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Indiana Public Retirement System

Teachers' Retirement Fund
1996 Account

Actuarial Valuation as of
June 30, 2022

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The experience and dedication you deserve

November 3, 2022

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

Dear Members of the Board:

At your request, we performed an actuarial valuation of the Teachers' Retirement Fund 1996 Account (TRF '96) as of June 30, 2022, for the purpose of estimating the actuarial required contribution for the plan year ending June 30, 2024. Actuarial valuations are performed annually. The major findings of the valuation are contained in this report, which reflects the benefit and funding provisions in place on June 30, 2022. There were no changes to the ongoing benefit provisions, actuarial assumptions or actuarial methods from last year, though the Board approved a new funding policy in June 2022.

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

We certify that all costs and liabilities for TRF '96 have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the plan and reasonable expectations); and which, in combination, offer the best estimate of anticipated experience affecting the plan. Nevertheless, the emerging costs will vary from those presented in this report to the extent actual experience differs from that projected by the actuarial assumptions.

We believe the actuarial assumptions used herein are reasonable. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in Appendix C. Specifically, we presented the proposed assumptions for the 2022 valuations to the Board on February 18, 2022, and the Board subsequently adopted their use at its April 29, 2022 meeting. These assumptions are applicable to both the funding and Governmental Accounting Standards Board (GASB) Statement Number 67 valuation calculations, unless otherwise noted.

3802 Raynor Pkwy, Suite 202, Bellevue, NE 68123
Phone (402) 905-4461 • Fax (402) 905-4464
www.CavMacConsulting.com
Offices in Kennesaw, GA • Bellevue, NE

In order to prepare the results in this report, we have utilized actuarial models that were developed to measure liabilities and develop actuarial costs. These models include tools that we have produced and tested, along with commercially available valuation software that we have reviewed to confirm the appropriateness and accuracy of the output. In utilizing these models, we develop and use input parameters and assumptions about future contingent events along with recognized actuarial approaches to develop the needed 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. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements.

We prepared a Risk Report for the INPRS Board in August 2019 that contains information which is relevant to TRF '96 and should be considered part of this valuation report. Although the report was prepared using the data, methods, and assumptions of the June 30, 2018 valuation report, it is our professional opinion that the general results of the risk report are applicable to the June 30, 2022 valuation report as well.

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

The Annual Comprehensive Financial Report (ACFR) for INPRS contains several exhibits that disclose the actuarial position of the System. This annual report, prepared as of June 30, 2022, provides data and tables that we prepared for use in the following sections of the ACFR:

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

Actuarial Section:
- Summary of INPRS Funded Status (Included in the Board Summary)
- Historical Summary of Actuarial Valuation Results by Retirement Plan
- Summary of Actuarial Assumptions, Methods and Plan Provisions
- Analysis of Financial Experience (Included in the 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

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

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

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

We respectfully submit the following report and look forward to discussing it with you.

Sincerely,

Brent A. Banister

Brent. A. Banister, PhD, FSA, EA, FCA, MAAA
Chief Actuary

Edward J. Koebel

Edward Koebel, FCA, EA, MAAA
Chief Executive Officer

Virginia Fritz

Virginia Fritz, FSA, EA, FCA, MAAA
Senior Actuary

Sections	Page

This report presents the results of the June 30, 2022 actuarial valuation of the Teachers' Retirement Fund 1996 Account (TRF '96). The primary purposes of performing this actuarial valuation are to:

- Determine the level of contributions for the plan year ending June 30, 2024, along with the actuarial surcharge rate for the 2023 calendar year, that will be sufficient to meet the funding policy set out by the Board to comply with Indiana statutes.
- Disclose asset and liability measurements as well as the plan's funded status on the valuation date.
- Compare actual and expected experience of the Fund during the plan year ending June 30, 2022.
- Analyze and report on trends in plan contributions, assets and liabilities over the past several years.

VALUATION RESULTS

In June 2022, the funding policy was modified to change certain parameters related to setting the employer contribution rates. Once the plan reaches 95% funded, the employer contribution rate will be decreased by 25% of the difference between the existing rate and the base benefit actuarially determined contribution (ADC) until the plan reaches a 110% funded status. When the plan reaches a 110% funded status, the employer contribution rate will be decreased to equal the base benefit ADC. Note that there is no longer a requirement to contribute at least the normal cost rate, thus reducing the chances of extremely high funded statuses. Since the plan has a supplemental allowance reserve account, the employer contribution rates are increased by any funding needed for that account. The updated funding policy is effective for the June 30, 2022 valuation, but since the Fund has a funded ratio just under the trigger of 95%, the new policy will not have an impact on the employer contribution rates set forth with this valuation. There were no other changes to the ongoing benefit provisions, actuarial assumptions and methods.

The actuarial valuation results provide a "snapshot" view of the plan's financial condition on June 30, 2022. The plan's UAAL increased from $355 million last year to $439 million this year, and the funded ratio decreased from 95.3% last year to 94.6% this year. The primary factor behind the decrease in the funded ratio was an actuarial loss due to overall pay increases higher than what was expected. Note that this was partially offset by an asset experience gain as portions of prior deferred asset gains were recognized.

A summary of the key results from the June 30, 2022 actuarial valuation compared to the June 30, 2021 valuation is shown in the following table.

Valuation Results	June 30, 2021	June 30, 2022
Unfunded Actuarial Accrued Liability	$ 354,745,327	$ 438,639,913
Funded Ratio (Actuarial Assets)	95.28%	94.62%
Normal Cost	5.73%	5.72%
UAAL Amortization	(0.03%)	0.07%
Actuarially Determined Contribution Rate	5.70%	5.79%
Actuarially Determined Surcharge Rate	0.21%	0.22%

Further detail on the valuation results can be found in the following sections of this Board Summary, including discussion regarding the change in the plan's assets, liabilities, and actuarial determined contribution rate between June 30, 2021 and June 30, 2022.

ASSETS

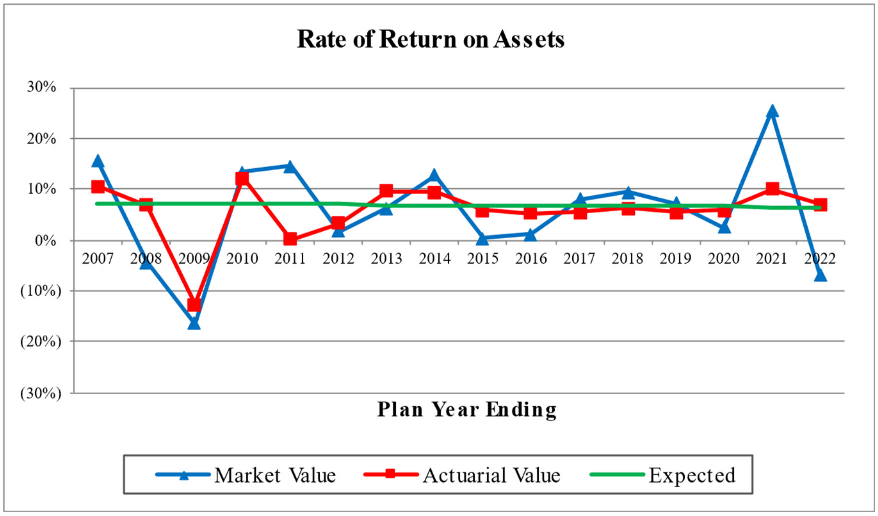
As of June 30, 2022, the plan had net assets of $7.497 billion when measured on a market value basis. This was a decrease of $491 million from the prior year.

The market value of assets is not used directly in the calculation of the unfunded actuarial accrued liability and the actuarial required contribution rate. An asset valuation method, which smoothes the effect of market fluctuations, is applied to determine the value of assets used in the valuation. The resulting amount is called the actuarial value of assets. In this year's valuation, the actuarial value of assets is $7.716 billion, an increase of $553 million from the prior year.

The components of change in the asset values are shown in the following table:

		Market Value		Actuarial Value
Net Assets, June 30, 2021	$	7,987,495,378	$	7,162,958,020
- Receipts	+	215,138,081	+	215,138,081
- Expenditures, Net of Administrative Expenses	-	168,620,964	-	168,620,964
- Net Investment Income	+	(537,472,869)	+	506,876,400
Net Assets, June 30, 2022	$	7,496,539,626	$	7,716,351,537
Estimated Rate of Return, Net of Expenses		(6.7%)		7.1%

The estimated rate of return on the actuarial value of assets was 7.1%, which was higher than the 6.25% investment return assumption applicable for the year ended June 30, 2022. As a result, there was an experience gain on assets of $58 million. The FY 2022 return on the market value of assets of -6.7% resulted in a change in the deferred investment experience from a net deferred investment gain of $825 million in last year's valuation to a net deferred investment loss of $220 million in the current valuation. See Tables 1 through 4 of this report for detailed information on the market and actuarial value of assets.



The rate of return of the actuarial value of assets has been less volatile than the market value return, illustrating the benefits of using an asset smoothing method. The smoothed actuarial value of plan assets has led to relatively steady actuarial valuation results over the last two years, even with a large gain followed by an offsetting loss.

LIABILITIES

The actuarial accrued liability is that portion of the present value of future benefits that is allocated to past service. The remaining portion will be paid by future normal costs. The difference between this liability and the actuarial value of assets as of the valuation date is called the unfunded actuarial accrued liability (UAAL). The dollar amount of unfunded actuarial accrued liability is reduced if the contributions to the plan exceed the normal cost for the year plus interest on the prior year's UAAL.

The unfunded actuarial accrued liability, including expected future COLAs, on both a market value and actuarial value of assets basis is shown as of June 30, 2022 in the following table:

	Market Value	Actuarial Value
Actuarial Accrued Liability	$ 8,154,991,450	$ 8,154,991,450
Value of Assets	7,496,539,626	7,716,351,537
Unfunded Actuarial Accrued Liability	$ 658,451,824	$ 438,639,913
Funded Ratio	91.93%	94.62%

See Table 5 of this report for the development of the unfunded actuarial accrued liability.

The total plan UAAL (on an actuarial basis) as of June 30, 2022 was $439 million, an $84 million increase from the $355 million UAAL last year. This change was primarily driven by an actuarial loss on liability experience of $92 million, largely due to salaries increasing by more than expected, along with smaller losses from new entrant/rehire experience. The change in UAAL also includes an actuarial gain of $58 million on the actuarial value of assets. The components of the change in the base UAAL are quantified in Table 7 of this report. See Table 8 and Table 9 of this report for a breakdown of the components of experience gains/losses for greater detail on the base plan benefits.

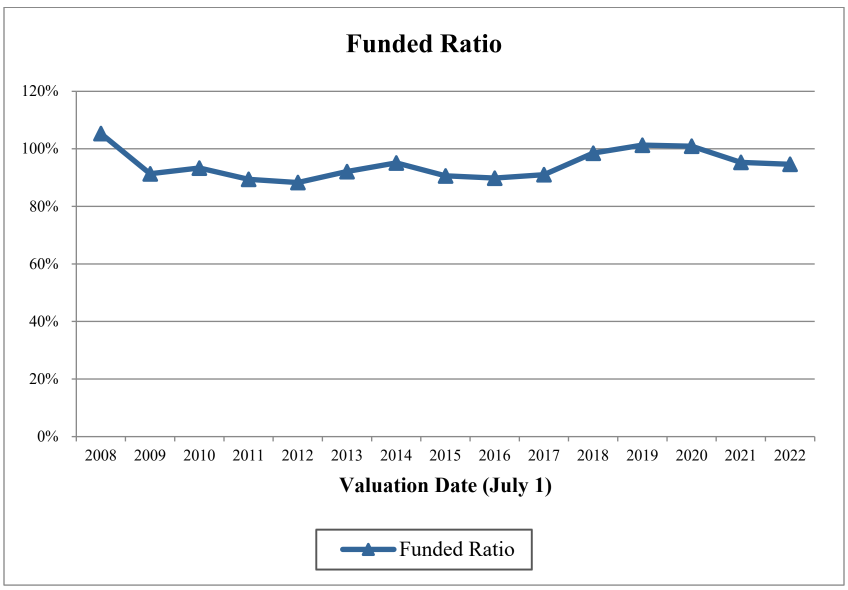
An evaluation of the UAAL on a pure dollar basis may not provide a complete analysis since only the difference between the assets and liabilities (which are both large numbers) is reflected. Another way to evaluate the UAAL and the progress made in its funding is to track the funded ratio, the ratio of the actuarial value of assets to the actuarial accrued liability. The funded status information, which is based on the actuarial value of assets, is shown below (in millions).

	6/30/2018	6/30/2019	6/30/2020	6/30/2021	6/30/2022
Funded Ratio	98.5%	101.3%	100.9%	95.3%	94.6%
UAAL (in millions)	$85	($76)	($57)	$355	$439

Note: Results before 2018 restated to exclude the DC assets in the funded ratio calculation.

Note that the funded ratio does not indicate whether or not the plan assets are sufficient to settle benefits earned to date. The funded ratio, by itself, also may not be indicative of future funding requirements. In addition, if the funded ratios were shown using the market value of assets, the results would differ.

The funded ratio over a long period of time is shown in the following graph. The Plan's funded status had been holding steady for a number of years.



Note: Funded ratios exclude DC account balances.

ACTUARIALLY DETERMINED CONTRIBUTION RATE

The Plan's actuarially determined contribution rate consists of two components:

- A "normal cost" for the portion of projected liabilities allocated by the actuarial cost method to service of members during the year following the valuation date.

- An "unfunded actuarial accrued liability contribution" for the excess of the portion of projected liabilities allocated to service to date over the actuarial value of assets.

The UAAL contribution rate is determined by calculating the amortization payment on the UAAL as a level dollar amount over 20 years for each new amortization base. Because the COLA portion of the benefits are funded through the surcharge, this portion of the benefit only considers the base benefit without any COLA. If the Fund's funded ratio exceeds 100% on a combined basis (base benefits plus future assumed COLAs), all prior amortization bases are eliminated and the negative UAAL (or "surplus") is amortized over an open 30-year period, as an offset to other Fund costs.

In addition to the components above that are designed to fund the guaranteed base benefit, the Board is responsible for determining the surcharge to fund future COLAs and/or 13th checks. Because there are five plans that must, by law, provide the same COLA or 13th check each year, the funding strategy needs to consider the funding needs of the entire System as well as the specific fund. The Legislature, via HEA No. 1001, authorized a 1.00% COLA effective January 1, 2022 to be paid from the Supplemental Reserve Account. No supplemental benefits are currently scheduled to be granted for fiscal year 2023.

The long-term assumption is that COLAs of 0.4% will be granted starting in 2024, 0.5% starting in 2034, and then 0.6% in 2039 and beyond. Considering the biennial budgeting cycle in Indiana, the near-term goal is to accumulate funds by June 30, 2023 to fund the two COLAs in the following biennium (January 2024 and January 2025). The surcharge rate for calendar year 2022 is 0.21%, and the actuarially determined surcharge rate effective January 1, 2023 is 0.22%. See Table 12 for further details. Note that this surcharge rate, while it will apply to calendar year 2023, is designed to bring the Supplemental Reserve Account to a target level as of June 30, 2023 and may not be reflective of what is needed for long-term funding of the target COLA.

The total employer rate is the sum of the contributions to fund the base benefits plus the surcharge. The rate set for the base benefits is equal to the greater of the current employer contribution rate or the ADC. Once the plan reaches 95% funded, the rate starts to decline, where the employer contribution rate will be decreased by 25% of the difference between the existing rate and the base benefit ADC until the plan reaches 110% funded status. When the plan reaches 110% funded status, the employer contribution rate will be decreased to equal the base benefit ADC. The employer contribution rate would then be increased for the surcharge rate. The Board could decide, however, to set the rate higher in order to provide a sufficient surcharge for the COLA funding while preserving the base funding.

See Table 13 of this report for the detailed development of the contribution rates which are summarized in the following table:

	June 30, 2021	June 30, 2022
Normal Cost	5.73%	5.72%
UAAL Amortization	(0.03%)	0.07%
Actuarially Determined Contribution Rate	5.70%	5.79%
Actuarially Determined Surcharge Rate	0.21%	0.22%
Approved Employer Funding Rate	6.00%	6.00%

To maintain the funded level of the plan, the plan's funding policy increases the employer funding rate as necessary to ensure they are contributing a minimum of the combined actuarially determined contribution rates for the base and supplemental plans. The actuarial required contribution, determined this year based on the snapshot of the plan taken on the valuation date of June 30, 2022, will change each year as the deferred investment experience is recognized and other experience (both investment and demographic) impacts the plan.

The June 30, 2022 actuarially determined contribution rate increased to 5.79% for the base benefits and 0.22% for the supplemental benefits. While this results in the employer funding rate changing from 6.00% to a recommended rate of 6.01% starting July 1, 2023, the Board has approved to keep the employer funding rate level at 6.00%, where 0.21% is contributed to the supplemental benefits. While the surcharge rate will begin January 1, 2023, the rate for the base benefits is applicable for the fiscal year beginning July 1, 2023.

SUMMARY OF PRINCIPAL RESULTS

	June 30, 2020	June 30, 2021	June 30, 2022
MEMBERSHIP			
Active Members	58,450	59,866	59,567
Retired Members and Beneficiaries	7,596	8,287	9,035
Inactive Vested Members	6,609	6,827	7,496
Total Members	72,655	74,980	76,098
Projected Annual Salaries of Active Members	$ 3,552,092,707	$ 3,781,121,764	$ 3,956,756,111
Annual Retirement Payments for Retired Members, Disabled Members and Beneficiaries	$ 132,003,879	$ 143,690,023	$ 157,029,561
ASSETS AND LIABILITIES			
Net Assets			
Market Value of Assets (MVA)	$ 6,325,311,322	$ 7,987,495,378	$ 7,496,539,626
Actuarial Value of Assets (AVA)	6,460,070,312	7,162,958,020	7,716,351,537
Actuarial Accrued Liability (AAL)	6,403,252,089	7,517,703,347	8,154,991,450
Unfunded Actuarial Accrued Liability (UAAL): AAL - AVA	$ (56,818,223)	$ 354,745,327	$ 438,639,913
Funded Ratios			
AVA / AAL	100.89%	95.28%	94.62%
MVA / AAL	98.78%	106.25%	91.93%
CONTRIBUTIONS			
Normal Cost	5.06%	5.73%	5.72%
Amortization of UAAL	(0.74%)	(0.03%)	0.07%
Actuarially Determined Contribution Rate	4.32%	5.70%	5.79%
Actuarially Determined Surcharge Rate (applicable next calendar year)	0.13%	0.21%	0.22%

Note: Liability and funded ratio results include both the base benefits and the supplemental benefits.

This report presents the actuarial valuation results of the Teachers' Retirement Fund 1996 Account as of June 30, 2022. This valuation was prepared at the request of the Indiana Public Retirement System.

Please pay particular attention to our actuarial certification letter, where the guidelines employed in the preparation of this report are outlined. We also comment on the sources and reliability of both the data and the actuarial assumptions upon which our findings are based. Those comments are the basis for our certification that this report is complete and accurate to the best of our knowledge and belief.

A summary of the findings which result from this valuation is presented in the previous section. Section 3 describes the assets and investment experience of the plan. Sections 4 and 5 describe how the obligations of the plan are to be met under the actuarial cost method in use. Section 6 provides information required by the Governmental Accounting Standards Board (GASB) for reporting and disclosure under GASB 67 and GASB 68.

This report includes several appendices:

- Appendix A — Schedules of valuation data classified by various categories of members.
- Appendix B — A summary of the current benefit structure, as determined by the provisions of governing law on June 30, 2022.
- Appendix C — A summary of the actuarial methods and assumptions used to estimate liabilities and determine contribution rates.
- Appendix D — A glossary of actuarial terms.

In many respects, an actuarial valuation can be thought of as an inventory process. The inventory is taken as of the actuarial valuation date, which for this valuation is June 30, 2022. On that date, the assets available for the payment of benefits are appraised. The assets are compared with the liabilities of the plan, which are generally in excess of assets. The actuarial process then leads to a method of determining the contributions needed by members and the employer in the future to balance the plan assets and liabilities.

Market Value of Assets

The current market value represents the "snapshot" or "cash-out" value of plan assets as of the valuation date. In addition, the market value of assets provides a basis for measuring investment performance from time to time.

Table 1 summarizes the changes in the market value of assets for the last two years for the base benefits, whereas Table 2 shows the changes for the supplemental benefit reserve account. Table 15 (in the GASB section) provides detail regarding the allocation of investments in the trust.

Actuarial Value of Assets

The market value of assets, representing a "cash-out" value of plan assets, may not be the best measure of the plan's ongoing ability to meet its obligations. To arrive at a suitable value of assets for the actuarial valuation, a technique for determining the actuarial value of assets is used which dampens swings in the market value while still indirectly recognizing market values. Under the asset smoothing methodology, the difference between the actual and assumed investment return on the market value of assets is recognized evenly over a five-year period.

Table 3 shows the development of the actuarial value of assets (AVA) as of the valuation date for the base benefits and Table 4 shows the information for the supplemental benefits.

TABLE 1

DEVELOPMENT OF MARKET VALUE OF ASSETS
(Base Benefits)

	June 30, 2021	June 30, 2022
1. Market Value of Assets, Beginning of Year	$ 6,317,954,066	$ 7,967,403,163
2. Receipts		
a. Member (Includes Purchased Service) [1]	$ 464,713	$ 432,657
b. Employer (Includes Purchased Service) [2]	192,469,537	203,955,340
c. Member Reassignment Transfers	3,091,716	4,037,179
d. Miscellaneous Income	(300)	2,963
e. Total	$ 196,025,666	$ 208,428,139
3. Expenditures		
a. Benefit Payments	$ 155,348,220	$ 167,722,041
b. Refund of Contributions	0	0
c. Administrative Expense	4,966,317	5,291,695
d. Miscellaneous Expenditures	0	0
e. Total	$ 160,314,537	$ 173,013,736
4. Investment Return		
a. Investment Income	$ 1,613,400,265	$ (530,704,600)
b. Securities Lending Income	337,703	261,659
c. Total	$ 1,613,737,968	$ (530,442,941)
5. Market Value of Assets, End of Year: (1) + (2e) - (3e) + (4c)	$ 7,967,403,163	$ 7,472,374,625
6. Rate of Return on Market Value of Assets, Net of Expenses[3]	25.38%	(6.71%)

[1] Includes $464,713 of member service purchases during fiscal year 2021 and $432,657 of member service purchases during fiscal year 2022.
[2] Includes $135,987 of employer service purchases during fiscal year 2021 and $63,837 of employer service purchases during fiscal year 2022.
[3] Based on individual fund experience. Assumes cash flows occur at mid-year.

TABLE 2

DEVELOPMENT OF MARKET VALUE OF ASSETS
(Supplemental Benefits)

	June 30, 2021	June 30, 2022
1. Market Value of Assets, Beginning of Year	$ 7,357,256	$ 20,092,215
2. Receipts		
a. Employer Surcharge	$ 10,019,208	$ 6,709,942
b. Lottery Allocation	0	0
c. Non-Employer Entity Contributions	0	0
d. Miscellaneous	0	0
e. Total	$ 10,019,208	$ 6,709,942
3. Expenditures		
a. Benefit Payments	$ 0	$ 898,923
b. Administrative Expense	0	0
c. Miscellaneous Expenditures	0	0
d. Total	$ 0	$ 898,923
4. Investment Return		
a. Investment Income	$ 2,715,217	$ (1,738,995)
b. Securities Lending Income	534	762
c. Total Investment Return	$ 2,715,751	$ (1,738,233)
5. Market Value of Assets, End of Year: (1) + (2e) - (3d) + (4c)	$ 20,092,215	$ 24,165,001
6. Rate of Return on Market Value of Assets, Net of Expenses [1]	21.96%	(7.56%)

[1] Based on individual fund experience. Assumes cash flows occur at mid-year.

TABLE 3

DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS
(Base Benefits)

		For Plan Year Ending June 30, 2022
1. Market Value, as of June 30, 2021	$	7,967,403,163
2. Receipts [1]	$	208,428,139
3. Expenditures, Net of Administrative Expenses [2]	$	(167,722,041)
4. Expected Return on Assets [3]	$	499,234,763
5. Expected Market Value as of June 30, 2022: (1) + (2) + (3) + (4)	$	8,507,344,024
6. Actual Market Value as of June 30, 2022	$	7,472,374,625
7. Year end 2022 asset gain/(loss): (6) - (5)	$	(1,034,969,399)

8. Deferred Investment Gains and Losses

	Year Ended June 30:		Gain/(Loss)	Factor		Deferred Amount
a.	2019	$	29,085,696	20%	$	5,817,139
b.	2020		(261,795,231)	40%		(104,718,092)
c.	2021		1,180,936,888	60%		708,562,133
d.	2022		(1,034,969,399)	80%		(827,975,519)
e.	Total				$	(218,314,339)

9. Initial Actuarial Value as of June 30, 2022: (6) - (8e)	$	7,690,688,964
10. Constraining Values		
a. 80% of Market Value: (6) x 0.8	$	5,977,899,700
b. 120% of Market Value: (6) x 1.2	$	8,966,849,550
11. Actuarial Value as of June 30, 2022	$	7,690,688,964
12. Actuarial Rate of Return, Net of Expenses [4]		7.06%
13. Actuarial Value of Assets as a Percent of Market Value: (11) / (6)		102.9%
14. Actuarial Value of Assets		
a. Base Benefits	$	7,690,688,964
b. Supplemental Benefits	$	25,662,573
c. Total	$	7,716,351,537

[1] Includes Employer Contributions, Service Purchases, Member Reassignment Transfers, and Miscellaneous Receipts.
[2] Includes DB Benefit Payments.
[3] Assumes cash flows occur at mid-year and a return assumption of 6.25%.
[4] Assumes cash flows occur at mid-year.

TABLE 4

DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS
(Supplemental Benefits)

		For Plan Year Ending June 30, 2022
1. Market Value, as of June 30, 2021	$	20,092,215
2. Receipts	$	6,709,942
3. Expenditures, Net of Administrative Expenses	$	(898,923)
4. Expected Return on Assets [1]	$	1,437,358
5. Expected Market Value as of June 30, 2022: (1) + (2) + (3) + (4)	$	27,340,592
6. Actual Market Value as of June 30, 2022	$	24,165,001
7. Year end 2022 asset gain/(loss): (6) - (5)	$	(3,175,591)

8. Deferred Investment Gains and Losses

	Year Ended June 30:		Gain/(Loss)	Factor		Deferred Amount
a.	2019	$	24,602	20%	$	4,920
b.	2020		(226,529)	40%		(90,612)
c.	2021		1,880,988	60%		1,128,593
d.	2022		(3,175,591)	80%		(2,540,473)
e.	Total				$	(1,497,572)

9. Initial Actuarial Value as of June 30, 2022: (6) - (8e)	$	25,662,573
10. Constraining Values		
a. 80% of Market Value: (6) x 0.8	$	19,332,001
b. 120% of Market Value: (6) x 1.2	$	28,998,001
11. Actuarial Value as of June 30, 2022	$	25,662,573
12. Actuarial Rate of Return, Net of Expenses [2]		5.26%
13. Actuarial Value of Assets as a Percent of Market Value: (11) / (6)		106.2%

[1] Assumes cash flows occur at mid-year and a discount rate of 6.25%.
[2] Assumes cash flows occur at mid-year.

In the previous section, an actuarial valuation was compared with an inventory process, and an analysis was given of the inventory of assets of the Teachers' Retirement Fund 1996 Account as of the valuation date, June 30, 2022. In this section, the discussion will focus on the commitments (future benefit payments) of the plan, which are referred to as its liabilities.

The liability calculations for the June 30, 2022 Teachers' Retirement Fund 1996 Account valuation are based on census data collected as of June 30, 2021. Standard actuarial techniques are used to adjust these results from June 30, 2021 to June 30, 2022. While these roll-forward techniques are based on all actuarial assumptions being met during the intervening year, there will, of course, be many of the assumptions that will not be met exactly. In general, this does not materially affect the resulting calculations or conclusions in this report. Should there be a year in which events, such as a plan change, occur that would affect the results, adjustments in the roll-forward methods would be made to appropriately reflect the events.

All liabilities reflect the benefit provisions and actuarial assumptions in place as of June 30, 2022.

Actuarial Accrued Liability

A fundamental principle in financing the liabilities of a retirement program is that the cost of its benefits should be related to the period in which benefits are earned, rather than to the period of benefit distribution. An actuarial cost method is a mathematical technique that allocates the present value of future benefits into annual costs. In order to do this allocation, it is necessary for the funding method to "breakdown" the present value of future benefits into two components:

(1) that which is attributable to the past and

(2) that which is attributable to the future.

Actuarial terminology calls the part attributable to the past the "past service liability" or the "actuarial accrued liability." The portion allocated to the future is known as the present value of future normal costs, with the specific piece of it allocated to the current year being called the "normal cost."

Table 5 contains the calculation of actuarial accrued liability for the Plan under the Entry Age Normal actuarial cost. This amount is split between the base benefit and the supplemental COLA benefit. Granted supplemental benefits are the present value of legislated benefits, whereas future supplemental benefits represent those assumed to occur based on the Plan's COLA assumption.

TABLE 5

ACTUARIAL ACCRUED LIABILITY
(Base and Supplemental Benefits)

As of June 30, 2022	Base Benefits	Supplemental Benefits *Granted*	Supplemental Benefits *Future*	Total
1. Actuarial Accrued Liability				
a. Active & Inactive Members	$ 6,001,138,506	$ 2,619,160	$ 355,892,624	$ 6,359,650,290
b. In-pay Members	1,720,687,929	15,944,751	58,708,480	1,795,341,160
c. Total	$ 7,721,826,435	$ 18,563,911	$ 414,601,104	$ 8,154,991,450
2. Actuarial Value of Assets	$ 7,690,688,964	$ 18,563,911	$ 7,098,662	$ 7,716,351,537
3. Unfunded Actuarial Accrued Liability: (1c) - (2)	$ 31,137,471	$ 0	$ 407,502,442	$ 438,639,913
4. Funded Ratio: (2) / (1c)	99.6%	100.0%	1.7%	94.6%

TABLE 6

SOLVENCY TEST
(Base and Supplemental Benefits)

	Actuarial Accrued Liabilities (AAL)					Portion of AAL Covered by Assets			
Actuarial Valuation as of June 30	Active Member Contributions	Retirees and Beneficiaries	Active Member (Employer Financed Portion)	Total Actuarial Accrued Liabilities	Actuarial Value of Assets	Active Member Contributions	Retirees and Beneficiaries	Active Member (Employer Financed Portion)	Total Actuarial Accrued Liabilities
2022	$0	$1,795,341	$6,359,650	$8,154,991	$7,716,352	N/A	100.0%	93.1%	94.6%
2021	0	1,648,130	5,869,573	7,517,703	7,162,958	N/A	100.0	94.0	95.3
2020	0	1,454,955	4,948,297	6,403,252	6,460,070	N/A	100.0	101.1	100.9
2019	0	1,371,702	4,608,724	5,980,426	6,056,317	N/A	100.0	101.4	101.3
2018	0	1,232,059	4,331,205	5,563,264	5,478,482	N/A	100.0	98.0	98.5
2017	1,378,143	1,213,780	4,322,314	6,914,237	6,414,134	100.0	100.0	88.4	92.8
2016	1,204,885	1,091,802	4,095,063	6,391,750	5,865,729	100.0	100.0	87.2	91.8
2015	1,159,597	908,353	3,837,741	5,905,691	5,461,172	100.0	100.0	88.4	92.5
2014	1,102,686	777,287	3,357,020	5,236,993	5,035,232	100.0	100.0	94.0	96.1
2013	975,309	798,486	2,975,573	4,749,368	4,453,828	100.0	100.0	90.1	93.8

Note: Dollar amounts are in thousands of dollars. Amounts before 2018 reflect the inclusion of DC balances in both the active member contributions and the assets.

TABLE 7

RECONCILIATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY
(Base and Supplemental Benefits)

For Year Ending June 30, 2022

	Base	Base and Supplemental
1. Unfunded Actuarial Accrued Liability as of June 30, 2021	$ (15,350,208)	$ 354,745,327
2. Normal Cost	216,658,277	230,270,315
3. Actuarially Determined Contribution	(215,373,016)	(223,313,372)
4. Interest	(879,059)	22,606,392
5. Expected Unfunded Actuarial Accrued Liability as of June 30, 2022	$ (14,944,006)	$ 384,308,662
6. Actuarial Value of Asset Changes		
a. Investment Experience (Gain)/Loss	$ (57,950,999)	$ (57,737,864)
b. Contributions (Above)/Below the Actuarially Determined Contribution and Other (Gain)/Loss	$ 18,872,365	$ 20,389,365
7. Actuarial Accrued Liability Changes		
a. Actuarial Accrued Liability Experience (Gain)/Loss	$ 85,160,111	$ 91,679,750
b. Additional Liability Due to Benefit Changes	0	0
c. Additional Liability Due to Assumption Changes	0	0
8. Total Experience (Gain)/Loss	$ 46,081,477	$ 54,331,251
9. Unfunded Actuarial Accrued Liability as of June 30, 2022: (5) + (8)	$ 31,137,471	$ 438,639,913

TABLE 8

ACTUARIAL GAIN/(LOSS)
(Base and Supplemental Benefits)

Liabilities		Base		Base and Supplemental
1. Actuarial Accrued Liability as of June 30, 2021	$	7,128,894,311	$	7,517,703,347
2. Normal Cost for Plan Year Ending June 30, 2022		216,658,277		230,270,315
3. Benefit Payments During Plan Year [1]		(167,426,571)		(168,325,494)
4. Service Purchases (employee and employer)		496,494		496,494
5. Member Reassignment Transfers		4,037,179		4,037,179
6. Interest at 6.25%		454,006,634		479,129,859
7. Change Due to Benefit Changes		0		0
8. Change Due to Assumption Changes		0		0
9. Expected Actuarial Accrued Liability as of June 30, 2022	$	7,636,666,324	$	8,063,311,700
10. Actuarial Accrued Liability as of June 30, 2022	$	7,721,826,435	$	8,154,991,450
Assets				
11. Actuarial Value of Assets as of June 30, 2021	$	7,144,244,519	$	7,162,958,020
12. Receipts During Plan Year		208,428,139		215,138,081
13. Expenditures, Excluding Expenses, During Plan Year		(167,722,041)		(168,620,964)
14. Interest at 6.25%		447,787,348		449,138,536
15. Expected Actuarial Value of Assets as of June 30, 2022	$	7,632,737,965	$	7,658,613,673
16. Actuarial Value of Assets as of June 30, 2022	$	7,690,688,964	$	7,716,351,537
Experience Gain / (Loss)				
17. Liability Actuarial Experience Gain/(Loss): (9) - (10)	$	(85,160,111)	$	(91,679,750)
18. Asset Actuarial Experience Gain/(Loss): (16) - (15)		57,950,999		57,737,864
19. Total Actuarial Experience Gain/(Loss): (17) + (18)	$	(27,209,112)	$	(33,941,886)

[1] Does not include miscellaneous expenses or benefit overpayments.

TABLE 9

EXPERIENCE GAIN/(LOSS) ANALYSIS BY SOURCE
(Base Benefits)

Liability Sources (in thousands)		**Gain/(Loss)**
Retirement	$	(8,036)
Termination		7,086
Disability		(466)
Mortality		1,448
Salary		(60,155)
New Entrants/Rehires		(44,534)
Miscellaneous/COLA		19,497
Total Liability Experience Gain/(Loss)	$	(85,160)
as a % of AAL		(1.1%)
Asset Experience Gain/(Loss)	$	57,951
Net Actuarial Experience Gain/(Loss)	$	(27,209)

TABLE 10

PROJECTED BENEFIT PAYMENTS
(Base and Supplemental Benefits)

Plan Year Ending June 30	Benefit Amount
2023	$ 194,870,905
2024	211,664,923
2025	230,432,505
2026	251,261,332
2027	274,459,111
2028	300,694,695
2029	331,093,812
2030	364,615,367
2031	401,589,179
2032	442,109,670
2033	486,191,092
2034	533,684,413
2035	583,590,864
2036	635,981,683
2037	689,994,739
2038	745,431,398
2039	801,554,922
2040	858,092,810
2041	913,585,445
2042	968,231,596
2043	1,021,512,572
2044	1,072,672,692
2045	1,121,576,379
2046	1,167,960,706
2047	1,211,186,455
2048	1,251,140,903
2049	1,287,909,763
2050	1,320,971,173
2051	1,350,874,336
2052	1,376,255,378

Note: Payouts reflect nominal payouts for current members, assuming that all future assumptions are met.

The previous two sections were devoted to a discussion of the assets and liabilities of the plan. We now turn to considering how the benefits will be funded. The method used to determine the incidence of the contributions in various years is called the actuarial cost method. Under an actuarial cost method, the contributions required to meet the difference between current assets and current liabilities are allocated each year between two elements: (1) the normal cost rate and (2) the unfunded actuarial accrued liability contribution rate.

The term "fully funded" is often applied to a plan in which contributions at the normal cost rate are sufficient to pay for the benefits of existing employees as well as for those of new employees. More often than not, plans are not fully funded, either because of past benefit improvements that have not been completely funded, contribution levels, or because of actuarial deficiencies that have occurred because experience has not been as favorable as anticipated by the actuarial assumptions. Under these circumstances, an unfunded actuarial accrued liability (UAAL) exists. Likewise, when the actuarial value of assets is greater than the actuarial accrued liability, a surplus exists.

Description of Contribution Rate Components

The Entry Age Normal (EAN) actuarial cost method is used for the valuation. Under that method, the normal cost for each year from entry age to assumed exit age is a constant percentage of the member's year by year projected compensation. The portion of the present value of future benefits not provided by the present value of future normal costs is the actuarial accrued liability. The unfunded actuarial accrued liability/(surplus) represents the difference between the actuarial accrued liability and the actuarial value of assets as of the valuation date. For TRF '96 purposes, this calculation excludes consideration of future COLAs. The unfunded actuarial accrued liability is calculated each year and reflects experience gains and losses. New amortization bases are funded over 20 years. If there is a surplus, all prior bases are eliminated and a new 30-year open amortization base is established.

Funding for future COLAs is provided by using a surcharge. This rate is intended to fund the COLAs anticipated to be granted in the next biennium by the start of that biennium.

In general, contributions are computed in accordance with a level percent-of-payroll funding objective. The contribution rate based on the June 30, 2022 actuarial valuation will be used to calculate the actuarially determined employer contribution rate to the Teachers' Retirement Fund 1996 Account for the plan year ending June 30, 2024. The supplemental benefit surcharge rate will be used to calculate the actuarially determined employer contribution rate for the 2023 calendar year.

Contribution Rate Summary

In Table 11 the amortization payment related to the unfunded actuarial accrued liability/(surplus), as of June 30, 2022, is developed. The surcharge needed to fund the assumed COLAs is developed in Table 12. Table 13 develops the actuarial required contribution rate for the Plan. The contribution rates shown in this report are based on the actuarial assumptions and cost methods described in Appendix C. Additionally, in Table 14 the contribution amounts under alternative discount rates are provided to illustrate the sensitivity of the contribution requirements relative to the selection of the investment return assumption.

TABLE 11

SCHEDULE OF AMORTIZATION BASES
(Base Benefits)

Amortization Bases	Original Amount	June 30, 2022 Remaining Payments	Date of Last Payment	Outstanding Balance as of June 30, 2022	Annual Contribution
2021 UAAL Base	(15,350,208)	19	7/1/2041	(14,944,006)	(1,285,260)
2022 UAAL Base	46,081,477	20	7/1/2042	46,081,477	3,858,365
Total				$ 31,137,471	$ 2,573,105

1. Total UAAL Amortization Payments	$ 2,573,105
2. Projected Payroll for FY 2023	$ 3,956,756,111
3. UAAL Amortization Payment Rate	0.07%
4. Remaining Amortization Period in Years (Weighted) [1]	20.5

[1] The weighted average remaining UAAL amortization period is calculated by weighting the remaining amortization period of each base by the amortization amount of each base.

TABLE 12

DEVELOPMENT OF SURCHARGE RATE
(Supplemental Benefits)

Projected COLAs in Next Biennium Beginning July 1, 2023

First Anticipated COLA		
1. Date of COLA commencement		January 1, 2024
2. Rate of COLA		0.4%
3. Value as of July 1, 2023 of COLA	$	7,906,523
Second Anticipated COLA		
4. Date of COLA commencement		January 1, 2025
5. Rate of COLA		0.4%
6. Value as of July 1, 2023 of COLA		8,109,457
7. Total COLA Funding Requirement as of July 1, 2023: (3) + (6)	$	16,015,980

Funding Sources for Projected COLAs

8. Assets as of June 30, 2022 Available for Future COLAs	$	7,098,662
9. Projected Contributions from 7/1/2022 to 12/31/2022		4,054,084
10. Expected Earnings through July 1, 2023		633,702
11. Projected Available Assets at July 1, 2023	$	11,786,448
12. Required Additional Funding for Anticipated COLAs: (7) - (11)		4,229,532

Surcharge Rate

13. Projected Payroll from 1/1/2023 to 6/30/2023		1,930,515,965
14. Value of (13) as of July 1, 2023	$	1,960,680,277
15. Surcharge Rate: (12) /(14)		0.22%

TABLE 13

ACTUARIAL REQUIRED CONTRIBUTION RATE
(Base and Supplemental Benefits)

	Base Benefits	Supplemental Benefits	Total
1. Projected Payroll for FY 2023	$ 3,956,756,111		
2. Normal Cost Rate as of June 30, 2021	5.72%	0.36%	6.08%
3. Amortization of UAAL as of June 30, 2022			
a. Dollar Amount	$ 2,573,105		
b. Percent of Projected Pay	0.07%		
4. Preliminary Actuarially Determined Contribution Rate: (2) + (3b)	5.79%		
5. Supplemental Benefit Surcharge Rate		0.22%	
6. Actuarially Determined Contribution Rate Subject to Legal Constraints	5.79%	0.22%	
7. Board Policy Surcharge Rate (for 2023 calendar year)		**0.21%**	
8. Board Policy Contribution Rate			**6.00%**

TABLE 14

INVESTMENT RETURN SENSITIVITY
(Base and Supplemental Benefits)

	1.00% Decrease: (5.25%)	0.75% Decrease: (5.50%)	0.50% Decrease: (5.75%)	0.25% Decrease: (6.00%)	Current Assumption: (6.25%)
Funded Status					
Actuarial Accrued Liability	$9,592,749,819	$9,203,428,801	$8,834,855,451	$8,485,768,683	$8,154,991,450
Actuarial Value of Assets	7,716,351,537	7,716,351,537	7,716,351,537	7,716,351,537	7,716,351,537
Unfunded Actuarial Accrued Liability	$1,876,398,282	$1,487,077,264	$1,118,503,914	$769,417,146	$438,639,913
Funded Ratio	80.4%	83.8%	87.3%	90.9%	94.6%
Actuarially Determined Contribution Amount					
Normal Cost	$323,533,756	$300,266,281	$278,775,964	$258,920,856	$240,570,772
UAAL Amortization	146,069,319	117,915,362	90,316,641	63,249,891	36,692,956
Actuarially Determined Contribution Amount	$469,603,075	$418,181,643	$369,092,605	$322,170,747	$277,263,728
Actuarially Determined Contribution Rate	11.87%	10.57%	9.33%	8.14%	7.01%

	0.25% Increase: (6.50%)	0.50% Increase: (6.75%)	0.75% Increase: (7.00%)	1.00% Increase: (7.25%)	1.25% Increase: (7.50%)
Funded Status					
Actuarial Accrued Liability	$7,841,424,682	$7,544,041,696	$7,261,883,043	$6,994,051,745	$6,739,708,900
Actuarial Value of Assets	7,716,351,537	7,716,351,537	7,716,351,537	7,716,351,537	7,716,351,537
Unfunded Actuarial Accrued Liability	$125,073,145	($172,309,841)	($454,468,494)	($722,299,792)	($976,642,637)
Funded Ratio	98.4%	102.3%	106.3%	110.3%	114.5%
Actuarially Determined Contribution Amount					
Normal Cost	$223,606,275	$207,917,765	$193,404,641	$179,974,531	$167,542,604
UAAL Amortization	10,624,725	(12,682,675)	(34,228,020)	(55,642,083)	(76,924,222)
Actuarially Determined Contribution Amount	$234,231,000	$195,235,090	$159,176,621	$124,332,448	$90,618,382
Actuarially Determined Contribution Rate	5.92%	4.93%	4.02%	3.14%	2.29%

Note: Comparisons are based on funding the COLA in the same method as the base benefit, rather than with a surcharge. Consequently, these results are for comparative purposes only and will not match the actual results under the funding policy.

GASB NO. 67 AND GASB NO. 68

The Governmental Accounting Standards Board issued Statement No. 67 (GASB 67), "Financial Reporting for Pension Plans" and Statement No. 68 (GASB 68), "Accounting and Financial Reporting for Pensions" in June 2012. The effective date for reporting under GASB 67 for the INPRS Plans was the fiscal year ending June 30, 2014. GASB 68's effective date for employers is the first fiscal year beginning after June 15, 2014.

The sections that follow provide the results of the required actuarial calculations set out in GASB 67 and GASB 68 for note disclosure and Required Supplementary Information (RSI). Some of this information was provided by the INPRS for use in this report.

The discount rate used for these disclosures is the assumed return on assets of 6.25%. We have verified that the current assets in conjunction with future contributions made on behalf of current members (including all contributions to fund any past service liability) will be sufficient to make the anticipated benefit payments to be provided to the current members.

To the best of our knowledge, the information contained in this report is complete and accurate. The calculations were performed by qualified actuaries according to generally accepted actuarial principles and practices, as well as in conformity with Actuarial Standards of Practice issued by the Actuarial Standards Board. The calculations are based on the current provisions of the plan, and on actuarial assumptions that are internally consistent and individually reasonable based on the actual experience of the plan. In addition, the calculations were completed in compliance with applicable law and, in our opinion, meet the requirements of GASB 67 and GASB 68.

TABLE 15

STATEMENT OF FIDUCIARY NET POSITION

			June 30, 2022
1. Assets			
a. Cash		$	391,741
b. Receivables			
i.	Contributions and Miscellaneous Receivables	$	1,383,603
ii.	Investments Receivable		60,840,930
iii.	Foreign Exchange Contracts Receivable		1,459,322,188
iv.	Interest and Dividends		17,126,565
v.	Receivables Due From Other Funds		0
vi.	Total Receivables	$	1,538,673,286
c. Investments			
i.	Short-Term Investments	$	0
ii.	Pooled Repurchase Agreements		17,149,512
iii.	Pooled Short-Term Investments		591,459,464
iv.	Pooled Fixed Income		2,029,964,251
v.	Pooled Equity		981,926,270
vi.	Pooled Alternative Investments		4,109,112,979
vii.	Pooled Derivatives		(54,852,938)
viii.	Pooled Investments		0
ix.	Securities Lending Collateral		34,861,741
x.	Total Investments	$	7,709,621,279
d. Net Capital Assets			0
e. Other Assets			0
f. Total Assets: a + b(vi) + c(x) + d + e		$	9,248,686,306
2. Liabilities			
a. Administrative Payable		$	48,990
b. Retirement Benefits Payable			14,296,469
c. Investments Payable			209,145,064
d. Foreign Exchange Contracts Payable			1,447,503,283
e. Securities Lending Obligations			34,861,741
f. Securities Sold Under Agreement to Repurchase			45,641,319
g. Due To Other Funds			649,814
h. Due to Other Governments			0
i. Total Liabilities: a + b + c + d + e + f + g + h		$	1,752,146,680
3. Fiduciary Net Position Restricted for Pensions: (1)(f) - (2)(i)		**$**	**7,496,539,626**

TABLE 16

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

			For Fiscal Year Ending June 30, 2022
1. Fiduciary Net Position as of June 30, 2021		**$**	**7,987,495,378**
2. Additions			
a. Contributions			
i.	Member Contributions	$	0
ii.	Employer Contributions		210,601,445
iii.	Service Purchases (Employer and Member) [1]		496,494
iv.	Non-Employer Contributing Entity Contributions		0
v.	Total Contributions	$	211,097,939
b. Investment Income/(Loss)			
i.	Net Appreciation/(Depreciation)	$	(1,219,083,881)
ii.	Net Interest and Dividend Income		742,907,283
iii.	Securities Lending Income		305,488
iv.	Other Net Investment Income		233,538
v.	Investment Management Expenses		(54,372,863)
vi.	Direct Investment Expenses		(2,127,672)
vii.	Securities Lending Expenses		(43,067)
viii.	Total Investment Income/(Loss)	$	(532,181,174)
c. Other Additions			
i.	Member Reassignments		5,473,597
ii.	Miscellaneous Receipts		2,963
iii.	Total Other Additions	$	5,476,560
d. Total Revenue (Additions): a(v) + b(viii) + c(iii)		$	(315,606,675)
3. Deductions			
a. Pension, Survivor and Disability Benefits		$	168,620,964
b. Death and Funeral Benefits			0
c. Distributions of Contributions and Interest			0
d. Administrative Expenses [2]			5,291,695
e. Member Reassignments			1,436,418
f. Miscellaneous Expenses			0
g. Total Expenses (Deductions)		$	175,349,077
4. Net Increase (Decrease) in Fiduciary Net Position: (2)(d) - (3)(g)		**$**	**(490,955,752)**
5. Fiduciary Net Position as of June 30, 2022: (1) + (4)		**$**	**7,496,539,626**

[1] Service purchases paid by employer of $63,837 and employee of $432,657.

[2] Includes $58,530 of hybrid plan contributions and $0 of My Choice plan contributions made by INPRS.

TABLE 17

SCHEDULE OF CHANGES IN NET PENSION LIABILITY

	For Fiscal Year Ending June 30, 2022		
	Total Pension Liability (a)	**Plan Fiduciary Net Position (b)**	**Net Pension Liability (a) – (b)**
1. Balance at June 30, 2021	$ 7,517,703,347	$ 7,987,495,378	$ (469,792,031)
2. Changes for the Year:			
Service Cost (SC) [1]	230,270,315		230,270,315
Interest Cost	479,120,626		479,120,626
Experience (Gains)/Losses	91,984,453		91,984,453
Assumption Changes	0		0
Plan Amendments	0		0
Benefit Payments	(168,620,964)	(168,620,964)	0
Service Purchases			
Employer Contributions	63,837	63,837	0
Employee Contributions	432,657	432,657	0
Member Reassignments [2]	4,037,179	4,037,179	0
Employer Contributions		210,601,445	(210,601,445)
Non-employer Contributions		0	0
Employee Contributions		0	0
Net Investment Income		(532,181,174)	532,181,174
Administrative Expenses [3]		(5,291,695)	5,291,695
Other		2,963	(2,963)
Net Changes	$ 637,288,103	$ (490,955,752)	$ 1,128,243,855
3. Balance at June 30, 2022	$ 8,154,991,450	$ 7,496,539,626	$ 658,451,824

[1] Service cost provided as of beginning of year. Interest to end of year is included in the interest cost.

[2] Includes net interfund transfers of employer contributed amounts.

[3] Includes contributions made by INPRS for its employees of $58,530 in the hybrid plan and $0 in the My Choice plan.

TABLE 18

DEFERRED OUTFLOWS OF RESOURCES

	June 30, 2021	Remaining Period	Recognition	June 30, 2022
1. Liability Experience				
June 30, 2022 Loss	$ 91,984,453	10.13	$ 9,080,401	$ 82,904,052
June 30, 2021 Loss	87,630,180	9.43	9,292,703	78,337,477
June 30, 2020 Loss	0	8.60	0	0
June 30, 2019 Loss	0	8.07	0	0
June 30, 2018 Loss	0	7.47	0	0
June 30, 2017 Loss	29,867,079	9.00	3,318,564	26,548,515
June 30, 2016 Loss	17,072,014	8.00	2,134,001	14,938,013
June 30, 2015 Loss	0	7.00	0	0
June 30, 2014 Loss	193,877	5.00	38,775	155,102
2. Assumption Changes				
June 30, 2022 Loss	$ 0	10.13	$ 0	$ 0
June 30, 2021 Loss	484,776,443	9.43	51,407,895	433,368,548
June 30, 2020 Loss	0	8.60	0	0
June 30, 2019 Loss	0	8.07	0	0
June 30, 2018 Loss	0	7.47	0	0
June 30, 2017 Loss	0	9.00	0	0
June 30, 2016 Loss	0	8.00	0	0
June 30, 2015 Loss	131,995,522	7.00	18,856,504	113,139,018
3. Investment Experience				
June 30, 2022 Loss	$ 1,032,687,930	5.00	$ 206,537,586	$ 826,150,344
June 30, 2021 Loss	0	4.00	0	0
June 30, 2020 Loss	154,056,362	3.00	51,352,121	102,704,241
June 30, 2019 Loss	0	2.00	0	0
June 30, 2018 Loss	0	1.00	0	0
Total Outflows: (1)+(2)+(3)	**$ 2,030,263,860**		**$ 352,018,550**	**$ 1,678,245,310**

Information was provided prospectively from June 30, 2013 for GASB No. 68 purposes. Results prior to 2018 were produced by the prior actuary.

In accordance with GASB, the original amortization period for liability experience and assumption changes are amortized over the expected future working lifetime of all members, whereas the investment experience is amortized over five years.

TABLE 19

DEFERRED INFLOWS OF RESOURCES

	June 30, 2021	Remaining Period	Recognition	June 30, 2022
1. Liability Experience				
June 30, 2022 Gain	$ 0	10.13	$ 0	$ 0
June 30, 2021 Gain	0	9.43	0	0
June 30, 2020 Gain	25,502,251	8.60	2,965,379	22,536,872
June 30, 2019 Gain	15,737,554	8.07	1,950,131	13,787,423
June 30, 2018 Gain	92,658,452	7.47	12,404,078	80,254,374
June 30, 2017 Gain	0	9.00	0	0
June 30, 2016 Gain	0	8.00	0	0
June 30, 2015 Gain	20,428,628	7.00	2,918,375	17,510,253
June 30, 2014 Gain	0	5.00	0	0
2. Assumption Changes				
June 30, 2022 Gain	$ 0	10.13	$ 0	$ 0
June 30, 2021 Gain	0	9.43	0	0
June 30, 2020 Gain	92,201	8.60	10,722	81,479
June 30, 2019 Gain	0	8.07	0	0
June 30, 2018 Gain	185,898,457	7.47	24,886,005	161,012,452
June 30, 2017 Gain	74,253,633	9.00	8,250,404	66,003,229
June 30, 2016 Gain	0	8.00	0	0
June 30, 2015 Gain	0	7.00	0	0
3. Investment Experience				
June 30, 2022 Gain	$ 0	5.00	$ 0	$ 0
June 30, 2021 Gain	950,361,444	4.00	237,590,362	712,771,082
June 30, 2020 Gain	0	3.00	0	0
June 30, 2019 Gain	13,727,314	2.00	6,863,659	6,863,655
June 30, 2018 Gain	24,928,829	1.00	24,928,829	0
Total Inflows: (1)+(2)+(3)	**$ 1,403,588,763**		**$ 322,767,944**	**$ 1,080,820,819**

Information was provided prospectively from June 30, 2013 for GASB No. 68 purposes. Results prior to 2018 were produced by the prior actuary.

In accordance with GASB, the original amortization period for liability experience and assumption changes are amortized over the expected future working lifetime of all members, whereas the investment experience is amortized over five years.

TABLE 20

DEFERRED INFLOWS / OUTFLOWS TO BE RECOGNIZED IN PENSION EXPENSE

Fiscal Year Ending June 30	Deferred Outflows	Deferred Inflows	Net Deferred Outflows/(Inflows)
Current Year:			
2022	$ 352,018,550	$ 322,767,944	$ 29,250,606
Future Years:			
2023	$ 352,018,550	$ 297,839,111	$ 54,179,439
2024	352,018,549	290,975,456	61,043,093
2025	300,666,429	290,975,452	9,690,977
2026	300,666,429	53,385,094	247,281,335
2027	94,090,070	53,385,094	40,704,976
Thereafter	278,785,283	94,260,612	184,524,671

TABLE 21

PENSION EXPENSE UNDER GASB NO. 68

		For Fiscal Year Ending June 30, 2022
1. Service Cost, beginning of year		$ 230,270,315
2. Interest Cost, including interest on service cost		479,120,626
3. Member Contributions [1]		0
4. Administrative Expenses [2]		5,233,165
5. Expected Return on Assets [3]		(500,506,756)
6. Plan Amendments		0
7. Recognition of Deferred Inflows / Outflows of Resources Related to:		
a. Liability Experience (Gains) / Losses	3,626,481	
b. Assumption Change (Gains) / Losses	37,117,268	
c. Investment Experience (Gains) / Losses	(11,493,143)	
d. Total: (7a)+(7b)+(7c)		29,250,606
8. Miscellaneous (Income) / Expense		(2,963)
9. Total Collective Pension Expense: (1)+(2)+(3)+(4)+(5)+(6)+(7d)+(8)		243,364,993
10. Employer Service Purchases [4]		63,837
Pension Expense / (Income): (9) + (10)		**$ 243,428,830**

[1] Excludes member paid service purchases of $432,657.

[2] Excludes contributions made by INPRS for its employees of $58,530 in the hybrid plan and $0 in the My Choice plan.

[3] Cash flows assumed to occur mid-year.

[4] To be expensed by the employers who purchased the service.

GASB NO. 67 and GASB NO. 68
NOTES TO THE FINANCIAL STATEMENTS

The material presented herein is a subset of the information requested as Notes to the Financial Statements. Required information not provided herein is to be supplied by the plan.

Actuarial Assumptions and Inputs

Significant actuarial assumptions and other inputs used to measure the total pension liability:

Type of Plan	The Teachers' Retirement Fund 1996 Account is a cost-sharing multiple-employer plan for GASB accounting purposes.
Measurement Date	June 30, 2022
Valuation Date	
Assets:	June 30, 2022
Liabilities:	June 30, 2021 – The TPL as of June 30, 2022 was determined based on an actuarial valuation prepared as of June 30, 2021 rolled forward one year to June 30, 2021, using the following key actuarial assumptions and other inputs, such as benefit accruals and actual benefit payments during that time period.
Inflation	2.00%
Future Salary Increases	2.65% - 11.90% based on years of service
Cost-of-Living Increases	As of June 30, 2022: Members in pay were granted a 1.00% COLA on January 1, 2022 and no COLA on January 1, 2023. Thereafter, the following COLAs, compounded annually, were assumed: 0.4% beginning on January 1, 2024 0.5% beginning on January 1, 2034 0.6% beginning on January 1, 2039 As of June 30, 2021: Members in pay were granted a 1.00% COLA on January 1, 2022 and no COLA on January 1, 2023. Thereafter, the following COLAs, compounded annually, were assumed: 0.4% beginning on January 1, 2024 0.5% beginning on January 1, 2034 0.6% beginning on January 1, 2039

Mortality Assumption	Pub-2010 Public Retirement Plans Mortality Tables (Amount-Weighted) with a fully generational projection of mortality improvements using SOA Scale MP-2019.
	Healthy Employees – Teacher Employee table with a 1 year set forward for males and a 1 year set forward for females.
	Retirees – Teacher Retiree table with a 1 year set forward for males and a 1 year set forward for females.
	Beneficiaries – Contingent Survivor table with no set forward for males and a 2 year set forward for females.
	Disableds – General Disabled table with a 140% load.
Experience Study	The most recent comprehensive experience study, based on member experience between June 30, 2014 and June 30, 2019, was completed in February 2020. The demographic assumptions were approved by the Board in June 2020 and were used beginning with the June 30, 2020 actuarial valuation. Economic assumptions were updated and approved by the Board in May 2021 following the completion of an Asset-Liability study and first used in the June 30, 2021 actuarial valuation.
Discount Rate	6.25%, net of investment expenses
	The discount rate is equal to the expected long-term rate of return on plan investments, net of investment expense and including price inflation. There was no change in the discount rate from the prior measurement date.
	The INPRS Board of Trustees has established a funding policy of setting the employer contribution rate equal to the greater of the current contribution rate (currently 6.00%) and a rate equal to the actuarially determined contribution rate which is based on the assumptions and methods selected by the Board for the annual actuarial valuations and projected covered member payroll. Based on this policy, the employer contribution rate will increase to 6.10%. The June 30, 2022 actuarial valuation assumes a long-term rate of return on assets of 6.25%, a 20-year level dollar closed method for amortizing the future layers of unfunded actuarial accrued liability (below 100% funded on an actuarial basis as of June 30, 2022), and a 5-year smoothing method for recognizing investment gains and losses in the actuarial value of assets.
	For the past several years, the Board has followed its current funding policy and employers have made their contributions to the plan. Therefore, if past practice is continued, the appropriations will be sufficient to make the Fund fully funded. As a result, it is presumed that the projected plan assets will be sufficient to cover the future benefit payments for current members and a detailed projection of plan assets and cash flows has not been prepared.

Discount Rate Sensitivity

	1% Decrease 5.25%	Current Rate 6.25%	1% Increase 7.25%
Net Pension Liability	$2,096,210,193	$658,451,824	($502,487,881)

Classes of Plan Members Covered

The June 30, 2022 valuation was performed using census data provided by INPRS as of June 30, 2021. Standard actuarial techniques were used to roll forward the total pension liability computed as of June 30, 2021 to the June 30, 2022 measurement date using actual benefit payments during that period of time.

Number as of June 30, 2021	
1. Currently Receiving Benefits:	
Retired Members, Disabled Members, and Beneficiaries	9,035
2. Inactive Members Entitled To But Not Yet Receiving Benefits	7,496
3. Inactive Non-vested Members Entitled to a Refund of Member Contributions	0
4. Active Members	59,567
Total Covered Plan Members: (1)+(2)+(3)+(4)	76,098

Money-Weighted Rate of Return

The money-weighted rate of return equals investment performance, net of pension plan investment expense, adjusted for the changing amounts actually invested. For the fiscal year ending June 30, 2022, the money-weighted return on the plan assets is -6.6%.

Components of Net Pension Liability

As of June 30, 2022	
Total Pension Liability	$ 8,154,991,450
Fiduciary Net Position	7,496,539,626
Net Pension Liability	$ 658,451,824
Ratio of Fiduciary Net Position to Total Pension Liability	91.93%

GASB NO. 67 AND GASB NO. 68: REQUIRED SUPPLEMENTAL INFORMATION
SCHEDULE OF CHANGES IN THE TOTAL PENSION LIABILITY AND PLAN FIDUCIARY NET POSITION

Fiscal Year Ending June 30	2018	2019	2020	2021	2022
Total Pension Liability					
Total Pension Liability - beginning	$6,914,237,041	$5,563,263,694	$5,980,426,336	$6,403,252,089	$7,517,703,347
DC Account Balances - beginning [1]	1,378,142,685	0	0	0	0
DB Pension Liability - beginning	$5,536,094,356	$5,563,263,694	$5,980,426,336	$6,403,252,089	$7,517,703,347
Service Cost (SC), beginning-of-year	182,558,143	180,559,476	183,632,094	190,036,960	230,270,315
Interest Cost, including interest on SC	382,297,585	383,383,638	411,329,073	439,928,627	479,120,626
Experience (Gains)/Losses	(142,274,764)	(21,587,947)	(31,433,009)	96,922,883	91,984,453
Assumption Changes	(285,442,477)	0	(113,645)	536,184,338	0
Plan Amendments	0	2,938,618	0	3,034,254	0
DC Annuitizations	6,503,849	0	0	0	0
Actual Benefit Payments	(122,239,791)	(132,572,511)	(143,371,247)	(155,348,220)	(168,620,964)
Member Reassignments	5,602,016	4,293,211	2,678,802	3,091,717	4,037,179
Service Purchases	164,777	148,157	103,685	600,700	496,494
Net Change in Total Pension Liability	27,169,338	417,162,642	422,825,753	1,114,451,259	637,288,103
DB Pension Liability - ending	$5,563,263,694	$5,980,426,336	$6,403,252,089	$7,517,703,347	$8,154,991,450
DC Account Balances - ending [1]	0	0	0	0	0
(a) Total Pension Liability - ending	$5,563,263,694	$5,980,426,336	$6,403,252,089	$7,517,703,347	$8,154,991,450
Plan Fiduciary Net Position					
Plan Fiduciary Net Position – beginning	$6,252,040,308	$5,452,351,707	$6,124,085,498	$6,325,311,322	$7,987,495,378
DC Account Balances - beginning [1]	1,378,142,685	0	0	0	0
DB Plan Fiduciary Net Position – beginning	$4,873,897,623	$5,452,351,707	$6,124,085,498	$6,325,311,322	$7,987,495,378
Contributions – employer	235,819,031	393,172,165	188,789,351	202,488,745	210,665,282
Contributions – non-employer	0	0	0	0	0
Contributions – member	129,780	127,304	103,685	464,713	432,657
Net investment income	457,707,449	411,146,841	158,071,621	1,616,453,718	(532,181,174)
Actual benefit payments	(122,239,791)	(132,572,511)	(143,371,247)	(155,348,220)	(168,620,964)
Net member reassignments	5,602,016	4,293,211	2,678,802	3,091,717	4,037,179
DC Annuitizations	6,503,849	0	0	0	0
Administrative expense	(5,208,400)	(5,037,962)	(5,089,388)	(4,966,317)	(5,291,695)
Other	140,150	604,743	43,000	(300)	2,963
Net change in Plan Fiduciary Net Position	578,454,084	671,733,791	201,225,824	1,662,184,056	(490,955,752)
DB Plan Fiduciary Net Position – ending	$5,452,351,707	$6,124,085,498	$6,325,311,322	$7,987,495,378	$7,496,539,626
DC Account Balances - ending 1	0	0	0	0	0
(b) Plan Fiduciary Net Position - ending	$5,452,351,707	$6,124,085,498	$6,325,311,322	$7,987,495,378	$7,496,539,626
Net Pension Liability - ending, (a) - (b)	$110,911,987	($143,659,162)	$77,940,767	($469,792,031)	$658,451,824

[1] Effective January 1, 2018, DC account balances are handled by a third party annuity provider and are treated as a separate defined contribution plan.
Information was provided prospectively from June 30, 2013 for GASB No. 67 and GASB No. 68 purposes. Results prior to 2018 were produced by the prior actuary.

GASB NO. 67 AND GASB NO. 68: REQUIRED SUPPLEMENTAL INFORMATION
SCHEDULE OF CHANGES IN THE TOTAL PENSION LIABILITY AND PLAN FIDUCIARY NET POSITION (continued)

Fiscal Year Ending June 30	2013	2014	2015	2016	2017
Total Pension Liability					
Total Pension Liability - beginning	$4,338,309,018	$4,748,148,931	$5,236,993,169	$5,905,691,033	$6,391,750,065
DC Account Balances - beginning [1]	899,338,904	990,704,762	1,120,728,729	1,170,914,523	1,217,432,610
DB Pension Liability - beginning	$3,438,970,114	$3,757,444,169	$4,116,264,440	$4,734,776,510	$5,174,317,455
Service Cost (SC), beginning-of-year	147,336,605	155,314,388	170,892,424	167,836,193	168,650,636
Interest Cost, including interest on SC	240,281,897	262,263,149	287,264,315	328,017,487	357,392,165
Experience (Gains)/Losses	(15,994,636)	504,077	(40,857,253)	29,876,020	46,459,899
Assumption Changes	0	0	263,991,050	0	(115,505,653)
Plan Amendments	0	(4,504,201)	0	0	1,352,763
DC Annuitizations	11,621,194	15,151,081	22,574,841	8,931,954	8,503,495
Actual Benefit Payments	(68,792,905)	(77,253,362)	(90,266,941)	(99,506,626)	(109,334,779)
Member Reassignments	0	6,922,378	4,889,464	4,370,023	4,258,375
Service Purchases	4,021,900	422,761	24,170	15,894	0
Net Change in Total Pension Liability	318,474,055	358,820,271	618,512,070	439,540,945	361,776,901
DB Pension Liability - ending	$3,757,444,169	$4,116,264,440	$4,734,776,510	$5,174,317,455	$5,536,094,356
DC Account Balances - ending [1]	990,704,762	1,120,728,729	1,170,914,523	1,217,432,610	1,378,142,685
(a) Total Pension Liability - ending	$4,748,148,931	$5,236,993,169	$5,905,691,033	$6,391,750,065	$6,914,237,041
Plan Fiduciary Net Position					
Plan Fiduciary Net Position – beginning	$4,018,148,904	$4,433,677,345	$5,189,442,330	$5,379,113,041	$5,611,229,693
DC Account Balances - beginning [1]	899,338,904	990,704,762	1,120,728,729	1,170,914,523	1,217,432,610
DB Plan Fiduciary Net Position – beginning	$3,118,810,000	$3,442,972,583	$4,068,713,601	$4,208,198,518	$4,393,797,083
Contributions – employer	180,714,000	194,750,861	205,763,142	215,625,986	227,206,663
Contributions – non-employer	0	0	0	0	0
Contributions – member	0	0	0	43,175	57,709
Net investment income	207,098,438	492,856,485	2,684,489	61,722,129	354,926,957
Actual benefit payments	(68,793,300)	(77,253,362)	(90,266,941)	(99,506,625)	(109,334,779)
Net member reassignments	0	6,922,371	4,890,290	4,369,512	4,258,236
DC Annuitizations	11,621,100	15,151,500	22,575,000	8,931,800	8,504,000
Administrative expense	(6,482,000)	(6,707,587)	(6,185,233)	(5,603,306)	(5,552,446)
Other	4,345	20,750	24,170	15,894	34,200
Net change in Plan Fiduciary Net Position	324,162,583	625,741,018	139,484,917	185,598,565	480,100,540
DB Plan Fiduciary Net Position – ending	$3,442,972,583	$4,068,713,601	$4,208,198,518	$4,393,797,083	$4,873,897,623
DC Account Balances - ending 1	990,704,762	1,120,728,729	1,170,914,523	1,217,432,610	1,378,142,685
(b) Plan Fiduciary Net Position - ending	$4,433,677,345	$5,189,442,330	$5,379,113,041	$5,611,229,693	$6,252,040,308
Net Pension Liability - ending, (a) - (b)	$314,471,586	$47,550,839	$526,577,992	$780,520,372	$662,196,733

[1] Effective January 1, 2018, DC account balances are handled by a third party annuity provider and are treated as a separate defined contribution plan.
Information was provided prospectively from June 30, 2013 for GASB No. 67 and GASB No. 68 purposes. Results prior to 2018 were produced by the prior actuary.

GASB NO. 67 AND GASB NO. 68: REQUIRED SUPPLEMENTAL INFORMATION

SCHEDULE OF THE NET PENSION LIABILITY

Fiscal Year Ending June 30	2018	2019	2020	2021	2022
Total Pension Liability	$5,563,263,694	$5,980,426,336	$6,403,252,089	$7,517,703,347	$8,154,991,450
Plan Fiduciary Net Position	5,452,351,707	6,124,085,498	6,325,311,322	7,987,495,378	7,496,539,626
Net Pension Liability	$110,911,987	($143,659,162)	$77,940,767	($469,792,031)	$658,451,824
Ratio of Plan Fiduciary Net Position to Total Pension Liability	98.01%	102.40%	98.78%	106.25%	91.93%
Covered-employee payroll [1]	$3,129,070,354	$3,257,917,777	$3,465,727,587	$3,634,648,638	$3,915,888,158
Net Pension Liability as a percentage of covered-employee payroll	3.54%	-4.41%	2.25%	-12.93%	16.81%

Fiscal Year Ending June 30	2013	2014	2015	2016	2017
Total Pension Liability	$4,748,148,931	$5,236,993,169	$5,905,691,033	$6,391,750,065	$6,914,237,041
Plan Fiduciary Net Position	4,433,677,345	5,189,442,330	5,379,113,041	5,611,229,693	6,252,040,308
Net Pension Liability	$314,471,586	$47,550,839	$526,577,992	$780,520,372	$662,196,733
Ratio of Plan Fiduciary Net Position to Total Pension Liability	93.38%	99.09%	91.08%	87.79%	90.42%
Covered-employee payroll [1]	$2,442,496,000	$2,598,115,000	$2,742,186,608	$2,881,397,273	$3,020,463,178
Net Pension Liability as a percentage of covered-employee payroll	12.88%	1.83%	19.20%	27.09%	21.92%

[1] As provided by INPRS.

Information was provided prospectively from June 30, 2013 for GASB No. 67 and GASB No. 68 purposes. Results prior to 2018 were produced by the prior actuary.

GASB NO. 67 AND GASB NO. 68: REQUIRED SUPPLEMENTAL INFORMATION

SCHEDULE OF EMPLOYER CONTRIBUTIONS

Fiscal Year Ending June 30	2018	2019	2020	2021	2022
Actuarially Determined Contribution [1]	$210,586,435	$226,099,494	$162,035,175	$158,762,674	$171,569,755
Actual employer contributions [2]	$235,675,239	$393,151,312	$188,789,351	$202,352,758	$210,601,445
Annual contribution (deficiency) / excess	$25,088,804	$167,051,818	$26,754,176	$43,590,084	$39,031,690
Covered-employee payroll [3]	$3,129,070,354	$3,257,917,777	$3,465,727,587	$3,634,648,638	$3,915,888,158
Actual contributions as a percentage of covered-employee payroll	7.53%	12.07%	5.45%	5.57%	5.38%

Fiscal Year Ending June 30	2013	2014	2015	2016	2017
Actuarially Determined Contribution [1]	$164,400,000	$177,711,000	$178,260,000	$180,375,469	$198,444,431
Actual employer contributions [2]	$180,714,567	$194,750,861	$205,525,842	$215,625,986	$227,206,663
Annual contribution (deficiency) / excess	$16,314,567	$17,039,861	$27,265,842	$35,250,517	$28,762,232
Covered-employee payroll [3]	$2,442,496,000	$2,598,115,000	$2,742,186,608	$2,881,397,273	$3,020,463,178
Actual contributions as a percentage of covered-employee payroll	7.40%	7.50%	7.49%	7.48%	7.52%

[1] The employer rates were applied to the actual covered employee payroll for the fiscal year to determine the contribution amount.
The actuarially determined amortization and normal cost rates were developed in the actuarial report completed one year prior to the fiscal year.
The surcharge rate uses the valuation completed two years ago for July-December and one year ago for January-June.

[2] Excludes service purchases paid for by the employer of $63,837.

[3] As provided by INPRS.

Information was provided prospectively from June 30, 2013 for GASB No. 67 and GASB No. 68 purposes. Results prior to 2018 were produced by the prior actuary.

GASB NO. 67 AND GASB NO. 68: REQUIRED SUPPLEMENTAL INFORMATION

SCHEDULE OF MONEY-WEIGHTED RETURNS

For Fiscal Year Ending June 30	Money-Weighted Return
2022	(6.6%)
2021	25.5%
2020	2.6%
2019	7.5%
2018	9.3%
2017	8.1%
2016	1.0%
2015	0.6%
2014	12.7%
2013	5.1%

Information was provided prospectively from June 30, 2013 for GASB No. 67 and GASB No. 68 purposes. Returns provided by INPRS.

MEMBER DATA RECONCILIATION
For June 30, 2021 Data used in the June 30, 2022 Valuation

	Active Members	Inactive Vested	Inactive Deceased	Disabled	Retired	Beneficiary	Total
1. As of June 30, 2020	**59,866**	**6,816**	**11**	**150**	**7,788**	**349**	**74,980**
2. Data Adjustments							
New Participants	3,863	0	0	0	0	0	3,863
Rehires	371	(370)	0	(1)	0	0	0
Terminations:							
Not Vested	(2,581)	0	0	0	0	0	(2,581)
Deferred Vested	(1,466)	1,466	0	0	0	0	0
Disability	(11)	0	0	11	0	0	0
Retirements	(441)	(340)	(2)	0	781	2	0
Refund / Benefits Ended	0	(47)	0	0	0	0	(47)
Transfer	(5)	(38)	0	0	0	0	(43)
Deaths:							
With Beneficiary	(10)	(5)	0	(2)	(49)	66	0
Without Beneficiary	(17)	(7)	0	(3)	(65)	(7)	(99)
Entitled to Future Pension Benefit	(2)	(2)	4	0	0	0	0
Data Corrections [1]	0	10	0	11	0	4	25
Net Change	(299)	667	2	16	667	65	1,118
3. As of June 30, 2021 [2]	**59,567**	**7,483**	**13**	**166**	**8,455**	**414**	**76,098**

[1] Data corrections reflect the movement between Disabled and Retired status, along with other movements in the INPRS data.

[2] Valuation results as of June 30, 2022 were calculated using June 30, 2021 census data, adjusted for certain activity before the valuation date. Headcounts may include multiple records for individuals, such as members with multiple periods of service.

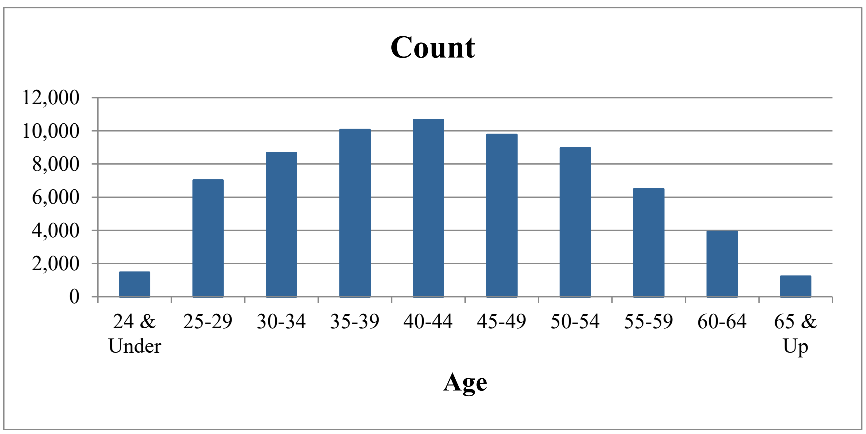
SUMMARY OF MEMBERSHIP DATA

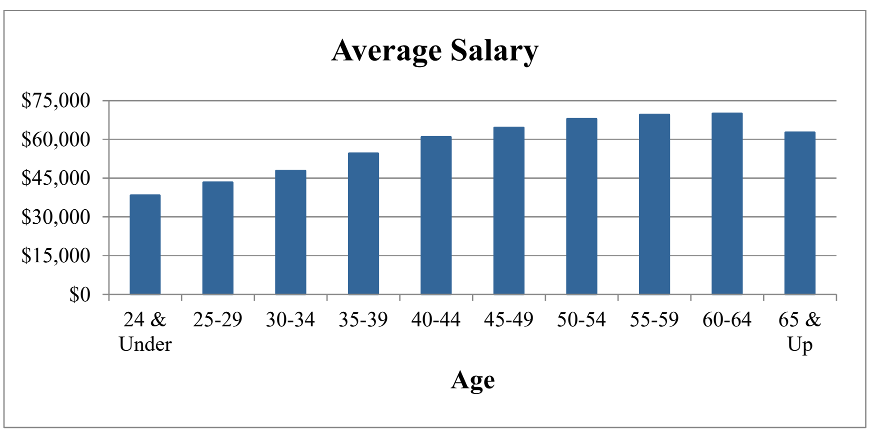
	Combined TRF Plans		1996 Account
Valuation Date	**June 30, 2021**	**June 30, 2022**	**June 30, 2022**
Date of Membership Data [1]	June 30, 2020	June 30, 2021	June 30, 2021
ACTIVE MEMBERS			
Number of Active Members	68,241	66,858	59,567
Annual Membership Data Salary [2]	$ 4,014,573,154	$ 4,080,815,174	$ 3,518,477,079
Anticipated Payroll for Next Fiscal Year	$ 4,354,360,329	$ 4,529,994,676	$ 3,956,756,111
Active Member Averages			
Age	43.1	43.2	41.6
Service	13.7	13.8	11.9
Annual Membership Data Salary	$ 58,829	$ 61,037	$ 59,068
INACTIVE MEMBERS			
Number of Inactive Members	8,791	9,371	7,496
Inactive Member Averages			
Age	51.6	51.5	49.5
Service	14.1	14.5	13.4
RETIREES, DISABLEDS, AND BENEFICIARIES			
Number of Members			
Retired	55,701	55,915	8,455
Disabled	260	271	166
Beneficiaries	5,863	6,006	414
Total	61,824	62,192	9,035
Annual Benefits			
Retired	$ 1,204,475,617	$ 1,216,521,525	$ 150,272,464
Disabled	2,721,880	2,808,613	1,456,971
Beneficiaries	89,159,775	92,554,214	5,300,126
Total	$ 1,296,357,272	$ 1,311,884,352	$ 157,029,561
Annual Benefits			
Pension	$ 1,165,138,525	$ 1,184,299,456	$ 145,600,450
DC Plan Annuities	131,218,747	127,584,896	11,429,111
Total	$ 1,296,357,272	$ 1,311,884,352	$ 157,029,561

[1] The valuation results were calculated using the prior year's census data and were adjusted for certain activity during fiscal year.
[2] The 2021 amounts include 30 records from the 1996 Account with less than a year of service who are missing a salary. Their salaries were defaulted to the average, $56,607. The 2022 amounts include 36 records from the 1996 Account with less than a year of service who are missing a salary. Their salaries were defaulted to the average, $59,068.

ACTIVE MEMBERS[1]
As of June 30, 2021 for the June 30, 2022 Valuation
Combined TRF Plans

	Count of Members			FY 2021 Annual Membership Data Salary		
Age	Male	Female	Total	Male	Female	Total
24 & Under	210	1,131	1,341	$ 8,468,842	$ 44,452,093	$ 52,920,935
25-29	1,445	5,192	6,637	67,327,709	233,427,727	300,755,436
30-34	2,121	6,231	8,352	113,049,627	302,082,983	415,132,610
35-39	2,468	7,125	9,593	151,511,697	389,042,073	540,553,770
40-44	2,887	7,819	10,706	199,851,658	473,578,891	673,430,549
45-49	2,553	7,082	9,635	189,468,157	453,899,807	643,367,964
50-54	2,455	6,899	9,354	190,526,279	466,836,755	657,363,034
55-59	1,700	4,626	6,326	132,640,774	319,482,886	452,123,660
60-64	975	2,806	3,781	76,684,493	196,156,940	272,841,433
65 & Up	342	791	1,133	22,631,721	49,694,062	72,325,783
Total	17,156	49,702	66,858	$ 1,152,160,957	$ 2,928,654,217	$ 4,080,815,174





[1] Includes 36 records from the 1996 Account with less than a year of service who are missing a salary. Their salaries were defaulted to the average, $59,068.

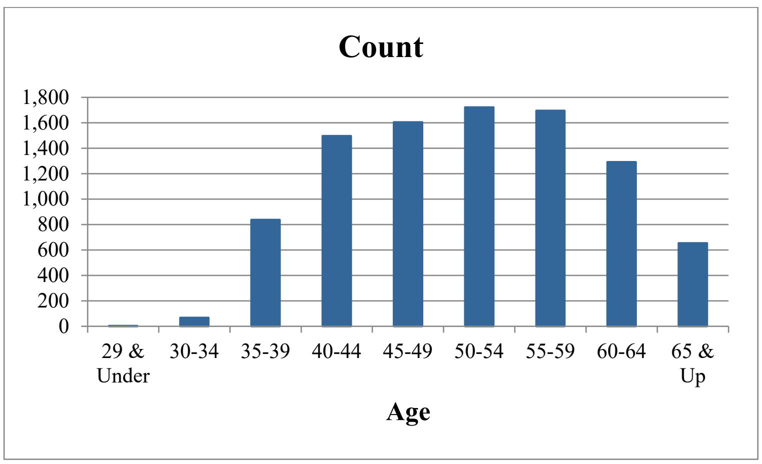
AGE AND SERVICE DISTRIBUTION[1]
As of June 30, 2021 for the June 30, 2022 Valuation
Combined TRF Plans

Age		0-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 34	Total
24 & Under	Number	1,340	1	0	0	0	0	0	0	1,341
	Total Salary	$ 52,874,802	$ 46,133	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 52,920,935
	Average Sal.	$ 39,459	$ 46,133	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 39,464
25-29	Number	5,085	1,552	0	0	0	0	0	0	6,637
	Total Salary	$ 225,936,287	$ 74,819,149	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 300,755,436
	Average Sal.	$ 44,432	$ 48,208	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 45,315
30-34	Number	1,995	5,367	989	1	0	0	0	0	8,352
	Total Salary	$ 89,879,820	$ 269,682,440	$ 55,523,247	$ 47,103	$ 0	$ 0	$ 0	$ 0	$ 415,132,610
	Average Sal.	$ 45,053	$ 50,248	$ 56,141	$ 47,103	$ 0	$ 0	$ 0	$ 0	$ 49,705
35-39	Number	1,465	2,732	4,089	1,307	0	0	0	0	9,593
	Total Salary	$ 67,728,872	$ 143,186,330	$ 242,447,488	$ 87,191,080	$ 0	$ 0	$ 0	$ 0	$ 540,553,770
	Average Sal.	$ 46,231	$ 52,411	$ 59,293	$ 66,711	$ 0	$ 0	$ 0	$ 0	$ 56,349
40-44	Number	1,210	1,752	1,896	4,509	1,335	3	1	0	10,706
	Total Salary	$ 56,098,125	$ 93,835,281	$ 114,186,243	$ 308,929,044	$ 100,035,079	$ 275,362	$ 71,415	$ 0	$ 673,430,549
	Average Sal.	$ 46,362	$ 53,559	$ 60,225	$ 68,514	$ 74,933	$ 91,787	$ 71,415	$ 0	$ 62,902
45-49	Number	925	1,296	1,120	1,704	3,733	855	2	0	9,635
	Total Salary	$ 42,952,327	$ 69,327,419	$ 67,376,843	$ 113,534,664	$ 280,588,378	$ 69,396,345	$ 191,988	$ 0	$ 643,367,964
	Average Sal.	$ 46,435	$ 53,493	$ 60,158	$ 66,628	$ 75,164	$ 81,165	$ 95,994	$ 0	$ 66,774
50-54	Number	683	999	931	1,261	1,881	3,001	595	3	9,354
	Total Salary	$ 32,104,414	$ 53,411,265	$ 55,218,211	$ 83,522,065	$ 140,430,711	$ 242,632,224	$ 49,835,773	$ 208,371	$ 657,363,034
	Average Sal.	$ 47,005	$ 53,465	$ 59,311	$ 66,235	$ 74,657	$ 80,850	$ 83,758	$ 69,457	$ 70,276
55-59	Number	362	509	588	772	994	1,042	1,563	496	6,326
	Total Salary	$ 15,945,470	$ 27,725,712	$ 33,949,781	$ 50,712,767	$ 71,571,650	$ 81,841,179	$ 129,210,532	$ 41,166,569	$ 452,123,660
	Average Sal.	$ 44,048	$ 54,471	$ 57,738	$ 65,690	$ 72,004	$ 78,542	$ 82,668	$ 82,997	$ 71,471
60-64	Number	226	274	306	422	545	474	464	1,070	3,781
	Total Salary	$ 9,677,007	$ 14,752,359	$ 17,835,127	$ 27,271,885	$ 39,567,376	$ 36,451,281	$ 37,795,307	$ 89,491,091	$ 272,841,433
	Average Sal.	$ 42,819	$ 53,841	$ 58,285	$ 64,625	$ 72,601	$ 76,901	$ 81,455	$ 83,637	$ 72,161
65 & Up	Number	130	128	114	131	123	109	90	308	1,133
	Total Salary	$ 3,469,529	$ 5,301,449	$ 5,600,265	$ 8,342,374	$ 8,730,368	$ 8,288,698	$ 7,143,599	$ 25,449,501	$ 72,325,783
	Average Sal.	$ 26,689	$ 41,418	$ 49,125	$ 63,682	$ 70,979	$ 76,043	$ 79,373	$ 82,628	$ 63,836
Total	Number	13,421	14,610	10,033	10,107	8,611	5,484	2,715	1,877	66,858
	Total Salary	$ 596,666,653	$ 752,087,537	$ 592,137,205	$ 679,550,982	$ 640,923,562	$ 438,885,089	$ 224,248,614	$ 156,315,532	$ 4,080,815,174
	Average Sal.	$ 44,458	$ 51,478	$ 59,019	$ 67,236	$ 74,431	$ 80,030	$ 82,596	$ 83,279	$ 61,037

[1] Includes 36 records from the 1996 Account with less than a year of service who are missing a salary. Their salaries were defaulted to the average, $59,068.

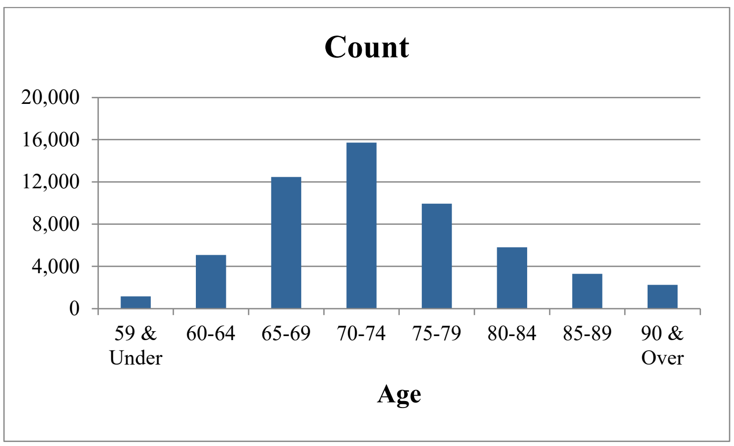
INACTIVE VESTED MEMBERS
As of June 30, 2021 for the June 30, 2022 Valuation
Combined TRF Plans

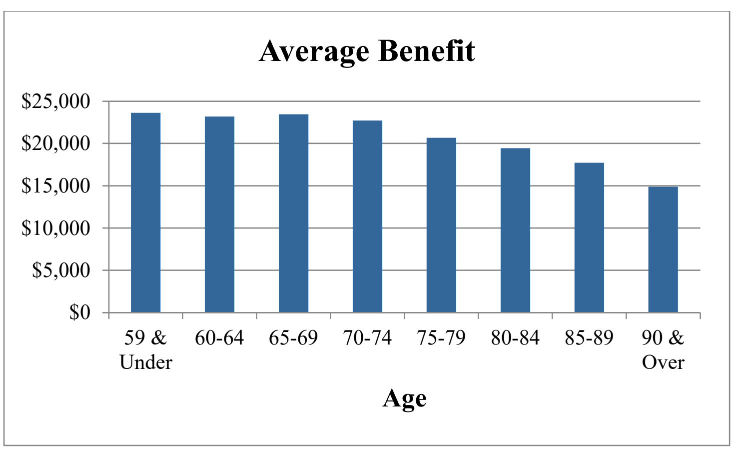
	Count of Members		
Age	Male	Female	Total
29 & Under	0	4	4
30-34	18	50	68
35-39	220	617	837
40-44	402	1,094	1,496
45-49	488	1,117	1,605
50-54	500	1,221	1,721
55-59	396	1,299	1,695
60-64	261	1,030	1,291
65 & Up	147	507	654
Total	2,432	6,939	9,371



RETIRED MEMBERS
As of June 30, 2021 for the June 30, 2022 Valuation
Combined TRF Plans

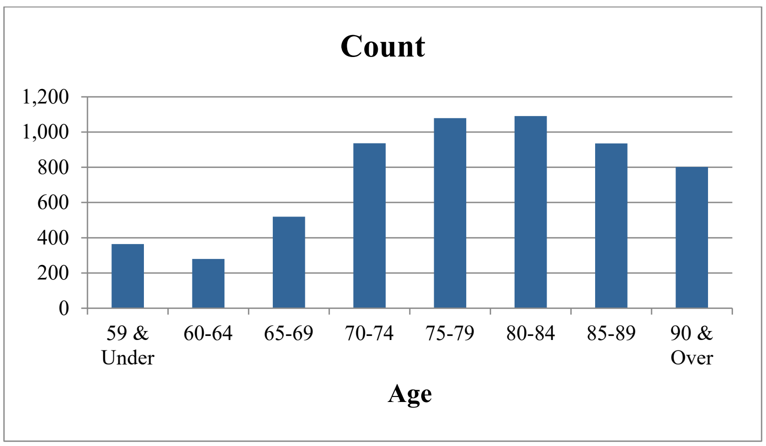
	Count of Members			Annual Benefits		
Age	Male	Female	Total	Male	Female	Total
59 & Under	298	826	1,124	$ 7,596,273	$ 19,645,328	$ 27,241,601
60-64	1,188	3,615	4,803	29,284,488	80,825,723	110,110,211
65-69	2,908	8,389	11,297	75,401,797	188,430,683	263,832,480
70-74	4,480	11,588	16,068	116,134,312	253,205,081	369,339,393
75-79	3,767	7,100	10,867	90,116,023	139,254,266	229,370,289
80-84	2,338	3,815	6,153	52,730,798	68,545,460	121,276,258
85-89	1,269	2,116	3,385	26,602,682	34,434,364	61,037,046
90 & Over	704	1,514	2,218	13,819,285	20,494,962	34,314,247
Total	16,952	38,963	55,915	$ 411,685,658	$ 804,835,867	$ 1,216,521,525

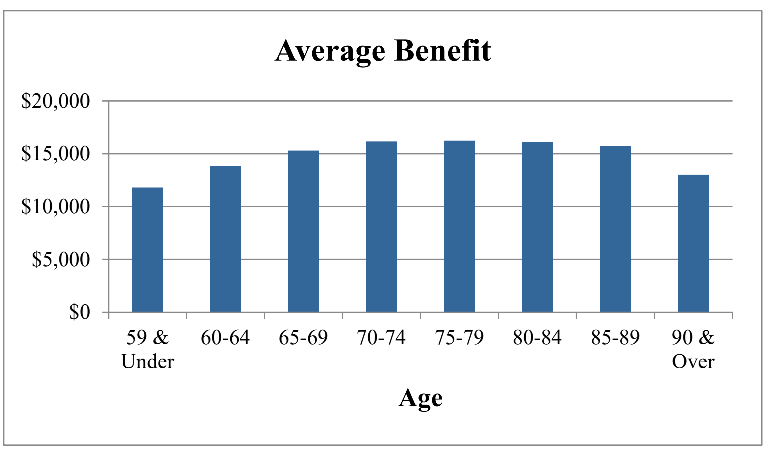




BENEFICIARIES RECEIVING BENEFITS
As of June 30, 2021 for the June 30, 2022 Valuation
Combined TRF Plans

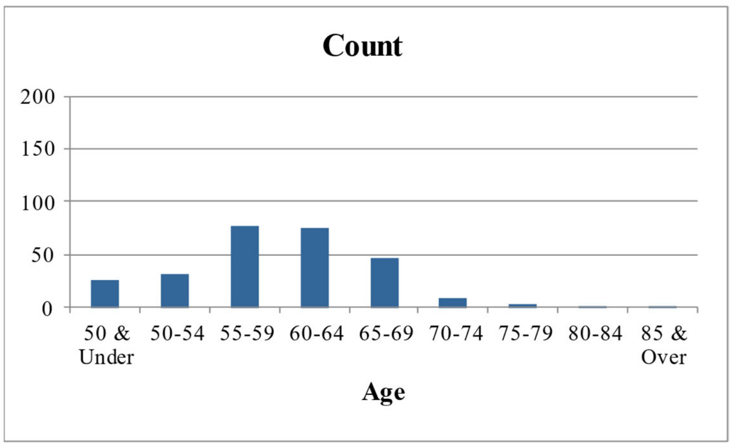
	Count of Members			Annual Benefits		
Age	Male	Female	Total	Male	Female	Total
59 & Under	154	210	364	$ 1,653,204	$ 2,457,343	$ 4,110,547
60-64	115	165	280	1,436,766	2,388,024	3,824,790
65-69	204	315	519	2,724,821	5,261,982	7,986,803
70-74	338	598	936	4,917,634	10,337,426	15,255,060
75-79	333	746	1,079	4,722,772	13,285,709	18,008,481
80-84	238	853	1,091	3,268,990	14,578,918	17,847,908
85-89	181	754	935	2,181,758	12,280,523	14,462,281
90 & Over	112	690	802	1,148,448	9,909,896	11,058,344
Total	1,675	4,331	6,006	$ 22,054,393	$ 70,499,821	$ 92,554,214

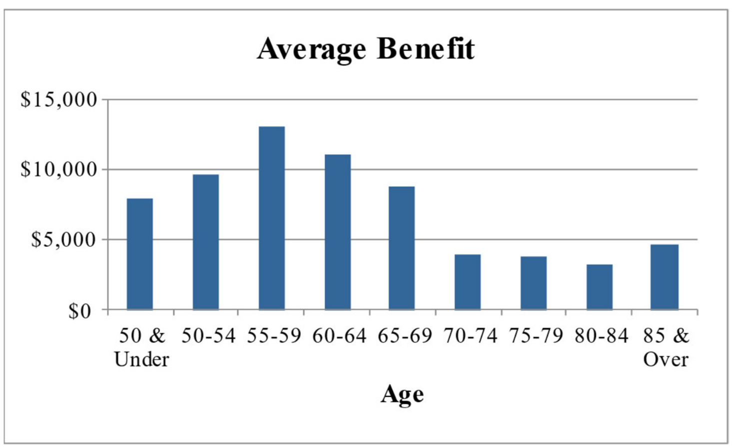




DISABLED MEMBERS
As of June 30, 2021 for the June 30, 2022 Valuation
Combined TRF Plans

	Count of Members			Annual Benefits		
Age	Male	Female	Total	Male	Female	Total
50 & Under	5	21	26	$ 39,300	$ 167,977	$ 207,277
50-54	8	23	31	79,145	219,117	298,262
55-59	22	55	77	309,748	691,652	1,001,400
60-64	12	64	76	113,740	724,467	838,207
65-69	8	38	46	103,817	300,359	404,176
70-74	3	6	9	14,022	21,992	36,014
75-79	1	3	4	3,637	11,771	15,408
80-84	0	1	1	0	3,271	3,271
85 & Over	0	1	1	0	4,598	4,598
Total	59	212	271	$ 663,409	$ 2,145,204	$ 2,808,613





MEMBERS AND BENEFICIARIES RECEIVING BENEFITS
As of June 30, 2021 for the June 30, 2022 Valuation
1996 Account

Schedule of Average Benefit Payments [1,2]

	Years of Credited Service						
For the Year Ended June 30, 2022	< 10	10 - 14	15 - 19	20 - 24	25 - 29	30 +	Total
Average Monthly Defined Benefit	$156	$494	$807	$1,190	$1,609	$2,366	$1,343
Average Monthly DC Annuity[3]	$65	$153	$242	$337	$496	$749	$394
Average Final Average Salary[4]	$38,450	$46,978	$56,534	$63,875	$69,671	$78,720	$63,983
Number of Benefit Recipients	181	1,131	2,311	1,812	1,311	2,289	9,035

[1] Calculated using the prior year census data, adjusted for certain activity during the fiscal year.
[2] Members with less than 10 years of service are primarily members receiving a disability benefit.
[3] This represents those retirees who elected to receive their DC account as a supplemental monthly payment in addition to the monthly Defined Benefit payment.
[4] Excludes the 140 in-pay members who are missing a final average salary in the data.

MEMBERS AND BENEFICIARIES RECEIVING BENEFITS
As of June 30, 2021 for the June 30, 2022 Valuation
1996 Account

Schedule of Benefit Recipients by Type of Benefit Option [1,2]

	Number of Recipients by Benefit Option							
Amount of Monthly Benefit (in dollars)	5-Year Certain & Life	Straight Life	Joint with 100% Survivor Benefits	Joint with Two-Thirds Survivor Benefits	Joint with One-Half Survivor Benefits	Survivors	Disability	Total Benefit Recipients
1 - 500	286	272	187	39	44	109	59	996
501 - 1,000	661	653	546	126	201	137	74	2,398
1,001 - 1,500	526	636	518	158	227	67	24	2,156
1,501 - 2,000	363	425	365	124	159	45	6	1,487
2,001 - 2,500	202	220	262	71	127	31	1	914
2,501 - 3,000	77	144	145	44	56	13	0	479
Over 3,000	109	139	190	68	85	12	2	605
Total	2,224	2,489	2,213	630	899	414	166	9,035

[1] Calculated using the prior year census data, adjusted for certain activity during the fiscal year.
[2] Members who elected Social Security Integration were included in their selected benefit option of either 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, or Joint With One-Half Survivor Benefits.

MEMBERS AND BENEFICIARIES RECEIVING BENEFITS
As of June 30, 2021 for the June 30, 2022 Valuation
1996 Account

Schedule of Retirees and Beneficiaries [1]

	Added to Rolls		Removed from Rolls		Rolls - End of Year				
	Number	Annual Benefits[2]	Number	Annual Benefits[2]	Number	Total Annual Benefits[2]	Percent Change In Total Annual Benefits	Average Annual Benefit	Percent Change In Average Annual Benefit
2022 [3]	824	$14,602	76	$1,044	9,035	$157,030	9.3%	$17,380	0.2%
2021 [3]	760	12,813	69	977	8,287	143,690	8.9	17,339	(0.2)
2020 [3]	619	10,236	64	927	7,596	132,004	7.4	17,378	(0.5)
2019 [3]	798	13,285	46	566	7,041	122,935	11.3	17,460	(0.6)
2018 [3]	710	9,562	217	1,002	6,289	110,423	8.1	17,558	(0.4)
2017 [3]	855	12,106	36	564	5,796	102,178	12.1	17,629	(3.8)
2016 [3]	858	16,075	17	305	4,977	91,160	20.4	18,316	0.1
2015 [3]	499	9,101	28	353	4,136	75,714	12.7	18,306	(0.1)
2014 [3]	0	12,216	0	251	3,665	67,169	0.0	18,327	0.0
2013	712	12,216	18	251	3,665	67,169	21.1	18,327	(1.8)

[1] Dollar amounts are in thousands except for the average annual benefit.
[2] Annual benefits includes members selecting an annuity for their DC account. 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.

Definitions

Fiscal year	Twelve month period ending June 30.
Participation	Any full-time Indiana teachers in a public school corporation, certain INPRS employees, and some employees in charter schools, innovation schools, turnaround schools and public universities who were hired after June 30, 1995.
Average annual compensation	Average of highest five years of compensation. Years do not need to be consecutive.
Member contributions	All Fund members are required by state law to contribute 3% of salary contributions to their Defined Contribution Account. These 3% contributions are generally "picked up" by the employer and contributed on a pre-tax basis on behalf of the employee. Extra voluntary contributions by the member are also possible, but on a post-tax basis. At retirement, there are six alternatives for receiving the proceeds of this account, including lump sums, full and partial rollovers, full and partial annuitization of the balance, and deferred distribution.
Minimum pension benefit	The minimum pension benefit paid to a regularly retired member receiving an unreduced pension benefit is $185 per month effective July 1, 2017 per SEA 46.

Eligibility for Benefits

Deferred vested	Ten years of service. Benefit commences at regular or early retirement eligibility.
Disability retirement	
Regular disability benefit	Five years of service.
Disability retirement benefit	Five years of service and determined to be disabled by the Social Security Administration. Annual verification of Social Security disability is required.
Early retirement	Age 50 with 15 years of service.
Normal retirement	Age 65 with ten years of service, or age 60 with 15 years of service, or if age is at least 55 and the sum of age plus credited service is at least 85.
Pre-retirement death	10 years of service. Spouse to whom member had been married for two or more years is automatically eligible, or a dependent may be designated as beneficiary.

Monthly Benefits Payable

Normal retirement	State pension equal to total service times 1.1% of Average Annual Compensation. Beginning July 1, 2017, the minimum pension benefit is $185 per month.
Early retirement	State pension is computed as regular retirement benefit, but reduced for each month between age at early retirement and attainment of age 65. The age reduction factor is calculated as the sum of the following: • 1/10 of 1% for each month from age 60 to 65. • 5/12 of 1% for each month from age at early retirement to 60.
Deferred retirement	Computed as a regular retirement benefit with state pension based on service and Average Annual Compensation at termination.
Disability	
Regular disability benefit	$125 per month plus $5 per month for each year of service credit over five years.
Disability retirement benefit	Computed as a regular retirement benefit using creditable service to the date of disability and without reduction for early retirement. The minimum benefit is $180 per month.
Pre-retirement death	The spouse or dependent beneficiary is entitled to receive the monthly life benefit payable immediately under the assumption that the member retired on the later of age 50 or the date before the date of death and elected the joint and full survivor option. If eligible for normal retirement at death, the minimum pension benefit is $185 per month.
Cost-of-Living-Adjustments	The employer-funded monthly pension benefits for members in pay status are increased periodically to preserve purchasing power that is diminished due to inflation. Such increases are not guaranteed by Statute and will only be provided by legislative action. A "13^{th} check" was paid to each member in pay status during fiscal year 2018, 2019, 2020 and 2021. The amount of the 13th check varied based on the years of creditable service the member had earned prior to retirement. Legislation passed in the 2018 legislative session creates a funding mechanism to provide for future benefit increases or 13^{th} checks. The INPRS Board has the authority to have

	employers contribute up to 1% of member pay into the fund. Increases or payments are made upon passed legislation subject to the availability of funds to provide the benefit. Legislation passed in 2021 provided for a 1% increase effective January 1, 2022 and no increase through the remainder of the biennium.
Forms of payment	The normal form of benefit payment (Option A-1) is a single life annuity with a five-year certain period. There are five optional forms of payment available, as listed below. Additionally, members retiring between ages 50 and 62 may integrate their pension benefit with their Social Security benefit by choosing Social Security Integration (Option A-4) in conjunction with the normal form or any other optional form selected. Optional forms of payment are calculated on an actuarially equivalent basis.
Additional Forms of Payment	
Option A-2:	Straight Life benefit with no certain period
Option A-3:	Modified Cash Refund Annuity (operates in conjunction with the Defined Contribution Account)
Option B-1:	100% Survivorship
Option B-2:	66 2/3% Survivorship
Option B-3:	50% Survivorship
	State law provides for actuarially-adjusted and re-calculated benefits based on a new optional form election in the event of the death of the member’s spouse after retirement.

Changes in Plan Provisions since the Prior Year

None.

ACTUARIAL METHODS

1. Actuarial Cost Method

The actuarial cost method is 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.

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 payments 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, gains and losses occurring from census experience different than assumed and assumption changes are amortized into expense over the average expected future service of all plan participants. Gains and losses occurring from investment experience different than assumed are amortized into expense over a 5-year period. The effect of plan changes on the plan liability are fully recognized in expense in the year in which they occur.

Member census data as of June 30, 2021 was used in the valuation and adjusted, where appropriate, to reflect changes between June 30, 2021 and June 30, 2022. The valuation results from June 30, 2021 were rolled-forward to June 30, 2022 to reflect benefit accruals during the year less benefits paid.

2. COLA Surcharge

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

3. Asset Valuation Method

Actuarial Value of Assets is equal to a five-year smoothing of gains and losses on the Market Value of Assets subject to a 20% corridor.

4. Anticipated Payroll

The Anticipated Payroll for the fiscal year beginning July 1, 2022 is equal to the actual payroll during the year ending June 30, 2022, increased with one year of salary scale.

5. Employer Contribution Rates

Based on the assumptions and methods previously described, an actuarially determined contribution rate is computed for each employer. The Board considers this information and has ultimate authority in setting the employer contribution rates.

Changes in Methods since the Prior Year

None.

ACTUARIAL ASSUMPTIONS

Valuation Date June 30, 2022

Economic Assumptions

1. Investment return — 6.25% per year, compounded annually (net of administrative and investment expenses)

2. Inflation — 2.00% per year

3. Salary increase

Service	Wage Inflation	Merit	Salary Increase
0-1	2.65%	9.25%	11.90%
2	2.65%	4.25%	6.90%
3	2.65%	2.75%	5.40%
4-14	2.65%	1.75%	4.40%
15	2.65%	1.50%	4.15%
16	2.65%	1.25%	3.90%
17	2.65%	1.00%	3.65%
18	2.65%	0.75%	3.40%
19	2.65%	0.50%	3.15%
20	2.65%	0.25%	2.90%
21+	2.65%	0.00%	2.65%

4. Cost-of-Living Adjustment (COLA) — Members in pay were granted a 1.00% COLA effective January 1, 2022 for the next biennium. Thereafter, the following COLAs, compounded annually, were assumed:

0.4% beginning on January 1, 2024
0.5% beginning on January 1, 2034
0.6% beginning on January 1, 2039

Demographic Assumptions

1. Mortality — Pub-2010 Public Retirement Plans Mortality Tables (Amount-Weighted) with a fully generational projection of mortality improvements using SOA Scale MP-2019.

Healthy Employees – Teacher Employee table with a 1 year set forward for males and a 1 year set forward for females.

Retirees – Teacher Retiree table with a 1 year set forward for males and a 1 year set forward for females.

Beneficiaries – Contingent Survivor table with no set forward for males and a 2 year set forward for females.

Disableds – General Disabled table with a 140% load.

2. Disability

Age	Sample Rates
<=36	0.005%
40	0.009%
45	0.014%
50	0.034%
55	0.061%
56-65	0.070%
66+	0.000%

3. Retirement

Age	Eligible for **Reduced** Benefit	Eligible for **Unreduced** Benefit
50-53	2.0%	N/A
54	5.0%	N/A
55-56	5.0%	15%
57	6.5%	15%
58	8.0%	15%
59	12.0%	15%
60	N/A	15%
61	N/A	20%
62	N/A	25%
63	N/A	30%
64	N/A	35%
65-74	N/A	40%
75+	N/A	100%

Active members: 30% commence benefit immediately (reduced for early retirement, if applicable). 70% defer to earliest unreduced retirement date.

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

4. Termination

Service	Male	Female
0	15.00%	12.50%
1	13.00%	11.50%
2	11.00%	10.50%
3	9.00%	9.50%
4	8.00%	8.50%
5	7.00%	7.50%
6	6.00%	6.50%
7	5.00%	5.50%
8	4.50%	5.00%
9	4.00%	4.50%
10	3.75%	4.00%
11	3.50%	3.50%
12	3.25%	3.25%
13	3.00%	3.00%
14	2.75%	2.75%
15	2.50%	2.50%
16+	2.25%	2.25%

Other Assumptions

1. Form of payment — 100% of members are assumed to elect the normal form of benefit payment (Option A-1), a single life annuity with a five-year certain period.

2. Marital status

   a. Percent married — 80% of male members and 75% of female members are assumed to be married and or to have a dependent beneficiary.

   b. Spouse's age — 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.

3. Decrement timing — Decrements are assumed to occur at the beginning of the year.

4. Miscellaneous adjustments — For active members, the Average Annual Compensation was increased by $200 for additional wages received upon termination, such as severance or unused sick leave.

Changes in Assumptions since the Prior Year

None.

Data Adjustments

Active and retired member data is reported as of June 30. Member census data as of June 30, 2021 was used in the valuation and adjusted, where appropriate, to reflect changes between June 30, 2021 and June 30, 2022. Standard actuarial roll-forward techniques were then used to project the total pension liability computed as of June 30, 2021 to the June 30, 2022 measurement date.

The member census data and the asset information for this valuation were furnished as of June 30, 2021. 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.

Actives and inactives with no date of birth are assumed to be the average age of the member population with their respective status. Additionally, payroll for new hires is annualized, and actives missing a salary are assumed to earn the average active salary amount. For members reported with no gender, the member is assumed to be female.

Other Technical Valuation Procedures

Salary increases are assumed to apply to annual amounts.

Decrements are assumed to occur at the beginning of the year. Standard adjustments are made for multiple decrements.

No actuarial liability is included for participants who terminated without being vested prior to the valuation date.

Accrued Service	Service credited under the system that was rendered before the date of the actuarial valuation.
Actuarial Assumptions	Estimates of future experience with respect to demographic or economic events. Demographic assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.
Actuarial Cost Method	A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of retirement system benefits between future normal cost and actuarial accrued liability. Sometimes referred to as the "actuarial funding method."
Actuarial Equivalent	A single amount or series of amounts of equal value to another single amount or series of amounts computed on the basis of a given set of actuarial assumptions.
Actuarial Accrued Liability	The difference between the actuarial present value of system benefits and the actuarial value of future normal costs. Also referred to as "accrued liability" or "actuarial liability."
Actuarial Present Value	The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest and by probabilities of payment.
Amortization	Paying off an interest-discounted amount with periodic payments of interest and principal, as opposed to paying off with lump sum payment.
Experience Gain (Loss)	The difference between actual experience and actuarial assumptions anticipated experience during the period between two actuarial valuation dates.
Normal Cost	The actuarial present value of retirement system benefits allocated to the current year by the actuarial cost method.
Unfunded Actuarial Accrued Liability	The difference between actuarial liability and the actuarial value of assets. Sometimes referred to as "unfunded accrued liability" or "unfunded liability". Most retirement systems have unfunded actuarial liability. They arise anytime new benefits are added and anytime an actuarial loss is realized.