444 |
| Total Pension Liability - ASA - End of Year |  | 1,378,143 |  | 1,217,433 |  | 1,170,915 |  | 1,120,729 |  | 990,705 |
| Total Pension Liability - Ending | \$ | 6,914,237 | \$ | 6,391,750 | \$ | 5,905,691 | \$ | 5,236,993 | \$ | 4,748,149 |
| Fiduciary Net Position - Beginning of Year | \$ | 5,611,230 | \$ | 5,379,113 | \$ | 5,189,442 | \$ | 4,433,677 | \$ | 4,018,149 |
| Employer Contributions |  | 227,207 |  | 215,626 |  | 205,763 |  | 194,751 |  | 180,714 |
| Member Contributions |  | 92,838 |  | 88,430 |  | 86,515 |  | 81,802 |  | 77,532 |
| Net Investment Income / (Loss) |  | 464,893 |  | 64,203 |  | 25,587 |  | 586,782 |  | 258,111 |
| Benefit Payments ${ }^{4}$ |  | $(143,725)$ |  | $(135,290)$ |  | $(127,899)$ |  | $(108,720)$ |  | $(97,157)$ |
| Net Member Reassignment ${ }^{5}$ |  | 5,116 |  | 4,735 |  | 5,865 |  | 7,836 |  | 2,806 |
| Administrative Expenses |  | $(5,553)$ |  | $(5,603)$ |  | $(6,184)$ |  | $(6,707)$ |  | $(6,482)$ |
| Other |  | 34 |  | 16 |  | 24 |  | 21 |  | 4 |
| Net Change in Fiduciary Net Position |  | 640,810 |  | 232,117 |  | 189,671 |  | 755,765 |  | 415,528 |
| Fiduciary Net Position - End of Year | \$ | 6,252,040 | \$ | 5,611,230 | \$ | 5,379,113 | \$ | 5,189,442 | \$ | 4,433,677 |
| Net Pension Liability |  |  |  |  |  |  |  |  |  |  |
| Total Pension Liability | \$ | 6,914,237 | \$ | 6,391,750 | \$ | 5,905,691 | \$ | 5,236,993 | \$ | 4,748,149 |
| Fiduciary Net Position |  | 6,252,040 |  | 5,611,230 |  | 5,379,113 |  | 5,189,442 |  | 4,433,677 |
| Net Pension Liability | \$ | 662,197 | \$ | 780,520 | \$ | 526,578 | \$ | 47,551 | \$ | 314,472 |

Fiduciary Net Position as a Percentage of the Total Pension Liability

Covered Payroll
90.4 \%
87.8 \%
91.1 \%
99.1 \%
93.4 \%

Net Pension Liability as a Percentage of Covered Payroll

${ }^{2}$ Excludes ASA lump sum payments to retired members or refunds of accumulated member contributions associated with ASA balances.
${ }^{3}$ Includes net interfund transfers, except for interfund transfers of ASA balances.
${ }^{4}$ Includes ASA lump sum payments to retired members and refunds of employee contributions associated with ASA balances.
${ }^{5}$ Includes net interfund transfers.

## Indiana Public Retirement System

Required Supplementary Information (Unaudited), continued
For the Year Ended June 30

Schedules of Changes in Net Pension Liability and Net Pension Liability ${ }^{1}$
1977 Police Officers' and Firefighters' Retirement Fund


## Indiana Public Retirement System

Required Supplementary Information (Unaudited), continued
For the Year Ended June 30

Schedules of Changes in Net Pension Liability and Net Pension Liability ${ }^{1}$ Judges' Retirement System

| Changes in Net Pension Liability | 2017 |  | 2016 |  | 2015 |  | 2014 |  | 2013 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Pension Liability - Beginning of Year | \$ | 501,126 | \$ | 468,944 | \$ | 464,855 | \$ | 453,110 | \$ | 437,854 |
| Service Cost |  | 14,762 |  | 13,870 |  | 15,283 |  | 15,302 |  | 16,084 |
| Interest Cost |  | 34,083 |  | 31,889 |  | 31,753 |  | 30,992 |  | 30,047 |
| Experience (Gains) / Losses |  | $(3,107)$ |  | 7,182 |  | 8,411 |  | $(16,026)$ |  | $(13,603)$ |
| Assumption Changes |  | $(1,213)$ |  | - |  | $(31,926)$ |  | - |  | 186 |
| Plan Amendments |  | - |  | - |  | - |  | - |  | - |
| Benefit Payments ${ }^{2}$ |  | $(22,099)$ |  | $(20,922)$ |  | $(19,432)$ |  | $(18,527)$ |  | $(17,579)$ |
| Net Member Reassignment ${ }^{3}$ |  | - |  | - |  | - |  | 4 |  | 121 |
| Other |  | 183 |  | 162 |  | - |  | - |  | - |
| Net Change in Total Pension Liability |  | 22,609 |  | 32,181 |  | 4,089 |  | 11,745 |  | 15,256 |
| Total Pension Liability - End of Year | \$ | 523,735 | \$ | 501,125 | \$ | 468,944 | \$ | 464,855 | \$ | 453,110 |
| Fiduciary Net Position - Beginning of Year | \$ | 441,790 | \$ | 437,352 | \$ | 432,730 | \$ | 375,752 | \$ | 262,326 |
| Employer Contributions |  | 16,824 |  | 16,946 |  | 21,020 |  | 20,895 |  | 111,419 |
| Member Contributions |  | 3,468 |  | 3,239 |  | 3,292 |  | 2,856 |  | 2,631 |
| Net Investment Income / (Loss) |  | 35,196 |  | 5,323 |  | (102) |  | 51,890 |  | 16,955 |
| Benefit Payments ${ }^{2}$ |  | $(22,099)$ |  | $(20,922)$ |  | $(19,432)$ |  | $(18,527)$ |  | $(17,579)$ |
| Net Member Reassignment ${ }^{3}$ |  | - |  | - |  | - |  | 4 |  | 121 |
| Administrative Expenses |  | (124) |  | (148) |  | (165) |  | (146) |  | (126) |
| Other |  | - |  | - |  | 9 |  | 6 |  | 5 |
| Net Change in Fiduciary Net Position |  | 33,265 |  | 4,438 |  | 4,622 |  | 56,978 |  | 113,426 |
| Fiduciary Net Position - End of Year | \$ | 475,055 | \$ | 441,790 | \$ | 437,352 | \$ | 432,730 | \$ | 375,752 |
| Net Pension Liability |  |  |  |  |  |  |  |  |  |  |
| Total Pension Liability | \$ | 523,735 | \$ | 501,125 | \$ | 468,944 | \$ | 464,855 | \$ | 453,110 |
| Fiduciary Net Position |  | 475,055 |  | 441,790 |  | 437,352 |  | 432,730 |  | 375,752 |
| Net Pension Liability | \$ | 48,680 | \$ | 59,335 | \$ | 31,592 | \$ | 32,125 | \$ | 77,358 |
| Fiduciary Net Position as a Percentage of the Total |  |  |  |  |  |  |  |  |  |  |
| Covered Payroll ${ }^{4}$ | \$ | 54,755 | \$ | 51,382 | \$ | 48,582 | \$ | 46,041 | \$ | 47,595 |
| Net Pension Liability as a Percentage of Covered Payroll |  | 88.9 \% |  | 115.5 \% |  | 65.0 \% |  | 69.8 \% |  | 162.5 \% |

[^12]
## Indiana Public Retirement System

Required Supplementary Information (Unaudited), continued
For the Year Ended June 30

Schedules of Changes in Net Pension Liability and Net Pension Liability ${ }^{1}$
Excise, Gaming and Conservation Officers' Retirement Fund
(dollars in thousands)

| Changes in Net Pension Liability | 2017 |  | 2016 |  | 2015 |  | 2014 |  | 2013 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Pension Liability - Beginning of Year | \$ | 138,965 | \$ | 132,796 | \$ | 123,601 | \$ | 118,097 | \$ | 113,282 |
| Service Cost |  | 3,550 |  | 3,011 |  | 3,905 |  | 3,841 |  | 3,811 |
| Interest Cost |  | 9,389 |  | 8,955 |  | 8,384 |  | 8,031 |  | 7,740 |
| Experience (Gains) / Losses |  | 120 |  | 470 |  | 845 |  | (430) |  | $(1,845)$ |
| Assumption Changes |  | $(2,578)$ |  |  |  | 2,669 |  |  |  | (40) |
| Plan Amendments |  |  |  |  |  | - |  |  |  |  |
| Benefit Payments ${ }^{2}$ |  | $(6,826)$ |  | $(6,267)$ |  | $(6,608)$ |  | $(5,938)$ |  | $(4,836)$ |
| Net Member Reassignment ${ }^{3}$ |  | (26) |  | - |  | - |  | - |  | (15) |
| Other |  | 9 |  | - |  | - |  | - |  | - |
| Net Change in Total Pension Liability |  | 3,638 |  | 6,169 |  | 9,195 |  | 5,504 |  | 4,815 |
| Total Pension Liability - End of Year | \$ | 142,603 | \$ | 138,965 | \$ | 132,796 | \$ | 123,601 | \$ | 118,097 |
| Fiduciary Net Position - Beginning of Year | \$ | 111,329 | \$ | 110,038 | \$ | 110,657 | \$ | 97,019 | \$ | 76,543 |
| Employer Contributions |  | 5,691 |  | 5,367 |  | 5,215 |  | 5,359 |  | 19,740 |
| Member Contributions |  | 1,102 |  | 1,016 |  | 1,004 |  | 1,019 |  | 1,006 |
| Net Investment Income / (Loss) |  | 8,869 |  | 1,313 |  | (71) |  | 13,339 |  | 4,702 |
| Benefit Payments ${ }^{2}$ |  | $(6,826)$ |  | $(6,245)$ |  | $(6,608)$ |  | $(5,938)$ |  | $(4,836)$ |
| Net Member Reassignment ${ }^{3}$ |  | (26) |  | (21) |  | - |  |  |  | (15) |
| Administrative Expenses |  | (123) |  | (139) |  | (159) |  | (141) |  | (121) |
| Other |  | - |  | - |  | - |  | - |  | - |
| Net Change in Fiduciary Net Position |  | 8,687 |  | 1,291 |  | (619) |  | 13,638 |  | 20,476 |
| Fiduciary Net Position - End of Year | \$ | 120,016 | \$ | 111,329 | \$ | 110,038 | \$ | 110,657 | \$ | 97,019 |
| Net Pension Liability |  |  |  |  |  |  |  |  |  |  |
| Total Pension Liability | \$ | 142,603 | \$ | 138,965 | \$ | 132,796 | \$ | 123,601 | \$ | 118,097 |
| Fiduciary Net Position |  | 120,016 |  | 111,329 |  | 110,038 |  | 110,657 |  | 97,019 |
| Net Pension Liability | \$ | 22,587 | \$ | 27,636 | \$ | 22,758 | \$ | 12,944 | \$ | 21,078 |
| Fiduciary Net Position as a Percentage of the Total |  |  |  |  |  |  |  |  |  |  |
| Covered Payroll ${ }^{4}$ | \$ | 27,428 | \$ | 25,526 | \$ | 25,133 | \$ | 25,825 | \$ | 24,675 |
| Net Pension Liability as a Percentage of Covered Payroll |  | 82.3 \% |  | 108.3 \% |  | 90.6 \% |  | 50.1 \% |  | 85.4 \% |

[^13]
## Indiana Public Retirement System

Required Supplementary Information (Unaudited), continued
For the Year Ended June 30

Schedules of Changes in Net Pension Liability and Net Pension Liability ${ }^{1}$
Prosecuting Attorneys' Retirement Fund

| Changes in Net Pension Liability | 2017 |  | 2016 |  | 2015 |  | 2014 |  | 2013 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Pension Liability - Beginning of Year | \$ | 85,033 | \$ | 77,861 | \$ | 65,336 | \$ | 61,940 | \$ | 56,080 |
| Service Cost |  | 1,650 |  | 1,626 |  | 1,603 |  | 1,587 |  | 1,568 |
| Interest Cost |  | 5,714 |  | 5,239 |  | 4,409 |  | 4,207 |  | 3,816 |
| Experience (Gains) / Losses |  | 1,996 |  | 4,058 |  | 4,551 |  | - |  | 1,474 |
| Assumption Changes |  | (216) |  | - |  | 5,216 |  | - |  | (109) |
| Plan Amendments |  | 6,547 |  | - |  |  |  | - |  | 1,346 |
| Benefit Payments ${ }^{2}$ |  | $(4,069)$ |  | $(3,747)$ |  | $(3,254)$ |  | $(2,398)$ |  | $(2,235)$ |
| Net Member Reassignment ${ }^{3}$ |  |  |  | - |  | - |  | - |  | - |
| Other |  | - |  | (4) |  | - |  | - |  | - |
| Net Change in Total Pension Liability |  | 11,622 |  | 7,172 |  | 12,525 |  | 3,396 |  | 5,860 |
| Total Pension Liability - End of Year | \$ | 96,655 | \$ | 85,033 | \$ | 77,861 | \$ | 65,336 | \$ | 61,940 |
| Fiduciary Net Position - Beginning of Year | \$ | 52,792 | \$ | 53,424 | \$ | 54,507 | \$ | 47,920 | \$ | 27,689 |
| Employer Contributions |  | 1,486 |  | 1,440 |  | 1,063 |  | 1,174 |  | 19,443 |
| Member Contributions |  | 1,357 |  | 1,279 |  | 1,269 |  | 1,334 |  | 1,271 |
| Net Investment Income / (Loss) |  | 4,167 |  | 589 |  | (34) |  | 6,581 |  | 1,897 |
| Benefit Payments ${ }^{2}$ |  | $(4,069)$ |  | $(3,747)$ |  | $(3,254)$ |  | $(2,398)$ |  | $(2,235)$ |
| Net Member Reassignment ${ }^{3}$ |  |  |  | - |  | - |  | - |  | - |
| Administrative Expenses |  | (158) |  | (193) |  | (127) |  | (108) |  | (145) |
| Other |  | - |  | - |  | - |  | 4 |  | - |
| Net Change in Fiduciary Net Position |  | 2,783 |  | (632) |  | $(1,083)$ |  | 6,587 |  | 20,231 |
| Fiduciary Net Position - End of Year | \$ | 55,575 | \$ | 52,792 | \$ | 53,424 | \$ | 54,507 | \$ | 47,920 |
| Net Pension Liability |  |  |  |  |  |  |  |  |  |  |
| Total Pension Liability | \$ | 96,655 | \$ | 85,033 | \$ | 77,861 | \$ | 65,336 | \$ | 61,940 |
| Fiduciary Net Position |  | 55,575 |  | 52,792 |  | 53,424 |  | 54,507 |  | 47,920 |
| Net Pension Liability | \$ | 41,080 | \$ | 32,241 | \$ | 24,437 | \$ | 10,829 | \$ | 14,020 |
| Fiduciary Net Position as a Percentage of the Total |  |  |  |  |  |  |  |  |  |  |
| Covered Payroll ${ }^{4}$ | \$ | 22,635 | \$ | 21,372 | \$ | 21,145 | \$ | 20,608 | \$ | 18,805 |
| Net Pension Liability as a Percentage of Covered Payroll |  | 181.5 \% |  | 150.9 \% |  | 115.6 \% |  | 52.5 \% |  | 74.6 \% |

[^14]
## Indiana Public Retirement System

Required Supplementary Information (Unaudited), continued
For the Year Ended June 30

Schedules of Changes in Net Pension Liability and Net Pension Liability ${ }^{1}$
Legislators' Defined Benefit Fund

| Changes in Net Pension Liability | 2017 |  | 2016 |  | 2015 |  | 2014 |  | 2013 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Pension Liability - Beginning of Year | \$ | 4,015 | \$ | 4,325 | \$ | 4,166 | \$ | 4,285 | \$ | 4,497 |
| Service Cost |  | 1 |  | 2 |  | 3 |  | 3 |  | 2 |
| Interest Cost |  | 258 |  | 280 |  | 269 |  | 277 |  | 291 |
| Experience (Gains) / Losses |  | (113) |  | (233) |  | (68) |  | (36) |  | (140) |
| Assumption Changes |  | - |  |  |  | 325 |  | - |  | - |
| Plan Amendments |  | - |  |  |  | - |  | - |  | - |
| Benefit Payments ${ }^{2}$ |  | (357) |  | (359) |  | (370) |  | (363) |  | (365) |
| Net Member Reassignment ${ }^{3}$ |  | - |  |  |  | - |  | - |  | - |
| Other |  | - |  |  |  | - |  | - |  | - |
| Net Change in Total Pension Liability |  | (211) |  | (310) |  | 159 |  | (119) |  | (212) |
| Total Pension Liability - End of Year | \$ | 3,804 | \$ | 4,015 | \$ | 4,325 | \$ | 4,166 | \$ | 4,285 |
| Fiduciary Net Position - Beginning of Year | \$ | 2,919 | \$ | 3,174 | \$ | 3,489 | \$ | 3,337 | \$ | 3,385 |
| Employer Contributions |  | 135 |  | 138 |  | 131 |  | 138 |  | 150 |
| Member Contributions |  | - |  |  |  | - |  | - |  | - |
| Net Investment Income / (Loss) |  | 221 |  | 27 |  | (5) |  | 439 |  | 201 |
| Benefit Payments ${ }^{2}$ |  | (357) |  | (359) |  | (370) |  | (363) |  | (365) |
| Net Member Reassignment ${ }^{3}$ |  | - |  |  |  | - |  | - |  | - |
| Administrative Expenses |  | (53) |  | (61) |  | (71) |  | (62) |  | (34) |
| Other |  | - |  | - |  | - |  | - |  | - |
| Net Change in Fiduciary Net Position |  | (54) |  | (255) |  | (315) |  | 152 |  | (48) |
| Fiduciary Net Position - End of Year | \$ | 2,865 | \$ | 2,919 | \$ | 3,174 | \$ | 3,489 | \$ | 3,337 |
| Net Pension Liability |  |  |  |  |  |  |  |  |  |  |
| Total Pension Liability | \$ | 3,804 | \$ | 4,015 | \$ | 4,325 | \$ | 4,166 | \$ | 4,285 |
| Fiduciary Net Position |  | 2,865 |  | 2,919 |  | 3,174 |  | 3,489 |  | 3,337 |
| Net Pension Liability | \$ | 939 | \$ | 1,096 | \$ | 1,151 | \$ | 677 | \$ | 948 |
| Fiduciary Net Position as a Percentage of the Total Pension Liability |  |  |  |  |  |  |  |  |  |  |
| Covered Payroll ${ }^{4}$ |  | N/A |  | N/A |  | N/A |  | N/A |  | N/A |
| Net Pension Liability as a Percentage of Covered Payroll ${ }^{4}$ |  | N/A |  | N/A |  | N/A |  | N/A |  | N/A |
| ${ }^{1}$ Information is not available prior to 2013. Additional years will be added until 10 years of historical data are shown. <br> ${ }^{2}$ Includes refunds of employee contributions. <br> ${ }^{3}$ Includes net interfund transfers. <br> ${ }^{4}$ Is a closed plan with no payroll. |  |  |  |  |  |  |  |  |  |  |

Required Supplementary Information (Unaudited), continued
Schedule of Contributions
(dollars in thousands)

| For the Year Ended June 30 |  | rially mined bution C) | Contributions in Relation to ADC ${ }^{1}$ |  | Contribution Deficiency (Excess) |  | Contributions as a Percentage of ADC | Covered Payroll |  | Contributions as a Percentage of Covered Payroll |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PERF |  |  |  |  |  |  |  |  |  |  |
| $2017^{2,3}$ | \$ | 496,867 | \$ | 558,659 | \$ | $(61,792)$ | 112.4 \% | \$ | 4,997,555 | 11.2 \% |
| 2016 $2,3,4$ |  | 492,000 |  | 547,684 |  | $(55,684)$ | 111.3 |  | 4,868,709 | 11.2 |
| $2015^{2,3}$ |  | 517,717 |  | 536,467 |  | $(18,750)$ | 103.6 |  | 4,804,145 | 11.2 |
| $2014{ }^{2,3}$ |  | 528,562 |  | 519,576 |  | 8,986 | 98.3 |  | 4,896,635 | 10.6 |
| $2013{ }^{2}$ |  | 464,047 |  | 455,658 |  | 8,389 | 98.2 |  | 4,700,000 | 9.7 |
| $2012{ }^{2}$ |  | 449,388 |  | 397,843 |  | 51,545 | 88.5 |  | 4,550,000 | 8.7 |
| $2011{ }^{2}$ |  | 351,000 |  | 342,779 |  | 8,221 | 97.7 |  | 4,500,000 | 7.6 |
| $2010^{2}$ |  | 329,731 |  | 331,090 |  | $(1,359)$ | 100.4 |  | 4,800,000 | 6.9 |
| $2009{ }^{2}$ |  | 326,170 |  | 323,151 |  | 3,019 | 99.1 |  | 4,850,000 | 6.7 |
| $2008{ }^{2}$ |  | 303,700 |  | 303,877 |  | (177) | 100.1 |  | 4,550,000 | 6.7 |


|  |  |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | :--- |
| $2017^{5}$ | $\$$ | 875,525 | $\$$ | 875,525 | $\$$ | - | $100.0 \%$ | $\$$ |
| $2016^{5}$ |  | 892,548 | 892,548 | 912,685 | $95.9 \%$ |  |  |  |
| $2015^{5}$ |  | 851,427 | 851,427 | - | 100.0 | 989,093 | 90.2 |  |
| $2014^{5}$ | 831,942 | 831,942 | - | 100.0 | $1,074,827$ | 79.2 |  |  |
| $2013^{5,6}$ | $1,013,080$ | $1,013,080$ | - | 100.0 | $1,262,828$ | 65.9 |  |  |
| $2012^{5}$ | 764,423 | 764,423 | - | 100.0 | $1,383,428$ | 73.2 |  |  |
| $2011^{5}$ |  | 748,978 | 748,978 | - | 100.0 | $1,637,066$ | 46.7 |  |
| $2010^{5}$ | 731,149 | 731,149 | - | 100.0 | $1,762,750$ | 42.5 |  |  |
| $2009^{5}$ | 706,366 | 706,366 | - | 100.0 | $1,865,102$ | 39.2 |  |  |
| $2008^{5}$ | 675,682 | 675,682 | - | 100.0 | $2,030,484$ | 34.8 |  |  |
|  |  |  |  | - | 100.0 | $2,295,816$ | 29.4 |  |


| TRF '96 |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $2017{ }^{2}$ | \$ | 198,444 | \$ | 227,207 | \$ | $(28,763)$ | 114.5 \% | \$ | 3,020,463 | 7.5\% |
| $2016^{2}$ |  | 180,375 |  | 215,626 |  | $(35,251)$ | 119.5 |  | 2,881,397 | 7.5 |
| $2015{ }^{2}$ |  | 178,260 |  | 205,763 |  | $(27,503)$ | 115.4 |  | 2,742,187 | 7.5 |
| $2014{ }^{2}$ |  | 177,711 |  | 194,751 |  | $(17,040)$ | 109.6 |  | 2,598,115 | 7.5 |
| $2013{ }^{2}$ |  | 167,311 |  | 180,714 |  | $(13,403)$ | 108.0 |  | 2,442,496 | 7.4 |
| 2012 ${ }^{2}$ |  | 154,800 |  | 181,067 |  | $(26,267)$ | 117.0 |  | 2,400,000 | 7.5 |
| $2011^{2}$ |  | 135,057 |  | 166,633 |  | $(31,576)$ | 123.4 |  | 2,225,000 | 7.5 |
| $2010^{2}$ |  | 99,000 |  | 154,491 |  | $(55,491)$ | 156.1 |  | 2,200,000 | 7.0 |
| $2009^{2}$ |  | 125,330 |  | 147,425 |  | $(22,095)$ | 117.6 |  | 2,075,000 | 7.1 |
| $2008^{2}$ |  | 130,305 |  | 132,446 |  | $(2,141)$ | 101.6 |  | 1,825,000 | 7.3 |
| '77 Fund |  |  |  |  |  |  |  |  |  |  |
| 20172,3 | \$ | 91,258 | \$ | 150,698 | \$ | $(59,440)$ | 165.1\% | \$ | 809,382 | 18.6 \% |
| 2016 ${ }^{2,3}$ |  | 113,353 |  | 151,299 |  | $(37,946)$ | 133.5 |  | 771,949 | 19.6 |
| 2015 ${ }^{2,3}$ |  | 118,881 |  | 146,402 |  | $(27,521)$ | 123.2 |  | 745,336 | 19.6 |
| $2014{ }^{2}$ |  | 103,425 |  | 140,119 |  | $(36,694)$ | 135.5 |  | 710,581 | 19.7 |
| $2013{ }^{2}$ |  | 112,590 |  | 137,111 |  | $(24,521)$ | 121.8 |  | 695,000 | 19.7 |
| 2012 ${ }^{2}$ |  | 132,549 |  | 135,605 |  | $(3,056)$ | 102.3 |  | 690,000 | 19.7 |
| $2011^{2}$ |  | 117,820 |  | 133,726 |  | $(15,906)$ | 113.5 |  | 687,000 | 19.5 |
| $2010^{2}$ |  | 94,135 |  | 130,775 |  | $(36,640)$ | 138.9 |  | 670,000 | 19.5 |
| 2009 ${ }^{2,7}$ |  | 64,285 |  | 64,285 |  | - | 100.0 |  | 330,000 | 19.5 |
| $2008{ }^{2,8}$ |  | 123,825 |  | 133,196 |  | $(9,371)$ | 107.6 |  | 635,000 | 21.0 |

[^15]
## Indiana Public Retirement System

Required Supplementary Information (Unaudited), continued
Schedule of Contributions
(dollars in thousands)


[^16]Required Supplementary Information (Unaudited), continued
For the Year Ended June 30

Schedule of Investment Returns ${ }^{1}$
Annual Money-Weighted Rate of Return, Net of Investment Expense

| Pension Trust Funds | 2017 | 2016 | 2015 | 2014 | 2013 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PERF | 7.60 \% | 1.11 \% | 0.32 \% | 12.33 \% | 5.79 \% |
| TRF Pre-' $96{ }^{2}$ | 8.14 | 1.01 | 0.57 | 12.71 | 5.11 |
| TRF ' $96{ }^{2}$ | 8.14 | 1.01 | 0.57 | 12.71 | 5.11 |
| '77 Fund | 7.97 | 1.22 | (0.07) | 13.70 | 5.85 |
| JRS | 7.96 | 1.18 | (0.06) | 13.69 | 5.24 |
| EG\&C | 7.97 | 1.17 | (0.09) | 13.69 | 5.48 |
| PARF | 7.94 | 1.10 | (0.08) | 13.70 | 4.84 |
| LE DB | 7.91 | 0.84 | (0.13) | 13.65 | 6.16 |
| Total INPRS ${ }^{3}$ | 7.85 | 1.10 | 0.44 | 12.69 | 5.57 |

${ }^{1}$ Information is not available prior to 2013. Additional years will be added until 10 years of historical data are shown.
${ }^{2}$ The TRF Pre-'96 and TRF '96 are combined for investment purposes.
${ }^{3}$ Rate of return also includes LE DC, SE and PSO Death Benefit Funds, and LPSPR.

Required Supplementary Information (Unaudited), continued
For the Year Ended June 30

## Schedule of Notes to Required Supplementary Information

## Schedules of Changes in Net Pension Liability and Net Pension Liability

Plan Amendments
In 2017, there were no changes to the Plan that impacted the pension benefits during the fiscal year.

## Assumption Changes

In 2017, a second mortality table was added creating both the healthy and disabled mortality tables. There were no other changes made during the current year that materially impacted Net Pension Liability during the fiscal year.

## Schedule of Contributions ${ }^{1}$

Methods and Assumptions Used in Calculating Actuarially Determined Contributions
The following actuarial methods and assumptions were used to determine the Actuarially Determined Contribution Rates:

| Description | PERF | $\begin{gathered} \text { TRF } \\ \text { Pre-'96 } \end{gathered}$ | TRF '96 | '77 Fund | JRS | EG\&C | PARF | LE DB |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |
| Liabilities | June 30, 2014 - Member census data as of June 30, 2014 was used in the valuation and adjusted, where appropriate, to reflect changes between June 30, 2014 and June 30, 2015. Standard actuarial roll forward techniques were then used to project the total pension liability computed as of June 30, 2014 to the June 30, 2015 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 | 30 Years, Closed |  |  |  |  |  |  |  |
| Remaining Amortization Period in Years (Weighted) ${ }^{2}$ | 26 | 25 | 26 | 30 Years, Open | 12 | 24 | 27 | 18 |
| Asset Valuation Method | Four 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 | 1.0\% |  |  | 2.0\% | 2.5\% | 1.0\% | N/A | 1.0\% |
| Future Salary Increases, including Inflation | 2.50\% - 4.25\% | 2.50\% | 12.50\% | 2.50\% | 2.50\% | 2.50\% | 4.00\% | 2.25\% |
| Inflation | 2.25\% |  |  |  |  |  |  |  |

## Trends

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 \& TRF only), dependent assumptions, future salary increase assumptions, inflation assumptions and COLA assumptions. For further details refer to the Actuarial Section of the CAFR.
TRF Pre-'96 and LE DB are closed to new members and the population will continue to decline over time.
Contributions in fiscal year 2013 are higher than in fiscal years 2014-2016 for certain pension trust funds due to 2012 HB 1376, which appropriated additional monies for the following pension trust funds: TRF Pre-' 96 - $\$ 206,796$ thousand, JRS $\$ 90,187$ thousand, EG\&C - $\$ 14,619$ thousand, and PARF - $\$ 17,363$ thousand.

[^17]Other Supplementary Schedules

Local Public Safety Pension Relief Fund Statement of Changes in Assets and Liabilities

| (dollars in thousands) | Balance as of June 30, 2016 |  | Additions |  | Deductions |  | Balance as of June 30, 2017 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assets |  |  |  |  |  |  |  |  |
| Cash | \$ | 339 | \$ | 430,405 | \$ | 430,022 | \$ | 722 |
| Short Term Investments |  | 26,957 |  | 216,600 |  | 212,698 |  | 30,859 |
| Contributions and Miscellaneous Receivables |  | 2,500 |  | - |  | - |  | 2,500 |
| Total Assets | \$ | 29,796 | \$ | 647,005 | \$ | 642,720 | \$ | 34,081 |
| Liabilities |  |  |  |  |  |  |  |  |
| Administrative Payable | \$ | 12 | \$ | 214,255 | \$ | 214,104 | \$ | 163 |
| Due to Other Funds |  | 3 |  | 56 |  | 57 |  | 2 |
| Due to Other Governments |  | 29,781 |  | 207,729 |  | 203,594 |  | 33,916 |
| Total Liabilities | \$ | 29,796 | \$ | 422,040 | \$ | 417,755 | \$ | 34,081 |

Other Supplementary Schedules, continued
For the Year Ended June 30

## Schedule of Administrative Expenses

| (dollars in thousands) | 2017 |  | 2016 |  |
| :---: | :---: | :---: | :---: | :---: |
| Personnel Services |  |  |  |  |
| Salaries and Wages | \$ | 12,853 | \$ | 12,396 |
| Employee Benefits |  | 5,822 |  | 5,650 |
| Temporary Services |  | 1,669 |  | 2,339 |
| Total Personnel Services |  | 20,344 |  | 20,385 |
| Contractual and Professional Services |  |  |  |  |
| Benefit Payment Processing Fees |  | 2,984 |  | 2,951 |
| Consulting Services |  | 2,583 |  | 1,703 |
| Actuarial Services |  | 821 |  | 1,086 |
| Legal Services |  | 209 |  | 83 |
| Total Contractual and Professional Services |  | 6,597 |  | 5,823 |
| Information Technology Services |  |  |  |  |
| Data Processing |  | 2,271 |  | 2,278 |
| Software and Licenses |  | 1,968 |  | 1,747 |
| Other Computer Services |  | 2,214 |  | 3,233 |
| Total Information Technology Services |  | 6,453 |  | 7,258 |
| Communications |  |  |  |  |
| Postage |  | 657 |  | 645 |
| Telephone |  | 431 |  | 445 |
| Printing |  | 186 |  | 188 |
| E-communications |  | 165 |  | 120 |
| Total Communications |  | 1,439 |  | 1,398 |
| Miscellaneous |  |  |  |  |
| Depreciation and Amortization |  | 1,970 |  | 2,068 |
| Office Rent and Expenses |  | 853 |  | 888 |
| Memberships and Training |  | 186 |  | 240 |
| Travel |  | 137 |  | 118 |
| Equipment Rental |  | 63 |  | 72 |
| Other Administrative Expenses |  | 323 |  | 252 |
| Total Miscellaneous |  | 3,532 |  | 3,638 |
| Subtotal Administrative Expenses |  | 38,365 |  | 38,502 |
| Less Amount Allocated to Pension Relief Fund |  | (31) |  | (33) |
| Total Administrative Expenses | \$ | 38,334 | \$ | 38,469 |

Other Supplementary Schedules, continued
For the Year Ended June 30

Schedule of Administrative Expenses - Contractual and Professional Services

| Vendor Name | 2017 |  | 2016 |  | Nature of Services |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Conduent (formerly XEROX) | \$ | 3,024 | \$ | 3,043 | Benefit Payment Services |
| iLab LLC |  | 672 |  | - | Expanded DB Services |
| PricewaterhouseCoopers LLP |  | 666 |  | 960 | Actuarial Services |
| RSM US LLP |  | 414 |  | 405 | Audit Services |
| Guidesoft |  | 385 |  | - | Expanded DB Services |
| Voya |  | 249 |  | - | Expanded DB Services |
| CherryRoad Technologies Inc. |  | 196 |  | 360 | Application Maintenance and Software Development |
| Nyhart, Inc. |  | 155 |  | 126 | Actuarial Services |
| Paganelli Law Group LLP |  | 142 |  | - | Legal Services |
| Crowe Horwarth |  | 98 |  | 83 | Business Continuity and Disaster Recovery |
| Loyalty Research Center |  | 86 |  | 86 | Research Services |
| Omkar Markand, M.D. |  | 69 |  | 80 | Medical Consulting |
| Gartner, Inc. |  | 67 |  | 65 | Project Research \& Advisory Service |
| AllClear |  | 64 |  | 64 | Identity Theft Protection Services |
| Ice Miller LLP |  | 56 |  | 52 | Legal Services |
| AIRvan Consulting LLC |  | 49 |  | 49 | Survey Services |
| Automatic Data Processing, Inc. |  | 46 |  | 49 | Payroll Processing Services |
| CEM Benchmarking, Inc. |  | 45 |  | 45 | Benchmarking Services |
| Willis Towers Watson (formerly Towers Perrin) |  | 33 |  | 6 | Human Resources Consulting |
| Westcomm |  | 22 |  | 23 | CAFR Production |
| Rook Security |  | 10 |  | - | IT Security Services |
| Advisa |  | 9 |  | 70 | Human Resources Consulting |
| Bluelock |  | 7 |  | - | Vulnerability Management Scanning Services |
| Wombat |  | 6 |  | - | IT Security Services |
| Briljent |  | 4 |  | 29 | Training Documentation Services |
| Stephenson Morow \& Semler |  | 4 |  | 9 | Legal Services |
| Krieg DeVault LLP |  | 2 |  | 14 | Legal Services |
| Cspring |  | - |  | 120 | IT Resource Assistance |
| Optiv (formerly FishNet) |  | - |  | 56 | IT Security Services |
| Farnsworth Group |  | - |  | 7 | Focus Group Research |
| Other |  | 17 |  | 22 | Other Services |
| Total | \$ | 6,597 | \$ | 5,823 |  |

[^18]Other Supplementary Schedules, continued
For the Year Ended June 30

## Schedule of Investment Expenses

| (dollars in thousands) | 2017 |  | 2016 |  |
| :---: | :---: | :---: | :---: | :---: |
| Investment Management Fees | \$ | 186,000 | \$ | 160,565 |
| Securities Lending Fees |  | 618 |  | 772 |
| General Investment Expenses |  |  |  |  |
| Investment Consultants |  |  |  |  |
| Verus (formerly Wurts) |  | 620 |  | 600 |
| TorreyCove |  | 575 |  | 454 |
| Aksia |  | 450 |  | 450 |
| Cutter Associates |  | - |  | 356 |
| Mercer |  | 335 |  | 319 |
| Capital Cities |  | 85 |  | 85 |
| MSCIIISS |  | 61 |  | 56 |
| Callan |  | - |  | 55 |
| CitiGroup |  | 27 |  | 26 |
| Ernst \& Young |  | 23 |  | 23 |
| CBRE, Inc. |  | - |  | 5 |
| Total Investment Consultants |  | 2,176 |  | 2,429 |
| Investment Custodian |  | 1,437 |  | 472 |
| Broker Commissions |  | 4,218 |  | 4,187 |
| Investment Recordkeeper Fees |  | 6,296 |  | 5,585 |
| Investment Staff Expenses |  | 2,380 |  | 2,201 |
| Investment Administrative Expenses |  | 955 |  | 957 |
| Subtotal General Investment Expenses |  | 17,462 |  | 15,831 |
| Less Amount Allocated to Pension Relief Fund |  | (5) |  | (9) |
| Total General Investment Expenses |  | 17,457 |  | 15,822 |
| Total Investment Expenses | \$ | 204,075 | \$ | 177,159 |



## Investment Section

## 2017 COMPREHENSIVE ANNUAL FINANCIAL REPORT For the Fiscal Year Ended June 30, 2017

| 11 | Report on Investment Activities | Investment Results - Annuity Savings |  |
| :---: | :---: | :---: | :---: |
| 114 | Report from the Chief Investment Officer | Accounts, My Choice and Legislators' Defined Contribution Fund |  |
|  | Outline of Investment Policies |  |  |
| $\begin{aligned} & 124 \\ & 126 \end{aligned}$ | Investment Summary | $\begin{aligned} & 142 \\ & 143 \end{aligned}$ | Assets by Investment Option Historical Annualized Time-Weighted |
| Investment Results - Consolidated Defined Benefit Assets |  |  |  |
|  |  |  | Rate of Return by Investment Option vs. Benchmark Returns Historical Annual Interest Crediting Rates |
| 127 | Assets by Retirement Plan | 144 |  |
| 128 | Asset Allocation Summary: June 30, 2017 Actual vs. June 30, 2016 Actual |  |  |
|  |  | Investment Information |  |
| 129 | Asset Allocation Summary: June 30, 2017 Actual vs. Target | 145 Top Ten Equity Holdings by Fair Value |  |
| 130 | Annualized Time-Weighted Rate of Return by Asset Class vs. | 145 | Top Ten Fixed Income Holdings by Fair Value |
|  | Benchmark Returns | 146 | Top Ten Brokers' Commission Fees |
| 131 | Asset Class Summaries | 146 | Investment Management Fees |
| 139 | Historical Comparative Investment | 147 | Investment Professionals |
|  | Results |  |  |
| 140 | Ten-Year Time-Weighted Investment |  |  |
|  | Rates of Return |  |  |
| 41 | orma |  |  |

# Verus ${ }^{77}$ 

August 2, 2017

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, 2017.

## Investment Landscape

To begin the fiscal year, debate surrounding the potential implementation of Brexit led to the first rate cut by the Bank of England since 2009 and a significant drawdown in the Pound Sterling. The currency hit a new 31-year low relative to the U.S. dollar. Global interest rates remained near alltime lows, and negative yielding sovereign and corporate debt totaled $\$ 11.6$ trillion by the end of the first quarter of the fiscal year. U.S. equity markets rallied with small cap stocks leading the way; the Russell 2000 Index finished up 9.0 percent. Information technology, up 12.9 percent, was the best performing sector in the S\&P 500 by a large margin. Emerging market equities experienced a rebound, returning 9.0 percent for the quarter.

During the second quarter of the fiscal year, economies around the globe experienced a pickup in headline inflation as energy prices increased. Strong performance from companies in the energy and financial sectors led to value equities outperforming growth equities. The Russell 1000 Value Index and Russell 1000 Growth Index returned 6.7 percent and 1.0 percent, respectively. The Federal Reserve raised interest rates at its December meeting, increasing the target federal funds rate to a range of $0.50-0.75$ percent. The U.S. dollar rose 6.4 percent on a trade weighted basis, creating a large return gap between hedged and unhedged international exposures. The MSCl EAFE Index returned (0.7) percent on an unhedged basis and 7.3 percent hedged.

During the third quarter of the fiscal year, the global economy exhibited a coordinated pickup in economic activity. In March, the Federal Reserve increased the target federal funds rate by 0.25 percent. The move resulted in the U.S. Treasury curve flattening moderately as short-term interest rates increased and long-term rates remained materially unchanged. Growth equities rebounded

Report on Investment Activities, continued
relative to value equities. The Russell 1000 Growth Index returned 8.9 percent, while the Russell 1000 Value Index returned 3.3 percent. The U.S. dollar fell 3.6 percent on a trade-weighted basis providing a boost to unhedged international equity exposures. The MSCI EAFE Index was up 7.2 percent for the quarter. In emerging markets, investors benefited from stabilizing currencies and commodity prices as well as higher growth outlooks. The MSCI EM Index finished the quarter up 11.4 percent.

Risk assets continued to move higher over the quarter ending June 30, finishing broadly up for the fiscal year. U.S. equities benefited from strong earnings growth; the blended year-over-year growth rate for Q1 earnings of S\&P 500 companies was 9.3 percent. In June 2017, the Federal Reserve raised the target federal funds rate to a range of 1.00-1.25 percent, and the Federal Open Market Committee (FOMC) minutes revealed the committee could start unwinding the \$4.5 trillion balance sheet by the end of the calendar year. In Europe, European Central Bank President Mario Draghi surprised markets with comments perceived as relatively hawkish. Subsequently, the Euro appreciated 2.3 percent against the U.S. dollar, and developed global rates moved upward. International equities outperformed domestic equities over the fourth quarter of the fiscal year, with the MSCI ACWI ex U.S. Index returning 5.8 percent relative to 3.1 percent for the S\&P 500 Index.

## Plan Performance ${ }^{1}$

The INPRS consolidated defined benefit investment portfolio (the Portfolio) earned an 8.0 percent return net of fees for the fiscal year ending June 30, 2017. This return outperformed the policy target index ${ }^{2}$ return by 1.5 percent and the long-term actuarial assumed return of 6.75 percent, by 1.25 percent. Portfolio risk as measured by standard deviation, fell from 8.5 percent at the beginning of the fiscal year to 7.3 percent in June. Total portfolio active risk remained below 2.0 percent, moving from 1.5 percent down to nearly 1.0 percent throughout fiscal year 2017.

The steady global upswing that occurred over the fiscal year led to strong performance from the portfolio's public equity, private markets, real estate, and absolute return assets on an absolute basis. On a relative basis, the Portfolio's public equity, both fixed income portfolios, real estate, and absolute return assets exceeded their respective composite benchmarks. Public equity strategies returned 21.0 percent in aggregate, beating the benchmark by 2.0 percent. The fixed income -ex inflation-linked portfolio returned 1.9 percent, outperforming the benchmark by 1.3 percent. While the fixed income - inflation-linked bond portfolio was down (0.2) percent for the fiscal year, it outperformed the benchmark by 1.1 percent. The real estate portfolio was up 10.4 percent for the fiscal year, finishing 3.0 percent above its benchmark. Absolute return assets generated a return of 7.8 percent, outperforming the benchmark by 2.9 percent.

[^19]Report on Investment Activities, continued

While the private markets portfolio was up 12.7 percent for the fiscal year, it underperformed the public market equivalent benchmark by 8.8 percent. During prolonged equity bull markets, private markets assets tend to underperform their public market counterparts. Risk parity strategies generated a 4.6 percent return for the period, while commodities lost 6.7 percent.

On an annualized basis, the Portfolio has performed well relative to the policy index. For the three years ending June 30, 2017, the Portfolio returned 3.0 percent, outperforming the target index by 0.4 percent. Over the five-year period, the Portfolio returned 5.7 percent, outperforming the target index by 0.4 percent. For the trailing ten-year period, the Portfolio returned 2.9 percent, which was neutral with the policy dynamic index returned also returning 2.9 percent over the same time period.

## Plan Activity

During the 2017 fiscal year, Varus and INPRS' investment staff collaborated on a number of comprehensive projects. Together we performed a thorough review of the Investment Policy Statement (IPS). We also incorporated a governance process into the liquidity management framework. Varus and INPRS' investment staff evaluated the market for risk parity managers in order to continue to diversify the existing manager roster within the risk parity portfolio. Additionally, Varus worked with investment staff to retain an independent transaction cost analysis provider to assist INPRS in fulfilling its fiduciary obligations to measure and monitor the trading practices of investment managers. Analysis and evaluation of the active management environment took place in an effort to determine how and where active management can be used and how active risk impacts total portfolio risk. A benchmark audit was conducted to review benchmarks used from the custodian, the performance reporting system, and the risk system. Focused analysis on investment management fees was performed for traditional asset classes relative to peers. Varus and INPRS' investment staff continued to measure and monitor the major drivers of risk within the portfolio and further developed a framework for managing portfolio risk.

All of us here at Verus appreciate the opportunity to assist the INPRS Board in meeting the Plan's investment objectives. We are confident in the direction of the Portfolio given the System's demographics and fiscal strength. We look forward to continuing our partnership as we navigate ever-changing capital markets.

Sincerely,


Jeffrey J. MacLean
Chief Executive Officer

## INPRS' Defined Benefit Investment Imperatives ${ }^{1}$

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' Board set the long-term rate of return assumption at 6.75 percent, and 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 ${ }^{2}$

The consolidated defined benefit assets returned 8.0 percent net of all fees over the past fiscal year and ended with a fair value of $\$ 26.4$ billion. Led by strong performance from higher risk, higher potential reward strategies (e.g. public equities, private markets, and real estate) as well as absolute return strategies, the portfolio marched higher throughout the year without many speed bumps along the way and surpassed the 6.75 percent return target. With a multitude of political and central bank headlines over the course of the year, one may have expected the environment to be ripe for wild swings across asset classes, and thus, the portfolio. Yet, markets tended to brush-off these events as a source of noise rather than longterm shifts in fundamentals, and as a result, the lack of volatility that has been a hallmark across most markets following the 2008 financial crisis continued in fiscal year 2017.

It is in these benign environments that the pressure to hold a larger allocation in those asset classes performing best continues to mount and our resolve in holding a diversified strategy is tested most. At INPRS, we believe the high level of uncertainty regarding the global economy's future calls for prudence, and we remain prudent by constructing a portfolio that does not have a concentrated allocation to any one asset class, regardless of how strong its performance has been over the most recent history.

Based on extensive research of the various asset classes and their performance in different economic environments through time, it was determined in 2012 that a new risk-balanced framework better fit our first two imperatives. Developed from that research, the chart on the following page illustrates the projected range of outcomes for INPRS' 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.

Report from the Chief Investment Officer, continued

INPRS Net of Fee Cumulative Return


The following table shows INPRS' annual net-of-fees returns over the same time period. Since inception of the revised strategy, the portfolio has generated an annual return of 5.5 percent above the return of cash and outperformed the average historical spread for the asset allocation over cash by 4.5 percent ${ }^{3}$.

INPRS Annual Returns (Net of Fees)

|  | Excess Return | + | Cash Return | $=$ |
| :--- | :---: | :---: | :---: | :---: |
| FY2013 | $5.9 \%$ | $0.1 \%$ | Total Return |  |
| FY2014 | 13.6 | 0.1 | $6.0 \%$ |  |
| FY2015 | 0.0 | 0.0 | 13.7 |  |
| FY2016 | 1.0 | 0.2 | 0.0 |  |
| FY2017 | 7.5 | 0.5 | 1.2 |  |
| INPRS Annual Return | 5.5 | 0.2 | 8.0 |  |
| Avg. Annual Return of <br> INPRS Target Asset | 4.5 |  | 5.7 |  |
| Allocation (since 1937) |  |  |  |  |

The prior charts highlight the near-term challenges resulting from today's low interest rate (and cash return) environment as the Plan's total performance has fallen short of the target rate of return assumption of 6.75 percent since 2012. 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.

[^20]
## Report from the Chief Investment Officer, continued

The chart below is better aligned with that long-term focus as it shows the expected range of outcomes for the investment portfolio over twenty years. As you can see, we are very early into the period over which the asset allocation was selected to produce, but the short-term results allow us to be optimistic that we are on the correct path.

INPRS Net of Fees Cumulative Return


## Performance Attribution

Looking closer at fiscal year 2017, the returns of INPRS' separate asset classes are shown in the chart on the following page. A majority of asset classes had positive returns while asset classes that tend to perform poorly when inflation is lower than expected - commodities and inflation-linked bonds - struggled. Equities (public and private) as well as real estate continued to post strong returns net of all fees as economic growth surprised to the upside. Investors have also been increasingly willing to pay-up for these higher risk asset classes in hopes of higher yields, and they have been rewarded over the past few years as central banks have flooded the global economy with liquidity and corporate earnings have improved. Finally, absolute return strategies were also accretive to the 6.75 percent return target net of all fees while providing a return that has been less correlated with cheaper equity and fixed income exposures over time. ${ }^{5}$

After OPEC ${ }^{6}$ and Russia agreed to a production freeze in the first quarter of fiscal year 2017 and optimism for a pick-up off of the low levels of inflation experienced over the past decade increased following the U.S. election, the commodities portfolio was yielding a positive return. However, those returns and then some were given back in the second half of the year with increased U.S. oil production, elevated global inventories, and lower inflation than expected by market participants in the final four months of the fiscal year (as measured by CPI).?

[^21]Report from the Chief Investment Officer, continued

The risk parity portfolio has been constructed with the most diversified collection of public asset classes available. The allocation of risk within these strategies can take many forms, including by asset class, factor, or economic environment. Regardless of the implementation, the risk contribution of each element to the overall portfolio is predetermined and controlled. Given this diversification and the fact that equities were the only major public asset class with a return greater than low single digits, the risk parity portfolio underperformed the 6.75 percent return target over the past fiscal year.

1-Year Asset Class Returns as of June 30, 2017


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).

Fiscal YTD Contribution to Total Return (As of 6/30/17)


Report from the Chief Investment Officer, continued

In fiscal year 2017, the investment team achieved a return that was 1.5 percent above the target asset allocation benchmark, net of all fees. The benchmark is meant to reflect what performance would have been had the plan 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 plan. This has continued the positive trend of the past five years as the outperformance generated by the investment team has produced approximately $\$ 457$ million in added value (asset allocation + manager selection) over a portfolio of merely passive investments since July 2012. To put this into perspective, these additional returns have been large enough to cover half of the PERF retirement payments made in fiscal year 2017.

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


Breaking that result down further, you can see that the outperformance over the past five years has largely been a result of positive manager selection across a majority of asset classes.

Annualized Performance Relative to Benchmarks July 2012 - June 2017


Report from the Chief Investment Officer, continued

## Current Portfolio Exposures

As previously mentioned, the System 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 the fiscal year to stay within the Board-approved allocation bands for each asset class. The allocation as of June 30, 2017 can be found in the chart below.


## With a Liability-Focused Portfolio: The Path of Returns are Important

The investment process for any individual or institution begins with the determination of that person's or entity's specific goals and risk tolerance. At INPRS, the process we have gone through, and continue to go through, has been no different. It is easy to get side-tracked by complicated actuarial analysis, short-term investment results, and a myriad of other distractions, but to avoid this trap, we focus on the basic economics of our expectations for future cash inflows and outflows to establish our plan's objectives.

The analysis begins with a projection of the liabilities based on the expected timing and magnitude of future retirement payments. It is then assumed that the funding for these liabilities is projected to come from two primary sources: employer/ employee contributions and investment returns. While contributions provide the ongoing support for expected cash out flows, they also serve as the back-stop in case the investment returns fall short of expectations or actuarial assumptions prove to be incorrect.

As a result of the factors outlined above, it is important to note that no two pension plans are exactly alike. For INPRS' specific plans, we believe there are additional considerations that require further attention: (1) the interrelationship between the funding sources and investment portfolio and (2) the negative effect of drawdowns given our cash flow profile.

Report from the Chief Investment Officer, continued

First, two fundamental linkages between employer contributions and investment returns exist within INPRS' consolidated defined benefit plan:

1. Although INPRS smooth's investment returns over five years for actuarial purposes, employer contributions can still become more volatile as investment performance is more volatile. The more return volatility the portfolio experiences the less predictable and stable the contribution requirements will be for employers. While the five-year smoothing does reduce some variability, it does not eliminate it. As a result, it is still critical to minimize portfolio drawdowns as much as possible while targeting a 6.75 percent rate of return.
2. Employers' fiscal health and traditional investment portfolios (e.g. 60 percent equities and 40 percent bonds) are generally biased toward environments where growth is better than expected. The income growth that fuels the tax base for INPRS' employers is frequently a result of higher economic growth. A traditional portfolio is also highly dependent on the rate of growth given that equities largely determine its performance. Consequently, it may be advantageous to reduce the correlation of the investment performance to economic growth so that both the portfolio and employers are not going through rough patches at the same time.

Second, intuition would lead one to believe that as long as the target rate of return was eventually achieved, drawdowns should be manageable for a pension plan with our long time horizon. But this is not always the case. Negative cash flows can produce a scenario where any significant loss in the investment portfolio can prohibit the plan from getting back to a healthy funded status within a reasonable period of time.

To illustrate this dynamic, consider the following example of a pension plan with an 85 percent funded status:


In this example, the funded status will grow from 85.0 percent to 96.0 percent over twenty years if the plan is able to achieve a 6.75 percent return every year without any variation in the return from year-to-year. As we all know, unfortunately, investment markets are not this tranquil. Every asset class is susceptible to poor performance that can last months, years, or even decades.

In the face of this uncertainty, it is important to understand the effect a surprise portfolio drawdown may have on our funded status. For example, let's assume the portfolio has a 30.0 percent sell-off in the first year (not an unusual occurrence for a traditional portfolio historically ${ }^{8}$ ), but then, we are able to earn a 9.2 percent investment return the remaining nineteen years of the time period. As a result of this turnaround in performance, we are able to show a 6.75 percent annualized return over the full twenty years despite the year one drawdown.

[^22]
## Report from the Chief Investment Officer, continued

When we translate these returns into actual cash flows and combine them with the assumed 2.0 percent cash outflow each year mentioned earlier, the future outcome is not as bright as it initially seems (see the chart below). While in the base case, the funded status reaches 96.0 percent in year 20 . The 30.0 percent drawdown case fails to get back to the original 85.0 percent funded status. This surprising result happens because the positive returns in years two through twenty are accruing off of a lower base each year than they would have been if there were: (1) no drawdown and (2) if there was no cash coming out of the plan each year.


This example is not meant to forecast a significant sell-off in the next year or illustrate our exact situation at INPRS across each plan that we manage ${ }^{9}$, but it is meant to highlight the need for our plan to be prepared for such possibilities given that we have negative cash flows across many plans and mitigate such drawdowns so that we continue to improve the financial strength of our various pension funds over time. One way we can do this is by reducing the reliance on any single asset class to provide the majority of our returns. While a concentrated allocation may provide adequate returns for a certain period of time, drawdowns in the chosen asset class are inevitable, and we need to avoid being caught in a position where a majority of our asset allocation is experiencing a material drawdown, thus creating a greater chance of a 30.0 percent loss or worse.

INPRS' asset allocation may look different than one that merely targets return without regard for risk. However, analyzing and planning for the inherent risks across the assets and liabilities are critical in ensuring we can make the required retirement payments when they come due. As a result, our plan has sought a more diversified approach to strategic asset allocation guided by our understanding of INPRS' specific funding sources and cash flows.

## Defined Contribution Plans

While the majority of this letter has focused on topics related to the portfolio of the defined benefit plans at INPRS, another critical aspect of the investment process is the establishment and ongoing management of the defined contribution investment fund line-up. Known as the Annuity Savings Account (ASA), My Choice: Retirement Savings Plan for Public Employees (My Choice ${ }^{10}$, and Legislators' Defined Contribution Fund, 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.

Report from the Chief Investment Officer, continued

Just as there have been imperatives established to guide the investment process of the defined benefit plan, we believed it was critical to establish specific imperatives for the defined contribution plans at INPRS, as well. In fiscal year 2017, the investment team collaborated with INPRS' defined contribution general consultant, Capital Cities, and the Board to establish the following imperatives:

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 make 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.

In addition to the ongoing monitoring and operation of the investment options, the investment team also formally conducts quarterly reviews of the defined contribution plans that culminates in an annual update presentation to the Board. This annual review process includes comparisons of INPRS' fees to the peer universe, fund performance relative to expectations, as well as defined contribution industry trends. One of the biggest takeaways from this year's review was the competitiveness of the funds offered across INPRS' platform in terms of fees. Based on data from Callan Associates, it is estimated that our members save approximately $\$ 15$ million per year versus similar investment fund offerings from institutional providers.

In fiscal year 2017, the investment team also undertook an in-depth review of the target date funds. The review began with a survey of our members that gauged their risk tolerance as well as satisfaction with the current investment options. The analysis was also conducted within the context of the Department of Labor's best practices for plan fiduciaries. Based on these data points and others, it was determined that INPRS' target date funds were still a good fit with the plans' specific circumstances, and no changes were made to the current line-up.

## Investment Team and Culture

There has been an evolution in culture over the past several years as the investment team has conscientiously dedicated more attention to risk management across each function of the investment process. In fiscal year 2017, the latest improvements were focused on how the structure and depth of our team could further enhance this transformation.

The defined benefit and defined contribution portfolios have grown in complexity through time as they have become larger and more global in nature. For example, today, the $\$ 26.4$ billion defined benefit portfolio consists of 15,992 securities across 335 managers. One can imagine the attention a portfolio of this scale as well as multiple defined contribution plans necessitates on a daily basis. Recognizing this constant need, we created a functional group within the investment team

Report from the Chief Investment Officer, continued
that would become experts in each of the operational processes that follow the asset allocation and manager selection decisions. The diagram below summarizes the primary steps of our investment process that the newly created Investment Risk and Operations group will lead going forward (highlighted in blue).


And just as our middle and back office functions can continually improve, we think there are always improvements to be made on the front-end, as well. One of the guiding principles in INPRS' investment policy statement states that "the asset allocation is the most important determinant of long-term investment results." In-line with this belief, we made a few changes in fiscal year 2017 in hopes of further improving the cross collaboration amongst the team and, thus, the asset allocation through time. The list below highlights the primary modifications we made:

- Investment directors are now responsible for at least one public and one "alternative" asset class. While it is important that we maintain expertise in "alternative" asset classes (e.g. private markets, real estate, absolute return, etc.), we believe it is just as important for our directors to consistently gauge the relative opportunity set between public and "alternative" markets.
- Investment analysts are now generalists rather than specializing in one asset class. We believe that increasing our analysts' breadth of knowledge will accelerate their development and the impact they have on the asset allocation decisions the team makes going forward.
- The investment team meets monthly to share asset allocation research and ideas. No matter whether a team member is a first-year analyst or a long-time director, we want the best ideas on asset allocation to surface and make their way into the portfolio. We believe this new forum provides another avenue for these thoughts to be heard.


## Navigating the Continuously Uncertain Future

The calls for lower returns going forward have become widespread among market participants. Even if that does play out as expected over the next decade, the winners and losers as well as the path of returns are still unknown. The mosaic of the global economy makes forecasting individual asset class returns (and even whether the sign should be positive or negative) extremely difficult; however, the one thing an investor can do is prepare for multiple outcomes. As Elroy Dimson from the London Business School has said, "Risk means more things can happen than will happen." Our investment team believes we have a portfolio strategy and process that is better prepared for multiple "futures," but we are relentlessly focused on finding even better ways to diversify the portfolio and improve our investment process in the face of these unknowns going forward.

Sincerely,


Scott B. Davis, CFA
Chief Investment Officer

## Outline of Investment Policies

The Indiana Public Retirement System's (INPRS) Board of Trustees (Board) serves as the ultimate fiduciary of INPRS. Indiana Code, Article 5-10.5 provides that a nine-member Board of Trustees will oversee INPRS. The nine trustees shall be appointed by the Governor, four of whom must be members of INPRS. The INPRS Board of Trustees appoints the executive director of INPRS.

The Board establishes investment policies; however, Indiana law establishes guidelines on the investment of the Fund's assets. At all times, INPRS must invest its assets in accordance with the "Prudent Investor" standard. Under this standard, investment decisions are based upon the same degree of care that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a similar character with similar aims.

The objective of the Board's Investment Policy Statement (IPS) is to maintain adequate funding for each retirement fund and pension system in order to provide for the payment of such fund's actuarially determined liabilities over time in a costeffective manner. The purpose of the IPS is to support this general objective by:

- Setting forth the investment policies which the Board judges to be appropriate and prudent, in consideration of the needs and legal requirements applicable to direct investment of the assets;
- Making a clear distinction between the roles and responsibilities of the Board, Staff, and each Service Provider;
- Establishing formalized criteria to measure, monitor and evaluate the performance results of the Investment Managers;
- Communicating the investment policies, objectives, guidelines, and performance criteria of the Board to the Staff, Investment Managers, Consultants, Service Providers, employers, members and all other interested parties; and
- Serving as a review document to guide the ongoing oversight of the investments by the System and demonstrating that the Board is fulfilling its fiduciary responsibilities in the administration and management of each Retirement Fund's assets solely in the interests of such Retirement Fund's members and beneficiaries.

The Board intends for the IPS to be a dynamic document, and, as such, expects to conduct periodic reviews utilizing input from INPRS staff, consultants and other knowledgeable parties. The Board anticipates approving changes from time to time to reflect changes in any or all of: economic and market conditions, investment opportunities, the System's investment strategy, benefit provisions, and the INPRS' governance.

The Board recognizes that the allocation of assets is the most important determinant of investment rates of returns over long periods of time. The procedure for determining the allocation will consider the relevant characteristics of the liabilities and the potential assets of the Fund. An asset liability study will be conducted no less than every five years and will analyze the expected returns of various 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 Fund.

With a long-term investment focus, the portfolio is invested across the following asset classes: Public Equity, Private Markets (i.e. Private Equity and Private Credit), Fixed Income - Ex Inflation-Linked, Fixed Income - Inflation-Linked, Commodities, Real Estate, Absolute Return, and Risk Parity. On December 16, 2016, the Board approved a revision to the Investment Policy Statement incorporating a change to the asset allocation targets. In addition, the private equity asset class was renamed to private markets to include the approved allocation to private credit.

Outline of Investment Policies, continued

| INPRS 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 | NCREIF NFI-ODCE |
| Absolute Return | 10.0 | 6.0 to 14.0 | HFRI Fund of Funds Composite |
| Risk Parity | 12.0 | 7.0 to 17.0 | Custom Benchmark |

The Board employs investment managers to implement the asset allocation through a selective and thorough search process that embodies the principles of procedural due diligence. It is the intent of the Board to encourage the participation of all qualified organizations in this process. The Board encourages investment managers to develop long-term investment strategies consistent with the guidelines outlined in the IPS, as well as governing Indiana statutes. Additionally, investment managers will adhere to and comply with the CFA Institute Global Investment Performance Standards in calculating and reporting investment performance. Performance of each manager is measured against the rate of return associated with appropriate market index benchmarks and an appropriate universe or style peer group of investment managers.

Annuity Savings Accounts (ASA) are accounts established for each member. A member's account is credited with the legislated 3.0 percent mandatory contribution (either paid by the member or by the employer). The ASA produces an additional separate benefit from the fixed-formula employer funded pension benefit to the member. The member can self-direct their investment between several options or may leave their contributions invested in the default target date retirement fund. The ASA investment options currently include:

1. Large Cap Equity Index Fund;
2. Small/Mid Cap Equity Fund;
3. International Equity Fund;
4. Fixed Income Fund;
5. Inflation Linked Fixed Income Fund;
6. Target-Date Retirement Funds;
7. Money Market Fund;
8. Stable Value Fund;
9. Consolidated Defined Benefit Assets (Legislators' Plan only);

The number and types of investment funds offered will be periodically reviewed by the Board in order to ensure diversity of investment alternatives, adequate and reasonable availability of investment types, and clarity and usefulness of the investment choices. ASA performance data is included in the Investment Highlights of this section.

Fund Fact Sheets for the aforementioned ASA investment options, are available online at:
http://www.in.gov/inprs/fundfactsheets.htm

Investment Summary
As of June 30, 2017

| (dollars in millions) | Actual Assets |  | Percent |
| :---: | :---: | :---: | :---: |
| Consolidated Defined Benefit Assets |  |  |  |
| Defined Benefit Retirement Plans' Assets | \$ | 26,355.3 | 82.8 \% |
| Legislators' Defined Contribution Fund (LE DC) ${ }^{1}$ |  | 9.2 | - |
| Total Consolidated Defined Benefit Assets |  | 26,364.5 | 82.8 |
| Annuity Savings Accounts (ASA) Assets ${ }^{2}$ |  |  |  |
| Public Employees' Retirement Fund (PERF) |  | 2,771.0 | 8.7 |
| Teachers' Pre-1996 Account (TRF Pre-'96) |  | 1,242.8 | 3.9 |
| Teachers' 1996 Account (TRF '96) |  | 1,377.1 | 4.3 |
| Total Annuity Savings Accounts Assets |  | 5,390.9 | 16.9 |
| Legislators' Defined Contribution Fund ${ }^{3}$ |  | 21.1 | 0.1 |
| Local Public Safety Pension Relief Fund ${ }^{4}$ |  | 30.9 | 0.1 |
| Death Benefit Funds ${ }^{5}$ |  | 15.0 | 0.1 |
| Total Investments ${ }^{6}$ | \$ | 31,822.4 | 100.0\% |

${ }^{1}$ Self-directed investment option by LE DC members.
Self-directed investment options by PERF, TRF Pre-'96 and TRF '96 members outside the Consolidated Defined Benefit Assets.
${ }^{3}$ Self-directed investments options by LE DC members outside the Consolidated Defined Benefit Assets.
${ }^{4}$ Assets are invested in high-quality, short-term money market instruments, including, but not limited to commercial paper and securities issued or guaranteed by the U.S. government.
${ }^{5}$ Includes State Employees' Death Benefit Fund and Public Safety Officers' Special Death Benefit Fund.
${ }^{6} /$ Includes Investment Receivables, Foreign Exchange Contracts Receivables, Interest and Dividend Receivables, Securities Lending Collateral, Investment Payables, Foreign Exchange Contracts Payables, Securities Lending Obligations, and Obligations Under Reverse Repurchase Agreements.


Assets by Retirement Plan
As of June 30, 2017
(dollars in millions)

| Retirement Plan | Amount |  | Percent |
| :---: | :---: | :---: | :---: |
| Public Employees' Retirement Fund (PERF) | \$ | 11,861.3 | 45.0 \% |
| Teachers' Pre-1996 Account (TRF Pre-'96) |  | 3,571.8 | 13.5 |
| Teachers' 1996 Account (TRF '96) |  | 4,870.2 | 18.5 |
| 1977 Police Officers' and Firefighters' Retirement Fund ('77 Fund) |  | 5,398.5 | 20.5 |
| Judges' Retirement System (JRS) |  | 475.0 | 1.8 |
| Excise, Gaming and Conservation Officers' Retirement Fund (EG\&C) |  | 120.0 | 0.5 |
| Prosecuting Attorneys' Retirement Fund (PARF) |  | 55.6 | 0.2 |
| Legislators' Defined Benefit Fund (LE DB) |  | 2.9 | - |
| Legislators' Defined Contribution Fund (LE DC) |  | 9.2 | - |
| Total Consolidated Defined Benefit Assets ${ }^{1}$ | \$ | 26,364.5 | 100.0\% |

${ }^{1}$ Includes Investment Receivables, Foreign Exchange Contracts Receivables, Interest and Dividend Receivables, Securities Lending Collateral, Investment Payables, Foreign Exchange Contracts Payables, Securities Lending Obligations, and Obligations Under Reverse Repurchase Agreements.


Asset Allocation Summary: June 30, 2017 Actual vs. June 30, 2016 Actual

| (dollars in millions) <br> Asset Class | June 30, 2017 |  |  | June 30, 2016 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | mount | Percent |  | mount | Percent |
| Public Equity | \$ | 6,213.6 | 23.6 \% | \$ | 5,511.8 | 22.3 \% |
| Private Markets |  | 3,358.3 | 12.7 |  | 3,304.5 | 13.3 |
| Fixed Income - Ex Inflation-Linked |  | 5,300.5 | 20.1 |  | 5,216.4 | 21.1 |
| Fixed Income - Inflation-Linked |  | 1,920.9 | 7.3 |  | 1,838.0 | 7.4 |
| Commodities |  | 2,092.2 | 7.9 |  | 1,822.0 | 7.4 |
| Real Estate |  | 1,717.7 | 6.5 |  | 1,629.8 | 6.6 |
| Absolute Return |  | 2,523.8 | 9.6 |  | 2,279.0 | 9.2 |
| Risk Parity |  | 2,914.6 | 11.1 |  | 2,736.4 | 11.0 |
| Cash + Cash Overlay ${ }^{1}$ |  | 322.9 | 1.2 |  | 437.7 | 1.7 |
| Total Consolidated Defined Benefit Assets ${ }^{2}$ | \$ | 26,364.5 | 100.0 \% | \$ | 24,775.6 | 100.0 \% |

${ }^{1}$ Includes an accrued liability relative to the legacy Guaranteed Fund.
${ }^{2}$ Amounts disclosed above will agree to the Pooled Unit Trust Investments in the Financial Section in Note $2(\mathrm{H})$ Summary of Significant Accounting Policies. The amounts disclosed above are shown by investment strategy and will differ from the Statement of Net Position and the Summary of Investments Held in the Financial Section Note 3 (D) Cash and Investments, due to the investment strategy disclosure being related to a systematic plan to achieve returns and diversification and the Summary of Investments Held disclosure summarized by 1) the legal structure of the investments and 2) excluding Investment Receivables, Foreign Exchange Contracts Receivables, Interest and Dividend Receivables, Securities Lending Collateral, Investment Payables, Foreign Exchange Contracts Payables, Securities Lending Obligations, and Obligations Under Reverse Repurchase Agreements.


Asset Allocation Summary: June 30, 2017 Actual vs. Target

| Asset Class | June 30, 2017 Actual | Target | Allowable Range for Investments |
| :---: | :---: | :---: | :---: |
| Public Equity | 23.6 \% | 22.0 \% | 19.5 to 24.5 \% |
| Private Markets | 12.7 | 14.0 | 10.0 to 18.0 |
| Fixed Income - Ex Inflation-Linked | 20.1 | 20.0 | 17.0 to 23.0 |
| Fixed Income - Inflation-Linked | 7.3 | 7.0 | 4.0 to 10.0 |
| Commodities | 7.9 | 8.0 | 6.0 to 10.0 |
| Real Estate | 6.5 | 7.0 | 3.5 to 10.5 |
| Absolute Return | 9.6 | 10.0 | 6.0 to 14.0 |
| Risk Parity | 11.1 | 12.0 | 7.0 to 17.0 |
| Cash + Cash Overlay ${ }^{1}$ | 1.2 | N/A |  |
| Total Consolidated Defined Benefit Assets | 100.0 \% | 100.0 \% |  |

${ }^{1}$ Includes cash, cash equivalents, and cash overlay. INPRS does not have a target allocation to cash as an asset class.


[^23]Annualized Time-Weighted Rate of Return by Asset Class vs. Benchmark Returns
For the Year Ended June 30, 2017

| Asset Class | 1-Year ${ }^{1}$ |  |  | Benchmark |
| :---: | :---: | :---: | :---: | :---: |
|  | Actual Return ${ }^{2}$ | Benchmark Return ${ }^{2}$ | Actual Over I (Under) Benchmark |  |
| Public Equity | 21.0 \% | 19.0 \% | 2.0 | MSCI All Country World IMI Index (MSCl ACWI) |
| Private Markets | 12.7 | 21.5 | (8.8) | Russell 3000 Index Plus 300 Basis Points |
| Fixed Income - Ex Inflation-Linked | 1.9 | 0.6 | 1.3 | Custom Benchmark ${ }^{3}$ |
| Fixed Income - Inflation-Linked | (0.2) | (1.3) | 1.1 | Custom Benchmark ${ }^{4}$ |
| Commodities | (6.7) | (7.5) | 0.8 | Custom Benchmark ${ }^{5}$ |
| Real Estate | 10.4 | 7.4 | 3.0 | NCREIF Open End Diversified Core Equity Index (ODCE) |
| Absolute Return | 7.8 | 4.9 | 2.9 | HFRI Custom Benchmark ${ }^{6}$ |
| Risk Parity | 4.6 | 10.9 | (6.3) | Custom Benchmark ${ }^{7}$ |
| Cash + Cash Overlay | 4.9 | 6.8 | (1.9) | Custom Benchmark ${ }^{8}$ |
| Total Consolidated Defined Benefit Assets | 8.0 | 6.5 | 1.5 | Custom Target Benchmark |

[^24]| Fair Value as of 06/30/2017 | INPRS 1-Year Net Performance ${ }^{1}$ | MSCI All Country World IMI Index 1-Year Performance |
| :---: | :---: | :---: |
| \$6,213.6 Million | 21.0\% | 19.0\% |

## 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.

INPRS Allocation


## Performance Attribution

INPRS' public equity portfolio had a return of 21.0 percent for fiscal year 2017. The portfolio outperformed the benchmark by 2.0 percent. The domestic segment outperformed the benchmark by 0.2 percent and the international segment outperformed the benchmark by 2.7 percent.

## Market Overview

Over the past year, global equities, as represented by the MSCI All Country World IMI Index, were up 19.0 percent. Based on the Russell 3000 Index, domestic equities were up 18.5 percent over the fiscal year. International equities were up 20.4 percent based on the MSCI ACWI ex US IMI Index.

For the first quarter of the fiscal year, INPRS' global equity portfolio was up 6.7 percent. Global equity markets rallied following the late June Brexit vote which had sent markets lower. Internationally, both the European Central Bank and Bank of Japan maintained economically stimulative measures.
In the second quarter of the fiscal year, INPRS' global equity portfolio was up 1.0 percent. The U.S. equity market advanced following the presidential election and finished the quarter ahead. International markets did not collectively participate in this move higher and finished lower for the quarter.
In the third quarter of the fiscal year, INPRS' global equity portfolio was up 6.8 percent. Developed economies continued a steady yet modest expansion with moderate inflation. Globally, equity markets moved higher as earnings growth improved in many regions.
In the fourth quarter of the fiscal year, INPRS' global equity portfolio was up 5.2 percent. Globally, markets advanced as economic growth accelerated in the U.S. and Europe. The U.S. equity market experienced relatively low volatility during the quarter.

[^25]
## Portfolio Structure

Regional Exposure
Domestic (U.S.)
Developed International
Emerging Markets


Fair Value
as of 06/30/2017

INPRS 1-Year
Net Performance ${ }^{1}$

Russell 3000 plus 300 basis points 1-Year Performance
21.5\%

## Portfolio Objective

The private markets portfolio seeks to provide risk adjusted returns in excess of the public equity markets while simultaneously decreasing the volatility of the investment portfolio through diversification. The private equity portion of portfolio is invested in the following sub-asset classes: venture and growth capital, buyout, energy, and debt related strategies. Implementation of private credit investments is expected to commence for fiscal year 2018. Private markets refer to private equity investments ("Private Equity") as well as private credit investments ("Private Credit").

## INPRS Allocation



## Performance Attribution

The private markets portfolio returned 12.7 percent for fiscal year 2017, which was accretive to the INPRS target rate of return of 6.75 percent but underperformed its public market benchmark. The private markets portfolio has outperformed the Cambridge Associates Pooled IRR for the one year period, 13.4 percent versus 12.8 percent, respectively, and since inception (December 2002), 11.3 percent versus 10.5 percent, respectively. The portfolio has returned a TVPI ${ }^{2}$ of $1.5 x$ and DPI $^{3}$ of 0.8 x since inception.

North American investments have generated the highest rate of return for the private markets portfolio totaling 12.3 percent since inception; while, European investments have fared the worst at 4.4 percent since inception.

Buyout investments have led the way for the private markets portfolio returning 12.4 percent inception to date. Venture capital, growth capital, real assets (energy), and special situations all proved to be accretive to the overall plan return generating 11.9 percent, 7.2 percent, 10.9 percent, and 10.5 percent, respectively, since inception.
Co-investments have been the strongest performing investment structure with a return of 35.4 percent since inception followed by secondary interests returning 14.6 percent, primary commitments at 11.6 percent, and fund of funds at 9.1 percent.

## Portfolio Overview

The private markets portfolio continues to maintain a home continent bias with 83.9 percent of portfolio net asset value located in North America. Investments are well diversified by sub-asset class with buyout and venture / growth capital accounting for the largest portions of the portfolio at 47.7 percent and 22.6 percent, respectively.
Primary commitments maintain the largest exposure of net asset value at 80.9 percent, however, coinvestment exposure is growing and now accounts for 4.0 percent of the private markets portfolio. The portfolio continues to mature with 18.7 percent of net asset value now coming from pre-2008 funds and a weighted average fund age of 7.5 years.
Distributions to and contributions from the INPRS' private markets portfolio totaled $\$ 762$ million and \$520 million, respectively, accounting for positive net cash flows of \$242 million for fiscal year 2017. Distributions and net cash flows in fiscal year 2017 were higher than any previous fiscal year for the private markets portfolio.
In fiscal year 2017, INPRS committed capital to seven managers across eight investments, totaling approximately $\$ 416$ million of new commitments. Commitments were made to managers in the buyout, growth, real assets, and special situations sub-asset classes.
${ }^{1}$ Investment performance is based on calculations made by the system's custodian, BNY Mellon, and are time weighted rates of return.
${ }^{2}$ Total value paid-in or investment multiple.
${ }^{3}$ Distributions to paid-in or realization multiple

Portfolio Structure
Investment by Region


Investment by Sub-Asset Class


Investment by Structure


Investment by Vintage Year

Fair Value
as of $6 / 30 / 2017$
as of 6/30/2017
\$5,300.5 Million

INPRS 1-Year
Net Performance ${ }^{1}$
1.9\%

Custom Benchmark ${ }^{2}$
$0.6 \%$

## 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--in part, by investing in certain actively managed strategies

INPRS Allocation


## Performance Attribution

For fiscal year 2017, the fixed income - ex inflation-linked portfolio returned 1.9 percent, outperforming its benchmark by 1.3 percent. Active management within unconstrained strategies, long duration bonds, opportunistic credit, and emerging market debt were the main drivers of the outperformance.

## Market Overview

Fiscal year 2017 was marked with challenges as investors continued to endure historically low yields, the emergence of populism in major nations such as the U.S. and U.K., and the early stages of a shift from highly accommodative monetary policy. Economies broadly improved during the period and major central banks began to consider tightening monetary policy through rate increases and tapering of asset purchases. Given low yields, tight corporate spreads, and a potential shift in central bank policy, INPRS staff maintained a generally cautious view on the markets.

During the first quarter, markets initially responded to the U.K.'s unexpected decision to leave the European Union with high volatility. In response, equities sold off in favor of safe-haven assets; however, in the proceeding weeks, equities and rates moved moderately higher overall as uncertainty diminished and growth showed signs of acceleration. Despite these developments, the Fed left rates unchanged at its September meeting, seeking additional progress on labor and inflation objectives. The fixed income - ex inflation-linked portfolio returned 1.8 percent during the period, led by strong performance in credit and, most notably, the opportunistic credit portfolio.
In the second quarter, strong autumn economic data paired with the unexpected U.S. presidential election outcome pushed rates higher. Markets also priced in a higher likelihood of a Fed rate increase. The Fed met expectations by increasing rates 0.25 percent during its December meeting. The fixed income - ex inflation-linked portfolio returned (4.1) percent during the period led by substantial declines in U.S. long duration bonds.
During the third quarter, the Fed again raised interest rates 0.25 percent on the back of improving employment data. The fixed income-ex inflation-linked portfolio returned 1.8 percent during the period, driven, in part, by a strong rebound in emerging markets debt-which benefited, to some extent, from more moderate expectations regarding potential U.S. protectionism.
During the fourth quarter, the Fed again increased rates by 0.25 percent and introduced a plan to reduce its massive amount of security holdings, while other central banks hinted at moving away from accommodative monetary policy in light of an improving global economy. As a result, inflation remained generally weak, and breakevens, particularly in the U.S., fell considerably during the quarter. As such, U.S. long duration bonds performed well and overall, the fixed income-ex inflation-linked portfolio returned 2.6 percent over the time period.
${ }^{1}$ Investment performance is based on calculations made by the system's custodian, BNY Mellon, and are time-weighted rates of return. ${ }^{2}$ Represents sub-asset class target allocations within the Fixed Income - Ex Inflation-Linked portfolio over time. ${ }^{3}$ Derivative exposure is included in Government.

## Portfolio Overview

|  | INPRS |  | Benchmark |
| :--- | :---: | :---: | :---: |
| Duration to worst: | 9.8 yrs |  | 9.7 yrs |
| Yield to worst: | $2.9 \%$ |  | $3.1 \%$ |
| Credit quality: | A1 / A | A1 |  |






| Fair Value as of 6/30/2017 | INPRS 1-Year Net Performance ${ }^{1}$ | Custom Benchmark 1-Year Performance ${ }^{2}$ |
| :---: | :---: | :---: |
| \$1,920.9 Million | (0.2)\% | (1.3)\% |

## Portfolio Objective

The INPRS Fixed Income - Inflation-Linked portfolio seeks, primarily via passive management, 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.

## INPRS Allocation



## Portfolio Overview

|  | INPRS |
| :--- | :---: |
| Duration to worst: | 17.9 yrs |
| Yield to worst: | $2.3 \%$ |
| Credit quality: | Aaa / AA+ |

## Performance Attribution

For fiscal year 2017, the INPRS Fixed Income - Inflation-Linked portfolio returned (0.2) percent, outperforming its Benchmark by 1.1 percent. An overweighting of global inflation-linked bonds and the alpha overlay drove the outperformance.

## Market Overview

During fiscal year 2017, inflation prints remained rather benign relative to expectations despite positive growth and an improving labor situation. Real yields increased throughout much of the fiscal year, pressuring absolute performance.
During the first quarter, breakevens increased throughout most of the developed world and real yields mostly declined, driving a 3.1 percent benchmark return and a 3.3 percent return in the INPRS Fixed Income - Inflation-Linked portfolio.
During the second quarter, weak U.S. TIPS performance drove a (5.4) benchmark return, as real yields increased significantly largely following the U.S. election in November. In December, the Fed increased rates by 0.25 percent. The INPRS Fixed Income - Inflation-Linked portfolio returned (4.3) percent during the period.
During the third quarter, employment data improved, inflation remained muted, and in March the Fed increased rates by 0.25 percent. The INPRS Fixed Income - Inflation-Linked portfolio returned 1.7 percent during the period due mostly to a modest recovery in U.S. TIPS and outperformed the benchmark by 0.1 percent.
During the fourth quarter, the Fed again increased rates by 0.25 percent and introduced a plan to reduce its massive amount of security holdings, while other central banks hinted at moving away from accommodative monetary policy in light of an improving global economy. That said, inflation remained generally weak, and breakeven, particularly in the U.S., fell considerably during the quarter. The INPRS Fixed Income - Inflation-Linked portfolio returned ( 0.7 ) percent during the period while the benchmark returned (0.3) percent.
${ }^{1}$ Investment performance is based on calculations made by the system's custodian, BNY Mellon, and are time weighted rates of return. ${ }^{2}$ Represents sub-asset class target allocations within the Fixed Income - Inflation-Linked portfolio over time.

| Fair Value <br> as of 6/30/2017 | INPRS 1-Year <br> Net Performance |  |
| :---: | :---: | :---: |
| $\$ 2,092.2$ Million | $(6.7) \%$ | Custom Benchmark <br> 1-Year Performance |
|  | $(7.5) \%$ |  |

## 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.

## INPRS Allocation



## Performance Attribution

The commodities portfolio one-year total return exceeded its benchmark by 0.8 percentage points. Commodities' total return is comprised of two components: 1) commodity futures return and 2) collateral return. The one-year return for each of these components was approximately (7.7) percent and 1.0 percent respectively.

## Market Overview

INPRS' commodity exposure is approximately equal to a 50/50 blend of the Bloomberg Commodity Index (BCOM) and the S\&P Goldman Sachs Commodity Index (GSCI). For the fiscal year, the two indices returned (6.5) percent and (9.0) percent respectively.
The story of fiscal 2017 is that of the reversal of the post-election reflation trade. The U.S. dollar round-tripped over the course of the year on the back of surging optimism over anticipated reflationary and economically-stimulating policy changes. However, disappointment came in the form of a fragmented course of action and congressional headwinds. Commodities in aggregate were in a choppy trading pattern for much of the first quarter of the fiscal year, but found support and notched significant gains after the presidential election through early February 2017. In late February, cracks in the effort to repeal and replace Obamacare led to doubts being cast across the entirety of the new administrations efforts, which resulted in a reversal in inflation expectations and commodities prices declined accordingly throughout the remainder of the fiscal year.
In the first quarter of the fiscal year, energy prices were volatile but found support late in the quarter on news of a potential OPEC production cut. Agricultural commodities continued their slide as benign growing conditions led to strong crop yields.
The surprise outcome in the U.S. presidential elections in the second quarter resulted in the market rallying behind prospective growth- and inflation-positive policy initiatives. The U.S. Dollar surged and precious metals declined. Soft commodities continued their decline, but industrial metals and energies rallied. Oil was helped by U.S. production cuts.

In the third quarter, industrial and precious metals outperformed energies, agricultures, and softs as the U.S. dollar reversed course but global growth notched gains, particularly in ex-U.S. markets.

The reflation trade reversal continued throughout the fourth quarter as inflation expectations disappointed, which resulted in weakness broadly across the commodities complex. The declining U.S. dollar was unable to provide support as it was outweighed by idiosyncratic pressures.
${ }^{1}$ Investment Returns are based on calculations made by the system's custodian, BNY Mellon, and are time weighted rates of return.
${ }^{2}$ Custom Benchmark is a $50 / 50$ blend of the Bloomberg Commodity Index and the Goldman Sachs Commodity Index. The collateral component is a $75 / 25$ blend of global inflation-linked bond indices and 90-day Treasury Bills respectively. ${ }^{3}$ Approximate.

## Portfolio Structure

| Sector Weights |  |
| :--- | :--- |
|  |  |
| 3 |  |
| $\square$ Energies | Grains |
| $\square$ Industrial Metals | $\square$ Precious Metals |
| $\square$ Softs | $\square$ Livestock |


| $\begin{gathered} \text { Fair Value } \\ \text { as of } 6 / 30 / 2017 \end{gathered}$ | INPRS 1-Year Net Performance ${ }^{1}$ | NCREIF Open End Diversified Core Equity Index ("ODCE") 1-Year Performance |
| :---: | :---: | :---: |
| \$1,717.7 Million | 10.4\% | 7.4\% |

## 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.

## INPRS Allocation



## Performance Attribution

For fiscal year 2017, the real estate portfolio exceeded its benchmark by 3.0 percentage points. Both the real estate equity and debt portfolios exceeded the benchmark's performance with returns of 10.5 percent and 9.8 percent, respectively. Value-add debt strategies were particularly strong contributors, returning 15.7 percent for the fiscal year, while opportunistic debt strategies (currently winding down and at a miniscule weighting within the portfolio at 1.0 percent of portfolio assets) were the only category to detract from performance with a (1.0) percent return for the period.

## Market Overview

Capital continued to flow into private real estate during the fiscal year, as evidenced by another year of strong performance. Appreciation was once again the largest contributor to total return. This trend slowed significantly during the year, however, as income exceeded appreciation in the fourth quarter.
The NFI-ODCE Index returned 7.9 percent gross of fees and 6.9 percent net of fees over the fiscal year ending June 30 , 2017. Continuing the trend from last year, income has remained fairly steady at approximately 1.1 percent per quarter while appreciation has been trending lower at 0.6 percent for the final quarter of the fiscal year as compared to 1.0 percent a year prior. ${ }^{3}$
When comparing the trailing three-year returns to the trailing twelve months, income contributions to total NFI-ODCE returns has remained fairly consistent at 4.4 percent to 4.7 percent. Appreciation, however, has declined from 6.5 percent over the trailing three years to 3.3 percent over the trailing twelve months. Since the ODCE's inception approximately forty years ago, appreciation has averaged 1.4 percent per annum, which equates to 16.0 percent of the 8.7 percent annualized gross returns of the index. Over this period, U.S. ten year bond yields declined from 7.8 percent to 2.3 percent, albeit not on a smooth downward sloping path, resulting in lower discount rates, and cap rate spreads/risk premiums to government bonds have oscillated around long-term averages as is normal for risk premiums as they relate to liquidity and business cycles. Given the recent strong relative outperformance of appreciation as discount rates and the risk premiums have compressed post crisis, it is potentially unwise to expect that tailwind to continue, as recent trends are indicating that the benefit is ebbing.
With respect to specific property types, major developments include the downfall of big box retail as the extent of Amazon's disruptive ability is weighed by market participants. A clear beneficiary of this disruption is industrial, as it has become a proxy for retail/consumption in the online shopping era. Multifamily supply increases in central business districts have weighed on incomes and valuations. So, the continuity of economic growth will determine whether there will be a correction or just a pause in an otherwise strong secular trend.
${ }^{1}$ Investment performance is based on calculations made by the system's custodian, BNY Mellon, and are time weighted rates of return.
${ }^{2}$ Exclusive of REIT mandate.
${ }^{3}$ Based on preliminary results as published by NCREIF.

| Fair Value as of 6/30/2017 | INPRS 1-Year Net Performance ${ }^{1}$ | HFRI Custom Benchmark ${ }^{2}$ |
| :---: | :---: | :---: |
| \$2,523.8 Million | 7.8\% | 4.9\% |

## 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.

## INPRS Allocation



## Performance Attribution

INPRS outperformed the HFRI custom benchmark by 2.9 percent resulting from a combination of strategy selection and individual manager performance in event driven, global macro, and relative value strategies.

## Market Overview

During the fiscal year, the portfolio was impacted by a combination of political uncertainty across Europe and the U.S., diverging monetary and fiscal policies across the developed world, and historically low levels of volatility.
The portfolio's strategies exhibited a wide range of results over the fiscal year, with a range of total returns from (13.6) to 21.9 percent. The average positive performing investments (eighteen in total) had a starting allocation of $\$ 94.2$ million and returned 9.8 percent. The average negative performing investments (two in total) had a starting allocation of \$96.1 million and returned (11.4) percent over the fiscal year. In summary, the numerous positive performers had slightly lower returns on slightly lower initial allocations than the few offsetting negative performers.
The portfolio also exhibited little beta to traditional asset classes over the fiscal year: 0.1 to the MSCI ACWI, (0.2) to the Barclays Global Aggregate Index, and 0.0 to the S\&P GSCI. The average pairwise correlation of fund returns across the entire roster of hedge funds was 0.1 , with the maximum average pairwise correlation of any single investment to other fund investments at 0.2 . The low realized correlation to traditional asset classes indicates that the portfolio has been successful in generating attractive returns while providing valuable diversification benefits to the INPRS consolidated defined benefit plan.
INPRS' fund-of-funds portfolio, which was a 12.8 percent allocation at the end of the fiscal year, gained 11.3 percent in aggregate over the fiscal year. Exposure to residential mortgages, event-driven, and special situations strategies were accretive to total performance.
${ }^{1}$ Investment performance is based on calculations made by the systems custodian, BNY Mellon, and are timeweighted rates of return.
${ }^{2}$ HFRI Custom benchmark is a weighted average of INPRS' exposure to representative HRFI sub-strategy indices.
${ }^{3}$ The sum total of sub-strategy returns may differ from the reported portfolio-level return due to rounding at the sub-strategy and portfolio levels.
${ }^{4}$ May not total 100 percent due to transition cash balance, allocations as of June 2017.

| Fair Value <br> as of 6/30/2017 | INPRS 1-Year <br> Net Performance $^{1}$ | Custom Benchmark |
| :---: | :---: | :---: | :---: |
|  | $4.6 \%$ | 1-Year Performance |

## Portfolio Objective

The risk parity portfolio seeks to create a risk balanced exposure that is capable of delivering consistent risk adjusted returns in several macroeconomic environments. Unlike a traditional asset allocation that is highly dependent on positive equity returns, the risk parity portfolio is constructed to accrue various asset class risk premiums, including equity, without long-term dominance from any single asset class. As a result, the underperformance of a given asset class in a particular environment may be offset by the outperformance of another asset with an opposing sensitivity to the environment.
The risk parity portfolio rests on the following key tenets:

1. Over a full market cycle, most asset classes provide investors with a positive risk premium in excess of cash instruments to encourage investment.
2. The main drivers of returns are growth and inflation factors and changes in risk premiums; asset classes will perform differently depending on their sensitivity to such factors and macroeconomic conditions.
3. The return of a particular asset class is proportional to its risk over long periods of time (i.e., different asset classes produce roughly similar Sharpe ratios over the long term).
4. The moderate use of leverage enables one to increase the risk allocation to lower-volatility asset classes that provide additional diversification and balance to various macroeconomic environments. The use of leverage enables to the portfolio to be constructed in a more diversified way without sacrificing equity-like rates of return over a full cycle.

## INPRS Allocation



## Performance Attribution

Lacking a passive market equivalent for the risk parity portfolio, INPRS continues to use the traditional portfolio of 60 percent global equities and 40 percent global bonds ( $60 / 40$ portfolio) as a benchmark for long-term return and risk comparisons, despite expectations of significant tracking error. For fiscal year 2017, the risk parity portfolio underperformed a 60/40 portfolio by 6.3 percent as the benefits of diversification were overwhelmed by strong equity market performance.
Over the past few years, equity risk concentrated or 60/40 portfolios have benefited from low volatility and high equity market returns. The same was true in fiscal year 2017. The risk parity portfolio benefitted from exposure to equities and inflation-linked bonds during the fiscal year, while commodities and nominal bonds were a drag on performance.

## Market Overview

High equity returns drove performance throughout fiscal year 2017, especially after the U.S. presidential election in November 2016. Markets anticipated higher economic growth and inflation from the new administration's prospective policies, which benefited the performance of equities and inflation-linked bonds but detracted from the performance of nominal bonds. As these policies failed to quickly materialize, market expectations of growth and inflation reverted somewhat, but equity performance continued its strong positive trend. Commodities continued to be a drag on performance throughout the fiscal year.
${ }^{1}$ Based on calculations made by the system's custodian, BNY Mellon, and are time weighted rates of return.
${ }^{2}$ Comprised of 60 percent MSCI ACWI IMI Index (equities) \& 40 percent Barclays Global Aggregate Bond Index (bonds).
${ }^{3}$ Sum total of manager contribution may differ from the reported portfolio level return due to rounding at the manager and portfolio levels.

## Portfolio Structure



Historical Comparative Investment Results ${ }^{1}$
As of June 30, 2017

|  | 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 \% | 8.0 \% | 3.0 \% | 5.7 \% |
| vs. BNY Mellon Public Universe Median ${ }^{4}$ |  | 12.4 | 5.4 | 8.8 |
| Target Reference Index ${ }^{5}$ |  | 6.5 | 2.6 | 5.2 |
| Total Domestic Equity | 11.2 | 18.7 | 8.2 | 13.7 |
| vs. BNY Mellon Public Universe Median |  | 18.1 | 8.7 | 14.4 |
| Russell 3000 Index |  | 18.5 | 9.1 | 14.6 |
| Total International Equity | 12.4 | 23.1 | 3.1 | 8.9 |
| vs. BNY Mellon Public Universe Median |  | 20.8 | 2.4 | 8.7 |
| MSCI ACWI ex U.S. IMI Net |  | 20.4 | 1.1 | 7.6 |
| Total Domestic Fixed Income | 11.5 | 0.5 | 4.1 | 4.2 |
| vs. BNY Mellon Public Universe Median |  | 1.7 | 3.2 | 3.1 |
| Barclays U.S. Aggregate Bond Index |  | (0.3) | 2.5 | 2.2 |
| Total International Fixed Income | 6.6 | 1.3 | 3.1 | (0.1) |
| vs. BNY Mellon Public Universe Median |  | 5.5 | (1.5) | 2.2 |
| Barclays Global Aggregate ex-USD (USDH) |  | (0.7) | 3.8 | 4.0 |

[^26]Ten-Year Time-Weighted Investment Rates of Return ${ }^{1}$
For the Year Ended June 30

| (dollars in millions) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Fair Value of Assets |  | Rate of Return ${ }^{2}$ | Actuarial Assumed Rate |
| 2017 | INPRS ${ }^{3}$ | \$ | 26,364.5 | 8.0 \% | 6.75 \% |
| 2016 | INPRS |  | 24,775.6 | 1.2 | 6.75 |
| 2015 | INPRS |  | 24,629.8 | 0.0 | 6.75 |
| 2014 | INPRS |  | 24,560.3 | 13.7 | 6.75 |
| 2013 | INPRS |  | 21,488.7 | 6.0 | 6.75 |
| 2012 | INPRS |  | 19,708.9 | 0.7 | 7.00 |
| 2011 | PERF CRIF ${ }^{4}$ |  | 15,796.6 | 20.1 | 7.00 |
|  | TRF DB Assets ${ }^{5}$ |  | 5,984.0 | 18.2 | 7.00 |
| 2010 | PERF CRIF |  | 13,314.0 | 13.9 | 7.25 |
|  | TRF DB Assets |  | 5,073.0 | 14.8 | 7.50 |
| 2009 | PERF CRIF |  | 11,795.1 | (20.6) | 7.25 |
|  | TRF DB Assets |  | 4,236.0 | (18.0) | 7.50 |
| 2008 | PERF CRIF |  | 14,851.0 | (7.6) | 7.25 |
|  | TRF DB Assets |  | 5,252.0 | (6.0) | 7.50 |

${ }^{1}$ Returns from 2008-2011 presented as previously reported; returns 2012 and thereafter are based on calculations made by the System's custodian, Bank of New York Mellon. All returns are time-weighted rates of return.
${ }^{2}$ Net of fees; 2008-2011 reported as gross of fees.
${ }^{3}$ INPRS Consolidated Defined Benefit Assets.
${ }^{4}$ PERF Consolidated Retirement Investment Fund.
${ }^{5}$ TRF Defined Benefit Assets.

## Statistical Performance

As of June 30, 2017

| Statistic | 1-Year | 3-Years | 5-Years | 10-Years |
| :---: | :---: | :---: | :---: | :---: |
| Annualized Time-Weighted Rate of Return | 8.0\% | 3.0\% | $5.7 \%$ | 2.9 \% |
| Annualized Standard Deviation | 2.7 | 4.3 | 4.3 | 9.3 |
| Annualized Sharpe Ratio ${ }^{1}$ | 2.7 | 0.7 | 1.3 | 0.3 |
| Beta ${ }^{2}$ | 0.2 | 0.3 | 0.3 | 0.6 |
| Correlation ${ }^{2}$ | 0.5 | 0.7 | 0.7 | 0.9 |
| Annualized Alpha ${ }^{3}$ | 1.3 | 0.2 | 0.1 | 0.0 |

${ }^{1}$ Risk Free Proxy is the Citigroup 3 Month T-Bill.
${ }^{2}$ Market Proxy is the S\&P 500.
${ }^{3}$ Market Proxy is INPRS' 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 fund and the performance which should have been achieved given the market's performance and the fund's risk posture.

## Investment Results - Annuity Savings Accounts, My Choice and Legislators' Defined Contribution Fund

Assets by Investment Option
As of June 30, 2017
(dollars in millions)

| Investment Option | ASA \& LE DC Plan Assets ${ }^{1}$ |  | Percent of Self-Directed Investments |
| :---: | :---: | :---: | :---: |
| Large Cap Equity Index Fund | \$ | 938.6 | 17.3 \% |
| Small / Mid Cap Equity Fund |  | 676.1 | 12.5 |
| International Equity Fund |  | 218.9 | 4.1 |
| Fixed Income Fund |  | 172.2 | 3.2 |
| Inflation-Linked Fixed Income Fund |  | 33.0 | 0.6 |
| Money Market Fund |  | 197.7 | 3.7 |
| Stable Value Fund |  | 2,605.3 | 48.1 |
| Target Date Funds ${ }^{2}$ |  | 570.2 | 10.5 |
| Total ASA and LE DC Plan Assets ${ }^{3}$ | \$ | 5,412.0 | 100.0 \% |

${ }^{1}$ Assets include all PERF, TRF Pre-'96, and TRF '96 ASA assets and the LE DC account balances allocated outside of the Consolidated Defined Benefit Assets option.
${ }^{2}$ Consolidated fair values of all Target Date Funds.
${ }^{3}$ Includes Investment Receivables, Foreign Exchange Contracts Receivables, Interest and Dividend Receivables, Investment Payables, Foreign Exchange Contracts Payables, and Obligations Under Reverse Repurchase Agreements.


## Investment Results - Annuity Savings Accounts, My Choice and Legislators' Defined Contribution Fund

Historical Annualized Time-Weighted Rate of Return by Investment Option vs. Benchmark Returns For the Year Ended June 30, 2017

| Investment Option | 1-Year ${ }^{1,2}$ | 3-Year ${ }^{1,2}$ | 5-Year ${ }^{1,2}$ |
| :---: | :---: | :---: | :---: |
| Large Cap Equity Index Fund | 17.9 \% | 9.6 | 14.6 \% |
| S\&P 500 Index | 17.9 | 9.6 | 14.6 |
| Small / Mid Cap Equity Fund | 21.6 | 6.6 | 13.9 |
| Russell Small Cap Completeness Index | 21.8 | 7.0 | 14.4 |
| International Equity Fund | 22.1 | 2.5 | 8.5 |
| MSCI ACWI ex US Index | 20.5 | 0.8 | 7.2 |
| Fixed Income Fund | 0.7 | 2.5 | 2.6 |
| Barclays U.S. Aggregate Bond Index | (0.3) | 2.5 | 2.2 |
| Inflation-Linked Fixed Income Fund | (0.5) | 0.4 | 0.3 |
| Barclays U.S. TIPS Index | (0.6) | 0.6 | 0.3 |
| Money Market Fund | 0.8 | 0.4 | 0.3 |
| Citigroup 3 Month T-Bill Index | 0.5 | 0.2 | 0.2 |
| Stable Value Fund | 1.6 | 1.5 | 2.2 |
| Citigroup 3 Month T-Bill Index | 0.5 | 0.2 | 0.2 |
| Target Date Funds ${ }^{\text {3 }}$ : |  |  |  |
| Retirement Fund | 2.5 | 2.0 | 2.7 |
| Retirement Fund Index | 1.6 | 1.7 | 2.0 |
| Retirement Fund 2020 | 4.0 | 2.5 | 4.2 |
| 2020 Fund Index | 3.2 | 2.1 | 3.6 |
| Retirement Fund 2025 | 5.9 | 3.0 | 5.5 |
| 2025 Fund Index | 5.0 | 2.7 | 5.0 |
| Retirement Fund 2030 | 8.6 | 3.5 | 7.0 |
| 2030 Fund Index | 7.7 | 3.2 | 6.6 |
| Retirement Fund 2035 | 12.4 | 4.2 | 8.2 |
| 2035 Fund Index | 11.5 | 3.7 | 7.7 |
| Retirement Fund 2040 | 14.1 | 4.5 | 8.5 |
| 2040 Fund Index | 13.2 | 3.9 | 8.0 |
| Retirement Fund 2045 | 14.3 | 4.6 | 8.6 |
| 2045 Fund Index | 13.4 | 4.0 | 8.0 |
| Retirement Fund 2050 | 14.3 | 4.6 | 8.6 |
| 2050 Fund Index | 13.4 | 4.0 | 8.0 |
| Retirement Fund 2055 | 14.3 | 4.6 | 8.6 |
| 2055 Fund Index | 13.4 | 4.0 | 8.0 |
| Retirement Fund 2060 | 14.3 | 4.6 | 8.6 |
| 2060 Fund Index | 13.4 | 4.0 | 8.0 |

## ${ }^{1}$ Return net of fees.

${ }^{2}$ Based on performance calculations made by the system's record keeper, Conduent. The 1-year, 3-year, and 5-year performance returns are timeweighted rates of return for the fiscal year ended June 30, 2017.
${ }^{3}$ Target Date Fund benchmarks are comprised of performance data using a passive strategy with the same asset allocation of each Target Date Fund.

## Investment Results - Annuity Savings Accounts, My Choice and Legislators' Defined Contribution Fund

Historical Annual Interest Crediting Rates
For the Year Ended June 30

|  | Annual Interest Crediting Rate ${ }^{1}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | '77 Fund | JRS | EG\&C | PARF |
| 2017 | 2.4 \% | 2.4 \% | 2.4 \% | 2.4 \% |
| 2016 | 1.8 | 1.8 | 1.8 | 1.8 |
| 2015 | 1.9 | 1.9 | 1.9 | 1.9 |
| 2014 | 2.7 | 2.7 | 2.7 | 2.7 |
| 2013 | 1.9 | 1.9 | 1.9 | 1.9 |
| 2012 | 5.5 | - | 0.3 | 5.5 |
| 2011 | 5.5 | - | 3.5 | 5.5 |
| 2010 | 5.5 | - | 3.5 | 5.5 |
| 2009 | 5.5 | - | 3.5 | 5.5 |
| 2008 | 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 eligible for a retirement benefit. Interest rates are approved by the INPRS Board of Trustees on an annual basis.

Top Ten Equity Holdings by Fair Value
As of June 30, $2017{ }^{1}$
(dollars in thousands)

| Company | Shares | Fair Value |  |
| :---: | :---: | :---: | :---: |
| Microsoft Corp. | 1,089,358 | \$ | 75,089 |
| Apple Inc. | 469,000 |  | 67,545 |
| Samsung Electronics Co. Ltd | 28,073 |  | 58,322 |
| Nestle SA | 544,951 |  | 47,487 |
| Taiwan Semiconductor Manufacturing | 6,261,494 |  | 42,917 |
| Alphabet Inc. Class C Capital Stock | 44,509 |  | 40,447 |
| Visa Inc. | 427,162 |  | 40,059 |
| Alphabet Inc. Class A Common Stock | 40,915 |  | 38,038 |
| Amazon.com Inc. | 36,173 |  | 35,015 |
| Johnson \& Johnson | 248,403 |  | 32,861 |

${ }^{1}$ A complete list of portfolio holdings is available upon request.

Top Ten Fixed Income Holdings by Fair Value
As of June 30, $2017^{1}$
(dollars in thousands)

| Description | Coupon Rate | Maturity Date |  | Par Value | Fair Value |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| U.S. Treasury - CPI Inflation Index Bond | 2.125 \% | 2/15/41 | \$ | 173,762 | \$ | 217,094 |
| U.S. Treasury Bond | 3.000 | 5/15/47 |  | 171,760 |  | 177,262 |
| U.S. Treasury - CPI Inflation Index Bond | 1.375 | 2/15/44 |  | 157,209 |  | 171,010 |
| U.S. Treasury Bond | 3.000 | 2/15/47 |  | 156,835 |  | 161,785 |
| U.S. Treasury - CPI Inflation Index Bond | 0.750 | 2/15/42 |  | 163,594 |  | 155,650 |
| U.S. Treasury - CPI Inflation Index Bond | 0.625 | 2/15/43 |  | 162,171 |  | 149,182 |
| U.S. Treasury Note | 2.375 | 5/15/27 |  | 147,850 |  | 148,786 |
| U.S. Treasury - CPI Inflation Index Bond | 0.750 | 2/15/45 |  | 155,880 |  | 146,188 |
| U.S. Treasury - CPI Inflation Index Bond | 2.125 | 2/15/40 |  | 111,765 |  | 139,003 |
| U.S. Treasury - CPI Inflation Index Bond | 1.000 | 2/15/46 |  | 137,043 |  | 136,920 |

[^27]Top Ten Brokers' Commission Fees
For the Year Ended June 30, 2017

| (dollars in thousands) |  |  |
| :---: | :---: | :---: |
| Broker | Amount Paid in Fees |  |
| Morgan Stanley \& Co. Inc. | \$ | 993 |
| Goldman Sachs \& Co. |  | 653 |
| Newedge USA LLC |  | 457 |
| Merrill Lynch Pierce Fenner \& Smith Inc. |  | 209 |
| Credit Suisse, New York |  | 132 |
| Pershing LLC, Jersey City |  | 131 |
| Jefferies \& Co. Inc., New York |  | 111 |
| Sanford C. Bernstein \& Co. |  | 87 |
| Merrill Lynch International |  | 80 |
| Instinet Europe Limited, London |  | 78 |
| Top Ten Brokers' Commission Fees |  | 2,931 |
| Other Brokers |  | 1,287 |
| Total Brokers' Commission Fees | \$ | 4,218 |

Investment Management Fees
For the Year Ended June 30, 2017

| (dollars in thousands) |  |  |
| :---: | :---: | :---: |
| Asset Class | Investment Management Fees |  |
| Consolidated Defined Benefit Assets |  |  |
| Public Equity | \$ | 15,739 |
| Private Markets |  | 44,080 |
| Fixed Income - Ex Inflation-Linked |  | 21,444 |
| Fixed Income - Inflation-Linked |  | 3,197 |
| Commodities |  | 7,205 |
| Real Estate |  | 18,087 |
| Absolute Return |  | 62,069 |
| Risk Parity |  | 7,940 |
| Cash + Cash Overlay |  | 280 |
| Total Consolidated Defined Benefit Assets |  | 180,041 |
| Special Death Benefit Fund Assets |  | 9 |
| Annuity Savings Accounts Assets |  | 5,950 |
| Total Investment Management Fees | \$ | 186,000 |

## Consolidated Defined Benefit Assets

## Custodian

Bank of New York Mellon

## Consultants

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

## Public Equity

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

A.M. Pappas \& Associates

ABRY Partners
Accel Partners
Accent Equity Partners AB
Actis Capital
Advanced Technology Ventures
Advent International
Aisling Capital
AlpInvest Partners
American Securities
AnaCap Financial Partners
Apax Partners
Apollo Management
ARCH Venture Partners
Ares Management
Arle Capital Partners
Austin Ventures
Avenue Capital Group
Bain Capital Partners
Baring Private Equity

## Bay Partners

Bertram Capital
Black Diamond Capital Management
Bregal Sagemount
Brentwood Associates
Butterfly Equity Partners, LLC
Caltius Capital Management
Cardinal Partners
Catterton Partners
Centerfield Capital Partners
Century Park Capital Partners
Cerberus Capital Management
Charterhouse Capital Partners
CID Capital
Cinven
Clarity China
Close Brothers Private Equity
Code, Hennessy \& Simmons
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

Investment Professionals, continued

Consolidated Defined Benefit Assets
Private Markets, cont.
Insight Venture Partners
Institutional Venture Partners
JFM Management
Khosla Ventures
KPS Special Situations Funds
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
Peninsula Capital Partners
Permira Advisers
Platinum Equity
Rho Capital Partners
RJD Partners
SAIF Management II
Sankaty Advisors
Scale Venture Partners
Silver Cup
Silver Lake Partners
StepStone Group
Sumeru Equity Partners
Sun Capital Partners
TA Associates
Technology Crossover Ventures
Technology Partners
Terra Firma Capital Partners
The Blackstone Group

The Jordan Company (TJC)
TowerBrook Financial
TPG Capital
Trilantic Capital Partners
Trinity Ventures
Triton Partners
True Ventures
TSG Consumer Partners
Veritas Capital Management
Veronis, Suhler \& Associates
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

Goldman Sachs Asset Management, LP
Income Research + Management
Oak Hill Advisors, LP
Oak Tree Capital Management, LP
Pacific Investment Management Company (PIMCO)
Reams Asset Management
State Street Global Advisors
Stone Harbor
TCW
Wellington

## Fixed Income - Inflation Linked

Bridgewater Associates, Inc.
Northern Trust Global Investments

## Commodities

CoreCommodity Management
Goldman Sachs Asset Management, LP
Gresham Investment Management, LLC

Investment Professionals, continued

## Consolidated Defined Benefit Assets

## Real Estate

Abacus Capital Group, LLC
BlackRock Financial Management
Blackstone Property Partners
Blackstone Real Estate Partners
Colony Capital, LLC
Exeter Property Group, LLC
Greenfield Partners, LLC
H/2 Capital Partners
Harrison Street Real Estate Capital, LLC
House Investments
JDM Partners
LaSalle Investment Management
Lone Star Funds
Mesa West Capital
Prima Capital Advisors, LLC
Related Fund Management LLC
Rockpoint Group LLC
Stockbridge Capital Group
TA Realty Associates
Walton Street Capital, LLC
WestRiver Capital, LLC

## Absolute Return

AQR Capital Management
Aeolus Capital Management
Black River Asset Management
Blackstone Alternative Asset Management (BAAM)
Blackstone Tactical Opportunities Advisors
Brevan Howard Asset Management
Bridgewater Associates, Inc.
Davidson Kempner Capital Management
D.E. Shaw Multi-Asset Manager

Emerging Sovereign Group
Garda Capital Partners
Highfields Capital Management
Ionic Capital Management
Kepos Capital LP
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 Global Advisors
Rokos Global Macro Limited
Tilden Park Associates
Two Sigma Advisers

## Risk Parity

AQR Capital Management
Bridgewater Associates, Inc
First Quadrant
Cash Overlay
Russell Investments

Investment Professionals, continued

## Annuity Savings Account \& Legislators' <br> Defined Contribution Fund Assets

Public Employees' Retirement Fund (PERF)
Teachers' Pre-1996 Account (TRF Pre-'96)
Teachers' 1996 Account (TRF '96)
Legislators' Defined Contribution Fund (LE DC)

## Consultant

Cap Cities (General: Defined Contribution)

## Large Cap Equity Index Fund

BlackRock Institutional Trust

## Small/Mid Cap Equity Fund

Rhumbline Advisers
Times Square Capital Management, LLC

International Equity Fund
Altrinsic Global Advisors, LLC
Arrowstreet Capital, LP
Baillie Gifford \& Company
BlackRock Institutional Trust

Fixed Income Fund
Loomis Sayles \& Company
Northern Trust Global Investments
Pacific Investment Management Company (PIMCO)

Inflation-Linked Fixed Income Fund
BlackRock Institutional Trust

Money Market Fund
Bank of New York Mellon

## Stable Value Fund

Galliard Capital Management (Fund Advisor)
Income Research + Management (Fund Sub-Advisor)
Logan Circle (Fund Sub-Advisor)
Loomis Sayles (Fund Sub-Advisor)
Reams Asset Management (Fund Sub-Advisor)
TCW (Fund Sub-Advisor)
Local Public Safety Pension Relief Fund
Bank of New York Mellon

## Special Death Funds

BlackRock Financial Management


# Actuarial Section 

2017 COMPREHENSIVE ANNUAL FINANCIAL REPORT
For the Fiscal Year Ended June 30, 2017

## INPRS

INDIANA PUBLIC RETIREMENT SYSTEM

| Indiana |  |
| :--- | :--- |
| 153 | Public Retirement System |
| 154 | Actuaries' Certification Letters |
| 160 | Summary of Funded Status |
| 161 | Analysis of Financial Experience |
| 162 | Ten-Year Schedule of Participating |
|  | Employers |

Public Employees' Retirement Fund
163 Historical Summary of Actuarial Valuation Results
164 Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions 169 Analysis of Financial Experience and Solvency Test
170 Schedule of Active Members Valuation Data
171 Schedule of Retirants and Beneficiaries
Teachers' Pre-1996 Account
172 Historical Summary of Actuarial Valuation Results
173 Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions
177 Analysis of Financial Experience and Solvency Test
178 Schedule of Active Members Valuation Data
179 Schedule of Retirants and Beneficiaries

Teachers' 1996 Account
180
Historical Summary of Actuarial Valuation Results
181 Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions Analysis of Financial Experience and Solvency Test
Schedule of Active Members Valuation Data
Schedule of Retirants and Beneficiaries
1977 Police Officers' and Firefighters' Retirement Fund
188 Historical Summary of Actuarial Valuation Results
189 Summary of Actuarial Assumptions,
Actuarial Methods and Plan Provisions
Analysis of Financial Experience and Solvency Test
193 Schedule of Active Members
Valuation Data
Schedule of Retirants and Beneficiaries
Judges' Retirement System
195 Historical Summary of Actuarial Valuation Results
196 Summary of Actuarial Assumptions,
Actuarial Methods and Plan Provisions
Analysis of Financial Experience and Solvency Test
200 Schedule of Active Members
Valuation Data
201 Schedule of Retirants and Beneficiaries

## Excise, Gaming and Conservation Officers' Retirement Fund

202 Historical Summary of Actuarial Valuation Results
203 Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions
Analysis of Financial Experience and Solvency Test
207 Schedule of Active Members Valuation Data
Schedule of Retirants and Beneficiaries
Prosecuting Attorneys' Retirement Fund
209 Historical Summary of Actuarial Valuation Results
210 Summary of Actuarial Assumptions,
Actuarial Methods and Plan Provisions
Analysis of Financial Experience and Solvency Test
214 Schedule of Active Members Valuation Data
Schedule of Retirants and Beneficiaries
Legislators' Defined Benefit Fund
216 Historical Summary of Actuarial Valuation Results
217 Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions
220 Analysis of Financial Experience and Solvency Test
221 Schedule of Active Members
Valuation Data
Schedule of Retirants and Beneficiaries

Introduction

The funding methods used for the Defined Benefit retirement plans administered by INPRS are not governed by and do not conform to GASB Statement No. 67, so the actuaries prepare two actuarial valuations for each of the pension plans. One is an actuarial valuation used for financial reporting purposes that conforms to GASB Statement No. 67 as disclosed in the Financial Section. The second is an actuarial valuation used for funding purposes as disclosed in the Actuarial Section, which follows generally accepted actuarial principles and practice and the Actuarial Standards of Practice issued by the Actuarial Standards Board. The actuarial methods and assumptions used to prepare the two actuarial valuations are nearly identical, with the primary difference being the method of valuation of the pension assets. For financial reporting purposes, the fair value of the assets is used as of the fiscal year end. For funding purposes, a five-year smoothing of the gains or losses on the fair value of assets is used for each year, subject to a 20 percent corridor around the fair value of assets. Therefore, the amounts presented in the Actuarial Section may differ from the amounts presented for financial reporting purposes in the Financial Section.

There are two actuaries providing the actuarial services for the eight Defined Benefit retirement plans administered by INPRS as summarized below:

## PricewaterhouseCoopers LLP

- Public Employees' Retirement Fund (PERF)
- 1977 Police Officers' and Firefighters' Retirement Fund ('77 Fund)
- Judges' Retirement System (JRS)
- Excise, Gaming and Conservation Officers' Retirement Fund (EG\&C)
- Prosecuting Attorneys' Retirement Fund (PARF)
- Legislators' Defined Benefit Fund (LE DB)


## Nyhart

- Teachers' Pre-1996 Account (TRF Pre-'96)
- Teachers' 1996 Account (TRF '96)

Accordingly, there is an Actuary Certification Letter from each actuary for the actuarial valuations prepared as of June 30, 2017.

## Actuaries' Certification Letters



November 2017
Board of Trustees
Indiana Public Retirement System
1 North Capitol, Suite001
Indianapolis, IN 46204

Re: Certification of the Actuarial Valuations of the Indiana Public Retirement System as of June 30, 2017

## Dear Board of Trustees:

Actuarial valuations are performed annually as required under statute for the I ndiana Public Retirement System ("INPRS") defined benefit pension plans. The results of theJ une 30, 2017 actuarial valuations for all plans other than the Teachers' Retirement Fund are presented in individual valuation reports pursuant to the engagement letter between INPRS and PricewaterhouseCoopers LLP ("PwC"). These plans (the "Plans") include:

- Public Employees' Retirement Fund
- 1977 Police Officers' and Firefighters' Retirement Fund
- J udges' Retirement System
- Excise, Gaming and Conservation Officers' Retirement Fund
- Prosecuting Attorneys' Retirement Fund
- Legislators' Defined Benefit Fund

The reports are intended to provide the Board of Trustees ("Board") and INPRS staff with information on the funded status of the Plans, development of the contribution rates, and certain financial statement disclosure information. The reports are intended for the sole use and benefit of the Board, and are not intended for reliance by other persons.

For accounting purposes, the actuarial assumptions and methods used in the J une 30, 2017 valuations were selected and approved by the Board, and are in accordance with our understanding of GASB No.67.

For funding purposes, employer contribution rates and amounts, as applicable, are adopted annually for each Plan by the Board, per Indiana statutes. The contributions are actuarially determined based on the funding policy, actuarial assumptions, and actuarial methods selected and approved by the Board. Contributions determined by the actuarial valuation become effective either twelve or eighteen months after the valuation date, depending on the applicable participating employer. Therefore, contribution rates and amounts determined by the J une 30, 2017 actuarial valuation and adopted by the Board will become effective on either J uly 1, 2018 or J anuary 1, 2019. If new legislation is enacted between the valuation date and the date the contributions become effective, the Board may adjust the recommended contributions before adopting them, in order to reflect this new legislation. Such adjustments are based on information supplied by the actuary.

## Financing Objectives and Funding Policy

In setting contribution levels, the Board's principal objectives have been:

- To set contributions such that the unfunded actuarial accrued liability ("UAAL") of plans that are open to new entrants will be amortized over a period not greater than 20 years for any UAAL arising sinceJ une 30, 2015, and 30 years for any UAAL that arose on or before $J$ une 30, 2015. For plans that are closed to new entrants, the UAAL will be amortized over a period not greater than 5 years.
- To set contributions that remain stable over time as determined by the Board.

To accomplish this, the Board's funding policy requires that employer contributions be equal to the sum of the employer normal cost (which pays the current year cost of benefits accruing) and an amortization of the UAAL in equal installments.

## Progress Toward Realization of Financing Objectives

The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) is a standard measure of a Plan's funded status. In the absence of benefit improvements and/ or adverse experience it should increase over time, until it reaches 100\% if contributions equal or exceed the actuarially determined amount. The combined funded ratio for all Plans (excluding the Teachers' Retirement Fund) remains at $84.6 \%$, primarily due to contributions exceeding the actuarially determined amounts and cost-of-living adjustments being less than assumed, offset by the delayed recognition (i.e. smoothing) of favorable investment returns, plan changes, assumption changes, and adverse member experience.

[^28]
## Actuaries' Certification Letters, continued

## Benefit Provisions

The benefit provisions reflected in the valuation reports are those which were in effect at J une 30, 2017, as set forth in Indiana statutes. There were no material changes in benefit provisions since the 2016 valuations except for the following:

- PERF: Per INPRS, ASA annuitizations will be accommodated through a third party annuity provider beginningJ anuary 1, 2018, compared to the previously effective date of April 1, 2017.
- 1977 Fund: Per 2017 House Enrolled Act No. 1617, a member who experiences a catastrophic physical personal injury in the line of duty will receive an enhanced disability retirement benefit.
- PARF: Per Senate Enrolled Act No. 265, the PERF benefit offset reflected in the PARF benefit formula was changed to bethe actual PERF benefit amount the member is receiving for members who commence their PERF benefit beforetheir PARF benefit.


## Assets and Member Data

The valuations were based on asset values of the trust funds as of J une 30, 2017 and member census data as of J une 30, 2016, adjusted for certain activity during fiscal year 2017 where applicable. All asset information and member data were provided by INPRS and INPRS takes responsibility for the accuracy and completeness of the information provided. While certain checks for reasonableness were performed, the data was used unaudited. The accuracy of the results presented in the reports is dependent upon the accuracy and completeness of the underlying asset and census information.

## Actuarial Assumptions and Methods

The actuarial assumptions were adopted by the Board pursuant to an experience study completed in April 2015, which reflected the experience period from J uly 1, 2010 through J une 30, 2014, as well as data from earlier studies. The actuarial assumptions used in the J une 30, 2017 valuations were the same assumptions used in the 2016 valuations, except for the mortality assumption for disabled members. The RP-2014 (with MP-2014 improvement removed) Disability Mortality Table was assumed instead of the RP-2014 (with MP-2014 improvement removed) Healthy Annuitant Mortality Tables with collar adjustments. Other minor assumption changes and refinements were made pursuant to the actuarial audit completed since the prior year and are summarized in the report.

TheJ une 30, 2017 valuations incorporate member census data as of J une 30, 2016, adjusted for certain activity during fiscal year 2017.
The valuation results fromJ une 30, 2016 were rolled-forward to J une 30,2017 to reflect benefit accruals during the year less benefits paid.
The actuarial assumptions and methods are summarized in the Actuarial Assumptions and Methods section of each valuation report. We believe the actuarial assumptions and methods are reasonable for the purposes of the valuation reports and comply with the parameters set forth in Statements No. 67 and No. 68 of the Governmental Accounting Standards Board ("GASB"). Different assumptions and methods may be reasonable for other purposes. As such, the results presented in the valuation reports should only be relied upon for the intended purposes stated therein by the intended parties.

## Certification

We certify that the information presented herein is accurate and fairly portrays the actuarial position of each Plan administered by INPRS (other than the Teachers' Retirement Fund) as of J une 30, 2017, based on the underlying census data and asset information provided by INPRS and the selected assumptions and methods. This information is presented in several schedules and exhibits in this report, including the following:

Financial Section:

- Note 1- Tables of Plan Membership (Included in the Historical Summary)
- Note 7-Net Pension Liability and Actuarial Information - Defined Benefit Plans (Included in the Accounting Section)
- Schedule of Changes in Net Pension Liability and Plan Fiduciary Net Position
- Schedule of Contributions (Actuarially Determined Contribution)
- Schedule of Notes to Required Supplementary Information


## Actuarial Section:

- Summary of INPRS Funded Status (Included in the Historical Summary)
- Historical Summary of Actuarial Valuation Results by Retirement Plan (Schedule of Funding Progress Included in the Historical Summary)
- Summary of Actuarial Assumptions, Methods and Plan Provisions
- Analysis of Financial Experience (Included in the Unfunded Actuarial Accrued Liability Reconciliation)
- Solvency Test (Included in the Historical Summary)
- Schedule of Active Member Valuation Data
- Schedule of Retirants and Beneficiaries


## Statistical Section:

- Membership Data Summary (Included in the Historical Summary)
- Ratio of Active Members to Annuitants (Census Counts Included in the Historical Summary)
- Schedule of Benefit Recipients by Type of Benefit Option
- Schedule of Average Benefit Payments

Actuaries' Certification Letters, continued


Subject to reliance on the data provided, all estimates are based on information available as of a point in time and are subject to ongoing unforeseen and random events. As such, any reported results must be viewed as having a likely range of variability from the estimate, both up and down. Differences between our estimates and actual results depend on the extent to which future experience conforms to the assumptions made for this analysis. It is certain that actual experience will not conform exactly to the assumptions used in this analysis. Although estimated amounts have not been rounded, no inference should be made regarding the precision of such results.

A range of results, different from those presented in this report could be considered reasonable. Future actuarial measurements may differ significantly from the current measurement presented in this report due to a number of factors including but not limited to: plan experience differing from that anticipated by the economic and demographic assumptions; increases or decreases expected as part of the natural operation of the methods 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); rounding conventions; and changes in plan provisions or applicable law. Due to the limited scope of this report, an analysis of the potential range of such future measurements has not been performed.

To the best of our knowledge our actuarial reports are complete and accurate and have been prepared in accordance with generally accepted actuarial principles and practice and with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with our understanding of the requirements of Indiana state law. The undersigned actuaries are members of the Society of Actuaries and other professional organizations, including the American Academy of Actuaries, and meet the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States relating to pension plans. There is no relationship between the Pw practitioners involved in this engagement and INPRS that may impair our objectivity.

Respectfully submitted,


Ms. Cindy Fraterrigo Member, American Academy of Actuaries Fellow of the Society of Actuaries Enrolled Actuary (No. 17-06229)


Mr. Brandon Robertson Member, American Academy of Actuaries Associate of the Society of Actuaries Enrolled Actuary (No. 17-07568)


Mr. Antonio DeSario
Member, American Academy of Actuaries
Fellow of the Society of Actuaries
Enrolled Actuary (No. 17-08239)

The content of this document is limited to the matters specifically addressed herein and does not address any other potential tax consequences, or the potential application of tax penalties, to any matter other than as set forth herein. Our conclusions are not binding upon any taxing authority or the courts and there is no assurance that any relevant taxing authority will not successfully assert a contrary position. In addition, no exceptions (including the reasonable cause exception) are available for any federal or state penalties imposed if any portion of a transaction is determined to lack economic substance or fails to satisfy any similar rule of law, and our advice will not protect you from any such penalties. This document supersedes all prior written or oral advice with respect to the issues addressed in this document and all such prior communications should not be relied upon by any person for any purpose.

October 30, 2017

## The Board of Trustees

Indiana Public Retirement System
Indianapolis, IN

## Dear Board Members:

Actuarial valuations are prepared annually for the Indiana State Teachers' Retirement Funds. Submitted in this report are the results of the June 30, 2017 actuarial valuations.

## Census Data and Asset Information

The member census data and the asset information for the valuations were furnished by the Chief Financial Officer and Staff. Their efforts and cooperation in furnishing these materials are acknowledged with appreciation. We did not audit the information provided, but we did review it thoroughly for reasonableness and compared it with the prior year's submission for consistency.

## Assumptions and Methods

The majority of the actuarial assumptions used in the June 30, 2017 valuations were adopted by the Board pursuant to the Experience Study completed in April 2015, which reflects the experience from July 1, 2011 to June 30, 2014. Assumptions are summarized in the Assumptions and Methods section of the June 30, 2017 valuation reports. These assumptions and methods have been used to develop the Actuarially Determined Contribution and are consistent with the accounting requirements detailed in GASB Statements No. 67 and No. 68.

Benefit obligations in the June 30, 2017 valuations are determined using June 30, 2016 census data and rolled-forward to the June 30, 2017 measurement date at the valuation interest rate, using actual distributions and ASA account returns during that period. We are not aware of any material events that would require additional adjustments to the benefit obligations for changes to the population not anticipated in the demographic assumptions used in the valuation.

## Funding Objectives

The Indiana State Teachers' Retirement Fund Pre-1996 Account is funded on a pay-as-you-go basis from the State of Indiana.

The funding objective of the Indiana State Teachers' Retirement Fund 1996 Account is to establish and receive contributions that, when invested at the assumed rate of return, will ultimately accumulate assets over each member's working lifetime that will be sufficient to pay expected retirement allowances. As such, an employer contribution rate is calculated each year. That rate is then considered in conjunction with the goal of maintaining a relatively stable contribution over time.

## Fund Structure

The Indiana State Teachers' Retirement Fund (TRF) is one fund comprised of a two-account structure in compliance with Indiana Code Section 5-10.4-2-2.

The Pre-1996 Account consists of members who were hired prior to July 1, 1995, and who have maintained continuous employment with the same school corporation or covered institution since that date.

## Characteristics of the Pre-1996 Account

1. Active membership in the Pre-1996 Account continues to decline as members quit, become disabled, die, or retire.
2. The Defined Benefits from the Pre-1996 Account are funded by State appropriations (including contributions of some revenue from the State Lottery). At the time of retirement, Annuity Savings Account (ASA) benefits payable from the Pre-1996 Account are funded by the annuitization of Pre-1996 Account member contributions.

The 1996 Account consists of members who were:

1. First hired after June 30, 1995; or
2. Pre-1996 Account members rehired by another school corporation after June 30,1995 and before July 1, 2005.

## Characteristics of the 1996 Account

1. As members depart from active service in the Pre-1996 Account, their replacements will become members of the 1996 Account. If the 1996 Account were a stand-alone plan, this pattern of departures and hirings would produce a fairly constant population size.
2. Defined Benefits payable from the 1996 Account are funded by contributions from local school corporations or other institutions that employ covered members. At the time of retirement, ASA benefits payable from the 1996 Account are funded by the annuitization of 1996 Account member contributions.

## Funding Arrangements

Prior to the legislation that established the two-account structure of TRF, the Defined Benefits of the Indiana State Teachers' Retirement Fund were funded with a pay-as-you-go method. Under this arrangement, amounts were appropriated to meet the current year's pension payment requirements. Defined Benefits payable from the Pre-1996 Account continue to be funded on this basis. In 1995, the Pension Stabilization Fund was set up for the Pre-1996 Account. Since then, some pre-funding progress has been made via State appropriations to this account.

Defined Benefits payable from the 1996 Account are funded through employer percent-of-pay contributions. The Board of the Indiana Public Retirement System sets this contribution rate after reviewing the most recent actuarial valuation report. The contribution rate of $7.50 \%$ for fiscal year 2018 was set by the Board in fiscal year 2017. The contribution rate of $7.50 \%$ for fiscal year 2019 was set by the Board in fiscal year 2018.

## Progress Towards Realization of Financing Objectives

The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) is a standard measure of a Plan's funded status. In the absence of benefit improvements, it should increase over time, until it reaches 100\%.

The funded ratio of the Pre-1996 Account (pay-as-you-go) decreased to $29.6 \%$ from $29.7 \%$ for the preceding year. Based on the actuarial assumptions, it is anticipated that the Pre-1996 Account will attain $100 \%$ funded status on 6/30/2039.

The funded ratio of the 1996 Account increased to $92.8 \%$ from $91.8 \%$ for the preceding year. Based on the actuarial assumptions, it is anticipated that the 1996 Account will attain $100 \%$ funded status on 6/30/2031.

Actuaries' Certification Letters, continued

## Certification

We have included several schedules and exhibits in this report, including the following:

## Financial Section

- Note 1 - Tables of Plan Membership
- Note 7 - Net Pension Liability and Actuarial Information - Defined Benefit Plans
- Schedule of Changes in Net Pension Liability and Net Pension Liability
- Schedule of Contributions (Actuarially Determined Contribution)
- Schedule of Notes to Required Supplementary Information


## Actuarial Section

- Summary of INPRS Funded Status
- Historical Summary of Actuarial Valuation Results by Retirement Plan (Schedule of Funding Progress)
- Summary of Actuarial Assumptions, Methods and Plan Provisions
- Analysis of Financial Experience (Unfunded Actuarial Accrued Liability Reconciliation)
- Solvency Test
- Schedule of Active Member Valuation Data
- Schedule of Retirants and Beneficiaries


## Statistical Section

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

To the best of our knowledge, this report presents a fair position of the funded status of the plan in accordance with the Actuarial Standards of Practice as described by the American Academy of Actuaries. In addition, information has been prepared in accordance with applicable government standards of financial reporting for defined benefit pension plans.

The actuarial valuation is prepared using information which has been reconciled and reviewed for reasonableness. We are not aware of any material inadequacy in employee census or asset values. The census information and the asset information have been provided to us by the Chief Financial Officer and Staff. We have not audited the information at the source, and therefore do not accept responsibility for the accuracy or the completeness of the data on which the information is based.

In our opinion, the actuarial assumptions and methods are individually reasonable and in combination represent our best estimate of anticipated experience of the plan.

Neither Nyhart nor any of its employees have any relationship with the plan or its sponsor which could impair or appear to impair the objectivity of this report.

The undersigned are compliant with the continuing education requirements of the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States.

Respectfully submitted,


Michael Zurek, EA, MAAA


Danielle Winegardner, ASA, EA, MARA


Tayt V. Odom, FSA, EA, MARA

Summary of Funded Status

| (dollars in millions) | Actuarial Valuation as of June 30, 2017 |  |  |  |  | Actuarial Valuation as of June 30, 2016 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pre-Funded Defined Benefit Retirement Plans | Actuarial Accrued Liability | Actuarial Value of Assets |  | nfunded Actuarial ccrued ability ${ }^{1}$ | Actuarial Funded Status | Actuarial Accrued Liability | Actuarial Value of Assets |  | nfunded Actuarial ccrued ability ${ }^{1}$ | Actuarial Funded Status |
| PERF | \$ 19,106.2 | \$ 15,098.9 | \$ | 4,007.3 | 79.0 \% | \$ 18,408.9 | \$ 14,553.0 | \$ | 3,855.9 | 79.1 \% |
| TRF '96 | 6,914.2 | 6,414.1 |  | 500.1 | 92.8 | 6,391.8 | 5,865.8 |  | 526.0 | 91.8 |
| '77 Fund | 5,385.8 | 5,587.6 |  | (201.8) | 103.7 | 5,039.8 | 5,255.2 |  | (215.4) | 104.3 |
| JRS | 523.7 | 492.0 |  | 31.7 | 93.9 | 501.1 | 469.4 |  | 31.7 | 93.7 |
| EG\&C | 142.6 | 124.5 |  | 18.1 | 87.3 | 138.9 | 118.5 |  | 20.4 | 85.3 |
| PARF | 96.7 | 58.0 |  | 38.7 | 60.0 | 85.0 | 56.4 |  | 28.6 | 66.4 |
| LE DB | 3.8 | 3.1 |  | 0.7 | 81.9 | 4.0 | 3.2 |  | 0.8 | 80.7 |
| Total Pre-Funded Defined Benefit Retirement Plans | \$ 32,173.0 | \$ 27,778.2 | \$ | 4,394.8 | 86.3 \% | \$ 30,569.5 | \$ 26,321.5 | \$ | 4,248.0 | 86.1 \% |
| Pay-As-You-Go Defined Benefit Retirement Plan |  |  |  |  |  |  |  |  |  |  |
| TRF Pre-'96 | 16,736.8 | 4,951.1 |  | 11,785.7 | 29.6 | 16,840.2 | 5,009.0 |  | 11,831.2 | 29.7 |
| Total Defined Benefit Retirement Plans | \$ 48,909.8 | \$ 32,729.3 |  | 16,180.5 | 66.9 \% | \$ 47,409.7 | \$ 31,330.5 |  | 16,079.2 | 66.1 \% |

${ }^{1}$ The Unfunded Actuarial Accrued Liability 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).

Analysis of Financial Experience

| (dollars in thousands) |  |  |  |  | (Gain) / Loss |  |  |  |  |  |  |  |  |  | $\begin{gathered} \text { June 30, } \\ 2017 \end{gathered}$ <br> UAAL ${ }^{1}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Defined Benefit Retirement Plans | June 30, <br> 2016 <br> UAAL ${ }^{1}$ | Normal Cost and Interest, less Expected Contributions |  | Expected June 30, 2017 UAAL $^{1}$ | Actuarial Value of Assets Experience |  | Actuarial Accrued Liabilities Experience ${ }^{2}$ |  | Actuarial Assumption \& Methodology Changes ${ }^{3}$ |  | Plan Provision Changes ${ }^{4}$ |  |  | Total Gain) I Loss |  |
| PERF | \$ 3,855,887 | \$ | $(65,715)$ | \$ 3,790,172 | \$ | 134,116 | \$ | 82,964 | \$ | 22,809 | \$ | $(22,766)$ | \$ | 217,123 | \$ 4,007,295 |
| TRF Pre-'96 | 11,831,211 |  | $(85,065)$ | 11,746,146 |  | 74,442 |  | 22,416 |  | $(61,548)$ |  | 4,213 |  | 39,523 | 11,785,669 |
| TRF '96 | 526,021 |  | $(9,290)$ | 516,731 |  | 51,065 |  | 46,460 |  | $(115,506)$ |  | 1,353 |  | $(16,628)$ | 500,103 |
| '77 Fund | $(215,419)$ |  | 2,385 | $(213,034)$ |  | (97) |  | 33,409 |  | $(23,399)$ |  | 1,323 |  | 11,236 | $(201,798)$ |
| JRS | 31,748 |  | $(1,131)$ | 30,617 |  | 5,425 |  | $(3,107)$ |  | $(1,213)$ |  | - |  | 1,105 | 31,722 |
| EG\&C | 20,449 |  | (407) | 20,042 |  | 488 |  | 120 |  | $(2,578)$ |  | - |  | $(1,970)$ | 18,072 |
| PARF | 28,561 |  | (503) | 28,058 |  | 2,303 |  | 1,996 |  | (216) |  | 6,547 |  | 10,630 | 38,688 |
| LE DB | 775 |  | (135) | 640 |  | 163 |  | (113) |  | - |  | - |  | 50 | 690 |
| Total INPRS | \$16,079,233 | \$ | $(159,861)$ | \$15,919,372 | \$ | 267,905 | \$ | 184,145 | \$ | $(181,651)$ | \$ | $(9,330)$ | \$ | 261,069 | \$16,180,441 |

${ }^{1}$ UAAL: Unfunded Actuarial Accrued Liabilities
${ }^{2}$ Actuarial Accrued Liabilities Experience represents actual experience versus expected experience of the actuarial census assumptions:

- Unanticipated changes to the member census data.
- For PERF, TRF Pre-'96, TRF '96, and EG\&C, a one-time payment (i.e., 13th Check) for benefit recipients by October 1, 2017 and 2018, rather than the assumed COLA of 1.00 percent.
- For ' 77 Fund, a 2.50 percent COLA for benefit recipients effective July 1, 2017, rather than the assumed COLA of 2.00 percent.
- For JRS, a 2.00 percent COLA for benefit recipients effective July 1, 2017, rather than the assumed COLA of 2.50 percent.
- For LE DB, a COLA will not be granted as of January 1, 2018 and 2019, compared to the assumed COLA of 1.00 percent.
${ }^{3}$ Actuarial Assumption and Methodology Changes include:
- Change from healthy to disabled mortality assumption for disabled members.
- Changes in actuarial assumptions and methods for consistency across all pension plans resulting from the 2016 actuarial audit.
- For '77 Fund members, 1.00 percent of all disabilities are assumed to be catastrophic physical personal injuries as defined in House Enrolled Act No. 1617.
${ }^{4}$ Plan Provision Changes:
- For PERF, TRF Pre-'96 and TRF '96, ASA annuitizations will be accommodated through a third party annuity provider beginning January 1, 2018, compared to the previous date of April $1,2017$.
- For TRF Pre-'96 and TRF '96, \$185 minimum monthly benefit payable beginning July 1, 2017 as specified in Senate Enrolled Act No. 46.
- For '77 Fund per House Enrolled Act No. 1617, a member who experienced a catastrophic physical personal injury in the line of duty will receive an enhanced benefit.
- For PARF, per Senate Enrolled Act No. 265, the PERF offset was changed to be the actual PERF benefit amount the member is receiving for members who commence their PERF benefit before their PARF benefit.

Ten-Year Schedule of Participating Employers
For the Year Ended June 30

|  | Total ${ }^{1}$ | PERF | $\begin{aligned} & \text { TRF } \\ & \text { Pre-' } 96^{2} \end{aligned}$ | TRF '96 ${ }^{2}$ | Total TRF ${ }^{2}$ | '77 Fund | JRS | EG\&C | PARF | LE DB |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 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 |
| $2013{ }^{3}$ | 1,171 | 1,121 | N/A | N/A | 365 | 161 | 1 | 1 | 1 | 1 |
| $2012{ }^{3}$ | 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 |
| 2009 | 1,220 | 1,179 | N/A | N/A | 360 | 160 | 1 | 1 | 1 | 1 |
| 2008 | 1,207 | 1,167 | N/A | N/A | 361 | 158 | 1 | 1 | 1 | 1 |

[^29]Historical Summary of Actuarial Valuation Results
Actuarial Valuation as of June 30
(dollars in millions)

|  | Actuarial Accrued Liability (AAL) |  | Actuarial Value of Assets (AVA) |  |  | nded ${ }^{1}{ }^{1}{ }^{1}{ }^{1}$ - AVA) | AVA Funded Status (AVA/AAL) |  | ered loyee roll ${ }^{2}$ | Unfunded Liability ${ }^{1}$ as a percentage of Covered Employee Payroll |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2017 | \$ | 19,106.2 | \$ | 15,098.9 | \$ | 4,007.3 | 79.0 \% | \$ | 4,997.6 | 80.2 \% |
| 2016 |  | 18,408.9 |  | 14,553.0 |  | 3,855.9 | 79.1 |  | 4,868.7 | 79.2 |
| 2015 |  | 17,980.6 |  | 14,131.9 |  | 3,848.7 | 78.6 |  | 4,804.1 | 80.1 |
| 2014 |  | 16,732.2 |  | 13,791.3 |  | 2,940.9 | 82.4 |  | 4,896.6 | 60.1 |
| 2013 |  | 16,145.7 |  | 12,947.3 |  | 3,198.4 | 80.2 |  | 4,700.0 | 68.1 |
| 2012 |  | 15,784.2 |  | 12,088.2 |  | 3,696.0 | 76.6 |  | 4,550.0 | 81.2 |
| 2011 |  | 14,913.1 |  | 12,000.6 |  | 2,912.5 | 80.5 |  | 4,500.0 | 64.7 |
| 2010 |  | 14,506.1 |  | 12,357.2 |  | 2,148.9 | 85.2 |  | 4,800.0 | 44.8 |
| 2009 |  | 13,506.2 |  | 12,569.3 |  | 936.9 | 93.1 |  | 4,850.0 | 19.3 |
| 2008 |  | 13,103.2 |  | 12,780.1 |  | 323.1 | 97.5 |  | 4,550.0 | 7.1 |

${ }^{1}$ The Unfunded Liability is calculated using the Actuarial Value of Assets (AVA), which is different than Net Pension Liability in the Financial Section that uses the Plan Fiduciary Net Position, also known as the Fair Value of Assets (FVA).
${ }^{2}$ Covered Employee Payroll can also be found in the RSI Contribution Schedule in the Financial Section.


AAL AVA $\square$ AVA Funded Status

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions

The actuarial assumptions and methods used in the June 30, 2017 valuation of the Public Employees' Retirement Fund were adopted by the INPRS Board in May 2017. 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 April 2016. The funding policy is available online at: www.in.gov/inprs/files/INPRS_Funding_Policy.pdf.

## Changes in Actuarial Assumptions

For the actuarial valuation as of June 30, 2017, an actuarial audit was completed which included updating the following assumptions: adding a load on final average salary of $\$ 400$ to reflect unused sick leave accumulated at termination of employment for active and inactive vested members. Additionally, for disabled members, the RP-2014 (with MP-2014 improvement removed) Disability Mortality tables are assumed instead of the RP2014 (with MP-2014 improvement removed) Total Data Set Mortality tables.

## Changes in Actuarial Methods

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

## Changes in Plan Provisions

ASA annuitizations will be accommodated through a third party annuity provider beginning January 1,2018 , compared to the previous date of April 1, 2017.

## 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

A load on final average salary of $\$ 400$ is included to reflect unused sick leave.
Interest Rate / Investment Return:
Funding $\quad 6.75$ 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:
1.00 percent per year in retirement

Future Salary Increases:
Based on 2010-2014 experience. Illustrative rates shown below:

| Age |  | Inflation |  | Productivity, Merit, <br> and Promotion |
| :---: | :---: | :---: | :---: | :---: |
|  | $2.25 \%$ |  | Total Individual <br> Salary Growth |  |
| $31-45$ | 2.25 | $2.00 \%$ |  | $4.25 \%$ |
| $46-55$ | 2.25 | 1.50 |  | 3.75 |
| $56-60$ | 2.25 | 1.00 |  | 3.25 |
| $>=61$ | 2.25 | 0.50 |  | 2.75 |

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions, continued

## Demographic Assumptions: Based on 2010-2014 Experience

Mortality (Healthy):

Mortality (Disabled):

Retirement:

Benefit Commencement Timing:
Active Members

Terminated Vested Members

Termination:

Earnings < \$20,000

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

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

| Age | Years of Service |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 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 |

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.

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

Ultimate tables illustrative rates shown below:

| 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 |

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions, continued

State (Male)
Earnings $>=\$ 20,000$

State (Female)
Earnings >= \$20,000

| 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 $>=\$ 20,000$

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

| Age | Years of Service |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 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 |

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions, continued

Disability:

Spouse/Beneficiary:

| Age | Male | Female |
| :---: | :---: | :---: |
| 20 | 0.0067 \% | 0.0050 \% |
| 30 | 0.0208 | 0.0158 |
| 40 | 0.0646 | 0.0496 |
| 50 | 0.2005 | 0.1556 |
| 60 | 0.5815 | 0.3751 |
| 70 | 0.1000 | 0.1000 |
| 80 | 0.0000 | 0.0000 |

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.

ASA Withdrawal: Prior to January 1, 2018:

- 40 percent of active members who decrement while vested are assumed to withdraw their ASA balance immediately upon decrement.
- 40 percent of vested inactive members are assumed to withdraw their ASA balance immediately on the valuation date.
- 100 percent of active members who decrement prior to vesting are assumed to withdraw their ASA balance immediately upon decrement.
- 100 percent of non-vested inactive members are assumed to withdraw their ASA balance immediately on the valuation date.

Beginning January 1, 2018 :

- 100 percent of active members are assumed to withdraw their ASA balance immediately upon decrement.
- 100 percent of inactive members are assumed to withdraw their ASA balance immediately.

ASA Annuitization:
Prior to January 1, 2018:

- 60 percent of active members who decrement while vested are assumed to annuitize their ASA balance at their assumed retirement age.
- 60 percent of vested inactive members are assumed to annuitize their ASA balance at their assumed retirement age.
- The conversion rate is 4.5 percent.

Beginning January 1, 2018, assumed INPRS entered an agreement with a third party for all ASA annuitizations.

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions, continued

## 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 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 (actives and inactives). 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 Member census data as of the prior year end was used in the valuation and adjusted, where appropriate, to reflect Date: 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.

Analysis of Financial Experience

| (dollars in thousands) | UAAL |  |
| :--- | ---: | ---: |
| Unfunded Actuarial Accrued Liability (UAAL): June 30, 2016 | $\$$ | $3,855,887$ |
| Normal Cost and Interest, less Expected Contributions | $(65,715)$ |  |
| Expected UAAL: June 30, 2017 | $3,790,172$ |  |
| UAAL (Gain) / Loss |  |  |
| Actuarial Value of Assets Experience | 134,116 |  |
| Actuarial Accrued Liabilities Experience ${ }^{1}$ | 82,964 |  |
| Actuarial Assumption \& Methodology Changes ${ }^{2}$ | 22,809 |  |
| Plan Provision Changes ${ }^{3}$ | $(22,766)$ |  |
| Total UAAL (Gain) / Loss | 217,123 <br> Unfunded Actuarial Accrued Liability: June 30, 2017 | 4,007,295 |

${ }^{1}$ Actuarial Accrued Liabilities Experience represents actual experience versus expected experience of the actuarial census assumptions:

- Unanticipated changes to the member census data.
- A one-time payment for benefit recipients by October 1, 2017 and 2018, rather than the assumed COLA of 1.00 percent. ${ }^{2}$ Actuarial Assumption and Methodology Changes include:
- Change from healthy to disabled mortality assumption for disabled members.
- Changes in actuarial assumptions and methods for consistency across all pension plans resulting from the 2016 actuarial audit. ${ }^{3}$ ASA annuitizations will be accommodated through a third party annuity provider beginning January 1, 2018, compared to the previous date of April 1, 2017.


## Solvency Test

(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 |
| 2017 | \$ 2,770,962 | \$ 7,834,962 | \$ 8,500,291 | \$ 19,106,215 | \$ 15,098,920 | 100.0\% | 100.0\% | 52.9\% | 79.0 \% |
| 2016 | 2,656,892 | 7,595,088 | 8,156,966 | 18,408,946 | 14,553,059 | 100.0 | 100.0 | 52.7 | 79.1 |
| 2015 | 2,717,173 | 6,981,308 | 8,282,087 | 17,980,568 | 14,131,884 | 100.0 | 100.0 | 53.5 | 78.6 |
| 2014 | 2,851,501 | 6,250,902 | 7,629,820 | 16,732,223 | 13,791,261 | 100.0 | 100.0 | 61.5 | 82.4 |
| 2013 | 2,796,103 | 6,367,819 | 6,981,759 | 16,145,681 | 12,947,283 | 100.0 | 100.0 | 54.2 | 80.2 |
| 2012 | 2,749,449 | 5,895,779 | 7,139,012 | 15,784,240 | 12,088,225 | 100.0 | 100.0 | 48.2 | 76.6 |
| 2011 | 2,805,023 | 5,370,786 | 6,737,338 | 14,913,147 | 12,000,586 | 100.0 | 100.0 | 56.8 | 80.5 |
| 2010 | 2,780,570 | 4,931,592 | 6,793,890 | 14,506,052 | 12,357,199 | 100.0 | 100.0 | 68.4 | 85.2 |
| 2009 | 2,669,318 | 4,611,257 | 6,225,705 | 13,506,280 | 12,569,336 | 100.0 | 100.0 | 85.0 | 93.1 |
| 2008 | 2,694,331 | 4,227,366 | 6,181,524 | 13,103,221 | 12,780,116 | 100.0 | 100.0 | 94.8 | 97.5 |

Schedule of Active Members Valuation Data
Actuarial Valuation as of June 30
(dollars in thousands - except annual average pay)

|  | Active Members | Annual Payroll ${ }^{1}$ |  |  | Average ay | Annual Percent Increase I (Decrease) In Average Pay |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $2017{ }^{2}$ | 134,909 | \$ | 5,130,437 | \$ | 38,029 | (0.5) \% |
| $2016^{2}$ | 131,178 |  | 5,014,012 |  | 38,223 | 6.8 |
| $2015^{2}$ | 138,660 |  | 4,964,813 |  | 35,806 | (3.0) |
| $2014{ }^{2}$ | 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) |
| 2009 | 147,792 |  | 4,931,423 |  | 33,367 | 1.7 |
| 2008 | 140,146 |  | 4,600,354 |  | 32,825 | 3.9 |

${ }^{1}$ Figures shown are the anticipated pay for the one-year period following the valuation date.
${ }^{2}$ The valuation results were calculated using the prior year census data, adjusted for certain activity during the fiscal year.

Total Number of Active Members Per Year and Annual Average Pay


Schedule of Retirants and Beneficiaries
Actuarial Valuation as of June 30
(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 ${ }^{2}$ |  | Percent |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Annual Benefits | Number | Annual Benefits | Number | Total Annual Benefits ${ }^{1,2}$ |  |  |  | Increase / <br> (Decrease) <br> in Average <br> Annual Benefit |
| $2017{ }^{3}$ | 4,855 | \$ 49,980 | 2,913 | \$ 18,808 | 85,130 | \$757,851 | 3.9 \% | \$ | 8,902 | 1.5 \% |
| $2016^{3}$ | 6,478 | 78,487 | 2,488 | 15,597 | 83,188 | 729,366 | 9.9 |  | 8,768 | 4.6 |
| $2015{ }^{3}$ | 5,489 | 60,538 | 2,241 | 14,107 | 79,198 | 663,767 | 7.4 |  | 8,381 | 3.0 |
| $2014{ }^{3}$ | - | - | - | - | 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 |
| 2009 | 6,047 | 55,726 | 3,372 | 19,103 | 65,099 | 477,553 | 9.3 |  | 7,336 | 4.9 |
| 2008 | 5,376 | 43,915 | 3,284 | 18,022 | 62,424 | 436,749 | 5.8 |  | 6,996 | 2.3 |

${ }^{1}$ End of year annual benefits are not equal to prior end of year annual benefits plus additions less removals due to beneficiary benefit changes, data changes, and COLA increases. ${ }^{2}$ Annual benefits includes members selecting an annuity for their ASA.
${ }^{3}$ The valuation results were calculated using the prior year census data, adjusted for certain activity during the fiscal year.

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


Historical Summary of Actuarial Valuation Results
Actuarial Valuation as of June 30
(dollars in millions)

|  | Actuarial Accrued Liability (AAL) |  | Actuarial Value of Assets (AVA) |  | Unfunded Liability ${ }^{1}$ (AAL - AVA) |  | AVA Funded Status (AVA/AAL) |  | ered oyee roll ${ }^{2}$ | Unfunded Liability ${ }^{1}$ as a percentage of Covered Employee Payroll |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2017 | \$ | 16,736.8 | \$ | 4,951.1 | \$ | 11,785.7 | 29.6 \% | \$ | 912.7 | 1,291.3 \% |
| 2016 |  | 16,840.2 |  | 5,009.0 |  | 11,831.2 | 29.7 |  | 989.1 | 1,196.2 |
| 2015 |  | 17,017.7 |  | 5,171.6 |  | 11,846.1 | 30.4 |  | 1,074.8 | 1,102.2 |
| 2014 |  | 16,355.2 |  | 5,358.3 |  | 10,996.9 | 32.8 |  | 1,262.8 | 870.8 |
| 2013 |  | 16,462.4 |  | 5,235.1 |  | 11,227.3 | 31.8 |  | 1,383.4 | 811.6 |
| 2012 |  | 16,522.0 |  | 4,978.1 |  | 11,543.9 | 30.1 |  | 1,637.1 | 705.1 |
| 2011 |  | 16,318.4 |  | 5,227.4 |  | 11,091.0 | 32.0 |  | 1,762.8 | 629.2 |
| 2010 |  | 16,282.1 |  | 5,382.4 |  | 10,899.7 | 33.1 |  | 1,865.1 | 584.4 |
| 2009 |  | 16,027.1 |  | 5,109.1 |  | 10,918.0 | 31.9 |  | 2,030.5 | 537.7 |
| 2008 |  | 15,792.3 |  | 5,954.0 |  | 9,838.3 | 37.7 |  | 2,295.8 | 428.5 |

${ }^{1}$ The Unfunded Liability is calculated using the Actuarial Value of Assets (AVA), which is different than Net Pension Liability in the Financial Section which uses the Plan Fiduciary Net Position, also known as the Fair Value of Assets (FVA).
${ }^{2}$ Covered Employee Payroll can also be found in the RSI Contribution Schedule in the Financial Section.


Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions

T' he actuarial assumptions and methods used in the June 30, 2017 valuation of the Teachers' Pre-1996 Account were adopted by the INPRS Board in May 2017. 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 April 2016. The funding policy is available online at: www.in.gov/inprs/files/INPRS_Funding_Policy.pdf.

## Changes in Actuarial Assumptions

For the actuarial valuation as of June 30, 2017, an actuarial audit was completed which included updating the following assumptions: replacing a 1 percent load on final average salary with a load of $\$ 400$ to reflect unused sick leave accumulated at termination of employment for active and inactive vested members. Additionally, for disabled members, the RP-2014 (with MP-2014 improvement removed) Disability Mortality tables are assumed instead of the RP-2014 (with MP-2014 improvement removed) White Collar Mortality tables.

## Changes in Actuarial Methods

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

## Changes in Plan Provisions

Per Senate Enrolled Act No. 46, \$185 minimum monthly benefit payable beginning July 1, 2017.

## 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 $\quad 6.75$ 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: $\quad 1.00$ percent per year in retirement
Future Salary Increases: Based on 2011-2014 experience. Illustrative rates shown below:

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

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions, continued

## Demographic Assumptions: Based on 2011-2014 Experience

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

Termination:

| Service Based |  |  | 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 |  |  |  |

[^30]Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions, continued
Disability:

| Age |  | Male |  | Female |
| :---: | :--- | :--- | :--- | :--- |
| 25 |  | $0.01 \%$ |  | $0.01 \%$ |
| 30 |  | 0.01 |  | 0.01 |
| 35 |  | 0.01 |  | 0.01 |
| 40 |  | 0.01 |  | 0.01 |
| 45 |  | 0.02 |  | 0.02 |
| 50 |  | 0.05 |  | 0.05 |
| 55 |  | 0.09 |  | 0.09 |
| 60 |  | 0.10 |  | 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.

ASA Annuitization: Prior to January 1, 2018:

- 50 percent of active members who decrement while vested are assumed to annuitize their ASA balance at their assumed retirement age.
- 50 percent of vested inactive members are assumed to annuitize their ASA balance at their assumed retirement age.
- ASA balances not converted to annuities are withdrawn.
- The conversion rate is 4.5 percent.

Beginning January 1, 2018, assumed INPRS entered an agreement with a third party for all ASA annuitizations.

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions, continued

## 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 five-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 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.

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 (actives and inactives). 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 Member census data as of the prior year end was used in the valuation and adjusted, where appropriate, to reflect Date: 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.

Analysis of Financial Experience

| (dollars in thousands) | UAAL |  |
| :---: | :---: | :---: |
| Unfunded Actuarial Accrued Liability (UAAL): June 30, 2016 | \$ | 11,831,211 |
| Normal Cost and Interest, less Expected Contributions |  | $(85,065)$ |
| Expected UAAL: June 30, 2017 |  | 11,746,146 |
| $\underline{\text { UAAL (Gain) / Loss }}$ |  |  |
| Actuarial Value of Assets Experience |  | 74,442 |
| Actuarial Accrued Liabilities Experience ${ }^{1}$ |  | 22,416 |
| Actuarial Assumption \& Methodology Changes ${ }^{2}$ |  | $(61,548)$ |
| Plan Provision Changes ${ }^{3}$ |  | 4,213 |
| Total UAAL (Gain) / Loss |  | 39,523 |
| Unfunded Actuarial Accrued Liability: June 30, 2017 | \$ | 11,785,669 |

${ }^{1}$ Actuarial Accrued Liabilities Experience represents actual experience versus expected experience of the actuarial census assumptions:

- Unanticipated changes to the member census data.
- A one-time payment for benefit recipients by October 1, 2017 and 2018, rather than the assumed COLA of 1.00 percent. ${ }^{2}$ Actuarial Assumption and Methodology Changes include:
- Change from healthy to disabled mortality assumption for disabled members.
- Changes in actuarial assumptions and methods for consistency across all pension plans resulting from the 2016 actuarial audit. ${ }^{3}$ Plan Provision Changes:
- ASA annuitizations will be accommodated through a third party annuity provider beginning January 1, 2018, compared to the previous date of April 1, 2017.
- \$185 minimum monthly benefit payable beginning July 1, 2017 as specified in Senate Enrolled Act No. 46.


## Solvency Test

(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 |
| 2017 | \$ 1,242,230 | \$ 11,653,674 | \$ 3,840,865 | \$ 16,736,769 | \$ 4,951,100 | 100.0 \% | 31.8 \% | - \% | 29.6 \% |
| 2016 | 1,161,803 | 11,461,481 | 4,216,916 | 16,840,200 | 5,008,989 | 100.0 | 33.6 | - | 29.7 |
| 2015 | 1,303,468 | 10,606,053 | 5,108,225 | 17,017,746 | 5,171,639 | 100.0 | 36.5 | - | 30.4 |
| 2014 | 1,525,192 | 9,876,539 | 4,953,485 | 16,355,216 | 5,358,351 | 100.0 | 38.8 | - | 32.8 |
| 2013 | 1,636,978 | 10,254,953 | 4,570,448 | 16,462,379 | 5,235,104 | 100.0 | 35.1 | - | 31.8 |
| 2012 | 1,782,353 | 9,451,792 | 5,287,870 | 16,522,015 | 4,978,107 | 100.0 | 33.8 | - | 30.1 |
| 2011 | 2,015,580 | 8,776,916 | 5,525,908 | 16,318,404 | 5,227,402 | 100.0 | 36.6 | - | 32.0 |
| 2010 | 2,353,715 | 8,153,240 | 5,775,111 | 16,282,066 | 5,382,410 | 100.0 | 37.1 | - | 33.1 |
| 2009 | 2,389,886 | 7,891,346 | 5,745,861 | 16,027,093 | 5,109,086 | 100.0 | 34.5 | - | 31.9 |
| 2008 | 2,613,138 | 7,244,422 | 5,934,745 | 15,792,305 | 5,953,991 | 100.0 | 46.1 | - | 37.7 |

## Teachers' Pre-1996 Account

Schedule of Active Members Valuation Data
Actuarial Valuation as of June 30
(dollars in thousands - except annual average pay)

|  | Active Members | Annual Payroll ${ }^{1}$ |  | Annual Average Pay |  | Annual Percent Increase I (Decrease) In Average Pay |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $2017^{2}$ | 13,128 | \$ | 933,278 | \$ | 71,091 | (2.4) \% |
| $2016^{2}$ | 14,327 |  | 1,044,096 |  | 72,876 | 0.8 |
| $2015{ }^{2}$ | 16,310 |  | 1,178,846 |  | 72,277 | 0.4 |
| $2014{ }^{2}$ | 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 |
| 2009 | 29,297 |  | 2,030,484 |  | 69,307 | 4.5 |
| 2008 | 34,628 |  | 2,295,816 |  | 66,299 | 1.9 |

${ }^{1}$ Figures shown are the anticipated pay for the one-year period following the valuation date.
${ }^{2}$ The valuation results were calculated using the prior year census data, adjusted for certain activity during the fiscal year.

Total Number of Active Members Per Year and Annual Average Pay


## Teachers' Pre-1996 Account

Schedule of Retirants and Beneficiaries
Actuarial Valuation as of June 30
(dollars in thousands - except average annual benefit)

${ }^{1}$ End of year annual benefits are not equal to prior end of year annual benefits plus additions less removals due to beneficiary benefit changes, data changes, and COLA increases. ${ }^{2}$ Annual benefits includes members selecting an annuity for their ASA.
${ }^{3}$ The valuation results were calculated using the prior year census data, adjusted for certain activity during the fiscal year.
${ }^{4}$ The end of year number of benefit recipients are not equal to prior end of year number of benefit recipients plus additions less removals due to reclassifications between TRF Pre-'96 and TRF '96.

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


Historical Summary of Actuarial Valuation Results
Actuarial Valuation as of June 30
(dollars in millions)

|  |  | arial rued (AAL) | Actuarial Value of Assets (AVA) |  | Unfunded Liability ${ }^{1}$ (AAL - AVA) |  | AVA Funded Status (AVA/AAL) |  | ered oyee roll ${ }^{2}$ | Unfunded Liability ${ }^{1}$ as a percentage of Covered Employee Payroll |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2017 | \$ | 6,914.2 | \$ | 6,414.1 | \$ | 500.1 | 92.8\% | \$ | 3,020.5 | 16.6 \% |
| 2016 |  | 6,391.8 |  | 5,865.8 |  | 526.0 | 91.8 |  | 2,881.4 | 18.3 |
| 2015 |  | 5,905.7 |  | 5,461.2 |  | 444.5 | 92.5 |  | 2,742.2 | 16.2 |
| 2014 |  | 5,237.0 |  | 5,035.2 |  | 201.8 | 96.1 |  | 2,598.1 | 7.8 |
| 2013 |  | 4,749.3 |  | 4,453.8 |  | 295.5 | 93.8 |  | 2,442.5 | 12.1 |
| 2012 |  | 4,338.3 |  | 3,936.4 |  | 401.9 | 90.7 |  | 2,400.0 | 16.7 |
| 2011 |  | 3,996.8 |  | 3,664.6 |  | 332.2 | 91.7 |  | 2,225.0 | 14.9 |
| 2010 |  | 3,614.6 |  | 3,422.6 |  | 192.0 | 94.7 |  | 2,200.0 | 8.7 |
| 2009 |  | 3,135.5 |  | 2,920.7 |  | 214.8 | 93.1 |  | 2,075.0 | 10.4 |
| 2008 |  | 2,957.8 |  | 3,080.1 |  | (122.3) | 104.1 |  | 1,825.0 | (6.7) |

${ }^{1}$ The Unfunded Liability is calculated using the Actuarial Value of Assets (AVA), which is different than Net Pension Liability in the Financial Section which uses the Plan Fiduciary Net Position, also known as the Fair Value of Assets (FVA).
${ }^{2}$ Covered Employee Payroll can also be found in the RSI Contribution Schedule in the Financial Section.


Funded Percentage

AAL AVA $\square$ AVA Funded Status

The actuarial assumptions and methods used in the June 30, 2017 valuation of the Teachers' 1996 Account were adopted by the INPRS Board in May 2017. 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 April 2016. The funding policy is available online at: www.in.gov/inprs/files/INPRS_Funding_Policy.pdf.

## Changes in Actuarial Assumptions

For the actuarial valuation as of June 30, 2017, an actuarial audit was completed which included updating the following assumptions: replacing a 1 percent load on final average salary with a load of $\$ 400$ to reflect unused sick leave accumulated at termination of employment for active and inactive vested members. Additionally, for disabled members, the RP-2014 (with MP-2014 improvement removed) Disability Mortality tables are assumed instead of the RP-2014 (with MP-2014 improvement removed) White Collar Mortality tables.

## Changes in Actuarial Methods

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

## Changes in Plan Provisions

Per Senate Enrolled Act No. 46, \$185 minimum monthly benefit payable beginning July 1, 2017.

## 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:
Cost of Living Increases:
Future Salary Increases:
2.25 percent per year
1.00 percent per year in retirement

Based on 2011-2014 experience. Illustrative rates shown below:

| Years of <br> Service |  |  | Merit and <br> Inflation |  | Total Individual <br> Seniority |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $2.25 \%$ |  | $10.25 \%$ |  |
| Salary Growth |  |  |  |  |  |

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions, continued

## Demographic Assumptions: Based on 2011-2014 Experience

| Mortality (Healthy): | RP-2014 White Collar Mortality Tables, with Social Security generational improvements from based on the Social Security Administration's 2014 Trustee Report. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mortality (Disabled): | RP-2014 based on | bility Mortality Social Security | les, w <br> dminist | ial Security 2014 Trus | ational port. | vements from |
| 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 |  |  |

Termination:

| Service Based |  |  | 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 |  |  |  |

[^31]Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions, continued
Disability:

| Age |  | Male |  | Female |
| :---: | :--- | :--- | :--- | :--- |
| 25 |  | $0.01 \%$ |  | $0.01 \%$ |
| 30 |  | 0.01 |  | 0.01 |
| 35 |  | 0.01 |  | 0.01 |
| 40 |  | 0.01 |  | 0.01 |
| 45 |  | 0.02 |  | 0.02 |
| 50 |  | 0.05 |  | 0.05 |
| 55 |  | 0.09 |  | 0.09 |
| 60 |  | 0.10 |  | 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.

ASA Annuitization: Prior to January 1, 2018:

- 50 percent of active members who decrement while vested are assumed to annuitize their ASA balance at their assumed retirement age.
- 50 percent of vested inactive members are assumed to annuitize their ASA balance at their assumed retirement age.
- ASA balances not converted to annuities are withdrawn.
- The conversion rate is 4.5 percent.

Beginning January 1, 2018, assumed INPRS entered an agreement with a third party for all ASA annuitizations.

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions, continued

## 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 (actives and inactives). 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 Member census data as of the prior year end was used in the valuation and adjusted, where appropriate, to reflect Date: 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.

Analysis of Financial Experience

| (dollars in thousands) | UAAL |  |
| :---: | :---: | :---: |
| Unfunded Actuarial Accrued Liability (UAAL): June 30, 2016 | \$ | 526,021 |
| Normal Cost and Interest, less Expected Contributions |  | $(9,290)$ |
| Expected UAAL: June 30, 2017 |  | 516,731 |
| UAAL (Gain) / Loss |  |  |
| Actuarial Value of Assets Experience |  | 51,065 |
| Actuarial Accrued Liabilities Experience ${ }^{1}$ |  | 46,460 |
| Actuarial Assumption \& Methodology Changes ${ }^{2}$ |  | $(115,506)$ |
| Plan Provision Changes ${ }^{3}$ |  | 1,353 |
| Total UAAL (Gain) / Loss |  | $(16,628)$ |
| Unfunded Actuarial Accrued Liability: June 30, 2017 | \$ | 500,103 |

${ }^{1}$ Actuarial Accrued Liabilities Experience represents actual experience versus expected experience of the actuarial census assumptions:

- Unanticipated changes to the member census data.
- A one-time payment for benefit recipients by October 1, 2017 and 2018, rather than the assumed COLA of 1.00 percent ${ }^{2}$ Actuarial Assumption and Methodology Changes include:
- Change from healthy to disabled mortality assumption for disabled members.
- Changes in actuarial assumptions and methods for consistency across all pension plans resulting from the 2016 actuarial audit. ${ }^{3}$ Plan Provision Changes:
- ASA annuitizations will be accommodated through a third party annuity provider beginning January 1, 2018, compared to the previous date of April 1, 2017.
- $\$ 185$ minimum monthly benefit payable beginning July 1, 2017 as specified in Senate Enrolled Act No. 46.


## Solvency Test

(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 <br> Member <br> (Employer <br> Financed Portion) | Total Actuarial Accrued Liabilities | Actuarial Value of Assets | Active Member Contributions | Retirees and Beneficiaries | Active <br> Member <br> (Employer <br> Financed <br> Portion) | Total Actuarial Accrued Liabilities |
| 2017 | \$ 1,378,143 | \$ 1,213,780 | \$ 4,322,314 | \$ 6,914,237 | \$ 6,414,134 | 100.0 \% | 100.0\% | 88.4\% | 92.8 \% |
| 2016 | 1,204,885 | 1,091,802 | 4,095,063 | 6,391,750 | 5,865,729 | 100.0 | 100.0 | 87.2 | 91.8 |
| 2015 | 1,159,597 | 908,353 | 3,837,741 | 5,905,691 | 5,461,172 | 100.0 | 100.0 | 88.4 | 92.5 |
| 2014 | 1,102,686 | 777,287 | 3,357,020 | 5,236,993 | 5,035,232 | 100.0 | 100.0 | 94.0 | 96.1 |
| 2013 | 975,309 | 798,486 | 2,975,573 | 4,749,368 | 4,453,828 | 100.0 | 100.0 | 90.1 | 93.8 |
| 2012 | 882,942 | 662,558 | 2,792,809 | 4,338,309 | 3,936,455 | 100.0 | 100.0 | 85.6 | 90.7 |
| 2011 | 840,341 | 562,445 | 2,594,053 | 3,996,839 | 3,664,657 | 100.0 | 100.0 | 87.2 | 91.7 |
| 2010 | 750,575 | 483,117 | 2,380,867 | 3,614,559 | 3,422,554 | 100.0 | 100.0 | 91.9 | 94.7 |
| 2009 | 655,843 | 432,942 | 2,046,748 | 3,135,533 | 2,920,735 | 100.0 | 100.0 | 89.5 | 93.1 |
| 2008 | 649,840 | 514,933 | 1,792,985 | 2,957,758 | 3,080,056 | 100.0 | 100.0 | 100.0 | 104.1 |

Schedule of Active Members Valuation Data
Actuarial Valuation as of June 30
(dollars in thousands - except annual average pay)

|  | Active Members | Annual Payroll ${ }^{1}$ |  | Annual Average Pay |  | Annual Percent Increase I (Decrease) In Average Pay |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $2017{ }^{2}$ | 58,097 | \$ | 3,032,299 | \$ | 52,194 | (4.0) \% |
| $2016^{2}$ | 55,265 |  | 3,004,169 |  | 54,359 | 0.8 |
| $2015{ }^{2}$ | 52,424 |  | 2,827,311 |  | 53,932 | 0.8 |
| $2014{ }^{2}$ | 51,204 |  | 2,740,661 |  | 53,524 | (0.0) |
| 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 |
| 2009 | 45,046 |  | 2,308,548 |  | 51,249 | 3.9 |
| 2008 | 41,628 |  | 2,052,719 |  | 49,311 | 2.5 |

${ }^{1}$ Figures shown are the anticipated pay for the one-year period following the valuation date.
${ }^{2}$ The valuation results were calculated using the prior year census data, adjusted for certain activity during the fiscal year.

Total Number of Active Members Per Year and Annual Average Pay


## Teachers' 1996 Account

Schedule of Retirants and Beneficiaries
Actuarial Valuation as of June 30
(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 ${ }^{2}$ |  | Percent Increase / (Decrease) in Average Annual Benefit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Annual Benefits | Number |  |  | Number |  | al Annual enefits ${ }^{1,2}$ |  |  |  |  |
| $2017^{3}$ | 855 | \$ 12,106 | 36 | \$ | 564 | 5,796 | \$ | 102,178 | 12.1 \% | \$ | 17,629 | (3.8) \% |
| $2016^{3}$ | 858 | 16,075 | 17 |  | 305 | 4,977 |  | 91,160 | 20.4 |  | 18,316 | 0.1 |
| $2015{ }^{3}$ | 499 | 9,101 | 28 |  | 353 | 4,136 |  | 75,714 | 12.7 |  | 18,306 | (0.1) |
| $2014{ }^{3}$ | - | 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) |
| $2009^{4}$ | 270 | 5,145 | 10 |  | 119 | 1,944 |  | 36,312 | (16.5) |  | 18,679 | (2.8) |
| 2008 | 255 | 5,126 | 21 |  | 316 | 2,263 |  | 43,482 | 17.5 |  | 19,214 | (0.1) |

${ }^{1}$ End of year annual benefits are not equal to prior end of year annual benefits plus additions less removals due to beneficiary benefit changes, data changes, and COLA increases ${ }^{2}$ Annual benefits includes members selecting an annuity for their ASA.
${ }^{3}$ The valuation results were calculated using the prior year census data, adjusted for certain activity during the fiscal year.
${ }^{4}$ The end of year number of benefit recipients are not equal to prior end of year number of benefit recipients plus additions less removals due to reclassifications between TRF Pre-'96 and TRF '96.

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


Historical Summary of Actuarial Valuation Results
Actuarial Valuation as of June 30
(dollars in millions)

|  | Actuarial Accrued Liability (AAL) |  | Actuarial Value of Assets (AVA) |  |  | nded ${ }^{1 i t y}{ }^{1}$ AVA) | AVA Funded Status (AVA/AAL) |  | red <br> yee oll ${ }^{2}$ | Unfunded Liability ${ }^{1}$ as a percentage of Covered Employee Payroll |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2017 | \$ | 5,385.8 | \$ | 5,587.6 | \$ | (201.8) | 103.7 \% | \$ | 809.4 | (24.9) \% |
| 2016 |  | 5,039.8 |  | 5,255.2 |  | (215.4) | 104.3 |  | 771.9 | (27.9) |
| 2015 |  | 4,680.7 |  | 4,939.3 |  | (258.6) | 105.5 |  | 745.3 | (34.7) |
| 2014 |  | 4,707.0 |  | 4,625.5 |  | 81.5 | 98.3 |  | 710.6 | 11.5 |
| 2013 |  | 4,392.9 |  | 4,180.7 |  | 212.2 | 95.2 |  | 695.0 | 30.5 |
| 2012 |  | 4,122.4 |  | 3,786.6 |  | 335.8 | 91.9 |  | 690.0 | 48.7 |
| 2011 |  | 3,639.0 |  | 3,593.8 |  | 45.2 | 98.8 |  | 687.0 | 6.6 |
| 2010 |  | 3,639.6 |  | 3,374.4 |  | 265.2 | 92.7 |  | 670.0 | 39.6 |
| $2009{ }^{3}$ |  | 3,332.7 |  | 3,265.6 |  | 67.1 | 98.0 |  | 330.0 | 20.3 |
| $2008{ }^{4}$ |  | 3,150.8 |  | 3,352.7 |  | (201.9) | 106.4 |  | 635.0 | (31.8) |

${ }^{1}$ The Unfunded Liability is calculated using the Actuarial Value of Assets (AVA), which is different than Net Pension Liability in the Financial Section which uses the Plan Fiduciary Net Position, also known as the Fair Value of Assets (FVA).
${ }^{2}$ Covered Employee Payroll can also be found in the RSI Contribution Schedule in the Financial Section.
${ }^{3}$ Covered employee payroll represents only a half year of activity.
${ }^{4}$ Actuarial valuation for 2008 was based off of a December year end.


Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions

The actuarial assumptions and methods used in the June 30, 2017 valuation of the 1977 Police Officers' and Firefighters' Retirement Fund were adopted by the INPRS Board in May 2017. 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 April 2016. The funding policy is available online at: www.in.gov/inprs/files/INPRS_Funding_Policy.pdf.

## Changes in Actuarial Assumptions

For the actuarial valuation as of June 30, 2017, an actuarial audit was completed during the plan year and the following assumptions were updated: applying IRC Section 415 limits to all benefits, correcting the mortality rates used in the valuation to properly reflect the RP-2014 (with MP-2014 improvement removed) Blue Collar Mortality tables, correcting the retirement rates to properly reflect the April 2015 experience study, and updating the salary scale assumption from 3.25 percent to 2.50 percent that is used for the Class III disability benefit. Additionally, for disabled members, the RP-2014 (with MP-2014 improvement removed) Disability Mortality tables are assumed instead of the RP-2014 (with MP-2014 improvement removed) Blue Collar Mortality tables.

## Changes in Actuarial Methods

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

## Changes in Plan Provisions

Per House Enrolled Act No. 1617, a member who experienced a catastrophic physical personal injury in the line of duty will receive an enhanced benefit.

## 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: |  |
| :--- | :--- |
| $\quad$ 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: | 2.00 percent per year in retirement |
| Future Salary Increases: | 2.50 percent per year |

## 1977 Police Officers' and Firefighters' Retirement Fund

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions, continued

## Demographic Assumptions: Based on 2010-2014 Experience

| Mortality (Healthy): | $\begin{aligned} & \text { RP-2014 } \\ & 2006 \text { base } \end{aligned}$ | ollar Mortality he Social Secu | s, with Social Administration's | generati Trustee |
| :---: | :---: | :---: | :---: | :---: |
| Mortality (Disabled): | $\begin{aligned} & \text { RP-2014 } \\ & 2006 \text { base } \end{aligned}$ | ty Mortality Ta he Social Secu | with Social Se Administration's | eneration <br> Trustee |
| Retirement: | Ages | Service < 32 | Service >= 32 |  |
|  | 45-51 | 10 \% | 100 \% |  |
|  | 52-57 | 10 | 20 |  |
|  | 58-61 | 15 | 20 |  |
|  | 62-64 | 20 | 20 |  |
|  | 65-69 | 50 | 50 |  |
|  | 70+ | 100 | 100 |  |
| 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 | Rate | Age | Rate |
| :---: | :---: | :---: | :---: |
| <32 | 0.10 \% | 48 | 0.42 \% |
| 33 | 0.12 | 49 | 0.44 |
| 34 | 0.14 | 50 | 0.46 |
| 35 | 0.16 | 51 | 0.48 |
| 36 | 0.18 | 52 | 0.50 |
| 37 | 0.20 | 53 | 0.52 |
| 38 | 0.22 | 54 | 0.54 |
| 39 | 0.24 | 55 | 0.56 |
| 40 | 0.26 | 56 | 0.58 |
| 41 | 0.28 | 57 | 0.60 |
| 42 | 0.30 | 58 | 0.62 |
| 43 | 0.32 | 59 | 0.64 |
| 44 | 0.34 | 60 | 0.66 |
| 45 | 0.36 | 61 | 0.68 |
| 46 | 0.38 | 62+ | 0.70 |
| 47 | 0.40 |  |  |

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions, continued
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 1 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 20year 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 (actives and inactives). 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.

Analysis of Financial Experience

| (dollars in thousands) | UAAL |  |
| :---: | :---: | :---: |
| Unfunded Actuarial Accrued Liability (UAAL): June 30, 2016 | \$ | $(215,419)$ |
| Normal Cost and Interest, less Expected Contributions |  | 2,385 |
| Expected UAAL: June 30, 2017 |  | $(213,034)$ |
| UAAL (Gain) / Loss |  |  |
| Actuarial Value of Assets Experience |  | (97) |
| Actuarial Accrued Liabilities Experience ${ }^{1}$ |  | 33,409 |
| Actuarial Assumption \& Methodology Changes ${ }^{2}$ |  | $(23,399)$ |
| Plan Provision Changes ${ }^{3}$ |  | 1,323 |
| Total UAAL (Gain) / Loss |  | 11,236 |
| Unfunded Actuarial Accrued Liability: June 30, 2017 | \$ | $(201,798)$ |
| ${ }^{1}$ Actuarial Accrued Liabilities Experience represents actual experience versus expected experience of the actuarial census assumptions: <br> - Unanticipated changes to the member census data. <br> - A 2.50 percent COLA for benefit recipients effective July 1, 2017, rather than the assumed COLA of 2.00 percent. <br> ${ }^{2}$ Actuarial Assumption and Methodology Changes include: <br> - Change from healthy to disabled mortality assumption for disabled members. <br> - Changes in actuarial assumptions and methods for consistency across all pension plans resulting from the 2016 actuarial audit. <br> - 1.00 percent of all disabilities are assumed to be catastrophic physical personal injuries as defined in House Enrolled Act No. 1617. <br> ${ }^{3}$ Per House Enrolled Act No. 1617, a member who experienced a catastrophic physical personal injury in the line of duty will receive an enhanced benefit. |  |  |

## Solvency Test

(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 |
| 2017 | \$ 857,426 | \$ 1,715,503 | \$ 2,812,824 | \$ 5,385,753 | \$ 5,587,551 | 100.0 \% | 100.0 \% | 100.0 \% | 103.7 \% |
| 2016 | 843,628 | 1,532,936 | 2,663,272 | 5,039,836 | 5,255,255 | 100.0 | 100.0 | 100.0 | 104.3 |
| 2015 | 832,760 | 1,362,021 | 2,485,913 | 4,680,694 | 4,939,330 | 100.0 | 100.0 | 100.0 | 105.5 |
| 2014 | 809,877 | 1,280,920 | 2,616,200 | 4,706,997 | 4,625,475 | 100.0 | 100.0 | 96.9 | 98.3 |
| 2013 | 782,124 | 1,288,457 | 2,322,366 | 4,392,947 | 4,180,704 | 100.0 | 100.0 | 90.9 | 95.2 |
| 2012 | 728,892 | 1,135,538 | 2,258,006 | 4,122,436 | 3,786,595 | 100.0 | 100.0 | 85.1 | 91.9 |
| 2011 | 679,849 | 970,676 | 1,988,431 | 3,638,956 | 3,593,787 | 100.0 | 100.0 | 97.7 | 98.8 |
| 2010 | 634,865 | 859,626 | 2,145,178 | 3,639,669 | 3,374,438 | 100.0 | 100.0 | 87.6 | 92.7 |
| 2009 | 571,534 | 793,167 | 1,967,985 | 3,332,686 | 3,265,598 | 100.0 | 100.0 | 96.6 | 98.0 |
| $2008{ }^{1}$ | 534,303 | 765,909 | 1,850,615 | 3,150,827 | 3,352,705 | 100.0 | 100.0 | 100.0 | 106.4 |

[^32]
## 1977 Police Officers' and Firefighters' Retirement Fund

Schedule of Active Members Valuation Data
Actuarial Valuation as of June 30
(dollars in thousands - except annual average pay)

|  | Active Members | Annual Payroll ${ }^{1}$ |  | Annual Average Pay |  | Annual Percent Increase I (Decrease) In Average Pay |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $2017^{2}$ | 13,587 | \$ | 829,736 | \$ | 61,068 | 4.2 \% |
| $2016{ }^{2}$ | 13,506 |  | 791,508 |  | 58,604 | 2.7 |
| $2015^{2}$ | 13,390 |  | 764,215 |  | 57,074 | 3.4 |
| $2014{ }^{2}$ | 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 |
| 2009 | 13,184 |  | 649,018 |  | 49,228 | - |
| $2008{ }^{3}$ | 13,095 |  | 644,936 |  | 49,251 | 2.8 |

${ }^{1}$ Figures shown are the anticipated pay for the one-year period following the valuation date.
${ }^{2}$ The valuation results were calculated using the prior year census data, adjusted for certain activity during the fiscal year. ${ }^{3}$ As of December 31 instead of June 30.

Total Number of Active Members Per Year and Annual Average Pay


## 1977 Police Officers' and Firefighters' Retirement Fund

Schedule of Retirants and Beneficiaries
Actuarial Valuation as of June 30
(dollars in thousands - except average annual benefit)

|  | Added to Rolls |  | Removed from Rolls |  |  | Rolls - End of Year |  |  | Percent Increase I (Decrease) In Total Annual Benefits | Average <br> Annual <br> Benefit |  | Percent Increase / (Decrease) in Average Annual Benefit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Annual Benefits | Number |  | nnual nefits | Number |  | annual nefits $^{1}$ |  |  |  |  |
| $2017^{2}$ | 407 | \$ 13,321 | 37 | \$ | 642 | 4,374 | \$ | 118,472 | 12.6 \% | \$ | 27,085 | 3.1 \% |
| $2016^{2}$ | 312 | 10,074 | 44 |  | 834 | 4,004 |  | 105,218 | 9.2 |  | 26,278 | 1.9 |
| $2015{ }^{2}$ | 283 | 8,858 | 38 |  | 727 | 3,736 |  | 96,336 | 10.3 |  | 25,786 | 3.1 |
| $2014{ }^{2}$ | - | - | - |  | - | 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 |
| 2009 | 102 | 2,571 | 24 |  | 479 | 2,608 |  | 55,564 | 3.7 |  | 21,305 | 0.6 |
| $2008^{3}$ | 255 | 5,861 | 273 |  | 4,565 | 2,530 |  | 53,588 | 8.2 |  | 21,181 | 8.9 |

${ }^{1}$ End of year annual benefits are not equal to prior end of year annual benefits plus additions less removals due to beneficiary benefit changes, data changes, and CoLA increases.
${ }^{2}$ The valuation results were calculated using the prior year census data, adjusted for certain activity during the fiscal year.
${ }^{3}$ As of December 31 instead of June 30.

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


Historical Summary of Actuarial Valuation Results
Actuarial Valuation as of June 30
(dollars in millions)

|  |  | rial ed (AAL) | Actuarial Value of Assets (AVA) |  | Unfunded Liability ${ }^{1}$ (AAL - AVA) |  | AVA Funded Status (AVA/AAL) |  |  | Unfunded Liability ${ }^{1}$ as a percentage of Covered Employee Payroll |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2017 | \$ | 523.7 | \$ | 492.0 | \$ | 31.7 | 93.9 \% | \$ | 54.8 | 57.9 \% |
| 2016 |  | 501.1 |  | 469.4 |  | 31.7 | 93.7 |  | 51.4 | 61.7 |
| 2015 |  | 468.9 |  | 447.5 |  | 21.4 | 95.4 |  | 48.6 | 44.1 |
| 2014 |  | 464.9 |  | 419.6 |  | 45.3 | 90.3 |  | 46.0 | 98.5 |
| 2013 |  | 453.1 |  | 381.2 |  | 71.9 | 84.1 |  | 47.6 | 151.1 |
| 2012 |  | 437.9 |  | 260.1 |  | 177.8 | 59.4 |  | 45.1 | 393.9 |
| 2011 |  | 400.3 |  | 248.6 |  | 151.7 | 62.1 |  | 45.8 | 331.5 |
| 2010 |  | 364.1 |  | 242.1 |  | 122.0 | 66.5 |  | 36.7 | 332.2 |
| 2009 |  | 330.6 |  | 241.0 |  | 89.6 | 72.9 |  | 36.2 | 247.5 |
| 2008 |  | 338.8 |  | 234.9 |  | 103.9 | 69.3 |  | 33.7 | 308.1 |

${ }^{1}$ The Unfunded Liability is calculated using the Actuarial Value of Assets (AVA), which is different than Net Pension Liability in the Financial Section which uses the Plan Fiduciary Net Position, also known as the Fair Value of Assets (FVA).
${ }^{2}$ Covered Employee Payroll can also be found in the RSI Contribution Schedule in the Financial Section.


The actuarial assumptions and methods used in the June 30, 2017 valuation of the Judges' Retirement System were adopted by the INPRS Board in May 2017. 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 April 2016. The funding policy is available online at: www.in.gov/inprs/files/INPRS_Funding_Policy.pdf.

## Changes in Actuarial Assumptions

For the actuarial valuation as of June 30, 2017, minor updates were made including correcting the mortality rates used in the valuation to properly reflect the RP-2014 (with MP-2014 improvement removed) White Collar Mortality tables. Additionally, for disabled members, the RP-2014 (with MP-2014 improvement removed) Disability Mortality tables are assumed instead of the RP-2014 (with MP-2014 improvement removed) White Collar Mortality tables.

## 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 that impacted the pension benefits 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: |  |
| :--- | :--- |
| $\quad$ 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: | 2.50 percent per year in deferral and retirement |
| Future Salary Increases: | 2.50 percent per year |

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions, continued

## Demographic Assumptions: Based on 2010-2014 Experience

Mortality (Healthy):

Mortality (Disabled):

RP-2014 White Collar Mortality Tables, with Social Security generational improvements from 2006 based on the Social Security Administration's 2014 Trustee report.

RP-2014 Disability Mortality Tables, with Social Security generational improvements from 2006 based on the Social Security Administration's 2014 Trustee report.

| Age | Service < 22 | Age | Service $>=22$ |
| :---: | :---: | :---: | :---: |
| 62 | 25 \% | 55-74 | 70 \% |
| 63 | 15 | 75+ | 100 |
| 64 | 10 |  |  |
| 65 | 50 |  |  |
| 66-74 | 30 |  |  |
| 75+ | 100 |  |  |

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

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 |

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.
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:

Data Measurement Date:

Asset Valuation 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 (actives and inactives). 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.

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.

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.

Analysis of Financial Experience

| (dollars in thousands) | UAAL |  |
| :---: | :---: | :---: |
| Unfunded Actuarial Accrued Liability (UAAL): June 30, 2016 | \$ | 31,748 |
| Normal Cost and Interest, less Expected Contributions |  | $(1,131)$ |
| Expected UAAL: June 30, 2017 |  | 30,617 |
| UAAL (Gain) / Loss |  |  |
| Actuarial Value of Assets Experience |  | 5,425 |
| Actuarial Accrued Liabilities Experience ${ }^{1}$ |  | $(3,107)$ |
| Actuarial Assumption \& Methodology Changes ${ }^{2}$ |  | $(1,213)$ |
| Plan Provision Changes |  |  |
| Total UAAL (Gain) / Loss |  | 1,105 |
| Unfunded Actuarial Accrued Liability: June 30, 2017 | \$ | 31,722 |
| ${ }^{1}$ Actuarial Accrued Liabilities Experience represents actual experience versus expected experience of the actuarial census assumptions: <br> - Unanticipated changes to the member census data. <br> -2.00 percent COLA for benefit recipients effective July 1, 2017, rather than the assumed COLA of 2.50 percent. <br> ${ }^{2}$ Actuarial Assumption and Methodology Changes include: <br> - Change from healthy to disabled mortality assumption for disabled members. <br> - Changes in actuarial assumptions and methods for consistency across all pension plans resulting from the 2016 actuarial audit. |  |  |

## Solvency Test

(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 |
| 2017 | \$ 36,385 | \$ 245,177 | \$ 242,173 | \$ 523,735 | \$ 492,013 | 100.0 \% | 100.0 \% | 86.9 \% | 93.9 \% |
| 2016 | 34,804 | 244,484 | 221,838 | 501,126 | 469,378 | 100.0 | 100.0 | 85.7 | 93.7 |
| 2015 | 32,383 | 210,020 | 226,542 | 468,945 | 447,514 | 100.0 | 100.0 | 90.5 | 95.4 |
| 2014 | 32,060 | 216,044 | 216,751 | 464,855 | 419,568 | 100.0 | 100.0 | 79.1 | 90.3 |
| $2013{ }^{1}$ | 29,060 | 224,132 | 199,918 | 453,110 | 381,240 | 100.0 | 100.0 | 64.1 | 84.1 |
| 2012 | 27,699 | 205,341 | 204,814 | 437,854 | 260,096 | 100.0 | 100.0 | 13.2 | 59.4 |
| 2011 | 24,359 | 198,797 | 177,118 | 400,274 | 248,623 | 100.0 | 100.0 | 14.4 | 62.1 |
| 2010 | 23,138 | 182,023 | 158,962 | 364,123 | 242,143 | 100.0 | 100.0 | 23.3 | 66.5 |
| 2009 | 21,649 | 170,962 | 137,940 | 330,551 | 240,954 | 100.0 | 100.0 | 35.0 | 72.9 |
| 2008 | 22,243 | 155,177 | 161,329 | 338,749 | 234,881 | 100.0 | 100.0 | 35.6 | 69.3 |

${ }^{1}$ 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
(dollars in thousands - except annual average pay)

|  | Active Members | Annual Payroll ${ }^{1}$ |  | Annual Average Pay |  | Annual Percent Increase I (Decrease) In Average Pay |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $2017{ }^{2}$ | 402 | \$ | 55,850 | \$ | 138,931 | 3.3 \% |
| $2016^{2}$ | 394 |  | 52,975 |  | 134,454 | (0.3) |
| $2015{ }^{2}$ | 368 |  | 49,651 |  | 134,921 | 2.8 |
| $2014{ }^{2}$ | 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 |
| 2009 | 288 |  | 36,196 |  | 125,680 | (0.5) |
| 2008 | 267 |  | 33,729 |  | 126,327 | 9.7 |

${ }^{1}$ Figures shown are the anticipated pay for the one-year period following the valuation date.
${ }^{2}$ The valuation results were calculated using the prior year census data, adjusted for certain activity during the fiscal year.

Total Number of Active Members Per Year and Annual Average Pay


Schedule of Retirants and Beneficiaries
Actuarial Valuation as of June 30
(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 <br> Annual <br> Benefit |  | Percent Increase I (Decrease) in Average Annual Benefit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number |  | nnual nefits | Number |  | nnual nefits | Number |  | Annual nefits ${ }^{1}$ |  |  |  |  |
| $2017{ }^{2}$ | 9 | \$ | 696 | 10 | \$ | 509 | 350 | \$ | 21,465 | 2.4 \% | \$ | 61,329 | 2.7 \% |
| $2016^{2}$ | 34 |  | 2,520 | 9 |  | 340 | 351 |  | 20,959 | 12.8 |  | 59,714 | 4.8 |
| $2015{ }^{2}$ | 10 |  | 494 | 5 |  | 195 | 326 |  | 18,578 | 0.6 |  | 56,987 | (1.0) |
| $2014{ }^{2}$ | - |  | - | - |  | - | 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) |
| 2009 | 74 |  | 3,744 | 57 |  | 1,835 | 293 |  | 15,230 | 3.2 |  | 51,978 | (2.8) |
| 2008 | 23 |  | 1,257 | 26 |  | 991 | 276 |  | 14,754 | 6.1 |  | 53,455 | 7.3 |

${ }^{1}$ End of year annual benefits are not equal to prior end of year annual benefits plus additions less removals due to beneficiary benefit changes, data changes, and COLA increases. ${ }^{2}$ The valuation results were calculated using the prior year census data, adjusted for certain activity during the fiscal year.

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


Historical Summary of Actuarial Valuation Results
Actuarial Valuation as of June 30
(dollars in millions)

|  | Actuarial Accrued Liability (AAL) |  | Actuarial Value of Assets (AVA) |  | Unfunded Liability ${ }^{1}$ (AAL - AVA) |  | AVA Funded Status (AVA/AAL) |  |  | Unfunded Liability ${ }^{1}$ as a percentage of Covered Employee Payroll |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2017 | \$ | 142.6 | \$ | 124.5 | \$ | 18.1 | 87.3 \% | \$ | 27.4 | 65.9 \% |
| 2016 |  | 138.9 |  | 118.5 |  | 20.4 | 85.3 |  | 25.5 | 80.1 |
| 2015 |  | 132.8 |  | 112.8 |  | 20.0 | 84.9 |  | 25.1 | 79.7 |
| 2014 |  | 123.6 |  | 107.6 |  | 16.0 | 87.0 |  | 25.8 | 62.1 |
| 2013 |  | 118.1 |  | 98.6 |  | 19.5 | 83.5 |  | 24.7 | 79.0 |
| 2012 |  | 113.3 |  | 76.0 |  | 37.3 | 67.1 |  | 24.3 | 153.5 |
| 2011 |  | 101.5 |  | 72.6 |  | 28.9 | 71.5 |  | 25.0 | 115.6 |
| 2010 |  | 97.8 |  | 70.3 |  | 27.5 | 71.9 |  | 25.3 | 108.7 |
| 2009 |  | 89.3 |  | 68.2 |  | 21.1 | 76.3 |  | 25.5 | 82.7 |
| 2008 |  | 77.2 |  | 65.4 |  | 11.8 | 84.7 |  | 23.7 | 49.8 |

${ }^{1}$ The Unfunded Liability is calculated using the Actuarial Value of Assets (AVA), which is different than Net Pension Liability in the Financial Section which uses the Plan Fiduciary Net Position, also known as the Fair Value of Assets (FVA).
${ }^{2}$ Covered Employee Payroll can also be found in the RSI Contribution Schedule in the Financial Section.


## Excise, Gaming and Conservation Officers' Retirement Fund

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions

T
he actuarial assumptions and methods used in the June 30, 2017 valuation of the Excise, Gaming and Conservation Officers' Retirement Fund were adopted by the INPRS Board in May 2017. 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 April 2016. The funding policy is available online at: www.in.gov/inprs/files/INPRS_Funding_Policy.pdf.

## Changes in Actuarial Assumptions

For the actuarial valuation as of June 30,2017 , an actuarial audit was completed which updated the following assumptions: incorporating the new 2.50 percent salary increase assumption instead of the old 3.00 percent assumption, applying IRC Section 415 limits to all benefits, correcting the mortality rates used in the valuation to properly reflect the RP-2014 (with MP-2014 improvement removed) Blue Collar Mortality tables, calculating final average salary based on any five years of salary during the previous ten years rather than five consecutive years, and applying the assumed 90 percent married percentage to the death benefit. Additionally, for disabled members, the RP-2014 (with MP-2014 improvement removed) Disability Mortality tables are assumed instead of the RP-2014 (with MP-2014 improvement removed) Blue Collar Mortality tables.

## Changes in Actuarial Methods

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

## Changes in Plan Provisions

There were no changes in plan provisions that impacted the pension benefits 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: |  |
| :--- | :--- |
| $\quad$ 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: | 1.00 percent per year in retirement |
| Future Salary Increases: | 2.50 percent per year |

## Excise, Gaming and Conservation Officers' Retirement Fund

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions, continued

## 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.

RP-2014 Disability Mortality Tables, with Social Security generational improvements from 2006 based on the Social Security Administration's 2014 Trustee report.

Retirement:

Termination:

Disability:

| Age |  | Rate |
| :---: | :---: | :---: |
|  |  | $35 \%$ |
| $46-49$ |  | 2 |
| 50 |  | 3 |
| $51-59$ |  | 15 |
| $60-64$ |  | 40 |
| $>=65$ |  | 100 |


| 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 |

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 |

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.

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions, continued

## Actuarial Methods

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

Data Measurement Date:

Asset Valuation 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 (actives and inactives). 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.

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.

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.

## Excise, Gaming and Conservation Officers' Retirement Fund

Analysis of Financial Experience

| (dollars in thousands) | UAAL |  |
| :---: | :---: | :---: |
| Unfunded Actuarial Accrued Liability (UAAL): June 30, 2016 | \$ | 20,449 |
| Normal Cost and Interest, less Expected Contributions |  | (407) |
| Expected UAAL: June 30, 2017 |  | 20,042 |
| UAAL (Gain) / Loss |  |  |
| Actuarial Value of Assets Experience |  | 488 |
| Actuarial Accrued Liabilities Experience ${ }^{1}$ |  | 120 |
| Actuarial Assumption \& Methodology Changes ${ }^{2}$ |  | $(2,578)$ |
| Plan Provision Changes |  | - |
| Total UAAL (Gain) / Loss |  | $(1,970)$ |
| Unfunded Actuarial Accrued Liability: June 30, 2017 | \$ | 18,072 |
| ${ }^{1}$ Actuarial Accrued Liabilities Experience represents actual experience versus expected experience of the actuarial census assumptions: <br> - Unanticipated changes to the member census data. <br> - A one-time payment for benefit recipients by October 1, 2017 and 2018, rather than the assumed COLA of 1.00 percent. <br> ${ }^{2}$ Actuarial Assumption and Methodology Changes include: <br> - Change from healthy to disabled mortality assumption for disabled members. <br> - Changes in actuarial assumptions and methods for consistency across all pension plans resulting from the 2016 actuarial audit. |  |  |

## Solvency Test

(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 |
| 2017 | \$ 9,737 | \$ 69,217 | \$ 63,649 | \$ 142,603 | \$ 124,531 | 100.0 \% | 100.0 \% | 71.6 \% | 87.3 \% |
| 2016 | 9,085 | 67,424 | 62,456 | 138,965 | 118,515 | 100.0 | 100.0 | 67.3 | 85.3 |
| 2015 | 8,456 | 61,503 | 62,837 | 132,796 | 112,765 | 100.0 | 100.0 | 68.1 | 84.9 |
| 2014 | 8,042 | 54,626 | 60,933 | 123,601 | 107,563 | 100.0 | 100.0 | 73.7 | 87.0 |
| $2013{ }^{1}$ | 7,494 | 56,028 | 54,575 | 118,097 | 98,608 | 100.0 | 100.0 | 64.3 | 83.5 |
| 2012 | 6,532 | 53,929 | 52,822 | 113,283 | 76,007 | 100.0 | 100.0 | 29.4 | 67.1 |
| 2011 | 6,271 | 46,695 | 48,568 | 101,534 | 72,599 | 100.0 | 100.0 | 40.4 | 71.5 |
| 2010 | 6,220 | 36,044 | 55,598 | 97,862 | 70,327 | 100.0 | 100.0 | 50.5 | 71.9 |
| 2009 | 5,274 | 35,039 | 48,983 | 89,296 | 68,170 | 100.0 | 100.0 | 56.9 | 76.3 |
| 2008 | 4,314 | 28,902 | 43,961 | 77,177 | 65,375 | 100.0 | 100.0 | 73.2 | 84.7 |

${ }^{1}$ 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.

## Excise, Gaming and Conservation Officers' Retirement Fund

Schedule of Active Members Valuation Data
Actuarial Valuation as of June 30
(dollars in thousands - except annual average pay)

|  | Active Members | Annual Payroll ${ }^{1}$ |  | Annual Average Pay |  | Annual Percent Increase I (Decrease) In Average Pay |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $2017{ }^{2}$ | 440 | \$ | 28,114 | \$ | 63,895 | 2.8 \% |
| $2016^{2}$ | 421 |  | 26,164 |  | 62,147 | 8.1 |
| $2015{ }^{2}$ | 448 |  | 25,761 |  | 57,502 | 2.0 |
| $2014{ }^{2}$ | 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) |
| 2009 | 443 |  | 25,238 |  | 56,971 | 9.5 |
| 2008 | 410 |  | 21,333 |  | 52,033 | 1.0 |

${ }^{1}$ Figures shown are the anticipated pay for the one-year period following the valuation date.
${ }^{2}$ The valuation results were calculated using the prior year census data, adjusted for certain activity during the fiscal year.

Total Number of Active Members Per Year and Annual Average Pay


## Excise, Gaming and Conservation Officers' Retirement Fund

Schedule of Retirants and Beneficiaries
Actuarial Valuation as of June 30
(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 <br> Annual <br> Benefit |  | Percent Increase / (Decrease) in Average Annual Benefit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number |  |  | Number |  | ual fits | Number |  | Annual efits ${ }^{1}$ |  |  |  |  |
| $2017^{2}$ | 8 | \$ | 314 | 5 | \$ | 60 | 223 | \$ | 5,912 | 4.4 \% | \$ | 26,512 | 3.0 \% |
| $2016{ }^{2}$ | 14 |  | 506 | 1 |  | 4 | 220 |  | 5,661 | 8.7 |  | 25,733 | 2.2 |
| $2015{ }^{2}$ | 15 |  | 556 | 1 |  | 5 | 207 |  | 5,210 | 11.7 |  | 25,170 | 4.1 |
| $2014{ }^{2}$ | - |  | - | - |  | - | 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 |
| 2009 | 59 |  | 748 | 39 |  | 258 | 157 |  | 3,056 | 21.3 |  | 19,465 | 5.9 |
| 2008 | 9 |  | 302 | 12 |  | 119 | 137 |  | 2,518 | 15.8 |  | 18,382 | 18.3 |

${ }^{1}$ End of year annual benefits are not equal to prior end of year annual benefits plus additions less removals due to beneficiary benefit changes, data changes, and COLA increases. ${ }^{2}$ The valuation results were calculated using the prior year census data, adjusted for certain activity during the fiscal year.

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


Historical Summary of Actuarial Valuation Results
Actuarial Valuation as of June 30
(dollars in millions)

|  | $\begin{gathered} \text { Actuarial } \\ \text { Accrued } \\ \text { Liability (AAL) } \end{gathered}$ |  | Actuarial Value of Assets (AVA) |  | Unfunded Liability ${ }^{1}$ (AAL - AVA) |  | AVA Funded Status (AVA/AAL) |  |  | Unfunded Liability ${ }^{1}$ as a percentage of Covered Employee Payroll |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2017 | \$ | 96.7 | \$ | 58.0 | \$ | 38.7 | 60.0 \% | \$ | 22.6 | 170.9 \% |
| 2016 |  | 85.0 |  | 56.4 |  | 28.6 | 66.4 |  | 21.4 | 133.6 |
| 2015 |  | 77.9 |  | 54.9 |  | 23.0 | 70.4 |  | 21.1 | 108.8 |
| 2014 |  | 65.3 |  | 52.9 |  | 12.4 | 81.0 |  | 20.6 | 60.2 |
| 2013 |  | 62.0 |  | 48.8 |  | 13.2 | 78.7 |  | 18.8 | 70.2 |
| 2012 |  | 56.1 |  | 27.5 |  | 28.6 | 49.0 |  | 21.7 | 131.8 |
| 2011 |  | 53.3 |  | 25.7 |  | 27.6 | 48.2 |  | 18.1 | 152.6 |
| 2010 |  | 49.2 |  | 26.2 |  | 23.0 | 53.2 |  | 21.0 | 109.4 |
| 2009 |  | 44.6 |  | 26.4 |  | 18.2 | 59.3 |  | 20.8 | 87.6 |
| 2008 |  | 38.1 |  | 26.4 |  | 11.7 | 69.2 |  | 20.6 | 56.8 |

${ }^{1}$ The Unfunded Liability is calculated using the Actuarial Value of Assets (AVA), which is different than Net Pension Liability in the Financial Section which uses the Plan Fiduciary Net Position, also known as the Fair Value of Assets (FVA).
${ }^{2}$ Covered Employee Payroll can also be found in the RSI Contribution Schedule in the Financial Section.


## Prosecuting Attorneys' Retirement Fund

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions

The actuarial assumptions and methods used in the June 30, 2017 valuation of the Prosecuting Attorneys' Retirement Fund were adopted by the INPRS Board in May 2017. 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 April 2016. The funding policy is available online at: www.in.gov/inprs/files/INPRS_Funding_Policy.pdf.

## Changes in Actuarial Assumptions

For the actuarial valuation as of June 30, 2017, there was an updating of the morality rates used in the valuation to properly reflect the RP-2014 (with MP-2014 improvement removed) White Collar Mortality tables. Additionally, for disabled members, the RP-2014 (with MP-2014 improvement removed) Disability Mortality tables are assumed instead of the RP-2014 (with MP-2014 improvement removed) White Collar Mortality tables.

## Changes in Actuarial Methods

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

## Changes in Plan Provisions

For the actuarial valuation as of June 30, 2017, Senate Enrolled Act No. 265, the PERF offset was changed to be the actual PERF benefit amount the member is receiving for members who commence their PERF benefit before their PARF benefit.

## 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:

| $\quad$ 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: | N/A |
| Future Salary Increases: | 4.00 percent per year |

## Prosecuting Attorneys' Retirement Fund

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions, continued

## Demographic Assumptions: Based on 2010-2014 Experience

Mortality (Healthy)

Mortality (Disabled):

RP-2014 White Collar Mortality Tables, with Social Security generational improvements from 2006 based on the Social Security Administration's 2014 Trustee report.

RP-2014 Disability Mortality Tables, with Social Security generational improvements from 2006 based on the Social Security Administration's 2014 Trustee report.

Retirement:

Termination:

Disability:

Spouse/Beneficiary:

| Age | Service < 22 | Service >=22 |
| :---: | :---: | :---: |
| 55-61 | 0 \% | 70 \% |
| 62-64 | 20 | 70 |
| >=65 | 100 | 100 |

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

| 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 |

90 percent of members are assumed to be married or to have a dependent beneficiary. Males are assumed to be three years older than their spouses.

## Actuarial Methods

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

Data Measurement Date:

Asset Valuation 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 (actives and inactives). 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.

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.

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.

Analysis of Financial Experience

| (dollars in thousands) | UAAL |  |
| :---: | :---: | :---: |
| Unfunded Actuarial Accrued Liability (UAAL): June 30, 2016 | \$ | 28,561 |
| Normal Cost and Interest, less Expected Contributions |  | (503) |
| Expected UAAL: June 30, 2017 |  | 28,058 |
| UAAL (Gain) / Loss |  |  |
| Actuarial Value of Assets Experience |  | 2,303 |
| Actuarial Accrued Liabilities Experience ${ }^{1}$ |  | 1,996 |
| Actuarial Assumption \& Methodology Changes ${ }^{2}$ |  | (216) |
| Plan Provision Changes ${ }^{3}$ |  | 6,547 |
| Total UAAL (Gain) / Loss |  | 10,630 |
| Unfunded Actuarial Accrued Liability: June 30, 2017 | \$ | 38,688 |

${ }^{1}$ Unanticipated changes to the member census data.
${ }^{2}$ Actuarial Assumption and Methodology Changes include:

- Change from healthy to disabled mortality assumption for disabled members.
- Changes in actuarial assumptions and methods for consistency across all pension plans resulting from the 2016 actuarial audit.
${ }^{3}$ Per Senate Enrolled Act No. 265, the PERF offset was changed to be the actual PERF benefit amount the member is receiving for members who commence their PERF benefit before their PARF benefit.

Solvency Test
(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 | $\begin{gathered} \text { Active } \\ \text { Member } \\ \text { Contributions } \\ \hline \end{gathered}$ | Retirees and Beneficiaries | Active Member (Employer Financed Portion) | Total Actuarial Accrued Liabilities |
| 2017 | \$ 26,327 | \$ 38,504 | \$ 31,824 | \$ 96,655 | \$ 57,967 | 100.0 \% | 82.2 \% | - \% | 60.0 \% |
| 2016 | 26,206 | 37,709 | 21,118 | 85,033 | 56,472 | 100.0 | 80.3 | - | 66.4 |
| 2015 | 25,479 | 26,636 | 25,746 | 77,861 | 54,848 | 100.0 | 100.0 | 10.6 | 70.4 |
| 2014 | 26,654 | 22,665 | 16,017 | 65,336 | 52,936 | 100.0 | 100.0 | 22.6 | 81.0 |
| $2013{ }^{1}$ | 25,371 | 22,004 | 14,565 | 61,940 | 48,762 | 100.0 | 100.0 | 9.5 | 78.7 |
| 2012 | 23,406 | 18,660 | 14,014 | 56,080 | 27,501 | 100.0 | 21.9 | - | 49.0 |
| 2011 | 21,592 | 16,806 | 14,854 | 53,252 | 25,651 | 100.0 | 24.2 | - | 48.2 |
| 2010 | 20,999 | 12,557 | 15,618 | 49,174 | 26,166 | 100.0 | 41.1 | - | 53.2 |
| 2009 | 19,239 | 10,384 | 15,009 | 44,632 | 26,467 | 100.0 | 69.6 | - | 59.3 |
| 2008 | 17,428 | 5,173 | 15,468 | 38,069 | 26,350 | 100.0 | 100.0 | 24.2 | 69.2 |

${ }^{1}$ 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.

## Prosecuting Attorneys' Retirement Fund

Schedule of Active Members Valuation Data
Actuarial Valuation as of June 30
(dollars in thousands - except annual average pay)

|  | Active Members | Annual Payroll ${ }^{1}$ |  |  | I Average Pay | Annual Percent Increase I (Decrease) In Average Pay |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $2017^{2}$ | 209 | \$ | 23,540 | \$ | 112,632 | 0.3 \% |
| $2016^{2}$ | 198 |  | 22,227 |  | 112,257 | 0.1 |
| $2015{ }^{2}$ | 196 |  | 21,991 |  | 112,198 | 9.9 |
| $2014{ }^{2}$ | 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 |
| 2009 | 221 |  | 20,782 |  | 94,037 | (4.7) |
| 2008 | 209 |  | 20,617 |  | 98,646 | 12.3 |

${ }^{1}$ Figures shown are the anticipated pay for the one-year period following the valuation date.
${ }^{2}$ The valuation results were calculated using the prior year census data, adjusted for certain activity during the fiscal year.

Total Number of Active Members Per Year and Annual Average Pay


## Prosecuting Attorneys' Retirement Fund

Schedule of Retirants and Beneficiaries
Actuarial Valuation as of June 30
(dollars in thousands - except average annual benefit)

${ }^{1}$ End of year annual benefits are not equal to prior end of year annual benefits plus additions less removals due to beneficiary benefit changes, data changes, and COLA increases. ${ }^{3}$ The valuation results were calculated using the prior year census data, adjusted for certain activity during the fiscal year.

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


Benefit (\$)

Historical Summary of Actuarial Valuation Results
Actuarial Valuation as of June 30
(dollars in millions)

|  | $\qquad$ |  | Actuarial Value of Assets (AVA) |  | Unfunded Liability ${ }^{1}$ (AAL - AVA) |  | AVA Funded Status (AVA/AAL) | Covered <br> Employee Payroll ${ }^{2}$ | Unfunded Liability ${ }^{1}$ as a percentage of Covered Employee Payroll |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2017 | \$ | 3.8 | \$ | 3.1 | \$ | 0.7 | 81.9 \% | N/A | N/A |
| 2016 |  | 4.0 |  | 3.2 |  | 0.8 | 80.7 | N/A | N/A |
| 2015 |  | 4.3 |  | 3.3 |  | 1.0 | 77.1 | N/A | N/A |
| 2014 |  | 4.2 |  | 3.5 |  | 0.7 | 83.1 | N/A | N/A |
| 2013 |  | 4.3 |  | 3.4 |  | 0.9 | 79.8 | N/A | N/A |
| 2012 |  | 4.5 |  | 3.4 |  | 1.1 | 75.0 | N/A | N/A |
| 2011 |  | 4.6 |  | 3.6 |  | 1.0 | 78.6 | N/A | N/A |
| 2010 |  | 4.9 |  | 4.1 |  | 0.8 | 83.0 | N/A | N/A |
| 2009 |  | 5.1 |  | 4.7 |  | 0.4 | 93.0 | N/A | N/A |
| 2008 |  | 5.0 |  | 5.1 |  | (0.1) | 101.6 | N/A | N/A |

${ }^{1}$ The Unfunded Liability is calculated using the Actuarial Value of Assets (AVA), which is different than Net Pension Liability in the Financial Section which uses the Plan Fiduciary Net Position, also known as the Fair Value of Assets (FVA).
${ }^{2}$ 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, 2017 valuation of the Legislators' Defined Benefit Plan were adopted by the INPRS Board in May 2017. 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 April 2016. The funding policy is available online at: www.in.gov/inprs/files/INPRS_Funding_Policy.pdf.

## Changes in Actuarial Assumptions

For the actuarial valuation as of June 30, 2017, there was an updating of the mortality tables to properly reflect the RP-2014 (with MP-2014 improvement removed) White Collar Mortality Tables. Additionally, for disabled members, the RP-2014 (with MP-2014 improvement removed) Disability Mortality tables are assumed instead of the RP-2014 (with MP-2014 improvement removed) White Collar Mortality tables.

## 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 that impacted the pension benefits 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:

| $\quad$ Funding | 6.75 percent (net of administrative and investment expenses) |
| :--- | :--- |
| $\quad$ Accounting \& Financial Reporting | 6.75 percent (net of investment expenses) |
| Inflation: | 2.25 percent per year |
| Cost of Living Increases: | 1.00 percent per year in retirement |
| Future Salary Increases: | 2.25 percent per year |

## Legislators' Defined Benefit Fund

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions, continued

## Demographic Assumptions: Based on 2010-2014 Experience

Mortality (Healthy):

Mortality (Disabled):

Retirement:

Termination:

Disability:

Spouse/Beneficiary:

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

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

| Age |  | Rate |
| :---: | :---: | :---: |
| 55 |  | $10 \%$ |
| $56-57$ |  | 8 |
| $58-61$ |  | 2 |
| $62-64$ |  | 5 |
| $65+$ |  | 100 |

Sarason T-2 Tables. Illustrative rates shown below:

| 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 |

75 percent of 1964 OASDI Tables. Illustrative rates shown below:

| 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 |

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.

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions, continued

## Actuarial Methods

Actuarial Cost \& Amortization
Methods:

Funding:

Accounting \& Financial Reporting:

Data Measurement Date:

Asset Valuation Method:

## 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 Legislator's Defined Benefit Plan 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 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.

## 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 (actives and inactives). 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.

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.

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.

## Legislators' Defined Benefit Fund

Analysis of Financial Experience

| (dollars in thousands) | UAAL |  |
| :---: | :---: | :---: |
| Unfunded Actuarial Accrued Liability (UAAL): June 30, 2016 | \$ | 775 |
| Normal Cost and Interest, less Expected Contributions |  | (135) |
| Expected UAAL: June 30, 2017 |  | 640 |
| UAAL (Gain) / Loss |  |  |
| Actuarial Value of Assets Experience |  | 163 |
| Actuarial Accrued Liabilities Experience ${ }^{1}$ |  | (113) |
| Actuarial Assumption \& Methodology Changes |  |  |
| Total UAAL (Gain) / Loss |  | 50 |
| Unfunded Actuarial Accrued Liability: June 30, 2017 | \$ | 690 |
| ${ }^{1}$ Actuarial Accrued Liabilities Experience represents actual experience versus expected experience of the actuarial census assumptions: <br> - Unanticipated changes to the member census data. <br> - A COLA will not be granted as of January 1, 2018 and 2019, compared to the assumed COLA of 1.00 percent. |  |  |

## Solvency Test

(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 |
| 2017 | \$ | \$ 3,013 | \$ 791 | \$ 3,804 | \$ 3,114 | N/A | 100.0 \% | 12.9 \% | 81.9 \% |
| 2016 | - | 3,207 | 809 | 4,016 | 3,241 | N/A | 100.0 | 4.2 | 80.7 |
| 2015 | - | 3,213 | 1,115 | 4,328 | 3,336 | N/A | 100.0 | 11.1 | 77.1 |
| 2014 | - | 3,076 | 1,097 | 4,173 | 3,467 | N/A | 100.0 | 35.7 | 83.1 |
| 2013 | - | 3,192 | 1,103 | 4,295 | 3,428 | N/A | 100.0 | 21.4 | 79.8 |
| 2012 | - | 3,031 | 1,472 | 4,503 | 3,377 | N/A | 100.0 | 23.5 | 75.0 |
| 2011 | - | 3,037 | 1,584 | 4,621 | 3,634 | N/A | 100.0 | 37.7 | 78.6 |
| 2010 | - | 3,017 | 1,892 | 4,909 | 4,075 | N/A | 100.0 | 55.9 | 83.0 |
| 2009 | - | 3,147 | 1,940 | 5,087 | 4,730 | N/A | 100.0 | 81.6 | 93.0 |
| 2008 | - | 2,258 | 2,781 | 5,039 | 5,120 | N/A | 100.0 | 100.0 | 101.6 |

## Legislators' Defined Benefit Fund

Schedule of Active Members Valuation Data
Actuarial Valuation as of June 30
(dollars in thousands - except annual average pay)

|  | Active Members | Annual Payroll | Annual Average Pay | Annual Percent Increase I (Decrease) In Average Pay |
| :---: | :---: | :---: | :---: | :---: |
| $2017{ }^{1}$ | 11 | N/A | N/A | N/A |
| $2016{ }^{1}$ | 11 | N/A | N/A | N/A |
| $2015{ }^{1}$ | 17 | N/A | N/A | N/A |
| $2014{ }^{1}$ | 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 |
| 2009 | 33 | N/A | N/A | N/A |
| 2008 | 34 | N/A | N/A | N/A |

${ }^{1}$ The valuation results were calculated using the prior year census data, adjusted for certain activity during the fiscal year.

## Total Number of Active Members Per Year



Schedule of Retirants and Beneficiaries
Actuarial Valuation as of June 30
(dollars in thousands - except average annual benefit)

${ }^{1}$ End of year annual benefits are not equal to prior end of year annual benefits plus additions less removals due to beneficiary benefit changes, data changes, and COLA increases. ${ }^{2}$ The valuation results were calculated using the prior year census data, adjusted for certain activity during the fiscal year.

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



## Statistical Section

## 2017 COMPREHENSIVE ANNUAL FINANCIAL REPORT <br> For the Fiscal Year Ended June 30, 2017

| Indiana | Public Retirement System |
| :--- | :--- |
| 225 | Summary of Statistical Section |
| 226 | Schedule of Changes and Growth in |
|  | Fiduciary Net Position |
| 227 | Summary of Income Sources for a Ten- |
|  | Year Period |
| 228 | Summary of Participating Employers |
| 229 | Membership Data Summary |
| 233 | Ratio of Active Members to Annuitants |
| 234 | Pension Benefits by Indiana County |
| 235 | Retirees by Geographical Location |
| 236 | Summary of Defined Benefit |
|  | Retirement Benefits |

Public Employees' Retirement Fund
237 Schedule of Changes and Growth in Fiduciary Net Position
238 Schedule of Historical Contribution Rates
Ratio of Active Members to Annuitants
Schedule of Benefit Recipients by Type of Benefit Option Schedule of Average Benefit Payments Schedule of Participating Employers: Top 10

## Teachers' Pre-1996 Account

243 Schedule of Changes and Growth in Fiduciary Net Position
244 Ratio of Active Members to Annuitants
245 Schedule of Benefit Recipients by Type of Benefit Option Schedule of Average Benefit Payments Schedule of Participating Employers: Top 10

Teachers' 1996 Account
248 Schedule of Changes and Growth in Fiduciary Net Position
249 Schedule of Historical Contribution Rates
Ratio of Active Members to Annuitants Schedule of Benefit Recipients by Type of Benefit Option
Schedule of Average Benefit Payments Schedule of Participating Employers: Top 10

1977 Police Officers' and Firefighters' Retirement Fund

254 Schedule of Changes and Growth in Fiduciary Net Position
255 Schedule of Historical Contribution Rates
Ratio of Active Members to Annuitants
Schedule of Benefit Recipients by Type of Benefit Option
Schedule of Average Benefit Payments
Schedule of Participating Employers: Top 10

Judges' Retirement System
260 Schedule of Changes and Growth in Fiduciary Net Position
261 Ratio of Active Members to Annuitants
262 Schedule of Benefit Recipients by Type of Benefit Option
263 Schedule of Average Benefit Payments

## Excise, Gaming and Conservation

 Officers' Retirement Fund264 Schedule of Changes and Growth in Fiduciary Net Position
265 Schedule of Historical Contribution Rates
266 Ratio of Active Members to Annuitants
267 Schedule of Benefit Recipients by Type of Benefit Option
Schedule of Average Benefit Payments

## Prosecuting Attorneys' Retirement Fund

269 Schedule of Changes and Growth in Fiduciary Net Position of Benefit Option
Schedule of Average Benefit Payments

## Legislators' Defined Benefit Fund

273 Schedule of Changes and Growth in Fiduciary Net Position
274 Ratio of Active Members to Annuitants
275 Schedule of Benefit Recipients by Type of Benefit Option
276 Schedule of Average Benefit Payments
Legislators' Defined Contribution Fund
277 Schedule of Changes and Growth in Fiduciary Net Position
278 Schedule of Historical Contribution Rates

## State Employees' Death Benefit Fund

279 Schedule of Changes and Growth in Fiduciary Net Position Schedule of Average Death Benefit Payments

## Public Safety Officers' Special Death

 Benefit Fund281 Schedule of Changes and Growth in Fiduciary Net Position
282
Schedule of Average Death Benefit Payments

Local Public Safety Pension Relief Fund
283 Schedule of Average Death Benefit Payments

Summary of Statistical Section

$=\begin{gathered}\text { his } \\ \text { vi } \\ \text { and }\end{gathered}$
his part of the Comprehensive Annual Financial Report contains more detailed information regarding the financial viability and pension benefit offerings for understanding the Financial Statements, Notes to the Financial Statements, and Required Supplementary Information.

## Financial Trends

The following schedules contain trends to assist in understanding changes over time in financial performance of each retirement fund:

■ Schedule of Changes and Growth in Fiduciary Net Position
■ Schedule of Income Sources for a Ten-Year Period

- Schedule of Historical Contribution Rates


## Demographic and Economic Information

The following schedules contain benefit and member data to provide a better understanding of the benefit offerings of each retirement fund:

- Summary of Participating Employers
- Membership Data Summary
- 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


## Indiana Public Retirement System

## Schedule of Changes and Growth in Fiduciary Net Position ${ }^{1}$

 For the Year Ended June 30

Fiduciary Net Position Beginning of Year

Contributions / (Benefits and Expenses)

| Employer Contributions | 967,011 | 1,012,012 | 923,759 | 894,851 | 933,719 | 749,439 | 677,385 | 648,470 | 636,164 | 609,138 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Nonemployer Contributing Entity | 871,564 | 888,111 | 846,122 | 826,142 | 1,004,140 | 756,116 | 739,846 | 717,932 | 693,140 | 653,981 |
| Member Contributions | 347,622 | 334,079 | 348,789 | 341,609 | 326,518 | 335,548 | 330,314 | 335,244 | 332,959 | 322,060 |
| Member Reassignments | 16,669 | 16,187 | 17,591 | 15,582 | 14,759 | 13,025 | 15,410 | 8,176 | 7,662 | 9,608 |
| Other | 185 | 1,078 | 188 | 172 | 106 | 100 | 166 | 154 | 166 | 404 |
| Total Contributions and Other | 2,203,051 | 2,251,467 | 2,136,449 | 2,078,356 | 2,279,242 | 1,854,228 | 1,763,121 | 1,709,976 | 1,670,091 | 1,595,191 |
| Pension Benefits | $(2,275,134)$ | $(2,212,132)$ | $(2,220,957)$ | $(2,006,827)$ | $(1,938,557)$ | $(1,976,672)$ | $(1,889,792)$ | $(1,623,749)$ | $(1,494,247)$ | $(1,477,798)$ |
| Disability Benefits | $(42,115)$ | $(62,234)$ | $(64,172)$ | $(71,202)$ | $(60,664)$ | $(57,239)$ | $(53,608)$ | $(55,554)$ | $(51,326)$ | $(47,079)$ |
| Survivor Benefits ${ }^{2}$ | $(163,155)$ | $(154,804)$ | $(144,767)$ | $(138,027)$ | $(131,468)$ | - | - | - | - |  |
| Death Benefits | (909) | (924) | $(1,010)$ | (870) | $(1,444)$ | (788) | (774) | $(1,014)$ | (656) | (558) |
| Distributions of Contributions and Interest | $(70,332)$ | $(80,385)$ | $(88,659)$ | $(87,375)$ | $(98,414)$ | $(95,431)$ | $(91,447)$ | $(53,297)$ | $(50,355)$ | $(60,440)$ |
| Administrative Expenses | $(38,334)$ | $(38,469)$ | $(40,456)$ | $(43,399)$ | $(45,864)$ | $(40,813)$ | $(35,848)$ | $(38,200)$ | $(36,043)$ | $(31,686)$ |
| Member Reassignments | $(16,669)$ | $(16,187)$ | $(17,591)$ | $(15,582)$ | $(14,759)$ | $(13,025)$ | $(15,410)$ | $(8,176)$ | $(7,662)$ | $(9,608)$ |
| Total Benefits and Expenses | $(2,606,648)$ | $(2,565,135)$ | $(2,577,612)$ | $(2,363,282)$ | $(2,291,170)$ | $(2,183,968)$ | $(2,086,879)$ | $(1,779,990)$ | $(1,640,289)$ | $(1,627,169)$ |
| Net Contributions I (Benefits and Expenses) | $(403,597)$ | $(313,668)$ | $(441,163)$ | $(284,926)$ | $(11,928)$ | $(329,740)$ | $(323,758)$ | $(70,014)$ | 29,802 | $(31,978)$ |
| Net Investment Income / (Loss) | 2,346,347 | 324,830 | 105,000 | 3,434,051 | 1,514,240 | 172,721 | 3,943,032 | 2,637,244 | $(4,642,194)$ | $(1,754,782)$ |
| Net Increase I (Decrease) | 1,942,750 | 11,162 | $(336,163)$ | 3,149,125 | 1,502,312 | $(157,019)$ | 3,619,274 | 2,567,230 | $(4,612,392)$ | (1,786,760) |

Fiduciary Net Position End of Year
\$ 29,872,151 \$ 29,860,989 \$ 30,197,152 \$ 27,048,027 \$ 25,545,715 \$ 25,702,734 \$ 22,083,460 \$ 19,516,230 \$ 24,128,622 \$ 25,915,382 d
${ }^{1}$ Prior years (2008 through 2013) have been restated to reflect the exclusion of the Pension Relief Fund as an Agency Fund and the reclass of Nonemployer Contributing Entity contributions from Employer Contributions and Other.
${ }^{2}$ Survivor benefits information is available since June 30, 2013.
(in thousands of dollars)


Summary of Income Sources for a Ten-Year Period
Fiscal Year 2008 - Fiscal Year 2017


Investment Income

$\square$ Employer Contributions

Summary of Participating Employers
For the Year Ended June 30, 2017

- PERF = Public Employees' Retirement Fund

■ TRF Pre-'96 = Teachers' Pre-1996 Account

- TRF '96 = Teachers' 1996 Account
- '77 Fund = 1977 Police Officers' and Firefighters' Retirement Fund
- JRS = Judges' Retirement System
- EG\&C = Excise, Gaming and Conservation Officers' Retirement Fund
- PARF = Prosecuting Attorneys' Retirement Fund
- LE = Legislators' Retirement System

| Employers | Total ${ }^{1}$ | PERF | $\begin{gathered} \text { TRF } \\ \text { Pre-'96 } \end{gathered}$ | TRF | '77 <br> Fund | JRS | EG\&C | PARF | LE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| State | 1 | 1 | 1 | 1 | - | 1 | 1 | 1 | 1 |
| Counties | 86 | 86 | - | - | - | - | - | - | - |
| Cities | 120 | 113 | - | - | 118 | - | - | - | - |
| Towns | 203 | 200 | - | - | 34 | - | - | - | - |
| Townships | 162 | 158 | - | - | 13 | - | - | - | - |
| School Districts \& Education | 370 | 333 | 340 | 367 | - | - | - | - | - |
| Other | 292 | 292 | - | - | 2 | - | - | - | - |
| Total | 1,234 | 1,183 | 341 | 368 | 167 | 1 | 1 | 1 | 1 |

${ }^{1}$ Sum of individual employers by retirement plan does not equal total employers, since one employer may participate in multiple retirement funds.


## 1,234 Total Employers




Membership Data Summary ${ }^{1}$


- PERF = Public Employees' Retirement Fund
- TRF Pre-'96 = Teachers' Pre-1996 Account
- TRF '96 = Teachers' 1996 Account

■ '77 Fund = 1977 Police Officers' and Firefighters' Retirement Fund

- JRS = Judges' Retirement System
- EG\&C = Excise, Gaming and Conservation Officers' Retirement Fund
- PARF = Prosecuting Attorneys' Retirement Fund
- LE DB = Legislators' Defined Benefit Fund
- LE DC = Legislators' Defined Contribution Fund


## Indiana Public Retirement System

Membership Data Summary, continued ${ }^{1}$

For the Year Ended June 30, $2017^{2}$

| Fund | Active Members | Retirees, Beneficiaries, \& Disabled Members | Inactive Vested Members | Inactive Non-Vested Members With Balance | Total Members |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PERF | 134,909 | 85,130 | 30,816 | 50,312 | 301,167 |
| TRF Pre-'96 | 13,128 | 53,240 | 2,504 | 400 | 69,272 |
| TRF '96 | 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 |
| LE DC | 150 | - | - | 72 | 222 |
| Total INPRS | 220,933 | 149,323 | 37,939 | 64,580 | 472,775 |

For the Year Ended June 30, $2016{ }^{2}$

| Fund | Active Members | Retirees, Beneficiaries, \& Disabled Members | Inactive Vested Members | Inactive Non-Vested Members With Balance | Total Members |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PERF | 131,178 | 83,188 | 29,702 | 50,212 | 294,280 |
| TRF Pre-'96 | 14,327 | 52,575 | 3,119 | 394 | 70,415 |
| TRF '96 | 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 |
| LE DC | 150 | - | - | 66 | 216 |
| Total INPRS | 215,450 | 145,522 | 37,526 | 64,447 | 462,945 |

For the Year Ended June 30, $2015{ }^{2}$

| Fund | Active Members | Retirees, Beneficiaries, \& Disabled Members | Inactive Vested Members | Inactive Non-Vested Members With Balance | Total Members |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PERF | 138,660 | 79,198 | 26,681 | 43,803 | 288,342 |
| TRF Pre-'96 | 16,310 | 50,214 | 4,545 | 408 | 71,477 |
| TRF '96 | 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 |
| LE DC | 149 | - | - | 73 | 222 |
| Total INPRS | 221,962 | 137,992 | 35,705 | 57,684 | 453,343 |

${ }^{1}$ INPRS intends to make this schedule a 10-year schedule over time. Inactive Non-Vested Members With Balance data was not available for select funds prior to fiscal year 2010.
${ }^{2}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year.

Membership Data Summary, continued ${ }^{1}$

For the Year Ended June 30, $2014{ }^{2}$

| Fund | Active Members | Retirees, Beneficiaries, \& Disabled Members | Inactive Vested Members | Inactive Non-Vested Members With Balance | Total Members |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PERF | 137,567 | 75,950 | 24,013 | 50,997 | 288,527 |
| TRF Pre-'96 | 19,210 | 49,345 | 3,314 | 546 | 72,415 |
| TRF '96 | 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 |
| LE DC | 149 | - | - | 70 | 219 |
| Total INPRS | 222,497 | 133,128 | 30,722 | 63,837 | 450,184 |

For the Year Ended June 30, 2013

| Fund | Active Members | Retirees, Beneficiaries, \& Disabled Members | Inactive Vested Members | Inactive Non-Vested Members With Balance | Total Members |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PERF | 137,937 | 75,950 | 23,504 | 51,057 | 288,448 |
| TRF Pre-'96 | 19,210 | 49,345 | 3,314 | 546 | 72,415 |
| TRF '96 | 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 |
| LE DC | 167 | - | - | 58 | 225 |
| Total INPRS | 222,877 | 133,128 | 30,213 | 63,885 | 450,103 |

For the Year Ended June 30, 2012

| Fund | Active Members | Retirees, Beneficiaries, \& Disabled Members | Inactive Vested Members | Inactive Non-Vested Members With Balance | Total Members |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PERF | 145,519 | 72,992 | 21,200 | 47,874 | 287,585 |
| TRF Pre-'96 | 22,688 | 47,000 | 3,382 | 794 | 73,864 |
| TRF '96 | 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 |
| LE DC | 167 | - | - | 47 | 214 |
| Total INPRS | 230,703 | 126,813 | 27,887 | 62,248 | 447,651 |

[^33]${ }^{2}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year

Membership Data Summary, continued ${ }^{1}$

For the Year Ended June 30, 2011

| Fund | Active Members | Retirees, Beneficiaries, \& Disabled Members | Inactive Vested Members | Inactive Non-Vested Members With Balance | Total Members |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PERF | 147,933 | 70,380 | 20,634 | 72,105 | 311,052 |
| TRF Pre-'96 | 24,710 | 45,421 | 3,921 | 3,595 | 77,647 |
| TRF '96 | 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 |
| LE DC | 171 | - | - | 51 | 222 |
| Total INPRS | 233,845 | 121,948 | 27,592 | 100,382 | 483,767 |

For the Year Ended June 30, 2010

| Fund | Active Members | Retirees, Beneficiaries, \& Disabled Members | Inactive Vested Members | Inactive Non-Vested Members With Balance | Total Members |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PERF | 149,877 | 67,166 | 14,759 | 88,234 | 320,036 |
| TRF Pre-'96 | 26,439 | 43,478 | 5,209 | 8,149 | 83,275 |
| TRF '96 | 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 |
| LE DC | 169 | - | - | 48 | 217 |
| Total INPRS | 237,279 | 116,181 | 22,725 | 125,160 | 501,345 |

${ }^{1}$ INPRS intends to make this schedule a 10-year schedule over time. Inactive Non-Vested Members With Balance data was not available for select funds prior to fiscal year 2010.

Ratio of Active Members to Annuitants
For the Year Ended June 30

|  | Active Members ${ }^{1}$ | Annuitants ${ }^{2}$ | Ratio Active Members to Annuitants |
| :---: | :---: | :---: | :---: |
| $2017{ }^{3}$ | 220,783 | 149,323 | 1.5 |
| $2016{ }^{3}$ | 215,300 | 145,522 | 1.5 |
| $2015{ }^{3}$ | 221,813 | 137,992 | 1.6 |
| $2014{ }^{3}$ | 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 |
| 2009 | 236,304 | 112,758 | 2.1 |
| 2008 | 230,417 | 108,254 | 2.1 |

${ }^{1}$ Active Members exclude LE DC.
${ }^{2}$ Annuitants includes retirees, beneficiaries and disabled members.
${ }^{3}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year.


Pension Benefits by Indiana County (Jan-Dec 2016)

More than $88 \%$ of retirees or their beneficiaries reside in Indiana. This map illustrates how approximately $\$ 2.0$ billion in pension benefit payments for calendar year 2016 were distributed among Indiana's counties, representing INPRS's economic impact on the state.


Retirees by Geographical Location (December 2016)

In the month of December 2016, more than 144 thousand retirees received benefits from INPRS.


Retirees outside the United States:

| Armed Forces, Pacific - 1 | Ecuador - 1 | Hong Kong - 1 | Mexico - 1 | Thailand - 2 |
| :---: | :---: | :---: | :---: | :---: |
| Australia-1 | England - 2 | India - 1 | Philippines - 1 | Turkmenistan-1 |
| Canada-13 | France-2 | Isle of Man - 1 | Puerto Rico-13 | Virgin Islands - 1 |
| China-1 | Germany - 4 | Israel - 2 | Romania - 1 |  |
| Croatia-2 | Greece - 1 | Jamaica - 1 | Spain - 2 |  |

## Indiana Public Retirement System

Summary of Defined Benefit Retirement Benefits (December 2016)

In the month of December 2016, more than 144 thousand retirees received benefits from INPRS administered defined benefit (DB) retirement plans with an average annualized DB benefit of $\$ 12,927$. The median annualized DB benefit was $\$ 10,134$, which means half of all retirees receiving benefits are higher than $\$ 10,134$ and half are lower. Retirees may also be eligible for Social Security.

| Annualized | Members |  | Amount (in thousands) |  |
| :---: | :---: | :---: | :---: | :---: |
|  | \# | \% | \$ | \% |
| Under \$10,000 | 71,326 | 49.2 | 360,323 | 19.2 |
| \$10,000-20,000 | 40,057 | 27.6 | 591,297 | 31.6 |
| \$20,000-30,000 | 25,246 | 17.4 | 611,174 | 32.6 |
| \$30,000-40,000 | 6,457 | 4.5 | 217,290 | 11.6 |
| \$40,000-50,000 | 1,239 | 0.9 | 54,496 | 2.9 |
| \$50,000-60,000 | 226 | 0.2 | 12,093 | 0.6 |
| \$60,000-70,000 | 73 | - | 4,739 | 0.3 |
| \$70,000-80,000 | 89 | 0.1 | 6,678 | 0.4 |
| \$80,000-90,000 | 128 | 0.1 | 10,816 | 0.6 |
| \$90,000-100,000 | 26 | - | 2,490 | 0.1 |
| Over \$100,000 | 13 | - | 1,530 | 0.1 |
| Total | 144,880 | 100.0 | 1,872,926 | 100.0 |

Annual Member Defined Benefits


## Public Employees' Retirement Fund

## Schedule of Changes and Growth in Fiduciary Net Position

For the Year Ended June 30

| (dollars in thousands) | 2017 | 2016 | 2015 | 2014 | 2013 | 2012 | 2011 | 2010 | 2009 | 2008 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Position - Beginning of Year | \$ 13,870,502 | \$ 13,907,666 | \$ 14,104,288 | \$ 12,720,601 | \$12,243,755 | \$ 12,461,356 | \$ 10,581,319 \$ | 9,442,336 | \$ 12,073,470 | \$ 13,262,414 | Expenses)


| Employer Contributions ${ }^{1}$ | 558,891 | 615,773 | 538,059 | 526,090 | 455,658 | 397,843 | 342,779 | 331,090 | 323,151 | 303,877 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Member Contributions | 168,112 | 161,905 | 169,731 | 164,189 | 156,408 | 158,696 | 156,028 | 158,089 | 160,034 | 155,728 |
| Member Reassignments | 6,118 | 5,543 | 4,184 | 3,444 | 4,363 | 3,341 | 5,302 | 2,361 | 3,115 | 6,356 |
| Other | 55 | 905 | 83 | 52 | 31 | 8 | 15 | 39 | 32 | 287 |
| Total Contributions and Other | 733,176 | 784,126 | 712,057 | 693,775 | 616,460 | 559,888 | 504,124 | 491,579 | 486,332 | 466,248 |
| Pension Benefits | $(830,750)$ | $(782,197)$ | $(756,484)$ | $(668,789)$ | $(625,526)$ | $(628,522)$ | $(600,797)$ | $(539,540)$ | $(500,214)$ | $(467,994)$ |
| Disability Benefits | $(17,754)$ | $(32,855)$ | $(34,984)$ | $(39,837)$ | $(42,905)$ | $(40,659)$ | $(37,663)$ | $(40,171)$ | $(36,569)$ | $(33,643)$ |
| Survivor Benefits ${ }^{2}$ | $(68,530)$ | $(64,036)$ | $(59,208)$ | $(56,701)$ | $(54,154)$ | - | - | - | - |  |
| Distributions of Contributions and Interest | $(47,822)$ | $(57,184)$ | $(62,732)$ | $(63,031)$ | $(68,775)$ | $(69,879)$ | $(65,178)$ | $(39,632)$ | $(36,099)$ | $(45,610)$ |
| Administrative Expenses | $(24,483)$ | $(24,098)$ | $(25,506)$ | $(27,433)$ | $(29,181)$ | $(24,793)$ | $(22,461)$ | $(24,959)$ | $(21,497)$ | $(21,183)$ |
| Member Reassignments | $(10,555)$ | $(10,814)$ | $(13,403)$ | $(7,690)$ | $(10,405)$ | $(9,684)$ | $(10,078)$ | $(5,837)$ | $(5,132)$ | $(6,844)$ |
| Total Benefits and Expenses | $(999,894)$ | $(971,184)$ | $(952,317)$ | $(863,481)$ | $(830,946)$ | $(773,537)$ | $(736,177)$ | $(650,139)$ | $(599,511)$ | $(575,274)$ |
| Net Contributions / (Benefits and Expenses) | $(266,718)$ | $(187,058)$ | $(240,260)$ | $(169,706)$ | $(214,486)$ | $(213,649)$ | $(232,053)$ | $(158,560)$ | $(113,179)$ | $(109,026)$ |
| Net Investment Income / (Loss) | 1,040,887 | 149,894 | 43,638 | 1,553,393 | 691,332 | $(3,952)$ | 2,112,090 | 1,297,543 | $(2,517,955)$ | $(1,079,918)$ |
| Net Increase I (Decrease) | 774,169 | $(37,164)$ | $(196,622)$ | 1,383,687 | 476,846 | $(217,601)$ | 1,880,037 | 1,138,983 | $(2,631,134)$ | $(1,188,944)$ |

Net Position - End of Year
\$ 14,644,671 \$ 13,870,502 \$ 13,907,666 \$ 14,104,288 \$ 12,720,601 \$ 12,243,755 \$ 12,461,356 \$ 10,581,319 \$ 9,442,336 \$ 12,073,470
${ }^{1} 2016$ Employer Contributions includes $\$ 67,772$ thousand in one-time contributions.
${ }^{2}$ Survivor benefit information is available since June 30, 2013.
(in thousands of dollars)



Net Position End of Year

## Public Employees' Retirement Fund

## Schedule of Historical Contribution Rates

For the Year Ended June 30

Political

|  | State <br> Rate |  | Subdivisions <br> (Aggregate) Rate |
| :--- | :--- | :--- | :--- |
| 2017 | $11.2 \%$ | $11.2 \%$ |  |
| 2016 | 11.2 | 11.2 |  |
| 2015 | 11.2 | 11.2 |  |
| 2014 | 11.2 | 11.0 |  |
| 2013 | 9.7 | 9.7 |  |
| 2012 | 8.6 | 8.8 |  |
| 2011 | 7.0 | 7.9 |  |
| 2010 | 6.5 | 7.1 |  |
| 2009 | 6.3 | 7.1 |  |
| 2008 | 6.3 | 6.9 |  |

Memo:
Effective Date
July 1
January 1


Ratio of Active Members to Annuitants
For the Year Ended June 30

|  | Active <br> Members |  | Annuitants ${ }^{1}$ | Ratio Active <br> Members to |
| :--- | :--- | :--- | :--- | :--- |
| Annuitants |  |  |  |  |
| ${ } }$ | 134,909 | 85,130 | 1.6 |  |
| $2016^{2}$ | 131,178 | 83,188 | 1.6 |  |
| $2015^{2}$ | 138,660 | 79,198 | 1.8 |  |
| $2014^{2}$ | 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 |  |
| 2009 | 147,792 | 65,099 | 2.3 |  |
| 2008 | 140,146 | 62,424 | 2.2 |  |

${ }^{1}$ Annuitants includes retirees, beneficiaries and disabled members.
${ }^{2}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year.


Schedule of Benefit Recipients by Type of Benefit Option
For the Year Ended June 30, $2017{ }^{1}$
Number of Benefit Recipients by Benefit Option

| Amount of Monthly Benefit (in dollars) | 5-Year Certain \& Life | Straight Life | Modified Cash Refund Plus 5-Year Certain \& Life $^{2}$ | Joint With 100\% Survivor Benefits | Joint With TwoThirds Survivor Benefits | Joint With One-Half Survivor Benefits | Social Security Integration | Survivors | Disability | Total Benefit Recipients |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \$ 1-500 | 11,835 | 8,581 | N/A | 7,036 | 750 | 1,758 | 260 | 6,214 | 2,093 | 38,527 |
| 501-1,000 | 7,105 | 8,137 | N/A | 4,731 | 971 | 2,084 | 167 | 2,535 | 523 | 26,253 |
| 1,001-1,500 | 2,475 | 3,675 | N/A | 2,546 | 607 | 1,117 | 75 | 708 | 147 | 11,350 |
| 1,501-2,000 | 951 | 1,701 | N/A | 1,072 | 366 | 484 | 82 | 232 | 45 | 4,933 |
| 2,001-3,000 | 562 | 1,122 | N/A | 726 | 246 | 402 | 95 | 99 | 9 | 3,261 |
| Over 3,000 | 101 | 316 | N/A | 166 | 97 | 95 | 11 | 16 | 4 | 806 |
| Total | 23,029 | 23,532 | N/A | 16,277 | 3,037 | 5,940 | 690 | 9,804 | 2,821 | 85,130 |



5-Year Certain \& Life - Provides a monthly benefit for retiree's life. If retiree receives benefits for at least five years prior to death, there is no benefit payable to a designated beneficiary. In the event the retiree dies before receiving five years of payments, the beneficiary receives the remainder of those five years of monthly benefits, or the present value of those remaining payments in a lump sum. Includes Modified Cash Refund Plus 5-Year Certain \& Life.
Straight Life - Provides a monthly benefit for retiree's life. The benefit ceases upon the death of the retiree. If applicable, the balance of the retiree's Annuity Savings Account (ASA) is distributed to a designated beneficiary or estate if the remaining ASA is greater than the total payments previously paid to the retiree.
Modified Cash Refund Plus 5-Year Certain \& Life - Provides a monthly benefit for retiree's life, including monthly annuitization of member's Annuity Savings Account (ASA). In the event the retiree dies before receiving five years of payments, the beneficiary receives either a monthly benefit of the pension amount only for the remainder of the five years of guaranteed pension payments, or the present value of those pension payments in a lump sum. If applicable, the balance of the retiree's ASA is distributed to a designated beneficiary or estate if the remaining ASA is greater than the ASArelated payments previously paid to the retiree. Incorporated with 5 -Year Certain \& Life.
Joint With 100\% Survivor Benefits - Provides a monthly benefit for retiree's life. Upon the death of the retiree, the qualified designated survivor receives 100 percent of the member's monthly benefit for the remainder of the survivor's life.
Joint With Two-Thirds Survivor Benefits - Provides a monthly benefit for retiree's life. Upon the death of the retiree, the qualified designated survivor receives $662 / 3$ percent of the member's monthly benefit for the remainder of the survivor's life.
Joint With One-Half Survivor Benefits - Provides a monthly benefit for 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.
Social Security Integration - Provides a higher monthly benefit for a retiree between the ages 50 and 62 who elects to integrate social security with the monthly benefit. For PERF retirees, the monthly benefit is reduced at age 62 to no less than $\$ 180$ depending on the estimated monthly benefit from social security at age 62.
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 PERF, five or more years of creditable service is required to be eligible for a disability benefit.
${ }^{1}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year.
${ }^{2}$ Included in 5-Year Certain \& Life.

Years of Credited Service

| For the Year Ended June 30, $2017{ }^{3}$ | $<10^{2}$ | 10-14 |  | 15-19 | 20-24 |  | 25-29 |  | 30+ | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Defined Benefit | \$ 155 | \$ | 282 | \$ 392 | \$ | 548 | \$ | 765 | \$ 1,241 | \$ | 618 |
| Average Monthly ASA Annuity ${ }^{4}$ | \$ 45 | \$ | 104 | \$ 142 | \$ | 199 | \$ | 273 | \$ 478 | \$ | 230 |
| Average Final Average Salary | \$ 24,719 | \$ | 24,631 | \$ 26,902 | \$ | 29,142 |  | ,445 | \$39,990 | \$ | 30,347 |
| Number of Benefit Recipients | 3,077 |  | 14,268 | 21,252 |  | 17,139 |  | ,718 | 16,676 |  | 85,130 |

For the Year Ended June 30, $2016^{3}$

| Average Monthly Defined Benefit |
| :--- |
| Average Monthly ASA Annuity ${ }^{4}$ |
| Average Final Average Salary |
| Number of Benefit Recipients |
| For the Year Ended June 30, 2015 |


| $\$$ | 153 | $\$$ | 278 | $\$$ | 385 | $\$$ | 537 | $\$$ | 751 | $\$ 1,218$ | $\$$ | 604 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| $\$$ | 46 | $\$$ | 103 | $\$$ | 140 | $\$$ | 197 | $\$$ | 274 | $\$$ | 479 | $\$$ |
| $\$ 24,269$ | $\$$ | 24,024 | $\$ 26,337$ | $\$ 28,523$ | $\$ 31,831$ | $\$ 39,261$ | $\$$ | 29,693 |  |  |  |  |
| 2,951 |  | 13,952 | 20,992 |  | 16,918 |  | 12,346 | 16,029 |  | 83,188 |  |  |

Average Monthly Defined Benefit Average Monthly ASA Annuity ${ }^{4}$ Average Final Average Salary Number of Benefit Recipients

For the Year Ended June 30, $2014^{3}$
Average Monthly Defined Benefit Average Monthly ASA Annuity ${ }^{4}$ Average Final Average Salary Number of Benefit Recipients

| $\$$ | 149 | $\$$ | 293 |
| :--- | ---: | ---: | ---: |
| $\$$ | 43 | $\$$ | 116 |
| $\$ 23,480$ | $\$$ | 23,252 |  |
|  | 2,775 |  | 14,087 |


| $\$$ | 378 | \$ | 525 |
| ---: | ---: | ---: | ---: |
| $\$$ | 129 | $\$$ | 187 |
| $\$ 25,678$ | $\$$ | 27,754 |  |
| 20,210 |  | 16,141 |  |


| $\$$ | 732 | $\$ 1,182$ | $\$$ | 583 |
| :--- | ---: | ---: | ---: | ---: |
| $\$$ | 255 | $\$$ | 443 | $\$$ |
| $\$ 30,842$ | $\$ 37,941$ | $\$$ | 211 |  |
| 11,503 | 14,482 |  | 79,198 |  |


| $\$$ | 154 | $\$$ | 269 | $\$$ | 370 |
| :--- | ---: | :--- | ---: | :--- | ---: |
| $\$$ | 42 | $\$$ | 94 | $\$$ | 124 |
| $\$ 22,762$ | $\$$ | 22,669 | $\$ 25,080$ |  |  |
|  | 2,670 |  | 12,866 |  | 19,825 |


| $\$$ | 515 |
| :--- | ---: |
| $\$$ | 180 |
| $\$$ | 27,190 |
|  | 15,757 |


| $\$$ | 715 |
| :--- | ---: |
| $\$$ | 244 |
| $\$ 30,044$ |  |
|  | 11,079 |


| $\$$ | 1,160 | $\$$ | 569 |
| ---: | ---: | ---: | ---: |
| $\$$ | 425 | $\$$ | 199 |
| $\$ 37,145$ | $\$$ | 28,019 |  |
| 13,753 |  | 75,950 |  |

For the Year Ended June 30, 2013
Average Monthly Defined Benefit
Average Monthly ASA Annuity ${ }^{4}$
Average Final Average Salary
Number of Benefit Recipients

| $\$$ | 154 | $\$$ | 269 | $\$$ | 370 | $\$$ | 515 | $\$$ | 715 | $\$ 1,160$ | $\$$ | 569 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | :--- | ---: | ---: | ---: | ---: |
| $\$$ | 42 | $\$$ | 94 | $\$$ | 124 | $\$$ | 180 | $\$$ | 244 | $\$$ | 425 | $\$$ |
| $\$ 22,762$ | $\$$ | 22,669 | $\$ 25,080$ | $\$ 27,190$ | $\$ 30,044$ | $\$ 37,145$ | $\$$ | 28,019 |  |  |  |  |
| 2,670 |  | 12,866 | 19,825 |  | 15,757 |  | 11,079 | 13,753 |  | 75,950 |  |  |

For the Year Ended June 30, 2012

| Average Monthly Defined Benefit |
| :--- |
| Average Monthly ASA Annuity $^{4}$ |
| Average Final Average Salary |
| Number of Benefit Recipients |


| $\$$ | 156 | $\$$ | 265 | $\$$ | 363 | $\$$ | 504 | $\$$ | 701 | $\$ 1,139$ | $\$$ | 555 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| $\$$ | 42 | $\$$ | 89 | $\$$ | 116 | $\$$ | 171 | $\$$ | 233 | $\$$ | 407 | $\$$ |
| $\$ 22,105$ | $\$$ | 21,993 | $\$ 24,513$ | $\$ 26,534$ | $\$ 29,347$ | $\$ 36,331$ | $\$$ | 27,306 |  |  |  |  |
| 2,523 |  | 12,369 | 19,361 |  | 15,258 |  | 10,589 | 12,892 |  | 72,992 |  |  |

For the Year Ended June 30, 2011

| Average Monthly Defined Benefit | \$ | 159 | \$ | 263 | \$ | 358 | \$ | 495 | \$ | 687 | \$ 1,120 | \$ | 542 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Average Monthly ASA Annuity ${ }^{4}$ | \$ | 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 |

[^34]Schedule of Participating Employers: Top 10

| Top 10 Employers | June 30, 2017 |  |  | June 30, 2008 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Covered Members | Rank | Percentage of Total PERF | Covered Members | Rank | Percentage of Total PERF |
| State of Indiana | 39,227 | 1 | 29.1 \% | 49,894 | 1 | 35.6 \% |
| Health \& Hospital Corporation Marion County | 4,820 | 2 | 3.6 | 4,579 | 2 | 3.3 |
| Marion County | 2,662 | 3 | 2.0 | 3,099 | 3 | 2.2 |
| Indianapolis Public Schools | 1,971 | 4 | 1.4 | 2,399 | 4 | 1.7 |
| Lake County | 1,554 | 5 | 1.1 |  |  |  |
| City of Indianapolis | 1,553 | 6 | 1.1 | 1,855 | 6 | 1.3 |
| South Bend Community School Corporation | 1,336 | 7 | 1.0 | 1,811 | 7 | 1.3 |
| Evansville-Vanderburgh School Corporation | 1,197 | 8 | 0.9 | 1,485 | 8 | 1.1 |
| St Joseph County | 1,090 | 9 | 0.8 |  |  |  |
| Metropolitan School District of Lawrence Township | 1,046 | 10 | 0.8 | 1,279 | 10 | 0.9 |
| Fort Wayne Community Schools |  |  |  | 2,027 | 5 | 1.4 |
| Allen County |  |  |  | 1,288 | 9 | 0.9 |
| Total - Top 10 Employers | 56,456 |  | 41.8 | 69,716 |  | 49.7 |
| All Other * | 78,453 |  | 58.2 | 70,430 |  | 50.3 |
| Grand Total | 134,909 |  | 100.0 \% | 140,146 |  | 100.0 \% |

1,183 Employers in 2017, and 1,178 in 2008

* As of June 30, 2017, "All Other" consisted of:

| Type of Employer | Number of <br> Employers |  | Covered <br> Members |  |
| :--- | ---: | ---: | ---: | ---: |
| Counties | 83 |  | 18,460 |  |
| Cities | 112 |  | 10,819 |  |
| Towns | 200 | 2,919 |  |  |
| Townships | 158 | 864 |  |  |
| School Districts \& Education | 329 | 38,900 |  |  |
| Other | 291 | 6,491 |  |  |
| Total All Other |  | $\mathbf{1 , 1 7 3}$ | $\mathbf{7 8 , 4 5 3}$ |  |
|  |  |  |  |  |

Schedule of Changes and Growth in Fiduciary Net Position ${ }^{1}$
For the Year Ended June 30

| (dollars in thousands) | 2017 |  | 2016 |  | 2015 |  | 2014 |  | 2013 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Position - Beginning of Year | \$ | 4,787,529 | \$ | 5,099,910 | \$ | 5,501,867 | \$ | 5,215,202 | \$ | 5,058,910 |
| Contributions / (Benefits and Expenses) |  |  |  |  |  |  |  |  |  |  |
| Employer Contributions |  | 4,525 |  | 5,048 |  | 5,811 |  | 6,325 |  | 9,484 |
| Nonemployer Contributing Entity ${ }^{2}$ |  | 871,000 |  | 887,500 |  | 845,616 |  | 825,617 |  | 1,003,596 |
| Member Contributions |  | 28,836 |  | 31,529 |  | 41,740 |  | 47,028 |  | 45,421 |
| Member Reassignments |  | 4,206 |  | 4,057 |  | 6,273 |  | 3,250 |  | 5,883 |
| Other |  | - |  | - |  | 21 |  | 19 |  | 5 |
| Total Contributions and Other |  | 908,567 |  | 928,134 |  | 899,461 |  | 882,239 |  | 1,064,389 |
| Pension Benefits |  | $(1,175,344)$ |  | $(1,185,321)$ |  | $(1,242,792)$ |  | $(1,143,154)$ |  | $(1,137,783)$ |
| Disability Benefits |  | $(2,412)$ |  | $(8,505)$ |  | $(9,567)$ |  | $(11,562)$ |  | (45) |
| Survivor Benefits |  | $(75,495)$ |  | $(73,124)$ |  | $(69,350)$ |  | $(66,150)$ |  | $(63,379)$ |
| Distributions of Contributions and Interest |  | $(4,993)$ |  | $(6,004)$ |  | $(7,145)$ |  | $(8,435)$ |  | $(11,738)$ |
| Administrative Expenses |  | $(6,226)$ |  | $(6,564)$ |  | $(6,530)$ |  | $(7,010)$ |  | $(7,926)$ |
| Member Reassignments |  | $(4,859)$ |  | $(3,426)$ |  | $(2,919)$ |  | $(6,844)$ |  | $(2,824)$ |
| Total Benefits and Expenses |  | $(1,269,329)$ |  | $(1,282,944)$ |  | $(1,338,303)$ |  | $(1,243,155)$ |  | $(1,223,695)$ |
| Net Contributions I (Benefits and Expenses) |  | $(360,762)$ |  | $(354,810)$ |  | $(438,842)$ |  | $(360,916)$ |  | $(159,306)$ |
| Net Investment Income / (Loss) |  | 390,863 |  | 42,429 |  | 36,885 |  | 647,581 |  | 315,598 |
| Net Increase I (Decrease) |  | 30,101 |  | $(312,381)$ |  | $(401,957)$ |  | 286,665 |  | 156,292 |
| Net Position - End of Year | \$ | 4,817,630 | \$ | 4,787,529 | \$ | 5,099,910 | \$ | 5,501,867 | \$ | 5,215,202 |

${ }^{1}$ June 30, 2013 was the first year to split the Teachers' Retirement Fund (TRF) into two, TRF Pre-1996 and TRF 1996 Accounts. INPRS intends to make this
schedule a 10-year schedule over time.
${ }^{2}$ The State of Indiana contributed additional monies of \$20,799 thousand in 2016 and \$206,796 thousand in 2013
(in thousands of dollars)


Ratio of Active Members to Annuitants
For the Year Ended June 30

|  | Active <br> Members |  | Annuitants |  |
| :--- | :--- | :--- | :--- | :--- |
|  | $2017^{2}$ | 13,128 |  | Ratio Active <br> Members to <br> Annuitants |
| ${ } }$ | 14,327 | 53,240 | 0.2 |  |
| $2015^{2}$ | 16,310 | 52,575 | 0.3 |  |
| $2014^{2}$ | 19,210 | 50,214 | 0.3 |  |
| 2013 | 19,210 | 49,345 | 0.4 |  |
| 2012 | 22,688 | 49,345 | 0.4 |  |
| 2011 | 24,710 | 47,000 | 0.5 |  |
| 2010 | 26,439 | 45,421 | 0.5 |  |
| 2009 | 29,297 | 43,478 | 0.6 |  |
| 2008 | 34,628 | 42,548 | 0.7 |  |
|  |  | 40,554 | 0.9 |  |

${ }^{1}$ Annuitants includes retirees, beneficiaries and disabled members.
${ }^{2}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year.


Schedule of Benefit Recipients by Type of Benefit Option
For the Year Ended June 30, $2017{ }^{1}$
Number of Benefit Recipients by Benefit Option

| Amount of Monthly Benefit (in dollars) | 5-Year Certain \& Life | Straight Life | Modified Cash Refund Plus 5-Year Certain \& Life | Joint With 100\% Survivor Benefits | Joint With TwoThirds Survivor Benefits | Joint With One-Half Survivor Benefits | Social Security Integration ${ }^{2}$ | Survivors | Disability | Total Benefit Recipients |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \$ 1-500 | 1,494 | 760 | 183 | 1,119 | 237 | 445 | N/A | 459 | 73 | 4,770 |
| 501-1,000 | 1,790 | 1,178 | 266 | 1,900 | 694 | 1,008 | N/A | 337 | 167 | 7,340 |
| 1,001-1,500 | 3,074 | 2,294 | 399 | 4,097 | 1,270 | 1,441 | N/A | 153 | 227 | 12,955 |
| 1,501-2,000 | 3,205 | 3,079 | 334 | 4,790 | 1,544 | 1,840 | N/A | 162 | 107 | 15,061 |
| 2,001-3,000 | 2,579 | 3,162 | 241 | 3,133 | 1,202 | 1,546 | N/A | 66 | 23 | 11,952 |
| Over 3,000 | 267 | 340 | 17 | 268 | 116 | 148 | N/A | 6 | - | 1,162 |
| Total | 12,409 | 10,813 | 1,440 | 15,307 | 5,063 | 6,428 | N/A | 1,183 | 597 | 53,240 |



5-Year Certain \& Life - Provides a monthly benefit for retiree's life. If retiree receives benefits for at least five years prior to death, there is no benefit payable to a designated beneficiary. In the event the retiree dies before receiving five years of payments, the beneficiary receives the remainder of those five years of monthly benefits, or the present value of those remaining payments in a lump sum.
Straight Life — Provides a monthly benefit for retiree's life. The benefit ceases upon the death of the retiree. If applicable, the balance of the retiree's Annuity Savings Account (ASA) is distributed to a designated beneficiary or estate if the remaining ASA is greater than the total payments previously paid to the retiree.
Modified Cash Refund Plus 5-Year Certain \& Life - Provides a monthly benefit for retiree's life, including monthly annuitization of member's Annuity Savings Account (ASA). In the event the retiree dies before receiving five years of payments, the beneficiary receives either a monthly benefit of the pension amount only for the remainder of the five years of guaranteed pension payments, or the present value of those pension payments in a lump sum. If applicable, the balance of the retiree's ASA is distributed to a designated beneficiary or estate if the remaining ASA is greater than the ASA-related payments previously paid to the retiree.
Joint With $100 \%$ Survivor Benefits — Provides a monthly benefit for retiree's life. Upon the death of the retiree, the qualified designated survivor receives 100 percent of the member's monthly benefit for the remainder of the survivor's life.
Joint With Two-Thirds Survivor Benefits - Provides a monthly benefit for retiree's life. Upon the death of the retiree, the qualified designated survivor receives $662 / 3$ percent of the member's monthly benefit for the remainder of the survivor's life.
Joint With One-Half Survivor Benefits - Provides a monthly benefit for 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.
Social Security Integration — Provides a higher monthly benefit for a retiree between the ages of 50 and 62 who elects to integrate social security with their monthly benefit. For TRF retirees, social security integration can be incorporated with 5-Year Certain \& Life, Straight Life, Modified Cash Refund Plus 5-Year Certain \& Life, Joint With 100\% Survivor Benefits, Joint With Two-Thirds Survivor Benefits, and 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. For TRF retirees, the monthly benefit is reduced or terminated at age 62 depending on the estimated monthly benefit from social security at age 62.
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, five or more years of creditable service is required to be eligible for a disability benefit. Includes Classroom Disability which provides a benefit of $\$ 125$ per month plus $\$ 5$ for each additional year of TRF-covered service over five years.
${ }^{1}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year.
${ }^{2}$ Included in 5-Year Certain \& Life, Straight Life, Modified Cash Refund Plus 5-Year Certain \& Life, Joint With 100\% Survivor Benefits, Joint With Two-Thirds Survivor Benefits, and Joint With One-Half Survivor Benefits.

Schedule of Average Benefit Payments ${ }^{1}$

Years of Credited Service

| For the Year Ended June 30, $2017{ }^{3}$ | $<10^{2}$ |  | 10-14 |  | 15-19 |  | 20-24 |  | 25-29 |  | 30+ | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Defined Benefit | \$ | 122 | \$ | 270 | \$ | 542 | \$ | 897 | \$ | 1,270 | \$ 1,869 | \$ | 1,532 |
| Average Monthly ASA Annuity ${ }^{4}$ | \$ | 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 |
| For the Year Ended June 30, $2016{ }^{3}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Defined Benefit | \$ | 577 | \$ | 268 | \$ | 539 | \$ | 884 |  | 1,247 | \$ 1,849 | \$ | 1,512 |
| Average Monthly ASA Annuity ${ }^{4}$ | \$ | 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 |
| For the Year Ended June 30, $2015{ }^{3}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Defined Benefit | \$ | 449 | \$ | 263 | \$ | 530 | \$ | 854 |  | 1,214 | \$ 1,811 | \$ | 1,471 |
| Average Monthly ASA Annuity ${ }^{5}$ | \$ | 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 |
| For the Year Ended June 30, $2014{ }^{3}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Defined Benefit | \$ | 405 | \$ | 258 | \$ | 517 | \$ | 834 |  | 1,187 | \$ 1,793 | \$ | 1,453 |
| Average Monthly ASA Annuity ${ }^{5}$ | \$ | 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 |
| For the Year Ended June 30, 2013 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Defined Benefit | \$ | 405 | \$ | 258 | \$ | 517 | \$ | 834 |  | 1,187 | \$ 1,793 | \$ | 1,453 |
| Average Monthly ASA Annuity ${ }^{5}$ | \$ | 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 |
| For the Year Ended June 30, 2012 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Defined Benefit | \$ | 311 | \$ | 252 | \$ | 503 | \$ | 804 |  | \$ 1,150 | \$ 1,747 | \$ | 1,405 |
| Average Monthly ASA Annuity ${ }^{5}$ | \$ | 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 |
| For the Year Ended June 30, 2011 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Defined Benefit | \$ | 239 | \$ | 250 | \$ | 493 | \$ | 785 |  | \$ 1,130 | \$ 1,722 | \$ | 1,376 |
| Average Monthly ASA Annuity ${ }^{5}$ | \$ | 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 |

${ }^{1}$ INPRS intends to make this schedule a 10-year schedule over time.
${ }^{2}$ Members with less than 10 years of service are primarily members receiving a disability benefit.
${ }^{3}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year.
${ }^{4}$ Represents the average of only the retirees who elected to receive their ASA as a supplemental monthly payment in addition to the monthly Defined Benefit payment.
${ }^{5}$ Represents the average of all retirees, regardless if they elected to receive their ASA as a supplemental monthly payment in addition to the monthly Defined Benefit payment.

Schedule of Participating Employers: Top 10

| Top 10 Employers | June 30, 2017 |  |  |  |  | June 30, $2008{ }^{1}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Covered Members |  |  | Rank | Percentage of Total TRF | Total TRF Covered Members | Rank | Percentage of Total TRF |
|  | TRF Pre-'96 | TRF '96 | Total TRF |  |  |  |  |  |
| Indianapolis Public Schools | 385 | 2,316 | 2,701 | 1 | 3.8 \% | 3,268 | 1 | 4.3 \% |
| Fort Wayne Community Schools | 431 | 1,712 | 2,143 | 2 | 3.0 | 2,369 | 2 | 3.1 |
| Evansville-Vanderburgh School Corporation | 398 | 1,133 | 1,531 | 3 | 2.1 | 1,681 | 3 | 2.2 |
| South Bend Community School Corporation | 259 | 1,119 | 1,378 | 4 | 1.9 | 1,563 | 4 | 2.0 |
| Hamilton Southeastern Schools | 137 | 1,095 | 1,232 | 5 | 1.7 |  |  |  |
| Wayne Township Metropolitan School District | 140 | 993 | 1,133 | 6 | 1.6 | 1,155 | 7 | 1.5 |
| Elkhart Community Schools | 162 | 877 | 1,039 | 7 | 1.5 | 1,087 | 8 | 1.4 |
| Vigo County School Corporation | 250 | 788 | 1,038 | 8 | 1.5 | 1,252 | 5 | 1.7 |
| Carmel Clay Schools | 129 | 894 | 1,023 | 9 | 1.4 | 1,081 | 9 | 1.4 |
| Hammond Public Schools | 188 | 812 | 1,000 | 10 | 1.4 |  |  |  |
| Gary Community School Corporation |  |  |  |  |  | 1,207 | 6 | 1.6 |
| Lawrence Township Metropolitan School District |  |  |  |  |  | 1,077 | 10 | 1.4 |
| Total - Top 10 Employers | 2,479 | 11,739 | 14,218 |  | 19.9 | 15,740 |  | 20.6 |
| All Other * | 10,649 | 46,358 | 57,007 |  | 80.1 | 60,516 |  | 79.4 |
| Grand Total | 13,128 | 58,097 | 71,225 |  | 100.0 \% | 76,256 |  | 100.0 \% |

341 TRF Pre-'96 and 368 TRF '96 employers in 2017, and 361 Total TRF employers in 2008

* As of June 30, 2017, "All Other" consisted of:

| Type of Employer | TRF Pre-'96 |  | TRF '96 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Number of Employers | Covered Members | Number of Employers | Covered Members |
| State | 1 | 86 | 1 | 480 |
| School Districts \& Education | 330 | 10,563 | 357 | 45,878 |
| Total All Other | 331 | 10,649 | 358 | 46,358 |

[^35] only available for Total TRF.

Schedule of Changes and Growth in Fiduciary Net Position ${ }^{1}$
For the Year Ended June 30

| (dollars in thousands) | 2017 |  | 2016 |  | 2015 |  | 2014 |  | 2013 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Position - Beginning of Year | \$ | 5,611,230 | \$ | 5,379,113 | \$ | 5,189,442 | \$ | 4,433,677 | \$ | 4,018,149 |
| Contributions / (Benefits and Expenses) |  |  |  |  |  |  |  |  |  |  |
| Employer Contributions |  | 227,207 |  | 215,626 |  | 205,763 |  | 194,751 |  | 180,714 |
| Member Contributions |  | 92,838 |  | 88,430 |  | 86,515 |  | 81,802 |  | 77,532 |
| Member Reassignments |  | 6,345 |  | 6,587 |  | 7,134 |  | 8,884 |  | 4,322 |
| Other |  | 34 |  | 16 |  | 24 |  | 21 |  | 4 |
| Total Contributions and Other |  | 326,424 |  | 310,659 |  | 299,436 |  | 285,458 |  | 262,572 |
| Pension Benefits |  | $(127,618)$ |  | $(119,754)$ |  | $(112,533)$ |  | $(94,615)$ |  | $(84,814)$ |
| Disability Benefits |  | $(1,717)$ |  | $(1,942)$ |  | $(1,692)$ |  | $(1,790)$ |  | (6) |
| Survivor Benefits |  | $(3,257)$ |  | $(2,606)$ |  | $(1,962)$ |  | $(1,581)$ |  | $(1,412)$ |
| Distributions of Contributions and Interest |  | $(11,133)$ |  | $(10,988)$ |  | $(11,712)$ |  | $(10,734)$ |  | $(10,925)$ |
| Administrative Expenses |  | $(5,553)$ |  | $(5,603)$ |  | $(6,184)$ |  | $(6,707)$ |  | $(6,482)$ |
| Member Reassignments |  | $(1,229)$ |  | $(1,852)$ |  | $(1,269)$ |  | $(1,048)$ |  | $(1,516)$ |
| Total Benefits and Expenses |  | $(150,507)$ |  | $(142,745)$ |  | $(135,352)$ |  | $(116,475)$ |  | $(105,155)$ |
| Net Contributions / (Benefits and Expenses) |  | 175,917 |  | 167,914 |  | 164,084 |  | 168,983 |  | 157,417 |
| Net Investment Income / (Loss) |  | 464,893 |  | 64,203 |  | 25,587 |  | 586,782 |  | 258,111 |
| Net Increase / (Decrease) |  | 640,810 |  | 232,117 |  | 189,671 |  | 755,765 |  | 415,528 |
| Net Position - End of Year | \$ | 6,252,040 | \$ | 5,611,230 | \$ | 5,379,113 | \$ | 5,189,442 | \$ | 4,433,677 |

${ }^{1}$ June 30, 2013 was the first year to split the Teachers' Retirement Fund (TRF) into two, TRF Pre-1996 and TRF 1996 Accounts. INPRS intends to make this schedule a 10-year schedule over time.
(in thousands of dollars)


Net PositionEnd of Year

## Schedule of Historical Contribution Rates

For the Year Ended June 30

|  | 1996 Account <br> Rate |
| :---: | :---: |
| 2017 | $7.50 \%$ |
| 2016 | 7.50 |
| 2015 | 7.50 |
| 2014 | 7.50 |
| 2013 | 7.50 |
| 2012 | 7.50 |
| 2011 | 7.50 |
| 2010 | 7.00 |
| $20099^{1}$ | 7.13 |
| 2008 | 7.25 |
| Memo: |  |
| Effective Date | July 1 |
| 17.25 percent from July 1 - December 31, 2008; |  |
| 7.0 percent from January 1 - June 30, 2009 |  |



Ratio of Active Members to Annuitants
For the Year Ended June 30

|  | Active Members | Annuitants ${ }^{1}$ | Ratio Active Members to Annuitants |
| :---: | :---: | :---: | :---: |
| $2017{ }^{2}$ | 58,097 | 5,796 | 10.0 |
| $2016^{2}$ | 55,265 | 4,977 | 11.1 |
| $2015{ }^{2}$ | 52,424 | 4,136 | 12.7 |
| $2014{ }^{2}$ | 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 |
| 2009 | 45,046 | 1,944 | 23.2 |
| 2008 | 41,628 | 2,263 | 18.4 |

${ }^{1}$ Annuitants includes retirees, beneficiaries and disabled members.
${ }^{2}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year.


Schedule of Benefit Recipients by Type of Benefit Option
For the Year Ended June 30, $2017{ }^{1}$
Number of Benefit Recipients by Benefit Option

| Amount of Monthly Benefit (in dollars) | 5-Year Certain \& Life | Straight Life | Modified Cash Refund Plus 5-Year Certain \& Life | Joint With 100\% Survivor Benefits | Joint With TwoThirds Survivor Benefits | Joint With One-Half Survivor Benefits | Social Security Integration ${ }^{2}$ | Survivors | Disability | Total Benefit Recipients |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \$ 1-500 | 283 | 207 | 24 | 187 | 35 | 62 | N/A | 50 | 66 | 914 |
| 501-1,000 | 454 | 369 | 52 | 414 | 88 | 165 | N/A | 55 | 66 | 1,663 |
| 1,001-1,500 | 304 | 300 | 41 | 312 | 97 | 126 | N/A | 10 | 23 | 1,213 |
| 1,501-2,000 | 225 | 193 | 24 | 243 | 69 | 110 | N/A | 7 | 10 | 881 |
| 2,001-3,000 | 165 | 180 | 18 | 289 | 86 | 124 | N/A | 4 | 6 | 872 |
| Over 3,000 | 52 | 58 | 1 | 69 | 37 | 35 | N/A | 1 | - | 253 |
| Total | 1,483 | 1,307 | 160 | 1,514 | 412 | 622 | N/A | 127 | 171 | 5,796 |



5-Year Certain \& Life - Provides a monthly benefit for retiree's life. If retiree receives benefits for at least five years prior to death, there is no benefit payable to a designated beneficiary. In the event the retiree dies before receiving five years of payments, the beneficiary receives the remainder of those five years of monthly benefits, or the present value of those remaining payments in a lump sum.
Straight Life - Provides a monthly benefit for retiree's life. The benefit ceases upon the death of the retiree. If applicable, the balance of the retiree's Annuity Savings Account (ASA) is distributed to a designated beneficiary or estate if the remaining ASA is greater than the total payments previously paid to the retiree.
Modified Cash Refund Plus 5-Year Certain \& Life — Provides a monthly benefit for retiree's life, including monthly annuitization of member's Annuity Savings Account (ASA). In the event the retiree dies before receiving five years of payments, the beneficiary receives either a monthly benefit of the pension amount only for the remainder of the five years of guaranteed pension payments, or the present value of those pension payments in a lump sum. If applicable, the balance of the retiree's ASA is distributed to a designated beneficiary or estate if the remaining ASA is greater than the ASA-related payments previously paid to the retiree.
Joint With $100 \%$ Survivor Benefits — Provides a monthly benefit for retiree's life. Upon the death of the retiree, the qualified designated survivor receives 100 percent of the member's monthly benefit for the remainder of the survivor's life.
Joint With Two-Thirds Survivor Benefits — Provides a monthly benefit for retiree's life. Upon the death of the retiree, the qualified designated survivor receives $662 / 3$ percent of the member's monthly benefit for the remainder of the survivor's life.
Joint With One-Half Survivor Benefits — Provides a monthly benefit for 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.
Social Security Integration — Provides a higher monthly benefit for a retiree between the ages of 50 and 62 who elects to integrate social security with their monthly benefit. For TRF retirees, social security integration can be incorporated with 5 -Year Certain \& Life, Straight Life, Modified Cash Refund Plus 5-Year Certain \& Life, Joint With 100\% Survivor Benefits, Joint With Two-Thirds Survivor Benefits, and 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. For TRF retirees, the monthly benefit is reduced or terminated at age 62 depending on the estimated monthly benefit from social security at age 62.
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, five or more years of creditable service is required to be eligible for a disability benefit. Includes Classroom Disability which provides a benefit of $\$ 125$ per month plus $\$ 5$ for each additional year of TRF-covered service over five years.
${ }^{1}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year.
${ }^{2}$ Included in 5-Year Certain \& Life, Straight Life, Modified Cash Refund Plus 5-Year Certain \& Life, Joint With 100\% Survivor Benefits, Joint With Two-Thirds Survivor Benefits, and Joint With One-Half Survivor Benefits.

Schedule of Average Benefit Payments ${ }^{1}$

Years of Credited Service

| For the Year Ended June 30, $2017{ }^{3}$ | $<10^{2}$ |  | 10-14 |  | 15-19 |  | 20-24 |  | 25-29 |  | 30+ | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Defined Benefit | \$ | 153 | \$ | 484 | \$ | 775 | \$ | 1,131 |  | 1,512 | \$ 2,266 | \$ | 1,312 |
| Average Monthly ASA Annuity ${ }^{4}$ | \$ | 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 |
| For the Year Ended June 30, $2016{ }^{3}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Defined Benefit | \$ | 403 | \$ | 478 | \$ | 760 | \$ | 1,113 |  | 1,481 | \$ 2,263 | \$ | 1,355 |
| Average Monthly ASA Annuity ${ }^{4}$ | \$ | 162 | \$ | 152 | \$ | 247 | \$ | 346 |  | 507 | \$ 735 | \$ | 417 |
| Average Final Average Salary |  | 35,250 | \$ | 45,420 |  | 5,554 | \$ | 59,740 |  | 64,060 | \$73,994 | \$ | 61,008 |
| Number of Benefit Recipients |  | 59 |  | 611 |  | 1,267 |  | 764 |  | 688 | 1,588 |  | 4,977 |
| For the Year Ended June 30, $2015{ }^{3}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Defined Benefit | \$ | 437 | \$ | 467 | \$ | 740 | \$ | 1,085 |  | 1,458 | \$ 2,225 | \$ | 1,360 |
| Average Monthly ASA Annuity ${ }^{5}$ | \$ | 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 |
| For the Year Ended June 30, $2014{ }^{3}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Defined Benefit | \$ | 263 | \$ | 450 | \$ | 730 | \$ | 1,041 |  | 1,426 | \$ 2,158 | \$ | 1,366 |
| Average Monthly ASA Annuity ${ }^{5}$ | \$ | 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 |
| For the Year Ended June 30, 2013 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Defined Benefit | \$ | 263 | \$ | 450 | \$ | 730 | \$ | 1,041 |  | 1,426 | \$ 2,158 | \$ | 1,366 |
| Average Monthly ASA Annuity ${ }^{5}$ | \$ | 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 |
| For the Year Ended June 30, 2012 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Defined Benefit | \$ | 274 | \$ | 444 | \$ | 682 | \$ | 995 |  | 1,401 | \$ 2,124 | \$ | 1,391 |
| Average Monthly ASA Annuity ${ }^{5}$ | \$ | 29 | \$ | 72 | \$ | 97 | \$ | 125 | \$ | 207 | \$ 223 | \$ | 165 |
| Average Final Average Salary |  | 39,141 | \$ | 43,284 |  | 8,634 | \$ | 55,970 |  | 60,295 | \$69,381 | \$ | 59,171 |
| Number of Benefit Recipients |  | 33 |  | 308 |  | 577 |  | 411 |  | 420 | 1,222 |  | 2,971 |
| For the Year Ended June 30, 2011 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Defined Benefit | \$ | 241 | \$ | 419 | \$ | 665 | \$ | 963 |  | 1,381 | \$ 2,080 | \$ | 1,400 |
| Average Monthly ASA Annuity ${ }^{5}$ | \$ | 25 | \$ | 76 | \$ | 92 | \$ | 122 |  | 188 | \$ 216 | \$ | 162 |
| Average Final Average Salary |  | 37,883 | \$ | 40,581 |  | 7,337 | \$ | 54,686 |  | 59,531 | \$67,586 | \$ | 58,202 |
| Number of Benefit Recipients |  | 27 |  | 247 |  | 453 |  | 341 |  | 363 | 1,123 |  | 2,554 |

${ }^{1}$ INPRS intends to make this schedule a 10-year schedule over time.
${ }^{2}$ Members with less than 10 years of service are primarily members receiving a disability benefit.
${ }^{3}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year.
${ }^{4}$ Represents the average of only the retirees who elected to receive their ASA as a supplemental monthly payment in addition to the monthly Defined Benefit payment.
${ }^{5}$ Represents the average of all retirees, regardless if they elected to receive their ASA as a supplemental monthly payment in addition to the monthly Defined Benefit payment.

Schedule of Participating Employers: Top 10

| Top 10 Employers | June 30, 2017 |  |  |  |  | June 30, $2008^{1}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Covered Members |  |  | Rank | Percentage of Total TRF | Total TRF Covered Members | Rank | Percentage of Total TRF |
|  | TRF Pre-'96 | TRF '96 | Total TRF |  |  |  |  |  |
| Indianapolis Public Schools | 385 | 2,316 | 2,701 | 1 | 3.8 \% | 3,268 | 1 | 4.3 \% |
| Fort Wayne Community Schools | 431 | 1,712 | 2,143 | 2 | 3.0 | 2,369 | 2 | 3.1 |
| Evansville-Vanderburgh School Corporation | 398 | 1,133 | 1,531 | 3 | 2.1 | 1,681 | 3 | 2.2 |
| South Bend Community School Corporation | 259 | 1,119 | 1,378 | 4 | 1.9 | 1,563 | 4 | 2.0 |
| Hamilton Southeastern Schools | 137 | 1,095 | 1,232 | 5 | 1.7 |  |  |  |
| Wayne Township Metropolitan School District | 140 | 993 | 1,133 | 6 | 1.6 | 1,155 | 7 | 1.5 |
| Elkhart Community Schools | 162 | 877 | 1,039 | 7 | 1.5 | 1,087 | 8 | 1.4 |
| Vigo County School Corporation | 250 | 788 | 1,038 | 8 | 1.5 | 1,252 | 5 | 1.7 |
| Carmel Clay Schools | 129 | 894 | 1,023 | 9 | 1.4 | 1,081 | 9 | 1.4 |
| Hammond Public Schools | 188 | 812 | 1,000 | 10 | 1.4 |  |  |  |
| Gary Community School Corporation |  |  |  |  |  | 1,207 | 6 | 1.6 |
| Lawrence Township Metropolitan School District |  |  |  |  |  | 1,077 | 10 | 1.4 |
| Total - Top 10 Employers | 2,479 | 11,739 | 14,218 |  | 19.9 | 15,740 |  | 20.6 |
| All Other * | 10,649 | 46,358 | 57,007 |  | 80.1 | 60,516 |  | 79.4 |
| Grand Total | 13,128 | 58,097 | 71,225 |  | 100.0 \% | 76,256 |  | 100.0 \% |
| 341 TRF Pre-' 96 and 368 TRF ‘96 employers in 2017, and 361 Total TRF employers in 2008 |  |  |  |  |  |  |  |  |

* As of June 30, 2017, "All Other" consisted of:

| Type of Employer | TRF Pre-'96 |  | TRF '96 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Number of Employers | Covered Members | Number of Employers | Covered Members |
| State | 1 | 86 | 1 | 480 |
| School Districts \& Education | 330 | 10,563 | 357 | 45,878 |
| Total All Other | 331 | 10,649 | 358 | 46,358 |

[^36]
## 1977 Police Officers' and Firefighters' Retirement Fund

Schedule of Changes and Growth in Fiduciary Net Position
For the Year Ended June 30

| (dollars in thousands) |  | 2017 | 2016 | 2015 | 2014 | 2013 | 2012 | 2011 | 2010 | 2009 | 2008 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Position - Beginning of Year | \$ | 4,950,999 \$ | 4,828,415 \$ | 4,757,978 \$ | 4,116,861 \$ | 3,817,013 \$ | 3,721,366 \$ | 3,033,285 \$ | 2,591,674 \$ | 3,148,396 \$ | 3,310,171 |
| Contributions / Benefits and |  |  |  |  |  |  |  |  |  |  |  |

Expenses)

${ }^{1}$ Survivor benefits information is available since June 30, 2013.
(in thousands of dollars)



Net PositionEnd of Year

1977 Police Officers' and Firefighters' Retirement Fund
Schedule of Historical Contribution Rates
For the Year Ended June 30

Fund Rate
2017
17.5 \%

2016
19.7

2015
19.7

2014
19.7

2013
19.7

2012
19.7

2011
19.5

2010
19.5

2009
19.5

2008
21.0

Memo:
Effective Date
January 1


1977 Police Officers' and Firefighters' Retirement Fund
Ratio of Active Members to Annuitants
For the Year Ended June 30

|  | Active <br> Members |  | Annuitants ${ }^{1}$ | Ratio Active <br> Members to <br> Annuitants |
| :--- | ---: | ---: | ---: | :---: |
| $2017^{2}$ | 13,587 | 4,374 | 3.1 |  |
| $2016^{2}$ | 13,506 | 4,004 | 3.4 |  |
| $2015^{2}$ | 13,390 | 3,736 | 3.6 |  |
| $2014^{2}$ | 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 |  |
| 2009 | 13,184 | 2,608 | 5.1 |  |
| $2008^{3}$ | 13,095 | 2,530 | 5.2 |  |

${ }^{1}$ Annuitants includes retirees, beneficiaries and disabled members.
${ }^{2}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year ${ }^{3}$ As of December 31 instead of June 30.


Schedule of Benefit Recipients by Type of Benefit Option
For the Year Ended June 30, $2017{ }^{1}$

| Amount of Monthly Benefit (in dollars) | Number of Benefit Recipients by Benefit Option |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Joint With 60\% Survivor Benefits | Survivors | Disability | Total Benefit Recipients |
| \$ 1-500 | - | 15 | - | 15 |
| 501-1,000 | 5 | 138 | 18 | 161 |
| 1,001-1,500 | 119 | 365 | 84 | 568 |
| 1,501-2,000 | 461 | 156 | 209 | 826 |
| 2,001-3,000 | 1,697 | 60 | 395 | 2,152 |
| Over 3,000 | 580 | 7 | 65 | 652 |
| Total | 2,862 | 741 | 771 | 4,374 |

Joint With 60\% Survivor Benefits — Provides a monthly benefit for retiree's life. Upon retiree's death, 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.

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 ${ }^{1}$

Years of Credited Service


Schedule of Participating Employers: Top 10

| Top 10 Employers | June 30, 2017 |  |  | June 30, 2008 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Covered Members | Rank | Percentage of Total '77 Fund | Covered Members | Rank | Percentage of Total '77 Fund |
| City of Indianapolis | 2,570 | 1 | 18.9 \% | 2,152 | 1 | 17.1 \% |
| City of Fort Wayne | 780 | 2 | 5.7 | 787 | 2 | 6.2 |
| City of Evansville | 546 | 3 | 4.0 | 534 | 3 | 4.2 |
| City of South Bend | 483 | 4 | 3.6 | 475 | 5 | 3.8 |
| City of Gary | 375 | 5 | 2.8 | 495 | 4 | 3.9 |
| City of Hammond | 352 | 6 | 2.6 | 385 | 6 | 3.1 |
| City of Lafayette | 272 | 7 | 2.0 | 260 | 8 | 2.1 |
| City of Terre Haute | 264 | 8 | 1.9 | 262 | 7 | 2.1 |
| City of Muncie | 257 | 9 | 1.9 |  |  |  |
| City of Carmel | 248 | 10 | 1.8 | 243 | 9 | 1.9 |
| City of Anderson |  |  |  | 231 | 10 | 1.8 |
| Total - Top 10 Employers | 6,147 |  | 45.2 | 5,824 |  | 46.2 |
| All Other * | 7,440 |  | 54.8 | 6,787 |  | 53.8 |
| Grand Total | 13,587 |  | 100.0 \% | 12,611 |  | 100.0 \% |

167 Employers in 2017, and 161 in 2008

* As of June 30, 2017, "All Other" consisted of:

| Type of Employer |  | Number of <br> Employers |  | Covered <br> Members |
| :--- | :--- | :--- | :--- | ---: |
|  |  | 108 | 5,897 |  |
| Cities |  | 34 | 1,051 |  |
| Towns | 13 | 466 |  |  |
| Townships | 2 | 26 |  |  |
| Other |  | $\mathbf{1 5 7}$ | $\mathbf{7 , 4 4 0}$ |  |
| Total All Other |  |  |  |  |

## Judges' Retirement System

## Schedule of Changes and Growth in Fiduciary Net Position

For the Year Ended June 30

| (dollars in thousands) | 2017 |  | 2016 |  | 2015 |  | 2014 |  | 2013 |  | 2012 |  | 2011 |  | 2010 |  | 2009 |  | 2008 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Position - Beginning of Year | \$ 441,790 | \$ | 437,352 | \$ | 432,730 | \$ | 375,752 | \$ | 262,326 | \$ | 256,986 | \$ | 208,395 | \$ | 179,428 | \$ | 219,426 | \$ | 233,386 |
| Contributions / (Benefits and |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Expenses)


| Employer Contributions ${ }^{1}$ |  | 16,824 |  | 16,946 |  | 21,020 |  | 20,895 |  | 111,419 |  | 18,896 |  | 19,200 |  | 18,631 |  | 20,861 |  | 15,920 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Member Contributions |  | 3,468 |  | 3,239 |  | 3,292 |  | 2,856 |  | 2,631 |  | 2,468 |  | 3,492 |  | 2,229 |  | 2,196 |  | 2,062 |
| Member Reassignments |  | - |  | - |  | - |  | 4 |  | 121 |  | 257 |  | 1,281 |  | 59 |  | 151 |  | 64 |
| Other |  | - |  | - |  | 9 |  | 6 |  | 5 |  | 2 |  | - |  | - |  | - |  | - |
| Total Contributions and Other |  | 20,292 |  | 20,185 |  | 24,321 |  | 23,761 |  | 114,176 |  | 21,623 |  | 23,973 |  | 20,919 |  | 23,208 |  | 18,046 |
| Pension Benefits |  | $(19,223)$ |  | $(18,194)$ |  | $(16,613)$ |  | $(15,819)$ |  | $(15,115)$ |  | $(16,569)$ |  | $(15,996)$ |  | $(15,441)$ |  | $(14,595)$ |  | $(12,514)$ |
| Disability Benefits |  | (136) |  | (90) |  | (230) |  | (134) |  | (193) |  | (158) |  | (92) |  | (29) |  | (54) |  | (65) |
| Survivor Benefits ${ }^{2}$ |  | $(2,696)$ |  | $(2,627)$ |  | $(2,578)$ |  | $(2,574)$ |  | $(2,218)$ |  | - |  | - |  | - |  | - |  | - |
| Distributions of Contributions and Interest |  | (44) |  | (11) |  | (11) |  | - |  | (53) |  | (19) |  | (5) |  | - |  | (55) |  | (50) |
| Administrative Expenses |  | (124) |  | (148) |  | (165) |  | (146) |  | (126) |  | (132) |  | (160) |  | (104) |  | (308) |  | (244) |
| Total Benefits and Expenses |  | $(22,223)$ |  | $(21,070)$ |  | $(19,597)$ |  | $(18,673)$ |  | $(17,705)$ |  | $(16,878)$ |  | $(16,253)$ |  | $(15,574)$ |  | $(15,012)$ |  | $(12,873)$ |
| Net Contributions I (Benefits and Expenses) |  | $(1,931)$ |  | (885) |  | 4,724 |  | 5,088 |  | 96,471 |  | 4,745 |  | 7,720 |  | 5,345 |  | 8,196 |  | 5,173 |
| Net Investment Income / (Loss) |  | 35,196 |  | 5,323 |  | (102) |  | 51,890 |  | 16,955 |  | 595 |  | 40,871 |  | 23,622 |  | $(48,194)$ |  | $(19,133)$ |
| Net Increase I (Decrease) |  | 33,265 |  | 4,438 |  | 4,622 |  | 56,978 |  | 113,426 |  | 5,340 |  | 48,591 |  | 28,967 |  | $(39,998)$ |  | $(13,960)$ |
| Net Position - End of Year | \$ | 475,055 | \$ | 441,790 | \$ | 437,352 | \$ | 432,730 | \$ | 375,752 | \$ | 262,326 | \$ | 256,986 | \$ | 208,395 | \$ | 179,428 | \$ | 219,426 |

${ }^{1}$ In 2013, the State of Indiana contributed additional monies of \$90,187 thousand.
${ }^{2}$ Survivor benefit information is available since June 30, 2013.
(in thousands of dollars)


Ratio of Active Members to Annuitants
For the Year Ended June 30

|  | Active Members | Annuitants ${ }^{1}$ | Ratio Active Members to Annuitants |
| :---: | :---: | :---: | :---: |
| $2017^{2}$ | 402 | 350 | 1.1 |
| $2016{ }^{2}$ | 394 | 351 | 1.1 |
| $2015^{2}$ | 368 | 326 | 1.1 |
| $2014{ }^{2}$ | 365 | 321 | 1.1 |
| 2013 | 365 | 321 | 1.1 |
| 2012 | 361 | 311 | 1.2 |
| 2011 | 363 | 310 | 1.2 |
| 2010 | 291 | 298 | 1.0 |
| 2009 | 288 | 293 | 1.0 |
| 2008 | 267 | 276 | 1.0 |

${ }^{1}$ Annuitants includes retirees, beneficiaries and disabled members.
${ }^{2}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year.


Schedule of Benefit Recipients by Type of Benefit Option
For the Year Ended June 30, $2017{ }^{1}$

| Amount of Monthly Benefit (in dollars) | Number of Benefit Recipients by Benefit Option |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Joint With OneHalf Survivor Benefits | Survivors | Disability | Total Benefit Recipients |
| \$ 1-500 | - | - | - |  |
| 501-1,000 | - | - | - |  |
| 1,001-1,500 | - | 29 | - | 29 |
| 1,501-2,000 | - | 11 | - | 11 |
| 2,001-3,000 | 11 | 36 | - | 47 |
| Over 3,000 | 236 | 25 | 2 | 263 |
| Total | 247 | 101 | 2 | 350 |

Joint With One-Half Survivor Benefits — Provides a monthly benefit for 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.
${ }^{1}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year.

Years of Credited Service

| For the Year Ended June 30, $2017{ }^{2}$ | Years of Credited Service |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | <10 |  | 10-14 |  | 15-19 |  | 20-24 |  | 25-29 |  | 30+ |  | Total |  |
|  | \$ | 2,095 | \$ | \$ 4,416 | \$ | \$ 5,589 | \$ | 5,945 | \$ | \$ 6,804 | \$ | 6,788 | \$ | 5,130 |
| Average Monthly Defined Benefit |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 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 |

For the Year Ended June 30, $2016^{2}$

| Average Monthly Defined Benefit |
| :--- |
| Average Final Average Salary |
| Number of Benefit Recipients |
| For the Year Ended June 30, 2015² |
| Average Monthl Defined Benefit |

Average Monthly Defined Benefit
Average Final Average Salary
Number of Benefit Recipients

| \$ | 2,046 | $\$$ | 4,145 | \$ |
| ---: | ---: | ---: | ---: | ---: |
| \$ | 59,251 | $\$$ | 116,014 | $\$$ |
|  | 57 |  | 75 |  |

For the Year Ended June 30, $2014^{2}$

| 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 |

For the Year Ended June 30, 2013

| Average Monthly Defined Benefit |  | $\$ 2,519$ | $\$$ | 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 |

For the Year Ended June 30, 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 |  |

For the Year Ended June 30, 2011

| Average Monthly Defined Benefit | $\$ 2,495$ | $\$$ | 4,104 | $\$$ | 5,043 | $\$$ | 5,317 | $\$$ | 6,337 | $\$$ | 6,162 | $\$$ | 4,513 |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Average Final Average Salary | $\$ 25,717$ | $\$$ | 113,387 | $\$$ | 112,461 | $\$$ | 113,606 | $\$$ | 111,708 | $\$$ | 120,715 | $\$$ | 111,151 |  |
| Number of Benefit Recipients |  | 75 |  | 66 |  | 47 |  | 64 |  | 35 |  | 23 |  | 310 |

${ }^{1}$ INPRS intends to make this schedule a 10-year schedule over time.
${ }^{2}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year.

## Excise, Gaming and Conservation Officers' Retirement Fund

Schedule of Changes and Growth in Fiduciary Net Position
For the Year Ended June 30

| (dollars in thousands) |  | 2017 |  | 2016 |  | 2015 |  | 2014 |  | 2013 |  | 2012 |  | 2011 |  | 2010 |  | 2009 |  | 2008 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Position - Beginning of Year | \$ | 111,329 | \$ | 110,038 | \$ | 110,657 | \$ | 97,019 | \$ | 76,543 | \$ | 75,305 | \$ | 61,174 | \$ | 51,404 | \$ | 61,076 | \$ | 63,172 |
| Contributions / (Benefits and Expenses) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Employer Contributions ${ }^{1}$ |  | 5,691 |  | 5,367 |  | 5,215 |  | 5,359 |  | 19,740 |  | 5,054 |  | 5,197 |  | 5,256 |  | 5,294 |  | 4,854 |
| Member Contributions |  | 1,102 |  | 1,016 |  | 1,004 |  | 1,019 |  | 1,006 |  | 972 |  | 1,002 |  | 1,010 |  | 1,025 |  | 981 |
| Member Reassignments |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | 9 |  | 5 |  | - |
| Total Contributions and Other |  | 6,793 |  | 6,383 |  | 6,219 |  | 6,378 |  | 20,746 |  | 6,026 |  | 6,199 |  | 6,275 |  | 6,324 |  | 5,835 |
| Pension Benefits |  | $(6,223)$ |  | $(5,639)$ |  | $(6,068)$ |  | $(5,379)$ |  | $(4,393)$ |  | $(4,656)$ |  | $(3,851)$ |  | $(3,092)$ |  | $(2,855)$ |  | $(2,616)$ |
| Disability Benefits |  | (49) |  | (58) |  | (60) |  | (92) |  | (64) |  | (61) |  | (58) |  | (58) |  | (60) |  | (65) |
| Survivor Benefits ${ }^{2}$ |  | (437) |  | (435) |  | (395) |  | (367) |  | (342) |  | - |  | - |  | - |  | - |  | - |
| Distributions of Contributions and Interest |  | (117) |  | (113) |  | (85) |  | (100) |  | (37) |  | (100) |  | (99) |  | (31) |  | (36) |  | (11) |
| Administrative Expenses |  | (123) |  | (139) |  | (159) |  | (141) |  | (121) |  | (131) |  | (112) |  | (73) |  | (94) |  | (83) |
| Member Reassignments |  | (26) |  | (21) |  | - |  | - |  | (15) |  | - |  | - |  | - |  | - |  | - |
| Total Benefits and Expenses |  | $(6,975)$ |  | $(6,405)$ |  | $(6,767)$ |  | $(6,079)$ |  | $(4,972)$ |  | $(4,948)$ |  | $(4,120)$ |  | $(3,254)$ |  | $(3,045)$ |  | $(2,775)$ |
| Net Contributions I (Benefits and Expenses) |  | (182) |  | (22) |  | (548) |  | 299 |  | 15,774 |  | 1,078 |  | 2,079 |  | 3,021 |  | 3,279 |  | 3,060 |
| Net Investment Income / (Loss) |  | 8,869 |  | 1,313 |  | (71) |  | 13,339 |  | 4,702 |  | 160 |  | 12,052 |  | 6,749 |  | $(12,951)$ |  | $(5,156)$ |
| Net Increase I (Decrease) |  | 8,687 |  | 1,291 |  | (619) |  | 13,638 |  | 20,476 |  | 1,238 |  | 14,131 |  | 9,770 |  | $(9,672)$ |  | $(2,096)$ |
| Net Position - End of Year | \$ | 120,016 | \$ | 111,329 | \$ | 110,038 | \$ | 110,657 | \$ | 97,019 | \$ | 76,543 | \$ | 75,305 | \$ | 61,174 | \$ | 51,404 | \$ | 61,076 |

${ }^{1}$ The State of Indiana contributed additional monies of \$70 thousand in 2016 and \$14,619 thousand in 2013.
${ }^{2}$ Survivor benefits information is available since June 30, 2013.
(in thousands of dollars)

$\square \square \square$ End of Year

## Excise, Gaming and Conservation Officers' Retirement Fund

Schedule of Historical Contribution Rates
For the Year Ended June 30

|  | EG\&C Rate |
| :---: | :---: |
| 2017 | $20.75 \%$ |
| 2016 | 20.75 |
| 2015 | 20.75 |
| 2014 | 20.75 |
| 2013 | 20.75 |
| 2012 | 20.75 |
| 2011 | 20.75 |
| 2010 | 20.75 |
| 2009 | 20.75 |
| 2008 | 21.00 |
| Memo: |  |
| Effective Date | January 1 |



## Excise, Gaming and Conservation Officers' Retirement Fund

Ratio of Active Members to Annuitants
For the Year Ended June 30

|  | Active <br> Members |  | Annuitants ${ }^{1}$ | Ratio Active <br> Members to <br> Annuitants |
| :--- | :--- | :--- | :--- | :--- |
| $2017^{2}$ | 440 | 223 | 2.0 |  |
| $2016^{2}$ | 421 | 220 | 1.9 |  |
| $2015^{2}$ | 448 | 207 | 2.2 |  |
| $2014^{2}$ | 473 | 193 | 2.5 |  |
| 2013 | 473 | 193 | 2.5 |  |
| 2012 | 468 | 187 | 2.5 |  |
| 2011 | 440 | 176 | 2.5 |  |
| 2010 | 471 | 157 | 3.0 |  |
| 2009 | 443 | 157 | 2.8 |  |
| 2008 | 410 | 137 | 3.0 |  |

${ }^{1}$ Annuitants includes retirees, beneficiaries and disabled members.
${ }^{2}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year.


## Excise, Gaming and Conservation Officers' Retirement Fund

Schedule of Benefit Recipients by Type of Benefit Option
For the Year Ended June 30, $2017^{1}$

| Amount of Monthly Benefit (in dollars) | Number of Benefit Recipients by Benefit Option |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Joint With OneHalf Survivor Benefits | Survivors | Disability | Total Benefit Recipients |
| \$ 1-500 | 2 | 12 | 1 | 15 |
| 501-1,000 | 11 | 19 | - | 30 |
| 1,001-1,500 | 15 | 10 | 1 | 26 |
| 1,501-2,000 | 12 | 2 | - | 14 |
| 2,001-3,000 | 81 | - | 1 | 82 |
| Over 3,000 | 56 | - | - | 56 |
| Total | 177 | 43 | 3 | 223 |

Joint With One-Half Survivor Benefits — Provides a monthly benefit for 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 ${ }^{1}$

Years of Credited Service

| For the Year Ended June 30, $2017{ }^{2}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | <10 |  | 10-14 |  | 15-19 |  | 20-24 |  | 25-29 |  | 30+ |  | Total |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 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 |
| For the Year Ended June 30, $2016{ }^{2}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 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 |
| For the Year Ended June 30, 2015 ${ }^{2}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 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 |
| For the Year Ended June 30, $2014{ }^{2}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 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 |
| For the Year Ended June 30, 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 |
| For the Year Ended June 30, 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 |
| For the Year Ended June 30, 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 |

${ }^{1}$ INPRS intends to make this schedule a 10-year schedule over time.
${ }^{2}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year.

## Prosecuting Attorneys' Retirement Fund

Schedule of Changes and Growth in Fiduciary Net Position
For the Year Ended June 30

| (dollars in thousands) |  | 2017 |  | 2016 |  | 2015 |  | 2014 |  | 2013 |  | 2012 |  | 2011 |  | 2010 |  | 2009 |  | 2008 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Position - Beginning of Year | \$ | 52,792 | \$ | 53,424 | \$ | 54,507 | \$ | 47,920 | \$ | 27,689 | \$ | 26,478 | \$ | 22,431 | \$ | 19,696 | \$ | 24,613 | \$ | 26,189 |
| Contributions / (Benefits and Expenses) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Employer Contributions ${ }^{1}$ |  | 1,486 |  | 1,440 |  | 1,063 |  | 1,174 |  | 19,443 |  | 1,839 |  | 170 |  | 170 |  | 170 |  | 170 |
| Member Contributions |  | 1,357 |  | 1,279 |  | 1,269 |  | 1,334 |  | 1,271 |  | 1,277 |  | 1,271 |  | 1,268 |  | 1,274 |  | 1,208 |
| Other |  | - |  | - |  | - |  | 4 |  | - |  | - |  | - |  |  |  | - |  |  |
| Total Contributions and Other |  | 2,843 |  | 2,719 |  | 2,332 |  | 2,512 |  | 20,714 |  | 3,116 |  | 1,441 |  | 1,438 |  | 1,444 |  | 1,378 |
| Pension Benefits |  | $(3,390)$ |  | $(3,270)$ |  | $(2,898)$ |  | $(2,283)$ |  | $(1,982)$ |  | $(1,783)$ |  | $(1,372)$ |  | $(1,143)$ |  | (988) |  | (787) |
| Disability Benefits |  | (97) |  | (136) |  | (19) |  | (20) |  | (19) |  | (19) |  | (19) |  | (20) |  | (19) |  | (19) |
| Survivor Benefits ${ }^{2}$ |  | (137) |  | (87) |  | (78) |  | (44) |  | (39) |  | - |  | - |  | - |  | - |  |  |
| Distributions of Contributions and Interest |  | (445) |  | (254) |  | (259) |  | (51) |  | (195) |  | (63) |  | (263) |  | (80) |  | (55) |  | (4) |
| Administrative Expenses |  | (158) |  | (193) |  | (127) |  | (108) |  | (145) |  | (82) |  | (78) |  | (55) |  | (45) |  | (36) |


${ }^{1}$ In 2013, the State of Indiana contributed additional monies of \$17,363 thousand.
${ }^{2}$ Survivor benefit information is available since June 30, 2013.
(in thousands of dollars)


## Prosecuting Attorneys' Retirement Fund

Ratio of Active Members to Annuitants
For the Year Ended June 30

|  | Active Members | Annuitants ${ }^{1}$ | Ratio Active Members to Annuitants |
| :---: | :---: | :---: | :---: |
| $2017^{2}$ | 209 | 138 | 1.5 |
| $2016{ }^{2}$ | 198 | 133 | 1.5 |
| $2015{ }^{2}$ | 196 | 107 | 1.8 |
| $2014{ }^{2}$ | 210 | 95 | 2.2 |
| 2013 | 210 | 95 | 2.2 |
| 2012 | 219 | 81 | 2.7 |
| 2011 | 212 | 76 | 2.8 |
| 2010 | 217 | 58 | 3.7 |
| 2009 | 221 | 50 | 4.4 |
| 2008 | 209 | 26 | 8.0 |

${ }^{1}$ Annuitants includes retirees, beneficiaries and disabled members.
${ }^{2}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year.


## Prosecuting Attorneys' Retirement Fund

Schedule of Benefit Recipients by Type of Benefit Option
For the Year Ended June 30, $2017{ }^{1}$

| Amount of Monthly Benefit (in dollars) | Number of Benefit Recipients by Benefit Option |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Joint With OneHalf Survivor Benefits | Survivors | Disability | Total Benefit Recipients |
| \$ 1-500 | 8 | 3 | - | 11 |
| 501-1,000 | 17 | 6 | - | 23 |
| 1,001-1,500 | 21 | 2 | - | 23 |
| 1,501-2,000 | 14 | 2 | 1 | 17 |
| 2,001-3,000 | 32 | - | - | 32 |
| Over 3,000 | 31 | - | 1 | 32 |
| Total | 123 | 13 | 2 | 138 |

Joint With One-Half Survivor Benefits — Provides a monthly benefit for 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 ${ }^{1}$

Years of Credited Service

| For the Year Ended June 30, $2017{ }^{2}$ | <10 |  | 10-14 |  | 15-19 |  | 20-24 |  | 25-29 |  | 30+ |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 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 |
| For the Year Ended June 30, 2016 ${ }^{2}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 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 |
| For the Year Ended June 30, $2015{ }^{2}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 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 |
| For the Year Ended June 30, $2014{ }^{2}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 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 |

For the Year Ended June 30, 2013

| Average Monthly Defined Benefit |  | $\$$ | 1,694 | $\$$ | 1,445 | $\$$ | 1,875 | $\$$ | 2,340 | $\$$ | 2,626 | $\$$ | 2,187 | $\$$ | 1,843 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Average Final Average Salary | $\$ 27,001$ | $\$$ | 54,908 | $\$$ | 71,821 | $\$$ | 83,707 | $\$$ | 103,220 | $\$$ | 110,167 | $\$$ | 72,709 |  |  |
| Number of Benefit Recipients |  | 28 |  | 22 |  | 22 |  | 14 |  | 5 |  | 4 |  | 95 |  |

For the Year Ended June 30, 2012

| Average Monthly Defined Benefit |  | $\$$ | 1,541 | $\$$ | 1,421 | $\$$ | 1,874 | $\$$ | 2,283 | $\$$ | 2,488 | $\$$ | 2,496 | $\$$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 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 |

For the Year Ended June 30, 2011

| Average Monthly Defined Benefit |  | $\$$ | 1,541 | $\$$ | 1,413 | $\$$ | 1,831 | $\$$ | 2,252 | $\$$ | 2,219 | $\$$ | 2,615 | $\$$ | 1,774 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Average Final Average Salary | $\$ 25,939$ | $\$$ | 55,721 | $\$$ | 69,668 | $\$$ | 79,113 | $\$$ | 95,745 | $\$$ | 101,967 | $\$$ | 68,573 |  |  |
| Number of Benefit Recipients |  | 17 |  | 20 |  | 20 |  | 12 |  | 4 |  | 3 |  | 76 |  |

${ }^{1}$ INPRS intends to make this schedule a 10-year schedule over time.
${ }^{2}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year.

## Legislators' Defined Benefit Fund

Schedule of Changes and Growth in Fiduciary Net Position
For the Year Ended June 30

| (dollars in thousands) | 2017 |  | 2016 |  | 2015 |  | 2014 |  | 2013 |  | 2012 |  | 2011 |  | 2010 |  | 2009 |  | 2008 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Position - Beginning of Year | \$ | 2,919 | \$ | 3,174 | \$ | 3,489 | \$ | 3,337 | \$ | 3,385 | \$ | 3,645 | \$ | 3,396 | \$ | 3,368 | \$ | 4,674 | \$ | 5,498 |
| Contributions / (Benefits and Expenses) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Employer Contributions |  | 135 |  | 138 |  | 131 |  | 138 |  | 150 |  | 112 |  |  |  |  |  | 100 |  | 100 |
| Other |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | 15 |  | - |
| Total Contributions and Other |  | 135 |  | 138 |  | 131 |  | 138 |  | 150 |  | 112 |  | - |  | - |  | 115 |  | 100 |
| Pension Benefits |  | (304) |  | (311) |  | (331) |  | (324) |  | (321) |  | (335) |  | (337) |  | (353) |  | (360) |  | (342) |
| Disability Benefits |  | - |  | - |  | - |  | (2) |  | (3) |  | (3) |  | (3) |  | (3) |  | (3) |  | (3) |
| Survivor Benefits ${ }^{1}$ |  | (53) |  | (48) |  | (39) |  | (37) |  | (41) |  |  |  | - |  | - |  | - |  | - |
| Administrative Expenses |  | (53) |  | (61) |  | (71) |  | (62) |  | (34) |  | (37) |  | (50) |  | (35) |  | (21) |  | (56) |
| Total Benefit and Expenses |  | (410) |  | (420) |  | (441) |  | (425) |  | (399) |  | (375) |  | (390) |  | (391) |  | (384) |  | (401) |
| Net Contributions I (Benefits and Expenses) |  | (275) |  | (282) |  | (310) |  | (287) |  | (249) |  | (263) |  | (390) |  | (391) |  | (269) |  | (301) |
| Net Investment Income / (Loss) |  | 221 |  | 27 |  | (5) |  | 439 |  | 201 |  | 3 |  | 639 |  | 419 |  | $(1,037)$ |  | (523) |
| Net Increase / (Decrease) |  | (54) |  | (255) |  | (315) |  | 152 |  | (48) |  | (260) |  | 249 |  | 28 |  | $(1,306)$ |  | (824) |
| Net Position - End of Year | \$ | 2,865 | \$ | 2,919 | \$ | 3,174 | \$ | 3,489 | \$ | 3,337 | \$ | 3,385 | \$ | 3,645 | \$ | 3,396 | \$ | 3,368 | \$ | 4,674 |

${ }^{1}$ Survivor benefit information is available since June 30, 2013.
(in thousands of dollars)



Ratio of Active Members to Annuitants
For the Year Ended June 30

|  | Active <br> Members $^{1}$ | Annuitants $^{2}$ | Ratio Active <br> Members to <br> Annuitants |
| :--- | ---: | :--- | :---: | :---: |
| $2017^{3}$ | 11 | 72 | 0.2 |
| $2016^{3}$ | 11 | 74 | 0.1 |
| $2015^{3}$ | 17 | 68 | 0.3 |
| $2014^{3}$ | 24 | 68 | 0.4 |
| 2013 | 24 | 68 | 0.4 |
| 2012 | 6 | 63 | 0.1 |
| 2011 | 7 | 65 | 0.1 |
| 2010 | 20 | 61 | 0.3 |
| 2009 | 33 | 59 | 0.6 |
| 2008 | 34 | 44 | 0.8 |



Schedule of Benefit Recipients by Type of Benefit Option
For the Year Ended June 30, $2017{ }^{1}$

| Amount of Monthly Benefit (in dollars) | Number of Benefit Recipients by Benefit Option |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Joint With OneHalf Survivor Benefits | Survivors | Disability | Total Benefit Recipients |
| \$ 1-500 | 33 | 12 | - | 45 |
| 501-1,000 | 23 | 3 | - | 26 |
| 1,001-1,500 | 1 | - | - | 1 |
| 1,501-2,000 | - | - | - | - |
| 2,001-3,000 | - | - | - | - |
| Over 3,000 | - | - | - | - |
| Total | 57 | 15 | - | 72 |

Joint With One-Half Survivor Benefits — Provides a monthly benefit for 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.
${ }^{1}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year.

Schedule of Average Benefit Payments ${ }^{1}$

Years of Credited Service

| For the Year Ended June 30, $2017{ }^{2}$ | Years of Credited Service |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | <10 |  | 10-14 |  | 15-19 |  | 20-24 |  | 25-29 |  | $30+$ |  | Total |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Defined Benefit ${ }^{3}$ | \$ | 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 |
| For the Year Ended June 30, $2016{ }^{2}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Defined Benefit ${ }^{3}$ | \$ | 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 |

For the Year Ended June 30, 2015²

| Average Monthly Defined Benefit ${ }^{3}$ |  | $\$$ | 255 | $\$$ | 443 | $\$$ | 679 | $\$$ | 1,008 | $\$$ | 577 | $\$$ | 1,568 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Average Final Average Salary | $\$$ | 25,872 | $\$$ | 22,383 | $\$$ | 24,244 |  | N/A |  | N/A |  | N/A | $\$$ |
| Number of Benefit Recipients |  | 31 |  | 17 |  | 16 |  | 24,781 |  |  |  |  |  |

For the Year Ended June 30, $2014^{2}$

| Average Monthly Defined Benefit ${ }^{3}$ |  | $\$$ | 386 | $\$$ | 351 | $\$$ | 459 | $\$$ | 629 | $\$$ | 472 | $\$$ | 669 | $\$$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 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 |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| For the Year Ended June 30, 2013 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Defined Benefit ${ }^{3}$ | $\$$ | 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 |  |  |

For the Year Ended June 30, 2012

| Average Monthly Defined Benefit ${ }^{3}$ | \$ | 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 |

For the Year Ended June 30, 2011

| Average Monthly Defined Benefit ${ }^{3}$ | \$ | 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 |

${ }^{1}$ INPRS intends to make this schedule a 10-year schedule over time.
${ }^{2}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year.
${ }^{3}$ Benefit calculations for the LE DB benefit recipients are based on years of service, not final average salary.

## Legislators' Defined Contribution Fund

Schedule of Changes and Growth in Fiduciary Net Position
For the Year Ended June 30

| (dollars in thousands) |  | 2017 |  | 2016 |  | 2015 |  | 2014 |  | 2013 |  | 2012 |  | 2011 |  | 2010 |  | 2009 |  | 2008 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Position - Beginning of Year | \$ | 28,410 | \$ | 28,288 | \$ | 29,103 | \$ | 25,322 | \$ | 25,579 | \$ | 24,755 | \$ | 22,356 | \$ | 19,778 | \$ | 24,298 | \$ | 25,729 |
| Contributions / (Benefits and Expenses) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Employer Contributions |  | 1,395 |  |  |  | - |  | - |  | - |  |  |  | - |  |  |  | - |  | - |
| Member Contributions |  | 388 |  | 1,763 |  | 1,715 |  | 1,590 |  | 1,463 |  | 1,303 |  | 1,205 |  | 1,146 |  | 1,342 |  | 1,366 |
| Other |  | 18 |  | 14 |  | 36 |  | 40 |  | 42 |  | 49 |  | 68 |  | 25 |  | 4 |  | 60 |
| Total Contributions and Other |  | 1,801 |  | 1,777 |  | 1,751 |  | 1,630 |  | 1,505 |  | 1,352 |  | 1,273 |  | 1,171 |  | 1,346 |  | 1,426 |
| Distributions of Contributions and Interest |  | $(2,504)$ |  | $(1,794)$ |  | $(3,100)$ |  | $(1,452)$ |  | $(3,616)$ |  | $(1,033)$ |  | $(2,675)$ |  | (803) |  | $(1,325)$ |  | $(1,116)$ |
| Administrative Expenses |  | (7) |  | (12) |  | (6) |  | (5) |  | (4) |  | (22) |  | (39) |  | (33) |  | (46) |  | - |
| Total Benefits and Expenses |  | $(2,511)$ |  | $(1,806)$ |  | $(3,106)$ |  | $(1,457)$ |  | $(3,620)$ |  | $(1,055)$ |  | $(2,714)$ |  | (836) |  | $(1,371)$ |  | $(1,116)$ |
| Net Contributions I (Benefits and Expenses) |  | (710) |  | (29) |  | $(1,355)$ |  | 173 |  | $(2,115)$ |  | 297 |  | $(1,441)$ |  | 335 |  | (25) |  | 310 |
| Net Investment Income / (Loss) |  | 3,072 |  | 151 |  | 540 |  | 3,608 |  | 1,858 |  | 527 |  | 3,840 |  | 2,243 |  | $(4,495)$ |  | $(1,741)$ |
| Net Increase I (Decrease) |  | 2,362 |  | 122 |  | (815) |  | 3,781 |  | (257) |  | 824 |  | 2,399 |  | 2,578 |  | $(4,520)$ |  | $(1,431)$ |
| Net Position - End of Year | \$ | 30,772 | \$ | 28,410 | \$ | 28,288 | \$ | 29,103 | \$ | 25,322 | \$ | 25,579 | \$ | 24,755 | \$ | 22,356 | \$ | 19,778 | \$ | 24,298 |

(in thousands of dollars)



## Legislators' Defined Contribution Fund

Schedule of Historical Contribution Rates
For the Year Ended June 30


Schedule of Changes and Growth in Fiduciary Net Position
For the Year Ended June 30

| (dollars in thousands) | 2017 |  | 2016 |  | 2015 |  | 2014 |  | 2013 |  | 2012 |  | 2011 |  | 2010 |  | 2009 |  | 2008 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Position - Beginning of Year | \$ | 8,348 | \$ | 8,013 | \$ | 7,917 | \$ | 7,683 | \$ | 7,683 | \$ | 7,347 | \$ | 7,091 | \$ | 6,566 | \$ | 6,251 | \$ | 5,797 |
| Contributions / (Benefits and Expenses) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Death Benefits |  | (100) |  | - |  | - |  |  |  | (50) |  | (50) |  | - |  |  |  | (50) |  | - |
| Administrative Expenses |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | (9) |  | (6) |
| Total Benefits and Expenses |  | (100) |  | - |  | - |  | - |  | (50) |  | (50) |  | - |  | - |  | (59) |  | (6) |
| Net Contributions I (Benefits and Expenses) |  | (100) |  | - |  | - |  | - |  | (50) |  | (50) |  | - |  | - |  | (59) |  | (6) |
| Net Investment Income / (Loss) |  | (12) |  | 335 |  | 96 |  | 234 |  | 50 |  | 386 |  | 256 |  | 525 |  | 374 |  | 460 |
| Net Increase I (Decrease) |  | (112) |  | 335 |  | 96 |  | 234 |  | - |  | 336 |  | 256 |  | 525 |  | 315 |  | 454 |
| Net Position End of Year | \$ | 8,236 | \$ | 8,348 | \$ | 8,013 | \$ | 7,917 | \$ | 7,683 | \$ | 7,683 | \$ | 7,347 | \$ | 7,091 | \$ | 6,566 | \$ | 6,251 |

(in thousands of dollars)


Schedule of Average Death Benefit Payments ${ }^{1}$

For the Year Ended June 30, 2017

| Average Death Benefit | $\$$ | 100,000 |
| :--- | ---: | ---: |
| Average Final Average Salary |  | N/A |
| Number of Benefit Recipients |  | 1 |

For the Year Ended June 30, 2016
Average Death Benefit
Average Final Average Salary
Number of Benefit Recipients
For the Year Ended June 30, 2015
Average Death Benefit
Average Final Average Salary

Number of Benefit Recipients
For the Year Ended June 30, 2014

| Average Death Benefit | $\$$ | - |
| :--- | :--- | ---: |
| Average Final Average Salary |  | N/A |
| Number of Benefit Recipients |  | - |

For the Year Ended June 30, 2013

| Average Death Benefit | $\$$ | 50,000 |
| :--- | ---: | ---: |
| Average Final Average Salary |  | N/A |
| Number of Benefit Recipients |  | 1 |

\$ $\quad-$
\$
N/A
.
-

For the Year Ended June 30, 2012

| Average Death Benefit | $\$$ | 50,000 |
| :--- | ---: | ---: |
| Average Final Average Salary |  | N/A |
| Number of Benefit Recipients |  | 1 |

For the Year Ended June 30, 2011

| Average Death Benefit | \$ | - |
| :--- | :--- | ---: | ---: |
| Average Final Average Salary |  | N/A |
| Number of Benefit Recipients |  |  |

For the Year Ended June 30, 2010

| Average Death Benefit | $\$$ | N/A |
| :--- | :--- | :--- | ---: |
| Average Final Average Salary |  | N |
| Number of Benefit Recipients |  |  |

For the Year Ended June 30, 2009
Average Death Benefit
Average Final Average Salary
Number of Benefit Recipients

For the Year Ended June 30, 2008
Average Death Benefit
Average Final Average Salary
,000

Average Final Average Salary
Number of Benefit Recipients

Number of Benefit Recipients death benefit was $\$ 50,000$.

## Number of Benefit Recipients



Schedule of Changes and Growth in Fiduciary Net Position
For the Year Ended June 30

| (dollars in thousands) | 2017 |  | 2016 |  | 2015 |  | 2014 |  | 2013 |  | 2012 |  | 2011 |  | 2010 |  | 2009 |  | 2008 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Position - Beginning of Year | \$ | 6,303 | \$ | 5,596 | \$ | 5,174 | \$ | 4,653 | \$ | 4,683 | \$ | 3,758 | \$ | 3,244 | \$ | 2,842 | \$ | 2,459 | \$ | 2,232 |
| Contributions I (Benefits and Expenses) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Nonemployer Contributing Entity |  | 564 |  | 611 |  | 506 |  | 525 |  | 544 |  | 716 |  | 548 |  | 626 |  | 539 |  | 517 |
| Total Contributions and Other |  | 564 |  | 611 |  | 506 |  | 525 |  | 544 |  | 716 |  | 548 |  | 626 |  | 539 |  | 517 |
| Death Benefits |  | - |  | (150) |  | (150) |  | (150) |  | (600) |  | - |  | (150) |  | (450) |  | (300) |  | (450) |
| Administrative Expenses |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | (3) |  | (2) |
| Total Benefits and Expenses |  | - |  | (150) |  | (150) |  | (150) |  | (600) |  | - |  | (150) |  | (450) |  | (303) |  | (452) |
| Net Contributions I (Benefits and Expenses) |  | 564 |  | 461 |  | 356 |  | 375 |  | (56) |  | 716 |  | 398 |  | 176 |  | 236 |  | 65 |
| Net Investment Income / (Loss) |  | (5) |  | 246 |  | 66 |  | 146 |  | 26 |  | 209 |  | 116 |  | 226 |  | 147 |  | 162 |
| Net Increase I (Decrease) |  | 559 |  | 707 |  | 422 |  | 521 |  | (30) |  | 925 |  | 514 |  | 402 |  | 383 |  | 227 |
| Net Position - End of Year | \$ | 6,862 | \$ | 6,303 | \$ | 5,596 | \$ | 5,174 | \$ | 4,653 | \$ | 4,683 | \$ | 3,758 | \$ | 3,244 | \$ | 2,842 | \$ | 2,459 |

(in thousands of dollars)


Schedule of Average Death Benefit Payments ${ }^{1}$

For the Year Ended June 30, 2017

| Average Death Benefit |
| :--- |
| Average Final Average Salary |
| Number of Benefit Recipients |
| For the Year Ended June 30, 2016 |

Average Death Benefit
Average Final Average Salary
Number of Benefit Recipients
For the Year Ended June 30, 2015
Average Death Benefit
Average Final Average Salary
Number of Benefit Recipients
For the Year Ended June 30, 2014
Average Death Benefit
Average Final Average Salary
Number of Benefit Recipients
For the Year Ended June 30, 2013
Average Death Benefit
Average Final Average Salary
Number of Benefit Recipients
\$ 150,000
\$
N/A
-
\$ 150,000
N/A
1
\$ 150,000
N/A
1

N/A
1
\$ 150,000
N/A
${ }^{1}$ Lump sum death benefit of $\$ 150,000$ paid to the surviving spouse or child(ren) of a public safety officer who dies in the line of duty as defined in statute (IC 5-10-10). If there is no surviving spouse or child(ren), the benefit is paid to the parent(s).

Number of Benefit Recipients


Public Safety Officers' Special Death Benefit Fund

## Pension Relief Fund ${ }^{1}$

Schedule of Average Death Benefit Payments ${ }^{1}$

For the Year Ended June 30, 2017
Average Death Benefit
Average Final Average Salary
Number of Benefit Recipients
For the Year Ended June 30, 2016

Average Death Benefit
Average Final Average Salary
Number of Benefit Recipients
For the Year Ended June 30, 2015
Average Death Benefit
Average Final Average Salary
Number of Benefit Recipients
For the Year Ended June 30, 2014
Average Death Benefit
Average Final Average Salary
Number of Benefit Recipients
For the Year Ended June 30, 2013
Average Death Benefit

Average Final Average Salary
Number of Benefit Recipients

| \$ |  | For the Year Ended June 30, 2012 | \$ | 150,000 |
| :---: | :---: | :---: | :---: | :---: |
|  | 150,000 | Average Death Benefit |  |  |
|  | N/A | Average Final Average Salary |  | N/A |
|  | 2 | Number of Benefit Recipients | \$ | 1 |
| \$ |  | For the Year Ended June 30, 2011 |  |  |
|  | - | Average Death Benefit |  | 150,000 |
|  | N/A | Average Final Average Salary |  | N/A |
|  | - | Number of Benefit Recipients |  | 3 |
| \$ |  | For the Year Ended June 30, 2010 | \$ |  |
|  | 150,000 | Average Death Benefit |  | 150,000 |
|  | N/A | Average Final Average Salary |  | N/A |
|  | 4 | Number of Benefit Recipients |  | 3 |
| \$ |  | For the Year Ended June 30, 2009 | \$ |  |
|  | 150,000 | Average Death Benefit |  | 150,000 |
|  | N/A | Average Final Average Salary |  | N/A |
|  | 2 | Number of Benefit Recipients |  | 1 |
| \$ |  | For the Year Ended June 30, 2008 | \$ |  |
|  | 150,000 | Average Death Benefit |  | 150,000 |
|  | N/A | Average Final Average Salary |  | N/A |
|  | 2 | 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 statute (IC 36-8-8-20). If there is no surviving spouse or child(ren), the benefit is paid to the parent(s).

## Number of Benefit Recipients





[^0]:    ${ }^{1}$ As of June 30, 2017.
    ${ }^{2}$ A complete list of investment professionals that have provided services to INPRS can be found at the end of the Investment Section.

[^1]:    ${ }^{1}$ Sum of individual employers by retirement plan does not equal total employers, since one employer may participate in multiple retirement funds.
    ${ }^{2}$ Includes State Employees' Death Benefit Fund and Public Safety Officers' Special Death Benefit Fund.
    ${ }^{3}$ Total INPRS, excluding TRF Pre-'96 Account (Pay-As-You-Go).

[^2]:    ${ }^{1}$ A member is eligible for withdrawal of the PERF Hybrid Plan Annuity Savings Account (ASA) benefit once he/she separates from service for 30 days. Certain restrictions may apply if the member is vested in a pension benefit.
    ${ }^{2}$ A member who has at least eight years of PERF Plan service as a county clerk, county auditor, county recorder, county treasurer, county sheriff or county coroner is eligible for normal retirement after reaching age 65. This change in the law applies only to members retiring after June 30, 2002. Public Law 73-2002 also provides that a member serving as state auditor, state treasurer or secretary of state, and whose term commences after the November 5, 2002 election, be vested with at least eight years of creditable service.
    ${ }^{3}$ Actively employed members who have completed at least 20 years of service may apply for retirement benefits at age 70 , remain actively employed in a PERF covered position without a separation from service, and receive monthly benefits.
    ${ }^{4}$ Members can elect at retirement to receive their Annuity Savings Account as a monthly supplement to their defined pension benefit or in a total distribution.
    ${ }^{5}$ Contribution amounts covering unfunded pension liability are not made to member My Choice accounts.

[^3]:    ${ }^{1}$ A member is eligible for withdrawal of the Annuity Savings Account (ASA) benefit once he/she separates from service for 30 days. Certain restrictions may apply if the member is vested in a pension benefit.
    ${ }^{2}$ Actively employed members who have completed at least 20 years of service may apply for retirement benefits at age 70, remain actively employed in a TRF covered position without a separation from service, and receive monthly benefits.
    ${ }^{3}$ Members can elect at retirement to receive their Annuity Savings Account as a monthly supplement to their defined pension benefit or in a total distribution.

[^4]:    ${ }^{1}$ This percentage is increased by 1.66 percent of average annual salary for each completed year of creditable service after 10 years. However, the total percentage may not exceed 75 percent.
    ${ }^{2}$ Average Annual Salary is defined as the average annual salary of an officer during the five years of highest annual salary in the 10 years immediately preceding an officer's retirement date.

[^5]:    ${ }^{1}$ The accompanying notes are an integral part of the financial statements.

[^6]:    ${ }^{1}$ The accompanying notes are an integral part of the financial statements.

[^7]:    ${ }^{1}$ Primarily includes cash and commingled debt funds.

[^8]:    ${ }^{1}$ Total of foreign currency risk, as a percentage of all pooled investments. See Note 2 (H) Pooled Investment Unit Trust Accounting.

[^9]:    ${ }^{1}$ Amounts disclosed above differ from the Asset Allocation Summary shown in the Investment Section. The investment type combines assets according to the security type assigned to each investment by the Custodian. The Asset Allocation Summary groups assets according to the investment objective of each investment manager.
    ${ }^{2}$ Short Term Investments include highly liquid assets, both pooled and non-pooled that are an integral part of the pension investments.

[^10]:    IInformation is not available prior to 2013. Additional years will be added until 10 years of historical data are shown.
    ${ }^{2}$ Excludes ASA lump sum payments to retired members or refunds of accumulated member contributions associated with ASA balances.
    3/ncludes net interfund transfers, except for interfund transfers of ASA balances.
    4Includes $\$ 232$ thousand for 2017, \$317 thousand for 2016 and $\$ 290$ thousand for 2015 of employer service purchases.
    IIncludes ASA lump sum payments to retired members and refunds of employee contributions associated with ASA balances.
    ${ }^{6}$ Includes net interfund transfers.
    ${ }^{7}$ Includes $\$ 1,307$ thousand for 2017, $\$ 1,302$ thousand for 2016 and $\$ 1,213$ thousand for 2015 of contributions by INPRS for its employees. ${ }^{8} 2016$ covered payroll was adjusted to include My Choice and 2013 was adjusted to reflect actual contribution rates.

[^11]:    ${ }^{1}$ Information is not available prior to 2013. Additional years will be added until 10 years of historical data are shown.
    ${ }^{2}$ Excludes ASA lump sum payments to retired members or refunds of accumulated member contributions associated with ASA balances,
    ${ }^{3}$ Includes net interfund transfers, except for interfund transfers of ASA balances.
    ${ }^{4}$ Includes ASA lump sum payments to retired members and refunds of employee contributions associated with ASA balances.
    ${ }^{5}$ Includes net interfund transfers.
    ${ }^{6} 2013$ represents anticipated covered payroll.

[^12]:    ${ }^{1}$ Information is not available prior to 2013. Additional years will be added until 10 years of historical data are shown.
    ${ }^{2}$ Includes refunds of employee contributions.
    ${ }^{3}$ Includes net interfund transfers.
    ${ }^{4} 2013$ represents anticipated covered payroll.

[^13]:    ${ }^{1}$ Information is not available prior to 2013. Additional years will be added until 10 years of historical data are shown.
    ${ }^{2}$ Includes refunds of employee contributions.
    ${ }^{3}$ Includes net interfund transfers.
    ${ }^{4} 2013$ covered payroll was adjusted to reflect actual contribution rates.

[^14]:    ${ }^{1}$ Information is not available prior to 2013. Additional years will be added until 10 years of historical data are shown.
    ${ }^{2}$ Includes refunds of employee contributions.
    ${ }^{3}$ Includes net interfund transfers.
    ${ }^{4} 2013$ represents anticipated covered payroll.

[^15]:    ${ }^{1}$ Contributions are from employers except for TRF Pre-'96, which are predominantly from a nonemployer contributing entity.
    ${ }^{2}$ Actuarially determined contribution and covered payroll were adjusted to reflect actual covered payroll.
    ${ }^{3}$ Contributions exclude specific financed liabilities.
    ${ }^{4}$ For PERF in 2016, contributions exclude one-time payments of $\$ 59.1$ million and $\$ 8.7$ million, and ADC and covered payroll were adjusted to include My Choice.
    ${ }^{5}$ The Actuarially Determined Contribution (ADC) matches the Contributions since the Contributions are the Nonemployer Contributing Entity Appropriation as determined by State Statute.
    ${ }^{6}$ In FY2013, the State of Indiana contributed \$206,796 thousand in additional monies to TRF Pre-'96.
    ${ }^{7}$ Represents only a half year of activity.
    ${ }^{8}$ Fiscal year end as of December 31.

[^16]:    ${ }^{1}$ Contributions are from employers except for TRF Pre-'96, which are predominantly from a nonemployer contributing entity.
    ${ }^{2}$ Actuarially determined contribution and covered payroll were adjusted to reflect actual payroll.
    ${ }^{9}$ Covered payroll represents anticipated covered payroll except for 6/30/2017, 6/30/2016, 6/30/2015 and 6/30/2014, which represents actual covered payroll.
    ${ }^{10}$ In FY2013, the State of Indiana contributed $\$ 90,187$ thousand in additional monies to JRS.
    ${ }^{11}$ The State of Indiana contributed $\$ 70$ thousand in FY2016 and $\$ 14,619$ thousand in FY2013 in additional monies to EG\&C.
    ${ }^{12}$ In FY2013, the State of Indiana contributed \$17,363 thousand in additional monies to PARF.
    ${ }^{13}$ Is a closed plan with no payroll.

[^17]:    ${ }^{1}$ Differs from Note 8 schedule as this table is for funding purposes and Note 8 is for financial reporting purposes. The Actuarially Determined Contributions in a given year are determined based on the actuarial valuation dated two fiscal years prior (i.e., rates effective 7-1-16 are based on the 6-30-15 valuation).
    ${ }^{2}$ The remaining amortization period becomes 30 years, open when a plans reaches $100 \%$ funded status.

[^18]:    Fees paid to investment professionals can be found in the Investment Section.

[^19]:    ${ }^{1}$ 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 Markets are equal to the asset class returns and not the benchmark.

[^20]:    ${ }^{3}$ Cash return based on Citigroup 3-month Treasury Bill (Source: INPRS' custodian, Bank of New York Mellon).
    ${ }^{4}$ INPRS' current target asset allocation was approximated historically using available indices. (Source: Verus, INPRS Board meeting - June 2015). Cash return based on the one-month US Treasury bill return from 1937-2016 (Source: Dimensional Fund Advisors' Matrix Book 2017 of Historical Returns Data).

[^21]:    ${ }^{5}$ From July 2014 - June 2017, INPRS' absolute return portfolio has had a 0.40 correlation to equities (MSCI ACWI Index) and ( 0.38 ) correlation to bonds (Barclays Global Aggregate Index).
    ${ }^{6}$ Organization of the Petroleum Exporting Countries
    ${ }^{7}$ Headline inflation slowed from 2.7 percent in February to 1.6 percent in May; while, Core inflation slowed from 2.2 to 1.7 percent (Source: Bureau of Labor Statistics, June 2016).

[^22]:    ${ }^{8}$ A typical pension fund portfolio has had a 30 percent or greater drawdown in 45 percent of rolling 10-year periods since 1925 (Source: Verus, INPRS Board Meeting - Feb. 2015).

[^23]:    Note: Cash + Cash Overlay is not represented in the above chart as INPRS does not have a target allocation to cash as an asset class.

[^24]:    ${ }^{1}$ Based on calculations made by the System's custodian, Bank of New York Mellon. Time-weighted rates of return have been reported for fiscal year 2017. ${ }^{2}$ Net of fees.
    ${ }^{3}$ Benchmark represents the sub-asset class target allocation within the fixed income portfolio over time.
    ${ }^{4}$ Global Inflation $70 / 30$ is a 70 percent weight to Global Inflation-Linked Bonds (including U.S.) and a 30 percent weight to U.S. Inflation-Linked Bonds.
    ${ }^{5} 50$ percent Bloomberg Commodity Index / 50 percent 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.
    ${ }^{6}$ Weighted average of INPRS' exposure to representative HFRI sub-strategy indices.
    ${ }^{7} 60$ percent MSCI ACWI IMI Index (Equities) / 40 percent Barclays Global Aggregate Bond Index (Bonds).
    ${ }^{8}$ 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.

[^25]:    ${ }^{1}$ Investment performance is based on calculations made by the system's custodian, BNY Mellon, and are time weighted rates of return.

[^26]:    ${ }^{1}$ 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' 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, Bank of New York Mellon. The 1-year, 3-year, and 5-year performance returns are time-weighted rates of return based on the market rates of return.
    ${ }^{4}$ 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.

[^27]:    ${ }^{1}$ A complete list of portfolio holdings is available upon request.

[^28]:    PricewaterhouseCoopers LLP, One North Wacker, Chicago, IL 60606
    T: (312) 298-2000, F: (312) 298-2001, www.pwc.com/

[^29]:    ${ }^{1}$ Sum of individual employers by retirement plan does not equal total employers, since one (1) employer may participate in multiple retirement funds. ${ }^{2}$ Prior to 2014 participating employers for TRF were not split between TRF Pre-'96 and TRF '96.
    ${ }^{3}$ The Total was adjusted to treat the State and its component units as one employer.

[^30]:    ${ }^{1}$ Age-based rates apply only if 10 or more years of service.

[^31]:    ${ }^{1}$ Age-based rates apply only if 10 or more years of service.

[^32]:    ${ }^{1}$ As of December 31 instead of June 30.

[^33]:    ${ }^{1}$ INPRS intends to make this schedule a 10-year schedule over time. Inactive Non-Vested Members With Balance data was not available for select funds prior to fiscal year 2010.

[^34]:    ${ }^{1}$ INPRS intends to make this schedule a 10-year schedule over time.
    ${ }^{2}$ 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).
    ${ }^{3}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year.
    ${ }^{4}$ This represents those retirees who elected to receive their ASA as a supplemental monthly payment in addition to the monthly Defined Benefit payment.

[^35]:    ${ }^{1}$ June 30, 2013 was the first year to split the Teachers' Retirement Fund (TRF) into two, TRF Pre-'96 and TRF '96 Accounts. June 30, 2008 "Top 10" Employers information is

[^36]:    ${ }^{1}$ June 30, 2013 was the first year to split the Teachers' Retirement Fund (TRF) into two, TRF Pre-1996 and TRF 1996 Accounts. June 30, 2008 "Top 10" Employers information is only available for Total TRF.

