## 2016

 For the Fiscal Year Ended June 30, 2016

INDIANA PUBLIC RETIREMENT SYSTEM


## COMPREHENSIVE ANNUAL FINANCIAL REPORT




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

## 2016 <br> COMPREHENSIVE ANNUAL FINANCIAL REPORT

For the Fiscal Year Ended June 30, 2016

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

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# Introductory Section 

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## Letter of Transmittal



November 30, 2016

Dear Board Members:

It is with pleasure that we present the Comprehensive Annual Financial Report (CAFR) of the Indiana Public Retirement System (INPRS) for the year ended June 30, 2016.

## About the System

As of June 30, 2016, INPRS was responsible for the investment of approximately $\$ 29.9$ billion in net assets. For the year, INPRS paid approximately $\$ 2.4$ billion in retirement, disability and survivor benefits to 145,522 benefit recipients. INPRS received contributions of approximately $\$ 2.2$ billion from 215,449 members actively employed in public service and 1,224 participating employers statewide, including a nonemployer contributing entity (State of Indiana). INPRS also maintains accounts for 101,974 inactive members for a total membership of 462,945 . Details about INPRS' members and employers can be found in the Statistical Section of this report.

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

```
■ Public Employees' Retirement Fund (PERF)
■ Teachers' Retirement Fund Pre-1996 Account (TRF Pre-1996)
- Teachers' Retirement Fund 1996 Account (TRF 1996)
■ 1977 Police Officers' and Firefighters' Pension and Disability Fund (1977 Fund)
\square Judges' Retirement System (JRS)
- State Excise Police, Gaming Agent, Gaming Control Officer and Conservation Enforcement
    Officers' Retirement Plan (EG&C Plan)
- Prosecuting Attorneys' Retirement Fund (PARF)
\square Legislators' Defined Benefit Plan (LEDB Plan)
■ Legislators' Defined Contribution Plan (LEDC Plan)
```

INPRS also 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' Pension and Disability Fund. However, INPRS makes disbursements from funds provided by the General Assembly to the local police and firefighter units throughout the state that are still obliged to pay benefits under those former plans.

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 the then existing defined benefit for PERF and TRF members, making these plans amongst the first in the nation to adopt a hybrid plan design. With employers paying the necessary contribution to fund the defined benefit, employees have since been required to make a contribution into a 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 or they can convert their balance into an annuitized amount that is added to their defined benefit. 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 Pre-1996 Account) to newly hired members and created a new account named the 1996 Account. All teachers hired after June 30, 1995, are members of the 1996 Account. The 1996 Account was established to be actuarially pre-funded by 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 TRF's unfunded liability of the Pre-1996 Account. The PSF was initially funded from $\$ 425$ million of employer reserves from the Pre-1996 Account and, since that time, has received contributions from the Indiana State General Fund, contributions from the Indiana State Lottery and interest earned from the investment of PSF assets. As of June 30, 2016, the PSF had a balance of $\$ 2.7$ billion.

A public referendum held in 1996 approved an amendment to the Indiana Constitution to allow 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 funds' 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 2016

Major changes passed in fiscal year 2015 that become effective in fiscal year 2016:

- 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 received a COLA increase.
■ Legislation allows emergency medical service providers access to a special death benefit. Their death must be a direct result of carrying out their duties as a provider. This applies only to deaths after June 30, 2015. The employer must purchase coverage for each EMS provider at $\$ 100$ per year.
- Legislation provides PERF employers the choice to offer the PERF ASA Only option for retirement. They can offer the PERF ASA Only plan in addition to or instead of the PERF Hybrid plan. PERF employers are not able to offer a retirement benefit other than PERF. Pre-existing defined contribution plans are exempt. In addition, if an employer
in the Public Employees' Retirement Fund (PERF) stops enrolling new positions in the fund, they must pay their share of unfunded liabilities.

Major changes passed in fiscal year 2016 that become effective in 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 allows the ASA Only 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 ASA Only plan when the employer gives its new hires the option to choose between the PERF Hybrid plan or the ASA Only plan, and allows members that retire from the PERF Hybrid plan to begin or continue receiving contributions into their ASA Only plan.
- Legislation allows 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 eliminates 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 replaces the Guaranteed Fund with a Stable Value Fund on January 1, 2017 and also defaults all existing funds in the Guaranteed Fund to a Stable Value Fund by December 31, 2016.
- Legislation requires the public retirement system to divest from businesses that engage in action or inaction to boycott, divest from, or sanction Israel.


## 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.

INPRS' unmodified opinion, as expressed in the independent auditor's report regarding the fair presentation of the financial statements, can be viewed 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

Letter of Transmittal, continued

Investment Activities and the CIO Report are located in the Investment Section of this report. In aggregate, fiscal year 2016 contributions from members, employers, and nonemployer contributing entities to all of the INPRS administered plans were 108.0 percent of the Actuarial Determined Contribution.

## Investments

In fiscal year 2016, INPRS Consolidated Defined Benefit Assets time-weighted rate of return was 1.2 percent net of fees versus a target asset allocation benchmark of 1.4 percent. While the investment team added value versus the benchmark due to tactical asset allocation decisions, it was outweighed by underperformance from manager selection within the public asset classes. The three-year return rate of 4.8 percent, the five-year rate of return of 4.2 percent and the 10-year rate of return of 3.8 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 can be found 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-1996 and TRF 1996 during 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 net assets by the actuarial accrued liability. This ratio provides an indication of the funding status of the plan, and 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 2016 is 86.1 percent compared to 86.0 percent in FY 2015. The TRF Pre1996 pay-as-you-go account, designed in 1921 for a zero funded status, actually has a funded status of 29.7 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.

Details of the actuarial analysis can be found in the Actuarial Section of this report and the supporting statistics can be found in the Statistical Section. In the Statement of Changes in Fiduciary Net Position, contained in the Financial Section of this report, the accumulated balance of funds derived from the excess of additions over deductions is referred to as the net position restricted for pension benefits. The actuarial accrued liability is not disclosed in the Statement of Fiduciary Net Position, but is disclosed in the Summary of INPRS Funded Status in the Actuarial Section.

Letter of Transmittal, continued

## Accomplishments in 2016

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 FY16 can be found on the INPRS website, www.inprs.in.gov. INPRS continues to leverage quality management tools to improve member and employer experiences. During FY16, INPRS improved call center performance, website satisfaction and the member use of online tools.

## 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 gratitude to Indiana Governor Mike Pence, 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, 2015


Executive Director/CEO

## 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

Administrative Organization ${ }^{1}$
Board of Trustees


Executive Team


Steve Russo Executive Director


## VISION:

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

## MISSION:

Efficiently collect necessary contributions, manage assets and pay earned benefits.

## PRINCIPLES:

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

STEWARDSHIP. We prudently invest assets held in trust for current and future retirees. We wisely manage expenses to maximize value to our stakeholders. We rigorously identify, measure, and manage risk across the organization.

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.

Mike Pence<br>Governor

## Eric Holcomb

 Lt. Governor
## Executive Team ${ }^{1}$

## Steve Russo

Executive Director
Steven Barley
Chief Operations Officer
and Deputy Director
Donna Brown
Chief Financial Officer

## Scott Davis

Chief Investment Officer

## Tony Green

Chief Legal and Compliance Officer

## Donna Grotz

Director of Strategic Initiatives
and Administration

## Mike Hineline

Chief Information and
Technology Officer

## Jeffrey Hutson

Chief Communication Officer

## Teresa Snedigar

Director of Internal Audit

## 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, 2016

- PERF = Public Employees' Retirement Fund
- TRF Pre-1996 = Teachers' Retirement Fund Pre-1996 Account
- TRF 1996 = Teachers' Retirement Fund 1996 Account
- 1977 Fund $=1977$ Police Officers' and Firefighters' Pension and Disability Fund
- JRS = Judges' Retirement System
- EG\&C Plan = State Excise Police, Gaming Agent, Gaming Control Officer, and Conservation Enforcement Officers' Retirement Plan
- PARF = Prosecuting Attorneys' Retirement Fund
- LEDB Plan = Legislators' Defined Benefit Plan
- LEDC Plan = Legislators' Defined Contribution Plan
(dollars in millions)

| Plan | Number of Employers ${ }^{1}$ | Total Number of Members | Fiduciary Net Position |  | Actuarial Valuation |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | ctuarial Value of Assets (AVA) |  | tuarial <br> crued ability AAL) |  | funded <br> AAL <br> JAAL) | Funded Status (AVA/AAL) |
| PERF | 1,177 | 294,280 | \$ | 13,870 | \$ | 14,553 | \$ | 18,409 | \$ | 3,856 | 79.1 \% |
| TRF Pre-1996 | 337 | 70,415 |  | 4,788 |  | 5,009 |  | 16,840 |  | 11,831 | 29.7 |
| TRF 1996 | 362 | 77,106 |  | 5,611 |  | 5,866 |  | 6,392 |  | 526 | 91.8 |
| 1977 Fund | 165 | 18,629 |  | 4,951 |  | 5,256 |  | 5,040 |  | (216) | 104.3 |
| JRS | 1 | 851 |  | 442 |  | 469 |  | 501 |  | 32 | 93.7 |
| EG\&C Plan | 1 | 769 |  | 111 |  | 119 |  | 139 |  | 20 | 85.3 |
| PARF | 1 | 582 |  | 53 |  | 56 |  | 85 |  | 29 | 66.4 |
| LEDB Plan | 1 | 97 |  | 3 |  | 3 |  | 4 |  | 1 | 80.7 |
| LEDC Plan | 1 | 216 |  | 28 |  | - |  | - |  | - | - |
| Other ${ }^{2}$ | - | - |  | 15 |  | - |  | - |  | - | - |
| Total | 1,224 | 462,945 | \$ | 29,872 | \$ | 31,331 | \$ | 47,410 | \$ | 16,079 | 86.1 \% ${ }^{3}$ |

[^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 3 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.

## ASA Only Plan

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

## Eligibility for Plan Payment

- Members are fully vested in the 3 percent employee share (Annuity Savings Account) upon hire
- The member's share of the employer contribution is based on full years of participation:

$$
\begin{aligned}
& 1 \text { year }=20 \text { percent } \\
& 2 \text { years }=40 \text { percent } \\
& 3 \text { years }=60 \text { percent } \\
& 4 \text { years }=80 \text { percent } \\
& 5 \text { years }=100 \text { percent }
\end{aligned}
$$

## Contribution Rates

Mandatory 3 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 $85^{\circ}$ ).
- 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 3 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' Pension and Disability 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 6 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 3 percent increase.
${ }^{1}$ This percentage is increased by 1 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 6 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 |
| :---: | :---: | :---: | :---: |
| 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\% |
| 15 | 53\% |  |  |

## 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.

# State Excise Police, Gaming Agent, Gaming Control Officer \& Conservation Enforcement Officers' Retirement Plan 

Fund Highlights, continued

State Excise Police, Gaming Agent, Gaming Control Officer, and Conservation Enforcement Officers' Retirement Plan 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 1 st day of the month following their 65 th birthday or 1 st 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 4 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 6 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 6 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 3 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 |  |

## Cost of Living Allowance (COLA)

No cost of living allowance is provided.

Fund Highlights, continued

The Legislators'Retirement System Defined Benefit Plan (LEDB plan) 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 Plan (LEDC plan).

## 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 LEDB plan employer contributions are actuarially determined State General Fund appropriations. There are no member contributions for the defined benefit plan.
- For the LEDC plan, 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 5 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



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Independent Auditor's Report

## 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, 2016, and the related Statement of Changes in 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, 2016, and the changes in fiduciary net position for the year then ended in conformity with accounting principles generally accepted in the United States of America.

## Other Matters

Prior-Year Comparative Information:
We have previously audited the System's 2015 financial statements, and we expressed an unmodified opinion in our report dated December 4, 2015. In our opinion, the summarized comparative information presented herein as of and for the year ended June 30, 2015, 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 37 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 94 through 106 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, 2016 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, 2016 (pages 107 through 110) 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 supplementary information has been subjected to the auditing procedures applied in the audit of the financial statements for the year ended June 30, 2016 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 supplementary information is fairly stated in all material respects, in relation to the financial statements as a whole as of and for the year ended June 30, 2016.

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, 2015 (not presented herein), and have issued our report thereon dated December 4, 2015, 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, 2015 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 2015 financial statements. The supplementary information has been subjected to the auditing procedures applied in the audit of the 2015 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, 2015.

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.

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Management's Discussion and Analysis

Management's Discussion and Analysis (MD\&A) of the Indiana Public Retirement System (INPRS) provides a narrative summary of INPRS financial position and performance for fiscal year ended June 30, 2016, including highlights and comparative data. The MD\&A is presented as required supplementary information to the financial statements of the INPRS Comprehensive Annual Financial Report (CAFR) and should be read in conjunction with the Letter of Transmittal included in the Introductory Section, and the Financial Statements, the Notes to the Financial Statements, Required Supplementary Information, and the Other Supplementary Schedules presented in the Financial Section.

INPRS is an independent instrumentality of the State of Indiana, administering nine (9) pension trust funds including eight (8) Defined Benefit retirement plans and one (1) Defined Contribution retirement plan, two (2) other postemployment benefit funds (Death Benefits), and one (1) agency fund. The following retirement plans and non-retirement funds are included in the INPRS financial statements. In this regard, refer to the Notes to the Financial Statements for descriptions of these retirement plans and non-retirement funds.

## Defined Benefit Retirement Plans:

- Public Employees' Retirement Fund (PERF)
- Teachers' Retirement Fund Pre-1996 Account (TRF Pre-1996)
- Teachers' Retirement Fund 1996 Account (TRF 1996)
- 1977 Police Officers' and Firefighters' Pension and Disability Fund (1977 Fund)
- Judges' Retirement System (JRS)
- State Excise Police, Gaming Agent, Gaming Control Officer, and Conservation Enforcement Officers' Retirement Plan (EG\&C Plan)
- Prosecuting Attorneys' Retirement Fund (PARF)
- Legislators' Retirement System - Legislators' Defined Benefit Plan (LEDB Plan)


## Defined Contribution Retirement Plan:

- Legislators' Retirement System - Legislators' Defined Contribution Plan (LEDC Plan)


## Other Postemployment Benefit Funds:

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


## Agency Fund:

Pension Relief Fund (PR Fund)

## Financial Highlights

- Total fiduciary net position of INPRS was $\$ 29,872$ million as of June 30,2016 , which is restricted for future pension and death benefit payments.
- Total fiduciary net position of INPRS increased by $\$ 11$ million or 0.04 percent during fiscal year 2016. The increase is primarily driven by employer and nonemployer contributing entity contributions of $\$ 2,234$ million, net investment income of $\$ 325$ million, and other additions of $\$ 17$ million partially offset by $\$ 2,565$ million in benefits and expenses.

Management's Discussion and Analysis, continued

- INPRS contributions primarily from employers, members, and nonemployer contributing entity increased to $\$ 2,234$ million during fiscal year 2016, or by $\$ 115$ million ( 5.4 percent), from contributions of $\$ 2,119$ million during fiscal year 2015. The increase is primarily due to an increase in contributions from the nonemployer contributing entity and additional contributions required from certain employers for the unfunded actuarial liability existing at the time the employer made an election to limit participation in their pension plan.
- INPRS' fiscal year 2016 time-weighted rate of return was 1.2 percent or $\$ 325$ million in net investment income, compared to a time-weighted rate of return of 0.4 percent or $\$ 105$ million in net investment income for fiscal year 2015. The money-weighted rate of return for fiscal year 2016 was 1.1 percent compared to a money-weighted rate of return in fiscal year 2015 of 0.4 percent.
- INPRS paid $\$ 2,510$ million in pension and disability benefits, special death benefits, and distributions of contributions and interest during fiscal year 2016. This represented a decrease of $\$ 10$ million, or 0.4 percent, from the $\$ 2,520$ million paid during fiscal year 2015.
- INPRS membership was 462,945 as of June 30, 2016. There were 215,449 active members, 145,522 benefit recipients, 37,525 inactive vested members, and 64,449 inactive non-vested members.
- As of June 30, 2016, the date of the most recent actuarial valuation, the aggregate INPRS (excluding the TRF Pre-1996 Pay-As-You-Go plan) market value of assets funded ratio was 81.9 percent, a decrease of 2.6 percentage points from prior year. The decrease from 84.5 percent market value of assets for fiscal year 2015 was mainly due to assets returns that were less than assumed.


## Overview of the Financial Statements

The Financial Section is comprised of four (4) components: (1) Financial Statements, (2) Notes to the Financial Statements, (3) Required Supplementary Information, and (4) Other Supplementary Schedules. The information available in each of these sections is briefly summarized as follows:

## - Financial Statements

The Statement of Fiduciary Net Position is a point-in-time snapshot of the INPRS assets and liabilities as of fiscal year end June 30, 2016 and 2015. It reports the fiduciary net position (assets less liabilities equals fiduciary net position) restricted for pension and death benefits. This statement reflects INPRS investments, at fair value, along with cash, receivables, and other assets and liabilities as of June 30, 2016 and 2015.

The Statement of Changes in Fiduciary Net Position reflects the effect of financial transactions that occurred during fiscal year 2016, where additions less deductions equal net increase (or net decrease) in fiduciary net position. Additions come primarily from contributions by employers, members, and the nonemployer contributing entity, which include State appropriations and revenues from lottery proceeds and taxes, as well as net investment income. Deductions are pension, disability and death benefit disbursements, administrative expenses, and other deductions. This increase (or decrease) in fiduciary net position reflects the change in the value of Fiduciary Net Position that occurred between June 30, 2016 and 2015.

Management's Discussion and Analysis, continued

## - 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 full understanding of the data provided in the INPRS financial statements.

Note 1. - provides a general description of the retirement plans and non-retirement funds administered by INPRS. Information regarding membership, member, employer and nonemployer contributing entity contributions, retirement benefits, and disability and survivor benefits for each of the retirement plans is also provided.

Note 2. - provides a summary of significant accounting policies, including the basis of accounting, investment accounting policies, management's use of estimates, and other significant accounting policies.

Note 3. - provides information on cash and investments.
Note 4. - provides information on derivative financial instruments.
Note 5. - provides information on long-term commitments for alternative investments.
Note 6. - provides information on risk management.
Note 7. - provides information on contingent liabilities.
Note 8. - provides information on the net pension liability, funded status and other actuarial information for each of the defined benefit retirement plans.

Note 9. - provides information on events subsequent to fiscal year-end 2016.

## Required Supplementary Information

As a result of the long-term nature of public defined benefit pension plans, financial statements for the past fiscal year alone cannot provide sufficient information to properly reflect the plan fiduciary net position as a percent of the total pension liability of the plans. Therefore, in addition to the basic financial statements, three (3) required schedules of historical trend information related to the defined benefit plans are presented as Required Supplementary Information (RSI) in the Financial Section. The three (3) RSI schedules consist of the Schedule of Changes in Net Pension Liability and Net Pension Liability, the Schedule of Contributions, and the Schedule of Investment Returns. These schedules give historical trend information that 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.

- Other Supplementary Schedules

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

Management's Discussion and Analysis, continued

Financial Analysis

## Statement of Fiduciary Net Position

As shown in the table below, the total fiduciary net position for INPRS was $\$ 29,872$ million as of June 30,2016 , which represents an increase of $\$ 11$ million or 0.04 percent, compared to total fiduciary net position of $\$ 29,861$ million as of June 30, 2015.

Fiduciary Net Position

| (dollars in millions) | June 30, 2016 |  | June 30, 2015 |  | Increase / <br> (Decrease) |  | Percentage Change |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assets |  |  |  |  |  |  |  |
| Cash | \$ | 7 | \$ | 7 | \$ | - | - \% |
| Receivables |  | 6,539 |  | 6,351 |  | 188 | 3.0 |
| Investments |  | 30,872 |  | 31,292 |  | (420) | (1.3) |
| Net Capital and Other Assets |  | 4 |  | 8 |  | (4) | (50.0) |
| Total Assets |  | 37,422 |  | 37,658 |  | (236) | (0.6) |
| Liabilities |  |  |  |  |  |  |  |
| Investment Liabilities |  | 7,367 |  | 7,613 |  | (246) | (3.2) |
| All Other Liabilities |  | 183 |  | 184 |  | (1) | (0.5) |
| Total Liabilities |  | 7,550 |  | 7,797 |  | (247) | (3.2) |
| Total Fiduciary Net Position | \$ | 29,872 | \$ | 29,861 | \$ | 11 | - |

Total assets of INPRS were $\$ 37,422$ million as of June 30,2016 , compared to $\$ 37,658$ million as of June 30,2015 , which represents a decrease in total assets of $\$ 236$ million, or 0.6 percent. The primary reasons for this decrease are as follows:

- Receivables increased by $\$ 188$ million or 3.0 percent, primarily due to an increase in the foreign currency futures contracts receivable of $\$ 172$ million. The majority of this amount was created by current hedging positions, which are used to reduce net foreign currency exposure. Foreign currency receivable contracts are overlapped with payable contracts in order to mitigate currency volatility when the original contract expires, which may result in a significant gross foreign currency position as of the Statement of Fiduciary Net Position date.

■ Investments decreased by $\$ 420$ million or 1.3 percent, driven primarily by securities lending collateral decreasing by $\$ 856$ million, which was partially offset by an increase in net investment income of $\$ 220$ million. The decrease in securities lending collateral of $\$ 856$ million or 69.3 percent compared to the prior fiscal year is due to policy changes INPRS implemented in fiscal year 2016, which eliminated the credit risk of the underlying cash collateral provided by the borrowers of the securities lending program. The policy change restricts cash collateral to overnight investments only, which are now eligible for indemnification by BNY Mellon; therefore, the credit risk is transferred from INPRS to BNY Mellon. As a result of only allowing overnight investments, the pool of borrowers who participate in the securities lending program has been reduced. The overall impact of this change on net investment income is minimal for fiscal year 2016.

- Net Capital and Other Assets decreased by $\$ 4$ million or 50.0 percent primarily due to the sale of the land and building at 143 W . Market Street, Indianapolis, IN and lower amortization due to fully amortized software costs related to certain modernization projects.

Management's Discussion and Analysis, continued

Total liabilities of INPRS were $\$ 7,550$ million as of June 30,2016 , compared to $\$ 7,797$ million as of June 30,2015 , which represents a decrease in total liabilities of $\$ 247$ million, or 3.2 percent. The primary reasons for the decrease are as follows:

■ Investment Liabilities decreased by $\$ 246$ million or 3.2 percent driven primarily by a decrease in securities lending obligations of $\$ 856$ million, which is partially offset by an increase in investment trade payables of $\$ 399$ million. The decrease in securities lending obligations is consistent with the decrease in securities lending collateral as discussed in the Financial Analysis - Investments section above.

- All Other Liabilities decreased by $\$ 1$ million or 0.5 percent, primarily due to a decrease in Due to Other Governmental Units related to the Pension Relief Fund.

A summary of fiduciary net position by fund compared to the prior fiscal year is as follows:

Fiduciary Net Position by Fund

| (dollars in millions) | June 30, 2016 |  | June 30, 2015 |  | Increase / <br> (Decrease) |  | Percentage Change |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PERF | \$ | 13,871 | \$ | 13,908 | \$ | (37) | (0.3) \% |
| TRF Pre-1996 |  | 4,788 |  | 5,100 |  | (312) | (6.1) |
| TRF 1996 |  | 5,611 |  | 5,379 |  | 232 | 4.3 |
| 1977 Fund |  | 4,951 |  | 4,828 |  | 123 | 2.5 |
| JRS |  | 442 |  | 437 |  | 5 | 1.1 |
| EG\&C Plan |  | 111 |  | 110 |  | 1 | 0.9 |
| PARF |  | 53 |  | 54 |  | (1) | (1.9) |
| LEDB Plan |  | 3 |  | 3 |  | - | - |
| LEDC Plan |  | 28 |  | 28 |  | - | - |
| SE Death Benefit Fund |  | 8 |  | 8 |  | - | - |
| PSO Special Death Benefit Fund |  | 6 |  | 6 |  | - | - |
| Total Fiduciary Net Position | \$ | 29,872 | \$ | 29,861 | \$ | 11 | - |

## Liquidity

Liquidity is critically important because the INPRS' defined benefit plan has a fiduciary responsibility to disburse monthly benefit payments. Liquidity needs are met through employer, member, nonemployer contributing entity, and other contributions, earnings from investments, and the well diversified portfolio of INPRS. 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 is able to tactically react to market opportunities and 3) liquidity enables INPRS to invest in long-term assets (private equity, real estate).

As of June 30, 2016, INPRS estimates 30 percent of the Consolidated Defined Benefit assets could be liquidated in one week, 68 percent of the assets could be liquidated within one month, and 78 percent of the portfolio could be liquidated within six months without a significant market impact.

Management's Discussion and Analysis, continued

## Statement of Changes in Fiduciary Net Position

As shown in the table below, the total fiduciary net position for INPRS increased by $\$ 11$ million or 0.04 percent, for fiscal year 2016, compared to a total fiduciary net position decrease of $\$ 336$ million, or 1.1 percent as of June 30,2015 . A summary of changes in fiduciary net position during the fiscal years ended June 30, 2016 and June 30, 2015 is presented below:

| (dollars in millions) | June 30, 2016 |  | June 30, 2015 |  | Increase / <br> (Decrease) |  | Percentage Change |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Additions |  |  |  |  |  |  |  |
| Member Contributions | \$ | 334 | \$ | 349 | \$ | (15) | (4.3) \% |
| Employer Contributions |  | 1,012 |  | 924 |  | 88 | 9.5 |
| Nonemployer Contributing Entity |  | 888 |  | 846 |  | 42 | 5.0 |
| Net Investment Income |  | 325 |  | 105 |  | 220 | 209.5 |
| Other Additions |  | 17 |  | 17 |  | - | - |
| Total Additions |  | 2,576 |  | 2,241 |  | 335 | 14.9 |
| Deductions |  |  |  |  |  |  |  |
| Benefits - Pension, Disability, Death |  | 2,430 |  | 2,431 |  | (1) | - |
| Distributions of Contributions and Interest |  | 80 |  | 89 |  | (9) | (10.1) |
| Administrative Expenses |  | 39 |  | 40 |  | (1) | (2.5) |
| Other Deductions |  | 16 |  | 17 |  | (1) | (5.9) |
| Total Deductions |  | 2,565 |  | 2,577 |  | (12) | (0.5) |
| Net Increase / (Decrease) in |  |  |  |  |  |  |  |
| Fiduciary Net Position | \$ | 11 | \$ | (336) | \$ | 347 | (103.3) |

## Additions

Additions to the fiduciary net position of INPRS needed to finance retirement benefits are accumulated primarily through contributions and investment income. Total additions for INPRS were $\$ 2,576$ million for fiscal year 2016, compared to $\$ 2,241$ million for fiscal year 2015, which represents an increase in total additions of $\$ 335$ million, or 14.9 percent. The primary reasons for the increase are as follows:

- Contributions increased by $\$ 115$ million or 5.4 percent. The increase is primarily due to an increase in contributions from the nonemployer contributing entity and additional contributions required from certain employers for the unfunded actuarial liability existing at the time the employer made an election to limit participation in their pension plan.
- Net Investment Income increased by $\$ 220$ million or 209.5 percent, driven by a 1.2 percent time-weighted rate of return in fiscal year 2016, compared to a 0.4 percent time-weighted rate of return for fiscal year 2015. The money-weighted rate of return for fiscal year 2016 was 1.1 percent compared to fiscal year 2015 rate of return of 0.4 percent.

Management's Discussion and Analysis, continued

## Deductions

Benefit payments, distributions of contributions and interest to members who terminate employment, and administrative expenses primarily comprise the INPRS expenses or deductions from fiduciary net position. Total deductions for INPRS were $\$ 2,565$ million for fiscal year 2016, compared to $\$ 2,577$ million for fiscal year 2015, which represents a decrease in total deductions of $\$ 12$ million, or 0.5 percent. The primary reason for the decrease is as follows:

- Distribution of Contributions and Interest decreased by $\$ 9$ million or 10.1 percent as a result of fewer inactive members withdrawing their funds.


## Consolidated Defined Benefit Asset Allocation and Rate of Return on Investments

The INPRS Board of Trustees adopted a new Investment Policy Statement (IPS) effective October 23, 2015. The asset allocation outlined within the IPS is for the Consolidated Defined Benefit portfolio. A substantial amount of the investments for the retirement plans administered by INPRS are pooled within the Consolidated Defined Benefit portfolio. The following table is a comparison of INPRS' Consolidated Defined Benefit target asset allocation as compared to INPRS current investment allocations as of June 30, 2016 and the actual allocations as of June 30, 2015.

## Consolidated Defined Benefit Asset Allocation

| Asset Class | June 30, 2016 Actual | June 30, 2016 Target | June 30, 2015 Actual | Allowable Range for Investments ${ }^{1}$ |
| :---: | :---: | :---: | :---: | :---: |
| Public Equity | 22.3 \% | 22.0 \% | 22.4 \% | 19.5 to 24.5 \% |
| Private Equity | 13.3 | 10.0 | 12.9 | 7.0 to 13.0 |
| Fixed Income - Ex Inflation-Linked ${ }^{2}$ | 21.1 | 24.0 | 21.6 | 21.0 to 27.0 |
| Fixed Income - Inflation-Linked | 7.4 | 7.0 | 10.0 | 4.0 to 10.0 |
| Commodities | 7.4 | 8.0 | 7.5 | 6.0 to 10.0 |
| Real Estate | 6.6 | 7.0 | 6.2 | 3.5 to 10.5 |
| Absolute Return | 9.2 | 10.0 | 9.4 | 6.0 to 14.0 |
| Risk Parity | 11.0 | 12.0 | 10.0 | 7.0 to 17.0 |
| Cash + Cash Overlay ${ }^{3}$ | 1.7 | N/A | N/A |  |
| Total | 100.0 \% | 100.0 \% | 100.0 \% |  |

The Consolidated Defined Benefit Assets time-weighted rate of return on investments was 1.2 percent for fiscal year 2016, compared to the 6.75 percent actuarial-assumed long-term rate of return. The fiscal year 2016 time-weighted rate of return was 1.2 percentage points higher than fiscal year 2015 time-weighted rate of return of 0.0 percent. A brief summary of the rate of return for each asset class for fiscal year 2016, compared to the respective benchmark for each asset class is provided below; however, the investment section of the Comprehensive Annual Financial Report (CAFR) provides additional information regarding INPRS investments.

- 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 (4.3) percent for fiscal year 2016, which underperformed the MSCI All Country World IMI Index by 0.4 percent over the same time period.

Management's Discussion and Analysis, continued

- Private Equity 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 portfolio had an investment rate of return of 6.8 percent for fiscal year 2016, which outperformed the Russell 3000 plus 300 basis point custom index by 1.7 percent over the same time 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 8.9 percent for fiscal year 2016, which underperformed the custom index which is a representation of the sub-asset class target allocations within the fixed income portfolio by 0.4 percent over the same time period.
- Fixed Income - Inflation-Linked or Treasury Inflation Protected Securities (TIPS) seeks to generate long-term risk-adjusted returns through investments in inflation-linked securities as well as provide protection against unanticipated inflation. The fixed income - inflation-linked portfolio had an investment rate of return of 5.4 percent for fiscal year 2016, which outperformed the Global Inflation-Linked 70/30 custom bond index by 0.1 percent over the same time 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 (19.6) percent for fiscal year, which underperformed custom commodities index of the 50/50 blend of the Bloomberg Commodity Index and the Goldman Sachs Commodity Index by 1.2 percent over the same time 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 8.1 percent for fiscal year 2016, which underperformed the NCREIF Open End Diversified Core Equity Index by 4.5 percent over the same time 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 (2.9) percent for fiscal year 2016, which underperformed the HFRI custom benchmark by 1.5 percent over the same time 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 1.7 percent for fiscal year 2016, which outperformed the custom index of a 60/40 blend of the MSCI ACWI IMI Index and the Barclays Global Aggregate Bond Index by 0.9 percent over the same time period.


## Actuarial Valuations and Funding 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 (AVA) is no longer to be used for financial reporting purposes. The Market Value of Assets (MVA) is required for financial reporting purposes; however, the Actuarial Value of Assets (AVA) will continue to be used for funding purposes as presented in the Actuarial Section.

Management's Discussion and Analysis, continued

The market value funded ratios of the defined benefit retirement plans administered by INPRS as of the latest actuarial valuations were as follows:

## Historical Trends

| Pre-Funded Defined Benefit Pension Trust Funds | June 30, 2016 | June 30, 2015 |
| :---: | :---: | :---: |
| PERF | 75.3 \% | 77.3 \% |
| TRF 1996 Account | 87.8 | 91.1 |
| 1977 Fund | 98.2 | 103.2 |
| JRS | 88.2 | 93.3 |
| EG\&C Plan | 80.1 | 82.9 |
| PARF | 62.1 | 68.6 |
| LEDB Plan | 72.7 | 73.4 |
| Pay-As-You-Go Defined Benefit Pension Trust Fund |  |  |
| TRF Pre-1996 Account | 28.4 | 30.0 |

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


## Indiana Public Retirement System

Statement of Fiduciary Net Position
As of June 30, 2016 (with Comparative Totals as of June 30, 2015) ${ }^{1}$

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

## Indiana Public Retirement System

Statement of Fiduciary Net Position, continued
As of June 30, 2016 (with Comparative Totals as of June 30, 2015) ${ }^{1}$


[^5]
## Indiana Public Retirement System

Statement of Changes in Fiduciary Net Position
For the Year Ended June 30, 2016 (with Comparative Totals for the Year Ended June 30, 2015) ${ }^{1}$

| (dollars in thousands) | Pension Trust Funds |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Public Employees' Retirement Fund |  | Teachers' Retirement Fund Pre-1996 Account |  | Teachers' Retirement Fund 1996 Account |  | 1977 Police Officers' and Firefighters' Pension and Disability Fund |  |  | dges' <br> rement <br> stem | EG\&C Plan |  | Prosecuting Attorneys' Retirement Fund |  |
| Additions |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Contributions: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Member | \$ | 161,905 | \$ | 31,529 | \$ | 88,430 | \$ | 44,918 | \$ | 3,239 | \$ | 1,016 | \$ | 1,279 |
| Employer |  | 615,773 |  | 5,048 |  | 215,626 |  | 151,674 |  | 16,946 |  | 5,367 |  | 1,440 |
| Nonemployer Contributing Entity |  | - |  | 887,500 |  | - |  | - |  | - |  | - |  |  |
| Total Contributions |  | 777,678 |  | 924,077 |  | 304,056 |  | 196,592 |  | 20,185 |  | 6,383 |  | 2,719 |
| Investment Income: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Net Appreciation/(Depreciation) Fair Value of Investments |  | 37,555 |  | (466) |  | 20,335 |  | 23,882 |  | 2,019 |  | 497 |  | 201 |
| Other Net Investment Income |  | 1,422 |  | 498 |  | 549 |  | 612 |  | 55 |  | 13 |  | 7 |
| Net Interest and Dividends Income |  | 190,860 |  | 69,208 |  | 73,864 |  | 67,502 |  | 6,080 |  | 1,527 |  | 733 |
| Securities Lending Income |  | 1,876 |  | 645 |  | 723 |  | 821 |  | 74 |  | 18 |  | 8 |
| Total Net Investment Income |  | 231,713 |  | 69,885 |  | 95,471 |  | 92,817 |  | 8,228 |  | 2,055 |  | 949 |
| Less Direct Investment Expenses: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Investment Management Fees |  | $(72,529)$ |  | $(25,259)$ |  | $(28,086)$ |  | $(30,789)$ |  | $(2,772)$ |  | (697) |  | (334) |
| Securities Lending Fees |  | (347) |  | (119) |  | (135) |  | (152) |  | (14) |  | (3) |  | (2) |
| Direct Investment Expenses |  | $(8,943)$ |  | $(2,078)$ |  | $(3,047)$ |  | $(1,556)$ |  | (119) |  | (42) |  | (24) |
| Total Direct Investment Expenses |  | $(81,819)$ |  | $(27,456)$ |  | $(31,268)$ |  | $(32,497)$ |  | $(2,905)$ |  | (742) |  | (360) |
| Net Investment Income / (Loss) |  | 149,894 |  | 42,429 |  | 64,203 |  | 60,320 |  | 5,323 |  | 1,313 |  | 589 |
| Other Additions: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Miscellaneous Income |  | 905 |  | - |  | 16 |  | 143 |  | - |  | - |  | - |
| Member Reassignments |  | 5,543 |  | 4,057 |  | 6,587 |  | - |  | - |  | - |  | - |
| Total Other Additions |  | 6,448 |  | 4,057 |  | 6,603 |  | 143 |  | - |  | - |  | - |
| Total Additions |  | 934,020 |  | 970,563 |  | 374,862 |  | 257,055 |  | 25,508 |  | 7,696 |  | 3,308 |
| Deductions |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Pension and Disability Benefits |  | 879,088 |  | 1,266,950 |  | 124,302 |  | 127,935 |  | 20,911 |  | 6,132 |  | 3,493 |
| Special Death Benefits |  | - |  | - |  | - |  | 774 |  | - |  | - |  | - |
| Distribution of Contributions and Interest |  | 57,184 |  | 6,004 |  | 10,988 |  | 4,037 |  | 11 |  | 113 |  | 254 |
| Administrative Expenses |  | 24,098 |  | 6,564 |  | 5,603 |  | 1,651 |  | 148 |  | 139 |  | 193 |
| Member Reassignments |  | 10,814 |  | 3,426 |  | 1,852 |  | 74 |  | - |  | 21 |  | - |
| Total Deductions |  | 971,184 |  | 1,282,944 |  | 142,745 |  | 134,471 |  | 21,070 |  | 6,405 |  | 3,940 |
| Net Increase / (Decrease) |  | $(37,164)$ |  | $(312,381)$ |  | 232,117 |  | 122,584 |  | 4,438 |  | 1,291 |  | (632) |
| Beginning Net Position Restricted |  | 13,907,666 |  | 5,099,910 |  | 5,379,113 |  | 4,828,415 |  | 437,352 |  | 110,038 |  | 53,424 |
| Ending Net Position Restricted | \$ | 13,870,502 | \$ | 4,787,529 | \$ | 5,611,230 | \$ | 4,950,999 | \$ | 441,790 | \$ | 111,329 | \$ | 52,792 |

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

## Indiana Public Retirement System

Statement of Changes in Fiduciary Net Position, continued
For the Year Ended June 30, 2016 (with Comparative Totals for the Year Ended June 30, 2015) ${ }^{1}$

| (dollars in thousands) | Pension Trust Funds |  |  |  | Other Postemployment Benefit Funds |  |  |  | INPRS Totals ${ }^{2}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Legislators' Defined Benefit Plan |  | ators' ed ution n | State Employees' Death Benefit Fund |  | Public Safety Officers' Special Death Benefit Fund |  |  | on Trust Other ployment it Funds Totals |  | on Trust Other mployment fit Funds Totals |
| Additions |  |  |  |  |  |  |  |  |  |  |  |  |
| Contributions: |  |  |  |  |  |  |  |  |  |  |  |  |
| Member | \$ | - | \$ | 1,763 | \$ | - | \$ | - | \$ | 334,079 | \$ | 348,789 |
| Employer |  | 138 |  | - |  | - |  | - |  | 1,012,012 |  | 923,759 |
| Nonemployer Contributing Entity |  | - |  | - |  | - |  | 611 |  | 888,111 |  | 846,122 |
| Total Contributions |  | 138 |  | 1,763 |  | - |  | 611 |  | 2,234,202 |  | 2,118,670 |
| Investment Income: |  |  |  |  |  |  |  |  |  |  |  |  |
| Net Appreciation/(Depreciation) Fair Value of Investments |  | 4 |  | (27) |  | 337 |  | 249 |  | 84,586 |  | $(116,790)$ |
| Other Net Investment Income |  | - |  | 2 |  | - |  | - |  | 3,158 |  | 4,588 |
| Net Interest and Dividends Income |  | 42 |  | 256 |  | 4 |  | 1 |  | 410,077 |  | 407,200 |
| Securities Lending Income |  | 1 |  | 2 |  | - |  | - |  | 4,168 |  | 4,200 |
| Total Net Investment Income |  | 47 |  | 233 |  | 341 |  | 250 |  | 501,989 |  | 299,198 |
| Less Direct Investment Expenses: |  |  |  |  |  |  |  |  |  |  |  |  |
| Investment Management Fees |  | (19) |  | (72) |  | (5) |  | (3) |  | $(160,565)$ |  | $(177,673)$ |
| Securities Lending Fees |  | - |  | - |  | - |  | - |  | (772) |  | (677) |
| Direct Investment Expenses |  | (1) |  | (10) |  | (1) |  | (1) |  | $(15,822)$ |  | $(15,848)$ |
| Total Direct Investment Expenses |  | (20) |  | (82) |  | (6) |  | (4) |  | $(177,159)$ |  | $(194,198)$ |
| Net Investment Income / (Loss) |  | 27 |  | 151 |  | 335 |  | 246 |  | 324,830 |  | 105,000 |
| Other Additions: |  |  |  |  |  |  |  |  |  |  |  |  |
| Miscellaneous Income |  | - |  | 14 |  | - |  | - |  | 1,078 |  | 188 |
| Member Reassignments |  | - |  | - |  | - |  | - |  | 16,187 |  | 17,591 |
| Total Other Additions |  | - |  | 14 |  | - |  | - |  | 17,265 |  | 17,779 |
| Total Additions |  | 165 |  | 1,928 |  | 335 |  | 857 |  | 2,576,297 |  | 2,241,449 |
| Deductions |  |  |  |  |  |  |  |  |  |  |  |  |
| Pension and Disability Benefits |  | 359 |  | - |  | - |  | - |  | 2,429,170 |  | 2,429,896 |
| Special Death Benefits |  | - |  | - |  | - |  | 150 |  | 924 |  | 1,010 |
| Distribution of Contributions and Interest |  | - |  | 1,794 |  | - |  | - |  | 80,385 |  | 88,659 |
| Administrative Expenses |  | 61 |  | 12 |  | - |  | - |  | 38,469 |  | 40,456 |
| Member Reassignments |  | - |  | - |  | - |  | - |  | 16,187 |  | 17,591 |
| Total Deductions |  | 420 |  | 1,806 |  | - |  | 150 |  | 2,565,135 |  | 2,577,612 |
| Net Increase / (Decrease) |  | (255) |  | 122 |  | 335 |  | 707 |  | 11,162 |  | $(336,163)$ |
| Beginning Net Position Restricted |  | 3,174 |  | 28,288 |  | 8,013 |  | 5,596 |  | 29,860,989 |  | 30,197,152 |
| Ending Net Position Restricted | \$ | 2,919 | \$ | 28,410 | \$ | 8,348 | \$ | 6,303 | \$ | 29,872,151 | \$ | 29,860,989 |

${ }^{1}$ The accompanying notes are an integral part of the financial statements.
${ }^{2}$ The 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, 2016

## Note 1. Descriptions of System and Plans

## Administration of System and Plans

The Indiana Public Retirement System (INPRS) administers nine (9) pension trust funds including eight (8) Defined Benefit retirement plans and one (1) Defined Contribution retirement plan, two (2) Other Postemployment Benefit funds and one (1) Agency fund. INPRS is governed by a nine-member Board of Trustees, appointed by the Governor pursuant to the following criteria: one (1) trustee with experience in economics, finance, or investments, one (1) trustee with experience in executive management of benefits administration, one (1) trustee who is an active or retired member of the 1977 Fund, two (2) trustees who are TRF members with at least 10 years of creditable service, one (1) 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 (2) tiers to the PERF Plan. The first is the Public Employees' Defined Benefit Plan (PERF Hybrid Plan) and the second is the Public Employees' Annuity Savings Account Only Plan (PERF ASA Only Plan). Details of the PERF Hybrid Plan and PERF ASA Only Plan 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. In order 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 (1) 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, 2016, there were 1,176 participating political subdivisions in addition to the State. As of June 30, 2016, PERF membership consisted of:

| Retired Members, Beneficiaries, and Disabled Members Receiving Benefits | 83,188 |
| :--- | ---: |
| Inactive Vested Members Entitled To But Not Yet Receiving Benefits | 29,702 |
| Inactive Non-Vested Members Entitled To a Distribution of ASA Balance | 50,212 |
| Active Members: Vested and Non-Vested | 131,178 |
| Total | $\underline{294,280}$ |

Notes to the Financial Statements, continued
June 30, 2016

## Contributions

The State of Indiana is obligated by statute to make contributions to the PERF Hybrid Plan or the PERF ASA Only Plan. Any political subdivision that elects to participate in the PERF Hybrid Plan 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 cost-sharing plan, all risks and costs, including benefit costs, are shared proportionately by the participating employers. During the year ended June 30, 2016, all participating employers were required to contribute 11.2 percent of covered payroll for members employed by the State. For political subdivisions, an average contribution rate of 11.19 percent was required from employers during the period of July 1 through December 31, 2015, and an average contribution rate of 11.2 percent was required for the period of January 1 through June 30, 2016. For the ASA Only Plan, all participating employers were 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 3 percent and not be greater than the normal cost of the fund which was 4.6 percent for the year ended June 30,2016 and any amount not credited to the member's account shall be applied to the pooled assets of the PERF Hybrid Plan.

The PERF Hybrid Plan or the PERF ASA Only Plan members contribute three (3) percent of covered payroll to their annuity savings account, which is not used to fund the defined benefit pension for the PERF Hybrid Plan. For the PERF Hybrid Plan, the employer may elect to make the contributions on behalf of the member. The employer shall pay the member's contributions on behalf of the member employed by the State for the PERF ASA Only Plan. Political subdivisions may choose to pay part or all of the member's contributions on behalf of the member for the PERF ASA Only Plan. In addition, members of the PERF Hybrid Plan (effective 7/1/2014 the PERF ASA Only Plan may also participate) may elect to make additional voluntary contributions, under certain criteria, of up to 10 percent of their compensation into their annuity savings accounts.

## PERF Hybrid Plan

## Plan Description

The PERF Hybrid Plan 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 (2) aspects to the PERF Hybrid Plan defined benefit structure. The first portion is the monthly defined benefit pension that is funded by the employer. The second portion of the PERF Hybrid Plan benefit structure is the annuity savings account (ASA) that supplements the defined benefit at retirement.

## Retirement Benefits - Defined Benefit Pension

The PERF Hybrid Plan 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 (8) 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 in order to withdraw the annuity savings account. A non-vested member who terminates employment prior to retirement may withdraw his/her annuity savings account 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 (6) months in a covered position may reclaim his/her forfeited creditable service.

Notes to the Financial Statements, continued
June 30, 2016
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. 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 (4) consecutive calendar quarters. The same calendar quarter may not be included in two (2) different groups. For PERF members who serve as an elected official, the highest one (1) year (total of four (4) 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 (5) 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, 2016; however, eligible members received a one-time check (a.k.a. 13th check) in September 2015. 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, 2014, and who was entitled to receive a monthly benefit on July 1, 2015.

## Disability and Survivor Benefits

The PERF Hybrid Plan also provides disability and survivor benefits. A member who has at least five (5) 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. 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 (2) 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, 2016

## 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 (3) 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 interest credits belong to the member and do not belong to the State or political subdivision.

Investments in the members' annuity savings accounts are individually directed and controlled by plan participants who direct the investment of their account balances among the following eight (8) investment options, with varying degrees of risk and return potential:

- Guaranteed Fund - This fund's objective is to provide stability of principal and a competitive interest rate. The interest rate is set by the INPRS Board of Trustees each year and is guaranteed for the fiscal year. Market risk is assumed by the Fund.

■ 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 Funds 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 market value.

Notes to the Financial Statements, continued
June 30, 2016

## ASA Only Plan

## Plan Description

The PERF ASA Only Plan was established by the Indiana Legislature in 2011 with an effective date of March 1, 2013 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. PERF ASA Only Plan members are full-time employees of the State of Indiana (as defined in IC 5-10.3-7-1 (d)), who are in a position eligible for membership in the PERF Hybrid Plan and who elect to become members of the PERF ASA Only Plan. The PERF ASA Only Plan membership does not include individuals who: (1) before March 1, 2013 were members of the PERF Hybrid Plan or (2) on or after March 1, 2013 do not elect to participate in the PERF ASA Only Plan. Any government agency that pays employees through the Auditor of the State is a mandatory participant in the ASA Only Plan and must offer eligible employees the ASA Only Plan option. Quasi-government agencies and State educational institutions may choose to offer the ASA Only Plan as an option to their employees.

## Retirement Account

The PERF ASA Only Plan maintains an annuity savings account for each member. Each member's account consists of two (2) subaccounts within the annuity savings account structure. There is a member contribution subaccount (which is the same as the annuity savings account in the PERF Hybrid Plan) and an employer contribution subaccount.

The member's contribution subaccount consists of the member's contributions, set by statute at three (3) 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 shall pay the member's contributions on behalf of the member. 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.

The PERF ASA Only Plan allows members to actively participate in managing their retirement benefits through selfdirected 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 (8) 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 Plan Retirement Benefits - Annuity Savings Account section, except for the Stable Value Fund:

■ Stable Value Fund (available only to PERF ASA Only members) - 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.

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

One (1) year of participation $=20 \%$
Two (2) years of participation $=40 \%$
Three (3) years of participation $=60 \%$
Four (4) years of participation $=80 \%$
Five (5) years of participation $=100 \%$

Notes to the Financial Statements, continued
June 30, 2016
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 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 have the 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-you-go plan (renamed the TRF Pre-1996 Account) to newly hired members and created a new account (named the TRF 1996 Account) for all members hired after June 30, 1995. TRF is two (2) cost-sharing, multiple-employer defined benefit plans, TRF Pre-1996 Account and TRF 1996 Account. 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' Retirement Fund Pre-1996 Account

## Plan Description

The Indiana State Teachers' Retirement Fund Pre-1996 Account (TRF Pre-1996) is a pay-as-you-go cost-sharing, multipleemployer 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, 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 (2) aspects to the TRF Pre-1996 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-1996 benefit structure is the annuity savings account that supplements the defined

Notes to the Financial Statements, continued
June 30, 2016
benefit at retirement and was described in the PERF Hybrid Plan Retirement Benefits - Annuity Savings Account section. Investment options are similar to the PERF Hybrid Plan.

## Membership

Membership in TRF Pre-1996 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 the TRF Pre-1996 Account and members hired after 1996 participate in the TRF 1996 Account (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 , 2016, the number of participating employers was 336 in addition to the State. The State of Indiana makes contributions as the sole nonemployer contributing entity. As of June 30, 2016, TRF Pre-1996 Account membership consisted of:

| Retired Members, Beneficiaries, and Disabled Members Receiving Benefits | 52,575 |
| :--- | ---: |
| Inactive Vested Members Entitled To But Not Yet Receiving Benefits | 3,119 |
| Inactive Non-Vested Members Entitled To a Distribution of ASA Balance | 394 |
| Active Members: Vested and Non-Vested | 14,327 |
| Total | 70,415 |

## Contributions

State appropriations are made in accordance with IC 5-10.4-2-4 for each fiscal year. Currently, a three (3) percent year-over-year 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-1996, which was established according to IC 5-10.4-2-5. As a nonemployer contributing entity, the State of Indiana contributed $\$ 887.5$ million in fiscal year 2016 to TRF Pre-1996. As part of the $\$ 887.5$ million contribution, the State prefunded one-time checks (a.k.a. 13 th check) of $\$ 41.0$ million in accordance with 2015 HEA 1001 for $\$ 20.3$ million and in accordance with 2016 HEA 1161 for $\$ 20.7$ million (which went into the Pension Stabilization Fund). Employers contributed $\$ 5.0$ million in fiscal year 2016.

TRF Pre-1996 Account members contribute three (3) 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' Retirement Fund 1996 Account

## Plan Description

The Indiana State Teachers' Retirement 1996 Account (TRF 1996) 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-1996. However, pursuant to the law in place prior to July 1,2005 , if a member of TRF Pre-1996 left employment and re-employed after June 30, 1995, the member and the liability were transferred to TRF 1996. There are two (2) aspects to the TRF 1996 defined benefit structure. The first portion is the monthly defined benefit pension

Notes to the Financial Statements, continued
June 30, 2016
that is funded by the employer. The second portion of the TRF 1996 benefit structure is the annuity savings account that supplements the defined benefit at retirement and was described in the PERF Hybrid Plan Retirement Benefits - Annuity Savings Account section. Investment options are similar to the PERF Hybrid Plan.

## Membership

Membership in TRF 1996 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 1996 is optional for teachers employed by charter schools, employees and officials of the Indiana State Board of Education who were Indiana licensed teachers prior to their employment with the Board, and teachers employed by special management teams as defined under IC 20-31 et Seq.

As of June 30, 2016, the number of participating employers was 361 in addition to the State. As of June 30, 2016, TRF 1996 Account membership consisted of:

Retired Members, Beneficiaries, and Disabled Members Receiving Benefits 4,977
Inactive Vested Members Entitled To But Not Yet Receiving Benefits 4,335
Inactive Non-Vested Members Entitled To a Distribution of ASA Balance 12,529

| Active Members: Vested and Non-Vested | $\frac{55,265}{}$ |
| :--- | ---: |
| Total | 77,106 |

## 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 the TRF 1996 Account 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, 2016, all participating employers in the TRF 1996 Account were required to contribute 7.5 percent of covered payroll.

TRF 1996 Account members contribute three (3) 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-1996 Account and TRF 1996 Account 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 in order to withdraw the annuity savings account. A non-vested member who terminates employment prior to retirement may withdraw his/her annuity savings account after 30 days, but by doing so forfeit his/her creditable

Notes to the Financial Statements, continued
June 30, 2016
service. A member who returns to covered service and works no less than six (6) 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, 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 (5) 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 (1) year of salary is used. In order for a salary year to be included as one of the five (5) years, the member must have received at least one-half (1/2) year of service credit for that year as stated in IC 5-10.4-4-2. The five (5) 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 (5) 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 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, 2016; however, eligible members did receive a one-time check (a.k.a. 13th check) in September 2015. 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, 2014, and who was entitled to receive a monthly benefit on July 1, 2015.

## TRF Pre-1996 Account and TRF 1996 Account Disability and Survivor Benefits

TRF also provides disability and survivor benefits. A member who has at least five (5) 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.

Members are eligible for a classroom disability benefit once they have earned five (5) years of service, have a temporary or permanent disability that continues for six (6) months or more, and applies for classroom disability benefits within one (1) 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 (5) 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 (2) 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

Notes to the Financial Statements, continued
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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 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' Pension and Disability Fund

## Plan Description

The 1977 Police Officers' and Firefighters' Pension and Disability Fund (1977 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 who are hired (or rehired) after April 30, 1977. The 1977 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 full-time firefighters employed by an Indiana city, town, township or county.

## Membership

As of June 30, 2016, the number of participating employers totaled 165. As of June 30, 2016, the 1977 Fund membership consisted of:

Retired Members, Beneficiaries, and Disabled Members Receiving Benefits 4,004
Inactive Vested Members Entitled To But Not Yet Receiving Benefits 186
Inactive Non-Vested Members Entitled To a Distribution of ASA Balance 933
Active Members: Vested and Non-Vested
Total
18,629

## Contributions

The funding policy for the 1977 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 determined by the INPRS Board of Trustees based on actuarial investigation and valuation in accordance with IC 36-8-8-6. As the 1977 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, 2016, all participating employers were required to contribute 19.7 percent of the salary of a first class officer or firefighter.

The member contribution rate is established by statute IC 36-8-8-8 at six (6) 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, may be withdrawn if the member terminates employment prior to 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 1977 Fund member ended service plus one (1) percent of that salary for each six (6) months of active service over 20 years to a maximum of 12

Notes to the Financial Statements, continued
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years. At 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).

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. There was no COLA increase effective July 1, 2015.

## Disability and Survivor Benefits

The 1977 Fund also provides disability and survivor benefits. An active member may file an application 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 1977 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 1977 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 twelve (12) months and not more than thirty-six (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 is 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, 2016, the amount held by the plan pursuant to the DROP is $\$ 66.6$ 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.

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#### Abstract

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


As of June 30, 2016, the Judges' Retirement System membership consisted of:

| Retired Members, Beneficiaries, and Disabled Members Receiving Benefits | 351 |
| :--- | ---: |
| Inactive Vested Members Entitled To But Not Yet Receiving Benefits | 65 |
| Inactive Non-Vested Members Entitled To a Distribution of ASA Balance | 41 |
| Active Members: Vested and Non-Vested | 394 <br> Total$\quad$851 |

## 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 30,2016 , the State of Indiana paid $\$ 16.9$ million in employer contributions.

The member contribution rate is established by statute IC 33-38-7-10 (1977 System) and IC 33-38-8-11 (1985 System) at six (6) 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 System) and IC 33-38-8-12 (1985 System).

## Retirement Benefits

A member vests after eight (8) years of creditable service. Judges who retire at or after age 65 with eight (8) 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. Applicable salary for participants in the 1985 Judges' System is defined in IC 33-38-8-14(e). The pension benefit for participants of the 1977 Judges' System is based on the salary being paid for the office that the participant held at the time of separation from service [IC 33-38-7-11(d)]. The statute provides for the percentage to be prorated for partial years of service. If the annual retirement benefit 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.

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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 System 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 System 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 System on an "ad hoc" basis. Beginning after June 30, 2010, a participant in the 1985 System 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 $2.2 \%$ for the year ended June 30, 2016 for eligible participants in the 1977 System and 1985 System.

## Disability and Survivor Benefits

There is no vesting requirement for permanent disability benefits. For both the 1977 System and the 1985 System, a participant is considered permanently disabled if the INPRS Board of Trustees receives a written certification by at least two (2) 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 (2) 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 (8) years of service and was in service as a judge. The minimum survivor benefit is $\$ 12,000$.

## (E) State Excise Police, Gaming Agent, Gaming Control Officer, and Conservation Enforcement Officers' Retirement Plan

## Plan Description

The State Excise Police, Gaming Agent, Gaming Control Officer, and Conservation Enforcement Officers' Retirement Plan (EG\&C Plan) 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. The EG\&C Plan was established in 1972 and is governed by the INPRS Board of Trustees in accordance with IC 5-10-5.5.

## Membership

As of June 30, 2016, the EG\&C Plan membership consisted of:

| Retired Members, Beneficiaries, and Disabled Members Receiving Benefits | 220 |
| :--- | ---: |
| Inactive Vested Members Entitled To But Not Yet Receiving Benefits | 7 |
| Inactive Non-Vested Members Entitled To a Distribution of Contributions | 121 |
| Active Members: Vested and Non-Vested | 421 |
| Total | 769 |

Notes to the Financial Statements, continued
June 30, 2016

## Contributions

The funding policy for the EG\&C Plan is in accordance with statute IC 5-10-5.5-8.5. The employer contribution rate is actuarially determined. The required contributions are determined by the INPRS Board of Trustees based on actuarial investigation and valuation. During the year ended June 30, 2016, 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 (4) 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.

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, 2016; however, eligible members did receive a one-time check (a.k.a. 13th check) in September 2015. 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, 2014, and who was entitled to receive a monthly benefit on July 1, 2015.

## 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

Notes to the Financial Statements, continued
June 30, 2016
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 the EG\&C Plan 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 the EG\&C Plan 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 twelve (12) months and not more than thirty-six (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 is 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, 2016, the amount held by the plan pursuant to the DROP is $\$ 1.9$ 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.

## Membership

As of June 30, 2016, the PARF membership consisted of:

| Retired Members, Beneficiaries, and Disabled Members Receiving Benefits | 133 |
| :--- | ---: |
| Inactive Vested Members Entitled To But Not Yet Receiving Benefits | 99 |
| Inactive Non-Vested Members Entitled To a Distribution of ASA Balance | 153 |
| Active Members: Vested and Non-Vested | 197 |
| Total | 582 |

Notes to the Financial Statements, continued
June 30, 2016

## 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, 2016, the State of Indiana appropriated $\$ 1.4$ million for employer contributions.

The member contribution rate is established by statute IC 33-39-7-12 at six (6) 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 (8) 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 (8) 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 prior to July 1, 2006 must have at least ten (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 (8) 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 (8) 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 prior to 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.

## Disability and Survivor Benefits

PARF also provides disability and survivor benefits. A participant who has at least five (5) 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 (8) 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.

Notes to the Financial Statements, continued
June 30, 2016
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 (2) separate and distinct plans. The Legislators' Defined Benefit Plan (LEDB Plan) (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 Plan (LEDC Plan) (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.

## Membership

As of June 30, 2016, the Legislators' Retirement System membership consisted of:

|  | Defined Benefit Plan | Defined Contribution Plan |
| :---: | :---: | :---: |
| Retired Members, Beneficiaries, and Disabled Members Receiving Benefits | 74 |  |
| Inactive Vested Members Entitled To But Not Yet Receiving Benefits | 12 |  |
| Inactive Non-Vested Members Entitled To a Distribution of ASA Balance | - | 66 |
| Active Members: Vested and Non-Vested | 11 | 150 |
| Total | 97 | 216 |

A member of the LEDB Plan, under certain circumstances, may also be a member of the LEDC Plan.

## Legislators' Defined Benefit Plan

The LEDB Plan provides retirement, disability and survivor benefits. The LEDB 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 the LEDB Plan, 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, 2016, the State of Indiana appropriated $\$ 0.1$ million for employer contributions.

Notes to the Financial Statements, continued
June 30, 2016

## 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 a month between ages 60 and 65 ; and (2) $5 / 12$ percent a month between ages 55 and 60 .

The monthly pension benefits for members in pay status are increased periodically as COLA. COLA increases for the LEDB Plan 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 date of retirement, and other eligibility factors. There was no COLA for the year ended June 30, 2016.

The LEDB Plan also provides disability and survivor benefits. A member who has at least five (5) 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 Plan

For the LEDC Plan, each participant is required to contribute five (5) 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 calendar year 2015 was 14.2 percent and the rate for calendar year 2016 is 14.2 percent.
Investments in the members' accounts are individually directed and controlled by plan participants who direct the investment of their account balances among several investment options of varying degrees of risk and return potential. There are nine (9) investment options available to LEDC Plan members: Defined Benefit Unitized 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.

Notes to the Financial Statements, continued
June 30, 2016
A participant of the LEDC Plan who terminates service as a member of the General Assembly is entitled to withdraw both the employee and employer contributions to the LEDC Plan. The amount available for withdrawal is the fair market 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 as purchased by the INPRS Board of Trustees, 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 the LEDC Plan, the participant's account is to be paid to the beneficiary(ies) or to 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 market 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 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 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 was ceased 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, which is an Other Postemployment Benefit plan (OPEB). The fund was established for the purpose of paying 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.

## Pension Relief Fund

The Pension Relief Fund (PR Fund) was created by the Indiana General Assembly in 1980 (IC 5-10.3-11) and is an Agency fund. The purpose of the PR Fund 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 the PR Fund 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.

Notes to the Financial Statements, continued
June 30, 2016

Distributions are made from the PR Fund 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, the PR Fund also pays a lump sum line of duty death benefit of $\$ 150,000$. As defined by IC $36-8-8-14.1$, 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 by INPRS for each unit of local government for amounts that have not been distributed to the local units. These amounts remain invested in the fund and are available to the units of local government at their request. As of June 30, 2016, units of local government had investments with a market value of approximately $\$ 1.7$ million on deposit in the PR Fund.

Notes to the Financial Statements, continued
June 30, 2016

## Note 2. Summary of Significant Accounting Policies

## (A) Reporting Entity

Established July 1, 2011, the Indiana Public Retirement System and the governing board of trustees merged the administration of the Public Employees' Retirement Fund (PERF) and the Teachers' Retirement Fund (TRF). INPRS is an independent body corporate and politic and is not a department or agency of the State, but is an independent instrumentality exercising essential government functions (Public Law 23-2011). For these reasons, INPRS is a pension trust fund of the State of Indiana for financial statement reporting purposes.

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

The INPRS Board of Trustees administers nine (9) pension trust funds [eight (8) Defined Benefit plans and one (1) Defined Contribution plan], two (2) 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:

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■ Public Employees' Retirement Fund (PERF)
■ Teachers' Retirement Fund Pre-1996 Account (TRF Pre-1996)
■ Teachers' Retirement Fund }1996\mathrm{ Account (TRF 1996)
■ 1977 Police Officers' and Firefighters' Pension and Disability Fund (1977 Fund)
■ Judges' Retirement System (JRS)
■ State Excise Police, Gaming Agent, Gaming Control Officer, and Conservation
    Enforcement Officers' Retirement Plan (EG&C Plan)
■ Prosecuting Attorneys' Retirement Fund (PARF)
■ Legislators' Defined Benefit Plan (LEDB Plan)
■ Legislators' Defined Contribution Plan (LEDC Plan)
■ State Employees' (SE) Death Benefit Fund
■ Public Safety Officers'(PSO) Special Death Benefit Fund
- Pension Relief Fund (PR Fund)
```

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 government 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 applies all applicable GASB pronouncements in accounting and reporting for its operations.

Notes to the Financial Statements, continued
June 30, 2016

## (C) Use of Estimates

In preparing the financial statements to conform to generally accepted accounting principles, the Board makes estimates and assumptions. These estimates and assumptions affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements, as well as the reported amounts of revenue and expenses during the reporting period. Actual results could differ from these 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 2015 financial statements to conform to the classifications for fiscal year 2016.

## (E) Contributions Receivable

Contributions are recognized as revenues when earned, pursuant to legal requirements. Member and employer contributions are earned on the employers' payroll date. The estimate for contributions receivable at year-end was calculated utilizing member and employer contributions from the last reported payroll period. Contributions receivable and revenue pursuant to service purchase credits are recognized in full in the year when service purchase contract is signed. Contributions receivable and revenue related to certain employers for the unfunded actuarial liability existing at the time the employer made an election to limit participation in their pension plan are recognized.

In addition to actuarially determined contractual contributions, one employer also makes quarterly installment payments, including interest at 7.25 percent per year, for the cost of service credits granted retroactively when the employer resolved to enlarge participation in the Public Employees' Retirement Fund. As of June 30, 2016, the outstanding balance was $\$ 1.0$ million. This agreement was entered into effective July 1,2000 , to be amortized over forty (40) years.

## (F) Deposit and Investment Policies and Provisions

Oversight of INPRS' 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, 2016, 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 is adopted by the INPRS Board of Trustees. This includes target asset allocations and allowable ranges that are expected to meet rates of return over a period of time, while minimizing risk. See Note 3 for more information.

During fiscal year 2015, INPRS conducted an asset liability study. Based on the results of this study, the Board approved an asset allocation, which incorporated only slight changes to the prior asset allocation targets for fiscal year 2016.

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

Notes to the Financial Statements, continued
June 30, 2016

## (G) Method Used to Value Investments

The pooled and non-pooled 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 equity, absolute return, private 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 market 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 equity 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.

## (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 the 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 GASB, the assets and liabilities for internal investment pools are allocated pro rata to each of the funds within the pool. This includes investment receivables, foreign exchange contract receivables, interest and dividend receivables, securities lending collateral, investment payables, foreign exchange contract payables, securities lending obligations, obligations under reverse repurchase agreements and the pooled investment holdings.

The INPRS Board of Trustees approved unitizing investment assets in order to provide for a consolidated rate of return and to invest in a diversified manner.

## Indiana Public Retirement System

Notes to the Financial Statements, continued
June 30, 2016

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)
\square Teachers' Retirement Fund Pre-1996 Account (TRF Pre-1996)
- Teachers' Retirement Fund 1996 Account (TRF 1996)
■ }1977\mathrm{ Police Officers' and Firefighters' Pension and Disability Fund (1977 Fund)
■ Judges' Retirement System (JRS)
\square State Excise Police, Gaming Agent, Gaming Control Officer, and Conservation
    Enforcement Officers' Retirement Plan (EG&C Plan)
- Prosecuting Attorneys' Retirement Fund (PARF)
- Legislators' Defined Benefit Plan (LEDB Plan)
```

The INPRS Board of Trustees also unitized the ASA investment assets of PERF, TRF Pre-1996 and TRF 1996 and the defined contribution assets of Legislators' Defined Contribution Plan (LEDC) into two asset pools.

The first pool is comprised of the PERF, TRF Pre-1996, and TRF 1996 assets in the Guaranteed Fund, also known as the ASA Guaranteed Fund Assets. The second pool is comprised of all other ASA assets and the LEDC defined contribution assets.

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:
(dollars in thousands)
Trust Fund

[^6]
## Indiana Public Retirement System

Notes to the Financial Statements, continued
June 30, 2016

## (I) Investments and Foreign Exchange Contracts Receivable 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, 2016.

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

## (J) Capital Assets

Capital assets, fixed and intangible are capitalized at historical cost when total cost is $\$ 25$ thousand or more. The cost of items like normal maintenance, repairs, and software license agreements that do not add to the value of the asset or materially extend the life of the asset are not capitalized. Depreciation and amortization are calculated using the straight-line method over the estimated useful life of assets exceeding one (1) year. Depreciation and amortization are recognized as administrative expenses.

A summary of net capital asset values compared to the prior fiscal year is as follows:

| Capital Assets | June 30, 2015 |  | Additions |  | Disposals |  | June 30, 2016 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Land | \$ | 547 | \$ | - | \$ | 547 | \$ | - |
| Depreciable Capital Assets: |  |  |  |  |  |  |  |  |
| Building |  | 2,893 |  | - |  | 2,893 |  | - |
| Leasehold Improvements |  | - |  | 382 |  | - |  | 382 |
| Equipment |  | 87 |  | - |  | - |  | 87 |
| Software |  | 15,634 |  | - |  | - |  | 15,634 |
| Capital Assets in Progress |  | 376 |  | 292 |  | 376 |  | 292 |
| Total Depreciable Capital Assets |  | 18,990 |  | 674 |  | 3,269 |  | 16,395 |
| Less Accumulated Depreciation/Amortization: |  |  |  |  |  |  |  |  |
| Building |  | 1,584 |  | 17 |  | 1,601 |  | - |
| Leasehold Improvements |  | - |  | 38 |  | - |  | 38 |
| Equipment |  | 87 |  | - |  | - |  | 87 |
| Software |  | 10,840 |  | 2,013 |  | - |  | 12,853 |
| Total Accumulated Depreciation |  | 12,511 |  | 2,068 |  | 1,601 |  | 12,978 |
| Total Net Depreciable Capital Assets |  | 6,479 |  | $(1,394)$ |  | 1,668 |  | 3,417 |
| Total Net Capital Assets | \$ | 7,026 | \$ | $(1,394)$ | \$ | 2,215 | \$ | 3,417 |

On August 13, 2015, the land and building at 143 W. Market Street, Indianapolis, Indiana was sold and INPRS personnel relocated to the INPRS offices at One North Capitol (1NC).

Costs to renovate 1 NC to accommodate additional staff were recorded as leasehold improvements. Leasehold improvements are being depreciated over the term of the lease.

Notes to the Financial Statements, continued
June 30, 2016

All capital equipment has been fully depreciated. No new equipment was capitalized during the current fiscal year.

Amortization of software is computed over five (5) 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. Software purchased during the current fiscal year was recorded as a capital asset in progress until it is placed in service.

## (K) Benefits and Distributions

Pension, disability, special death benefits, and distributions of contributions and interest are recognized when due and payable to members or beneficiaries. Pension, disability and special death benefits are paid once the retirement or survivor applications have been processed and approved. Distributions of contributions and interest are distributions from inactive, non-vested members' annuity savings accounts. These distributions may be requested by members or automatically distributed by the fund when certain criteria are met.

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

Total due to/from other funds represents recurring 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 occur resulting in the transfer of member and employer reserves between funds due to a retiring member having service in multiple funds. Once a member selects the fund he/she wants to retire from, creditable service covered by the other fund and the related annuity savings account (ASA) balance will be transferred to the fund selected in calculating the member's retirement benefit.

When the member's retirement benefit is calculated, the fund selected establishes a receivable from the other fund for the ASA balance (member reserve) and the calculated employer reserve for the service credit transferred in from the other fund. The receivable is reflected in the receivable section in the Statement of Fiduciary Net Position. Conversely, the payable is reflected in the liabilities section of the Statement of Fiduciary Net Position.

## (M) Due to Other Governments

Total due to other governments represents a liability account reflecting amounts owed by INPRS to another government (e.g., county or municipality). INPRS acts as an agent of the Pension Relief Fund.

## (N) Compensated Absences

INPRS' full-time employees accumulate earned but unused vacation, sick pay, compensatory time, and personal time each pay period. Bonus vacation days are awarded upon completion of five (5), 10 and 20 years of employment with INPRS and/ or the State of Indiana. Upon separation from service, employees in good standing will be paid for a maximum of 30 unused vacation leave days.

Vacation, compensatory time and personal leave are reflected as part of the salaries and benefits payable line in the Liabilities section of the Statement of Fiduciary Net Position. No liability is calculated for unpaid accumulated sick leave since it is not probable that sick leave will be paid.

Notes to the Financial Statements, continued
June 30, 2016

## (O) Administrative, Project 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. These expenses are paid from plan assets and investment earnings.

The PERF plan pays the administrative and direct investment expenses of all the funds. At June 30, 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 settled in the following fiscal period.

## (P) Federal Income Tax Status

Plans administered by INPRS 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.

## (Q) Reserves and Designations

The following are the legally required reserves.
Member Reserve - The member reserve represents the accumulated contributions made by or on behalf of the members plus/minus earnings/losses, less amounts distributed or transferred to the Benefits in Force reserve for retirement, disability, or other benefits. For the PERF and TRF plans, this reserve includes the members' annuity savings accounts.

Employer Reserve - This reserve consists of the accumulated contributions from employers plus/minus earnings/losses, less transfers made to the Benefits in Force reserve for the actuarial pension cost for retirement, disability, or other benefits.

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. The accumulated contributions of the PERF and TRF members who elect to annuitize their annuity savings accounts and the actuarial pension cost are transferred to the reserve upon retirement, disability, or death.

The following are the balances of the reserves as of June 30, 2016:
(dollars in thousands)

| Pension Trust Funds |  | Member <br> Reserve |  |  | Employer <br> Reserve $^{1}$ |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Benefits <br> in Force |  |  |  |  | Total Reserves |  |  |  |

${ }^{1}$ The employer reserve includes $\$ 2,596 \mathrm{k}$ of reserve monies for the unvested portion of the ASA Only Plan.

Notes to the Financial Statements, continued
June 30, 2016

## (R) New Accounting Pronouncements

GASB has issued Statement No. 72, "Fair Value Measurement and Application." This Statement addresses accounting and financial reporting issues related to fair value measurements. The definition of fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. This Statement provides guidance for determining a fair value measurement for financial reporting purposes. The requirements of this Statement are effective for financial reporting periods beginning after June 15, 2015. Management has evaluated GASB Statement No. 72 and has implemented its requirements in the financial statements as presented.

GASB has issued Statement No. 73, "Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68." This Statement establishes requirements for defined benefit pensions that are not within the scope of Statement No. 68, as well as for the assets accumulated for purposes of providing those pensions. In addition, it establishes requirements for defined contribution pensions that are not within the scope of Statement No. 68. It also amends certain provisions of Statement No. 67, "Financial Reporting for Pension Plans", and Statement No. 68 for pension plans and pensions that are within their respective scopes. If the pension is not within the scope of Statement 68 , the requirements are effective for financial reporting periods beginning after June 15, 2016. All other pension plans are required to use an effective financial reporting period beginning after June 15, 2015. Management has evaluated GASB Statement No. 73 and has implemented its requirements in the financial statements as presented.

GASB has issued Statement No. 74, "Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans" for which the principal objective of this statement is to improve 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 is currently evaluating GASB Statement No. 74 and, if applicable, will implement in the appropriate period.

GASB has issued Statement No. 75, "Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions" for which the primary objective of this Statement is to improve 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 has issued Statement No. 76, "The Hierarchy of Generally Accepted Accounting Principles for State and Local Government" which establishes the hierarchy of generally accepted accounting principles (GAAP) for state and local governments and the framework for selecting those principles. The requirements of this Statement are effective for financial reporting periods beginning after June 15, 2015. Management has evaluated GASB Statement No. 76 and has implemented its requirements in the financial statements as presented.

GASB has issued Statement No. 77, "Tax Abatement Disclosures" which will establish 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 is currently evaluating GASB Statement No. 77 and, if applicable, will implement in the appropriate period.

Notes to the Financial Statements, continued
June 30, 2016
GASB has issued Statement No. 78, "Pensions Provided through Certain Multiple-Employer Defined Benefit Pension Plans" which 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 is currently evaluating GASB Statement No. 78 and, if applicable, will implement in the appropriate period.

GASB has issued Statement No. 79, "Certain External Investment Pools and Pool Participants" which 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 has issued Statement No. 80, "Blending Requirements for Certain Component Units" which 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 is currently evaluating GASB Statement No. 80 and, if applicable, will implement in the appropriate period.

GASB has issued Statement No. 81, "Irrevocable Split-Interest Agreements" which 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 has issued Statement No. 82, "Pension Issues" which is to improve 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 has early adopted its requirements in the financial statements as presented.

Notes to the Financial Statements, continued
June 30, 2016

## 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 statute (IC 5-10.3-5-3(a)) for PERF and (IC 5-10.4-3-10(a)) for TRF, 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 plans. The INPRS Board of Trustees utilizes external investment managers, each with specific mandates to collectively achieve the investment objectives of the retirement funds. Depending on the mandate and 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 periodically.

The INPRS Board of Trustees adopted a new Investment Policy Statement effective October 23, 2015, and the new strategic asset allocation for the Consolidated Defined Benefit Assets is as follows:

| Global Asset Classes | Target Allocation | Target Range |
| :---: | :---: | :---: |
| Public Equity | 22.0 \% | 19.5 to $24.5 \%$ |
| Private Equity | 10.0 | 7.0 to 13.0 |
| Fixed Income - Ex Inflation-Linked | 24.0 | 21.0 to 27.0 |
| 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 may differ for the PERF ASA, TRF Pre-1996 ASA, TRF 1996 ASA, and the LEDC plans, as these plan allocations are directed by the members.

The Pension Relief Fund (PR Fund) is invested 100 percent 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 State Employees' Death Benefit Fund and the Public Safety Officers' Special Death Benefit Fund are 100 percent invested in a commingled fund, which invest in short-term and fixed income investments.

Notes to the Financial Statements, continued
June 30, 2016

## (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, 2016, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expenses is as follows:

| Pension Trust Funds ${ }^{1}$ | 2016 Annual Money Weighted Rate of Return |
| :---: | :---: |
| Public Employees' Retirement Fund | 1.11 \% |
| Teachers' Retirement Fund Pre-1996 Account ${ }^{2}$ | 1.01 |
| Teachers' Retirement Fund 1996 Account ${ }^{2}$ | 1.01 |
| 1977 Police Officers' and Firefighters' Pension and Disability Fund | 1.22 |
| Judges' Retirement System | 1.18 |
| State Excise Police, Gaming Agent, Gaming Control Officer, and Conservation Enforcement Officers' Retirement Plan | 1.17 |
| Prosecuting Attorneys' Retirement Fund | 1.10 |
| Legislators' Defined Benefit Plan | 0.84 |
| Total INPRS ${ }^{3}$ | 1.10 |

${ }^{1}$ Excludes the Legislators' Defined Contribution Plan
${ }^{2}$ The Teachers' Retirement Fund Accounts are combined for investment purposes
${ }^{3}$ Rate of return also includes Legislators' Defined Contribution Plan, State Employees' Death Benefit Fund, Public Safety
Officers' Special Death Benefit Fund and Pension Relief Fund

## (C) Cash in Bank and Deposits

Cash balances represent both operational demand deposit accounts held at the bank and, investment related cash and shortterm investments, both pooled and non-pooled, 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 the INPRS total cash deposits, which includes short-term investment funds as of June 30, 2016.
(dollars in thousands)

| Cash Deposits | Total |  |
| :---: | :---: | :---: |
| Demand Deposit Account - Bank Balances (Insured by FDIC up to $\$ 250$ thousand per financial institution) | \$ | 6,828 |
| Held with Indiana Treasurer of State (Fully Insured) |  | 497 |
| Demand Deposit - Outstanding Check Float |  | $(24,564)$ |
| Held with Custodian Bank (Uncollateralized) |  | 167,000 |
| Short Term Investment Funds held at Bank (Collateralized) |  | 1,395,892 |
| Total | \$ | 1,545,653 |

Notes to the Financial Statements, continued
June 30, 2016

## (D) Summary of Investments Held

A summary of investments held as of June 30, 2016, exclusive of operational cash and the securities lending program which is fully disclosed in Section (I), is as follows:
(dollars in thousands)

| Investment Type ${ }^{1}$ | Fair Value | \% of Total Investments |
| :---: | :---: | :---: |
| Short Term Investments ${ }^{2}$ | \$ 51,521 | 0.2 \% |
| Repurchase Agreements | 6,433 | - |
| Short Term ${ }^{\text {² }}$ |  |  |
| Cash at Brokers | 167,000 | 0.5 |
| Money Market Sweep Vehicle | 1,344,371 | 4.4 |
| Commercial Paper | 15,494 | 0.1 |
| U.S. Treasury Obligations | 239,551 | 0.8 |
| Non-U.S. Governments | 7,106 | - |
| Total Short Term Investments | 1,773,522 | 5.8 |

## Fixed Income

| U.S. Governments | $3,870,320$ | 12.7 |
| :--- | ---: | ---: |
| Non-U.S. Governments | $2,667,584$ | 8.7 |
| U.S. Agencies | 811,012 | 2.7 |
| Corporate Bonds | $2,333,511$ | 7.7 |
| Asset-Backed Securities | 651,824 | 2.1 |
| Commingled Fixed Income Funds | 878,060 | 2.9 |
| Total Fixed Income Investments | $11,212,311$ | 36.8 |

## Equity

| Domestic Equities | $3,337,858$ | 10.9 |
| :--- | ---: | ---: |
| International Equities | $2,763,596$ | 9.1 |
| Commingled Equity Funds | $1,234,825$ | 4.0 |
| Total Equity Investments | $7,336,279$ | 24.0 |

Alternative Investments

| Private Equity | $3,499,128$ | 11.5 |
| :--- | ---: | ---: |
| Absolute Return | $2,299,874$ | 7.5 |
| Private Real Estate | $1,577,811$ | 5.2 |
| Risk Parity | $2,736,363$ | 9.0 |
| Total Alternative Investments | $10,113,176$ | 33.2 |

## Derivatives

Total Investments

|  | (964) | - |
| :---: | :---: | :---: |
| \$ | 30,492,278 | 100.0 \% |

1The amounts disclosed above will 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 non-pooled and pooled, that are an integral part of the pension investments.

Notes to the Financial Statements, continued
June 30, 2016

## (E) 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, are not registered in the name of INPRS and are held by either the counterparty or the counterparty trust department's agent, but not in INPRS' name.

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, 2016, there was $\$ 173.83$ million of cash on deposit which was uninsured and uncollateralized and therefore exposed to credit risk as disclosed in Section (C).

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

## (F) Interest Rate Risk

Interest rate risk is the risk changes in interest rates may 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 fixedincome investment is to market interest rate changes. The INPRS Investment Policy Statement recognizes interest rate risk as a market risk factor that is monitored on an absolute and relative basis.

As of June 30, 2016 debt security duration is as follows:

| Debt Security Type | Carrying Value |  | \% of All Debt Securities | Portfolio Weighted Average Effective Duration (Years) |
| :---: | :---: | :---: | :---: | :---: |
| Short Term Investments |  |  |  |  |
| Money Market Sweep Vehicle | \$ | 1,371,328 | 10.5 \% | 0.01 |
| Commercial Paper |  | 15,494 | 0.1 | 0.04 |
| U.S. Treasury Obligations |  | 239,551 | 1.8 | 0.25 |
| Corporate Bonds Less than 1 Year |  | 7,106 | 0.1 | 0.71 |
| Duration Not Available |  | 191,564 | 1.5 | N/A |
| Total Short Term Investments |  | 1,825,043 | 14.0 |  |
| Fixed Income Investments |  |  |  |  |
| U.S. Governments |  | 3,870,320 | 29.7 | 10.08 |
| Non-U.S. Government |  | 2,662,813 | 20.4 | 7.56 |
| U.S. Agencies |  | 745,432 | 5.7 | 2.88 |
| Corporate Bonds |  | 2,072,139 | 15.9 | 5.95 |
| Asset-Backed Securities |  | 608,359 | 4.7 | 1.13 |
| Duration Not Available |  | 1,253,248 | 9.6 | N/A |
| Total Fixed Income Investments |  | 11,212,311 | 86.0 |  |
| Total Debt Securities | \$ | 13,037,354 | 100.0 \% |  |

The $\$ 1.44$ billion, for which no duration was available, is primarily made up of cash and commingled debt funds.

Notes to the Financial Statements, continued
June 30, 2016

## (G) Credit Risk

The credit risk of investments is the risk the issuer will default and will no longer meet their obligations. The INPRS Investment Policy Statement recognizes credit (quality) risk as a market and strategic risk factor which is monitored on an absolute and relative basis.

INPRS uses three primary rating investment services, Standard and Poor's, Moody's, and Fitch, ranked in priority order respectively.

| (dollars in thousands) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Credit Rating | Short Term Investments | Fixed Income Securities | Total | \% of All Debt Securities |
| AAA | \$ | \$ 997,009 | \$ 997,009 | 7.7 \% |
| U.S. Government Guaranteed | - | 4,681,332 | 4,681,332 | 36.4 |
| AA | 244,547 | 1,321,243 | 1,565,790 | 12.2 |
| A | 47 | 1,225,518 | 1,225,565 | 9.5 |
| BBB | 17,557 | 1,262,706 | 1,280,263 | 9.9 |
| BB | - | 285,150 | 285,150 | 2.2 |
| B | - | 187,745 | 187,745 | 1.5 |
| Below B | - | 213,433 | 213,433 | 1.7 |
| Unrated | 1,395,892 | 1,038,175 | 2,434,067 | 18.9 |
| Total | \$ 1,658,043 | \$ 11,212,311 | \$ 12,870,354 | 100.0 \% |

The above table does not include cash with brokers of $\$ 167.00$ million.

The $\$ 2.43$ billion unrated 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, 2016, single issuer exposure in the portfolio did not exceed 5 percent of either the total investments or the Fiduciary Net Position.

INPRS Investment Policy Statement has placed a limit on the concentration of assets placed with an investment manager.

- No investment manager will manage more than 10 percent of the INPRS 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 percent of the system's assets in actively managed portfolios without Board approval.
- No investment manager will manage more than 15 percent of the INPRS 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 percent of the system's assets in passively managed portfolios without Board approval.
- No investment manager will manage more than 25 percent of the INPRS assets in a combination of actively and passively managed portfolios.

Notes to the Financial Statements, continued
June 30, 2016

## (H) Foreign Currency Risk

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

At June 30, 2016, INPRS did not have a currency hedging program at the total fund level. However, 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.

INPRS exposure to foreign currency risk at June 30, 2016, is as follows:

| (dollars in thousands) <br> Currency | Foreign Currency Held at June 30, 2016 |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Short Term |  | Fixed Income |  | Equity |  | Other Investments |  | Total |  | \% of Total ${ }^{1}$ |
| Argentina Peso | \$ | 34 | \$ | 2,231 | \$ | - | \$ | 6,013 | \$ | 8,278 | - \% |
| Australian Dollar |  | 2 |  | 82,675 |  | 109,387 |  | $(82,751)$ |  | 109,313 | 0.4 |
| Brazilian Real |  | 409 |  | 52,612 |  | 21,209 |  | $(19,186)$ |  | 55,044 | 0.2 |
| Canadian Dollar |  | 523 |  | 120,199 |  | 145,677 |  | $(120,596)$ |  | 145,803 | 0.5 |
| Chilean Peso |  | - |  | - |  | - |  | (924) |  | (924) | - |
| Chinese R Yuan HK |  | - |  | - |  | - |  | $(24,542)$ |  | $(24,542)$ | (0.1) |
| China Yuan Renminbi |  | - |  | 50 |  | - |  | 18,116 |  | 18,166 | 0.1 |
| Colombian Peso |  | 84 |  | 20,996 |  | - |  | 1,317 |  | 22,397 | 0.1 |
| Czech Koruna |  | - |  | (8) |  | 732 |  | 103 |  | 827 | - |
| Danish Krone |  | 670 |  | 18,138 |  | 49,250 |  | $(15,777)$ |  | 52,281 | 0.2 |
| Dominican Rep Peso |  | - |  | 1,882 |  | - |  | - |  | 1,882 | - |
| Egyptian Pound |  | - |  | - |  | 700 |  | - |  | 700 | - |
| Euro Currency Unit |  | 6,852 |  | 1,094,910 |  | 522,993 |  | $(979,801)$ |  | 644,954 | 2.2 |
| Hong Kong Dollar |  | 274 |  | 40 |  | 108,507 |  | $(15,532)$ |  | 93,289 | 0.3 |
| Hungarian Forint |  | 238 |  | (254) |  | 3,415 |  | 14,110 |  | 17,509 | 0.1 |
| Indian Rupee |  | 636 |  | 32 |  | 28,672 |  | (631) |  | 28,709 | 0.1 |
| Indonesian Rupiah |  | 58 |  | 30,533 |  | 3,220 |  | 1,307 |  | 35,118 | 0.1 |
| Israeli Shekel |  | 64 |  | - |  | 5,825 |  | (36) |  | 5,853 | - |
| Japanese Yen |  | 7,183 |  | 346,375 |  | 415,768 |  | $(364,795)$ |  | 404,531 | 1.4 |
| Malaysian Ringgit |  | 151 |  | 26,261 |  | 1,450 |  | 4,134 |  | 31,996 | 0.1 |
| Mexican Peso |  | 277 |  | 51,054 |  | 13,694 |  | $(5,082)$ |  | 59,943 | 0.2 |
| Taiwan New Dollar |  | 361 |  | - |  | 59,928 |  | $(18,160)$ |  | 42,129 | 0.1 |
| Turkish Lira |  | 3 |  | 18,669 |  | 13,003 |  | 7,867 |  | 39,542 | 0.1 |
| New Zealand Dollar |  | 115 |  | 6,404 |  | 9,051 |  | $(16,962)$ |  | $(1,392)$ | - |
| Norwegian Krone |  | 320 |  | 4,017 |  | 9,683 |  | 9,005 |  | 23,025 | 0.1 |
| Peruvian Nuevo Sol |  | - |  | 1,947 |  | - |  | 3,318 |  | 5,265 | - |
| Philippines Peso |  | 16 |  | 243 |  | 1,383 |  | 673 |  | 2,315 | - |
| Polish Zloty |  | 46 |  | 58,147 |  | 1,559 |  | $(26,618)$ |  | 33,134 | 0.1 |
| British Pound Sterling |  | 3,714 |  | 485,366 |  | 332,478 |  | $(487,799)$ |  | 333,759 | 1.1 |
| Romania Leu |  | 6 |  | 823 |  | - |  | 6,318 |  | 7,147 | - |
| Russian Ruble |  | - |  | 21,122 |  | - |  | $(7,960)$ |  | 13,162 | - |
| South African Rand |  | 300 |  | 39,629 |  | 26,302 |  | $(14,426)$ |  | 51,805 | 0.2 |
| Singapore Dollar |  | 205 |  | 4,867 |  | 19,694 |  | $(18,629)$ |  | 6,137 | - |
| South Korean Won |  | - |  | (147) |  | 98,586 |  | $(8,521)$ |  | 89,918 | 0.3 |
| Swedish Krona |  | 404 |  | 68,719 |  | 67,069 |  | $(64,835)$ |  | 71,357 | 0.2 |
| Swiss Franc |  | 3,140 |  | 3,402 |  | 161,555 |  | $(4,168)$ |  | 163,929 | 0.5 |
| Thai Baht |  | 222 |  | 15,540 |  | 10,006 |  | $(1,371)$ |  | 24,397 | 0.1 |
| UAE Dirham |  | - |  | - |  | 2,049 |  | $(13,179)$ |  | $(11,130)$ | - |
| Held in Foreign Currency | \$ | 26,307 | \$ | 2,576,474 | \$ | 2,242,845 | \$ | $(2,240,000)$ | \$ | 2,605,626 | 8.7 \% |

${ }^{1}$ Total of foreign currency risk, as a percentage of all investments.

Notes to the Financial Statements, continued
June 30, 2016
The foreign currency exposure consists of unhedged assets within the investment portfolio. The short term investment, debt securities and equity securities include accruals. Other investments include foreign holdings of other investments, derivatives and receivables/payables.

## (I) Securities Lending

Indiana Code 5-10.2-2-13(d) provides that the INPRS Board of Trustees' may 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 Benefits Assets. The INPRS Investment Policy Statement requires that collateral securities and/or cash be initially pledged at 102 percent of the fair value of the securities lent for domestic securities and 105 percent for international securities. No more than 40 percent of the Consolidated Defined Benefit Assets may be lent in aggregate. The custodian bank and/or its securities lending sub-agents provide 100 percent indemnification of the Consolidated Defined Benefit Assets against borrower default, overnight market risk and failure to return loaned securities. Securities received as collateral by INPRS cannot be pledged or sold unless the borrower defaults.

At June 30, 2016, INPRS had no security lending credit risk exposure as the collateral value pledged exceeded the fair value of securities on loan, per the requirements stated above.
(dollars in thousands)

| Security Type | Fair Value of Securities on Loan |  | Collateral Value (Securities and Cash) |  |
| :---: | :---: | :---: | :---: | :---: |
| U.S. Governments | \$ | 420,356 | \$ | 445,910 |
| Corporate Bonds |  | 28,758 |  | 29,471 |
| International Bonds |  | 3,427 |  | 3,572 |
| Domestic Equities |  | 280,447 |  | 287,710 |
| International Equities |  | 74,678 |  | 82,939 |
| Total | \$ | 807,666 | \$ | 849,602 |

Cash collateral can be reinvested. The reinvested assets are subject to the investment guidelines specified by the INPRS 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.

Notes to the Financial Statements, continued
June 30, 2016

## (J) Repurchase Agreements

A repurchase agreement is an agreement in which INPRS transfers cash to a broker-dealer or financial institution. The broker-dealer or financial institution transfers securities to INPRS and promises to repay the cash plus interest in exchange for the same securities. Repurchase agreements are assets with the security collateral held at INPRS' custodian bank.

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 of INPRS' whereby security collateral is held at the broker dealer or financial institution's custodian bank.

Cash received and reinvested in securities is not required to match the maturities of the securities posted as collateral.
At June 30, 2016, INPRS did not have a repurchase agreement or an obligation under a reverse repurchase agreement program at the total fund level. However, at the manager level, repurchase agreements and obligations under reverse repurchase agreements are allowable investments.

The amounts held at June 30 , 2016, 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 | \$ | 6,433 | \$ | 6,433 |


| Obligations Under Reverse Repurchase Agreements by Collateral Type | Cash Collateral Posted |  | Fair Value |  |
| :---: | :---: | :---: | :---: | :---: |
| U.S. Treasury | \$ | 268,075 | \$ | 271,139 |
| Non U.S. Government |  | 252 |  | 331 |
|  | \$ | 268,327 | \$ | 271,470 |

At June 30, 2016, INPRS had no reverse repurchase agreement credit risk exposure since the cash collateral value posted was less than the fair value of the liability held.

Notes to the Financial Statements, continued
June 30, 2016

## (K) Fair Value Measurement

In accordance with GASB Statement No. 72, INPRS' 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 if they have a share price equal to $\$ 1.00$. STIF's with a share price not equal to $\$ 1.00$ are included with commingled short term investments measured at the net asset value (NAV).

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 valued using a third party source.

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, 2016
At June 30, 2016, the fair value of investments categorized by Level 1,2 and 3 is as follows:
(dollars in thousands)

| June 30, 2016 | 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) |
| 51,521 |  |  |  |
| 167,000 |  |  |  |
| 6,433 |  |  |  |
| 1,288,067 |  |  |  |
| 1,513,021 |  |  |  |

Investments by Fair Value Level
Pooled Short Term Investments ${ }^{2}$
BNY - Mellon Cash Reserves
Commercial Paper
U.S. Treasury Obligations

Non-U.S. Governments
Total Pooled Short Term Investments
Fixed Income Investments
U.S. Governments

Non-U.S. Governments
U.S. Agencies

Corporate Bonds
Asset-Backed Securities
Total Fixed Income Investments

| 34,521 | - | 34,521 | \$ |
| :---: | :---: | :---: | :---: |
| 15,494 | - | 15,494 |  |
| 239,551 | 239,551 | - |  |
| 7,106 | - | 7,106 |  |
| 296,672 | 239,551 | 57,121 | - |
| 3,870,320 | 3,869,991 | 329 |  |
| 2,667,584 | - | 2,667,584 |  |
| 811,012 | - | 811,012 | - |
| 2,333,511 | - | 2,332,561 | 950 |
| 651,824 | - | 651,824 |  |
| 10,334,251 | 3,869,991 | 6,463,310 | 950 |
| 3,337,858 | 3,329,904 | 7,954 | - |
| 2,763,596 | 2,760,269 | 3,208 | 119 |
| 6,101,454 | 6,090,173 | 11,162 | 119 |
| 16,732,377 | 10,199,715 | 6,531,593 | 1,069 |

Investments Measured at the Net Asset Value (NAV)

| Commingled Short Term | 21,783 |
| :--- | ---: |
| Commingled Fixed Income | 878,060 |
| Commingled Equity | $1,234,825$ |
| Private Equity | $3,499,128$ |
| Absolute Return | $2,299,874$ |
| Private Real Estate | $1,577,811$ |
| Risk Parity | $2,736,363$ |
| Total Investments Measured at the Net Asset Value (NAV) | $12,247,844$ |

## Investment Derivatives

Total Futures
Total Options
Total Swaps
Total Investment Derivatives

| 13,912 | 13,912 | - |  |
| ---: | ---: | ---: | ---: | ---: |
| 100 | - | 100 | - |
| $(14,976)$ |  |  |  |
|  | $(964)$ |  |  |

Total Investments (less Securities Lending Collateral)

[^7]Notes to the Financial Statements, continued
June 30, 2016
The valuation method for investments measured at the net asset value (NAV) per share or equivalent, at June 30, 2016, is presented as follows:

| (dollars in thousands) | Fair Value |  | Unfunded Commitments |  | Redemption Frequency <br> (if Currently Eligible) | Redemption Notice Period |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Commingled Short Term Funds | \$ | 21,783 | \$ | - | Daily | 1 day |
| Commingled Fixed Income Funds |  | 878,060 |  | - | Daily | 1 day |
| Commingled Equity Funds |  | 1,234,825 |  | - | Daily | 1 day |
| Private Equity |  | 3,499,128 |  | 1,773,671 | N/A | N/A |
| Real Estate Funds |  | 1,577,811 |  | 538,273 | Quarterly | 30-90 days |
| Absolute Return |  | 2,299,874 |  | - | Monthly, Quarterly, Semi-Annually | 30-120 days |
| Risk Parity |  | 2,736,363 |  | - | Daily, Weekly, Monthly | 3-5 days |
| Total | \$ | 12,247,844 | \$ | 2,311,944 |  |  |

Commingled Short Term, Fixed Income and Equity Funds - There are three short term funds, twenty-one fixed income funds and three equity funds, which are considered to be commingled in nature. These investments are valued at the net asset value of the units held at June 30, 2016, based upon fair value of the underlying securities.
Private Equity - Consisting of 269 private equity funds, this strategy invests across a range of strategies, geographies, and industries. These underlying portfolio company investments cannot be redeemed with the funds, but rather the funds will make distributions of capital to INPRS as the funds sell the underlying portfolio company investments.
Real Estate Funds - Consisting of twenty-nine private real estate funds, this strategy invests primarily in U.S. commercial real estate. There are twenty-three private real estate funds that have been classified as illiquid where these investments can never be redeemed with those real estate funds. Distributions of capital from illiquid private real estate funds will be received as the underlying real estate assets are liquidated over the average ten year life of the fund. There are six real estate funds that have been classified as liquid real estate funds by nature of the open-end structure of the fund. Open-end funds generally offer periodic distributions of net cash flow, which investors can elect to reinvest, as well as quarterly redemption windows. Illiquid funds represent approximately 40 percent of the value of the real estate fund investments.
Absolute Return - The absolute return strategies 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). Given that mandate, 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 26 fund holdings that cover a broad spectrum of investment strategies and investment horizons, which results in distinct fund redemption terms to prevent assetliability 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 100 percent independent verification of NAVs/fair values by the funds' administrators. For the drawdown strategies, which are 19 percent of the Absolute Return portfolio (the majority consists of level 3 assets), the valuation processes are comparable to private equity valuations, with quarterly valuations as discussed in the following paragraph.
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 funds transact in what are presently 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 30,2016 , it is probable $\$ 3.50$ billion and $\$ 1.58$ billion of the investments in the private equity and real estate funds type, respectively, will be sold at an amount different from the NAV of the INPRS' ownership interest in partners' capital. Therefore, the fair values of the investments in this type have been estimated using recent observable transaction information for similar investments and non-binding bids received from potential buyers of the investments (one quarter in arrears plus current quarter cash flows). As of June 30, 2016, 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.

Notes to the Financial Statements, continued
June 30, 2016

## 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 held by INPRS 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 INPRS' 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. INPRS' 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, INPRS' 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.

Notes to the Financial Statements, continued
June 30, 2016

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.

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.

The Fund enters into foreign currency forwards 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, 2016

## (B) Derivative Contracts

The table below summarizes INPRS' derivative contracts for the year ended June 30, 2016:
(dollars in thousands)

| Investment Derivatives | Change in Fair Value |  | Fair Value |  | Notional |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Futures: |  |  |  |  |  |  |
| Index Futures - Long | \$ | $(16,837)$ | \$ | $(16,837)$ | \$ | 655,537 |
| Commodity Futures - Long |  | 17,313 |  | 17,313 |  | 1,287,059 |
| Fixed Income Futures - Long |  | 18,922 |  | 18,922 |  | 674,041 |
| Fixed Income Futures - Short |  | $(5,486)$ |  | $(5,486)$ |  | $(517,326)$ |
| Total Futures |  | 13,912 |  | 13,912 |  | 2,099,311 |

## Options:

Currency Spot Options Bought
Currency Spot Options Written
Interest Rate Options Bought
Interest Rate Options Written
Fixed Income Options Bought
Fixed Income Options Written
Inflation Rate Swaptions Bought
Total Options
Swaps:
Interest Rate Swaps - Pay Fixed Receive Variable
Interest Rate Swaps - Pay Variable Receive Fixed
Overnight Index Interest Rate Swaps -
Pay Fixed Receive Variable
Overnight Index Interest Rate Swaps -
Pay Variable Receive Fixed
Inflation Swaps- Pay Fixed Receive Variable
Inflation Swaps- Pay Variable Receive Fixed
Currency Swaps
Total Return Swaps
Credit Default Swaps Single Name - Buy Protection
Credit Default Swaps Single Name - Sell Protection
Credit Default Swaps Index - Buy Protection
Credit Default Swaps Index - Sell Protection
Total Swaps
Total Derivatives

| 164 | 953 | 42,585 |
| :---: | :---: | :---: |
| 423 | (612) | 56,980 |
| 695 | 3,940 | 344,950 |
| (864) | $(4,175)$ | 497,720 |
| (31) | 36 | 36 |
| (26) | (43) | (43) |
| (29) | 1 | 31,610 |
| 332 | 100 | 973,838 |
| $(13,047)$ | $(16,923)$ | 702,146 |
| 2,720 | 2,156 | 428,182 |
| (15) | (15) | 6,626 |
| (4) | (45) | 8,272 |
| (643) | (666) | 37,690 |
| 303 | 303 | 4,708 |
| 135 | 134 | 27,664 |
| 98 | 98 | 15,142,148 |
| (76) | (115) | 62,670 |
| 126 | (150) | 13,325 |
| (84) | (427) | 13,300 |
| 192 | 674 | 29,810 |
| $(10,295)$ | $(14,976)$ | 16,476,541 |
| \$ 3,949 | \$ (964) | \$ 19,549,690 |

Notes to the Financial Statements, continued
June 30, 2016

The table below summarizes the swap maturity profile as of June 30, 2016.

| (dollars in thousands) | Swap Maturity Profile at June 30, 2016 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Swap Type | $<1 \mathrm{yr}$ |  | $1-5 \mathrm{yrs}$ |  | 5-10 yrs |  | 10-20 yrs |  | $20+\mathrm{yrs}$ |  | Total |  |
| Interest Rate Swaps - Pay Fixed Receive Variable | \$ | 142 | \$ | $(4,545)$ | \$ | $(5,432)$ | \$ | $(2,427)$ | \$ | $(4,661)$ |  | $(16,923)$ |
| Interest Rate Swaps - Pay Variable Receive Fixed |  | (70) |  | 2,881 |  | 459 |  | $(1,162)$ |  | 48 |  | 2,156 |
| Overnight Index Interest Rate Swaps Pay Fixed Receive Variable |  | (15) |  | - |  | - |  | - |  | - |  | (15) |
| Overnight Index Interest Rate Swaps - Pay Variable Receive Fixed |  | - |  | (45) |  | - |  | - |  | - |  | (45) |
| Inflation Swaps - Pay Fixed Receive Variable |  | - |  | (666) |  | - |  | - |  | - |  | (666) |
| Inflation Swaps - Pay Variable Receive Fixed |  | - |  | - |  | 39 |  | 264 |  | - |  | 303 |
| Currency Swaps |  | - |  | (77) |  | (134) |  | 345 |  | - |  | 134 |
| Total Return Swaps |  | 98 |  | - |  | - |  | - |  | - |  | 98 |
| Credit Default Swaps Single Name - Buy Protection |  | - |  | (115) |  | - |  | - |  | - |  | (115) |
| Credit Default Swaps Single Name - Sell Protection |  | - |  | (78) |  | (66) |  | - |  | (6) |  | (150) |
| Credit Default Swaps Index - Buy Protection |  | - |  | (427) |  | - |  | - |  | - |  | (427) |
| Credit Default Swaps Index - Sell Protection |  | - |  | 674 |  | - |  | - |  | - |  | 674 |
| Total Swap Fair Value | \$ | 155 | \$ | $(2,398)$ | \$ | $(5,134)$ | \$ | $(2,980)$ | \$ | $(4,619)$ | \$ | $(14,976)$ |

## (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.

INPRS' investment managers use International Swaps and Derivative Association 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 , 2016, was $\$ 21.59$ million, of which $\$ 18.61$ million was uncollateralized.

## Indiana Public Retirement System

Notes to the Financial Statements, continued
June 30, 2016
The table below summarizes the counterparty positions as of June 30, 2016:

| (dollars in thousands) <br> Swaps Counterparty | S\&P <br> Rating | Fair Value |  |  |  |  |  | Collateral |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Receivable Unrealized Gain |  | Payable (Unrealized Loss) |  | Total <br> Fair Value |  | Posted |  | Received |  |
| Bank of America | BBB+ | \$ | 98 | \$ | (129) | \$ | 49 | S | 100 | \$ | (210) |
| Banque Nationale De Paris | A |  | 1,478 |  | (312) |  | 1,288 |  | - |  | $(1,280)$ |
| Barclays | BBB |  | 203 |  | (104) |  | (86) |  | - |  | - |
| Citigroup Inc. | BBB+ |  | 665 |  | (870) |  | (315) |  | 1,107 |  | (350) |
| CME Group | AA- |  | 8,781 |  | $(14,361)$ |  | $(9,298)$ |  | 800 |  | - |
| Credit Suisse | BBB+ |  | 443 |  | (125) |  | 401 |  | 56 |  | (202) |
| Deutsche Bank | BBB+ |  | 5,661 |  | $(5,873)$ |  | (167) |  | 200 |  | (510) |
| Goldman Sachs | BBB+ |  | 174 |  | (527) |  | (405) |  | 1,930 |  | - |
| HSBC Securities Inc. | A |  | 7 |  | (186) |  | (186) |  | - |  | $(1,680)$ |
| Intercontinental Exchange Inc. | A |  | 598 |  | (490) |  | 247 |  | 283 |  | - |
| JPMorgan Chase Bank | A- |  | 306 |  | (374) |  | (111) |  | 390 |  | - |
| London Clearing House | BBB+ |  | 2,643 |  | $(8,421)$ |  | $(6,732)$ |  | 131 |  | - |
| Morgan Stanley | BBB+ |  | 529 |  | (138) |  | 339 |  | 1,550 |  | (950) |
| Total |  | \$ | 21,586 | \$ | $(31,910)$ | \$ | $(14,976)$ | \$ | 6,547 | \$ | $(5,182)$ |

Notes to the Financial Statements, continued
June 30, 2016

## (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 (F). The table below summarizes INPRS' 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 | 1.32\% to 2.50\% | 3M USD LIBOR | \$ | $(14,838)$ | \$ | 475,112 |
| Brazilian Real | 12.29\% to 15.77\% | 1D BRL CDI |  | 1,496 |  | 54,093 |
| Pound Sterling | 0.36\% | 12M GBP WMBA SONIA COMPOUND |  | (7) |  | 45,344 |
| Euro Currency Unit | 0.38\% to 0.40\% | 3M EURIBOR REUTERS |  | 8 |  | 26,874 |
| Pound Sterling | 1.60\% to $2.25 \%$ | 6M GBP LIBOR BBA |  | $(1,613)$ |  | 20,707 |
| Euro Currency Unit | 0.00\% to $1.70 \%$ | 6M EURIBOR REUTERS |  | (634) |  | 20,558 |
| Japanese Yen | 0.30\% to 0.90\% | 6M JPY LIBOR BBA |  | (754) |  | 16,967 |
| Colombian Peso | 5.19\% to $7.26 \%$ | 1D COP COOVIBR |  | 50 |  | 14,506 |
| Hungarian Forint | 1.38\% to 2.42\% | 6M BUBOR REUTERS |  | (208) |  | 6,952 |
| Indian Rupee | 6.42\% | INR MIBOR OIS COMPOUND |  | 33 |  | 5,928 |
| Malaysian Ringgit | 0.00\% to 4.52\% | 3M KLIBOR |  | (61) |  | 3,775 |
| South Korean Won | $3.49 \%$ to $3.56 \%$ | 3M KRW KWCDC COD |  | (421) |  | 2,668 |
| Hong Kong Dollar | 1.50\% | 3M HIBOR BLOOMBERG |  | 40 |  | 2,572 |
| Swedish Krona | 0.05\% to 1.00\% | 3M SEK STIBOR SIDE |  | (35) |  | 2,186 |
| Mexican Peso | 5.18\% to 5.86\% | 28D MXN TIIE BANXICO |  | 8 |  | 1,777 |
| Czech Koruna | 0.55\% | 6M CZK PRIBOR PRBO |  | (8) |  | 1,173 |
| South African Rand | 7.89\% to 8.55\% | 3M ZAR JIBAR SAFEX |  | 6 |  | 527 |
| Colombian Peso | 5.11\% | 90 DAYS DTF RATE |  | 15 |  | 427 |
|  |  |  | \$ | $(16,923)$ | \$ | 702,146 |

Interest Rate Swap- Pay Variable Receive Fixed:
U.S. Dollar

Brazilian Real
Thailand Baht
Euro Currency Unit
Mexican Peso
Canadian Dollar
Pound Sterling
South Korean Won
South African Rand
South Korean Won
Chinese Yuan Renminbi
Pound Sterling
Swedish Krona
Australian Dollar
Brazilian Real
Polish Zloty

3M USD LIBOR BBA
1D BRLCDI
6M THB THBFIX REUTERS
6M EURIBOR REUTERS
28D MXN TIIE BANXICO
3M CAD BA CDOR
3M GBP LIBOR BBA
3M KRW CD KSDA
3M ZAR JIBAR SAFEX
3M KRW KWCDC COD
7D CHINA FIXING REPO RATES
6M GBP LIBOR BBA
3M SEK STIBOR SIDE
6M AUD BBR BBSW
1M BRLCDI
6M WIBOR WIBO

| 1.75\% to 2.75\% | \$ | 1,264 | \$ | 255,340 |
| :---: | :---: | :---: | :---: | :---: |
| 10.73\% to 14.56\% |  | (507) |  | 51,973 |
| 1.52\% to 1.90\% |  | 43 |  | 20,547 |
| 0.86\% to $1.57 \%$ |  | 618 |  | 18,775 |
| 5.25\% to 7.10\% |  | (135) |  | 15,527 |
| 1.50\% |  | 400 |  | 14,337 |
| 0.40\% to 0.46\% |  | 26 |  | 11,577 |
| 1.46\% to 2.88\% |  | 122 |  | 10,618 |
| 6.225\% to 7.64\% |  | (197) |  | 9,578 |
| 2.03\% to 2.94\% |  | 151 |  | 6,454 |
| 2.75\% to 2.98\% |  | 50 |  | 3,885 |
| 2.19\% |  | 302 |  | 2,941 |
| 0.05\% |  | 26 |  | 2,718 |
| 2.50\% |  | 47 |  | 1,742 |
| 11.12\% to 11.15\% |  | (64) |  | 1,305 |
| 2.02\% |  | 10 |  | 865 |
|  | \$ | 2,156 | \$ | 428,182 |

## Indiana Public Retirement System

Notes to the Financial Statements, continued
June 30, 2016

## (E) Foreign Currency Risk

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

At June 30, 2016, INPRS' investments included a foreign currency contract receivable balance of $\$ 5.97$ billion and an offsetting foreign currency contract payable of $\$ 5.95$ billion

The net loss recognized for the fiscal year ended June 30,2016 due to foreign currency transactions was $\$ 13.51$ million.

## Note 5. Long Term Commitments for Alternative Investments

INPRS enters into long-term commitments for funding other investments in private equity and private real estate. These amounts include Euro currency, Norwegian Krone and British Pound Sterling denominated commitments to limited liability partnerships. The remaining amount of unfunded commitments, converted to U.S. dollars using the closing exchange rate, as of June 30, 2016, is as follows:
(dollars in thousands)

| Currency | Total Unfunded Commitments |  |
| :---: | :---: | :---: |
| U.S. Dollar | \$ | 2,276,253 |
| Euro Currency Unit |  | 31,144 |
| Norwegian Krone |  | 3,675 |
| British Pound Sterling |  | 872 |
| Total | \$ | 2,311,944 |

## Note 6. 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.

Notes to the Financial Statements, continued
June 30, 2016

## Note 7. Contingent Liabilities

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

## Note 8. 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, 2016:

| (dollars in thousands) |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pre-Funded Defined Benefit Pension Trust Funds | Total Pension Liability (a) |  | Fiduciary Net Position (b) |  | Net Pension Liability (Surplus) (a) - (b) |  | Fiduciary Net Position as a Percent of Total Pension Liability (b) / (a) |
| PERF | \$ | 18,408,947 | \$ | 13,870,502 | \$ | 4,538,445 | 75.3 \% |
| TRF 1996 Account |  | 6,391,750 |  | 5,611,230 |  | 780,520 | 87.8 |
| 1977 Fund |  | 5,039,836 |  | 4,950,999 |  | 88,837 | 98.2 |
| JRS |  | 501,125 |  | 441,790 |  | 59,335 | 88.2 |
| EG\&C Plan |  | 138,965 |  | 111,329 |  | 27,636 | 80.1 |
| PARF |  | 85,033 |  | 52,792 |  | 32,241 | 62.1 |
| LEDB Plan |  | 4,015 |  | 2,919 |  | 1,096 | 72.7 |

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

TRF Pre-1996 Account \$ 16,840,200 \$ 4,787,529 \$ 12,052,671 $28.4 \%$

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. There were no changes in assumptions and methods for financial reporting purposes.

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 at 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, 2016

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

| Description | PERF | TRF <br> Pre-1996 <br> Account | TRF 1996 Account | $1977$ <br> Fund | JRS | $\begin{gathered} \text { EG\&C } \\ \text { Plan } \end{gathered}$ | PARF | $\begin{gathered} \text { LEDB } \\ \text { Plan } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Valuation Date: |  |  |  |  |  |  |  |  |
| Assets | June 30, 2016 |  |  |  |  |  |  |  |
| Liabilities | June 30, 2015 - Member census data as of June 30, 2015 was used in the valuation and adjusted, where appropriate, to reflect changes between June 30,2015 and June 30, 2016. Standard actuarial roll forward techniques were then used to project the total pension liability computed as of June 30, 2015 to the June 30, 2016 measurement date. |  |  |  |  |  |  |  |
| Actuarial Cost Method (Accounting) | Entry Age Normal (Level Percent of Payroll) |  |  |  |  |  |  |  |
| Actuarial Assumptions: |  |  |  |  |  |  |  |  |
| Experience Study Date | Period of 4 years ended June 30, 2014 | Period of 3 June | $\begin{aligned} & \text { years ended } \\ & 0,2014 \end{aligned}$ | Period of 4 years ended June 30, 2014 |  |  |  |  |
| Investment Rate of Return (Accounting) | $6.75 \%$, net of investment expense, including inflation |  |  |  |  |  |  |  |
| 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\% | 2.5\% - 12.5\% |  | 2.5\% | 2.5\% | 2.5\% | 4.0\% | 2.25\% |
| Inflation | 2.25\% |  |  |  |  |  |  |  |
| Mortality | 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 <br> Collar Mortality Table, with Social Security Administration generational improvement scale from 2006 | RP-2014 White <br> 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 |  |

The long-term return expectation for the INPRS defined benefit retirement plans has been determined by using a buildingblock 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, 2016

| Public Equity | $5.7 \%$ | $22.0 \%$ |
| :--- | :--- | :---: |
| Private Equity | 6.2 | 10.0 |
| Fixed Income - Ex Inflation-Linked | 2.7 | 24.0 |
| Fixed Income - Inflation-Linked | 0.7 | 7.0 |
| Commodities | 2.0 | 8.0 |
| Real Estate | 2.7 | 7.0 |
| Absolute Return | 4.0 | 10.0 |
| Risk Parity | 5.0 | 12.0 |

Total pension liability for each defined benefit pension plan was calculated using the discount rate of 6.75 percent. 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 long-term assumed investment rate of return ( 6.75 percent). 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, and to illustrate the potential impact the following table presents the net pension liability of each defined benefit pension plan calculated using the discount rate of 6.75 percent, 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 ( $5.75 \%$ ), or one percentage point higher ( $7.75 \%$ ) than the current rate:
(dollars in thousands)

## Pre-Funded Defined Benefit Pension Trust Funds

PERF
TRF 1996 Account
1977 Fund
JRS
EG\&C Plan
PARF
LEDB Plan
Pay-As-You-Go Defined Benefit Pension Trust Fund

| $\begin{aligned} & \text { 1\% Decrease } \\ & (5.75 \%) \\ & \hline \end{aligned}$ |  | $\begin{aligned} & \text { Current Discount } \\ & \quad \text { Rate (6.75\%) } \\ & \hline \end{aligned}$ |  | $\begin{gathered} \text { 1\% Increase } \\ (7.75 \%) \\ \hline \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| \$ | 6,518,281 | \$ | 4,538,445 | \$ | 2,892,901 |
|  | 1,737,603 |  | 780,520 |  | 15,494 |
|  | 907,182 |  | 88,837 |  | $(571,476)$ |
|  | 117,520 |  | 59,335 |  | 10,549 |
|  | 46,676 |  | 27,636 |  | 12,008 |
|  | 42,865 |  | 32,241 |  | 23,483 |
|  | 1,398 |  | 1,096 |  | 832 |

TRF Pre-1996 Account $\quad \$ \quad 13,630,767 \quad \$ \quad 12,052,671 \quad \$ \quad 10,707,809$

Notes to the Financial Statements, continued
June 30, 2016

## Note 9. Subsequent Events

## Financial Statement Events

Events or transactions that were known prior to the date the financial statements were issued, that provided additional evidence about conditions that existed at June 30,2016 , were not material to the financial statements and were not recognized in the financial statements for the year ended June $30,2016$.

Events or transactions that were known prior to the date the financial statements were issued, that provided additional evidence about conditions that did not exist at June 30,2016 , were not material to the financial statements and were not disclosed in the financial statements for the year ended June 30, 2016.

## Legislative Changes

Below is a summary of significant legislative changes that are effective July 1, 2016. These changes have been reflected in the actuarial valuations as of June $30,2016$.

## Public Employees' Retirement Fund (HEA 1161)

- PERF members, beneficiaries, and survivors received a one-time check, based on years of service, 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.


## Teachers' Retirement Fund - TRF Pre-1996 Account (HEA 1161)

- TRF members, beneficiaries, and survivors received a one-time check, based on years of service, 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.


## Teachers' Retirement Fund - TRF 1996 Account (HEA 1161)

- TRF members, beneficiaries, and survivors received a one-time check, based on years of service, 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.


## 1977 Police Officers' and Firefighters' Pension and Disability Fund

- A 1.1 percent COLA was approved for eligible participants effective July 1, 2016, in accordance with IC 36-8-8-15.


## Judges Retirement System

- A 3.1 percent COLA was approved for eligible participants effective July 1, 2016, in accordance with IC 33-38-8-25.


## State Excise Police, Gaming Agent, Gaming Control Officer, and Conservation Enforcement Officers' Retirement Plan (HEA 1161)

- EG\&C Plan members, beneficiaries, and survivors received a one-time check, based on years of service, 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.


Introduction to Required Supplementary Information and Other Supplementary Schedules

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

Net Pension Liability
Total Pension Liability
Fiduciary Net Position
Net Pension Liability
Fiduciary Net Position as a Percentage of the Total Pension Liability

| $\$$ | $18,408,947$ |
| :--- | ---: |
|  | $13,870,502$ |
| $\$ \quad 4,538,445$ |  |


| $\$$ | $17,980,568$ |
| :--- | ---: |
|  | $13,907,666$ |
| $\$$ | $4,072,902$ |



| Covered Payroll ${ }^{8}$ | $\$$ | $4,853,224$ | $\$$ | $4,804,145$ | $\$$ |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Net Pension Liability as a Percentage of Covered Payroll | $93.5 \%$ | $84.8 \%$ | $4,700,000$ |  |  |

${ }^{1}$ 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 $\$ 317$ thousand for 2016 and $\$ 290$ thousand for 2015 of employer service purchases.
${ }^{5}$ Includes ASA lump sum payments to retired members and refunds of employee contributions associated with ASA balances.
${ }^{6}$ Includes net interfund transfers.
${ }^{7}$ Includes $\$ 1,302$ thousand for 2016 and $\$ 1,213$ thousand for 2015 of contributions by INPRS for its employees.
${ }^{8} 2013$ covered payroll was adjusted to reflect actual contribution rates.

## Indiana Public Retirement System

Required Supplementary Information, continued
For the Year Ended June 30

Schedules of Changes in Net Pension Liability and Net Pension Liability ${ }^{1}$
Teachers' Retirement Fund Pre-1996 Account
(dollars in thousands)

| Changes in Net Pension Liability | 2016 |  | 2015 |  | 2014 |  | 2013 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Pension Liability - Beginning of Year | \$ | 17,017,747 | \$ | 16,355,216 | \$ | 16,463,598 | \$ | 16,522,015 |
| Annuity Savings Account (ASA) - Beginning of Year |  | 1,421,455 |  | 1,715,340 |  | 1,814,049 |  | 1,974,076 |
| Excluding ASA - Beginning of Year |  | 15,596,292 |  | 14,639,876 |  | 14,649,549 |  | 14,547,939 |
| Service Cost |  | 46,787 |  | 57,751 |  | 68,860 |  | 81,343 |
| Interest Cost |  | 1,019,403 |  | 959,895 |  | 961,628 |  | 957,228 |
| Experience (Gains) / Losses |  | $(5,794)$ |  | $(140,466)$ |  | $(70,517)$ |  | $(40,719)$ |
| Assumption Changes |  |  |  | 1,033,158 |  |  |  |  |
| Plan Amendments |  |  |  |  |  | $(25,524)$ |  |  |
| Benefit Payments ${ }^{2}$ |  | $(1,118,122)$ |  | $(1,100,434)$ |  | $(1,034,563)$ |  | $(988,335)$ |
| ASA Annuitizations |  | 35,185 |  | 143,225 |  | 93,982 |  | 86,941 |
| Net Member Reassignment ${ }^{3}$ |  | - |  | 3,266 |  | $(3,802)$ |  | - |
| Other |  | 1,321 |  | 21 |  | 263 |  | 5,152 |
| Net Change in Total Pension Liability - Excluding ASA |  | $(21,220)$ |  | 956,416 |  | $(9,673)$ |  | 101,610 |
| Net Change in Total Pension Liability - ASA |  | $(156,327)$ |  | $(293,885)$ |  | $(98,709)$ |  | $(160,027)$ |
| Net Change in Total Pension Liability |  | $(177,547)$ |  | 662,531 |  | $(108,382)$ |  | $(58,417)$ |
| Total Pension Liability - Excluding ASA - End of Year |  | 15,575,072 |  | 15,596,292 |  | 14,639,876 |  | 14,649,549 |
| Total Pension Liability - ASA - End of Year |  | 1,265,128 |  | 1,421,455 |  | 1,715,340 |  | 1,814,049 |
| Total Pension Liability - Ending | \$ | 16,840,200 | \$ | 17,017,747 | \$ | 16,355,216 | \$ | 16,463,598 |
| Fiduciary Net Position - Beginning of Year | \$ | 5,099,910 | \$ | 5,501,867 | \$ | 5,215,202 | \$ | 5,058,910 |
| Employer Contributions |  | 5,048 |  | 5,811 |  | 6,325 |  | 9,484 |
| Nonemployer Contributing Entity Contributions |  | 887,500 |  | 845,616 |  | 825,617 |  | 1,003,596 |
| Member Contributions |  | 31,529 |  | 41,740 |  | 47,028 |  | 45,421 |
| Net Investment Income / (Loss) |  | 42,429 |  | 36,885 |  | 647,581 |  | 315,598 |
| Benefit Payments ${ }^{4}$ |  | (1,272,954) |  | $(1,328,854)$ |  | $(1,229,301)$ |  | $(1,212,945)$ |
| Net Member Reassignment ${ }^{5}$ |  | 631 |  | 3,354 |  | $(3,594)$ |  | 3,059 |
| Administrative Expenses |  | $(6,564)$ |  | $(6,530)$ |  | $(7,010)$ |  | $(7,926)$ |
| Other |  | - |  | 21 |  | 19 |  | 5 |
| Net Change in Fiduciary Net Position |  | $(312,381)$ |  | $(401,957)$ |  | 286,665 |  | 156,292 |
| Fiduciary Net Position - End of Year | \$ | 4,787,529 | \$ | 5,099,910 | \$ | 5,501,867 | \$ | 5,215,202 |
| Net Pension Liability |  |  |  |  |  |  |  |  |
| Total Pension Liability | \$ | 16,840,200 | \$ | 17,017,747 | \$ | 16,355,216 | \$ | 16,463,598 |
| Fiduciary Net Position |  | 4,787,529 |  | 5,099,910 |  | 5,501,867 |  | 5,215,202 |
| Net Pension Liability | \$ | 12,052,671 | \$ | 11,917,837 | \$ | 10,853,349 | \$ | 11,248,396 |

Fiduciary Net Position as a Percentage of the Total

| Covered Payroll |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\$$ | 989,093 | $\$$ | $1,074,827$ | $\$$ | $1,262,828$ | $\$$ |
| Net Pension Liability as a Percentage of Covered Payroll |  | $1,218.6 \%$ | $1,108.8 \%$ | $859.4 \%$ | $813.1 \%$ |  |  |

${ }^{1}$ Information is not available prior to 2013. Additional years will be added until 10 years of historical data are shown.
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.

## Indiana Public Retirement System

Required Supplementary Information, continued
For the Year Ended June 30

Schedules of Changes in Net Pension Liability and Net Pension Liability ${ }^{1}$
Teachers' Retirement Fund 1996 Account
(dollars in thousands)

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

## Net Pension Liability <br> Total Pension Liability <br> Fiduciary Net Position

## Net Pension Liability

Fiduciary Net Position as a Percentage of the Total Pension Liability

| $\$$ | $6,391,750$ |
| :--- | ---: |
|  | $5,611,230$ |
| $\$$ | $\mathbf{7 8 0 , 5 2 0}$ |


| $\$$ | $5,905,691$ |
| ---: | ---: |
|  | $5,379,113$ |
| $\$$ | 526,578 |


| $\$$ | $5,236,993$ |
| :--- | ---: |
|  | $5,189,442$ |
| $\$$ | 47,551 |


| \$ | $4,748,149$ |
| :--- | ---: |
|  | $4,433,677$ |
| $\$$ | 314,472 |


|  | 87.8 \% |  | 91.1 \% |  | 99.1 \% |  | 93.4 \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \$ | 2,881,397 | \$ | 2,742,187 | \$ | 2,598,115 | \$ | 2,442,496 |
|  | 27.1 \% |  | 19.2 \% |  | 1.8 \% |  | 12.9 \% |

[^8]
## Indiana Public Retirement System

Required Supplementary Information, continued
For the Year Ended June 30

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

| Changes in Net Pension Liability | 2016 |  | 2015 |  | 2014 |  | 2013 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Pension Liability - Beginning of Year | \$ | 4,680,695 | \$ | 4,706,998 | \$ | 4,392,947 | \$ | 4,122,436 |
| Service Cost |  | 129,369 |  | 138,204 |  | 133,075 |  | 130,912 |
| Interest Cost |  | 320,218 |  | 323,129 |  | 301,824 |  | 283,733 |
| Experience (Gains) / Losses |  | 41,723 |  | $(61,640)$ |  | $(11,754)$ |  | $(39,592)$ |
| Assumption Changes |  |  |  | $(309,801)$ |  |  |  | $(4,810)$ |
| Plan Amendments |  |  |  |  |  |  |  |  |
| Benefit Payments ${ }^{2}$ |  | $(132,746)$ |  | $(116,490)$ |  | $(109,094)$ |  | $(99,803)$ |
| Net Member Reassignment ${ }^{3}$ |  | (74) |  |  |  |  |  | 71 |
| Other |  | 651 |  | 295 |  | - |  | - |
| Net Change in Total Pension Liability |  | 359,141 |  | $(26,303)$ |  | 314,051 |  | 270,511 |
| Total Pension Liability - End of Year | \$ | 5,039,836 | \$ | 4,680,695 | \$ | 4,706,998 | \$ | 4,392,947 |
| Fiduciary Net Position - Beginning of Year | \$ | 4,828,415 | \$ | 4,757,978 | \$ | 4,116,861 | \$ | 3,817,013 |
| Employer Contributions ${ }^{4}$ |  | 151,674 |  | 146,697 |  | 140,119 |  | 137,111 |
| Member Contributions |  | 44,918 |  | 43,523 |  | 41,791 |  | 40,786 |
| Net Investment Income / (Loss) |  | 60,320 |  | $(1,600)$ |  | 570,058 |  | 223,510 |
| Benefit Payments ${ }^{2}$ |  | $(132,746)$ |  | $(116,490)$ |  | $(109,094)$ |  | $(99,803)$ |
| Net Member Reassignment ${ }^{3}$ |  | (74) |  | - |  | - |  | 71 |
| Administrative Expenses |  | $(1,651)$ |  | $(1,708)$ |  | $(1,787)$ |  | $(1,845)$ |
| Other |  | 143 |  | 15 |  | 30 |  | 18 |
| Net Change in Fiduciary Net Position |  | 122,584 |  | 70,437 |  | 641,117 |  | 299,848 |
| Fiduciary Net Position - End of Year | \$ | 4,950,999 | \$ | 4,828,415 | \$ | 4,757,978 | \$ | 4,116,861 |
| Net Pension Liability / (Asset) |  |  |  |  |  |  |  |  |
| Total Pension Liability | \$ | 5,039,836 | \$ | 4,680,695 | \$ | 4,706,998 | \$ | 4,392,947 |
| Fiduciary Net Position |  | 4,950,999 |  | 4,828,415 |  | 4,757,978 |  | 4,116,861 |
| Net Pension Liability / (Asset) | \$ | 88,837 | \$ | $(147,720)$ | \$ | (50,980) | \$ | 276,086 |
| Fiduciary Net Position as a Percentage of the Total Pension Liability | 98.2 \% |  |  | 103.2 \% |  | 101.1 \% |  | 93.7 \% |
| Covered Payrol\| ${ }^{5}$ | \$ | 771,949 | \$ | 745,336 | \$ | 710,581 | \$ | 695,000 |
| Net Pension Liability / (Asset) as a Percentage of Covered Payroll |  | 11.5 \% |  | (19.8) \% |  | (7.2) \% |  | 39.7 \% |

[^9]
## Indiana Public Retirement System

Required Supplementary Information, 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 | 2016 |  | 2015 |  | 2014 |  | 2013 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Pension Liability - Beginning of Year | \$ | 468,944 | \$ | 464,855 | \$ | 453,110 | \$ | 437,854 |
| Service Cost |  | 13,870 |  | 15,283 |  | 15,302 |  | 16,084 |
| Interest Cost |  | 31,889 |  | 31,753 |  | 30,992 |  | 30,047 |
| Experience (Gains) / Losses |  | 7,182 |  | 8,411 |  | $(16,026)$ |  | $(13,603)$ |
| Assumption Changes |  | - |  | $(31,926)$ |  | - |  | 186 |
| Plan Amendments |  | - |  | - |  | - |  | - |
| Benefit Payments ${ }^{2}$ |  | $(20,922)$ |  | $(19,432)$ |  | $(18,527)$ |  | $(17,579)$ |
| Net Member Reassignment ${ }^{3}$ |  | - |  | - |  | 4 |  | 121 |
| Other |  | 162 |  | - |  | - |  | - |
| Net Change in Total Pension Liability |  | 32,181 |  | 4,089 |  | 11,745 |  | 15,256 |
| Total Pension Liability - End of Year | \$ | 501,125 | \$ | 468,944 | \$ | 464,855 | \$ | 453,110 |
| Fiduciary Net Position - Beginning of Year | \$ | 437,352 | \$ | 432,730 | \$ | 375,752 | \$ | 262,326 |
| Employer Contributions |  | 16,946 |  | 21,020 |  | 20,895 |  | 111,419 |
| Member Contributions |  | 3,239 |  | 3,292 |  | 2,856 |  | 2,631 |
| Net Investment Income / (Loss) |  | 5,323 |  | (102) |  | 51,890 |  | 16,955 |
| Benefit Payments ${ }^{2}$ |  | $(20,922)$ |  | $(19,432)$ |  | $(18,527)$ |  | $(17,579)$ |
| Net Member Reassignment ${ }^{3}$ |  | - |  | - |  | 4 |  | 121 |
| Administrative Expenses |  | (148) |  | (165) |  | (146) |  | (126) |
| Other |  | - |  | 9 |  | 6 |  | 5 |
| Net Change in Fiduciary Net Position |  | 4,438 |  | 4,622 |  | 56,978 |  | 113,426 |
| Fiduciary Net Position - End of Year | \$ | 441,790 | \$ | 437,352 | \$ | 432,730 | \$ | 375,752 |
| Net Pension Liability |  |  |  |  |  |  |  |  |
| Total Pension Liability | \$ | 501,125 | \$ | 468,944 | \$ | 464,855 | \$ | 453,110 |
| Fiduciary Net Position |  | 441,790 |  | 437,352 |  | 432,730 |  | 375,752 |
| Net Pension Liability | \$ | 59,335 | \$ | 31,592 | \$ | 32,125 | \$ | 77,358 |
| Fiduciary Net Position as a Percentage of the Total Pension Liability |  |  |  |  |  |  |  |  |
| Covered Payroll ${ }^{4}$ | \$ | 51,382 | \$ | 48,582 | \$ | 46,041 | \$ | 47,595 |
| Net Pension Liability / (Asset) as a Percentage of |  |  |  |  |  |  |  |  |
| ${ }^{1}$ Information is not available prior to 2013. Additional ye <br> ${ }^{2}$ Includes refunds of employee contributions. <br> ${ }^{3}$ Includes net interfund transfers. <br> ${ }^{4} 2013$ represents anticipated covered payroll. | until | rs of historic | data | wn. |  |  |  |  |

## Indiana Public Retirement System

Required Supplementary Information, continued
For the Year Ended June 30

Schedules of Changes in Net Pension Liability and Net Pension Liability ${ }^{1}$
State Excise Police, Gaming Agent, Gaming Control Officer, and Conservation Enforcement Officers' Retirement Plan

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

## Indiana Public Retirement System

Required Supplementary Information, 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 | 2016 |  | 2015 |  | 2014 |  | 2013 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Pension Liability - Beginning of Year | \$ | 77,861 | \$ | 65,336 | \$ | 61,940 | \$ | 56,080 |
| Service Cost |  | 1,626 |  | 1,603 |  | 1,587 |  | 1,568 |
| Interest Cost |  | 5,239 |  | 4,409 |  | 4,207 |  | 3,816 |
| Experience (Gains) / Losses |  | 4,058 |  | 4,551 |  |  |  | 1,474 |
| Assumption Changes |  | - |  | 5,216 |  |  |  | (109) |
| Plan Amendments |  | - |  | - |  |  |  | 1,346 |
| Benefit Payments ${ }^{2}$ |  | $(3,747)$ |  | $(3,254)$ |  | $(2,398)$ |  | $(2,235)$ |
| Net Member Reassignment ${ }^{3}$ |  |  |  |  |  |  |  | - |
| Other |  | (4) |  | - |  |  |  | - |
| Net Change in Total Pension Liability |  | 7,172 |  | 12,525 |  | 3,396 |  | 5,860 |
| Total Pension Liability - End of Year | \$ | 85,033 | \$ | 77,861 | \$ | 65,336 | \$ | 61,940 |
| Fiduciary Net Position - Beginning of Year | \$ | 53,424 | \$ | 54,507 | \$ | 47,920 | \$ | 27,689 |
| Employer Contributions |  | 1,440 |  | 1,063 |  | 1,174 |  | 19,443 |
| Member Contributions |  | 1,279 |  | 1,269 |  | 1,334 |  | 1,271 |
| Net Investment Income / (Loss) |  | 589 |  | (34) |  | 6,581 |  | 1,897 |
| Benefit Payments ${ }^{2}$ |  | $(3,747)$ |  | $(3,254)$ |  | $(2,398)$ |  | $(2,235)$ |
| Net Member Reassignment ${ }^{3}$ |  | - |  | - |  |  |  | - |
| Administrative Expenses |  | (193) |  | (127) |  | (108) |  | (145) |
| Other |  | - |  | - |  | 4 |  | - |
| Net Change in Fiduciary Net Position |  | (632) |  | $(1,083)$ |  | 6,587 |  | 20,231 |
| Fiduciary Net Position - End of Year | \$ | 52,792 | \$ | 53,424 | \$ | 54,507 | \$ | 47,920 |
| Net Pension Liability |  |  |  |  |  |  |  |  |
| Total Pension Liability | \$ | 85,033 | \$ | 77,861 | \$ | 65,336 | \$ | 61,940 |
| Fiduciary Net Position |  | 52,792 |  | 53,424 |  | 54,507 |  | 47,920 |
| Net Pension Liability | \$ | 32,241 | \$ | 24,437 | \$ | 10,829 | \$ | 14,020 |
| Fiduciary Net Position as a Percentage of the Pension Liability |  | 62.1 |  | 68.6 |  | 83.4 |  | 77.4 \% |
| Covered Payroll ${ }^{4}$ | \$ | 21,372 | \$ | 21,145 | \$ | 20,608 | \$ | 18,805 |
| Net Pension Liability / (Asset) as a Percentage of |  |  |  |  |  |  |  |  |
| ${ }^{1}$ 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> ${ }^{4} 2013$ represents anticipated covered payroll. |  |  |  |  |  |  |  |  |

## Indiana Public Retirement System

Required Supplementary Information, continued
For the Year Ended June 30

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


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

| For the Year Ended June 30 |  | arially mined ibution DC) | Contributions in Relation to ADC ${ }^{1}$ |  |  | bution ency ess) | Contributions as a Percentage of ADC |  | vered yroll | Contributions as a Percentage of Covered Payroll |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Public Employees' Retirement Fund |  |  |  |  |  |  |  |  |  |  |
| $2016{ }^{2,3}$ | \$ | 490,538 | \$ | 547,684 | \$ | $(57,146)$ | 111.6 \% | \$ | 4,853,224 | 11.3 \% |
| $2015^{2,4}$ |  | 517,717 |  | 536,467 |  | $(18,750)$ | 103.6 |  | 4,804,145 | 11.2 |
| $2014{ }^{2,5}$ |  | 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 |
| $2007{ }^{2}$ |  | 259,768 |  | 260,150 |  | (382) | 100.1 |  | 4,325,000 | 6.0 |
| Teachers' Retirement Fund Pre-1996 Account |  |  |  |  |  |  |  |  |  |  |
| $2016{ }^{6}$ | \$ | 892,548 | \$ | 892,548 | \$ | - | 100.0\% | \$ | 989,093 | 90.2 \% |
| $2015{ }^{6}$ |  | 851,427 |  | 851,427 |  | - | 100.0 |  | 1,074,827 | 79.2 |
| $2014{ }^{6}$ |  | 831,942 |  | 831,942 |  | - | 100.0 |  | 1,262,828 | 65.9 |
| $2013^{6,7}$ |  | 1,013,080 |  | 1,013,080 |  | - | 100.0 |  | 1,383,428 | 73.2 |
| $2012^{6}$ |  | 764,423 |  | 764,423 |  | - | 100.0 |  | 1,637,066 | 46.7 |
| $2011{ }^{6}$ |  | 748,978 |  | 748,978 |  | - | 100.0 |  | 1,762,750 | 42.5 |
| $2010^{6}$ |  | 731,149 |  | 731,149 |  | - | 100.0 |  | 1,865,102 | 39.2 |
| 20096 |  | 706,366 |  | 706,366 |  | - | 100.0 |  | 2,030,484 | 34.8 |
| $2008{ }^{6}$ |  | 675,682 |  | 675,682 |  | - | 100.0 |  | 2,295,816 | 29.4 |
| $2007{ }^{6}$ |  | 636,039 |  | 636,039 |  | - | 100.0 |  | 2,376,390 | 26.8 |
| Teachers' Retirement Fund 1996 Account |  |  |  |  |  |  |  |  |  |  |
| $2016{ }^{2}$ | \$ | 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 |
| $200{ }^{2}$ |  | 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 |
| $2007{ }^{2}$ |  | 150,415 |  | 117,001 |  | 33,414 | 77.8 |  | 1,675,000 | 7.0 |
| 1977 Police Officers' and Firefighters' Pension and Disability Fund |  |  |  |  |  |  |  |  |  |  |
| $2016{ }^{2,8}$ | \$ | 113,353 | \$ | 151,299 | \$ | $(37,946)$ | 133.5 \% | \$ | 771,949 | 19.6 \% |
| $2015{ }^{2,9}$ |  | 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 |
| 20092,10 |  | 64,285 |  | 64,285 |  | - | 100.0 |  | 330,000 | 19.5 |
| 20082,11 |  | 123,825 |  | 133,196 |  | $(9,371)$ | 107.6 |  | 635,000 | 21.0 |
| $2007{ }^{2,11}$ |  | 114,075 |  | 122,712 |  | $(8,637)$ | 107.6 |  | 585,000 | 21.0 |

[^10]
## Indiana Public Retirement System

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

| For the Year Ended June 30 | Actuarially Determined Contribution (ADC) |  |  | utions tion to $\mathrm{C}^{1}$ |  | bution iency ess) | Contributions as a Percentage of ADC |  |  | Contributions as a Percentage of Covered Payroll |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Judges' Retirement System |  |  |  |  |  |  |  |  |  |  |
| $2016{ }^{12}$ | \$ | 17,485 | \$ | 16,946 | \$ | 539 | 96.9 \% | \$ | 51,382 | 33.0 \% |
| $2015{ }^{12}$ |  | 18,865 |  | 21,020 |  | $(2,155)$ | 111.4 |  | 48,582 | 43.3 |
| $2014{ }^{12}$ |  | 27,648 |  | 20,895 |  | 6,753 | 75.6 |  | 46,041 | 45.4 |
| $2013^{12,13}$ |  | 25,458 |  | 111,419 |  | $(85,961)$ | 437.7 |  | 47,595 | 234.1 |
| $2012{ }^{12}$ |  | 19,664 |  | 18,896 |  | 768 | 96.1 |  | 45,138 | 41.9 |
| $2011{ }^{12}$ |  | 18,910 |  | 19,200 |  | (290) | 101.5 |  | 45,764 | 42.0 |
| $2010^{12}$ |  | 16,077 |  | 18,631 |  | $(2,554)$ | 115.9 |  | 36,722 | 50.7 |
| 200912 |  | 16,131 |  | 20,861 |  | $(4,730)$ | 129.3 |  | 36,196 | 57.6 |
| $2008{ }^{12}$ |  | 10,028 |  | 15,920 |  | $(5,892)$ | 158.8 |  | 33,729 | 47.2 |
| $2007{ }^{12}$ |  | 12,249 |  | 14,662 |  | $(2,413)$ | 119.7 |  | 29,712 | 49.3 |

State Excise Police, Gaming Agent, Gaming Control Officer, and Conservation Enforcement Officers' Retirement Plan

| $2016^{2,14}$ | $\$$ | 4,078 | $\$$ | 5,297 | $\$$ | $(1,219)$ | $129.9 \%$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| $2015^{2}$ | 4,820 | 5,215 | $(395)$ | 108.2 | 25,526 | 25,133 | $20.8 \%$ |
| $2014^{2}$ | 5,341 | 5,359 | $(18)$ | 100.3 | 25,825 | 20.8 |  |
| $2013^{2,15}$ | 4,794 | 19,740 | $(14,946)$ | 411.8 | 24,675 | 80.0 |  |
| $2012^{2}$ | 4,556 | 5,054 | $(498)$ | 110.9 | 24,300 | 20.8 |  |
| $2011^{2}$ | 4,112 | 5,197 | $(1,085)$ | 126.4 | 25,000 | 20.8 |  |
| $2010^{2}$ | 4,200 | 5,256 | $(1,056)$ | 125.1 | 25,300 | 20.8 |  |
| $2009^{2}$ | 5,294 | 5,294 | - | 100.0 | 25,500 | 20.8 |  |
| $2008^{2}$ | 4,918 | 4,854 | 64 | 98.7 | 23,700 | 20.5 |  |
| $2007^{2}$ | 4,410 | 3,359 | 1,051 | 76.2 | 21,000 | 16.0 |  |

Prosecuting Attorneys' Retirement Fund

| $2016{ }^{12}$ | \$ | 1,381 | \$ | 1,440 | \$ | (59) | 104.3\% | \$ | 21,372 | 6.7 \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $2015{ }^{12}$ |  | 1,419 |  | 1,063 |  | 356 | 74.9 |  | 21,145 | 5.0 |
| $2014{ }^{12}$ |  | 2,345 |  | 1,174 |  | 1,171 | 50.1 |  | 20,608 | 5.7 |
| $2013{ }^{12,16}$ |  | 2,542 |  | 19,443 |  | $(16,901)$ | 764.9 |  | 18,805 | 103.4 |
| $2012{ }^{12}$ |  | 2,037 |  | 1,839 |  | 198 | 90.3 |  | 21,705 | 8.5 |
| $2011{ }^{12}$ |  | 1,960 |  | 170 |  | 1,790 | 8.7 |  | 18,082 | 0.9 |
| $2010^{12}$ |  | 1,663 |  | 170 |  | 1,493 | 10.2 |  | 21,016 | 0.8 |
| $2009{ }^{12}$ |  | 1,340 |  | 170 |  | 1,170 | 12.7 |  | 20,782 | 0.8 |
| $2008{ }^{12}$ |  | 1,040 |  | 170 |  | 870 | 16.3 |  | 20,617 | 0.8 |
| $2007{ }^{12}$ |  | 1,044 |  | 190 |  | 854 | 18.2 |  | 18,092 | 1.1 |

Legislators' Retirement System - Defined Benefit Plan ${ }^{17}$

| 2016 | $\$$ | 138 | $\$$ | 138 | $\$$ | - |
| :--- | ---: | ---: | ---: | ---: | ---: | :--- |
| N/A |  |  |  |  |  |  |
| 2015 | 119 | 131 | $(12)$ | $100.0 \%$ | N/A | N/A |
| 2014 | 138 | 138 | - | 100.0 | N/A |  |
| 2013 | 140 | 150 | $(10)$ | 107.1 | N/A | N/A |
| 2012 | 113 | 112 | 1 | 99.1 | N/A | N/A |
| 2011 | 113 | - | 113 | - | N/A | N/A |
| 2010 | 63 | - | 63 | - | N/A | N/A |
| 2009 | 45 | 100 | $(55)$ | 222.2 | N/A | N/A |
| 2008 | 66 | 100 | $(34)$ | 151.5 | N/A | N/A |
| 2007 | 120 | 100 | 20 | 83.3 | N/A | N/A |
|  |  |  |  |  | N/A | N/A |

[^11]Required Supplementary Information, 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 | 2016 | 2015 | 2014 | 2013 |
| :---: | :---: | :---: | :---: | :---: |
| Public Employees' Retirement Fund | 1.11 \% | 0.32 \% | 12.33 \% | 5.79 \% |
| Teachers' Retirement Fund Pre-1996 Account ${ }^{2}$ | 1.01 | 0.57 | 12.71 | 5.11 |
| Teachers' Retirement Fund 1996 Account ${ }^{2}$ | 1.01 | 0.57 | 12.71 | 5.11 |
| 1977 Police Officers' and Firefighters' Pension and Disability Fund | 1.22 | (0.07) | 13.70 | 5.85 |
| Judges' Retirement System | 1.18 | (0.06) | 13.69 | 5.24 |
| State Excise Police, Gaming Agent, Gaming Control Officer, and Conservation Enforcement Officers' Retirement Plan | 1.17 | (0.09) | 13.69 | 5.48 |
| Prosecuting Attorneys' Retirement Fund | 1.10 | (0.08) | 13.70 | 4.84 |
| Legislators' Defined Benefit Plan | 0.84 | (0.13) | 13.65 | 6.16 |
| Total INPRS ${ }^{3}$ | 1.10 | 0.44 | 12.69 | 5.57 |

${ }^{2}$ The Teachers' Retirement Fund Accounts are combined for investment purposes.
${ }^{3}$ Rate of return also includes Legislators' Defined Contribution Plan, State Employees' Death Benefit Fund, Public Safety Officers' Special Death Benefit Fund and Pension Relief Fund.

Required Supplementary Information, 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 2016, there were no changes to the Plan that impacted the pension benefits during the fiscal year.

## Assumption Changes

In 2016, there were no changes to the assumptions that impacted the 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 | TRF Pre-1996 Account | TRF 1996 Account | 1977 <br> Fund | JRS | $\begin{gathered} \text { EG\&C } \\ \text { Plan } \end{gathered}$ | PARF | $\begin{aligned} & \text { LEDB } \\ & \text { Plan } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Valuation Date: <br> Assets <br> June 30, 2014 |  |  |  |  |  |  |  |  |
| Liabilities | June 30, 2013 - Member census data as of June 30, 2013 was used in the valuation and adjusted, where appropriate, to reflect changes between June 30, 2013 and June 30, 2014. Standard actuarial roll forward techniques were then used to project the total pension liability computed as of June 30, 2013 to the June 30, 2014 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 | 23 | 20 | 21 | 24 | 25 | 16 |
| Asset Valuation Method | 4-year smoothing of gains and losses on the Market Value of assets subject to a $20 \%$ corridor |  |  |  |  |  |  |  |
| Investment Rate of Return (Funding) | 6.75\%, net of administrative and investment expense, including inflation |  |  |  |  |  |  |  |
| Cost of Living Increases | 1.0\% | 1.0 |  | 2.25\% | 4.0\% | 1.0\% | N/A | 1.0\% |
| Future Salary Increases, including Inflation | 3.25\% - 4.5\% | 3.0\% - |  | 3.25\% | 4.0\% | 3.25\% | 4.0\% | 3.0\% |
| Inflation | 3.0\% |  |  |  |  |  |  |  |

## Trends

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: Teachers' Retirement Fund Pre-1996 Account - \$206,796 thousand, Judges' Retirement Fund - $\$ 90,187$ thousand, State Excise Police, Gaming Agent, Gaming Control Officer, and Conservation Enforcement Officers' Retirement Plan - $\$ 14,619$ thousand, and the Prosecuting Attorneys' Retirement Fund - $\$ 17,363$ thousand.

[^12]Other Supplementary Schedules

## Pension Relief Statement of Changes in Assets and Liabilities

| (dollars in thousands) | Balance as of June 30, 2015 |  | Additions |  | Deductions |  | Balance as of June 30, 2016 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assets: |  |  |  |  |  |  |  |  |
| Cash | \$ | 200 | \$ | 428,310 | \$ | 428,171 | \$ | 339 |
| Short Term Investments |  | 30,356 |  | 212,183 |  | 215,582 |  | 26,957 |
| Contributions Receivable |  | 2,500 |  | - |  | - |  | 2,500 |
| Total Assets | \$ | 33,056 | \$ | 640,493 | \$ | 643,753 | \$ | 29,796 |
| Liabilities: |  |  |  |  |  |  |  |  |
| Accounts Payable | \$ | 15 | \$ | 215,984 | \$ | 215,987 | \$ | 12 |
| Due to Other Funds |  | 2 |  | 23 |  | 22 |  | 3 |
| Due to Other Governments |  | 33,039 |  | 202,604 |  | 205,862 |  | 29,781 |
| Total Liabilities | \$ | 33,056 | \$ | 418,611 | \$ | 421,871 | \$ | 29,796 |

Other Supplementary Schedules, continued For the Year Ended June 30

## Schedule of Administrative Expenses

| (dollars in thousands) | 2016 |  | 2015 |  |
| :---: | :---: | :---: | :---: | :---: |
| Personnel Services |  |  |  |  |
| Salaries and Wages | \$ | 12,396 | \$ | 11,737 |
| Employee Benefits |  | 5,650 |  | 5,427 |
| Temporary Services |  | 2,339 |  | 5,141 |
| Total Personnel Services |  | 20,385 |  | 22,305 |
| Contractual and Professional Services |  |  |  |  |
| Benefit Payment Processing Fees |  | 2,951 |  | 2,942 |
| Consulting Services |  | 1,703 |  | 2,248 |
| Actuarial Services |  | 1,086 |  | 1,355 |
| Legal Services |  | 83 |  | 93 |
| Total Contractual and Professional Services |  | 5,823 |  | 6,638 |
| Information Technology Services |  |  |  |  |
| Data Processing |  | 2,278 |  | 2,692 |
| Software and Licenses |  | 1,747 |  | 1,624 |
| Other Computer Services |  | 3,233 |  | 1,261 |
| Total Information Technology Services |  | 7,258 |  | 5,577 |
| Communications |  |  |  |  |
| Postage |  | 645 |  | 724 |
| Telephone |  | 445 |  | 352 |
| Printing |  | 188 |  | 179 |
| E-communications |  | 120 |  | 130 |
| Total Communications |  | 1,398 |  | 1,385 |
| Miscellaneous |  |  |  |  |
| Depreciation and Amortization |  | 2,068 |  | 2,553 |
| Office Rent and Expenses |  | 888 |  | 1,433 |
| Memberships and Training |  | 240 |  | 201 |
| Travel |  | 118 |  | 98 |
| Equipment Rental |  | 72 |  | 72 |
| Other Administrative Expenses |  | 252 |  | 225 |
| Total Miscellaneous |  | 3,638 |  | 4,582 |
| Subtotal Administrative Expenses |  | 38,502 |  | 40,487 |
| Less Amount Allocated to Pension Relief Fund |  | (33) |  | (31) |
| Total Administrative Expenses | \$ | 38,469 | \$ | 40,456 |

Other Supplementary Schedules, continued
For the Year Ended June 30

Schedule of Administrative Expenses - Contractual and Professional Services
(dollars in thousands)

| Vendor Name | 2016 |  | 2015 |  | Nature of Services |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Xerox | \$ | 3,043 | \$ | 3,111 | Benefit Payment Services |
| PricewaterhouseCoopers LLP |  | 960 |  | 1,165 | Actuarial Services |
| RSM US LLP |  | 405 |  | 490 | Audit Services |
| CherryRoad Technologies Inc. |  | 360 |  | 312 | Application Maintenance and Software Development |
| Nyhart, Inc. |  | 126 |  | 190 | Actuarial Services |
| iLab |  | - |  | 190 | Software Quality Assurance (Transition Fee) |
| Cspring |  | 120 |  | - | IT Resource Assistance |
| Loyalty Research Center |  | 86 |  | 80 | Research Services |
| Omkar Markand, M.D. |  | 80 |  | 53 | Medical Consulting |
| Crowe Horwarth |  | 83 |  | - | Business Continuity and Disaster Recovery |
| Advisa |  | 70 |  | - | Human Resources Consulting |
| Orion |  | - |  | 115 | Process Management |
| KPMG LLP |  | - |  | 114 | IT Strategy Dev Assistance \& DB Consulting |
| Callan |  | - |  | 89 | ASA Annuity/Recordkeeper RFP Consulting |
| Segal |  | - |  | 80 | Plan Document Consulting |
| Axia |  | - |  | 80 | Operations Performance Scorecard |
| Gartner, Inc. |  | 65 |  | 63 | Project Research \& Advisory Service |
| AllClear |  | 64 |  | 64 | Identity Theft Protection Services |
| Level 3 |  | - |  | 61 | Call Center Quality Management |
| Optiv (Formerly FishNet) |  | 56 |  | 65 | IT Security Services |
| Automatic Data Processing, Inc. |  | 49 |  | 50 | Payroll Processing Services |
| AIRvan Consulting LLC |  | 49 |  | 49 | Survey Services |
| CEM Benchmarking, Inc. |  | 45 |  | 45 | Benchmarking Services |
| Ice Miller LLP |  | 52 |  | 38 | Legal Services |
| Briljent |  | 29 |  | 6 | Training Documentation Services |
| Westcomm |  | 23 |  | - | CAFR Production |
| Funston Advisory Services |  | - |  | 30 | Board Governance Review \& Analysis |
| Groom Law Group Chartered |  | - |  | 24 | Legal Services |
| Ernst \& Young LLP |  | - |  | 21 | Management Consulting |
| Krieg DeVault LLP |  | 14 |  | 14 | Legal Services |
| Stephenson Morow \& Semler |  | 9 |  | 11 | Legal Services |
| Gonzalez Saggio Harlan |  | - |  | 2 | Legal Services |
| Farnsworth Group |  | 7 |  | - | Focus Group Research |
| Towers Perrin |  | 6 |  | - | Human Resources Consulting |
| Fleming Stage |  | 4 |  | 1 | Legal Services |
| Ropes \& Gray |  | 4 |  | - | Legal Services |
| Other |  | 14 |  | 25 | Other Services |
| Total | \$ | 5,823 | \$ | 6,638 |  |

[^13]Other Supplementary Schedules, continued
For the Year Ended June 30

## Schedule of Investment Expenses

| (dollars in thousands) | 2016 |  | 2015 |  |
| :---: | :---: | :---: | :---: | :---: |
| Investment Management Fees | \$ | 160,565 | \$ | 177,673 |
| Securities Lending Fees |  | 772 |  | 677 |
| Direct Investment Expenses |  |  |  |  |
| Investment Consultants: |  |  |  |  |
| Verus ( Formerly Wurts) |  | 600 |  | 400 |
| TorreyCove |  | 454 |  | 383 |
| Aksia |  | 450 |  | 450 |
| Strategic Investment Solutions |  | - |  | 279 |
| Cutter Associates |  | 356 |  | - |
| Mercer |  | 319 |  | 216 |
| ORG Portfolio Management LLC |  | - |  | 140 |
| Capital Cities |  | 85 |  | 85 |
| MSCIIISS |  | 56 |  | 52 |
| Callan |  | 55 |  | - |
| CitiGroup |  | 26 |  | 26 |
| Ernst \& Young |  | 23 |  | 42 |
| CBRE, Inc |  | 5 |  | - |
| Total Investment Consultants |  | 2,429 |  | 2,073 |
| Investment Custodian |  | 472 |  | 459 |
| Broker Commissions |  | 4,187 |  | 4,747 |
| Investment Recordkeeper Fees |  | 5,585 |  | 5,439 |
| Investment Staff Expenses |  | 2,201 |  | 2,149 |
| Investment Administrative Expenses |  | 957 |  | 989 |
| Subtotal Direct Investment Expenses |  | 15,831 |  | 15,856 |
| Less Amount Allocated to Pension Relief Fund |  | (9) |  | (8) |
| Total Direct Investment Expenses |  | 15,822 |  | 15,848 |
| Total Investment Expenses | \$ | 177,159 | \$ | 194,198 |



## Investment Section

## 2016 COMPREHENSIVE ANNUAL FINANCIAL REPORT For the Fiscal Year Ended June 30, 2016

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## Investment Information

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# Verus ${ }^{77}$ 

August 8, 2016

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

## Dear Trustees:

As Indiana Public Retirement System's (INPRS) general consultant, Verus Advisory is pleased to provide the Board of Trustees with an overview of the market environment for the fiscal year ended June 30, 2016 as well as an update on performance and a summary of recent developments.

## Investment Landscape

The 2016 fiscal year was marked by continued challenges in the global economy and capital markets; where continued volatility in equity, energy, and currency markets prompted central banks globally to foster low and even negative interest rate policies.

The U.S. continued its moderate recovery during fiscal year 2016 with real GDP growth of 2.1 percent (as of March $31^{\text {st }}$ ) year over year, positive but below the long-term trend. Headline inflation was 1.0 percent during the period. Our research suggests that the current cycle, while above average in terms of duration, has resulted in lower cumulative economic growth than most prior cycles. The labor market in the U.S. continues to improve with headline U-3 unemployment at 4.9 percent as of June 30, 2016; the participation rate declines of the last several years appear to have stabilized.

The fiscal year began with concerns over an economic slowdown in China and continued pressure on energy markets causing broadly negative sentiment across risk markets. INPRS was not immune to this sell-off, and this market downturn cost the portfolio approximately 4.0 percent during the third quarter of 2015.

In the fourth quarter of 2015, disinflationary pressures continued globally prompting the European Central Bank to push deposit rates further into negative territory. The U.S. dollar appreciated to its highest level since 2003 relative to a trade weighted basket of currencies. The most notable event in markets was the Federal Reserve raising the fed funds rate for the first time since the Global Financial Crisis, creating a notable divergence in central bank policies between the U.S. and other developed markets.

Report on Investment Activities, continued

The first quarter of 2016 witnessed a precipitous drop in equity markets as recessionary fears escalated. With the Federal Reserve offering more dovish commentary, oil prices finding a bottom, and economic stimulus propping up China's economy, markets quickly stabilized and re-traced new highs, with emerging markets seeing a particularly significant recovery.

The second quarter of 2016 ended with Brexit where the U.K. voted to leave the EU catching the market by surprise. Brexit led to a short-term market sell-off followed by most markets snapping back relatively quickly. More impactful to performance for INPRS has been interest rates continued move lower; as of June 30, 2016 approximately one third of all global government bonds were trading with a negative yield, more than $\$ 10$ trillion in market value. Two of the largest sovereign bond markets outside the U.S., German and Japanese yield curves had negative yields out to the 15 year tenor.

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

The INPRS investment portfolio ("the Portfolio") earned a 1.2 percent return net of fees for the fiscal year ending June 30, 2016. This return trailed the policy index return by 20 basis points and the long-term actuarial assumed return, of 6.75 percent, by 5.6 percent. However, INPRS' one-year return did exceed the median of a public funds universe ${ }^{2}$ which earned 0.8 percent.

As previously discussed, the largest driver of returns during the fiscal year was depreciation in global public equities (which in turn was largely driven by a strengthening U.S. dollar) and weaker commodity markets offset by lower interest rates driving bond prices higher. On an absolute basis, exposure to global private equity, global fixed income, real estate and risk parity were positive, while investments in public equity, commodities, and hedge funds were negative.

The Portfolio's investments in private equity, global fixed income and risk parity exceeded their respective composite benchmarks. Private equity returned 6.8 percent on a time-weighted basis, exceeding the public market equivalent benchmark (Russell $3000+3.0$ percent) by 1.7 percent; being overweight in this asset class was additive to returns. Inflation-linked bonds returned 5.4 percent and exceeded the benchmark by 10 basis points. Risk parity strategies generated returns of 1.7 percent, outperforming the composite's custom benchmark by 90 basis points.

Global public equity strategies fell 4.3 percent over the period, the broad market index fell 3.9 percent. The nominal fixed income portfolio returned 8.9 percent, trailing its benchmark by 0.4 percent. Despite a 14 percent return in commodities for the first six months of 2016, the fiscal year return was (19.6) percent, trailing the benchmark by 1.2 percent. Real estate strategies generated returns of 8.1 percent trailing its benchmark by 4.5 percent over the fiscal year while absolute return lost 2.9 percent.

[^14]Report on Investment Activities, continued

On a longer term basis, the portfolio has generated 4.8 percent annually over the last three years and 4.2 percent over the last five years. Consistent with the INPRS' goal of minimizing investment risk, the realized standard deviation of the program has averaged less than 6.0 percent for the last five years.

## Plan Activity

After a 2015 fiscal year that focused on ensuring the asset allocation was aligned with the enterprise objectives (completed through an asset-liability study), during 2016 Verus worked with INPRS staff on a number of strategic initiatives designed to maximize the overall efficiency of the portfolio. This included implementation of a cash securitization strategy which should improve realized returns and decrease the operational burdens associated with liquidity management. Verus has also worked with staff on evaluating the merits of internalizing certain investment management functions in an effort to reduce the fees paid to third-party investment managers and further improve the in-house intellectual capital. A comprehensive study regarding the appropriateness of investment management fees has also been conducted. Verus and INPRS staff have undertaken analyses focused on revisiting the role of commodities in the context of the current disinflationary cycle. The collaboration on this effort has provided additional insight relative to the risk exposure within the portfolio, including how risk is defined from a liquidity perspective and how INPRS can utilize measurement of risk factors in the portfolio rebalancing process.

All of us here at Verus appreciate the opportunity to assist in meeting the investment objectives set forth by the INPRS Board. We are confident in the direction of the portfolio given the INPRS' 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' 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 staff. 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 again last fiscal year, 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.

## Putting the Year in Perspective ${ }^{2}$

The consolidated defined benefit assets returned 1.2 percent net of all fees over the past fiscal year and ended with a market value of $\$ 24.8$ billion. Fiscal year 2016 was a continuation of the low return environment of the prior year as well as increased volatility across asset classes. This was the second straight year that U.S. public equities experienced an intra-year sell-off greater than 10.0 percent, which had not happened in the three years prior. Not to mention, commodities finished the year down over 18.0 percent. Defying consensus views from market participants though, longer-dated U.S. Treasury bonds had another banner year with a return greater than 16.0 percent. This combination of difficult to anticipate events, in addition to many others not mentioned, continued to strengthen our belief in the importance of diversification and the avoidance of a concentration in any one asset class.

The path toward reducing INPRS' concentration in equities started in fiscal year 2012. Based on extensive research of the various asset classes and their performance in different economic environments through time, it was determined that a new risk-balanced framework better fit our first two imperatives. Developed from that research, the following chart illustrates the projected range of outcomes for INPRS' asset allocation around the 6.75 percent return target (dotted line). This visual is meant to track the cumulative performance of the actual portfolio (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.
${ }^{2}$ Rates of return specific to INPRS' portfolio are 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 market value.

Report from the Chief Investment Officer, continued

INPRS Net of Fees Cumulative Returns


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 5.0 percent above the return of cash and outperformed the average historical spread for the asset allocation over cash ( 4.5 percent) ${ }^{3}$.

INPRS Annual Returns (Net of Fees)

|  | Excess Return | + | Cash Return | = | Total Return |
| :---: | :---: | :---: | :---: | :---: | :---: |
| FY2016 | 1.0 \% |  | 0.2 \% |  | 1.2 \% |
| FY2015 | 0.0 |  | 0.0 |  | 0.0 |
| FY2014 | 13.6 |  | 0.1 |  | 13.7 |
| FY2013 | 5.9 |  | 0.1 |  | 6.0 |
| INPRS Annual Return | 5.0 |  | 0.1 |  | 5.1 |
| Avg. Annual Return of INPRS Target Asset Allocation (since 1937) ${ }^{4}$ | 4.5 |  | 3.6 |  | 8.1 |

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 years.

[^15]Report from the Chief Investment Officer, continued

## Performance Attribution

Looking closer at fiscal year 2016, a majority of asset classes had positive returns, while asset classes that tend to perform poorly when growth is lower than expected - public equities and commodities - struggled. Real estate and private equity continued to post strong returns net of all fees, albeit on a lagged basis. ${ }^{5}$ More specifically, INPRS' separate asset classes and actual asset allocation generated the following returns:

For the Year Ended June 30, 2016


The chart above does not tell the full story, though, as there was a reversal in performance mid-year. The turning point occurred in February 2016 as broad-based underperformance in the first seven months of the fiscal year threatened the pace of improving global growth and, thus, caused the Federal Reserve and other global central banks to reconsider raising interest rates or tightening policy any further. As a result, performance in the final five months of the fiscal year was much improved, led by commodities and fixed income. ${ }^{6}$

July 2015 - Jan 2016


Feb 2016 - Jun 2016


[^16]Report from the Chief Investment Officer, continued

The following chart takes 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 6/30/16)


In fiscal year 2016, INPRS experienced a return that was 0.2 percent below its target asset allocation benchmark, net of all fees. The benchmark is meant to reflect what performance would have been had the portfolio been at target weights in each asset class the entire year and invested in passive strategies. The tactical asset allocation decisions made by the team this year produced a slight value-add. On the other hand, the public asset classes lagged their respective benchmarks resulting in an underperformance of 0.3 percent, which more than offset the positive contributions from tactical asset allocation decisions. Despite the underperformance relative to the overall benchmark this year, INPRS' portfolio has produced approximately $\$ 188$ million in added value over a portfolio of merely passive investments (asset allocation + manager selection) since reaching the revised asset allocation in July 2012.

## Reflections from the Past Four Years

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 last year's asset-liability study 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 prudently moved toward the new target allocations over the course of fiscal year 2016. The allocation as of June 30, 2016 can be found in the chart on the following page.

Report from the Chief Investment Officer, continued


The allocation may look different than one that merely targets a return without regard for risk; however, INPRS has sought a more diversified approach to strategic asset allocation based on two fundamental linkages between employer contributions and investment returns within the consolidated defined benefit plan:

1. Employer contributions 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. As a result, it is critical for the portfolio to minimize drawdowns as much as possible while trying to target 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.

Although the last four years have been less volatile than what we have observed in markets over a longer history ${ }^{7}$, there have been a few smaller sell-offs in equity markets that are worth analyzing. These mini case studies (defined as months where global equities declined by more than 2.5 percent) serve as helpful observations as we continually evaluate the effectiveness of the portfolio in reducing the pain of equity drawdowns. So far, the results have met our original objectives. INPRS has outperformed a traditional 60 percent equity and 40 percent bond portfolio in five of the six cases with a 37 percent smaller drawdown on average ( -1.6 percent vs. -2.6 percent) as illustrated in the following charts. ${ }^{8}$

[^17]Report from the Chief Investment Officer, continued

Equity Drawdowns: INPRS vs 60/40 Portfolio


While there is still work to be done to ensure future equity drawdowns do not have damaging effects on the portfolio and thus employer contributions, analysis of the first real-time examples we have observed leave us encouraged that we have headed down the appropriate path.

## Focus on Continual Improvement

There has been an evolution in culture over the past five years as the INPRS investment team has conscientiously focused more attention on risk management across each function of the investment process. This shift has resulted in enhancements to our portfolio risk reporting, fee reporting, external investment manager diligence, and compliance function to name a few. The focus on continual improvement was no different in fiscal year 2016 as the team completed projects associated with fee management and liquidity.

Related to the second investment imperative, effectiveness and efficiency, INPRS continued to negotiate fees and cut costs where possible. As a resource to use in these efforts going forward, INPRS participated in a public pension fee study conducted by CEM Benchmarking. The benchmarking study compared the cost of INPRS' asset allocation and subsequent performance to CEM's extensive database of similar-sized public pension plans. After neutralizing for differences in asset allocation across plans, CEM reported that INPRS' annual investment fees were lower than the average peer plan. ${ }^{9}$ While it is important for the team to remain vigilant in minimizing fees, the ultimate barometer of success will be performance net of all fees. Examining the benefit from fees paid over the past five years, CEM reported that INPRS' outperformance over its passive benchmark ( 0.3 percent annually net of all fees) was in the top half of the peer universe.

Report from the Chief Investment Officer, continued

Focusing on the third investment imperative, liquidity, INPRS continues to strive for greater precision in determining the optimal amount of liquid assets to keep on-hand while minimizing the performance drag from low cash returns. A good example in fiscal year 2016 was the implementation of a cash overlay program. The securities used to construct the overlay attempt to match INPRS' target asset allocation as closely as possible while enabling us to maintain a similar cash profile. Inside and outside of the overlay portfolio, INPRS is positioned to deliver adequate liquidity for retirement payments. As of June 30, 2016, INPRS estimates 30 percent of the Consolidated Defined Benefit Assets could be liquidated in one week, 68 percent of the portfolio could be liquidated within one month, and 78 percent of the portfolio could be liquidated within six months without a significant market impact.

## Looking Forward

I have found my first six years at INPRS, first as Director of Public Equity and then Deputy CIO , to be greatly fulfilling. Now as CIO, I will continue to maintain focus on ensuring that INPRS achieves its imperatives over the coming years and decades. While the current environment may make it difficult to achieve the return component in the near-term, I have confidence in the strong culture and team we have at INPRS. This foundation allows me to be optimistic over the long-term that we can meet each of the imperatives outlined above.


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 cost-effective 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's 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 three 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 market 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 Equity, Fixed Income - Ex Inflation-Linked, Fixed Income - Inflation-Linked, Commodities, Real Estate, Absolute Return, and Risk Parity. The current asset allocation, approved by the Board on October 23, 2015 is as follows:

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 |
| Private Equity | 10.0 | 7.0 to 13.0 | Russell $3000+300 \mathrm{bps}$ |
| Fixed Income - Ex Inflation-Linked | 24.0 | 21.0 to 27.0 | 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 of the Public Employees' Retirement Fund and the Teachers' Retirement Fund (Pre-1996 Account and 1996 Account). A member's account is credited with the legislated 3 percent mandatory contribution (either paid by the member or the employer). The member has investment direction to several alternative funds or may direct contributions to the Guaranteed Fund. The ASA produces an additional separate benefit from the fixed-formula employer funded pension benefit to the member. 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 (PERF ASA Only \& Legislators' Plan only);
9. Consolidated Defined Benefit Assets (Legislators' Plan only);
10. Guaranteed Fund

The Guaranteed Fund provides a guarantee of the value of an individual's contributions plus any interest credited. The INPRS Board of Trustees annually establishes the interest crediting rate for the Guaranteed Fund based on a uniform methodology. The interest crediting rate for the Guaranteed Fund during the last 10 years is included in the Investment Highlights of this section.

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, 2016

| (dollars in millions) | Actual Assets |  | Percent |
| :---: | :---: | :---: | :---: |
| Consolidated Defined Benefit Assets: |  |  |  |
| Defined Benefit Retirement Plans' Assets | \$ | 24,766.6 | 82.7 \% |
| Legislators' Defined Contribution Plan (LEDC Plan) ${ }^{1}$ |  | 9.0 | - |
| Total Consolidated Defined Benefit Assets |  | 24,775.6 | 82.7 |
| Annuity Savings Accounts (ASA) Assets ${ }^{2}$ : |  |  |  |
| Public Employees' Retirement Fund (PERF) |  | 2,613.1 | 8.7 |
| Teachers' Retirement Fund Pre-1996 Account (TRF Pre-1996) |  | 1,277.5 | 4.3 |
| Teachers' Retirement Fund 1996 Account (TRF 1996) |  | 1,217.8 | 4.1 |
| Total Annuity Savings Accounts Assets |  | 5,108.4 | 17.1 |
| Legislators' Defined Contribution Plan ${ }^{3}$ |  | 19.0 | 0.1 |
| Pension Relief Fund ${ }^{4}$ |  | 26.9 | 0.1 |
| Death Benefit Funds ${ }^{5}$ |  | 14.6 | - |
| Total Investments ${ }^{6}$ | \$ | 29,944.5 | 100.0\% |

[^18]

Assets by Retirement Plan
As of June 30, 2016
(dollars in millions)

| Retirement Plan | Amount |  | Percent |
| :---: | :---: | :---: | :---: |
| Public Employees' Retirement Fund | \$ | 11,198.7 | 45.2 \% |
| Teachers' Retirement Fund Pre-1996 Account |  | 3,609.4 | 14.6 |
| Teachers' Retirement Fund 1996 Account |  | 4,399.8 | 17.8 |
| 1977 Police Officers' and Firefighters' Pension and Disability Fund |  | 4,950.0 | 20.0 |
| Judges' Retirement System |  | 441.7 | 1.8 |
| State Excise Police, Gaming Agent, Gaming Control Officer, and Conservation Enforcement Officers' Retirement Plan |  | 111.3 | 0.4 |
| Prosecuting Attorneys' Retirement Fund |  | 52.8 | 0.2 |
| Legislators' Retirement System - Defined Benefit Plan |  | 2.9 | - |
| Legislators' Retirement System - Defined Contribution Plan |  | 9.0 | - |
| Total Consolidated Defined Benefit Assets ${ }^{1}$ | \$ | 24,775.6 | 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.


Public Employees' Retirement Fund
Teachers' Retirement Fund Pre-1996 Account
Teachers' Retirement Fund 1996 Account
1977 Police Officers' and Firefighters'
Pension and Disability Fund
Judges' Retirement System
Excise, Gaming and Conservation
Prosecuting Attorneys' Retirement Fund

Asset Allocation Summary: June 30, 2016 Actual vs. June 30, 2015 Actual

| (dollars in millions) <br> Asset Class | June 30, 2016 |  |  | June 30, 2015 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Amount | Percent |  | mount | Percent |
| Public Equity | \$ | 5,511.8 | 22.3 \% | \$ | 5,521.0 | 22.4 \% |
| Private Equity |  | 3,304.5 | 13.3 |  | 3,181.0 | 12.9 |
| Fixed Income - Ex Inflation-Linked ${ }^{1}$ |  | 5,216.4 | 21.1 |  | 5,335.7 | 21.6 |
| Fixed Income - Inflation-Linked |  | 1,838.0 | 7.4 |  | 2,455.9 | 10.0 |
| Commodities |  | 1,822.0 | 7.4 |  | 1,850.5 | 7.5 |
| Real Estate |  | 1,629.8 | 6.6 |  | 1,518.9 | 6.2 |
| Absolute Return |  | 2,279.0 | 9.2 |  | 2,309.3 | 9.4 |
| Risk Parity |  | 2,736.4 | 11.0 |  | 2,457.5 | 10.0 |
| Cash + Cash Overlay |  | 437.7 | 1.7 |  | - | - |
| Total Consolidated Defined Benefit Assets ${ }^{2}$ | \$ | 24,775.6 | 100.0\% | \$ | 24,629.8 | 100.0\% |

${ }^{1}$ Includes cash \& cash equivalents for fiscal year ended June 30, 2015 only.
${ }^{2}$ Amounts disclosed above will agree to the Pooled Unit Trust Investments in the Financial Section in Note 2 (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, 2016 Actual vs. Target

| Asset Class | June 30, 2016 Actual | Target | Allowable Range for Investments |
| :---: | :---: | :---: | :---: |
| Public Equity | 22.3 \% | 22.0 \% | 19.5 to 24.5 \% |
| Private Equity | 13.3 | 10.0 | 7.0 to 13.0 |
| Fixed Income - Ex Inflation-Linked | 21.1 | 24.0 | 21.0 to 27.0 |
| Fixed Income - Inflation-Linked | 7.4 | 7.0 | 4.0 to 10.0 |
| Commodities | 7.4 | 8.0 | 6.0 to 10.0 |
| Real Estate | 6.6 | 7.0 | 3.5 to 10.5 |
| Absolute Return | 9.2 | 10.0 | 6.0 to 14.0 |
| Risk Parity | 11.0 | 12.0 | 7.0 to 17.0 |
| Cash + Cash Overlay ${ }^{1}$ | 1.7 | 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.


[^19]Annualized Time-Weighted Rate of Return by Asset Class vs. Benchmark Returns
For the Year Ended June 30, 2016

| Asset Class | 1-Year ${ }^{1}$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Actual Return ${ }^{2}$ | Benchmark Return ${ }^{2}$ | Actual Over / (Under) Benchmark | Benchmark |
| Public Equity | (4.3) \% | (3.9) \% | (0.4) | MSCI All Country World IMI Index (MSCl ACWI) |
| Private Equity | 6.8 | 5.1 | 1.7 | Russell 3000 Index Plus 300 Basis Points |
| Fixed Income - Ex Inflation-Linked | 8.9 | 9.3 | (0.4) | Custom Benchmark ${ }^{3}$ |
| Fixed Income - Inflation-Linked | 5.4 | 5.3 | 0.1 | Custom Benchmark ${ }^{4}$ |
| Commodities | (19.6) | (18.4) | (1.2) | Custom Benchmark ${ }^{5}$ |
| Real Estate | 8.1 | 12.6 | (4.5) | NCREIF Open End Diversified Core Equity Index (ODCE) |
| Absolute Return | (2.9) | (1.4) | (1.5) | HFRI Custom Benchmark ${ }^{6}$ |
| Risk Parity | 1.7 | 0.8 | 0.9 | Custom Benchmark ${ }^{7}$ |
| Cash + Cash Overlay | 5.9 | 4.2 | 1.7 | Custom Benchmark ${ }^{8}$ |
| Total Consolidated Defined Benefit Assets | 1.2 | 1.4 | (0.2) | Custom Benchmark |

[^20]| Market Value as of 06/30/2016 | INPRS 1-Year Net Performance ${ }^{1}$ | MSCI All Country World IMI Index 1-Year Performance |
| :---: | :---: | :---: |
| \$5,511.8 Million | (4.3)\% | (3.9)\% |

## 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 (4.3) percent for fiscal year 2016. The portfolio underperformed the benchmark by 0.4 percent as the underperformance from the domestic portfolio more than offset the outperformance from the international portfolio. The domestic portfolio's underperformance was the result of an overweight to the small cap space and underperformance of large/mid cap active strategies.

## Market Overview

Global equities, as represented by the MSCI All Country World IMI Index, were down 3.9 percent, over the year. Based on the Russell 3000 Index, domestic equities were up 2.1 percent over the fiscal year, while international equities were down 9.6 percent based on the MSCI ACWI ex US IMI Index.

For the first quarter of the fiscal year, INPRS' global equity portfolio was down 10.0 percent. Global equity markets had a rough quarter mainly driven by concerns about slower growth within the Chinese economy and European Union countries. The Federal Reserve left interest rates unchanged while the European Central Bank indicated it might extend its QE program if needed.

In the second quarter, INPRS' global equity portfolio was up 4.8 percent. Global equity markets generally recovered from the lows of the first quarter as concerns about a Chinese slowdown and geopolitical risks decreased. Energy and emerging markets continued to put downward pressure on the global equity markets.

In the third quarter, INPRS' global equity portfolio was up 0.3 percent. While global equity markets had a volatile quarter, beginning calendar year 2016 with a steep loss in January, markets recovered by the end of the quarter as central banks renewed commitments to stimulate growth. Global economic data showed some improvement and oil prices recovered significantly from recent lows.
In the fourth quarter, INPRS' global equity portfolio was up 1.1 percent. Another volatile quarter was the experience in equity markets as Brexit shocked the world at the end of June. Concern over slowing global growth, the future of the European Union, the impact of Brexit, the direction of interest rate, and the price of commodities contributed to increasing volatility in equity markets around the world.

## Portfolio Structure

Regional Exposure

- Domestic (U.S.)
Developed International
Emerging Markets



Asset Class Summary: Private Equity
Market Value
as of $06 / 30 / 2016$
INPRS 1-Year
Net Performance ${ }^{1}$
Russell 3000 plus 300 basis points 1-Year Performance
\$3,304.5 Million
6.8\%
5.1\%

## Portfolio Objective

The private equity 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 pivate equity portfolio is invested in the following sub-asset classes: venture and growth capital, buyout, energy, and debt related strategies.

## INPRS Allocation



## Performance Attribution

The private equity portfolio returned 6.8 percent for fiscal year 2016, outpacing its benchmark return of 5.1 percent by 1.7 percent. The private equity portfolio also outperformed the Cambridge Associates Pooled IRR for the one year period, 8.9 percent versus 6.3 percent, respectively, and the since inception period, 11.4 percent versus 10.4 percent, respectively.
Secondary interests have led the way for the private equity portfolio returning 14.4 percent inception to date. Venture capital, buyouts, special situations, and Real Assets (energy) all proved to be accretive to the overall plan return generating 12.6 percent, 11.7 percent, 10.1 percent, and 11.1 percent, respectively.
Although the exit environment for private equity was not as consistently strong in fiscal year 2016 as in recent years past, INPRS' private equity portfolio continued to receive positive net cash flows of $\$ 188$ million. Distributions during the fiscal year totaled $\$ 750$ million and contributions totaled $\$ 546$ million.

## Portfolio Overview

The private equity portfolio continues to maintain a home continent bias with over 80 percent of portfolio net asset value located in North America. Investments are well diversified by sub-asset class with buyout and venture capital / growth accounting for the largest portions of the portfolio at 44 percent and 25 percent, respectively.
The portfolio continues to mature with only 2.9 percent of net asset value now coming from pre2006 funds and a weighted average fund age of seven years.

In fiscal year 2016, INPRS invested capital with nine managers across thirteen investments, totaling $\$ 669$ million of new commitments. Commitments were made to managers in the buyout, real assets, and special situations sub-asset classes.
${ }^{1}$ Investment performance is based on calculations made by the system's custodian, Bank of New York Mellon, and are time-weighted rates of return.

Portfolio Structure
Investment by Region

- North America Europe



Investment by Vintage Year


| Market Value <br> as of 6/30/2016 | INPRS 1-Year <br> Net Performance |
| :---: | :---: | :---: | :---: |
| $\$ 5,216.4$ Million |  |$\frac{8.9 \%}{\text { Custom Benchmark }^{2}}$| $9.3 \%$ |
| :---: |

## Portfolio Objective

The fixed income portfolio seeks to generate current income and long-term risk-adjusted return in excess of the Custom Benchmark ("Benchmark") through investment in debt securities. A focus is placed on preservation of capital. To minimize the probability of substantial principal loss over the investment horizon, staff first reduce volatility of the portfolio then enhance portfolio return from contractual income and capital appreciation through active management.

## INPRS Allocation



## Performance Attribution

For fiscal year 2016, INPRS fixed income portfolio returned 8.9 percent, underperforming its benchmark by 0.4 percent. Active management within long duration bonds and emerging market debt were the main detractors from performance.

## Market Overview

During fiscal year 2016, investors shifted focus from the U.S. economic recovery and the Fed's dot plot to the negative global economic growth trend and the contagion effect it had on valuation of risk and risk-free assets. Markets experienced several significant shocks: (1) slower than expected Chinese growth, (2) a collapse of commodity prices, (3) trillions of dollars in negative yielding risk-free assets, and (4) Brexit; yet valuations of (both risk and risk-free assets) set all time highs. INPRS' fixed income portfolio benefited from this anomaly but continued its cautious stance.
For the first quarter, uninspiring U.S. growth and labor market prints (e.g. weak participation rate and wage growth) and highly dovish monetary policy in the EU and Japan led to declines in developed market yields. Slower than expected Chinese growth pressured commodities prices and drove spreads significantly wider. INPRS fixed income portfolio returned (0.4) percent with emerging market debt and the opportunistic credit strategy as the main detractors to performance.
For the second quarter, the highly anticipated 0.25 percent Fed rate hike finally materialized in December after 2.5 years of speculation and drove Treasury yields higher. With U.S. dollar at a decade high and continued deceleration of Chinese growth, prices of commodities declined further, spreads widen significantly as credit quality deteriorated, and a number of emerging economies fell further into recession. INPRS fixed income portfolio returned (0.5) percent with long duration Treasury and IG credits, and opportunistic credit strategy as the main detractors to performance.

For the third quarter, continued downward global growth trend and manufacturing overcapacity both acted as dampener on inflation. The lack of inflationary pressure supported the highly dovish monetary policy at global central banks. This dynamic, coupled with the S\&P 500 having its worst start to a calendar year ever, tilted the Fed back to being dovish. Global safe haven yields rallied and the U.S. dollar weakened. Drawdown in risk assets was short lived and a full recovery was made by quarter-end. INPRS fixed income portfolio returned 5.1 percent with long duration Treasury and IG credits, and emerging markets debt as the main contributors to performance.
For the fourth quarter, lackluster global growth, suppressed inflation, and market volatility driven by Brexit and missed earnings, dismissed the expectation of a Fed rate hike and continued the commitment on highly dovish monetary policy at global central banks. Global safe haven yields continued to rally, U.S. dollar weakened and several equity markets set all time highs. INPRS fixed income portfolio returned 4.6 percent with emerging markets debt as the main contributor to performance.
${ }^{1}$ Investment performance is based on calculations made by the system's custodian, Bank of New York Mellon, and are time-weighted rates of return.
${ }^{2}$ Represents sub-asset class target allocations within the fixed income portfolio over time.
${ }^{3}$ Derivative exposure is included in Government.

## Portfolio Overview

|  | INPRS | Benchmark |
| :---: | :---: | :---: |
| Duration to worst: | 9.5 yrs | 9.5 yrs |
| Yield to worst: | 2.8\% | 2.8\% |
| Credit quality: | A2 / A | A1 / A + |




Asset Class Summary: Fixed Income - Inflation-Linked

| Market Value as of $6 / 30 / 2016$ | INPRS 1-Year Net Performance ${ }^{1}$ | Custom Benchmark <br> 1-Year Performance ${ }^{2}$ |
| :---: | :---: | :---: |
| \$1,838.0 Million | 5.4\% | 5.3\% |

## Portfolio Objective

The global inflation-linked bonds ("ILBs") portfolio seeks to generate long-term risk-adjusted return similar to that of the custom global inflation index ("Benchmark"), comprised of 70 percent Barclays Capital U.S. Treasury Inflation Protected Securities (TIPS) Index and 30 percent Barclays Capital Global Inflation-Linked Bond Index, through investment in inflation-linked securities as well as provide protection against unanticipated inflation primarily via passive management.

## INPRS Allocation



## Portfolio Overview

|  | INPRS |  | Benchmark |
| :--- | :---: | :---: | :---: |
| Duration to worst: | 19.6 yrs |  | 19.3 yrs |
| Yield to worst: | $1.9 \%$ |  | $0.9 \%$ |
| Credit quality: | Aaa / AA + | Aa1 / AA + |  |



For the second quarter, the highly anticipated 0.25 percent Fed rate hike finally materialized in December after more than two years of speculation and drove real rates higher. Despite inflation prints in the U.S. and ex-U.S. developed markets rising slightly and breakeven inflation widening, INPRS global ILBs portfolio declined 0.7 percent in the quarter.

For the third quarter, a continued downward global growth trend and manufacturing overcapacity both acted as a dampener on inflation. However, benefits of lower commodity prices started to trickle through to end consumers and breakeven inflation widened slightly. This dynamic, coupled with the S\&P 500 having its worst start ever to a calendar year, tilted the Fed back to being dovish which resulted in a significant rally of real rates. INPRS global ILBs portfolio returned 4.1 percent in the quarter.

For the fourth quarter, lackluster global growth, suppressed inflation, and market volatility driven by Brexit as well as missed earnings, dismissed the expectation of another Fed rate hike and continued the commitment on highly dovish monetary policy at global central banks. As a result, breakeven inflation declined slightly and real rates rallied significantly. INPRS global ILBs portfolio returned 3.4 percent.

[^21]
## Performance Attribution

For fiscal year 2016, INPRS global ILBs portfolio returned 5.4 percent, outperforming its benchmark by 0.1 percent. The portfolio's exposure to long duration U.S. TIPS was the main contributor to performance.

## Market Overview

INPRS extended duration significantly in U.S. TIPS and transitioned to its approved target allocation in fiscal year 2016. The portfolio is expected to retain its sensitivity to changes in inflation expectation; however, given its long duration, changes in real rates are expected to influence performance, as well.
During the last twelve months, inflation prints remained near zero in ex-U.S. developed markets despite highly dovish monetary policy at global central banks that resulted in trillions of negative yielding risk-free assets. Inflation prints were within a normal range in the U.S., excluding the effects of food and energy. Lackluster global growth coupled with another collapse in commodity prices kept the risk of an unexpected spike in inflation relatively low but not zero. As an inflation hedge, INPRS' global ILBs portfolio stayed vigilant and kept pace with its benchmark.

For the first quarter, growth was uninspiring in the U.S. and ex-U.S. developed markets, while slower than expected growth in China pressured prices of commodities and kept inflation prints below expectations and breakeven inflation narrowed considerably. INPRS global ILBs portfolio declined 1.4 percent in the quarter.


Asset Class Summary: Commodities

| Market Value <br> as of $6 / 30 / 2016$ | INPRS 1-Year <br> Net Performance $^{1}$ | $(19.6) \%$ |
| :---: | :---: | :---: | | Custom Benchmark |
| :---: |
| 1-Year Performance |

## 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 trailed its benchmark by 1.2 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 (21.6) percent and 2.0 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 ("GSCl"). For the fiscal year, the two indices returned (13.3) percent and (26.1) percent, respectively.
China reported slower growth for the first quarter, which had a significant impact on commodity prices. The more diversified BCOM fell 14.5 percent during the quarter, its largest quarterly decline since the fourth quarter of 2008. Petroleum markets were hit hardest, with WTI Crude Oil falling nearly 25.0 percent within the quarter.
Commodity markets were mostly down over the first two quarters of fiscal year 2016. Notably, energy, industrial metals, precious metals, livestock, and the agriculture complexes all experienced double-digit declines for the full calendar year of 2015. A number of negative forces weighed on commodity prices during the second quarter of fiscal year 2016, including U.S. dollar strength, deflationary concerns in Europe, and a slowing of the Chinese economy. The BCOM and the GSCI were down 10.6 percent and 16.6 percent, respectively, for the second quarter of fiscal year 2016.
Commodity markets rallied toward the end of the third quarter. Led by the precious metals complex, a small group of commodities, including RBOB gasoline, zinc, gold, silver, soybean oil, and lean hogs, each experienced double-digit price gains to begin calendar year 2016. The BCOM index climbed 0.4 percent while the GSCI index fell 2.5 percent during the period.
The commodity rally late in the third-quarter continued into the fourth quarter, with the BCOM and the GSCl indices increasing 12.8 percent and 12.7 percent, respectively. Crude oil prices gained over 25.0 percent during the quarter, benefiting from strong demand and inventory draws. The largest increases in spot prices, however, were in natural gas and soybean meal. Both commodities were up more than 49.0 percent during the quarter.
${ }^{1}$ Investment Returns are based on calculations made by the system's custodian, Bank of New York 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 |  |
| Agriculture | $\square$ Energy |
| $\square$ Industrial Metals | $\square$ Livestock |
| $\square$ Foods and Fibers | $\square$ Precious Metals |



Market Value
as of $6 / 30 / 2016$
\$1,629.8 Million

INPRS 1-Year Net Performance ${ }^{1}$
8.1\%

NCREIF Open End Diversified
Core Equity Index ("ODCE")
1-Year Performance
12.6\%

## 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 2016, the real estate portfolio trailed its benchmark by 4.5 percentage points. It is important to note that the real estate portfolio will trail its all-equity benchmark during periods of strong equity outperformance relative to debt, as the portfolio is comprised of approximately 35.0 percent commercial real estate debt. The debt portion of the portfolio accounted for nearly all of the relative underperformance with the debt and equity portfolios having returned 2.0 percent and 12.1 percent, respectively, 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.
For the first quarter, the ODCE returned 3.7 percent. U.S. commercial real estate performed well during the quarter with healthy levels of absorption and continued rental gains as the main drivers. Given the relative attractiveness of U.S. assets, global capital flows remained strong. Across property types, industrial posted the highest return for the quarter, increasing 3.7 percent.

Despite a preliminary second quarter annualized GDP estimate of 0.7 percent, the final quarter of 2015 witnessed record levels of commercial real estate asset pricing, the highest transaction volume and peak occupancies for the cycle across the office, retail and industrial property types. Performance for the ODCE was up 3.3 percent for the quarter.
For the third quarter, the ODCE was up 2.2 percent. The U.S. real estate markets continued to achieve favorable results in the third quarter despite a global backdrop of economic uncertainty and capital markets volatility. Retail and industrial were the top-performing property types, both increasing 3.0 percent for the quarter.
In an otherwise low-yielding market environment, the ODCE finished the year with another relatively strong quarter, up 2.1 percent ${ }^{3}$. In the U.S., industrial led the other major property types with a return of 2.9 percent for the quarter. Retail and apartments also performed well, increasing 2.2 percent and 1.9 percent, respectively.
${ }^{1}$ Investment performance is based on calculations made by the system's custodian, Bank of New York Mellon, and are time weighted rates of return.
${ }^{2}$ Estimated.
${ }^{3}$ Based on preliminary results as published by NCREIF.

## Portfolio Structure





| Market Value <br> as of $6 / 30 / 2016$ | INPRS 1-Year <br> Net Performance ${ }^{1}$ | $(2.9) \%$ |
| :---: | :---: | :---: |

## 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. These strategies have historically delivered returns with low correlation to traditional long-only investment strategies. It is important to maintain an appropriate level of diversification among investment strategies in order to most effectively meet these stated objectives. At the end of the fiscal year, the absolute return portfolio was comprised of twenty-three managers across twenty-five investments.

## INPRS Allocation



## Performance Attribution

INPRS underperformed the HFRI Custom benchmark due to a combination of strategy selection and individual manager performance in ex-US equity, event driven, global macro, and structured credit strategies.

## Market Overview

INPRS' absolute return portfolio returned (2.9) percent during fiscal year 2016. The performance trails the return for the custom benchmark.
During the fiscal year, the portfolio was impacted by a combination of market disappointment in central bank decisions, rapid tightening and easing of financial conditions post the China equity/growth scare in Q3 2015, high yield spread widening in Q1 2016, and the immediate market shock from the outcome of the Brexit vote near the end of the fiscal year.
The portfolio's strategies exhibited a wide range of results over the fiscal year, with a range of total returns from -20 percent to +20 percent. The average positive performing investment (twelve in total) had a starting allocation of $\$ 77$ million and returned 6.7 percent. The average negative performing investment (thirteen in total) had a starting allocation of \$108 million and returned (10.2) percent over the fiscal year. In summary, the poor performers had lower returns on larger initial allocations than the offsetting positive performers. Despite the challenging alpha performance, the portfolio exhibited very little beta to traditional asset classes over the fiscal year -- 0.1 to the MSCI ACWI, (0.3) to the Barclays Global Aggregate Index, and zero to the S\&P GSCI. The average pairwise correlation of fund returns across the entire roster of hedge funds was 0.2 , with the maximum average pairwise correlation of any single investment to other fund investments at 0.3 .
INPRS' fund-of-funds portfolio, which was an 18.3 percent allocation at the end of the fiscal year, lost 5.0 percent in aggregate over the fiscal year, with wide performance dispersion between the managers. Exposure to energy-related event driven and credit strategies detracted the most from performance, with the greatest positive impact coming from residential mortgages and short-term quantitative strategies.
${ }^{1}$ Investment performance is based on calculations made by the systems custodian, Bank of New York Mellon, and are time-weighted rates of return.
${ }^{2} H F R I$ 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\% due to transition cash balance, allocations as of June 2016.

Contribution to Performance by Strategy ${ }^{3}$


Portfolio Composition


Fund of Funds - Look-Through ${ }^{4}$


| Market Value <br> as of $6 / 30 / 2016$ | INPRS 1-Year <br> Net Performance |  |
| :---: | :---: | :---: |
|  | $1.7 \%$ | Custom Benchmark <br> 1-Year Performance |
|  | 0.86 .4 Million |  |

## Portfolio Objective

The risk parity portfolio seeks to create risk balance that is capable of delivering consistent and high 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 is expected to 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 carry a risk premium, and by investing in them, investors expect to earn a return higher than that offered by cash instruments.
2. The return of a particular asset class is proportional to its risk over long periods of time (i.e., different asset classes have similar Sharpe ratios).
3. True diversification goes beyond simple capital allocation and, instead, focuses on risk allocation.
4. The main drivers of returns are growth and inflation factors and changes in risk premiums; asset classes will perform differently depending on the particular combination of such factors.

## 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 2016, the risk parity portfolio outperformed a 60/40 portfolio by 0.9 percent. Diversification beyond U.S. equities and bonds was rewarded through periods of volatility in the second half of the fiscal year.
Over the past few years, equity risk concentrated or $60 / 40$ portfolios have benefited from low volatility and high returns within the equity market. However, brief periods of volatility in January and June resulted in an outperformance in risk-balanced risk parity portfolios over a 60/40 portfolio. In particular, the largest contributing factor to performance within a risk parity portfolio over the fiscal year was nominal bonds. Inflation indexed bonds also contributed positively to performance, while equity and commodities were detractors to performance.

## Market Overview

The first half of fiscal year 2016 was a continuation of fiscal year 2015 - where a low inflationary environment caused losses in commodities and inflation indexed bonds which could not be offset by gains in nominal bonds or equities. As a result, risk parity underperformed a 60/40 portfolio. As inflation began to rise throughout the second half of fiscal year 2016 and Brexit added volatility within equity markets, gains in nominal bonds, inflation indexed bonds, and commodities resulted in outperformance of risk parity over 60/40 portfolios where risk is concentrated within equities.
${ }^{1}$ Based on calculations made by the system's custodian, Bank of New York Mellon, and are time weighted rates of return. ${ }^{2}$ Comprised of 60\% MSCI ACWI IMI Index (equities) \& 40\% Barclays Global Aggregate Bond Index (bonds).

## Portfolio Structure

Manager Allocation<br>Bridgewater $\square$ AQR $\square$ First Quadrant



Target Risk Allocation
Exposure to asset classes that perform well in the following economic environments


Historical Comparative Investment Results ${ }^{1}$
As of June 30, 2016

|  | 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 \% | 1.2 \% | 4.8 \% | 4.2 \% |
| vs. BNY Mellon Public Universe Median ${ }^{4}$ |  | 0.8 | 6.7 | 6.5 |
| Target Reference Index ${ }^{5}$ |  | 1.4 | 4.6 | 4.3 |
| Total Domestic Equity | 11.8 | 0.1 | 9.7 | 10.6 |
| vs. BNY Mellon Public Universe Median |  | 1.2 | 10.6 | 11.3 |
| Russell 3000 Index |  | 2.1 | 11.1 | 11.6 |
| Total International Equity | 10.4 | (8.6) | 2.6 | 1.3 |
| vs. BNY Mellon Public Universe Median |  | (8.6) | 2.8 | 1.8 |
| MSCI ACWI ex U.S. IMI Net |  | (9.6) | 1.7 | 0.4 |
| Total Domestic Fixed Income | 11.3 | 10.6 | 6.4 | 5.4 |
| vs. BNY Mellon Public Universe Median |  | 5.5 | 4.2 | 4.2 |
| Barclays U.S. Aggregate Bond Index |  | 6.0 | 4.1 | 3.8 |
| Total International Fixed Income | 6.9 | 8.5 | 3.8 | 0.3 |
| vs. BNY Mellon Public Universe Median |  | 1.7 | 0.4 | 0.6 |
| Barclays Global Aggregate ex-USD (USDH) |  | 8.5 | 5.9 | 5.5 |

${ }^{1}$ 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.
${ }^{3} / n v e s t m e n t ~ p e r f o r m a n c e ~ i s ~ b a s e d ~ o n ~ c a l c u l a t i o n s ~ m a d e ~ b y ~ t h e ~ s y s t e m ' s ~ c u s t o d i a n, ~ B a n k ~ o f ~ N e w ~ Y o r k ~ M e l l o n . ~ T h e ~ 1-y e a r, ~ 3-y e a r, ~ a n d ~ 5-y e a r ~$ performance returns are time-weighted rates of return based on the market rates of return.
${ }^{4}$ Universe of Public Funds.
${ }^{5}$ Benchmark history through December 31, 2011, represents composite returns for the legacy PERF and TRF dynamic policies and have been combined using dynamic market weights each month and are reported under the single Total Consolidated Defined Benefit Assets structure beginning January 1 , 2012.

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

| (dollars in millions) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Market Value of Assets |  | Rate of Return ${ }^{2}$ | Actuarial Assumed Rate |
| 2016 | INPRS ${ }^{3}$ | \$ | 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 |
| 2007 | PERF CRIF |  | 16,114.3 | 18.2 | 7.25 |
|  | TRF DB Assets |  | 5,501.0 | 17.9 | 7.50 |

${ }^{1}$ Returns from 2007-2011 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; 2007-2011 reported as gross of fees.
${ }^{3}$ INPRS Consolidated Defined Benefit Assets.
${ }^{4}$ Public Employees' Retirement Fund Consolidated Retirement Investment Fund.
${ }^{5}$ Teachers' Retirement Fund Defined Benefit Assets.

## Statistical Performance

As of June 30, 2016

| Statistic | 1-Year | 3-Years | 5-Years | 10-Years |
| :---: | :---: | :---: | :---: | :---: |
| Annualized Time-Weighted Rate of Return | 1.19 \% | 4.78 \% | 4.18 \% | 3.80 \% |
| Annualized Standard Deviation | 5.49 | 4.67 | 5.71 | 9.42 |
| Annualized Sharpe Ratio ${ }^{1}$ | 0.22 | 1.01 | 0.74 | 0.34 |
| Beta ${ }^{2}$ | 0.33 | 0.33 | 0.40 | 0.57 |
| Annualized Alpha ${ }^{3}$ | (0.22) | 0.07 | (0.23) | (0.16) |
| Correlation ${ }^{2}$ | 0.83 | 0.79 | 0.84 | 0.91 |

${ }^{1}$ Risk Free Proxy is the Citigroup 3 Month Treasury Bill.
${ }^{2}$ Market Proxy is the S\&P 500.
${ }^{3}$ Market Proxy is INPRS' Custom 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 (1) indicates less volatility than the market. A Beta of greater than one (1) indicates greater volatility than the market.

Alpha: A measure of performance on a risk-adjusted basis. 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.

Correlation: A Statistical measure of how two (2) 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. Often, the correlation is squared and known as $R$-squared or the Coefficient of the Correlation.

## Investment Results - Annuity Savings Accounts and Legislators' Defined Contribution Plan

Assets by Investment Option
As of June 30, 2016
(dollars in millions)

| Investment Option | ASA \& LEDC Plan Assets ${ }^{1}$ |  | Percent of Self-Directed Investments |
| :---: | :---: | :---: | :---: |
| Guaranteed Fund | \$ | 2,874.2 | 56.1 \% |
| Large Cap Equity Index Fund |  | 827.1 | 16.1 |
| Small / Mid Cap Equity Fund |  | 582.6 | 11.4 |
| International Equity Fund |  | 181.5 | 3.5 |
| Fixed Income Fund |  | 177.9 | 3.5 |
| Inflation-Linked Fixed Income Fund |  | 33.7 | 0.7 |
| Money Market Fund |  | 23.2 | 0.4 |
| Stable Value Fund |  | 1.2 | - |
| Target Date Funds ${ }^{2}$ |  | 426.0 | 8.3 |
| Total ASA and LEDC Plan Assets ${ }^{3}$ | \$ | 5,127.4 | 100.0 \% |

${ }^{1}$ Assets include all PERF, TRF Pre-1996, and TRF 1996 ASA assets and the LEDC Plan account balances allocated outside of the Consolidated Defined Benefit Assets option.
${ }^{2}$ Consolidated market 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.


Guaranteed Fund

Large Cap Equity Index Fund

Small / Mid Cap Equity Fund

International Equity Fund
Fixed Income Fund
Inflation-Linked Fixed Income Fund
Money Market Fund
Target Date Funds

## Investment Results - Annuity Savings Accounts and Legislators' Defined Contribution Plan

Historical Annualized Time-Weighted Rate of Return by Investment Option vs. Benchmark Returns As of June 30, 2016

| Investment Option | 1-Year ${ }^{1,2}$ | 3-Year ${ }^{1,2}$ | 5-Year ${ }^{1,2}$ |
| :---: | :---: | :---: | :---: |
| Guaranteed Fund | 0.46 \% | 0.35 \% | 0.63 \% |
| Large Cap Equity Index Fund | 4.0 | 11.6 | 12.1 |
| S\&P 500 Index | 4.0 | 11.7 | 12.1 |
| Small / Mid Cap Equity Fund | (4.8) | 8.0 | 8.8 |
| Russell Small Cap Completeness Index | (5.2) | 8.6 | 9.3 |
| International Equity Fund | (8.9) | 2.4 | 0.9 |
| MSCI ACWI ex US Index | (10.2) | 1.2 | 0.1 |
| Fixed Income Fund | 5.4 | 4.0 | 4.1 |
| Barclays U.S. Aggregate Bond Index | 6.0 | 4.1 | 3.8 |
| Inflation-Linked Fixed Income Fund | 3.6 | 2.0 | 2.5 |
| Barclays U.S. TIPS Index | 4.4 | 2.3 | 2.6 |
| Money Market Fund | 0.3 | 0.2 | 0.1 |
| Citigroup 3 Month T-Bill Index | 0.1 | 0.1 | 0.1 |
| Stable Value Fund ${ }^{3}$ | 1.4 | 2.2 | 2.5 |
| Citigroup 3 Month T-Bill Index | 0.1 | 0.1 | 0.1 |


| Target Date Funds |  |  |  |
| :--- | :--- | :--- | :--- |
| Retirement Fund |  |  |  |
| Retirement Fund Index | 3.0 | 3.3 | 3.5 |
| Retirement Fund 2020 | 3.1 | 2.8 | 2.7 |
| 2020 Fund Index | 2.5 | 4.2 | 4.1 |
| Retirement Fund 2025 | 2.7 | 3.9 | 3.7 |
| 2025 Fund Index | 2.2 | 4.9 | 4.6 |
| Retirement Fund 2030 | 2.3 | 4.6 | 4.3 |
| 2030 Fund Index | 1.1 | 5.5 | 5.0 |
| Retirement Fund 2035 | 1.1 | 5.3 | 4.8 |
| 2035 Fund Index | $(0.7)$ | 5.7 | 5.2 |
| Retirement Fund 2040 | $(1.0)$ | 5.3 | 4.9 |
| 2040 Fund Index | $(1.2)$ | 5.6 | 5.2 |
| Retirement Fund 2045 | $(1.6)$ | 5.2 | 4.8 |
| 2045 Fund Index | $(1.1)$ | 5.6 | 5.2 |
| Retirement Fund 2050 | $(1.6)$ | 5.2 | 4.8 |
| 2050 Fund Index | $(1.1)$ | 5.6 | 5.2 |
| Retirement Fund 2055 | $\mathbf{1 1 . 6 )}$ | 5.2 | 4.8 |
| 2055 Fund Index | $(1.1)$ | 5.6 | 5.2 |
| Retirement Fund 2060 | $(1.6)$ | 5.2 | 4.8 |
| 2060 Fund Index | $(1.1)$ | 5.7 | 5.5 |

[^22]
## Investment Results - Annuity Savings Accounts and Legislators' Defined Contribution Plan

Annuity Savings Accounts Ten-Year Guaranteed Fund Interest Crediting Rates
For the Year Ended June 30

|  | Interest Credit Rate |  |  |
| :---: | :---: | :---: | :---: |
|  | INPRS | PERF | TRF |
| 2016 | 0.46 \% | N/A | N/A |
| 2015 | 0.32 | N/A | N/A |
| 2014 | 0.26 | N/A | N/A |
| 2013 | 0.28 | N/A | N/A |
| $2012{ }^{1}$ | 1.75 | N/A | N/A |
| 2011 | N/A | 1.75 \% | 1.75 \% |
| 2010 | N/A | 3.50 | 3.50 |
| 2009 | N/A | 6.00 | 5.50 |
| 2008 | N/A | 6.50 | 6.00 |
| 2007 | N/A | 6.00 | 5.50 |

'Guaranteed Fund assets of PERF, TRF Pre-1996 and TRF 1996 were unitized as of January 1, 2012.


Largest Assets Held as of June 30, 2016
Top Ten Equity Holdings by Fair Value ${ }^{1}$
(dollars in thousands)

| Company | Shares | Fair Value |  |
| :---: | :---: | :---: | :---: |
| Microsoft Corp. | 1,221,812 | \$ | 62,520 |
| Nestle SA | 726,560 |  | 56,047 |
| Apple Inc. | 535,521 |  | 51,196 |
| Exxon Mobil Corp. | 398,410 |  | 37,347 |
| Alphabet Inc. Class C Capital Stock | 51,203 |  | 35,438 |
| Visa Inc. | 472,287 |  | 35,030 |
| Taiwan Semiconductor Manufacturing | 6,620,494 |  | 33,350 |
| Alphabet Inc. Class A Common Stock | 46,471 |  | 32,694 |
| Johnson \& Johnson | 266,816 |  | 32,365 |
| Allergan PLC | 136,764 |  | 31,605 |

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

Largest Assets Held as of June 30, 2016
Top Ten Fixed Income Holdings by Fair Value ${ }^{1}$
(dollars in thousands)

| Description | Coupon Rate | Maturity Date |  | Par Value | Fair Value |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| U.S. Treasury - CPI Inflation Index Bond | 2.125 \% | 2/15/41 | \$ | 159,575 | \$ | 210,504 |
| U.S. Treasury - CPI Inflation Index Bond | 1.375 | 2/15/44 |  | 158,407 |  | 183,119 |
| U.S. Treasury - CPI Inflation Index Bond | 0.750 | 2/15/45 |  | 157,806 |  | 158,478 |
| U.S. Treasury Bond | 2.500 | 2/15/46 |  | 149,440 |  | 155,610 |
| U.S. Treasury - CPI Inflation Index Bond | 0.750 | 2/15/42 |  | 154,343 |  | 154,646 |
| U.S. Treasury - CPI Inflation Index Bond | 0.625 | 2/15/43 |  | 155,922 |  | 151,762 |
| U.S. Treasury Note | 1.000 | 5/31/18 |  | 147,860 |  | 149,004 |
| U.S. Treasury - CPI Inflation Index Bond | 2.125 | 2/15/40 |  | 101,076 |  | 132,140 |
| U.S. Treasury Note | 0.375 | 10/31/16 |  | 113,240 |  | 113,248 |
| U.S. Treasury - CPI Inflation Index Bond | 1.000 | 2/15/46 |  | 94,424 |  | 101,938 |

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

Top Ten Brokers' Commission Fees
For the Year Ended June 30, 2016

| (dollars in thousands) |  |  |
| :---: | :---: | :---: |
| Broker | Amount Paid in Fees |  |
| Morgan Stanley \& Co. Inc. | \$ | 674 |
| Goldman Sachs \& Co. |  | 523 |
| Newedge USA LLC |  | 433 |
| Investment Technology Group, New York |  | 127 |
| Credit Suisse, New York |  | 118 |
| UBS Securities LLC |  | 118 |
| Jeffries \& Co. Inc., New York |  | 116 |
| Merrill Lynch International |  | 110 |
| Instinet Europe Limited, London |  | 103 |
| JP Morgan Secs Ltd, London |  | 66 |
| Top Ten Brokers' Commission Fees |  | 2,388 |
| Other Brokers |  | 1,799 |
| Total Brokers' Commission Fees | \$ | 4,187 |

Investment Management Fees
For the Year Ended June 30, 2016

| (dollars in thousands) |  |  |
| :---: | :---: | :---: |
| Asset Class | Investment Management Fees |  |
| Consolidated Defined Benefit Assets |  |  |
| Public Equity | \$ | 16,190 |
| Private Equity |  | 42,110 |
| Fixed Income - Ex Inflation-Linked |  | 10,654 |
| Fixed Income - Inflation-Linked |  | 3,374 |
| Commodities |  | 7,263 |
| Real Estate |  | 16,785 |
| Absolute Return |  | 51,912 |
| Risk Parity |  | 7,909 |
| Cash + Cash Overlay |  | 100 |
| Total Consolidated Defined Benefit Assets |  | 156,297 |
| Special Death Benefit Fund Assets |  | 8 |
| Annuity Savings Accounts Assets |  | 4,260 |
| Total Investment Management Fees | \$ | 160,565 |

Investment Professionals

## Consolidated Defined Benefit Assets

## Custodian

Bank of New York Mellon

## Consultants

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

## Public Equity

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

## Private Equity

A.M. Pappas \& Associates, LLC

ABRY Partners
Accel Partners
Accent Equity Partners AB
Actis Capital
Advanced Technology Ventures
Advent International Global Private Equity
Aisling Capital
Alplnvest US Holdings, Inc.
American Securities Capital Partners, L.P.
AnaCap Financial Partners LLP
Apax Partners, Inc
Apollo Management, L.P.
ARCH Venture Partners
Ares Management
Arle Capital Partners
Austin Ventures
Avenue Capital Group, LLC
Bain Capital Partners
Baring Private Equity Asia Limited

## Bay Partners

Bertram Capital
Black Diamond Capital Management, LLC
Brentwood Associates
Caltius Mezzanine
Cardinal Partners
Catterton Partners
Centerfield Capital Partners
Century Park Capital Partners
Cerberus Capital Management
Charterhouse Capital Partners
CID Capital
Cinven Limited
Clarity China
Close Brothers Private Equity, Ltd.
Code Hennessy \& Simmons LLC
Coller Capital
Columbia Capital LLC
Court Square Capital Partners
Crescent Capital Partners
Crestview Capital Funds
CVC Capital Partners
Doll Capital Management
Elevation Partners
EnCap Investments
Energy Capital Partners
Enhanced Capital Partners
Escalate Capital Partners
Falcon Investment Advisors, LLC
First Reserve Corporation
Forbion Capital Partners
Fortress Investment Group LLC
Gilde Buyout Partners
Globespan Capital Partners
GSO Capital Opportunities
GTCR Golder Rauner, LLC
H2 Equity Partners BV
Hammond Kennedy Whitney \& Co
Hellman \& Friedman LLC
Herkules Capital
High Road Capital Partners
Horsley Bridge
Insight Venture Partners
Institutional Venture Partners

## Investment Information

Investment Professionals, continued

## Consolidated Defined Benefit Assets

Private Equity, cont.
JFM Management Inc.
Khosla Ventures
KPS Special Situations Funds
Landmark Partners, Inc.
Leonard Green \& Partners
Lexington Partners Inc.
Lightyear Capital LLC
Lindsay Goldberg
Lion Capital
MBK Partners
Merit Capital Partners
Mill Road Capital
Neuberger Berman
New Enterprise Associates
New Mountain Capital LLC
NGP Energy Capital Management
Oak Hill Advisors, L. P.
Oak Hill Capital Management, Inc.
Oak Investment Partners
Oaktree Capital Management, LLC
Opus Capital Venture Partners
Panda Power Funds
Parthenon Capital
Peninsula Capital Partners LLC
Permira Advisers Limited
Platinum Equity, LLC
Rho Capital Partners, Inc.
RJD Partners Limited
SAIF Management II Ltd
Sankaty Advisors
Scale Venture Partners
Silver Cup
Silver Lake Partners
Stepstone
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 Investors
TPG Capital
Trilantic Capital Partners
Trinity Ventures
Triton
True Ventures
TSG Consumer Partners
Veritas Capital Management
Veronis, Suhler \& Associates, Inc.
Vestar Capital Partners, Inc.
Vintage Venture Partners
Vision Capital LLP
Vista Equity Partners
Walden Group of Venture Capital Funds
Warburg Pincus
Warwick Energy Investment Group
Wayzata Investment Partners, LLC
Weston Presidio Capital
White Deer Energy
Windjammer Capital Investors
WLR Recovery Partners
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

BlackRock Financial Management
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
Highfields Capital Management
Ionic Capital Management
Kepos Capital
King Street Capital Management
MKP Capital Management
Nephila Capital
Oceanwood Capital Management

Oxford Asset Management
Pacific Alternative Asset Management
Company (PAAMCO)
Perella Weinberg Partners
Pharo Global Advisors
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 Plan Assets<br>Public Employees' Retirement Fund (PERF)<br>Teachers' Retirement Fund Pre-1996 Account (TRF Pre-1996)<br>Teachers' Retirement Fund 1996 Account (TRF 1996)<br>Legislators' Defined Contribution Plan<br>(LEDC Plan)<br>Consultant<br>Cap Cities (General: Defined Contribution)<br>Large Cap Equity Index Fund<br>BlackRock Institutional Trust<br>Small/Mid Cap Equity Fund<br>Rhumbline Advisers<br>Times Square Capital Management, LLC<br>International Equity Fund<br>Altrinsic Global Advisors, LLC<br>Arrowstreet Capital, LP<br>Baillie Gifford \& Company<br>BlackRock Institutional Trust<br>Fixed Income Fund<br>Loomis Sayles \& Company<br>Northern Trust Global Investments<br>Pacific Investment Management Company (PIMCO)<br>Inflation-Linked Fixed Income Fund<br>BlackRock Institutional Trust<br>Money Market Fund<br>Bank of New York Mellon<br>Guaranteed Fund<br>Logan Circle<br>Reams Asset Management<br>State Street Global Advisors



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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 with 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 market value of the assets is used as of the fiscal year end. For funding purposes, a five (5) year smoothing of the gains or losses on the market value of assets is used for each year. 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 (2) actuaries providing the actuarial services for the eight (8) Defined Benefit retirement plans administered by INPRS as summarized below:

## PricewaterhouseCoopers LLP

- Public Employees' Retirement Fund
- 1977 Police Officers' and Firefighters' Pension and Disability Fund
- Judges' Retirement System
- State Excise Police, Gaming Agent, Gaming Control Officer, and Conservation Enforcement Officers' Retirement Plan
- Prosecuting Attorneys' Retirement Fund
- Legislators' Defined Benefit Plan


## Nyhart

- Teachers' Retirement Fund Pre-1996 Account
- Teachers' Retirement Fund 1996 Account

Accordingly, the INPRS FY2016 CAFR Actuarial Section includes an Actuary Certification Letter from each actuary for the actuarial valuations prepared as of June 30, 2016.

## Actuaries' Certification Letters

November 2016<br>Board of Trustees<br>Indiana Public Retirement System<br>1 North Capitol, Suite 001<br>Indianapolis, IN 46204

Re: Certification of the Actuarial Valuations of the Indiana Public Retirement System as of June 30,2016

## Dear Board of Trustees:

Actuarial valuations are performed annually as required under statute for the Indiana Public Retirement System ("INPRS") defined benefit pension plans. The results of the June 30, 2016 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' Pension and Disability Fund
- Judges' Retirement System
- State Excise Police, Gaming Agent, Gaming Control Officer, and Conservation Enforcement Officers' Retirement Plan
- Prosecuting Attorneys' Retirement Fund
- Legislators' Retirement System Defined Benefit Plan

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 are intended for their sole use and benefit, and are not intended for reliance by other persons.

For accounting purposes, the actuarial assumptions and methods used in the June 30, 2016 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 employer. Therefore, contribution rates and amounts determined by the June 30, 2016 actuarial valuation and adopted by the Board will become effective on either July 1, 2017 or January 1, 2018. 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 during the year ending June 30,2016 , and 30 years for any UAAL that arose prior to the year ending June 30, 2016. For plans that are closed to new entrants, the UAAL will be amortized over a period not greater than 5 years.
- To set contributions such that they remain relatively level over time.

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) increased by $0.3 \%$ from the preceding year to $84.6 \%$, primarily due to contributions exceeding the actuarially determined amounts, offset by investment returns less than the $6.75 \%$ assumed, and other adverse member demographic experience.

## Actuaries' Certification Letters, continued



## Benefit Provisions

The benefit provisions reflected in the valuation reports are those which were in effect at June 30, 2016, as set forth in Indiana statutes. There were no material changes in benefit provisions since the 2015 valuations.

## Assets and Member Data

The valuations were based on asset values of the trust funds as of June 30, 2016 and member census data as of June 30, 2015, adjusted for certain activity during fiscal year 2016. All asset information and member data were provided by INPRS. 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 used in the June 30, 2016 valuations were the same assumptions used in the 2015 valuations. The assumptions were adopted by the Board pursuant to an experience study completed in April 2015, which reflected the experience period from July 1, 2010 through June 30, 2014, as well as data from earlier studies. The June 30, 2016 valuations incorporate member census data as of June 30, 2015, adjusted for certain activity during fiscal year 2016. Standard actuarial techniques were used to roll forward valuation results from June 30, 2015 to June 30, 2016.

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.

## 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 June 30, 2016, based on the underlying census data, asset information and 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 8 - 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

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.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

## Actuaries' Certification Letters, continued

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 PwC 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. 14-06229)


Mr. Brandon Robertson
Member, American Academy of Actuaries
Associate of the Society of Actuaries
Enrolled Actuary (No. 14-07568)


Mr. Antonio DeSario
Member, American Academy of Actuaries
Fellow of the Society of Actuaries
Enrolled Actuary (No. 14-08239)

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.

November 7, 2016

## 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, 2016 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 actuarial assumptions used in the June 30, 2016 valuations are based on plan experience from July 1, 2011 to June 30, 2014. The Board adopted changes to the Actuarial Value of Assets smoothing period and to the amortization period for the Calculated Contribution Rate effective with the June 30, 2016 valuation. Assumptions are summarized in the Assumptions and Methods section of the June 30, 2016 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, 2016 valuations are determined using June 30, 2015 census data and rolled-forward to the June 30, 2016 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.

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## 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. hired on or after July 1, 1995; or
2. hired before July 1, 1995, and prior to June 30, 2005:
a. were either hired by another school corporation or institution covered by TRF, or
b. were re-hired by a covered prior employer.

## 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 2017 was set by the Board in fiscal year 2016. The contribution rate of $7.50 \%$ for fiscal year 2018 was set by the Board in fiscal year 2017.

## 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 $29.7 \%$ from $30.4 \%$ 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 decreased to $91.8 \%$ from $92.5 \%$ for the preceding year. Based on the actuarial assumptions, it is anticipated that the 1996 Account will attain $100 \%$ funded status on 6/30/2035.

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 8 - Net Pension Liability and Actuarial Information - Defined Benefit Plans
- $\quad$ 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,

Danielle Winegardnec
Danielle Winegardner, ASA, EA, MARA


Tayt V. Odom, FSA, EA, MARA

Summary of Funded Status

| (dollars in millions) | Actuarial Valuation as of June 30, 2016 |  |  |  |  | Actuarial Valuation as of June 30, 2015 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pre-Funded Defined Benefit Retirement Plans | Actuarial Accrued Liability | Actuarial Value of Assets |  | nfunded ctuarial Accrued iability ${ }^{1}$ | Actuarial Funded Status |  | ctuarial ccrued iability |  | ctuarial Value of Assets |  | funded <br> ctuarial ccrued ability ${ }^{1}$ | Actuarial <br> Funded <br> Status |
| Public Employees' Retirement Fund | \$ 18,408.9 | \$ 14,553.0 | \$ | 3,855.9 | 79.1 \% | \$ | 17,980.6 | \$ | 14,131.9 | \$ | 3,848.7 | 78.6 \% |
| Teachers' Retirement Fund 1996 Account | 6,391.8 | 5,865.8 |  | 526.0 | 91.8 |  | 5,905.7 |  | 5,461.2 |  | 444.5 | 92.5 |
| 1977 Police Officers' and Firefighters' Pension and Disability Fund | 5,039.8 | 5,255.2 |  | (215.4) | 104.3 |  | 4,680.7 |  | 4,939.3 |  | (258.6) | 105.5 |
| Judges' Retirement System | 501.1 | 469.4 |  | 31.7 | 93.7 |  | 468.9 |  | 447.5 |  | 21.4 | 95.4 |
| State Excise Police, Gaming Agent, Gaming Control Officer, and Conservation Enforcement Officers' Retirement Plan | 138.9 | 118.5 |  | 20.4 | 85.3 |  | 132.8 |  | 112.8 |  | 20.0 | 84.9 |
| Prosecuting Attorneys' Retirement Fund | 85.0 | 56.4 |  | 28.6 | 66.4 |  | 77.9 |  | 54.9 |  | 23.0 | 70.4 |
| Legislators' Defined Benefit Plan | 4.0 | 3.2 |  | 0.8 | 80.7 |  | 4.3 |  | 3.3 |  | 1.0 | 77.1 |
| Total Pre-Funded Defined Benefit Retirement Plans | \$ 30,569.5 | \$ 26,321.5 | \$ | 4,248.0 | 86.1 \% | \$ | 29,250.9 | \$ | 25,150.9 | \$ | 4,100.0 | 86.0 \% |
| Pay-As-You-Go Defined Benefit Retirement Plan |  |  |  |  |  |  |  |  |  |  |  |  |
| Teachers' Retirement Fund Pre-1996 Account | 16,840.2 | 5,009.0 |  | 11,831.2 | 29.7 |  | 17,017.7 |  | 5,171.6 |  | 11,846.1 | 30.4 |
| Total Defined Benefit Retirement Plans | \$ 47,409.7 | \$ 31,330.5 |  | 16,079.2 | 66.1 \% |  | 46,268.6 | \$ | 30,322.5 | \$ | 15,946.1 | 65.5 \% |

[^23]Analysis of Financial Experience

| (dollars in thousands) |  |  |  |  |  |  | / Loss |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Defined Benefit Retirement Plans | $\begin{gathered} \text { June } 30, \\ 2015 \end{gathered}$ <br> UAAL ${ }^{1}$ |  | arial <br> Assets ience |  | arial <br> rued <br> lities ience ${ }^{2}$ |  | tization of ing Bases |  | uarial ption \& dology nges ${ }^{3}$ |  |  | June 30, 2016 UAAL ${ }^{1}$ |
| Public Employees' Retirement Fund | \$ 3,848,685 | \$ | 91,335 | \$ | $(4,870)$ | \$ | $(59,984)$ | \$ | $(19,279)$ | \$ | - | \$ 3,855,887 |
| Teachers Retirement Fund Pre-1996 Account | 11,846,107 |  | 75,846 |  | $(5,794)$ |  | $(73,114)$ |  | $(11,834)$ |  | - | 11,831,211 |
| Teachers Retirement Fund 1996 Account | 444,519 |  | 60,156 |  | 29,892 |  | $(15,531)$ |  | 6,985 |  | - | 526,021 |
| 1977 Police Officers' and Firefighters' Pension and Disability Fund | $(258,636)$ |  | 9,332 |  | 41,724 |  | 2,864 |  | $(10,703)$ |  | - | $(215,419)$ |
| Judges' Retirement System | 21,430 |  | 5,011 |  | 7,182 |  | (799) |  | $(1,076)$ |  | - | 31,748 |
| State Excise Police, Gaming Agent, Gaming Control Officer, and Conservation Enforcement Officers' Retirement Plan | 20,031 |  | 623 |  | 469 |  | (363) |  | (311) |  | - | 20,449 |
| Prosecuting Attorneys' Retirement Fund | 23,012 |  | 2,027 |  | 4,058 |  | (333) |  | (203) |  | - | 28,561 |
| Legislators' Defined Benefit Plan | 991 |  | 84 |  | (232) |  | (38) |  | (30) |  | - | 775 |
| Total INPRS | \$15,946,139 | \$ | 244,414 | \$ | 72,429 | \$ | $(147,298)$ | \$ | $(36,451)$ | \$ | - | \$16,079,233 |

Ten-Year Schedule of Participating Employers
As of June 30

|  | Total ${ }^{1}$ | PERF | $\begin{gathered} \text { TRF } \\ \text { Pre-1996² } \end{gathered}$ | TRF 1996 ${ }^{2}$ | TOTAL TRF ${ }^{2}$ | 1977 | JRS | EG\&C | PARF | LEDB |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 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 |
| $2007{ }^{4}$ | 1,663 | 1,138 | N/A | N/A | 360 | 161 | 1 | 1 | 1 | 1 |

[^24]Historical Summary of Actuarial Valuation Results
Actuarial Valuation as of June 30

${ }^{1}$ 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 Market Value of Assets (MVA).
${ }^{2}$ Covered Payroll can also be found in the RSI Contribution Schedule in the Financial Section.


Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions

The actuarial assumptions and methods used in the June 30, 2016 valuation of the Public Employees' Retirement Fund were adopted by the INPRS Board in April 2016. 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, 2016, there were no changes to the actuarial assumptions from the actuarial valuation as of June 30, 2015.

## Changes in Actuarial Methods

The INPRS Board approved the following changes in methods, effective June 30, 2016:
For funding purposes and when the plan is below $100 \%$ funded (based on Actuarial Value of Assets), gains and losses occurring from census experience different than assumed, assumption changes, and benefit changes will be amortized over a 20 -year period with level payments each year, rather than a 30 -year period. A new gain or loss base will continue to be established each year. This change is made on a prospective basis, beginning with the June 30, 2016 actuarial valuation. Amortization bases established prior to June 30, 2016 will continue to be amortized over their original amortization period, even if the remaining period is greater than 20 years at June 30, 2016. If the plan is at or above $100 \%$ funded (based on Actuarial Value of Assets), the methodology of treating past amortization bases as fully amortized and amortizing the entire surplus over an open 30-year period is unchanged.

For funding purposes, the smoothing period for investment gains and losses in the development of the Actuarial Value of Assets was increased from four years to five years at June 30, 2016. This change was implemented retroactively in that the Actuarial Value of Assets at June 30, 2016 was computed as if the five-year amortization period for recognizing investment gains and losses had always been in effect. This change increased the Actuarial Value of Assets, and therefore decreased the Unfunded Actuarial Accrued Liability of the plan by $\$ 19.3$ million at June 30, 2016.

## 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:

Funding
Accounting \& Financial Reporting
Inflation:
Cost of Living Increases:
Future Salary Increases:
6.75 percent (net of administrative and investment expenses)
6.75 percent (net of investment expenses)
2.25 percent per year
1.00 percent per year in retirement

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

Retirement:

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

Benefit Commencement Timing:

Active Members

Terminated Vested Members

Termination:

Earnings < \$20,000

If eligible for a reduced early retirement benefit upon termination from employment, $33 \%$ commence immediately and $67 \%$ defer to earliest unreduced retirement age.

If eligible for an unreduced retirement benefit upon termination from employment, $100 \%$ commence immediately.
$100 \%$ defer to earliest unreduced retirement age. If currently eligible for an unreduced retirement benefit, 100\% commence immediately.

Ultimate tables illustrative rates shown below:

| State |  |  |
| :---: | :---: | :---: |
| Age | Male | Female |
| 20-24 | 32 \% | 34 \% |
| 25-29 | 32 | 33 |
| 30-34 | 32 | 30 |
| 35-39 | 29 | 30 |
| 40-44 | 29 | 24 |
| 45-49 | 26 | 24 |
| 50-54 | 25 | 22 |
| 55+ | 22 | 20 |


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

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions, continued

| State (Male) |  | Years of Service |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Earnings >= \$20,000 | Age | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10+ |
|  | 20-24 | 23 \% | 23 \% | 23 \% | 20 \% | 20 \% | 17 \% | 17 \% | 12 \% | 12 \% | 7 \% | 7 \% |
|  | 25-29 | 23 | 23 | 23 | 19 | 17 | 17 | 17 | 12 | 12 | 7 | 7 |
|  | 30-34 | 22 | 22 | 19 | 18 | 16 | 13 | 13 | 12 | 7 | 7 | 7 |
|  | 35-39 | 17 | 17 | 17 | 17 | 16 | 10 | 10 | 9 | 7 | 6 | 6 |
|  | 40-44 | 17 | 17 | 14 | 12 | 12 | 10 | 9 | 9 | 7 | 5 | 5 |
|  | 45-49 | 14 | 14 | 14 | 10 | 10 | 10 | 9 | 7 | 4 | 4 | 4 |
|  | 50-54 | 14 | 14 | 9 | 9 | 9 | 9 | 9 | 7 | 4 | 4 | 4 |
|  | 55+ | 13 | 13 | 7 | 7 | 7 | 7 | 7 | 7 | 4 | 4 | 4 |
| State (Female) |  | Years of Service |  |  |  |  |  |  |  |  |  |  |
| 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

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

Political Subdivisions (Female)
Years of Service
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:

ASA Withdrawal: $\quad$ Prior to April 1, 2017:

- $40 \%$ of active members who decrement while vested are assumed to withdraw their ASA balance immediately upon decrement.
- $40 \%$ of vested inactive members are assumed to withdraw their ASA balance immediately on the valuation date.
$-100 \%$ of active members who decrement prior to vesting are assumed to withdraw their ASA balance immediately upon decrement.
$-100 \%$ of non-vested inactive members are assumed to withdraw their ASA balance immediately on the valuation date.

Beginning April 1, 2017:

- $100 \%$ of active members are assumed to withdraw their ASA balance immediately upon decrement.
$-100 \%$ of inactive members are assumed to withdraw their ASA balance immediately.

ASA Annuitization: Prior to April 1, 2017:

- $60 \%$ of active members who decrement while vested are assumed to annuitize their ASA balance at their assumed retirement age.
- $60 \%$ of vested inactive members are assumed to annuitize their ASA balance at their assumed retirement age.
- The conversion rate is $4.5 \%$.

Beginning April 1, 2017, assumes INPRS will outsource annuities to 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 $100 \%$ 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 5 -year period. The effect of plan changes on the plan liability are fully recognized in expense in the year in which they occur.

Actuarial (Liability)
Member census data as of the prior year end was used in the valuation and adjusted, where appropriate, to reflect Valuation Method: 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 Market Value of Assets (MVA), 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 MVA.

Accounting and financial reporting uses the Market Value of Assets (MVA) 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, 2015 | $\$$ | $3,848,685$ |
| UAAL (Gain) / Loss |  |  |
| Actuarial Value of Assets Experience |  | 91,335 |
| Actuarial Accrued Liabilities Experience ${ }^{1}$ | $(4,870)$ |  |
| Amortization of Existing Bases | $(59,984)$ |  |
| Actuarial Assumption \& Methodology Changes ${ }^{2}$ | $(19,279)$ |  |
| Plan Provision Changes |  |  |
| Unfunded Actuarial Accrued Liability (UAAL): June 30, 2016 | $\$$ | $3,855,887$ |

${ }^{1}$ Actuarial Accrued Liabilities Experience represents actual experience versus expected experience of the actuarial census assumptions.
${ }^{2}$ The smoothing period for investment gains and losses in the development of the actuarial value of assets was increased from four (4) years to five (5) years.

## 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 <br> Actuarial <br> Accrued <br> Liabilities |
| 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 |
| 2007 | 2,707,176 | 4,007,389 | 5,725,233 | 12,439,798 | 12,220,934 | 100.0 | 100.0 | 96.2 | 98.2 |

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 / (Decrease) In Average Pay |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $2016{ }^{2}$ | 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 |
| 2007 | 138,863 |  | 4,385,676 |  | 31,583 | 2.7 |

${ }^{1}$ 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)

${ }^{1}$ 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) |  |  | Unfunded Liability ${ }^{1}$ as a percentage of Covered Payroll |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 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 |
| $2013{ }^{3}$ |  | 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 | 705.2 |
| 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 |
| 2007 |  | 15,988.3 |  | 5,763.5 |  | 10,224.8 | 36.0 |  | 2,376.4 | 430.3 |

[^25]

Funded Percentage

## Teachers' Retirement Fund Pre-1996

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions

The actuarial assumptions and methods used in the June 30, 2016 valuation of the Teachers' Retirement Fund 1996 Account were adopted by the INPRS Board in April 2016. 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, 2016, there were no changes to the actuarial assumptions from the actuarial valuation as of June 30, 2015.

## Changes in Actuarial Methods

The INPRS Board approved the following changes in methods, effective June 30, 2016:
For funding purposes and when the plan is below 100\% funded (based on Actuarial Value of Assets), gains and losses occurring from census experience different than assumed, assumption changes, and benefit changes will be amortized over a 5 -year period with level payments each year, rather than a 30 -year period. A new gain or loss base will continue to be established each year. This change is made on a retroactive basis, beginning with the June 30, 2016 actuarial valuation, such that bases established prior to June 30, 2016 will be eliminated and the entire Unfunded Actuarial Accrued Liability will be amortized over 5 years. If the plan is at or above $100 \%$ funded (based on Actuarial Value of Assets), the methodology of treating past amortization bases as fully amortized and amortizing the entire surplus over an open 30-year period is unchanged.
For funding purposes, the smoothing period for investment gains and losses in the development of the Actuarial Value of Assets was increased from four years to five years at June 30, 2016. This change was implemented retroactively in that the Actuarial Value of Assets at June 30, 2016 was computed as if the five-year amortization period for recognizing investment gains and losses had always been in effect. This change increased the Actuarial Value of Assets, and therefore decreased the Unfunded Actuarial Accrued Liability of the plan by $\$ 11.8$ million at June 30, 2016.

## 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:

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: 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 |

## Teachers' Retirement Fund Pre-1996

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions, continued

## Demographic Assumptions: Based on 2011-2014 Experience

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

Retirement:

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

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 |  |  |  |

## Teachers' Retirement Fund Pre-1996

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions, continued

Disability:

| Age |  | Male |  | Female |
| :---: | :--- | :--- | :--- | :--- |
|  |  | $0.01 \%$ |  | $0.01 \%$ |
| 35 |  | 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 (3) years older than female spouses.

ASA Withdrawal: $\quad$ Prior to April 1, 2017:

- $50 \%$ of active members who decrement while vested are assumed to withdraw their ASA balance immediately upon decrement
- $50 \%$ of vested inactive members are assumed to withdraw their ASA balance immediately on the valuation date.
$-100 \%$ of active members who decrement prior to vesting are assumed to withdraw their ASA balance immediately upon decrement.
- 100\% of non-vested inactive members are assumed to withdraw their ASA balance immediately on the valuation date.

Beginning April 1, 2017:

- 100\% of active members are assumed to withdraw their ASA balance immediately upon decrement.
- 100\% of inactive members are assumed to withdraw their ASA balance immediately

ASA Annuitization: Prior to April 1, 2017:

- $50 \%$ of active members who decrement while vested are assumed to annuitize their ASA balance at their assumed retirement age.
- $50 \%$ of vested inactive members are assumed to annuitize their ASA balance at their assumed retirement age.
- The conversion rate is $4.5 \%$.

Beginning April 1, 2017, assumes INPRS will outsource annuities to 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 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\% 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 5 -year period. The effect of plan changes on the plan liability are fully recognized in expense in the year in which they occur.

Actuarial (Liability)
Member census data as of the prior year end was used in the valuation and adjusted, where appropriate, to reflect Valuation Method: 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 Market Value of Assets (MVA), 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 MVA.

Accounting and financial reporting uses the Market Value of Assets (MVA) 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, 2015 | \$ | 11,846,107 |
| UAAL (Gain) / Loss |  |  |
| Actuarial Value of Assets Experience |  | 75,846 |
| Actuarial Accrued Liabilities Experience ${ }^{1}$ |  | $(5,794)$ |
| Amortization of Existing Bases |  | $(73,114)$ |
| Actuarial Assumption \& Methodology Changes ${ }^{2}$ |  | $(11,834)$ |
| Plan Provision Changes |  | - |
| Unfunded Actuarial Accrued Liability (UAAL): June 30, 2016 | \$ | 11,831,211 |

${ }^{1}$ Actuarial Accrued Liabilities Experience represents actual experience versus expected experience of the actuarial census assumptions.
${ }^{2}$ The smoothing period for investment gains and losses in the development of the actuarial value of assets was increased from four (4) years to five (5) years.

## Solvency Test

(dollars in thousands)


## Teachers' Retirement Fund Pre-1996

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 Pay | Annual Percent Increase / (Decrease) In Average Pay |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $2016{ }^{2}$ | 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 | (0.0) |
| 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 |
| 2007 | 36,526 |  | 2,376,390 |  | 65,060 | 7.6 |

${ }^{1}$ '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' Retirement Fund Pre-1996

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 Pre-1996 Account and 1996 Account.

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


Historical Summary of Actuarial Valuation Results
Actuarial Valuation as of June 30


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Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions

The actuarial assumptions and methods used in the June 30, 2016 valuation of the Teachers' Retirement Fund 1996 Account were adopted by the INPRS Board in April 2016. 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, 2016, there were no changes to the actuarial assumptions from the actuarial valuation as of June 30, 2015.

## Changes in Actuarial Methods

The INPRS Board approved the following changes in methods, effective June 30, 2016:
For funding purposes and when the plan is below $100 \%$ funded (based on Actuarial Value of Assets), gains and losses occurring from census experience different than assumed, assumption changes, and benefit changes will be amortized over a 20-year period with level payments each year, rather than a 30 -year period. A new gain or loss base will continue to be established each year. This change is made on a prospective basis, beginning with the June 30, 2016 actuarial valuation. Amortization bases established prior to June 30, 2016 will continue to be amortized over their original amortization period, even if the remaining period is greater than 20 years at June 30, 2016. If the plan is at or above $100 \%$ funded (based on Actuarial Value of Assets), the methodology of treating past amortization bases as fully amortized and amortizing the entire surplus over an open 30-year period is unchanged.
For funding purposes, the smoothing period for investment gains and losses in the development of the Actuarial Value of Assets was increased from four years to five years at June 30, 2016. This change was implemented retroactively in that the Actuarial Value of Assets at June 30, 2016 was computed as if the five-year amortization period for recognizing investment gains and losses had always been in effect. This change decreased the Actuarial Value of Assets, and therefore increased the Unfunded Actuarial Accrued Liability of the plan by $\$ 7.0$ million at June $30,2016$.

## 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:

Funding
6.75 percent (net of administrative and investment expenses)

Accounting \& Financial Reporting
Inflation:
Cost of Living Increases: $\quad 1.00$ percent per year in retirement
Future Salary Increases:
6.75 percent (net of investment expenses)
2.25 percent per year

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 |

## Teachers' Retirement Fund 1996

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions, continued

## Demographic Assumptions: Based on 2011-2014 Experience

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

Retirement:

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

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 |  |  |  |

[^27]
## Teachers' Retirement Fund 1996

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 (3) years older than female spouses.

ASA Withdrawal: Prior to April 1, 2017:
$-50 \%$ of active members who decrement while vested are assumed to withdraw their ASA balance immediately upon decrement.

- $50 \%$ of vested inactive members are assumed to withdraw their ASA balance immediately on the valuation date.
$-100 \%$ of active members who decrement prior to vesting are assumed to withdraw their ASA balance immediately upon decrement.
- $100 \%$ of non-vested inactive members are assumed to withdraw their ASA balance immediately on the valuation date.

Beginning April 1, 2017:

- 100\% of active members are assumed to withdraw their ASA balance immediately upon decrement.
- 100\% of inactive members are assumed to withdraw their ASA balance immediately.

ASA Annuitization: Prior to April 1, 2017:

- $50 \%$ of active members who decrement while vested are assumed to annuitize their ASA balance at their assumed retirement age.
- $50 \%$ of vested inactive members are assumed to annuitize their ASA balance at their assumed retirement age.
- The conversion rate is $4.5 \%$.

Beginning April 1, 2017, assumes INPRS will outsource annuities to 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 $100 \%$ 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 5 -year period. The effect of plan changes on the plan liability are fully recognized in expense in the year in which they occur.

Actuarial (Liability)
Member census data as of the prior year end was used in the valuation and adjusted, where appropriate, to reflect Valuation Method: 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 Market Value of Assets (MVA), 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 MVA.

Accounting and financial reporting uses the Market Value of Assets (MVA) 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, 2015 | \$ | 444,519 |
| UAAL (Gain) / Loss |  |  |
| Actuarial Value of Assets Experience |  | 60,156 |
| Actuarial Accrued Liabilities Experience ${ }^{1}$ |  | 29,892 |
| Amortization of Existing Bases |  | $(15,531)$ |
| Actuarial Assumption \& Methodology Changes ${ }^{2}$ |  | 6,985 |
| Plan Provision Changes |  | - |
| Unfunded Actuarial Accrued Liability (UAAL): June 30, 2016 | \$ | 526,021 |

${ }^{1}$ Actuarial Accrued Liabilities Experience represents actual experience versus expected experience of the actuarial census assumptions.
${ }^{2}$ The smoothing period for investment gains and losses in the development of the actuarial value of assets was increased from four (4) years to five (5) years.

## 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 Member (Employer Financed Portion) | Total Actuarial Accrued Liabilities |
| 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 |
| 2007 | 656,918 | 449,452 | 1,721,184 | 2,827,554 | 2,713,052 | 100.0 | 100.0 | 93.3 | 95.9 |

## Teachers' Retirement Fund 1996

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 / (Decrease) In Average Pay |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $2016^{2}$ | 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 |
| 2007 | 39,307 |  | 1,891,605 |  | 48,124 | 11.8 |

${ }^{1}$ 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.

Total Number of Active Members Per Year and Annual Average Pay


## Teachers' Retirement Fund 1996

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 Pre-1996 Account and 1996 Account.

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 Payroll |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 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) |
| $2007{ }^{4}$ |  | 2,889.3 |  | 3,281.5 |  | (392.2) | 113.6 |  | 585.0 | (67.0) |

[^28]

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions

The actuarial assumptions and methods used in the June 30, 2016 valuation of the 1977 Police Officers' and Firefighters' Pension and Disability Fund were adopted by the INPRS Board in April 2016. 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, 2016, there were no changes to the actuarial assumptions from the actuarial valuation as of June 30, 2015.

## Changes in Actuarial Methods

The INPRS Board approved the following changes in methods, effective June 30, 2016:
For funding purposes and when the plan is below 100\% funded (based on Actuarial Value of Assets), gains and losses occurring from census experience different than assumed, assumption changes, and benefit changes will be amortized over a 20 -year period with level payments each year, rather than a 30 -year period. A new gain or loss base will continue to be established each year. This change is made on a prospective basis, beginning with the June 30, 2016 actuarial valuation. Amortization bases established prior to June 30, 2016 will continue to be amortized over their original amortization period, even if the remaining period is greater than 20 years at June 30, 2016. If the plan is at or above $100 \%$ funded (based on Actuarial Value of Assets), the methodology of treating past amortization bases as fully amortized and amortizing the entire surplus over an open 30 -year period is unchanged.
For funding purposes, the smoothing period for investment gains and losses in the development of the Actuarial Value of Assets was increased from four years to five years at June 30, 2016. This change was implemented retroactively in that the Actuarial Value of Assets at June 30, 2016 was computed as if the five-year amortization period for recognizing investment gains and losses had always been in effect. This change increased the Actuarial Value of Assets, and therefore decreased the Unfunded Actuarial Accrued Liability of the plan by $\$ 10.7$ million at June 30, 2016.

## 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:

Funding
Accounting \& Financial Reporting
Interest on Member Contributions:
Inflation:
Cost of Living Increases: $\quad 2.00$ percent per year in retirement
Future Salary Increases:
6.75 percent (net of administrative and investment expenses)
6.75 percent (net of investment expenses)
3.50 percent per year
2.25 percent per year
2.50 percent per year, which includes inflation

## 1977 Police Officers' and Firefighters' Pension and Disability Fund

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions, continued

## Demographic Assumptions: Based on 2010-2014 Experience

Mortality (Healthy and Disabled): RP-2014 Blue Collar mortality tables, with Social Security generational improvements from 2006 based on the Social Security Administration's 2014 Trustee report.

| Retirement: | Ages | Service < 32 | Service >= 32 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 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: $\quad 80$ 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 (3) 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 45 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 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 $100 \%$ 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 5 -year period. The effect of plan changes on the plan liability are fully recognized in expense in the year in which they occur.

Actuarial (Liability) Member census data as of the prior year end was used in the valuation and adjusted, where appropriate, to reflect Valuation Method: 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 Market Value of Assets (MVA), 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 MVA.

Accounting and financial reporting uses the Market Value of Assets (MVA) 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, 2015 | \$ | $(258,636)$ |
| UAAL (Gain) / Loss |  |  |
| Actuarial Value of Assets Experience |  | 9,332 |
| Actuarial Accrued Liabilities Experience ${ }^{1}$ |  | 41,724 |
| Amortization of Existing Bases |  | 2,864 |
| Actuarial Assumption \& Methodology Changes ${ }^{2}$ |  | $(10,703)$ |
| Plan Provision Changes |  | - |
| Unfunded Actuarial Accrued Liability (UAAL): June 30, 2016 | \$ | $(215,419)$ |
| ${ }^{1}$ Actuarial Accrued Liabilities Experience represents actual experience versus expected experience of the actuarial census assumptions. <br> ${ }^{2}$ The smoothing period for investment gains and losses in the development of the actuarial value of assets was increased from four (4) years to five (5) years. |  |  |

## 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 Member (Employer Financed Portion) | Total <br> Actuarial <br> Accrued <br> Liabilities |
| 2016 | \$ 843,628 | \$ 1,532,936 | \$ 2,663,272 | \$ 5,039,836 | \$ 5,255,255 | 100.0 \% | 100.0 \% | 108.1 \% | 104.3 \% |
| 2015 | 832,760 | 1,362,021 | 2,485,913 | 4,680,694 | 4,939,330 | 100.0 | 100.0 | 110.4 | 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 |
| $2007{ }^{1}$ | 498,662 | 655,827 | 1,734,806 | 2,889,295 | 3,281,480 | 100.0 | 100.0 | 100.0 | 113.6 |

[^29]
## 1977 Police Officers' and Firefighters' Pension and Disability 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 / (Decrease) In Average Pay |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $2016{ }^{2}$ | 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 |
| $2007{ }^{3}$ | 12,611 |  | 603,963 |  | 47,892 | 3.5 |

${ }^{1}$ 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. ${ }^{3}$ As of December 31 instead of June 30.

Total Number of Active Members Per Year and Annual Average Pay


## 1977 Police Officers' and Firefighters' Pension and Disability 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.
${ }^{2}$ The valuation results were calculated using the prior year census data, adjusted for certain activity during the fiscal year.
${ }^{4}$ 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


[^30]
$\square$ Actuarial Accrued Liability
$\square$ Actuarial Value of Assets
$\square$ AVA Funded Status

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions

The actuarial assumptions and methods used in the June 30, 2016 valuation of the Judges' Retirement System were adopted by the INPRS Board in April 2016. 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, 2016, there were no changes to the actuarial assumptions from the actuarial valuation as of June 30, 2015.

## Changes in Actuarial Methods

The INPRS Board approved the following changes in methods, effective June 30, 2016:
For funding purposes and when the plan is below $100 \%$ funded (based on Actuarial Value of Assets), gains and losses occurring from census experience different than assumed, assumption changes, and benefit changes will be amortized over a 20 -year period with level payments each year, rather than a 30 -year period. A new gain or loss base will continue to be established each year. This change is made on a prospective basis, beginning with the June 30, 2016 actuarial valuation. Amortization bases established prior to June 30, 2016 will continue to be amortized over their original amortization period, even if the remaining period is greater than 20 years at June 30, 2016. If the plan is at or above $100 \%$ funded (based on Actuarial Value of Assets), the methodology of treating past amortization bases as fully amortized and amortizing the entire surplus over an open 30-year period is unchanged.
For funding purposes, the smoothing period for investment gains and losses in the development of the Actuarial Value of Assets was increased from four years to five years at June 30, 2016. This change was implemented retroactively in that the Actuarial Value of Assets at June 30, 2016 was computed as if the five-year amortization period for recognizing investment gains and losses had always been in effect. This change increased the Actuarial Value of Assets, and therefore decreased the Unfunded Actuarial Accrued Liability of the plan by $\$ 1.1$ million at June 30, 2016.

## 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:

| 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, which includes inflation |

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions, continued

## Demographic Assumptions: Based on 2010-2014 Experience

Mortality (Healthy and Disabled):
RP-2014 White Collar mortality tables, with Social Security generational improvements from 2006 based on the Social Security Administration's 2014 Trustee report.

Retirement:

Termination:

Disability:

| 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 |

Spouse/Beneficiary:
90 percent of members are assumed to be married or to have a dependent beneficiary. Male members are assumed to be three (3) years older than their spouses and female members are assumed to be two (2) years younger than their spouses.

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:
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 $100 \%$ 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 5 -year period. The effect of plan changes on the plan liability are fully recognized in expense in the year in which they occur.

Actuarial (Liability) Valuation Method: 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 Market Value of Assets (MVA), 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 MVA.

Accounting and financial reporting uses the Market Value of Assets (MVA) 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, 2015 | $\$$ | 21,430 |
| UAAL (Gain) / Loss |  |  |
| Actuarial Value of Assets Experience |  | 5,011 |
| Actuarial Accrued Liabilities Experience ${ }^{1}$ | 7,182 |  |
| Amortization of Existing Bases | $(799)$ |  |
| Actuarial Assumption \& Methodology Changes ${ }^{2}$ |  | $(1,076)$ |
| Plan Provision Changes |  |  |
| Unfunded Actuarial Accrued Liability (UAAL): June 30, 2016 | $\$$ | 31,748 |

${ }^{1}$ Actuarial Accrued Liabilities Experience represents actual experience versus expected experience of the actuarial census assumptions. A significant assumption is Cost-of-Living Adjustment (COLA), which is a loss of approximately $\$ 1,788$ thousand as benefit recipients received 3.10\% COLA effective July 1, 2016, rather than the assumed 2.50\%. ${ }^{2}$ The smoothing period for investment gains and losses in the development of the actuarial value of assets was increased from four (4) years to five (5) years.

## 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 Member (Employer Financed Portion) | Total <br> Actuarial Accrued Liabilities |
| 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 |
| 2007 | 21,276 | 143,645 | 119,074 | 283,995 | 211,747 | 100.0 | 100.0 | 39.3 | 74.6 |

${ }^{1}$ In accordance with Legislation passed during March 2012, the State appropriated \$90,187 thousand during FY2013 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 ${ }^{1}$ |  |  | I Average Pay | Annual Percent Increase / (Decrease) In Average Pay |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $2016{ }^{2}$ | 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 |
| 2007 | 258 |  | 29,712 |  | 115,163 | (7.4) |

${ }^{1}$ 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 / (Decrease) in Average Annual Benefit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number |  | Annual enefits | Number |  | nnual nefits | Number |  | Annual nefits ${ }^{1}$ |  |  |  |  |
| $2016^{2}$ | 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 |
| 2007 | 18 |  | 976 | 8 |  | 409 | 279 |  | 13,899 | 7.1 |  | 49,819 | 3.2 |

${ }^{1}$ 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


# State Excise Police, Gaming Agent, Gaming Control Officer \& Conservation Enforcement Officers' Retirement Plan 

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 Payroll |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 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 |
| $2013{ }^{3}$ |  | 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 |
| 2007 |  | 74.5 |  | 57.4 |  | 17.0 | 77.1 |  | 21.0 | 81.1 |

[^31]

# State Excise Police, Gaming Agent, Gaming Control Officer <br> \& Conservation Enforcement Officers' Retirement Plan 

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions

T
he actuarial assumptions and methods used in the June 30, 2016 valuation of the State Excise Police, Gaming Agent, Gaming Control Officer, and Conservation Enforcement Officers' Retirement Plan were adopted by the INPRS Board in April 2016. 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, 2016, there were no changes to the actuarial assumptions from the actuarial valuation as of June 30, 2015.

## Changes in Actuarial Methods

The INPRS Board approved the following changes in methods, effective June 30, 2016:
For funding purposes and when the plan is below $100 \%$ funded (based on Actuarial Value of Assets), gains and losses occurring from census experience different than assumed, assumption changes, and benefit changes will be amortized over a 20 -year period with level payments each year, rather than a 30 -year period. A new gain or loss base will continue to be established each year. This change is made on a prospective basis, beginning with the June 30, 2016 actuarial valuation. Amortization bases established prior to June 30, 2016 will continue to be amortized over their original amortization period, even if the remaining period is greater than 20 years at June 30, 2016. If the plan is at or above $100 \%$ funded (based on Actuarial Value of Assets), the methodology of treating past amortization bases as fully amortized and amortizing the entire surplus over an open 30-year period is unchanged.
For funding purposes, the smoothing period for investment gains and losses in the development of the Actuarial Value of Assets was increased from four years to five years at June 30, 2016. This change was implemented retroactively in that the Actuarial Value of Assets at June 30, 2016 was computed as if the five-year amortization period for recognizing investment gains and losses had always been in effect. This change increased the Actuarial Value of Assets, and therefore decreased the Unfunded Actuarial Accrued Liability of the plan by $\$ 0.3$ million at June $30,2016$.

## 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:

| 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: | $\mathbf{1 . 0 0}$ percent per year in retirement |
| Future Salary Increases: | 2.50 percent per year, which includes inflation |

# State Excise Police, Gaming Agent, Gaming Control Officer <br> \& Conservation Enforcement Officers' Retirement Plan 

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions, continued

## Demographic Assumptions: Based on 2010-2014 Experience

Mortality (Healthy and Disabled):
RP-2014 Blue Collar Set Mortality Table, with Social Security generational improvements from 2006 based on the Social Security Administration's 2014 Trustee report.

Retirement:

Termination:

| Age |  | Rate |
| :---: | :---: | :---: |
| 45 |  | $3 \%$ |
| $46-49$ |  | 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 |

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

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

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

# State Excise Police, Gaming Agent, Gaming Control Officer <br> \& Conservation Enforcement Officers' Retirement Plan 

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:
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 $100 \%$ 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 5 -year period. The effect of plan changes on the plan liability are fully recognized in expense in the year in which they occur.

Actuarial (Liability) Valuation Method: 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 Market Value of Assets (MVA), 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 MVA.

Accounting and financial reporting uses the Market Value of Assets (MVA) 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.

# State Excise Police, Gaming Agent, Gaming Control Officer <br> \& Conservation Enforcement Officers' Retirement Plan 

Analysis of Financial Experience

| (dollars in thousands) | UAAL |  |
| :---: | :---: | :---: |
| Unfunded Actuarial Accrued Liability (UAAL): June 30, 2015 | \$ | 20,031 |
| UAAL (Gain) / Loss |  |  |
| Actuarial Value of Assets Experience |  | 623 |
| Actuarial Accrued Liabilities Experience ${ }^{1}$ |  | 469 |
| Amortization of Existing Bases |  | (363) |
| Actuarial Assumption \& Methodology Changes ${ }^{2}$ |  | (311) |
| Plan Provision Changes |  | - |
| Unfunded Actuarial Accrued Liability (UAAL): June 30, 2016 | \$ | 20,449 |

${ }^{1}$ Actuarial Accrued Liabilities Experience represents actual experience versus expected experience of the actuarial census assumptions.
${ }^{2}$ The smoothing period for investment gains and losses in the development of the actuarial value of assets was increased from four (4) years to five (5) years.

## 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 <br> Actuarial <br> Accrued <br> Liabilities |
| 2016 | \$ 9,085 | \$ 67,424 | \$ 62,456 | \$ 138,965 | \$ 118,516 | 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 |
| 2007 | 3,527 | 24,606 | 46,318 | 74,451 | 57,414 | 100.0 | 100.0 | 63.2 | 77.1 |

[^32]
# State Excise Police, Gaming Agent, Gaming Control Officer \& Conservation Enforcement Officers' Retirement Plan 

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 / (Decrease) In Average Pay |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $2016^{2}$ | 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 |
| 2007 | 344 |  | 17,715 |  | 51,497 | 7.2 |

${ }^{1}$ 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


# State Excise Police, Gaming Agent, Gaming Control Officer \& Conservation Enforcement Officers' Retirement Plan 

Schedule of Retirants and Beneficiaries
Actuarial Valuation as of June 30
(dollars in thousands - except average annual benefit)


[^33]Total Number of Retirants and Beneficiaries Per Year and Average Annual Benefit


Benefit (\$)

## Prosecuting Attorneys' Retirement Fund

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 Payroll |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 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 |
| $2013{ }^{3}$ |  | 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 |
| 2007 |  | 32.1 |  | 23.8 |  | 8.2 | 74.3 |  | 18.1 | 45.5 |

[^34]
Actuarial Accrued Liability
Actuarial Value of Assets
$\square$ AVA Funded Status

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions

The actuarial assumptions and methods used in the June 30, 2016 valuation of the Prosecuting Attorneys' Retirement Fund were adopted by the INPRS Board in April 2016. 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, 2016, there were no changes to the actuarial assumptions from the actuarial valuation as of June 30, 2015.

## Changes in Actuarial Methods

The INPRS Board approved the following changes in methods, effective June 30, 2016:
For funding purposes and when the plan is below $100 \%$ funded (based on Actuarial Value of Assets), gains and losses occurring from census experience different than assumed, assumption changes, and benefit changes will be amortized over a 20 -year period with level payments each year, rather than a 30 -year period. A new gain or loss base will continue to be established each year. This change is made on a prospective basis, beginning with the June 30, 2016 actuarial valuation. Amortization bases established prior to June 30,2016 will continue to be amortized over their original amortization period, even if the remaining period is greater than 20 years at June 30, 2016. If the plan is at or above $100 \%$ funded (based on Actuarial Value of Assets), the methodology of treating past amortization bases as fully amortized and amortizing the entire surplus over an open 30-year period is unchanged.

For funding purposes, the smoothing period for investment gains and losses in the development of the Actuarial Value of Assets was increased from four years to five years at June 30, 2016. This change was implemented retroactively in that the Actuarial Value of Assets at June 30, 2016 was computed as if the five-year amortization period for recognizing investment gains and losses had always been in effect. This change increased the Actuarial Value of Assets, and therefore decreased the Unfunded Actuarial Accrued Liability of the plan by $\$ 0.2$ million at June 30, 2016.

## 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: | N/A |
| Future Salary Increases: | 4.00 percent per year, which includes inflation |

## Prosecuting Attorneys' Retirement Fund

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions, continued

## Demographic Assumptions: Based on 2010-2014 Experience

Mortality (Healthy and Disabled):
RP-2014 White Collar mortality tables, with Social Security generational improvements from 2006 based on the Social Security Administration's 2014 Trustee report.

Retirement:

Termination:

| Age | Service < 22 | Service >=22 |
| :---: | :---: | :---: |
| 55-61 | 0 \% | 70 \% |
| 62-64 | 20 | 70 |
| >=65 | 100 | 100 |

Disability:

Spouse/Beneficiary:
10 percent per year for all members prior to retirement eligibility.

| Age |  | Male |  | Female |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | $0.0067 \%$ |  |
| 30 |  | $0.0050 \%$ |  |  |
| 40 |  |  | 0.0646 |  |
| 50 |  | 0.2005 |  | 0.0458 |
| 60 |  | 0.6220 |  | 0.1556 |
| 70 |  | 0.1000 |  | 0.4881 |
| $71+$ |  | 0.0000 |  | 0.1000 |
| $71+0000$ |  |  |  |  |

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

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:
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 $100 \%$ 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 5 -year period. The effect of plan changes on the plan liability are fully recognized in expense in the year in which they occur.

Actuarial (Liability) Valuation Method: 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 Market Value of Assets (MVA), 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 MVA.

Accounting and financial reporting uses the Market Value of Assets (MVA) 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.

## Prosecuting Attorneys' Retirement Fund

Analysis of Financial Experience
(dollars in thousands)
Unfunded Actuarial Accrued Liability (UAAL): June 30, 2015

UAAL (Gain) / Loss
Actuarial Value of Assets Experience 2,027
Actuarial Accrued Liabilities Experience 4,058
Amortization of Existing Bases
Actuarial Assumption \& Methodology Changes ${ }^{1}$
Plan Provision Changes
Unfunded Actuarial Accrued Liability (UAAL): June 30, 2016

(203)
${ }^{1}$ The smoothing period for investment gains and losses in the development of the actuarial value of assets was increased from four (4) years to five (5) years.

## 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 <br> Portion) | Total Actuarial Accrued Liabilities | Actuarial Value of Assets | Active Member Contributions | Retirees and Beneficiaries | Active Member (Employer Financed Portion) | Total <br> Actuarial Accrued Liabilities |
| 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 |
| 2007 | 16,014 | 3,192 | 12,846 | 32,052 | 23,815 | 100.0 | 100.0 | 35.9 | 74.3 |

${ }^{1}$ In accordance with Legislation passed during March 2012, the State appropriated $\$ 17,363$ thousand during FY2013 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 / (Decrease) In Average Pay |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $2016^{2}$ | 197 | \$ | 22,227 | \$ | 112,827 | 0.6 \% |
| $2015{ }^{2}$ | 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 |
| 2007 | 206 |  | 18,092 |  | 87,825 | (0.4) |

${ }^{1}$ 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)

${ }^{1}$ 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

${ }^{1}$ 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 Market Value of Assets (MVA). ${ }^{2}$ Is a closed plan with no Covered Payroll.



Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions

The actuarial assumptions and methods used in the June 30, 2016 valuation of the Legislators' Defined Benefit Plan were adopted by the INPRS Board in April 2016. 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, 2016, there were no changes to the actuarial assumptions from the actuarial valuation as of June 30, 2015.

## Changes in Actuarial Methods

The INPRS Board approved the following changes in methods, effective June 30, 2016:
For funding purposes and when the plan is below $100 \%$ funded (based on Actuarial Value of Assets), gains and losses occurring from census experience different than assumed, assumption changes, and benefit changes will be amortized over a 5 -year period with level payments each year, rather than a 30 -year period. A new gain or loss base will continue to be established each year. This change is made on a retroactive basis, beginning with the June 30, 2016 actuarial valuation, such that bases established prior to June 30, 2016 will be eliminated and the entire Unfunded Actuarial Accrued Liability will be amortized over 5 years. If the plan is at or above 100\% funded (based on Actuarial Value of Assets), the methodology of treating past amortization bases as fully amortized and amortizing the entire surplus over an open 30year period is unchanged.
For funding purposes, the smoothing period for investment gains and losses in the development of the Actuarial Value of Assets was increased from four years to five years at June 30, 2016. This change was implemented retroactively in that the Actuarial Value of Assets at June 30, 2016 and was computed as if the five-year amortization period for recognizing investment gains and losses had always been in effect. This change increased the Actuarial Value of Assets, and therefore decreased the Unfunded Actuarial Accrued Liability of the plan by \$30 thousand at June 30, 2016.

## 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:
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:
1.00 percent per year in retirement
Future Salary Increases:
2.25 percent per year, which includes inflation

## Legislators' Defined Benefit Plan

Summary of Actuarial Assumptions, Actuarial Methods and Plan Provisions, continued

## Demographic Assumptions: Based on 2010-2014 Experience

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

Retirement:

| Age |  | Rate |
| :---: | :---: | :---: |
| 55 |  | $10 \%$ |
| $56-57$ |  | 8 |
| $58-61$ |  | 2 |
| $62-64$ |  | 5 |
| $65+$ |  | 100 |

Termination:
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 |

Disability:
75 percent of 1964 OASDI Table. 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 |

Spouse/Beneficiary:
90 percent of members are assumed to be married or to have a dependent beneficiary. Male members are assumed to be three (3) years older than their spouses.

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 \& Amortization
Methods:
Funding:

## Traditional Unit Credit

The normal cost is calculated separately for each active member and is equal to actuarial present value of additional benefits expected to be accrued during the year following the valuation date. The actuarial accrued liability on any valuation date is the actuarial present value of the benefits earned for service prior to the valuation date. Since the benefits for all members of the 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 $100 \%$ funded (based on Actuarial Value of Assets), the past amortization bases are considered fully amortized and a single amortization base equal to the surplus is amortized over a 30 -year period with level payment each year. The purpose of the method is to give a smooth progression of the costs from year-to-year and, at the same time, provide for an orderly funding of the unfunded liabilities.

Accounting \& Financial Reporting: Entry Age Normal- Level Percent of Payroll
The normal cost is calculated separately for each active member and is equal to the level percentage of payroll needed as an annual contribution from entry age to retirement age to fund projected benefits. The actuarial accrued liability on any valuation date is the accumulated value of such normal costs from entry age to the valuation date.
Gains and losses occurring from census experience different than assumed and assumption changes are amortized into expense over the average expected future service of all plan participants (actives and inactives). Gains and losses occurring from investment experience different than assumed are amortized into expense over a 5 -year period. The effect of plan changes on the plan liability are fully recognized in expense in the year in which they occur.

Actuarial (Liability) Valuation Method: 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 Market Value of Assets (MVA), 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 MVA.

Accounting and financial reporting uses the Market Value of Assets (MVA) 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

${ }^{1}$ Actuarial Accrued Liabilities Experience represents actual experience versus expected experience of the actuarial census assumptions. A significant assumption is Cost-of-Living Adjustment (COLA), which is a gain of approximately $\$ 36$ thousand as benefit recipients received 0.00\% COLA effective January 1, 2017, rather than the assumed $1.00 \%$.
${ }^{2}$ The smoothing period for investment gains and losses in the development of the actuarial value of assets was increased from four (4) years to five (5) years.

## 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 |  | ive mber loyer nced ion) |  | tal <br> uarial <br> rued <br> ilities |  |  | Active Member Contributions | Retirees and Beneficiaries | Active Member (Employer Financed Portion) | Total Actuarial Accrued Liabilities |
| 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 |
| 2007 | - | 2,432 |  | 2,737 |  | 5,169 |  | 5,035 | N/A | 100.0 | 95.1 | 97.4 |

## Legislators' Defined Benefit Plan

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 / (Decrease) In Average Pay |
| :---: | :---: | :---: | :---: | :---: |
| $2016{ }^{1}$ | 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 |
| 2007 | 43 | 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)


[^35] ${ }^{2}$ 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


Benefit (\$)


## Statistical Section

## 2016 COMPREHENSIVE ANNUAL FINANCIAL REPORT <br> For the Fiscal Year Ended June 30, 2016

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Summary of Statistical Section

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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 plan:

- 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 plan:

- Summary of Participating Employers
- Membership Data Summary
- Ratio of Active Members to Annuitants
- Pension Benefits by Indiana County
- Retirees by Geographical Location
- 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)

| Member Contributions | 334,079 | 348,789 | 341,609 | 326,518 | 335,548 | 330,314 | 335,244 | 332,959 | 322,060 | 312,488 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Employer Contributions | 1,012,012 | 923,759 | 894,851 | 933,719 | 749,439 | 677,385 | 648,470 | 636,164 | 609,138 | 532,143 |
| Nonemployer Contributing Entity | 888,111 | 846,122 | 826,142 | 1,004,140 | 756,116 | 739,846 | 717,932 | 693,140 | 653,981 | 618,658 |
| Member Reassignments | 16,187 | 17,591 | 15,582 | 14,759 | 13,025 | 15,410 | 8,176 | 7,662 | 9,608 | 6,965 |
| Other | 1,078 | 188 | 172 | 106 | 100 | 166 | 154 | 166 | 404 | 253 |
| Total Contributions and Other | 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 | 1,470,507 |
| Pension Benefits | $(2,212,132)$ | $(2,220,957)$ | $(2,006,827)$ | $(1,938,557)$ | $(1,976,672)$ | $(1,889,792)$ | $(1,623,749)$ | $(1,494,247)$ | $(1,477,798)$ | $(1,379,511)$ |
| Disability Benefits | $(62,234)$ | $(64,172)$ | $(71,202)$ | $(60,664)$ | $(57,239)$ | $(53,608)$ | $(55,554)$ | $(51,326)$ | $(47,079)$ | $(45,094)$ |
| Survivor Benefits ${ }^{2}$ | $(154,804)$ | $(144,767)$ | $(138,027)$ | $(131,468)$ |  |  |  |  |  |  |
| Death Benefits | (924) | $(1,010)$ | (870) | $(1,444)$ | (788) | (774) | $(1,014)$ | (656) | (558) | (222) |
| Distributions of Contributions and Interest | $(80,385)$ | $(88,659)$ | $(87,375)$ | $(98,414)$ | $(95,431)$ | $(91,447)$ | $(53,297)$ | $(50,355)$ | $(60,440)$ | $(65,382)$ |
| Administrative Expenses | $(38,469)$ | $(40,456)$ | $(43,399)$ | $(45,864)$ | $(40,813)$ | $(35,848)$ | $(38,200)$ | $(36,043)$ | $(31,686)$ | $(27,366)$ |
| Member Reassignments | $(16,187)$ | $(17,591)$ | $(15,582)$ | $(14,759)$ | $(13,025)$ | $(15,410)$ | $(8,176)$ | $(7,662)$ | $(9,608)$ | $(6,965)$ |
| Total Benefits and Expenses | $(2,565,135)$ | $(2,577,612)$ | $(2,363,282)$ | $(2,291,170)$ | $(2,183,968)$ | $(2,086,879)$ | $(1,779,990)$ | $(1,640,289)$ | $(1,627,169)$ | $(1,524,540)$ |
| Net Contributions / (Benefits and Expenses) | $(313,668)$ | $(441,163)$ | $(284,926)$ | $(11,928)$ | $(329,740)$ | $(323,758)$ | $(70,014)$ | 29,802 | $(31,978)$ | $(54,033)$ |
| Net Investment Income / (Loss) | 324,830 | 105,000 | 3,434,051 | 1,514,240 | 172,721 | 3,943,032 | 2,637,244 | $(4,642,194)$ | $(1,754,782)$ | 3,792,531 |
| Net Increase / (Decrease) | 11,162 | $(336,163)$ | 3,149,125 | 1,502,312 | $(157,019)$ | 3,619,274 | 2,567,230 | $(4,612,392)$ | $(1,786,760)$ | 3,738,498 |
| 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 |

${ }^{1}$ Prior years (2007 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 2007 - Fiscal Year 2016


Summary of Participating Employers
For the Year Ended June 30, 2016

- PERF = Public Employees' Retirement Fund
- TRF Pre-1996 = Teachers' Retirement Fund Pre-1996 Account
- TRF $1996=$ Teachers' Retirement Fund 1996 Account
- 1977 Fund = 1977 Police Officers' and Firefighters' Pension and Disability Fund
- JRS = Judges' Retirement System
- EG\&C Plan = State Excise Police, Gaming Agent, Gaming Control Officer, and Conservation Enforcement Officers' Retirement Plan
- PARF = Prosecuting Attorneys' Retirement Fund
- LE = Legislators' Retirement System

| Employers | Total ${ }^{1}$ | PERF | $\begin{gathered} \text { TRF } \\ \text { Pre-1996 } \end{gathered}$ | $\begin{aligned} & \text { TRF } \\ & 1996 \end{aligned}$ | $1977$ <br> Fund | JRS | $\begin{gathered} \text { EG\&C } \\ \text { Plan } \end{gathered}$ | PARF | LE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| State | 1 | 1 | 1 | 1 | - | 1 | 1 | 1 | 1 |
| Counties | 86 | 86 | - | - | - | - | - | - | - |
| Cities | 120 | 113 | - | - | 118 | - | - | - | - |
| Towns | 203 | 199 | - | - | 33 | - | - | - | - |
| Townships | 160 | 157 | - | - | 12 | - | - | - | - |
| School Districts \& Education | 363 | 330 | 336 | 361 | - | - | - | - | - |
| Other | 291 | 291 | - | - | 2 | - | - | - | - |
| Total | 1,224 | 1,177 | 337 | 362 | 165 | 1 | 1 | 1 | 1 |

${ }^{1}$ Sum of individual employers by retirement plan does not equal total employers, since one (1) employer may participate in multiple retirement plans.


Membership Data Summary ${ }^{1}$


For the Year Ended June 30, $2016{ }^{2}$

| Retirement Plans | Active Members | Retirees, Disabilitants, \& Beneficiaries | Inactive Vested Members | Inactive Non-Vested Members With Balance | Total Members |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PERF | 131,178 | 83,188 | 29,702 | 50,212 | 294,280 |
| TRF Pre-1996 | 14,327 | 52,575 | 3,119 | 394 | 70,415 |
| TRF 1996 | 55,265 | 4,977 | 4,335 | 12,529 | 77,106 |
| 1977 Fund | 13,506 | 4,004 | 186 | 933 | 18,629 |
| JRS | 394 | 351 | 65 | 41 | 851 |
| EG\&C Plan | 421 | 220 | 7 | 121 | 769 |
| PARF | 197 | 133 | 99 | 153 | 582 |
| LEDB Plan | 11 | 74 | 12 | - | 97 |
| LEDC Plan | 150 | - | - | 66 | 216 |
| Total INPRS | 215,449 | 145,522 | 37,525 | 64,449 | 462,945 |

[^36]
## Indiana Public Retirement System

Membership Data Summary, continued ${ }^{1}$

For the Year Ended June 30, $2015^{2}$

| Retirement Plans | Active Members | Retirees, Disabilitants, \& Beneficiaries | Inactive Vested Members | Inactive Non-Vested Members With Balance | Total Members |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PERF | 138,660 | 79,198 | 26,681 | 43,803 | 288,342 |
| TRF Pre-1996 | 16,310 | 50,214 | 4,545 | 408 | 71,477 |
| TRF 1996 | 52,424 | 4,136 | 4,132 | 12,292 | 72,984 |
| 1977 Fund | 13,390 | 3,736 | 155 | 822 | 18,103 |
| JRS | 368 | 326 | 78 | 32 | 804 |
| EG\&C Plan | 448 | 207 | 3 | 101 | 759 |
| PARF | 196 | 107 | 97 | 153 | 553 |
| LEDB Plan | 17 | 68 | 14 | - | 99 |
| LEDC Plan | 149 | - | - | 73 | 222 |
| Total INPRS | 221,962 | 137,992 | 35,705 | 57,684 | 453,343 |

For the Year Ended June 30, $2014{ }^{2}$

| Retirement Plans | Active Members | Retirees, Disabilitants, \& Beneficiaries | Inactive Vested Members | Inactive Non-Vested Members With Balance | Total Members |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PERF | 137,567 | 75,950 | 24,013 | 50,997 | 288,527 |
| TRF Pre-1996 | 19,210 | 49,345 | 3,314 | 546 | 72,415 |
| TRF 1996 | 51,204 | 3,665 | 3,103 | 11,147 | 69,119 |
| 1977 Fund | 13,295 | 3,491 | 129 | 796 | 17,711 |
| JRS | 365 | 321 | 67 | 32 | 785 |
| EG\&C Plan | 473 | 193 | 4 | 87 | 757 |
| PARF | 210 | 95 | 83 | 162 | 550 |
| LEDB Plan | 24 | 68 | 9 | - | 101 |
| LEDC Plan | 149 | - | - | 70 | 219 |
| Total INPRS | 222,497 | 133,128 | 30,722 | 63,837 | 450,184 |

For the Year Ended June 30, 2013

| Retirement Plans | Active Members | Retirees, Disabilitants, \& Beneficiaries | Inactive Vested Members | Inactive Non-Vested Members With Balance | Total Members |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PERF | 137,937 | 75,950 | 23,504 | 51,057 | 288,448 |
| TRF Pre-1996 | 19,210 | 49,345 | 3,314 | 546 | 72,415 |
| TRF 1996 | 51,204 | 3,665 | 3,103 | 11,147 | 69,119 |
| 1977 Fund | 13,287 | 3,491 | 129 | 796 | 17,703 |
| JRS | 365 | 321 | 67 | 32 | 785 |
| EG\&C Plan | 473 | 193 | 4 | 87 | 757 |
| PARF | 210 | 95 | 83 | 162 | 550 |
| LEDB Plan | 24 | 68 | 9 | - | 101 |
| LEDC Plan | 167 | - | - | 58 | 225 |
| Total INPRS | 222,877 | 133,128 | 30,213 | 63,885 | 450,103 |

[^37]
## Indiana Public Retirement System

Membership Data Summary, continued ${ }^{1}$

For the Year Ended June 30, 2012

| Retirement Plans | Active Members | Retirees, Disabilitants, \& Beneficiaries | Inactive Vested Members | Inactive Non-Vested Members With Balance | Total Members |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PERF | 145,519 | 72,992 | 21,200 | 47,874 | 287,585 |
| TRF Pre-1996 | 22,688 | 47,000 | 3,382 | 794 | 73,864 |
| TRF 1996 | 47,885 | 2,971 | 2,985 | 12,528 | 66,369 |
| 1977 Fund | 13,390 | 3,208 | 122 | 751 | 17,471 |
| JRS | 361 | 311 | 72 | 28 | 772 |
| EG\&C Plan | 468 | 187 | 4 | 61 | 720 |
| PARF | 219 | 81 | 84 | 165 | 549 |
| LEDB Plan | 6 | 63 | 38 | - | 107 |
| LEDC Plan | 167 | - | - | 47 | 214 |
| Total INPRS | 230,703 | 126,813 | 27,887 | 62,248 | 447,651 |

For the Year Ended June 30, 2011

| Retirement Plans | Active Members | Retirees, Disabilitants, \& Beneficiaries | Inactive Vested Members | Inactive Non-Vested Members With Balance | Total Members |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PERF | 147,933 | 70,380 | 20,634 | 72,105 | 311,052 |
| TRF Pre-1996 | 24,710 | 45,421 | 3,921 | 3,595 | 77,647 |
| TRF 1996 | 46,633 | 2,554 | 2,715 | 23,573 | 75,475 |
| 1977 Fund | 13,376 | 2,966 | 126 | 791 | 17,259 |
| JRS | 363 | 310 | 66 | 31 | 770 |
| EG\&C Plan | 440 | 176 | 5 | 59 | 680 |
| PARF | 212 | 76 | 85 | 177 | 550 |
| LEDB Plan | 7 | 65 | 40 | - | 112 |
| LEDC Plan | 171 | - | - | 51 | 222 |
| Total INPRS | 233,845 | 121,948 | 27,592 | 100,382 | 483,767 |

For the Year Ended June 30, 2010

| Retirement Plans | Active Members | Retirees, Disabilitants, \& Beneficiaries | Inactive Vested Members | Inactive Non-Vested Members With Balance | Total Members |
| :---: | :---: | :---: | :---: | :---: | :---: |
| PERF | 149,877 | 67,166 | 14,759 | 88,234 | 320,036 |
| TRF Pre-1996 | 26,439 | 43,478 | 5,209 | 8,149 | 83,275 |
| TRF 1996 | 46,433 | 2,181 | 2,461 | 27,698 | 78,773 |
| 1977 Fund | 13,362 | 2,782 | 111 | 771 | 17,026 |
| JRS | 291 | 298 | 73 | 31 | 693 |
| EG\&C Plan | 471 | 157 | 4 | 52 | 684 |
| PARF | 217 | 58 | 74 | 177 | 526 |
| LEDB Plan | 20 | 61 | 34 | - | 115 |
| LEDC Plan | 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 retirement plans prior to fiscal year 2010.

Ratio of Active Members to Annuitants
For the Year Ended June 30

|  | Active <br> Members $^{1}$ |  | Annuitants |  |
| :--- | ---: | ---: | ---: | ---: |
|  | $2016^{3}$ | 215,299 |  | Ratio Active <br> Members to <br> Annuitants |
| $2015^{3}$ | 221,813 | 145,522 | 1.5 |  |
| $2014^{3}$ | 222,348 | 137,992 | 1.6 |  |
| 2013 | 222,710 | 133,128 | 1.7 |  |
| 2012 | 230,536 | 126,813 | 1.7 |  |
| 2011 | 233,674 | 121,948 | 1.8 |  |
| 2010 | 237,110 | 116,181 | 1.9 |  |
| 2009 | 236,304 | 112,758 | 2.0 |  |
| 2008 | 230,417 | 108,254 | 2.1 |  |
| 2007 | 228,158 | 104,617 | 2.2 |  |

'Active Members exclude Legislators' Defined Contribution Plan
${ }^{2}$ nnnuitants includes retirees, disabilities, and beneficiaries.
${ }^{3}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year.


## Indiana Public Retirement System

Pension Benefits by Indiana County (Jan-Dec 2015)

More than $88 \%$ of retirees or their beneficiaries reside in Indiana. This map illustrates how approximately $\$ 1.9$ billion in pension benefit payments for calendar year 2015 were distributed amongst Indiana's counties, representing INPRS's economic impact on the state.


## Indiana Public Retirement System

Retirees by Geographical Location (December 2015)

In the month of December 2015, there were more than 143 thousand retirees paid by INPRS.


Retirees outside the United States:

| Armed Forces, Europe -1 | Ecuador -1 | India -1 | Philippines -1 | Turkmenistan -1 |
| :--- | :--- | :--- | :--- | :--- |
| Australia -1 | England -2 | Isle of Man -1 | Puerto Rico -14 |  |
| Canada -13 | France -2 | Israel -2 | Romania -1 |  |
| China -1 | Germany -5 | Jamaica -1 | Spain -1 |  |
| Croatia -2 | Greece -1 | Mexico -1 | Thailand -2 |  |

## Public Employees' Retirement Fund

Schedule of Changes and Growth in Fiduciary Net Position
For the Year Ended June 30

| (dollars in thousands) | 2016 | 2015 | 2014 | 2013 | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

Net Position - Beginning of Year
\$ 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 \$ 11,366,226 Contributions / Benefits and Expenses)

| Member Contributions | 161,905 | 169,731 | 164,189 | 156,408 | 158,696 | 156,028 | 158,089 | 160,034 | 155,728 | 147,740 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Employer Contributions ${ }^{1}$ | 615,773 | 538,059 | 526,090 | 455,658 | 397,843 | 342,779 | 331,090 | 323,151 | 303,877 | 260,150 |
| Member Reassignments | 5,543 | 4,184 | 3,444 | 4,363 | 3,341 | 5,302 | 2,361 | 3,115 | 6,356 | 2,695 |
| Other | 905 | 83 | 52 | 31 | 8 | 15 | 39 | 32 | 287 | 145 |
| Total Contributions and Other | 784,126 | 712,057 | 693,775 | 616,460 | 559,888 | 504,124 | 491,579 | 486,332 | 466,248 | 410,730 |
| Pension Benefits | $(782,197)$ | $(756,484)$ | $(668,789)$ | $(625,526)$ | $(628,522)$ | $(600,797)$ | $(539,540)$ | $(500,214)$ | $(467,994)$ | $(433,463)$ |
| Disability Benefits | $(32,855)$ | $(34,984)$ | $(39,837)$ | $(42,905)$ | $(40,659)$ | $(37,663)$ | $(40,171)$ | $(36,569)$ | $(33,643)$ | $(32,546)$ |
| Survivor Benefits ${ }^{2}$ | $(64,036)$ | $(59,208)$ | $(56,701)$ | $(54,154)$ | - | - |  |  |  |  |
| Distributions of Contributions and Interest | $(57,184)$ | $(62,732)$ | $(63,031)$ | $(68,775)$ | $(69,879)$ | $(65,178)$ | $(39,632)$ | $(36,099)$ | $(45,610)$ | $(48,334)$ |
| Administrative Expenses | $(24,098)$ | $(25,506)$ | $(27,433)$ | $(29,181)$ | $(24,793)$ | $(22,461)$ | $(24,959)$ | $(21,497)$ | $(21,183)$ | $(17,943)$ |
| Member Reassignments | $(10,814)$ | $(13,403)$ | $(7,690)$ | $(10,405)$ | $(9,684)$ | $(10,078)$ | $(5,837)$ | $(5,132)$ | $(6,844)$ | $(6,795)$ |
| Total Benefits and Expenses | $(971,184)$ | $(952,317)$ | $(863,481)$ | $(830,946)$ | $(773,537)$ | $(736,177)$ | $(650,139)$ | $(599,511)$ | $(575,274)$ | $(539,081)$ |
| Net Contributions / (Benefits and Expenses) | $(187,058)$ | $(240,260)$ | $(169,706)$ | $(214,486)$ | $(213,649)$ | $(232,053)$ | $(158,560)$ | $(113,179)$ | $(109,026)$ | $(128,351)$ |
| Net Investment Income / (Loss) | 149,894 | 43,638 | 1,553,393 | 691,332 | $(3,952)$ | 2,112,090 | 1,297,543 | $(2,517,955)$ | $(1,079,918)$ | 2,024,539 |
| Net Increase I (Decrease) | $(37,164)$ | $(196,622)$ | 1,383,687 | 476,846 | $(217,601)$ | 1,880,037 | 1,138,983 | $(2,631,134)$ | $(1,188,944)$ | 1,896,188 |
| Net Position - End 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 |

${ }^{1}$ Year ended June 30, 2016 includes \$67,772 thousand in one-time contributions.
${ }^{2}$ Survivor benefits information is available since June 30, 2013.
(in thousands of dollars)


Schedule of Historical Contribution Rates
For the Year Ended June 30

Political

|  | State <br> Rate |  | Subdivisions <br> (Aggregate) Rate |
| :---: | :---: | :---: | :---: |
| 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 | 6.9 |  |
| 2008 | 6.3 | 6.9 |  |
| 2007 | 5.5 | 6.3 |  |

Memo:
Effective Date
July 1
January 1


## Public Employees' 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 |
| :--- | :--- | :--- | :--- | :--- |
| $2016^{2}$ | 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 |  |
| 2007 | 138,863 | 60,332 | 2.3 |  |

${ }^{1}$ Annuitants includes retirees, disabilities, and beneficiaries.
${ }^{2}$ 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, $2016{ }^{1}$


5-Year Certain \& Life - Provides a monthly benefit for retiree's life. If retiree receives benefits for at least five (5) years prior to death, there is no benefit payable to a designated beneficiary. In the event the retiree dies before receiving five (5) years of payments, the beneficiary receives the remainder of those five (5) 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 (5) years of payments, the beneficiary receives either a monthly benefit of the pension amount only for the remainder of the five (5) 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 (5) 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 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $<10^{2}$ | 10-14 |  | 15-19 | 20-24 |  | 25-29 | 30+ | Total |  |
| For the Year Ended June 30, $2016{ }^{3}$ |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Defined Benefit | \$ 153 | \$ | 278 | \$ 385 | \$ | 537 | \$ 751 | \$ 1,218 | \$ | 604 |
| Average Monthly ASA Annuity ${ }^{4}$ | \$ 46 | \$ | 103 | \$ 140 | \$ | 197 | \$ 274 | \$ 479 | \$ | 229 |
| Average Final Average Salary | \$ 24,269 | \$ | 24,024 | \$ 26,337 | \$ | 28,523 | \$ 31,831 | \$39,261 | \$ | 29,693 |
| Number of Benefit Recipients | 2,951 |  | 13,952 | 20,992 |  | 16,918 | 12,346 | 16,029 |  | 83,188 |
| For the Year Ended June 30, $2015{ }^{3}$ |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Defined Benefit | \$ 149 | \$ | 293 | \$ 378 | \$ | 525 | \$ 732 | \$ 1,182 | \$ | 583 |
| Average Monthly ASA Annuity ${ }^{4}$ | \$ 43 | \$ | 116 | \$ 129 | \$ | 187 | \$ 255 | \$ 443 | \$ | 211 |
| Average Final Average Salary | \$ 23,480 | \$ | 23,252 | \$ 25,678 | \$ | 27,754 | \$ 30,842 | \$37,941 | \$ | 28,714 |
| Number of Benefit Recipients | 2,775 |  | 14,087 | 20,210 |  | 16,141 | 11,503 | 14,482 |  | 79,198 |

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

| $\$$ | 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, 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 |

[^38]Schedule of Participating Employers: Top 10

| Top 10 Employers | June 30, 2016 |  |  | June 30, 2007 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Covered Members | Rank | Percentage of Total PERF | Covered Members | Rank | Percentage of Total PERF |
| State of Indiana | 38,918 | 1 | 29.7 \% | 49,042 | 1 | 35.3 \% |
| Health \& Hospital Corporation Marion County | 3,848 | 2 | 2.9 | 4,226 | 2 | 3.0 |
| Marion County | 2,636 | 3 | 2.0 | 3,006 | 3 | 2.2 |
| Indianapolis Public Schools | 1,799 | 4 | 1.4 | 2,469 | 4 | 1.8 |
| City of Indianapolis | 1,536 | 5 | 1.2 | 1,868 | 6 | 1.3 |
| Lake County | 1,525 | 6 | 1.1 | 1,859 | 7 | 1.3 |
| South Bend Community School Corporation | 1,272 | 7 | 1.0 | 1,524 | 8 | 1.1 |
| Evansville-Vanderburgh School Corporation | 1,175 | 8 | 0.9 |  |  |  |
| Allen County | 1,097 | 9 | 0.8 | 1,291 | 9 | 0.9 |
| Fort Wayne Community Schools | 1,088 | 10 | 0.8 | 2,011 | 5 | 1.5 |
| Metropolitan School District of Lawrence Township |  |  |  | 1,203 | 10 | 0.9 |
| Total - Top 10 Employers | 54,894 |  | 41.8 | 68,499 |  | 49.3 |
| All Other * | 76,284 |  | 58.2 | 70,364 |  | 50.7 |
| Grand Total | 131,178 |  | 100.0 \% | 138,863 |  | 100.0 \% |

1,177 Employers in 2016, and 1,180 in 2007

* As of June 30, 2016, "All Other" consisted of:

| Type of Employer |  | Number of <br> Employers |  | Covered <br> Members |
| :--- | ---: | ---: | ---: | ---: |
| Counties |  | 83 |  | 18,523 |
| Cities | 112 |  | 11,184 |  |
| Towns | 199 | 2,799 |  |  |
| Townships | 157 | 865 |  |  |
| School Districts \& Education |  | 326 | 37,461 |  |
| Other |  | 290 | 5,452 |  |
| Total All Other | $\mathbf{1 , 1 6 7}$ | $\mathbf{7 6 , 2 8 4}$ |  |  |

Schedule of Changes and Growth in Fiduciary Net Position ${ }^{1}$
For the Year Ended June 30

| (dollars in thousands) | 2016 |  | 2015 |  | 2014 |  | 2013 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Position - Beginning of Year | \$ | 5,099,910 | \$ | 5,501,867 | \$ | 5,215,202 | \$ | 5,058,910 |
| Contributions / (Benefits and Expenses) |  |  |  |  |  |  |  |  |
| Member Contributions |  | 31,529 |  | 41,740 |  | 47,028 |  | 45,421 |
| Employer Contributions |  | 5,048 |  | 5,811 |  | 6,325 |  | 9,484 |
| Nonemployer Contributing Entity ${ }^{2}$ |  | 887,500 |  | 845,616 |  | 825,617 |  | 1,003,596 |
| Member Reassignments |  | 4,057 |  | 6,273 |  | 3,250 |  | 5,883 |
| Other |  |  |  | 21 |  | 19 |  | 5 |
| Total Contributions and Other |  | 928,134 |  | 899,461 |  | 882,239 |  | 1,064,389 |
| Pension Benefits |  | (1,185,321) |  | $(1,242,792)$ |  | $(1,143,154)$ |  | $(1,137,783)$ |
| Disability Benefits |  | $(8,505)$ |  | $(9,567)$ |  | $(11,562)$ |  | (45) |
| Survivor Benefits |  | $(73,124)$ |  | $(69,350)$ |  | $(66,150)$ |  | $(63,379)$ |
| Distributions of Contributions and Interest |  | $(6,004)$ |  | $(7,145)$ |  | $(8,435)$ |  | $(11,738)$ |
| Administrative Expenses |  | $(6,564)$ |  | $(6,530)$ |  | $(7,010)$ |  | $(7,926)$ |
| Member Reassignments |  | $(3,426)$ |  | $(2,919)$ |  | $(6,844)$ |  | $(2,824)$ |
| Total Benefits and Expenses |  | $(1,282,944)$ |  | $(1,338,303)$ |  | $(1,243,155)$ |  | $(1,223,695)$ |
| Net Contributions / (Benefits and Expenses) |  | $(354,810)$ |  | $(438,842)$ |  | $(360,916)$ |  | $(159,306)$ |
| Net Investment Income / (Loss) |  | 42,429 |  | 36,885 |  | 647,581 |  | 315,598 |
| Net Increase / (Decrease) |  | $(312,381)$ |  | $(401,957)$ |  | 286,665 |  | 156,292 |
| Net Position - End of Year | \$ | 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.

Total Contributions and Other

Total Benefits and Expenses
Net Investment Income | (Loss)

$\square \square$
Net PositionEnd of Year

Ratio of Active Members to Annuitants
For the Year Ended June 30

|  | Active <br> Members |  | Annuitants | Ratio Active <br> Members to |
| :--- | :--- | :--- | :--- | :--- |
| Annuitants |  |  |  |  |
| ${ } }$ | 14,327 | 52,575 | 0.3 |  |
| $2015^{2}$ | 16,310 | 50,214 | 0.3 |  |
| $2014^{2}$ | 19,210 | 49,345 | 0.4 |  |
| 2013 | 19,210 | 49,345 | 0.4 |  |
| 2012 | 22,688 | 47,000 | 0.5 |  |
| 2011 | 24,710 | 45,421 | 0.5 |  |
| 2010 | 26,439 | 43,478 | 0.6 |  |
| 2009 | 29,297 | 42,548 | 0.7 |  |
| 2008 | 34,628 | 40,554 | 0.9 |  |
| 2007 | 36,526 | 39,328 | 0.9 |  |

${ }^{1}$ Annuitants includes retirees, disabilities, and beneficiaries.
${ }^{2}$ 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, $2016{ }^{1}$
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 | 1,572 | 747 | 190 | 1,116 | 245 | 451 | N/A | 437 | 77 | 4,835 |
| 501-1,000 | 1,909 | 1,223 | 284 | 1,960 | 696 | 1,007 | N/A | 329 | 171 | 7,579 |
| 1,001-1,500 | 3,122 | 2,318 | 411 | 4,109 | 1,255 | 1,425 | N/A | 141 | 227 | 13,008 |
| 1,501-2,000 | 3,166 | 3,014 | 344 | 4,635 | 1,517 | 1,840 | N/A | 141 | 109 | 14,766 |
| 2,001-3,000 | 2,429 | 2,972 | 255 | 2,933 | 1,149 | 1,467 | N/A | 57 | 26 | 11,288 |
| Over 3,000 | 259 | 300 | 18 | 261 | 110 | 146 | N/A | 5 | - | 1,099 |
| Total | 12,457 | 10,574 | 1,502 | 15,014 | 4,972 | 6,336 | N/A | 1,110 | 610 | 52,575 |



5-Year Certain \& Life - Provides a monthly benefit for retiree's life. If retiree receives benefits for at least five (5) years prior to death, there is no benefit payable to a designated beneficiary. In the event the retiree dies before receiving five (5) years of payments, the beneficiary receives the remainder of those five (5) 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 (5) years of payments, the beneficiary receives either a monthly benefit of the pension amount only for the remainder of the five (5) 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 $1 \mathbf{0 0 \%}$ 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 (5) 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 (5) 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, $2016{ }^{3}$ |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $<10^{2}$ |  | 10-14 |  | 15-19 | 20-24 |  | 25-29 | 30+ | Total |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| 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 |

[^39]Schedule of Participating Employers: Top 10

|  | June 30, 2016 |  |  |  |  | June 30, $2007{ }^{1}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Top 10 Employers | Pre-1996 Account Covered Members | 1996 <br> Account <br> Covered <br> Members | Total TRF Covered Members | Rank | Percentage of Total TRF | Total TRF Covered Members | Rank | Percentage of Total TRF |
| Indianapolis Public Schools | 498 | 2,282 | 2,780 | 1 | 4.0 \% | 3,402 | 1 | 4.5 \% |
| Fort Wayne Community Schools | 473 | 1,711 | 2,184 | 2 | 3.1 | 2,294 | 2 | 3.0 |
| Evansville-Vanderburgh School Corporation | 439 | 1,094 | 1,533 | 3 | 2.2 | 1,624 | 3 | 2.2 |
| South Bend Community School Corporation | 300 | 1,130 | 1,430 | 4 | 2.1 | 1,611 | 4 | 2.1 |
| Hamilton Southeastern Schools | 162 | 1,101 | 1,263 | 5 | 1.8 |  |  |  |
| Wayne Township Metropolitan School District | 145 | 970 | 1,115 | 6 | 1.6 | 1,141 | 7 | 1.5 |
| Elkhart Community Schools | 175 | 898 | 1,073 | 7 | 1.5 | 1,130 | 8 | 1.5 |
| Vigo County School Corporation | 271 | 777 | 1,048 | 8 | 1.5 | 1,244 | 5 | 1.7 |
| Carmel Clay Schools | 143 | 881 | 1,024 | 9 | 1.5 | 1,079 | 10 | 1.4 |
| Hammond Public Schools | 206 | 808 | 1,014 | 10 | 1.5 |  |  |  |
| Gary Community School Corporation |  |  |  |  |  | 1,240 | 6 | 1.6 |
| Lawrence Township Metropolitan School District |  |  |  |  |  | 1,086 | 9 | 1.4 |
| Total - Top 10 Employers | 2,812 | 11,652 | 14,464 |  | 20.8 | 15,851 |  | 20.9 |
| All Other * | 11,515 | 43,613 | 55,128 |  | 79.2 | 59,982 |  | 79.1 |
| Grand Total | 14,327 | 55,265 | 69,592 |  | 100.0 \% | 75,833 |  | 100.0 \% |

363 Employers in 2016, and 360 in 2007
*As of June 30, 2016, "All Other" consisted of:

| Type of Employer | Pre-1996 Account |  | 1996 Account |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Number of Employers | Covered Members | Number of Employers | Covered Members |
| State | 1 | 28 | 1 | 177 |
| School Districts \& Education | 326 | 11,487 | 351 | 43,436 |
| Total All Other | 327 | 11,515 | 352 | 43,613 |

[^40]
## Teachers' Retirement Fund (1996)

Schedule of Changes and Growth in Fiduciary Net Position ${ }^{1}$
For the Year Ended June 30

| (dollars in thousands) | 2016 |  | 2015 |  | 2014 |  | 2013 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Position - Beginning of Year | \$ | 5,379,113 | \$ | 5,189,442 | \$ | 4,433,677 | \$ | 4,018,149 |
| Contributions / (Benefits and Expenses) |  |  |  |  |  |  |  |  |
| Member Contributions |  | 88,430 |  | 86,515 |  | 81,802 |  | 77,532 |
| Employer Contributions |  | 215,626 |  | 205,763 |  | 194,751 |  | 180,714 |
| Member Reassignments |  | 6,587 |  | 7,134 |  | 8,884 |  | 4,322 |
| Other |  | 16 |  | 24 |  | 21 |  | 4 |
| Total Contributions and Other |  | 310,659 |  | 299,436 |  | 285,458 |  | 262,572 |
| Pension Benefits |  | $(119,754)$ |  | $(112,533)$ |  | $(94,615)$ |  | $(84,814)$ |
| Disability Benefits |  | $(1,942)$ |  | $(1,692)$ |  | $(1,790)$ |  | (6) |
| Survivor Benefits ${ }^{1}$ |  | $(2,606)$ |  | $(1,962)$ |  | $(1,581)$ |  | $(1,412)$ |
| Distributions of Contributions and Interest |  | $(10,988)$ |  | $(11,712)$ |  | $(10,734)$ |  | $(10,925)$ |
| Administrative Expenses |  | $(5,603)$ |  | $(6,184)$ |  | $(6,707)$ |  | $(6,482)$ |
| Member Reassignments |  | $(1,852)$ |  | $(1,269)$ |  | $(1,048)$ |  | $(1,516)$ |
| Total Benefits and Expenses |  | $(142,745)$ |  | $(135,352)$ |  | $(116,475)$ |  | $(105,155)$ |
| Net Contributions / (Benefits and Expenses) |  | 167,914 |  | 164,084 |  | 168,983 |  | 157,417 |
| Net Investment Income / (Loss) |  | 64,203 |  | 25,587 |  | 586,782 |  | 258,111 |
| Net Increase / (Decrease) |  | 232,117 |  | 189,671 |  | 755,765 |  | 415,528 |
| Net Position - End of Year | \$ | 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 |
| :---: |
| $7.50 \%$ |
| 7.50 |
| 7.50 |
| 7.50 |
| 7.50 |
| 7.50 |
| 7.00 |
| 7.13 |
| 7.25 |
| 7.00 |

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 |
| :---: | :---: | :---: | :---: |
| $2016{ }^{2}$ | 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 |
| 2007 | 39,307 | 1,925 | 20.4 |

${ }^{1}$ Annuitants includes retirees, disabilities, and beneficiaries.
${ }^{2}$ 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, $2016{ }^{1}$
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 | 229 | 138 | 19 | 148 | 28 | 49 | N/A | 27 | 65 | 703 |
| 501-1,000 | 392 | 315 | 51 | 342 | 73 | 149 | N/A | 29 | 63 | 1,414 |
| 1,001-1,500 | 269 | 249 | 43 | 274 | 79 | 112 | N/A | 4 | 20 | 1,050 |
| 1,501-2,000 | 194 | 168 | 23 | 223 | 60 | 101 | N/A | 7 | 8 | 784 |
| 2,001-3,000 | 154 | 155 | 19 | 264 | 79 | 115 | N/A | 4 | 5 | 795 |
| Over 3,000 | 45 | 55 | 1 | 62 | 33 | 33 | N/A | 2 | - | 231 |
| Total | 1,283 | 1,080 | 156 | 1,313 | 352 | 559 | N/A | 73 | 161 | 4,977 |



5-Year Certain \& Life - Provides a monthly benefit for retiree's life. If retiree receives benefits for at least five (5) years prior to death, there is no benefit payable to a designated beneficiary. In the event the retiree dies before receiving five (5) years of payments, the beneficiary receives the remainder of those five (5) 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 (5) years of payments, the beneficiary receives either a monthly benefit of the pension amount only for the remainder of the five (5) 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 (5) 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 (5) 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, $2014{ }^{3}$
Average Monthly Defined Benefit
Average Monthly ASA Annuity ${ }^{5}$
Average Final Average Salary
Number of Benefit Recipients

| $\$$ | 263 | $\$$ | 450 |
| :--- | ---: | ---: | ---: |
| $\$$ | 23 | $\$$ | 71 |
| $\$ 39,665$ | $\$$ | 44,142 |  |
|  | 36 |  | 406 |


| $\$$ | 730 |
| :--- | ---: |
| $\$$ | 102 |
| $\$ 51,558$ |  |
|  | 822 |


| $\$$ | 1,041 |
| :--- | ---: |
| $\$$ | 124 |
| $\$$ | 57,665 |
|  | 537 |


| $\$$ | 1,426 | $\$ 2,158$ | $\$$ | 1,366 |
| :--- | ---: | ---: | ---: | ---: |
| $\$$ | 200 | $\$ 230$ | $\$$ | 162 |
| $\$ 61,752$ | $\$ 70,633$ | $\$$ | 59,995 |  |
|  | 504 | 1,360 |  | 3,665 |

For the Year Ended June 30, 2013
Average Monthly Defined Benefit
Average Monthly ASA Annuity ${ }^{5}$
Average Final Average Salary
Number of Benefit Recipients

| $\$$ | 263 | $\$$ | 450 |
| :--- | ---: | ---: | ---: |
| $\$$ | 23 | $\$$ | 71 |
| $\$ 39,665$ | $\$$ | 44,142 |  |
|  | 36 |  | 406 |


| $\$$ | 730 |
| :--- | ---: |
| $\$$ | 102 |
| $\$ 51,558$ |  |
|  | 822 |


| $\$$ | 1,041 |
| :--- | ---: |
| $\$$ | 124 |
| $\$$ | 57,665 |
|  | 537 |


| $\$$ | 1,426 | $\$ 2,158$ | $\$$ | 1,366 |
| :--- | ---: | ---: | ---: | ---: |
| $\$$ | 200 | $\$$ | 230 | $\$$ |
| $\$ 61,752$ | $\$ 70,633$ | $\$$ | 59,995 |  |
|  | 504 | 1,360 |  | 3,665 |

For the Year Ended June 30, 2012
Average Monthly Defined Benefit
Average Monthly ASA Annuity ${ }^{5}$
Average Final Average Salary
Number of Benefit Recipients

| \$ | 274 | $\$$ | 444 |
| :--- | ---: | ---: | ---: |
| $\$$ | 29 | $\$$ | 72 |
| $\$ 39,141$ | $\$$ | 43,284 |  |
|  | 33 |  | 308 |


| $\$$ | 682 |
| :--- | ---: |
| $\$$ | 97 |
| $\$ 48,634$ |  |
|  | 577 |


| $\$$ | 995 |
| :--- | ---: |
| $\$$ | 125 |
| $\$$ | 55,970 |
|  | 411 |


| $\$$ | 1,401 |
| :--- | ---: |
| $\$$ | 207 |
| $\$$ | 60,295 |
|  | 420 |


| $\$ 2,124$ | $\$$ | 1,391 |
| :--- | ---: | ---: |
| $\$ 223$ | $\$$ | 165 |
| $\$ 69,381$ | $\$$ | 59,171 |
| 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 |

[^41]Schedule of Participating Employers: Top 10

|  | June 30, 2016 |  |  |  |  | June 30, $2007{ }^{1}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Top 10 Employers | Pre-1996 Account Covered Members | $1996$ <br> Account Covered Members | Total TRF Covered Members | Rank | Percentage of Total TRF | Total TRF Covered Members | Rank | Percentage of Total TRF |
| Indianapolis Public Schools | 498 | 2,282 | 2,780 | 1 | 4.0 \% | 3,402 | 1 | 4.5 \% |
| Fort Wayne Community Schools | 473 | 1,711 | 2,184 | 2 | 3.1 | 2,294 | 2 | 3.0 |
| Evansville-Vanderburgh School Corporation | 439 | 1,094 | 1,533 | 3 | 2.2 | 1,624 | 3 | 2.2 |
| South Bend Community School Corporation | 300 | 1,130 | 1,430 | 4 | 2.1 | 1,611 | 4 | 2.1 |
| Hamilton Southeastern Schools | 162 | 1,101 | 1,263 | 5 | 1.8 |  |  |  |
| Wayne Township Metropolitan School District | 145 | 970 | 1,115 | 6 | 1.6 | 1,141 | 7 | 1.5 |
| Elkhart Community Schools | 175 | 898 | 1,073 | 7 | 1.5 | 1,130 | 8 | 1.5 |
| Vigo County School Corporation | 271 | 777 | 1,048 | 8 | 1.5 | 1,244 | 5 | 1.7 |
| Carmel Clay Schools | 143 | 881 | 1,024 | 9 | 1.5 | 1,079 | 10 | 1.4 |
| Hammond Public Schools | 206 | 808 | 1,014 | 10 | 1.5 |  |  |  |
| Gary Community School Corporation |  |  |  |  |  | 1,240 | 6 | 1.6 |
| Lawrence Township Metropolitan School District |  |  |  |  |  | 1,086 | 9 | 1.4 |
| Total - Top 10 Employers | 2,812 | 11,652 | 14,464 |  | 20.8 | 15,851 |  | 20.9 |
| All Other * | 11,515 | 43,613 | 55,128 |  | 79.2 | 59,982 |  | 79.1 |
| Grand Total | 14,327 | 55,265 | 69,592 |  | 100.0 \% | 75,833 |  | 100.0 \% |

363 Employers in 2016, and 360 in 2007

* As of June 30, 2016, "All Other" consisted of:

| Type of Employer | Pre-1996 Account |  | 1996 Account |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Number of Employers | Covered Members | Number of Employers | Covered Members |
| State | 1 | 28 | 1 | 177 |
| School Districts \& Education | 326 | 11,487 | 351 | 43,436 |
| Total All Other | 327 | 11,515 | 352 | 43,613 |

[^42]
## 1977 Police Officers' and Firefighters' Pension and Disability Fund

Schedule of Changes and Growth in Fiduciary Net Position
For the Year Ended June 30


## Net Position - Beginning of

Year
Contributions / (Benefits and Expenses)

| Member Contributions | 44,918 | 43,523 | 41,791 | 40,786 | 40,870 |  | 40,532 |  | 39,826 |  | 38,520 |  | 36,787 |  | 33,898 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Employer Contributions | 151,674 | 146,697 | 140,119 | 137,111 | 135,605 |  | 133,726 |  | 130,774 |  | 130,002 |  | 129,553 |  | 118,816 |
| Member Reassignments | - | - | - | 71 | 123 |  | - |  | 237 |  | 131 |  | - |  |  |
| Other | 143 | 15 | 30 | 18 | 41 |  | 83 |  | 90 |  | 115 |  | 57 |  | 76 |
| Total Contributions and Other | 196,735 | 190,235 | 181,940 | 177,986 | 176,639 |  | 174,341 |  | 170,927 |  | 168,768 |  | 166,397 |  | 152,790 |
| Pension Benefits | $(97,445)$ | $(83,239)$ | $(76,462)$ | $(68,622)$ | $(67,920)$ |  | $(56,503)$ |  | $(47,150)$ |  | $(41,019)$ |  | $(42,790)$ |  | $(33,661)$ |
| Disability Benefits | $(18,647)$ | $(17,620)$ | $(17,767)$ | $(17,429)$ | $(16,288)$ |  | $(15,710)$ |  | $(15,199)$ |  | $(14,541)$ |  | $(13,184)$ |  | $(12,256)$ |
| Survivor Benefits ${ }^{1}$ | $(11,843)$ | $(11,156)$ | $(10,573)$ | $(9,884)$ | - |  | - |  | - |  | - |  | - |  |  |
| Death Benefits | (774) | (860) | (720) | (794) | (738) |  | (624) |  | (564) |  | (306) |  | (108) |  | (72) |
| Distributions of Contributions and Interest | $(4,037)$ | $(3,615)$ | $(3,572)$ | $(3,074)$ | $(3,101)$ |  | $(2,662)$ |  | $(2,304)$ |  | $(3,172)$ |  | $(3,186)$ |  | $(3,293)$ |
| Administrative Expenses | $(1,651)$ | $(1,708)$ | $(1,787)$ | $(1,845)$ | $(1,662)$ |  | $(2,108)$ |  | $(1,865)$ |  | $(3,766)$ |  | $(3,156)$ |  | $(2,559)$ |
| Member Reassignments | (74) | - | - | - | (33) |  | (61) |  | - |  | (5) |  | (3) |  |  |
| Total Benefits and Expenses | $(134,471)$ | $(118,198)$ | $(110,881)$ | $(101,648)$ | $(89,742)$ |  | $(77,668)$ |  | $(67,082)$ |  | $(62,809)$ |  | $(62,427)$ |  | $(51,841)$ |
| Net Contributions / (Benefits and Expenses) | 62,264 | 72,037 | 71,059 | 76,338 | 86,897 |  | 96,673 |  | 103,845 |  | 105,959 |  | 103,970 |  | 100,949 |
| Net Investment Income / (Loss) | 60,320 | $(1,600)$ | 570,058 | 223,510 | 8,750 |  | 591,408 |  | 337,766 |  | $(662,681)$ |  | $(265,745)$ |  | 490,857 |
| Net Increase I (Decrease) | 122,584 | 70,437 | 641,117 | 299,848 | 95,647 |  | 688,081 |  | 441,611 |  | $(556,722)$ |  | $(161,775)$ |  | 591,806 |
| Net Position - End 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 |

${ }^{1}$ Survivor benefits information is available since June 30, 2013.
(in thousands of dollars)


Schedule of Historical Contribution Rates
For the Year Ended June 30

1977
Fund Rate
2016
19.7 \%

2015
19.7

2014
19.7

2013
19.7

2012
19.7

2011
19.5

2010
19.5

2009
19.5
$2008 \quad 21.0$
2007
21.0

Memo:
Effective Date
January 1


Ratio of Active Members to Annuitants
For the Year Ended June 30

|  | Active <br> Members |  | Annuitants ${ }^{1}$ | Ratio Active <br> Members to <br> Annuitants |
| :--- | :--- | :--- | :--- | :--- |
| $\mathbf{2 0 1 6 ^ { 2 }}$ | 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 |  |
| $2007^{3}$ | 12,611 | 2,548 | 4.9 |  |

${ }^{1}$ Annuitants includes retirees, disabilities, and beneficiaries.
${ }^{2}$ 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, $2016{ }^{1}$

| Number of Benefit Recipients by Benefit Option |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Amount of Monthly <br> Benefit (in dollars) | Joint With 60\% Survivor Benefits | Survivors | Disability | Total Benefit Recipients |
| \$ 1-500 | - | 15 | - | 15 |
| 501-1,000 | 10 | 132 | 26 | 168 |
| 1,001-1,500 | 134 | 336 | 98 | 568 |
| 1,501-2,000 | 476 | 133 | 213 | 822 |
| 2,001-3,000 | 1,508 | 54 | 363 | 1,925 |
| Over 3,000 | 448 | 13 | 45 | 506 |
| Total | 2,576 | 683 | 745 | 4,004 |

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 1977 Fund, there is no minimum creditable service requirement.
${ }^{1}$ 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 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $<10^{2}$ |  | 0-14 ${ }^{2}$ | 15-19 ${ }^{2}$ | 20-24 | 25-29 | 30+ |  | Total |
| For the Year Ended June 30, $2016{ }^{3}$ |  |  |  |  |  |  |  |  |  |
| Average Monthly Defined Benefit | \$ 1,624 | \$ | 1,901 | \$ 1,839 | \$ 1,969 | \$ 2,498 | \$ 2,799 | \$ | 2,190 |
| Average Final Average Salary | \$ 41,299 | \$ | 47,438 | \$ 45,587 | \$ 44,846 | \$ 47,841 | \$51,017 | \$ | 46,803 |
| Number of Benefit Recipients | 380 |  | 226 | 262 | 1,463 | 1,071 | 602 |  | 4,004 |
| For the Year Ended June 30, $2015{ }^{3}$ |  |  |  |  |  |  |  |  |  |
| Average Monthly Defined Benefit | \$ 1,709 | \$ | 1,862 | \$ 1,812 | \$ 1,953 | \$ 2,473 | \$ 2,714 | \$ | 2,149 |
| Average Final Average Salary | \$ 40,564 | \$ | 46,871 | \$ 44,876 | \$ 43,912 | \$ 47,030 | \$50,367 | \$ | 45,862 |
| Number of Benefit Recipients | 421 |  | 222 | 256 | 1,361 | 963 | 513 |  | 3,736 |
| For the Year Ended June 30, $2014{ }^{3}$ |  |  |  |  |  |  |  |  |  |
| Average Monthly Defined Benefit | \$ 1,841 | \$ | 1,748 | \$ 1,734 | \$ 1,864 | \$ 2,362 | \$ 2,553 | \$ | 2,084 |
| Average Final Average Salary | \$ 42,408 | \$ | 45,969 | \$ 44,636 | \$ 43,120 | \$ 46,421 | \$48,656 | \$ | 45,245 |
| Number of Benefit Recipients | 290 |  | 226 | 273 | 1,243 | 883 | 576 |  | 3,491 |
| For the Year Ended June 30, 2013 |  |  |  |  |  |  |  |  |  |
| Average Monthly Defined Benefit | \$ 1,841 | \$ | 1,748 | \$ 1,734 | \$ 1,864 | \$ 2,362 | \$ 2,553 | \$ | 2,084 |
| Average Final Average Salary | \$ 42,408 | \$ | 45,969 | \$ 44,636 | \$ 43,120 | \$ 46,421 | \$48,656 | \$ | 45,245 |
| Number of Benefit Recipients | 290 |  | 226 | 273 | 1,243 | 883 | 576 |  | 3,491 |
| For the Year Ended June 30, 2012 |  |  |  |  |  |  |  |  |  |
| Average Monthly Defined Benefit | \$ 1,766 | \$ | 1,685 | \$ 1,685 | \$ 1,815 | \$ 2,284 | \$ 2,396 | \$ | 1,999 |
| Average Final Average Salary | \$ 40,609 | \$ | 45,578 | \$ 43,738 | \$ 42,368 | \$ 45,510 | \$47,219 | \$ | 44,173 |
| Number of Benefit Recipients | 251 |  | 215 | 266 | 1,178 | 822 | 476 |  | 3,208 |
| For the Year Ended June 30, 2011 |  |  |  |  |  |  |  |  |  |
| Average Monthly Defined Benefit | \$ 1,708 | \$ | 1,609 | \$ 1,636 | \$ 1,758 | \$ 2,206 | \$ 2,272 | \$ | 1,916 |
| Average Final Average Salary | \$ 40,474 | \$ | 44,601 | \$ 43,597 | \$ 41,438 | \$ 44,731 | \$47,365 | \$ | 43,362 |
| Number of Benefit Recipients | 241 |  | 208 | 264 | 1,102 | 755 | 396 |  | 2,966 |
| ${ }^{1}$ INPRS intends to make this schedule a 10 -year schedule over time. <br> ${ }^{2}$ Members with less than 20 years of service are primarily members receiving a disability benefit from INPRS. <br> ${ }^{3}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year. |  |  |  |  |  |  |  |  |  |

Schedule of Participating Employers: Top 10

| Top 10 Employers | June 30, 2016 |  |  | June 30, 2007 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Covered Members | Rank | Percentage of Total 1977 Fund | Covered Members | Rank | Percentage of Total 1977 Fund |
| City of Indianapolis | 2,472 | 1 | 18.3 \% | 1,944 | 1 | 15.4 \% |
| City of Fort Wayne | 790 | 2 | 5.8 | 773 | 2 | 6.1 |
| City of Evansville | 551 | 3 | 4.1 | 507 | 4 | 4.0 |
| City of South Bend | 482 | 4 | 3.6 | 459 | 5 | 3.7 |
| City of Gary | 408 | 5 | 3.0 | 520 | 3 | 4.1 |
| City of Hammond | 360 | 6 | 2.7 | 372 | 6 | 3.0 |
| City of Lafayette | 272 | 7 | 2.0 | 244 | 8 | 1.9 |
| City of Carmel | 266 | 8 | 2.0 | 244 | 8 | 1.9 |
| City of Terre Haute | 257 | 9 | 1.9 | 257 | 7 | 2.1 |
| City of Elkhart | 238 | 10 | 1.7 |  |  |  |
| City of Anderson |  |  |  | 231 | 10 | 1.8 |
| Total - Top 10 Employers | 6,096 |  | 45.1 | 5,551 |  | 44.0 |
| All Other * | 7,410 |  | 54.9 | 7,060 |  | 56.0 |
| Grand Total | 13,506 |  | 100.0 \% | 12,611 |  | 100.0 \% |

165 Employers in 2016, and 161 in 2007

* As of June 30, 2016, "All Other" consisted of:

| Type of Employer | Number of Employers | Covered Members |
| :---: | :---: | :---: |
| Cities | 108 | 5,895 |
| Towns | 33 | 1,015 |
| Townships | 12 | 475 |
| Other | 2 | 25 |
| Total All Other | 155 | 7,410 |

## Judges' Retirement System

## Schedule of Changes and Growth in Fiduciary Net Position

For the Year Ended June 30

| (dollars in thousands) |  | 2016 |  | 2015 |  | 2014 |  | 2013 |  | 2012 |  | 2011 |  | 2010 |  | 2009 |  | 2008 |  | 2007 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Position - Beginning of Year | \$ | 437,352 | \$ | 432,730 | \$ | 375,752 | \$ | 262,326 | \$ | 256,986 | \$ | 208,395 | \$ | 179,428 | \$ | 219,426 | \$ | 233,386 | \$ | 193,310 |
| Contributions / (Benefits and Expenses) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Member Contributions |  | 3,239 |  | 3,292 |  | 2,856 |  | 2,631 |  | 2,468 |  | 3,492 |  | 2,229 |  | 2,196 |  | 2,062 |  | 1,925 |
| Employer Contributions ${ }^{1}$ |  | 16,946 |  | 21,020 |  | 20,895 |  | 111,419 |  | 18,896 |  | 19,200 |  | 18,631 |  | 20,861 |  | 15,920 |  | 14,662 |
| Member Reassignments |  | - |  | - |  | 4 |  | 121 |  | 257 |  | 1,281 |  | 59 |  | 151 |  | 64 |  | - |
| Other |  | - |  | 9 |  | 6 |  | 5 |  | 2 |  | - |  | - |  | - |  | - |  | - |
| Total Contributions and Other |  | 20,185 |  | 24,321 |  | 23,761 |  | 114,176 |  | 21,623 |  | 23,973 |  | 20,919 |  | 23,208 |  | 18,046 |  | 16,587 |
| Pension Benefits |  | $(18,194)$ |  | $(16,613)$ |  | $(15,819)$ |  | $(15,115)$ |  | $(16,569)$ |  | $(15,996)$ |  | $(15,441)$ |  | $(14,595)$ |  | $(12,514)$ |  | $(11,554)$ |
| Disability Benefits |  | (90) |  | (230) |  | (134) |  | (193) |  | (158) |  | (92) |  | (29) |  | (54) |  | (65) |  | (110) |
| Survivor Benefits ${ }^{2}$ |  | $(2,627)$ |  | $(2,578)$ |  | $(2,574)$ |  | $(2,218)$ |  | - |  | - |  | - |  | - |  | - |  | - |
| Distributions of Contributions and Interest |  | (11) |  | (11) |  | - |  | (53) |  | (19) |  | (5) |  | - |  | (55) |  | (50) |  | (72) |
| Administrative Expenses |  | (148) |  | (165) |  | (146) |  | (126) |  | (132) |  | (160) |  | (104) |  | (308) |  | (244) |  | (194) |
| Total Benefits and Expenses |  | $(21,070)$ |  | $(19,597)$ |  | $(18,673)$ |  | $(17,705)$ |  | $(16,878)$ |  | $(16,253)$ |  | $(15,574)$ |  | $(15,012)$ |  | $(12,873)$ |  | $(11,930)$ |
| Net Contributions / (Benefits and Expenses) |  | (885) |  | 4,724 |  | 5,088 |  | 96,471 |  | 4,745 |  | 7,720 |  | 5,345 |  | 8,196 |  | 5,173 |  | 4,657 |
| Net Investment Income / (Loss) |  | 5,323 |  | (102) |  | 51,890 |  | 16,955 |  | 595 |  | 40,871 |  | 23,622 |  | $(48,194)$ |  | $(19,133)$ |  | 35,419 |
| Net Increase / (Decrease) |  | 4,438 |  | 4,622 |  | 56,978 |  | 113,426 |  | 5,340 |  | 48,591 |  | 28,967 |  | $(39,998)$ |  | $(13,960)$ |  | 40,076 |
| Net Position - End of Year | \$ | 441,790 | \$ | 437,352 | \$ | 432,730 | \$ | 375,752 | \$ | 262,326 | \$ | 256,986 | \$ | 208,395 | \$ | 179,428 | \$ | 219,426 | \$ | 233,386 |

IIn FY2013, 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)

$\square$
Net Position-
End of Year

Ratio of Active Members to Annuitants
For the Year Ended June 30

|  | Active <br> Members |  | Annuitants ${ }^{1}$ | Ratio Active <br> Members to <br> Annuitants |
| :--- | :--- | :--- | :--- | :--- |
| $2016^{2}$ | 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 |  |
| 2007 | 258 | 279 | 0.9 |  |

${ }^{1}$ Annuitants includes retirees, disabilities, and beneficiaries.
${ }^{2}$ 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, $2016{ }^{1}$

Number of Benefit Recipients by Benefit Option

| Amount of Monthly <br> Benefit (in dollars) | Joint With One-Half Survivor Benefits | Survivors | Disability | Total Benefit Recipients |
| :---: | :---: | :---: | :---: | :---: |
| \$ 1-500 | - | - | - |  |
| 501-1,000 | - | - | - | - |
| 1,001-1,500 | - | 31 | - | 31 |
| 1,501-2,000 | - | 13 | - | 13 |
| 2,001-3,000 | 12 | 33 | - | 45 |
| Over 3,000 | 237 | 22 | 3 | 262 |
| Total | 249 | 99 | 3 | 351 |

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, $2015^{2}$

| Average Monthly Defined Benefit | \$ | 2,046 | \$ | 4,145 | \$ | 5,297 | \$ | 5,479 | \$ | 6,555 | \$ | 6,558 | \$ | 4,749 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Average Final Average Salary | \$ | 59,251 | \$ | 116,014 | \$ | 117,354 | \$ | 114,577 | \$ | 112,207 | \$ | 122,815 | \$ | 114,494 |
| Number of Benefit Recipients |  | 57 |  | 75 |  | 61 |  | 69 |  | 38 |  | 26 |  | 326 |

For the Year Ended June 30, $2014^{2}$
Average Monthly Defined Benefit
Average Final Average Salary
Number of Benefit Recipients

| $\$ 3,519$ | $\$$ | 4,090 | $\$$ | 5,039 | $\$$ | 5,544 | $\$$ | 6,538 | $\$$ | 6,545 | $\$$ | 4,796 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| $\$ 108,307$ | $\$$ | 113,994 | $\$$ | 113,254 | $\$$ | 114,783 | $\$$ | 111,708 | $\$$ | 122,579 | $\$$ | 114,885 |
| 88 |  | 66 |  | 47 |  | 62 |  | 34 |  | 24 |  | 321 |

For the Year Ended June 30, 2013

| Average Monthly Defined Benefit | \$ | 3,519 | \$ | 4,090 | \$ | 5,039 | \$ | 5,544 | \$ | 6,538 | \$ | 6,545 | \$ | 4,796 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Average Final Average Salary | \$ | 108,307 | \$ | 113,994 | \$ | 113,254 | \$ | 114,783 | \$ | 111,708 | \$ | 122,579 | \$ | 114,885 |
| Number of Benefit Recipients |  | 88 |  | 66 |  | 47 |  | 62 |  | 34 |  | 24 |  | 321 |

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 | $\$ 27,717$ | $\$$ | 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.

# State Excise Police, Gaming Agent, Gaming Control Officer \& Conservation Enforcement Officers' Retirement Plan 

Schedule of Changes and Growth in Fiduciary Net Position
For the Year Ended June 30

| (dollars in thousands) |  | 2016 |  | 2015 |  | 2014 |  | 2013 |  | 2012 |  | 2011 |  | 2010 |  | 2009 |  | 008 |  | 2007 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Position - Beginning of Year | \$ | 110,038 | \$ | 110,657 | \$ | 97,019 | \$ | 76,543 | \$ | 75,305 | \$ | 61,174 | \$ | 51,404 | \$ | 61,076 | \$ | 63,172 | \$ | 52,616 |
| Contributions / Benefits and Expenses) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Member Contributions |  | 1,016 |  | 1,004 |  | 1,019 |  | 1,006 |  | 972 |  | 1,002 |  | 1,010 |  | 1,025 |  | 981 |  | 129 |
| Employer Contributions ${ }^{1}$ |  | 5,367 |  | 5,215 |  | 5,359 |  | 19,740 |  | 5,054 |  | 5,197 |  | 5,256 |  | 5,294 |  | 4,854 |  | 3,359 |
| Member Reassignments |  | - |  | - |  | - |  | - |  | - |  | - |  | 9 |  | 5 |  | - |  | - |
| Total Contributions and Other |  | 6,383 |  | 6,219 |  | 6,378 |  | 20,746 |  | 6,026 |  | 6,199 |  | 6,275 |  | 6,324 |  | 5,835 |  | 3,488 |
| Pension Benefits |  | $(5,639)$ |  | $(6,068)$ |  | $(5,379)$ |  | $(4,393)$ |  | $(4,656)$ |  | $(3,851)$ |  | $(3,092)$ |  | $(2,855)$ |  | $(2,616)$ |  | $(2,309)$ |
| Disability Benefits |  | (58) |  | (60) |  | (92) |  | (64) |  | (61) |  | (58) |  | (58) |  | (60) |  | (65) |  | (64) |
| Survivor Benefits ${ }^{2}$ |  | (435) |  | (395) |  | (367) |  | (342) |  | - |  | - |  | - |  | - |  | - |  | - |
| Distributions of Contributions and Interest |  | (113) |  | (85) |  | (100) |  | (37) |  | (100) |  | (99) |  | (31) |  | (36) |  | (11) |  | (3) |
| Administrative Expenses |  | (139) |  | (159) |  | (141) |  | (121) |  | (131) |  | (112) |  | (73) |  | (94) |  | (83) |  | (64) |
| Member Reassignments |  | (21) |  | - |  | - |  | (15) |  | - |  | - |  | - |  | - |  | - |  | - |
| Total Benefits and Expenses |  | $(6,405)$ |  | $(6,767)$ |  | $(6,079)$ |  | $(4,972)$ |  | $(4,948)$ |  | $(4,120)$ |  | $(3,254)$ |  | $(3,045)$ |  | $(2,775)$ |  | $(2,440)$ |
| Net Contributions / (Benefits and Expenses) |  | (22) |  | (548) |  | 299 |  | 15,774 |  | 1,078 |  | 2,079 |  | 3,021 |  | 3,279 |  | 3,060 |  | 1,048 |
| Net Investment Income / (Loss) |  | 1,313 |  | (71) |  | 13,339 |  | 4,702 |  | 160 |  | 12,052 |  | 6,749 |  | $(12,951)$ |  | $(5,156)$ |  | 9,508 |
| Net Increase / (Decrease) |  | 1,291 |  | (619) |  | 13,638 |  | 20,476 |  | 1,238 |  | 14,131 |  | 9,770 |  | $(9,672)$ |  | $(2,096)$ |  | 10,556 |
| Net Position - End of Year | \$ | 111,329 | \$ | 110,038 | \$ | 110,657 | \$ | 97,019 | \$ | 76,543 | \$ | 75,305 | \$ | 61,174 | \$ | 51,404 | \$ | 61,076 | \$ | 63,172 |

${ }^{1}$ 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)


# State Excise Police, Gaming Agent, Gaming Control Officer <br> \& Conservation Enforcement Officers' Retirement Plan 

Schedule of Historical Contribution Rates
For the Year Ended June 30

|  | EG\&C Plan <br> Rate |
| :--- | :--- |
| 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 | 20.50 |
| 2007 | 16.00 |
| c: |  |
|  | January 1 |



Ratio of Active Members to Annuitants
For the Year Ended June 30

|  | Active <br> Members |  | Annuitants ${ }^{1}$ | Ratio Active <br> Members to <br> Annuitants |
| :--- | :--- | :--- | :--- | :--- |
| $2016^{2}$ | 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 |  |
| 2007 | 344 | 140 | 2.5 |  |

${ }^{1}$ Annuitants includes retirees, disabilities, and beneficiaries.
${ }^{2}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year


# State Excise Police, Gaming Agent, Gaming Control Officer \& Conservation Enforcement Officers' Retirement Plan 

Schedule of Benefit Recipients by Type of Benefit Option
For the Year Ended June 30, $2016{ }^{1}$

Number of Benefit Recipients by Benefit Option

| Amount of Monthly Benefit (in dollars) | Joint With One-Half Survivor Benefits | Survivors | Disability | Total Benefit Recipients |
| :---: | :---: | :---: | :---: | :---: |
| \$ 1-500 | 2 | 13 | 1 | 16 |
| 501-1,000 | 11 | 20 | 1 | 32 |
| 1,001-1,500 | 15 | 10 | 1 | 26 |
| 1,501-2,000 | 13 | 2 | - | 15 |
| 2,001-3,000 | 79 | - | 1 | 80 |
| Over 3,000 | 51 | - | - | 51 |
| Total | 171 | 45 | 4 | 220 |

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 EG\&C Plan, there is no minimum creditable service requirement.
${ }^{1}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year.

# State Excise Police, Gaming Agent, Gaming Control Officer \& Conservation Enforcement Officers' Retirement Plan 

Schedule of Average Benefit Payments ${ }^{1}$

Years of Credited Service

| For the Year Ended June 30, $2016{ }^{2}$ | Years of Credited Service |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | < 10 |  | 10-14 |  | 15-19 |  | 20-24 |  | 25-29 |  | 30+ |  | Total |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 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) |  | 2016 |  | 2015 |  | 2014 |  | 2013 |  | 2012 |  | 2011 |  | 2010 |  | 2009 |  | 2008 |  | 2007 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Position - Beginning of Year | \$ | 53,424 | \$ | 54,507 | \$ | 47,920 | \$ | 27,689 | \$ | 26,478 | \$ | 22,431 | \$ | 19,696 | \$ | 24,613 | \$ | 26,189 | \$ | 21,645 |
| Contributions / (Benefits and Expenses) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Member Contributions |  | 1,279 |  | 1,269 |  | 1,334 |  | 1,271 |  | 1,277 |  | 1,271 |  | 1,268 |  | 1,274 |  | 1,208 |  | 1,133 |
| Employer Contributions ${ }^{1}$ |  | 1,440 |  | 1,063 |  | 1,174 |  | 19,443 |  | 1,839 |  | 170 |  | 170 |  | 170 |  | 170 |  | 190 |
| Other |  | - |  | - |  | 4 |  | - |  | - |  | - |  | - |  | - |  | - |  |  |
| Total Contributions and Other |  | 2,719 |  | 2,332 |  | 2,512 |  | 20,714 |  | 3,116 |  | 1,441 |  | 1,438 |  | 1,444 |  | 1,378 |  | 1,323 |
| Pension Benefits |  | $(3,270)$ |  | $(2,898)$ |  | $(2,283)$ |  | $(1,982)$ |  | $(1,783)$ |  | $(1,372)$ |  | $(1,143)$ |  | (988) |  | (787) |  | (614) |
| Disability Benefits |  | (136) |  | (19) |  | (20) |  | (19) |  | (19) |  | (19) |  | (20) |  | (19) |  | (19) |  | (19) |
| Survivor Benefits ${ }^{2}$ |  | (87) |  | (78) |  | (44) |  | (39) |  | - |  | - |  | - |  | - |  | - |  |  |
| Distributions of Contributions and Interest |  | (254) |  | (259) |  | (51) |  | (195) |  | (63) |  | (263) |  | (80) |  | (55) |  | (4) |  | (71) |
| Administrative Expenses |  | (193) |  | (127) |  | (108) |  | (145) |  | (82) |  | (78) |  | (55) |  | (45) |  | (36) |  | (23) |



IIn FY2013, 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)


Ratio of Active Members to Annuitants
For the Year Ended June 30

|  | Active <br> Members | Annuitants $^{1}$ | Ratio Active <br> Members to <br> Annuitants |
| :--- | :--- | :--- | :--- | :--- |
| $2016^{2}$ | 197 | 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 |
| 2007 | 206 | 20 | 10.3 |

${ }^{1}$ Annuitants includes retirees, disabilities, and beneficiaries.
${ }^{2}$ 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, $2016{ }^{1}$

Number of Benefit Recipients by Benefit Option

| Amount of Monthly Benefit (in dollars) | Joint With One-Half Survivor Benefits | Survivors | Disability | Total Benefit Recipients |
| :---: | :---: | :---: | :---: | :---: |
| \$ 1-500 | 8 | 3 | - | 11 |
| 501-1,000 | 18 | 4 | - | 22 |
| 1,001-1,500 | 21 | 2 | - | 23 |
| 1,501-2,000 | 14 | 1 | 1 | 16 |
| 2,001-3,000 | 30 | - | - | 30 |
| Over 3,000 | 30 | - | 1 | 31 |
| Total | 121 | 10 | 2 | 133 |

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 (5) 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, $2016{ }^{2}$ | Years of Credited Service |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | < 10 |  | 10-14 |  | 15-19 |  | 20-24 |  | 25-29 |  | 30+ |  | Total |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 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 | $\$$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 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 | $\$$ | 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, 2012

| Average Monthly Defined Benefit |  | $\$$ | 1,541 | $\$$ | 1,421 | $\$$ | 1,874 | $\$$ | 2,283 | $\$$ | 2,488 | $\$$ | 2,496 | $\$$ | 1,821 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Average Final Average Salary | $\$$ | 63,714 | $\$$ | 54,908 | $\$$ | 72,709 | $\$$ | 83,534 | $\$$ | 103,220 | $\$$ | 110,167 | $\$$ | 72,130 |  |
| Number of Benefit Recipients |  | 17 |  | 21 |  | 21 |  | 13 |  | 5 |  | 4 | 81 |  |  |

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 | \$ | 58,939 | \$ | 55,721 | \$ | 69,668 | \$ | 79,113 | \$ | 95,745 | \$ | 101,967 | \$ | 68,573 |
| Number of Benefit Recipients |  | 17 |  | 20 |  | 20 |  | 12 |  | 4 |  | 3 |  | 76 |

${ }^{1}$ 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 Plan

Schedule of Changes and Growth in Fiduciary Net Position
For the Year Ended June 30

| (dollars in thousands) | 2016 |  | 2015 |  | 2014 |  | 2013 |  | 2012 |  | 2011 |  | 2010 |  | 2009 |  | 2008 |  | 2007 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Position - Beginning of Year | \$ | 3,174 | \$ | 3,489 | \$ | 3,337 | \$ | 3,385 | \$ | 3,645 | \$ | 3,396 | \$ | 3,368 | \$ | 4,674 | \$ | 5,498 | \$ | 5,121 |
| Contributions / (Benefits and Expenses) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Employer Contributions |  | 138 |  | 131 |  | 138 |  | 150 |  | 112 |  | - |  |  |  | 100 |  | 100 |  | 100 |
| Other |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | 15 |  | - |  | - |
| Total Contributions and Other |  | 138 |  | 131 |  | 138 |  | 150 |  | 112 |  | - |  | - |  | 115 |  | 100 |  | 100 |
| Pension Benefits |  | (311) |  | (331) |  | (324) |  | (321) |  | (335) |  | (337) |  | (353) |  | (360) |  | (342) |  | (330) |
| Disability Benefits |  | - |  | - |  | (2) |  | (3) |  | (3) |  | (3) |  | (3) |  | (3) |  | (3) |  | (3) |
| Survivor Benefits ${ }^{1}$ |  | (48) |  | (39) |  | (37) |  | (41) |  | - |  | - |  | - |  | - |  | - |  | - |
| Administrative Expenses |  | (61) |  | (71) |  | (62) |  | (34) |  | (37) |  | (50) |  | (35) |  | (21) |  | (56) |  | (56) |
| Member Reassignments |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | (133) |
| Total Benefit and Expenses |  | (420) |  | (441) |  | (425) |  | (399) |  | (375) |  | (390) |  | (391) |  | (384) |  | (401) |  | (522) |
| Net Contributions / (Benefits and Expenses) |  | (282) |  | (310) |  | (287) |  | (249) |  | (263) |  | (390) |  | (391) |  | (269) |  | (301) |  | (422) |
| Net Investment Income / (Loss) |  | 27 |  | (5) |  | 439 |  | 201 |  | 3 |  | 639 |  | 419 |  | $(1,037)$ |  | (523) |  | 799 |
| Net Increase / (Decrease) |  | (255) |  | (315) |  | 152 |  | (48) |  | (260) |  | 249 |  | 28 |  | $(1,306)$ |  | (824) |  | 377 |
| Net Position - End of Year | \$ | 2,919 | \$ | 3,174 | \$ | 3,489 | \$ | 3,337 | \$ | 3,385 | \$ | 3,645 | \$ | 3,396 | \$ | 3,368 | \$ | 4,674 | \$ | 5,498 |

${ }^{1}$ 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 |
| :--- | ---: | :--- | :--- | :--- |
| $2016^{3}$ | 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 |
| 2007 | 43 | 45 | 1.0 |


$\square$ Active Members
Annuitants
Ratio Active Members to Annuitants

Schedule of Benefit Recipients by Type of Benefit Option
For the Year Ended June 30, $2016{ }^{1}$

Number of Benefit Recipients by Benefit Option

| Amount of Monthly <br> Benefit (in dollars) | Joint With One-Half Survivor Benefits | Survivors | Disability | Total Benefit Recipients |
| :---: | :---: | :---: | :---: | :---: |
| \$ 1-500 | 34 | 13 | - | 47 |
| 501-1,000 | 24 | 2 | - | 26 |
| 1,001-1,500 | 1 | - | - | 1 |
| 1,501-2,000 | - | - | - | - |
| 2,001-3,000 | - | - | - | - |
| Over 3,000 | - | - | - | - |
| Total | 59 | 15 | - | 74 |

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, LEDB Plan, five (5) 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, $2016{ }^{2}$ | $<10$ |  | 10-14 |  | 15-19 |  | 20-24 |  | 25-29 |  | 30+ |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Defined Benefit ${ }^{3}$ | \$ | 250 | \$ | 451 | \$ | 667 | \$ | 1,008 | \$ | 577 | \$ | 784 | \$ | 410 |
| Average Final Average Salary | \$ | 25,932 | \$ | 22,383 | \$ | 24,244 | \$ | - | \$ | - | \$ | - | \$ | 24,785 |
| Number of Benefit Recipients |  | 39 |  | 16 |  | 15 |  | 2 |  | 1 |  | 1 |  | 74 |
| For the Year Ended June 30, $2015^{2}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Average Monthly Defined Benefit ${ }^{3}$ | \$ | 255 | \$ | 443 | \$ | 679 | \$ | 1,008 | \$ | 577 | \$ | 1,568 | \$ | 448 |
| Average Final Average Salary | \$ | 25,872 | \$ | 22,383 | \$ | 24,244 | \$ | - | \$ | - | \$ | - | \$ | 24,781 |
| Number of Benefit Recipients |  | 31 |  | 17 |  | 16 |  | 2 |  | 1 |  | 1 |  | 68 |
| For the Year Ended June 30, $2014{ }^{2}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 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, 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 |

[^43]
## Legislators' Defined Contribution Plan

Schedule of Changes and Growth in Fiduciary Net Position
For the Year Ended June 30

| (dollars in thousands) |  | 2016 |  | 2015 |  | 2014 |  | 2013 |  | 2012 |  | 2011 |  | 2010 |  | 2009 |  | 2008 |  | 2007 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Position - Beginning of Year | \$ | 28,288 | \$ | 29,103 | \$ | 25,322 | \$ | 25,579 | \$ | 24,755 | \$ | 22,356 | \$ | 19,778 | \$ | 24,298 | \$ | 25,729 | \$ | 20,869 |
| Contributions / (Benefits and Expenses) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Member Contributions |  | 1,763 |  | 1,715 |  | 1,590 |  | 1,463 |  | 1,303 |  | 1,205 |  | 1,146 |  | 1,342 |  | 1,366 |  | 1,468 |
| Member Reassignments |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | 429 |
| Other |  | 14 |  | 36 |  | 40 |  | 42 |  | 49 |  | 68 |  | 25 |  | 4 |  | 60 |  | 32 |
| Total Contributions and Other |  | 1,777 |  | 1,751 |  | 1,630 |  | 1,505 |  | 1,352 |  | 1,273 |  | 1,171 |  | 1,346 |  | 1,426 |  | 1,929 |
| Distributions of Contributions and Interest |  | $(1,794)$ |  | $(3,100)$ |  | $(1,452)$ |  | $(3,616)$ |  | $(1,033)$ |  | $(2,675)$ |  | (803) |  | $(1,325)$ |  | $(1,116)$ |  | (708) |
| Administrative Expenses |  | (12) |  | (6) |  | (5) |  | (4) |  | (22) |  | (39) |  | (33) |  | (46) |  | - |  | - |
| Total Benefits and Expenses |  | $(1,806)$ |  | $(3,106)$ |  | $(1,457)$ |  | $(3,620)$ |  | $(1,055)$ |  | $(2,714)$ |  | (836) |  | $(1,371)$ |  | $(1,116)$ |  | (708) |
| Net Contributions / (Benefits and Expenses) |  | (29) |  | $(1,355)$ |  | 173 |  | $(2,115)$ |  | 297 |  | $(1,441)$ |  | 335 |  | (25) |  | 310 |  | 1,221 |
| Net Investment Income / (Loss) |  | 151 |  | 540 |  | 3,608 |  | 1,858 |  | 527 |  | 3,840 |  | 2,243 |  | $(4,495)$ |  | $(1,741)$ |  | 3,639 |
| Net Increase / (Decrease) |  | 122 |  | (815) |  | 3,781 |  | (257) |  | 824 |  | 2,399 |  | 2,578 |  | $(4,520)$ |  | $(1,431)$ |  | 4,860 |
| Net Position - End of Year | \$ | 28,410 | \$ | 28,288 | \$ | 29,103 | \$ | 25,322 | \$ | 25,579 | \$ | 24,755 | \$ | 22,356 | \$ | 19,778 | \$ | 24,298 | \$ | 25,729 |

(in thousands of dollars)


Schedule of Historical Contribution Rates
For the Year Ended June 30


## State Employees' Death Benefit Fund

Schedule of Changes and Growth in Fiduciary Net Position
For the Year Ended June 30

| (dollars in thousands) | 2016 |  | 2015 |  | 2014 |  | 2013 |  | 2012 |  | 2011 |  | 2010 |  | 2009 |  | 2008 |  | 2007 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Position - Beginning of Year | \$ | 8,013 | \$ | 7,917 | \$ | 7,683 | \$ | 7,683 | \$ | 7,347 | \$ | 7,091 | \$ | 6,566 | \$ | 6,251 | \$ | 5,797 | \$ | 5,508 |
| Contributions / (Benefits and Expenses) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Death Benefits |  | - |  | - |  | - |  | (50) |  | (50) |  | - |  |  |  | (50) |  | - |  | - |
| Administrative Expenses |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | (9) |  | (6) |  | (4) |
| Total Benefits and Expenses |  | - |  | - |  | - |  | (50) |  | (50) |  | - |  | - |  | (59) |  | (6) |  | (4) |
| Net Contributions / (Benefits and Expenses) |  | - |  | - |  | - |  | (50) |  | (50) |  | - |  | - |  | (59) |  | (6) |  | (4) |
| Net Investment Income / (Loss) |  | 335 |  | 96 |  | 234 |  | 50 |  | 386 |  | 256 |  | 525 |  | 374 |  | 460 |  | 293 |
| Net Increase / (Decrease) |  | 335 |  | 96 |  | 234 |  | - |  | 336 |  | 256 |  | 525 |  | 315 |  | 454 |  | 289 |
| Net Position End of Year | \$ | 8,348 | \$ | 8,013 | \$ | 7,917 | \$ | 7,683 | \$ | 7,683 | \$ | 7,347 | \$ | 7,091 | \$ | 6,566 | \$ | 6,251 | \$ | 5,797 |

(in thousands of dollars)


Schedule of Average Death Benefit Payments ${ }^{1}$

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
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
Average Death Benefit

Average Final Average Salary
Number of Benefit Recipients
For the Year Ended June 30, 2011
Average Death Benefit
Average Final Average Salary
Number of Benefit Recipients
For the Year Ended June 30, 2010
Average Death Benefit
Average Final Average Salary
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
Number of Benefit Recipients
For the Year Ended June 30, 2007
Average Death Benefit
Average Final Average Salary
Number of Benefit Recipients
${ }^{1}$ Lump sum death benefit of $\$ 100,000$ paid to the surviving spouse or child(ren) of a state employee who dies in the line of duty as defined in statute (IC 5-10-11). Prior to 2014, the death benefit was $\$ 50,000$.
\$ 50,000
N/A

$$
1
$$

\$
N/A
$\$$ N/A

Number of Benefit Recipients
$\$$ N/A
\$ 50,000 N/A 1
\$ 50,000 N/A 1
\$ N/A
\$ N/A
-


\$ $\quad-$ N/A N/A
\$ -


Schedule of Changes and Growth in Fiduciary Net Position
For the Year Ended June 30

| (dollars in thousands) | 2016 |  | 2015 |  | 2014 |  | 2013 |  | 2012 |  | 2011 |  | 2010 |  | 2009 |  | 2008 |  | 2007 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Position - Beginning of Year | \$ | 5,596 | \$ | 5,174 | \$ | 4,653 | \$ | 4,683 | \$ | 3,758 | \$ | 3,244 | \$ | 2,842 | \$ | 2,459 | \$ | 2,232 | \$ | 1,800 |
| Contributions / (Benefits and Expenses) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Nonemployer Contributing Entity |  | 611 |  | 506 |  | 525 |  | 544 |  | 716 |  | 548 |  | 626 |  | 539 |  | 517 |  | 485 |
| Total Contributions and Other |  | 611 |  | 506 |  | 525 |  | 544 |  | 716 |  | 548 |  | 626 |  | 539 |  | 517 |  | 485 |
| Death Benefits |  | (150) |  | (150) |  | (150) |  | (600) |  | - |  | (150) |  | (450) |  | (300) |  | (450) |  | (150) |
| Administrative Expenses |  | - |  | - |  | - |  | - |  | - |  | - |  | - |  | (3) |  | (2) |  | (1) |
| Total Benefits and Expenses |  | (150) |  | (150) |  | (150) |  | (600) |  | - |  | (150) |  | (450) |  | (303) |  | (452) |  | (151) |
| Net Contributions / (Benefits and Expenses) |  | 461 |  | 356 |  | 375 |  | (56) |  | 716 |  | 398 |  | 176 |  | 236 |  | 65 |  | 334 |
| Net Investment Income / (Loss) |  | 246 |  | 66 |  | 146 |  | 26 |  | 209 |  | 116 |  | 226 |  | 147 |  | 162 |  | 98 |
| Net Increase / (Decrease) |  | 707 |  | 422 |  | 521 |  | (30) |  | 925 |  | 514 |  | 402 |  | 383 |  | 227 |  | 432 |
| Net Position - End of Year | \$ | 6,303 | \$ | 5,596 | \$ | 5,174 | \$ | 4,653 | \$ | 4,683 | \$ | 3,758 | \$ | 3,244 | \$ | 2,842 | \$ | 2,459 | \$ | 2,232 |

(in thousands of dollars)


Net PositionEnd of Year

Schedule of Average Death Benefit Payments ${ }^{1}$

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
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
Average Death Benefit
Average Final Average Salary
Number of Benefit Recipients
For the Year Ended June 30, 2011
Average Death Benefit
150,000
Average Final Average Salary
Number of Benefit Recipients
For the Year Ended June 30, 2010
Average Death Benefit
Average Final Average Salary
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
Number of Benefit Recipients
For the Year Ended June 30, 2007
Average Death Benefit
\$ 150,000
Average Final Average Salary
Number of Benefit Recipients
${ }^{1}$ 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).
\$ 150,000
\$ 150,000

1

Number of Benefit Recipients


## Pension Relief Fund

Schedule of Average Death Benefit Payments ${ }^{1}$

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
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
Average Death Benefit
Average Final Average Salary
Number of Benefit Recipients
For the Year Ended June 30, 2011
Average Death Benefit
Average Final Average Salary
Number of Benefit Recipients
For the Year Ended June 30, 2010
Average Death Benefit
Average Final Average Salary
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
Number of Benefit Recipients
For the Year Ended June 30, 2007
Average Death Benefit
Average Final Average Salary
Number of Benefit Recipients
$\$$
N/A
\$ 150,000
N/A
4
\$ 150,000
N/A
2
\$ 150,000
N/A
2
\$ 150,000
N/A
1
\$ 150,000
N/A
3
\$ 150,000
N/A
3
$\$ 150,000$
N/A 1
\$ 150,000
\$
150,000
N/A
1
${ }^{1}$ 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, 2016.
    ${ }^{2}$ 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 (1) employer may participate in multiple retirement plans
    ${ }^{2}$ Includes State Employees' Death Benefit Fund and Public Safety Officers' Special Death Benefit Fund.
    ${ }^{3}$ Total INPRS, excluding TRF Pre-1996 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 ASA Only 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]:    ${ }^{1}$ All other ASA/Defined Contribution Assets consist of PERF, TRF Pre-1996 and TRF 1996 ASA assets which are not invested into the Guaranteed Fund plus other LEDC defined contributions that are not invested into the Consolidated Defined Benefit Assets.
    ${ }^{2}$ The LEDC Plan allows members to invest in the Consolidated Defined Benefit Assets.

[^7]:    \$ 30,492,278

[^8]:    '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.
    ${ }^{6} 2013$ covered payroll was adjusted to reflect actual contribution rates.

[^9]:    ${ }^{1}$ 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.
    ${ }^{4}$ Includes $\$ 375$ thousand for 2016 and $\$ 295$ thousand for 2015 of employer service purchases.
    ${ }^{5} 2013$ covered payroll was adjusted to reflect actual contribution rates.

[^10]:    'Contributions are from employers except for the Teachers' Retirement Fund TRF Pre-1996 Account, which are predominately from a nonemployer contributing entity.
    ${ }^{2}$ Actuarially determined contribution and covered payroll were adjusted to reflect actual covered payroll.
    ${ }^{3}$ PERF contributions exclude specific financed liabilities of $\$ 317$ thousand, and one-time payments of $\$ 59.1$ million and $\$ 8.7$ million for 6/30/2016.
    ${ }^{4}$ PERF contributions exclude specific financed liabilities of $\$ 290$ thousand for 6/30/2015.
    ${ }^{5}$ PERF contributions exclude specific financed liabilities of \$6,514 thousand for 6/30/2014.
    ${ }^{6}$ The Actuarially Determined Contribution (ADC) matches the Contributions since the Contributions are the Nonemployer Contributing Entity Appropriation as determined by State Statute.
    ${ }^{7}$ In FY2013, the State of Indiana appropriated $\$ 206,796$ thousand in additional monies to TRF Pre-1996 Account
    ${ }^{8} 1977$ Fund contributions exclude specific financed liabilities of $\$ 375$ thousand for 6/30/2016.
    ${ }^{9} 1977$ Fund contributions exclude specific financed liabilities of $\$ 295$ thousand for 6/30/2015.
    ${ }^{10}$ Represents only a half year of activity.
    ${ }^{11}$ Fiscal year end as of December 31.

[^11]:    ${ }^{1}$ Contributions are from employers except for the Teachers' Retirement Fund TRF Pre-1996 Account, which are predominately from a nonemployer contributing entity.
    ${ }^{2}$ Actuarially determined contribution and covered payroll were adjusted to reflect actual covered payroll.
    ${ }^{12}$ Covered payroll represents anticipated covered payroll except for $6 / 30 / 2016,6 / 30 / 2015$ and $6 / 30 / 2014$, which represents actual covered payroll.
    ${ }^{13}$ In FY2013, the State of Indiana appropriated $\$ 90,187$ thousand in additional monies to JRS.
    ${ }^{14}$ In FY2016, the State of Indiana appropriated $\$ 70$ thousand in additional monies to EG\&C Plan.
    ${ }^{15}$ In FY2013, the State of Indiana appropriated $\$ 14,619$ thousand in additional monies to EG\&C Plan.
    ${ }^{16}$ In FY2013, the State of Indiana appropriated $\$ 17,363$ thousand in additional monies to PARF.
    ${ }^{17}$ ls a closed plan with no payroll.

[^12]:    ${ }^{1}$ 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 6-30-14 valuation).
    ${ }^{2}$ The Actuarial and Remaining Amortization periods will both be "30 years, Open" when a plans reaches $100 \%$ funded status.

[^13]:    Fees paid to investment professionals can be found in the Investment Section.

[^14]:    ${ }^{1}$ 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 market value.
    ${ }^{2}$ Bank of New York Mellon Universe of Public Funds

[^15]:    ${ }^{3}$ A portfolio's return in excess of cash is also known as the risk premium. Cash return based on three-month LIBOR (source: the System's custodian, Bank of New York Mellon).
    ${ }^{4}$ Excess return presented by INPRS' general consultant, Verus, at the June 2015 INPRS Board meeting. INPRS' current target asset allocation was approximated historically using available indices. Cash return based on the one-month US Treasury bill return from 1937-2015 (source: Dimensional Fund Advisors' Matrix Book 2016 of Historical Returns Data).

[^16]:    ${ }^{5}$ Real estate and private equity performance is lagged one quarter due to the timing of valuations.
    ${ }^{6}$ Although it was the second best performer from February to June, risk parity was not mentioned because it is a diversified allocation of equities, fixed income, and commodities.

[^17]:    ${ }^{7}$ Going back to 1926, March 2009 through June 2016 is the second longest run without a decline of 20 percent or more for the S\&P 500 Index. Source: J.P.Morgan Guide to the Markets, July 31, 2016.
    ${ }^{8}$ Equities and bonds have been represented by the MSCI ACWI imi Index and the Barclays Global Aggregate Index, respectively. Source: the INPRS' custodian, Bank of New York Mellon.

[^18]:    ${ }^{1}$ Assets represent members of the LEDC Plan who have elected the Consolidated Defined Benefit Assets option. ${ }^{2}$ ASA assets are directed by PERF, TRF Pre-1996 and TRF 1996 members outside the Consolidated Defined Benefit Assets. ${ }^{3}$ Account balances directed outside the Legislators' Consolidated Defined Benefit Assets option. ${ }^{4}$ Assets are invested in a Money Market Fund with Bank of New York Mellon.
    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.

[^19]:    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.

[^20]:    ${ }^{1}$ 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 2016. ${ }^{2}$ 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 $70 \%$ weight to Global Inflation-Linked Bonds (including U.S.) and a $30 \%$ weight to U.S. Inflation-Linked Bonds.
    ${ }^{5} 50 \%$ Bloomberg Commodity Index / 50\% Goldman Sachs Commodity Index and a collateral component is a $75 / 25$ blend of Global Inflation Linked Bonds (ILBs) and 90-day Treasury
    Bills respectively.
    ${ }^{6}$ Weighted average of INPRS' exposure to representative HFRI sub-strategy indices.
    ${ }^{7} 60 \%$ MSCI ACWI IMI Index (Equities) / 40\% 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 Treasury Bill was the benchmark for cash.

[^21]:    Investment performance is based on calculations made by the system's custodian, Bank of New York Mellon, and are time weighted rates of return.
    ${ }^{2}$ Global Inflation 70/30 is a 70\% weight to Global Inflation-Linked Bonds (including U.S.) and a 30\% weight to U.S. InflationLinked Bonds.

[^22]:    Return net of fees.
    ${ }^{2}$ Based on performance calculations made by the system's record keeper, Xerox. The 1-year, 3-year, and 5-year performance returns are timeweighted rates of return for the fiscal year ended June 30, 2016. Prior to July 30, 2010, all data presented (excluding the Guaranteed Fund) is calculated from manager composite performance. After July 30, 2010, all performance presented consists of actual investment returns experienced by members.
    ${ }^{3} / n v e s t m e n t ~ F u n d ~ O p t i o n ~ i n ~ t h e ~ L e g i s l a t o r s ' ~ D e f i n e d ~ C o n t r i b u t i o n ~ P l a n ~ a n d ~ P u b l i c ~ E m p l o y e e s ' ~ R e t i r e m e n t ~ F u n d ~ A S A ~ O n l y ~ P l a n . ~$
    ${ }^{4}$ Target Date Fund benchmarks are comprised of performance data using a passive strategy with the same asset allocation of each Target Date Fund.

[^23]:    ${ }^{1}$ 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 Market Value of Assets (MVA).

[^24]:    ${ }^{1}$ Sum of individual employers by retirement plan does not equal total employers, since one (1) employer may participate in multiple retirement plans.
    ${ }^{2}$ Prior to June 30, 2014 participating employers for TRF were not split between the TRF Pre-1996 Account and the TRF 1996 Account.
    ${ }^{3}$ The Total was adjusted to treat the State and it's component units as one employer.
    ${ }^{4}$ Total is the sum of each of the plans, so employers are duplicated if they participate in more than one plan.

[^25]:    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 Market Value of Assets (MVA).
    ${ }^{2}$ Covered Payroll can also be found in the RSI Contribution Schedule in the Financial Section.
    ${ }^{3}$ The State of Indiana contributed additional monies of \$206,796 thousand.

[^26]:    ${ }^{1}$ 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 Market Value of Assets (MVA).
    ${ }^{2}$ Covered Payroll can also be found in the RSI Contribution Schedule in the Financial Section.

[^27]:    ${ }^{1}$ Age-based rates apply only if 10 or more years of service.

[^28]:    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 Market Value of Assets (MVA).
    ${ }^{2}$ Covered Payroll can also be found in the RSI Contribution Schedule in the Financial Section.
    ${ }^{3}$ Covered payroll represents only a half year of activity.
    ${ }^{4}$ Actuarial Valuations from 2007-2008 were based off of a December year end.

[^29]:    ${ }^{1}$ As of December 31 instead of June 30.

[^30]:    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 Market Value of Assets (MVA).
    ${ }^{2}$ Covered Payroll can also be found in the RSI Contribution Schedule in the Financial Section.
    ${ }^{3}$ The State of Indiana contributed additional monies of \$90,187 thousand.

[^31]:    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 Market Value of Assets (MVA).
    ${ }^{2}$ Covered Payroll can also be found in the RSI Contribution Schedule in the Financial Section.
    ${ }^{3}$ The State of Indiana contributed additional monies of \$14,619 thousand.

[^32]:    ${ }^{1}$ In accordance with Legislation passed during March 2012, the State appropriated $\$ 14,619$ thousand during FY2013 to reach a funded status of 80.0 percent based on the actuarial valuation as of June 30, 2012.

[^33]:    ${ }^{1}$ 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.

[^34]:    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 Market Value of Assets (MVA).
    ${ }^{2}$ Covered Payroll can also be found in the RSI Contribution Schedule in the Financial Section.
    ${ }^{3}$ The State of Indiana contributed additional monies of $\$ 17,363$ thousand.

[^35]:    ${ }^{1}$ 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.

[^36]:    ${ }^{1}$ INPRS intends to make this schedule a 10-year schedule over time. Inactive Non-Vested Members With Balance data was not available for select retirement plans prior to fiscal year 2010.
    ${ }^{2}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year.

[^37]:    ${ }^{1}$ INPRS intends to make this schedule a 10-year schedule over time. Inactive Non-Vested Members With Balance data was not available for select retirement plans prior to
    fiscal year 2010.
    ${ }^{2}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year.

[^38]:    ${ }^{1}$ 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 (8) 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 (8) 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. Note: The actuarial valuation as of June 30, 2016, assumes $60 \%$ of PERF members annuitize their ASA balances prior to 4/1/2017.

[^39]:    ${ }^{1}$ 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 from INPRS.
    ${ }^{3}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year.
    ${ }^{4}$ Represents an 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 an 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. Note: The actuarial valuation as of June 30, 2016, assumes $50 \%$ of TRF members annuitize their ASA balances prior to 4/1/2017.

[^40]:    TJune 30, 2013 was the first year to split the Teachers’Retirement Fund (TRF) into two, TRF Pre-1996 and TRF 1996 Accounts. June 30, 2007 "Top 10" Employers information is only available for Total TRF.

[^41]:    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 from INPRS.
    ${ }^{3}$ Calculated using the prior year census data, adjusted for certain activity during the fiscal year.
    ${ }^{4}$ Represents an 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 an 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. Note: The actuarial valuation as of June 30, 2016, assumes $50 \%$ of TRF members annuitize their ASA balances prior to 4/1/2017.

[^42]:    ${ }^{1}$ 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, 2007 "Top 10" Employers information is only available for Total TRF.

[^43]:    ${ }^{1}$ 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 LEDB benefit recipients are based on years of service, not final average salary.

