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GASB STATEMENT NO. 68 REPORT

FOR THE

IOWA PUBLIC EMPLOYEES'

RETIREMENT SYSTEM

MEASUREMENT DATE: JUNE 30, 2021

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January 11, 2022

Ms. Darla Iverson
Chief Financial Officer
Iowa Public Employees' Retirement System
7401 Register Drive
Des Moines, IA 50321

Dear Ms. Iverson:

Presented in this report is information to assist the Iowa Public Employees' Retirement System in providing information required under the Governmental Accounting Standards Board (GASB) Statement No. 68 to participating employers. GASB Statement No. 68 establishes accounting and financial reporting requirements for governmental employers who provide pension benefits to their employees through a trust. This report has been prepared as of June 30, 2021, the Measurement Date.

Much of the information presented in this report is based on the results of the GASB 67 report, prepared for the June 30, 2021 Measurement Date, for the Iowa Public Employees' Retirement System. See that report, which was issued November 4, 2021, for more information on the member data, actuarial assumptions and methods, and calculation methodology used in developing the total pension liability and other results in the GASB 67 report.

To the best of our knowledge, the information contained in this report is complete and accurate. Please note that the allocation of the proportionate share of the collective Net Pension Liability, Pension Expense, and Deferred Inflows and Outflows to participating employers under GASB 68 will be performed by the Iowa Public Employees' Retirement System and, therefore, is not included in this report.

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. 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. The calculations are based on the current provisions of the System and on actuarial assumptions that are internally consistent and individually reasonable based on the actual experience of the System. In addition, the calculations were completed in compliance with applicable law and, in our opinion, meet the requirements of GASB 68.

These results are only for financial reporting and may not be appropriate for funding purposes or other types of analysis. Calculations for purposes other than satisfying the requirements of GASB 68 may produce significantly different results. Future actuarial results may differ significantly from the current results presented in this report due to such factors as changes in plan experience or changes in economic or demographic assumptions.

We, Patrice A. Beckham, FSA, and Brent A. Banister, FSA, are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein. We are available to answer any questions on the material contained in this report or to provide explanations or further details as may be appropriate.

Respectfully submitted,

Patrice Beckham

Brent A. Banister

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Principal and Consulting Actuary

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

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IOWA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

SECTION I - SUMMARY OF PRINCIPAL RESULTS

ALL MEMBERSHIP GROUPS

Valuation Date (VD):	June 30, 2021
Prior Measurement Date:	June 30, 2020
Measurement Date (MD):	June 30, 2021
Membership Data for Valuation:	
Retirees and Beneficiaries	128,589
Inactive Vested Members	25,279
Inactive Nonvested Members	53,236
Active Members	173,304
Total	380,408
Single Equivalent Interest Rate (SEIR):	
Long-Term Expected Rate of Return	7.00%
Municipal Bond Index Rate at Prior Measurement Date	2.19%
Municipal Bond Index Rate at Measurement Date	2.13%
Year in which Fiduciary Net Position is Projected to be Depleted	N/A
Single Equivalent Interest Rate at Prior Measurement Date	7.00%
Single Equivalent Interest Rate at Measurement Date	7.00%
Collective Net Pension Liability:	
Total Pension Liability (TPL)	$42,544,648,750
Fiduciary Net Position (FNP)	42,889,875,682
Net Pension Liability/(Asset) (NPL = TPL – FNP)	($345,226,932)
FNP as a percentage of TPL	100.81%
Collective Pension Expense:	($545,155,135)
Collective Deferred Outflows of Resources:	$1,021,713,524
Collective Deferred Inflows of Resources:	$6,391,653,176

SECTION II – INTRODUCTION

The Governmental Accounting Standards Board issued Statement No. 68 (GASB 68), *"Accounting and Financial Reporting For Pensions"* in June 2012. GASB 68's effective date for employers was the first fiscal year beginning after June 15, 2014. The Iowa Public Employees' Retirement System (System) is a cost-sharing, multiple-employer defined benefit pension plan as defined by GASB 68.

This report, prepared as of June 30, 2021 (the Measurement Date), presents information to assist the Iowa Public Employees' Retirement System in providing the required information under GASB 68 to participating employers. Much of the material provided in this report, including the Net Pension Liability, is based on the results of the GASB 67 report for the Iowa Public Employees' Retirement System, which was issued November 4, 2021. See that report for more information on the member data and actuarial assumptions and methods used in developing the GASB 67 results.

GASB 68 requires the inclusion of a proportionate share of the Net Pension Liability (NPL) on each participating employer's balance sheet and to determine and show a proportionate share of a Pension Expense (PE) in the Notes to Financial Statements that may bear little relationship to the funding requirements for the Iowa Public Employees' Retirement System. In fact, it is possible in some years for the NPL to be an asset or the PE to be an income item.

The NPL is set equal to the Total Pension Liability (TPL) minus the Fiduciary Net Position (FNP). The benefit provisions recognized in the calculation of the TPL are summarized in Appendix B. The Iowa Public Employees' Retirement System is a cost-sharing multiple-employer plan so the NPL and PE are allocated among the participating employers. Those amounts, which are needed for the employers' financial statements, will be determined by the Iowa Public Employees' Retirement System.

PE includes amounts for Service Cost (the Normal Cost under Entry Age Normal for the year), interest on the TPL, employee contributions, administrative expenses, other cash flows during the year, recognition of increases/decreases in the TPL due to changes in the benefit structure, actual versus expected experience, actuarial assumption changes, and recognition of investment gains/losses. The actual experience and assumption change impacts are recognized over the average expected remaining service life of the System membership as of the beginning of the measurement period, while investment gains/losses are recognized equally over five years. The development of the PE is shown in Section III. The unrecognized portions of each year's experience, assumption changes and investment gains/losses are used to develop Deferred Inflows and Outflows of Resources which also must be included on the employer's balance sheet.

Among the items needed for the TPL calculation is a discount rate, as defined by GASB, or a Single Equivalent Interest Rate (SEIR). To determine the SEIR, the FNP must be projected into the future for as long as there are anticipated benefits payable under the plan's provision applicable to the membership and beneficiaries of the System on the Measurement Date. If the FNP is not projected to be depleted at any point in the future, the long-term expected rate of return on plan investments expected to be used to finance the benefit payments may be used as the SEIR.

If, however, the FNP is projected to be depleted at a future measurement date, the SEIR is determined as the single rate that will generate a present value of benefit payments equal to the sum of the present value determined by discounting all projected benefit payments through the date of depletion by the long-term expected rate of return, and the present value determined by discounting those benefits after the date of depletion by a 20-year tax-exempt municipal bond (rating AA/Aa or higher) rate. The rate used, if necessary, for this purpose is the monthly average of the Bond Buyers General Obligation 20-year Municipal Bond Index Rate (formerly published monthly by the Board of Governors of the Federal Reserve System).

Our calculations indicated that the FNP is not projected to be depleted, so the Municipal Bond Index Rate is not used in the determination of the SEIR. The SEIR is 7.00%, the long-term assumed rate of return on investments in effect at the current and Prior Measurement Dates, and meets the requirements of GASB 67 and 68.

The FNP projections are based upon the Iowa Public Employees' Retirement System's financial status on the Measurement Date, the indicated set of methods and assumptions, and the requirements of GASB 68. As such, the FNP projections are not reflective of the cash flows and asset accumulations that would occur on an ongoing plan basis, reflecting the impact of future members. Therefore, the results of this test do not necessarily indicate whether or not the fund will actually run out of money, the financial condition of the System, or the System's ability to make benefit payments in future years.

Although all the assets of the Iowa Public Employees' Retirement System are held in one trust, there are three distinct membership groups (Regular Membership, the Sheriffs and Deputies group, and the Protection Occupation group) for whom separate contribution rates are determined each year. Paragraph 49 of GASB 68 provides "to the extent that different contribution rates are assessed based on separate relationships that constitute the NPL, the determination of the employer's proportionate share of the collective NPL should be made in a manner that reflects those separate relationships". Therefore, the calculations of the NPL, PE and Deferred Inflows and Outflows were performed separately for each of the membership groups: Regular Membership, Sheriffs and Deputies and Protection Occupation. For informational purposes only, the results for each group were added together to determine the collective NPL, collective PE and collective Deferred Inflows and Outflows.

The sections that follow provide the results of all the required collective calculations, presented in the order laid out in GASB 68 for note disclosure and Required Supplementary Information (RSI). **The Iowa Public Employees' Retirement System will prepare the calculation of the proportionate share of the collective NPL, collective Pension Expense and collective Deferred Inflows and Outflows for each participating employer.**

SECTION III – PENSION EXPENSE

As noted earlier, the collective Pension Expense (PE) consists of a number of different items. GASB 68 refers to the first item as Service Cost, which is the Normal Cost using the Entry Age Normal (EAN) actuarial cost method. The second item is interest on the TPL at 7.00%, the SEIR in effect as of the Prior Measurement Date.

The next three items refer to any changes that occurred in the TPL due to:

- benefit changes,
- actual versus expected experience, or
- changes in actuarial assumptions or other inputs.

Benefit changes, which are recognized immediately, will increase PE if there is a benefit improvement for existing System members, or decrease PE if there is a benefit reduction. For the year ended June 30, 2021, there were no benefit changes to be recognized.

The next item to be recognized is the portion of current year changes in TPL due to actual versus expected experience for the year. The portion to recognize in the current year is determined by spreading the total change over the average expected remaining service life of the entire System membership at the beginning of the measurement period. The average expected remaining service life of active members is the average number of years the active members are expected to remain in covered employment. At the beginning of the measurement period, this number is 11.82 years. The average expected remaining service life of the inactive members is zero. Therefore, the recognition period is the weighted average of these two amounts, or 5.38 years.

The last item under changes in TPL is changes in actuarial assumptions or other inputs. There were no changes in the actuarial assumptions since the Prior Measurement Date. If there was such a change, the change would be recognized over the average expected remaining service life of the entire System membership, using the same approach that applied to experience gains and losses as described earlier.

Employee contributions, including service purchases, and projected earnings on the FNP at the long-term rate of return are subtracted from the amount determined thus far. One-fifth of the current-period differences between projected and actual earnings on the FNP is recognized in the PE.

The current year portions of previously determined experience, assumption and earnings amounts, recognized as Deferred Outflows of Resources and Deferred Inflows of Resources are included next. Deferred Outflows of Resources are added to the PE while Deferred Inflows of Resources are subtracted from the PE. Finally, administrative expenses and other miscellaneous items are included.

The calculation of the collective PE for the year ended June 30, 2021 is shown in the following table.

Collective Pension Expense
For the Year Ended June 30, 2021

ALL MEMBERSHIP GROUPS

Service Cost at end of year	$930,439,635
Interest on the Total Pension Liability	2,791,843,382
Current-period benefit term changes	0
Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	31,365,976
Expensed portion of current-period assumption changes	0
Employee contributions including service purchases	(554,310,862)
Projected earnings on plan investments	(2,346,838,726)
Expensed portion of current-period difference between projected and actual earnings on plan investments	(1,511,227,052)
Administrative expenses	13,851,969
Recognition of beginning Deferred Outflows of Resources	551,045,233
Recognition of beginning Deferred Inflows of Resources	(451,324,690)
Total Pension Expense	**($545,155,135)**

Note: System experience and assumption changes are recognized over the average expected remaining service life for all System members, which is 5.38 years.

Pension Expense
For the Year Ended June 30, 2021

REGULAR MEMBERS

Service Cost at end of year	$848,205,709
Interest on the Total Pension Liability	2,614,411,111
Current-period benefit term changes	0
Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	23,946,933
Expensed portion of current-period assumption changes	0
Employee contributions including service purchases	(516,768,970)
Projected earnings on plan investments	(2,169,745,724)
Expensed portion of current-period difference between projected and actual earnings on plan investments	(1,397,255,442)
Administrative expenses	13,258,679
Recognition of beginning Deferred Outflows of Resources	513,719,718
Recognition of beginning Deferred Inflows of Resources	(417,189,549)
Total Pension Expense	**($487,417,535)**

Note: System experience and assumption changes are recognized over the average expected remaining service life for all System members, which is 5.38 years.

Pension Expense
For the Year Ended June 30, 2021

SHERIFFS AND DEPUTIES

Service Cost at end of year	$21,701,020
Interest on the Total Pension Liability	52,244,786
Current-period benefit term changes	0
Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	2,108,010
Expensed portion of current-period assumption changes	0
Employee contributions including service purchases	(11,835,731)
Projected earnings on plan investments	(52,097,781)
Expensed portion of current-period difference between projected and actual earnings on plan investments	(33,394,474)
Administrative expenses	110,367
Recognition of beginning Deferred Outflows of Resources	11,482,482
Recognition of beginning Deferred Inflows of Resources	(14,154,815)
Total Pension Expense	**($23,836,136)**

Note: System experience and assumption changes are recognized over the average expected remaining service life for all System members, which is 5.38 years.

Pension Expense
For the Year Ended June 30, 2021

PROTECTION OCCUPATION

Service Cost at end of year	$60,532,906
Interest on the Total Pension Liability	125,187,485
Current-period benefit term changes	0
Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	5,311,033
Expensed portion of current-period assumption changes	0
Employee contributions including service purchases	(25,706,161)
Projected earnings on plan investments	(124,995,221)
Expensed portion of current-period difference between projected and actual earnings on plan investments	(80,577,136)
Administrative expenses	482,923
Recognition of beginning Deferred Outflows of Resources	25,843,033
Recognition of beginning Deferred Inflows of Resources	(19,980,326)
Total Pension Expense	**($33,901,464)**

Note: System experience and assumption changes are recognized over the average expected remaining service life for all System members, which is 5.38 years.

SECTION IV – NOTES TO FINANCIAL STATEMENTS

The material presented herein will follow the order presented in GASB 68. Paragraph numbers are provided for ease of reference. Amounts are shown in the aggregate. The Iowa Public Employees' Retirement System will determine the proportionate share of certain amounts for individual employers as required by GASB 68.

Paragraph 74: The information required is to be prepared by the Iowa Public Employees' Retirement System and/or the individual employer.

Paragraph 75: The information required is to be prepared by the individual employer.

Paragraphs 76(a) – (d): The information required is to be supplied by the Iowa Public Employees' Retirement System.

Paragraph 77: This paragraph requires information to be disclosed regarding the actuarial assumptions and other inputs used to measure the TPL. The complete set of actuarial assumptions and other inputs utilized in developing the TPL are outlined in Appendix C. The TPL as of June 30, 2021 was determined based on an actuarial valuation prepared as of June 30, 2021, using the following key actuarial assumptions and other inputs:

Rate of Inflation	2.60 percent
Rate of salary increases, including inflation	3.25 to 16.25 percent
Long-term Rate of Return, net of investment expense, including inflation	7.00 percent
Municipal Bond Index Rate	2.13 percent
Year FNP is projected to be depleted	N/A
Single Equivalent Interest Rate, net of investment expense, including inflation	7.00 percent
Post-retirement benefit increases	1) Pre 7/1/1990 retirees: Dividends are assumed to increase 2.60% per year. 2) Post 6/30/1990 retirees: A Favorable Experience Dividend (FED) reserve account exists to help offset the negative effects of post-retirement inflation. As of the Measurement Date, there was no FED reserve account balance and no future transfers were expected to occur. Therefore, no post-retirement benefit increase was reflected for this group in the TPL.

Rates of Mortality	Mortality rates were based on the RP-2014 Generational Mortality Tables, with age setbacks and age set forwards as well as other adjustments based on different membership groups. Future mortality improvements are anticipated using Projection Scale MP-2017. Different adjustments apply to pre-retirement, post-retirement, and post-disability mortality tables. See Appendix C for more detailed descriptions.

The demographic actuarial assumptions used in the valuation are based on the results of the actuarial experience study, dated June 28, 2018, which covered the four-year period ending June 30, 2017. At the Investment Board's direction, the experience study of the System's economic assumptions, including the long-term rate of return, was accelerated a year resulting in a full review of the economic assumptions in early 2017. The findings of the experience study on economic assumptions, along with the resulting recommendations, are included in the report dated March 24, 2017.

Paragraph 78

(a) Discount rate (SEIR): The discount rate used to measure the TPL at June 30, 2021 was 7.00%. There was no change since the Prior Measurement Date.

(b) Projected cash flows: The projection of cash flows used to determine the discount rate assumed that plan contributions from employees and employers will be made according to the current Contribution Rate Funding Policy (see Appendix D) and that all actuarial assumptions are met in the future:

a. Employee contribution rate: 40% of the Required Contribution Rate for Regular and Protection Occupation membership. 50% of the Required Contribution Rate for Sheriffs and Deputies. See Appendix B for more detail.
b. Employer contribution rate: 60% of the Required Contribution Rate for Regular and Protection Occupation membership. 50% of the Required Contribution Rate for Sheriffs and Deputies. See Appendix B for more detail.
c. Administrative expenses in the prior year were projected forward with inflation as an estimate for administrative expenses in the current and future years. The portion of expenses in future years allocated to the current members was based on the proportionate share of covered payroll in each year for the remainder of the existing members to the total covered payroll for all members.

Based on those assumptions, the System's FNP was projected to be available to make all projected future benefit payments of current System members. Therefore, the long-term expected rate of return on System investments of 7.00% was applied to all periods of projected benefit payments to determine the TPL.

The FNP projections are based upon the System's financial status on the Measurement Date, the indicated set of methods and assumptions, and the requirements of GASB 67 and 68. As such, the FNP projections are not reflective of the cash flows and asset accumulations that would occur on an ongoing System basis, reflecting the impact of future members. Therefore, the results of this test do not necessarily indicate whether or not the fund will actually run out of money, the financial condition of the System, or the System's ability to make benefit payments in future years.

(c) Long-term rate of return: The long-term expected return on plan assets is reviewed as part of regular experience studies, generally prepared every four years for the System. The Investment Board elected to accelerate the experience study of the economic assumptions by one year, performing the study in early 2017. That recent analysis of economic assumptions is outlined in a report dated March 24, 2017. Several factors are considered in evaluating the long-term rate of return assumption, including long-term historical data, estimates inherent in current market data, and an analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of investment expense and inflation), along with estimates of variability and correlations for each asset class, were developed by the System's investment consultant. These ranges were combined to develop the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and then adding expected inflation. The capital market assumptions developed by investment consultants are often intended for use over a 10-year investment horizon and are not always useful in setting the long-term rate of return for funding pension plans which covers a longer timeframe. The long-term rate of return assumption is intended to be a long-term assumption (30 to 50 years) and is not expected to change absent a significant change in the asset allocation, a change in the inflation assumption, or a fundamental change in the market that alters expected returns in future years.

(d) Municipal bond rate: A municipal bond rate was not used in determining the discount rate. If it were required, the rate would be 2.13% on the Measurement Date.

(e) Periods of projected benefit payments: Projected future benefit payments for all current plan members were projected through 2120.

(f) Assumed asset allocation: This information will be supplied by the System.

(g) Sensitivity analysis: This paragraph requires disclosure of the sensitivity of the NPL to changes in the discount rate. The following presents the collective NPL of the System, calculated using the discount rate of 7.00 percent, as well as what the System's NPL would be if it were calculated using a discount rate that is 1-percentage-point lower (6.00 percent) or 1-percentage-point higher (8.00 percent) than the current rate.

	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
All Membership Groups			
Total Pension Liability	$47,716,591,162	$42,544,648,750	$38,210,696,975
Fiduciary Net Position	$42,889,875,682	$42,889,875,682	$42,889,875,682
Net Pension Liability/(Asset)	$4,826,715,480	($345,226,932)	($4,679,178,707)
Regular Members			
Total Pension Liability	$44,599,569,526	$39,777,935,943	$35,737,100,710
Fiduciary Net Position	$39,637,744,850	$39,637,744,850	$39,637,744,850
Net Pension Liability/(Asset)	$4,961,824,676	$140,191,093	($3,900,644,140)
Sheriffs and Deputies			
Total Pension Liability	$918,541,168	$816,703,678	$731,477,772
Fiduciary Net Position	$957,673,108	$957,673,108	$957,673,108
Net Pension Liability/(Asset)	($39,131,940)	($140,969,430)	($226,195,336)
Protection Occupation			
Total Pension Liability	$2,198,480,468	$1,950,009,129	$1,742,118,493
Fiduciary Net Position	$2,294,457,724	$2,294,457,724	$2,294,457,724
Net Pension Liability/(Asset)	($95,977,256)	($344,448,595)	($552,339,231)

Paragraph 79: The required information will be supplied by the Iowa Public Employees' Retirement System.

Paragraph 80:

(a)-(b) This information will be supplied by the Iowa Public Employees' Retirement System.

(c) The Measurement Date of the collective NPL is June 30, 2021. The TPL as of June 30, 2021 was determined based on the June 30, 2021 actuarial funding valuation report, dated October 27, 2021.

(d) There were no changes in the actuarial assumptions since the Prior Measurement Date.

(e) There was no change in the benefit terms that affected measurement of the TPL since the Prior Measurement Date.

(f) The information will be supplied by the Iowa Public Employees' Retirement System.

(g) Please see Section III for the development of the collective PE. The Iowa Public Employees' Retirement System will provide the proportionate share for each participating employer.

(h)(1) – (3) Since certain expense items are recognized over closed periods each year, the deferred portions of these items must be tracked annually. If the amounts serve to reduce PE they are labeled Deferred Inflows of Resources. If they will increase PE they are labeled Deferred Outflows of Resources. The recognition of these amounts is accomplished on a level dollar basis, with no interest included in the deferred amounts. Experience gains/losses and the impact of changes in actuarial assumptions, if any, are recognized over the average expected remaining service life of the active and inactive System members at the beginning of the measurement period. Investment gains and losses are recognized equally over a five-year period.

Paragraph 53 of GASB 68 states that the employer's proportionate share of PE and Deferred Inflows and Outflows should be determined using the employer's proportionate share of the collective NPL. Since the allocation of the collective NPL will be performed separately for each of the membership groups, Regular Membership, Sheriffs and Deputies and Protection Occupation groups, the PE and Deferred Inflows and Outflows are also allocated by membership group.

The following tables provide a summary of the amounts of the Deferred Outflows of Resources and Deferred Inflows of Resources as of the Measurement Date (June 30, 2021) for each of the three membership groups in the Iowa Public Employees' Retirement System: (1) Regular Membership, (2) Sheriffs and Deputies and (3) Protection Occupation. Per GASB 68, reporting of the differences between projected and actual earnings should be on a net basis, with only one Deferred Outflow or Inflow. This information is provided in the following tables.

Regular Membership	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows/(Inflows) of Resources
Differences between expected and actual experience	$106,665,928	$107,098,862	($432,934)
Changes of assumptions	91,696,956	0	91,696,956
Differences between projected and actual earnings	724,277,564	5,803,631,840	(5,079,354,276)
Total	$922,640,448	$5,910,730,702	($4,988,090,254)

Sheriffs and Deputies	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows/(Inflows) of Resources
Differences between expected and actual experience	$9,423,262	$942,036	$8,481,226
Changes of assumptions	1,540,868	6,614,869	(5,074,001)
Differences between projected and actual earnings	17,136,989	138,537,163	(121,400,174)
Total	$28,101,119	$146,094,068	($117,992,949)

Protection Occupation	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows/(Inflows) of Resources
Differences between expected and actual experience	$26,556,501	$276,840	$26,279,661
Changes of assumptions	3,250,675	384,142	2,866,533
Differences between projected and actual earnings	41,164,781	334,167,424	(293,002,643)
Total	$70,971,957	$334,828,406	($263,856,449)

The following table provides a summary of the amounts of Deferred Outflows of Resources and Deferred Inflows of Resources as of June 30, 2021 for the System in total (all membership groups). This table is provided for summary purposes only.

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows/(Inflows) of Resources
Differences between expected and actual experience	$142,645,691	$108,317,738	$34,327,953
Changes of assumptions	96,488,499	6,999,011	89,489,488
Differences between projected and actual earnings	782,579,334	6,276,336,427	(5,493,757,093)
Total	$1,021,713,524	$6,391,653,176	($5,369,939,652)

The following tables show the Deferred Outflows of Resources and Deferred Inflows of Resources separately to provide additional detail.

Regular Membership - Deferred Outflows of Resources				
	June 30, 2020 (1)	Additions (2)	Recognition (3)	June 30, 2021 (4) = (1) + (2) - (3)
Differences between expected and actual experience				
FY 2016 Base	$ 0	$ 0	$ 0	$ 0
FY 2017 Base	7,706,226	0	5,927,864	1,778,362
FY 2018 Base	0	0	0	0
FY 2019 Base	0	0	0	0
FY 2020 Base	0	0	0	0
FY 2021 Base	0	128,834,499	23,946,933	104,887,566
Total	$ 7,706,226	$ 128,834,499	$ 29,874,797	$ 106,665,928
Changes of assumptions				
FY 2016 Base	$ 0	$ 0	$ 0	$ 0
FY 2017 Base	330,639,771	0	254,338,287	76,301,484
FY 2018 Base	27,423,185	0	12,027,713	15,395,472
FY 2019 Base	0	0	0	0
FY 2020 Base	0	0	0	0
FY 2021 Base	0	0	0	0
Total	$ 358,062,956	$ 0	$ 266,366,000	$ 91,696,956
Differences between projected and actual earnings				
FY 2016 Base	$ 0	$ 0	$ 0	$ 0
FY 2017 Base	0	0	0	0
FY 2018 Base	0	0	0	0
FY 2019 Base	0	0	0	0
FY 2020 Base	965,703,418	0	241,425,854	724,277,564
FY 2021 Base	0	0	0	0
Total	$ 965,703,418	$ 0	$ 241,425,854	$ 724,277,564
Total	$ 1,331,472,600	$ 128,834,499	$ 537,666,651	$ 922,640,448

Regular Membership - Deferred Inflows of Resources								
		June 30, 2020 (1)		Additions (2)		Recognition (3)		June 30, 2021 (4) = (1) + (2) - (3)
Differences between expected and actual experience								
FY 2016 Base	$	5,513,118	$	0	$	5,513,118	$	0
FY 2017 Base		0		0		0		0
FY 2018 Base		54,876,347		0		24,068,574		30,807,773
FY 2019 Base		83,933,026		0		23,980,864		59,952,162
FY 2020 Base		21,020,568		0		4,681,641		16,338,927
FY 2021 Base		0		0		0		0
Total	$	165,343,059	$	0	$	58,244,197	$	107,098,862
Changes of assumptions								
FY 2016 Base	$	0	$	0	$	0	$	0
FY 2017 Base		0		0		0		0
FY 2018 Base		0		0		0		0
FY 2019 Base		0		0		0		0
FY 2020 Base		0		0		0		0
FY 2021 Base		0		0		0		0
Total	$	0	$	0	$	0	$	0
Differences between projected and actual earnings								
FY 2016 Base	$	0	$	0	$	0	$	0
FY 2017 Base		220,436,200		0		220,436,200		0
FY 2018 Base		124,816,467		0		62,408,234		62,408,233
FY 2019 Base		228,302,756		0		76,100,918		152,201,838
FY 2020 Base		0		0		0		0
FY 2021 Base		0		6,986,277,211		1,397,255,442		5,589,021,769
Total	$	573,555,423	$	6,986,277,211	$	1,756,200,794	$	5,803,631,840
Total	$	738,898,482	$	6,986,277,211	$	1,814,444,991	$	5,910,730,702

Sheriffs and Deputies - Deferred Outflows of Resources	June 30, 2020 (1)	Additions (2)	Recognition (3)	June 30, 2021 (4) = (1) + (2) - (3)
Differences between expected and actual experience				
FY 2016 Base	$ 0	$ 0	$ 0	$ 0
FY 2017 Base	824,104	0	633,926	190,178
FY 2018 Base	0	0	0	0
FY 2019 Base	0	0	0	0
FY 2020 Base	0	0	0	0
FY 2021 Base	0	11,341,094	2,108,010	9,233,084
Total	$ 824,104	$ 11,341,094	$ 2,741,936	$ 9,423,262
Changes of assumptions				
FY 2016 Base	$ 0	$ 0	$ 0	$ 0
FY 2017 Base	6,677,095	0	5,136,227	1,540,868
FY 2018 Base	0	0	0	0
FY 2019 Base	0	0	0	0
FY 2020 Base	0	0	0	0
FY 2021 Base	0	0	0	0
Total	$ 6,677,095	$ 0	$ 5,136,227	$ 1,540,868
Differences between projected and actual earnings				
FY 2016 Base	$ 0	$ 0	$ 0	$ 0
FY 2017 Base	0	0	0	0
FY 2018 Base	0	0	0	0
FY 2019 Base	0	0	0	0
FY 2020 Base	22,849,318	0	5,712,329	17,136,989
FY 2021 Base	0	0	0	0
Total	$ 22,849,318	$ 0	$ 5,712,329	$ 17,136,989
Total	$ 30,350,517	$ 11,341,094	$ 13,590,492	$ 28,101,119

Sheriffs and Deputies - Deferred Inflows of Resources								
	June 30, 2020 (1)		Additions (2)		Recognition (3)		June 30, 2021 (4) = (1) + (2) - (3)	
Differences between expected and actual experience								
FY 2016 Base	$	162,389	$	0	$	162,389	$	0
FY 2017 Base		0		0		0		0
FY 2018 Base		1,512,846		0		663,529		849,317
FY 2019 Base		63,744		0		18,212		45,532
FY 2020 Base		60,707		0		13,520		47,187
FY 2021 Base		0		0		0		0
Total	$	1,799,686	$	0	$	857,650	$	942,036
Changes of assumptions								
FY 2016 Base	$	0	$	0	$	0	$	0
FY 2017 Base		0		0		0		0
FY 2018 Base		11,782,737		0		5,167,868		6,614,869
FY 2019 Base		0		0		0		0
FY 2020 Base		0		0		0		0
FY 2021 Base		0		0		0		0
Total	$	11,782,737	$	0	$	5,167,868	$	6,614,869
Differences between projected and actual earnings								
FY 2016 Base	$	0	$	0	$	0	$	0
FY 2017 Base		4,946,734		0		4,946,734		0
FY 2018 Base		2,811,724		0		1,405,861		1,405,863
FY 2019 Base		5,330,106		0		1,776,702		3,553,404
FY 2020 Base		0		0		0		0
FY 2021 Base		0		166,972,370		33,394,474		133,577,896
Total	$	13,088,564	$	166,972,370	$	41,523,771	$	138,537,163
Total	$	26,670,987	$	166,972,370	$	47,549,289	$	146,094,068

Protection Occupation - Deferred Outflows of Resources								
		June 30, 2020 (1)		Additions (2)		Recognition (3)		June 30, 2021 (4) = (1) + (2) - (3)
Differences between expected and actual experience								
FY 2016 Base	$	0	$	0	$	0	$	0
FY 2017 Base		325,875		0		250,674		75,201
FY 2018 Base		0		0		0		0
FY 2019 Base		1,392,332		0		397,809		994,523
FY 2020 Base		2,861,831		0		637,379		2,224,452
FY 2021 Base		0		28,573,358		5,311,033		23,262,325
Total	$	4,580,038	$	28,573,358	$	6,596,895	$	26,556,501
Changes of assumptions								
FY 2016 Base	$	0	$	0	$	0	$	0
FY 2017 Base		14,086,252		0		10,835,577		3,250,675
FY 2018 Base		0		0		0		0
FY 2019 Base		0		0		0		0
FY 2020 Base		0		0		0		0
FY 2021 Base		0		0		0		0
Total	$	14,086,252	$	0	$	10,835,577	$	3,250,675
Differences between projected and actual earnings								
FY 2016 Base	$	0	$	0	$	0	$	0
FY 2017 Base		0		0		0		0
FY 2018 Base		0		0		0		0
FY 2019 Base		0		0		0		0
FY 2020 Base		54,886,375		0		13,721,594		41,164,781
FY 2021 Base		0		0		0		0
Total	$	54,886,375	$	0	$	13,721,594	$	41,164,781
Total	$	73,552,665	$	28,573,358	$	31,154,066	$	70,971,957

Protection Occupation - Deferred Inflows of Resources	June 30, 2020 (1)	Additions (2)	Recognition (3)	June 30, 2021 (4) = (1) + (2) - (3)
Differences between expected and actual experience				
FY 2016 Base	$ 60,134	$ 0	$ 60,134	$ 0
FY 2017 Base	0	0	0	0
FY 2018 Base	493,120	0	216,280	276,840
FY 2019 Base	0	0	0	0
FY 2020 Base	0	0	0	0
FY 2021 Base	0	0	0	0
Total	$ 553,254	$ 0	$ 276,414	$ 276,840
Changes of assumptions				
FY 2016 Base	$ 0	$ 0	$ 0	$ 0
FY 2017 Base	0	0	0	0
FY 2018 Base	684,252	0	300,110	384,142
FY 2019 Base	0	0	0	0
FY 2020 Base	0	0	0	0
FY 2021 Base	0	0	0	0
Total	$ 684,252	$ 0	$ 300,110	$ 384,142
Differences between projected and actual earnings				
FY 2016 Base	$ 0	$ 0	$ 0	$ 0
FY 2017 Base	11,760,127	0	11,760,127	0
FY 2018 Base	6,856,941	0	3,428,470	3,428,471
FY 2019 Base	12,645,616	0	4,215,205	8,430,411
FY 2020 Base	0	0	0	0
FY 2021 Base	0	402,885,678	80,577,136	322,308,542
Total	$ 31,262,684	$ 402,885,678	$ 99,980,938	$ 334,167,424
Total	$ 32,500,190	$ 402,885,678	$ 100,557,462	$ 334,828,406

The following tables provide the collective Deferred Outflows of Resources and Deferred Inflows of Resources as of June 30, 2021 for the System in total (all membership groups). This table is provided for summary purposes only. The tables by membership group should be used when determining the proportionate share of the Deferred Outflows of Resources and Deferred Inflows of Resources for each participating employer, which will be provided by the Iowa Public Employees' Retirement System.

Deferred Outflows of Resources	June 30, 2020 (1)	Additions (2)	Recognition (3)	June 30, 2021 (4) = (1) + (2) - (3)
Differences between expected and actual experience				
FY 2016 Base	$ 0	$ 0	$ 0	$ 0
FY 2017 Base	8,856,205	0	6,812,464	2,043,741
FY 2018 Base	0	0	0	0
FY 2019 Base	1,392,332	0	397,809	994,523
FY 2020 Base	2,861,831	0	637,379	2,224,452
FY 2021 Base	0	168,748,951	31,365,976	137,382,975
Total	$ 13,110,368	$ 168,748,951	$ 39,213,628	$ 142,645,691
Changes of assumptions				
FY 2016 Base	$ 0	$ 0	$ 0	$ 0
FY 2017 Base	351,403,118	0	270,310,091	81,093,027
FY 2018 Base	27,423,185	0	12,027,713	15,395,472
FY 2019 Base	0	0	0	0
FY 2020 Base	0	0	0	0
FY 2021 Base	0	0	0	0
Total	$ 378,826,303	$ 0	$ 282,337,804	$ 96,488,499
Differences between projected and actual earnings				
FY 2016 Base	$ 0	$ 0	$ 0	$ 0
FY 2017 Base	0	0	0	0
FY 2018 Base	0	0	0	0
FY 2019 Base	0	0	0	0
FY 2020 Base	1,043,439,111	0	260,859,777	782,579,334
FY 2021 Base	0	0	0	0
Total	$ 1,043,439,111	$ 0	$ 260,859,777	$ 782,579,334
Total	$ 1,435,375,782	$ 168,748,951	$ 582,411,209	$ 1,021,713,524

Deferred Inflows of Resources	June 30, 2020 (1)	Additions (2)	Recognition (3)	June 30, 2021 (4) = (1) + (2) - (3)
Differences between expected and actual experience				
FY 2016 Base	$ 5,735,641	$ 0	$ 5,735,641	$ 0
FY 2017 Base	0	0	0	0
FY 2018 Base	56,882,313	0	24,948,383	31,933,930
FY 2019 Base	83,996,770	0	23,999,076	59,997,694
FY 2020 Base	21,081,275	0	4,695,161	16,386,114
FY 2021 Base	0	0	0	0
Total	$ 167,695,999	$ 0	$ 59,378,261	$ 108,317,738
Changes of assumptions				
FY 2016 Base	$ 0	$ 0	$ 0	$ 0
FY 2017 Base	0	0	0	0
FY 2018 Base	12,466,989	0	5,467,978	6,999,011
FY 2019 Base	0	0	0	0
FY 2020 Base	0	0	0	0
FY 2021 Base	0	0	0	0
Total	$ 12,466,989	$ 0	$ 5,467,978	$ 6,999,011
Differences between projected and actual earnings				
FY 2016 Base	$ 0	$ 0	$ 0	$ 0
FY 2017 Base	237,143,061	0	237,143,061	0
FY 2018 Base	134,485,132	0	67,242,565	67,242,567
FY 2019 Base	246,278,478	0	82,092,825	164,185,653
FY 2020 Base	0	0	0	0
FY 2021 Base	0	7,556,135,259	1,511,227,052	6,044,908,207
Total	$ 617,906,671	$ 7,556,135,259	$ 1,897,705,503	$ 6,276,336,427
Total	$ 798,069,659	$ 7,556,135,259	$ 1,962,551,742	$ 6,391,653,176

(h)(4) and (5) Changes in the employer's proportion and differences between the employer's contributions and the employer's proportionate share of contributions are considered Deferred Outflows of Resources and Deferred Inflows of Resources. In addition, any employer contributions subsequent to the Measurement Date are also Deferred Outflows of Resources. This information will be provided by the individual employers.

(i) The following tables provide the Deferred Outflows of Resources and Deferred Inflows of Resources as of June 30, 2021 for the Regular Membership, Sheriffs and Deputies and Protection Occupation groups that will be recognized in PE in future years:

Regular Membership			
Year Ended June 30:	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows/(Inflows) of Resources
2022	$355,480,346	$1,588,495,672	($1,233,015,326)
2023	268,740,546	1,508,758,066	(1,240,017,520)
2024	265,372,789	1,413,927,517	(1,148,554,728)
2025	23,946,933	1,399,549,447	(1,375,602,514)
2026	9,099,834	0	9,099,834
Thereafter	0	0	0

Sheriffs and Deputies			
Year Ended June 30:	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows/(Inflows) of Resources
2022	$9,551,385	$42,440,168	($32,888,783)
2023	7,820,339	36,835,697	(29,015,358)
2024	7,820,341	33,417,102	(25,596,761)
2025	2,108,010	33,401,101	(31,293,091)
2026	801,044	0	801,044
Thereafter	0	0	0

Protection Occupation			
Year Ended June 30:	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows/(Inflows) of Resources
2022	$23,393,691	$88,737,202	($65,343,511)
2023	20,067,815	84,936,934	(64,869,119)
2024	19,868,910	80,577,136	(60,708,226)
2025	5,623,348	80,577,134	(74,953,786)
2026	2,018,193	0	2,018,193
Thereafter	0	0	0

The following table provides a summary of the collective amounts reported as Deferred Outflows of Resources and Deferred Inflows of Resources to be recognized in PE in future years for all groups. This table is provided for informational purposes only. The tables by membership group should be used when determining the proportionate share of the Deferred Inflows and Outflows for each participating employer, which will be provided by the Iowa Public Employees' Retirement System.

Year Ended June 30:	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows/(Inflows) of Resources
2022	$388,425,422	$1,719,673,042	($1,331,247,620)
2023	296,628,700	1,630,530,697	(1,333,901,997)
2024	293,062,040	1,527,921,755	(1,234,859,715)
2025	31,678,291	1,513,527,682	(1,481,849,391)
2026	11,919,071	0	11,919,071
Thereafter	0	0	0

(j) There are no non-employer contributing entities at IPERS.

SECTION V – REQUIRED SUPPLEMENTARY INFORMATION

There are several tables of Required Supplementary Information (RSI) that need to be included in the System's financial statements:

Paragraphs 81(a) and (b): This information will be provided by the Iowa Public Employees' Retirement System Employer Self-Service through I-Que.

Paragraph 82: Information about factors that significantly affect trends in the amounts reported in the schedules required by paragraph 81 should be presented as notes to the schedules. At this point, only eight years are being reported in the Schedule of the Employer's Proportionate Share of the Net Pension Liability. Comments on additional years will be added as they occur. Employers should have the information available to report ten years in the Schedule of Employer Contributions.

Changes of benefit and funding terms: The following changes were made by the Iowa Legislature and reflected in the valuation performed as of June 30 listed below:

6/30/2021 Valuation:
- None

6/30/2020 Valuation:
- None

6/30/2019 Valuation:
- None

6/30/2018 Valuation:
- None

6/30/2017 Valuation:
- None

6/30/2016 Valuation:
- None

6/30/2015 Valuation:
- None

6/30/2014 Valuation:
- None

Changes in actuarial assumptions and methods:

6/30/2021 Valuation:

- None

6/30/2020 Valuation:

- None

6/30/2019 Valuation:

- None

6/30/2018 Valuation:

- Mortality assumption was changed to the family of RP-2014 Mortality Tables for all groups, with mortality improvements modeled using Scale MP-2017.
- Retirement rates for Regular members were lowered to better reflect actual experience. For the Sheriffs and Deputies, the retirement assumption was modified to reflect lower retirement rates at the younger ages. For the Protection Occupation group, the retirement rates were modified both higher and lower across the age ranges.
- Disability rates were lowered for all groups to better reflect the actual experience.
- Termination rates for Regular members were adjusted to better reflect actual experience. Separate termination assumptions were adopted for the two Special Service groups and the assumptions were changed to be service-based rather than age-based.
- The probability of a vested member electing to receive a deferred benefit was adjusted for Regular members to better reflect actual experience.
- The merit component of the salary increase assumption was adjusted to better reflect actual salary increases.

6/30/2017 Valuation:

- The inflation assumption decreased from 3.00% to 2.60% per year.
- The assumed rate of interest on member accounts was decreased from 3.75% to 3.50% per year.
- The long-term rate of return assumption decreased from 7.50% to 7.00% per year.
- The wage growth and payroll growth assumption decreased from 4.00% to 3.25% per year.
- Salary increase assumption decreased by 0.75%.

6/30/2016 Valuation:

- None

6/30/2015 Valuation:

- None

6/30/2014 Valuation:

- The inflation assumption decreased from 3.25% to 3.00% per year.
- The assumed rate of interest on member accounts was decreased from 4.00% to 3.75% per year.
- Male mortality rates for Regular members were adjusted:
    - State males were changed to the RP-2000 Healthy Annuitant Table using generational mortality projections with no age adjustment.
    - School males were changed to the RP-2000 Healthy Annuitant Table using generational mortality projections with a 1-year age set back and rates decreased by 5% below age 75.
    - Other males were changed to the RP-2000 Healthy Annuitant Table using generational mortality projections with no age adjustment.
- Retirement rates were reduced for Sheriffs and Deputies between the ages of 55 and 64.
- Beginning June 30, 2014, the Amortization Method amortizes the June 30, 2014 UAL as a level percentage of payroll over a closed 30-year period. Each year thereafter, changes in the UAL will result in the establishment of new amortization bases. The future bases arising from plan experience will be amortized over a closed 20-year period beginning on the date the base is established. The amortization period for changes in the UAL due to plan amendments and assumption changes will be determined by the Investment Board at the time they occur.

SCHEDULE OF CHANGES IN THE EMPLOYERS' NET PENSION LIABILITY

ALL MEMBERSHIP GROUPS

Fiscal Year Ended June 30

	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability/(Asset) (a) – (b)
Balances at June 30, 2020	$41,072,427,540	$34,047,692,112	$7,024,735,428
Changes for the year:			
Service cost	930,439,635		930,439,635
Interest	2,791,843,382		2,791,843,382
Benefit term changes	0		0
Differences between expected and actual experience	168,748,951		168,748,951
Assumption changes	0		0
Employer contributions		817,561,450	(817,561,450)
Employee contributions including service purchases		554,310,862	(554,310,862)
Net investment income, including net securities lending income		9,902,973,985	(9,902,973,985)
Benefit payments, including member refunds	(2,418,810,758)	(2,418,810,758)	0
Administrative expenses		(13,851,969)	13,851,969
Net changes	1,472,221,210	8,842,183,570	(7,369,962,360)
Balances at June 30, 2021	$42,544,648,750	$42,889,875,682	($345,226,932)

SCHEDULE OF CHANGES IN THE EMPLOYERS' NET PENSION LIABILITY

REGULAR MEMBERS

Fiscal Year Ended June 30

	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability/(Asset) (a) – (b)
Balances at June 30, 2020	$38,469,643,936	$31,493,894,122	$6,975,749,814
Changes for the year:			
Service cost	848,205,709		848,205,709
Interest	2,614,411,111		2,614,411,111
Benefit term changes	0		0
Differences between expected and actual experience	128,834,499		128,834,499
Assumption changes	0		0
Employer contributions		767,476,814	(767,476,814)
Employee contributions including service purchases		516,768,970	(516,768,970)
Net investment income, including net securities lending income		9,156,022,935	(9,156,022,935)
Benefit payments, including member refunds	(2,280,396,000)	(2,280,396,000)	0
Administrative expenses		(13,258,679)	13,258,679
Other changes	(2,763,312)	(2,763,312)	0
Net changes	1,308,292,007	8,143,850,728	(6,835,558,721)
Balances at June 30, 2021	$39,777,935,943	$39,637,744,850	$140,191,093

SCHEDULE OF CHANGES IN THE EMPLOYERS' NET PENSION LIABILITY

SHERIFFS AND DEPUTIES

Fiscal Year Ended June 30

	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability/(Asset) (a) – (b)
Balances at June 30, 2020	$766,018,806	$749,717,084	$16,301,722
Changes for the year:			
Service cost	21,701,020		21,701,020
Interest	52,244,786		52,244,786
Benefit term changes	0		0
Differences between expected and actual experience	11,341,094		11,341,094
Assumption changes	0		0
Employer contributions		11,762,537	(11,762,537)
Employee contributions including service purchases		11,835,731	(11,835,731)
Net investment income, including net securities lending income		219,070,151	(219,070,151)
Benefit payments, including member refunds	(40,006,070)	(40,006,070)	0
Administrative expenses		(110,367)	110,367
Other changes	5,404,042	5,404,042	0
Net changes	50,684,872	207,956,024	(157,271,152)
Balances at June 30, 2021	$816,703,678	$957,673,108	($140,969,430)

SCHEDULE OF CHANGES IN THE EMPLOYERS' NET PENSION LIABILITY

PROTECTION OCCUPATION

Fiscal Year Ended June 30

	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability/(Asset) (a) – (b)
Balances at June 30, 2020	$1,836,764,798	$1,804,080,906	$32,683,892
Changes for the year:			
Service cost	60,532,906		60,532,906
Interest	125,187,485		125,187,485
Benefit term changes	0		0
Differences between expected and actual experience	28,573,358		28,573,358
Assumption changes	0		0
Employer contributions		38,322,099	(38,322,099)
Employee contributions including service purchases		25,706,161	(25,706,161)
Net investment income, including net securities lending income		527,880,899	(527,880,899)
Benefit payments, including member refunds	(98,408,688)	(98,408,688)	0
Administrative expenses		(482,923)	482,923
Other changes	(2,640,730)	(2,640,730)	0
Net changes	113,244,331	490,376,818	(377,132,487)
Balances at June 30, 2021	$1,950,009,129	$2,294,457,724	($344,448,595)

Chapter 97B of the Iowa code sets out the IPERS provisions, which are briefly summarized as follows:

Participation:	In general, the System covers people in non-federal public employment within the State of Iowa. Membership is mandatory if a person is in covered employment. Exceptions to this are set out in the law. Notable exceptions are those covered by another public system in Iowa (such as judges, state patrol, and policemen and firemen in cities having civil service), employees of the Regents' institutions, and employees of the community colleges who elect alternative coverage.
Service Credit:	A member will receive membership credit for service rendered after July 4, 1953 (special rules apply to service before this date). Service is counted to the complete quarter of a calendar year. A member will not receive credit for more than four quarters of service in a calendar year regardless of the number of employers reporting covered wages for that member. A calendar year is the 12-month period beginning January 1 and ending December 31. Members may purchase service under specified conditions. To make such a purchase, the member must pay the actuarial cost of such service.

REGULAR MEMBERS:

Average Salary:	The average of the member's highest three years of covered wages. Effective July 1, 2012 the average of a member's highest five years of covered wages, but not less than the member's highest three years as of June 30, 2012, if vested at that time.

Age and Service Requirements for Benefits:

Normal Retirement	Earliest of the first day of the month of the member's 65th birthday, age 62 with 20 years of service or Rule of 88 (age plus service equals/exceeds 88), with a minimum of age 55.
Early Retirement	First day of any month starting with the month of the member's 55th birthday but preceding the normal retirement date.
Inactive Vested Benefit	Four years of service (seven years effective July 1, 2012). Prior to July 1, 2005 inactive members could become eligible for a vested benefit merely by reaching age 55.
Pre-retirement Death Benefit	Upon death of a member before benefits have started.
Disability Benefit	Upon meeting requirements to be vested, if the active or inactive member begins receiving federal Social Security disability or Railroad Retirement disability benefits.

Retirement Benefits:

Normal Retirement	An annuity equal to 2% of Average Salary for each year of service up to 30 years plus 1% of Average Salary for each of the next 5 years of service. Maximum years of service recognized for benefit accrual purposes is 35 with a resulting maximum benefit of 65% of Average Salary (Option 2).
Early Retirement	An annuity, determined in the same manner as for normal retirement. However, a reduction of 0.25% per month is applied for each month the benefit commences prior to normal retirement age (based on service at early retirement). Effective July 1, 2012, the reduction changed to 0.50% per month and applies to each month that the benefit commences before age 65. Transition rules apply if members have service both before and after July 1, 2012.
Pre-retirement Death Benefits	Beneficiaries of members may receive a lump sum determined by a formula that includes how much the member contributed to IPERS, years of service, highest year's salary, and other factors. Beneficiaries may have the option of receiving a monthly benefit based on the present value of the member's accrued benefit at death.
Disability Benefits	An annuity, payable immediately, equal to the Normal Retirement Benefit without an early retirement adjustment.

Termination Benefits:

Less than four* years of Service (Nonvested)	A refund of all of the member's accumulated contributions.
Four* or more years of Service (Vested)	At the member's election either: (1) a refund of all of the member's accumulated contributions plus a portion (years of service divided by 30) of the employer's contributions with interest, or (2) a deferred benefit determined in the same manner as for normal retirement. Payments can begin at normal or early retirement.

* Effective July 1, 2012 seven years of service for those not vested at that time.

Form of Annuity:	The base form, or normal form, is a life annuity with a guaranteed return of employee contributions (Option 2).

Optional Forms of Payment:	*Option 1:* The member specifies a dollar amount, in $1,000 increments, that the member wishes to have paid to a designated beneficiary following the death of the member. The death benefit will be in the form of a single payment and cannot exceed the amount of a member's own accumulated contributions to IPERS, and it cannot lower the member's benefit as calculated under Option 2 by more than 50%.
	Option 3: After the member's death, all benefits cease.
	Option 4: The member receives a reduced monthly benefit so that a lifetime monthly benefit may be provided after the member's death to the person named by the member as the contingent annuitant. The member specifies what benefit the contingent annuitant will receive after the death of the member. The monthly benefit can be the same as the member's monthly benefit or three-fourths, one-half, or one-fourth of the amount. These choices may be restricted if the contingent annuitant is not the member's spouse and is more than ten years younger than the member.
	Option 5: If the member dies before ten full years (120 months of payments) have ended, the member's beneficiary will receive a monthly benefit for the remainder of the ten years. Members who have attained age 90 as of the first month of entitlement are not allowed to select this option.
	Option 6: The member receives a reduced monthly benefit so that a lifetime monthly benefit may be provided after the member's death to the person named by the member as the contingent annuitant. In addition, the monthly amounts are also reduced to pay for a pop-up feature. The pop-up feature provides that if the contingent annuitant dies before the member, the member's benefit will pop back up to what it would have been under IPERS Option 2, and death benefits may be payable to the member's designated beneficiary if certain conditions are met.
Actuarial Equivalent Lump Sum Payment:	If a vested member is entitled to receive a benefit and it is less than $50 per month under Option 2, the member shall receive a retirement benefit in an actuarial equivalent lump sum payment. The lump sum will include the member's and employer's accumulated contributions.
Post-retirement Benefit Increases:	Annual dividends are paid to those retired prior to July 1, 1990. Effective with the November 2000 dividend payment, the dividend is adjusted by the least of the following percentages: (1) the change in the CPI, (2) percentage

certified to by the actuary as affordable by the System, and (3) 3%.

Favorable Experience Dividend (FED): For members who retired after June 30, 1990, a favorable experience dividend (FED) reserve account has been established under Iowa Code §97B.49F(2). The main purpose of this account is to help offset the negative effects of postretirement inflation. All members and beneficiaries who receive a monthly allowance qualify for favorable experience dividend payments. Each November, IPERS determines if a FED payment should be paid the following January subject to the following conditions:

- The member must be retired one year.
- The FED rate cannot exceed 3%.
- The FED payment will be issued in a lump sum in January.
- The FED payment is not guaranteed.

The formula is as follows:
(December's monthly benefit) X (12 months) X (Rate) X (Full calendar years retired) = FED

Source of Funds:

Regular Membership:

Contribution Rates			
Time Period	**Employees****	**Employer**	**Total**
Prior to 7/1/07	3.70%	5.75%	9.45%
7/1/07 – 6/30/08	3.90%	6.05%	9.95%
7/1/08 – 6/30/09	4.10%	6.35%	10.45%
7/1/09 – 6/30/10	4.30%	6.65%	10.95%
7/1/10 – 6/30/11	4.50%	6.95%	11.45%
7/1/11 – 6/30/12	5.38%	8.07%	13.45%
7/1/12 and later	Determined by Contribution Rate Funding Policy*		

*Change in contribution rate cannot exceed 1.0% per year.
**Employee rate is 40% of total contribution rate.

SHERIFFS/DEPUTIES AND PROTECTION OCCUPATION:

Average Salary: The average of the member's highest three years of covered wages.

Age and Service Requirements for Benefits:

Normal Retirement: Generally age 55. However, a member of the Sheriffs and Deputy Sheriffs may retire at age 50 with 22 years of service.

Inactive Vested Benefit	Four years of service. Prior to July 1, 2005 inactive members could become eligible for vested benefits merely by reaching age 55.
Pre-retirement Death Benefit	Upon death of a member before benefits have started.
Disability Benefit	Upon meeting requirements to be vested, (i) if the active or inactive member begins receiving federal Social Security or Railroad Retirement disability benefits, or (ii) upon being determined by IPERS to be disabled under the provisions of Iowa Code section 97B.50A. The disability benefits under Iowa Code section 97B.50A must be applied for through IPERS within one (1) year after termination of employment. Benefits under Iowa Code section 97B.50A may be paid for in-service disability or ordinary disability.

Retirement Benefits:

Normal Retirement	60% of Average Salary after completion of 22 years of service, plus an additional 1.5% of Average Salary for years of service greater than 22 but not more than 30. Maximum formula is 72% of Average Salary.
Pre-retirement Death Benefit	Beneficiaries of members may receive a lump sum determined by a formula that includes how much the member contributed to IPERS, years of service, highest year's salary, and other factors. Beneficiaries may have the option of receiving a monthly benefit based on the present value of the member's accrued benefit at death.
Disability Benefits	An annuity, payable immediately, equal to the Normal Retirement Benefit, without an adjustment. The benefit is the greater of the Normal Retirement Benefit and either 50% (for ordinary disability) or 60% (for in-service disability) of Average Salary.

Termination Benefits:

Less than four years of Service (Non-vested)	A refund of all of the member's accumulated contributions.
Four or more years of Service (Vested)	At the member's election either: (1) a refund of all of the member's accumulated contributions plus a portion (years of service divided by 22) of the employer's contributions with interest, or

(2) a deferred benefit determined in the same manner as for normal retirement. Payments begin at normal retirement.

Form of Annuity: The base form, or normal form, is a life annuity with a guaranteed return of employee contributions (Option 2).

Optional Forms of Payment: *Option 1:* The member specifies a dollar amount, in $1,000 increments, that the member wishes to have paid to a designated beneficiary following the death of the member. The death benefit will be in the form of a single payment and cannot exceed the amount of a member's own accumulated contributions to IPERS, and it cannot lower the member's benefit as calculated under Option 2 by more than 50%.

Option 3: After the member's death, all benefits cease.

Option 4: The member receives a reduced monthly benefit so that a lifetime monthly benefit may be provided after the member's death to the person named by the member as the contingent annuitant. The member specifies what benefit the contingent annuitant will receive after the death of the member. The monthly benefit can be the same as the member's monthly benefit or three-fourths, one-half, or one-fourth of the amount. These choices may be restricted if the contingent annuitant is not the member's spouse and is more than ten years younger than the member.

Option 5: If the member dies before ten full years (120 months of payments) have ended, the member's beneficiary will receive a monthly benefit for the remainder of the ten years. Members who have attained age 90 as of the first month of entitlement are not allowed to select this option.

Option 6: The member receives a reduced monthly benefit so that a lifetime monthly benefit may be provided after the member's death to the person named by the member as the contingent annuitant. In addition, the monthly amounts are also reduced to pay for a pop-up feature. The pop-up feature provides that if the contingent annuitant dies before the member, the member's benefit will pop back up to what it would have been under IPERS Option 2, and death benefits may be payable to the member's designated beneficiary if certain conditions are met.

Level Income Payment Option: A Level Income payment alternative is authorized for members of the Sheriffs and Deputies group and the Protection Occupation group. This alternative applies to all IPERS retirement options listed above except Option 6. The Level Income payment

	alternative permits a member to receive a relatively level income both before and after age 62 when benefits from IPERS and Social Security are combined. Higher IPERS benefits are paid prior to age 62. When the member reaches age 62, the member's IPERS benefit is permanently reduced. This amount is determined when the member retires and is not recomputed based on the actual Social Security benefit.
Actuarial Equivalent Lump Sum Payment:	If a vested member is entitled to receive a benefit and it is less than $50 per month under Option 2, the member shall receive a retirement benefit in an actuarial equivalent lump sum payment. The lump sum will include the member's and employer's accumulated contributions.
Post-retirement Benefit Increases:	Annual dividends are paid to those retired prior to July 1, 1990. Effective with the November 2000 dividend payment, the dividend is adjusted by the least of the following percentages: (1) the change in the CPI, (2) percentage certified to by the actuary as affordable by the System, and (3) 3%.
Favorable Experience Dividend (FED):	For members who retired after June 30, 1990, a favorable experience dividend (FED) reserve account has been established under Iowa Code §97B.49F(2). The main purpose of this account is to help offset the negative effects of postretirement inflation. All members and beneficiaries who receive a monthly allowance qualify for favorable experience dividend payments. Each November, IPERS determines if a FED payment should be paid the following January subject to the following conditions: • The member must be retired one year. • The FED rate cannot exceed 3%. • The FED payment will be issued in a lump sum in January. • The FED payment is not guaranteed. The formula is as follows: (December's Monthly benefit) x (12 months) x (Rate) x (Full calendar years retired) = FED
Source of Funds:	
Sheriffs and Deputies:	Determined by Contribution Rate Funding Policy. Employees contribute 50% and employers contribute 50%.
Protection Occupation:	Determined by Contribution Rate Funding Policy. Employees contribute 40% and employers contribute 60%.

ECONOMIC ASSUMPTIONS:

Rate of Inflation (effective June 30, 2017)

2.60% per annum

Rate of Crediting Interest on Contribution Balances (effective June 30, 2017)

3.50% per annum, compounded annually

Rate of Investment Return (effective June 30, 2017)

7.00% per annum, compounded annually, net of expenses.

Wage Growth Assumption (effective June 30, 2017)

3.25% per annum based on 2.60% inflation assumption and 0.65% real wage inflation.

Payroll Increase Assumption (effective June 30, 2017)

3.25% per year

Cost of Living Adjustments Assumption (effective June 30, 2017)

2.60% for members who retired before July 1, 1990. No cost-of-living adjustments are assumed to be granted to future retirees

DEMOGRAPHIC ASSUMPTIONS:

Rates of Mortality

Pre-Retirement (effective June 30, 2018)

State		
	Male	RP-2014 Employee Table Adjusted to 2006, Generational using MP-2017, base rates setback 4 years
	Female	RP-2014 Employee Table Adjusted to 2006, Generational using MP-2017, base rates setback 4 years
School		
	Male	RP-2014 Employee Table Adjusted to 2006, Generational using MP-2017, base rates setback 4 years
	Female	RP-2014 Employee Table Adjusted to 2006, Generational using MP-2017, base rates setback 8 years
Other		
	Male	RP-2014 Employee Table Adjusted to 2006, Generational using MP-2017, base rates setback 3 years
	Female	RP-2014 Employee Table Adjusted to 2006, Generational using MP-2017, base rates setback 4 years

Sheriffs/Deputies and Protection Occupation	
Male	RP-2014 Employee Table Adjusted to 2006, Generational using MP-2017, base rates setback 3 years
Female	RP-2014 Employee Table Adjusted to 2006, Generational using MP-2017, base rates setback 4 years

5% of active deaths are assumed to be service related for non-regular members.

Post-Retirement (effective June 30, 2018)

State	RP-2014 Healthy Annuitant Adjusted to 2017, Generational using MP-2017
Male	8.5% increase in rates above age 75
Female	No adjustment
School	RP-2014 Healthy Annuitant Adjusted to 2017, Generational using MP-2017
Male	Base rates setback 2 years, 10% decrease in rates below age 75, 20% increase above age 75
Female	Base rates setback 2 years, 25% decrease below age 75, 10% increase above age 75
Other	RP-2014 Healthy Annuitant Adjusted to 2017, Generational using MP-2017
Male	Base rates set forward 1 year, 10% decrease below age 75, 8% increase above age 75
Female	Base rates setback 1 year, 10% decrease below age 75, 5% increase above age 75
Sheriffs/Deputies and Protection Occupation	RP-2014 Healthy Annuitant Adjusted to 2017, Generational using MP-2017
Male	Base rates set forward 1 year, 10% increase above age 75
Female	No adjustment
Beneficiaries:	Same as members
Disabled Members	RP-2014 Disabled Mortality, Generational using MP-2017
Male	Base rates set forward 3 years
Female	Base rates set forward 5 years

Note: All mortality scaling factors before and after age 75 are geometrically blended between ages 73 and 77.

Retirement Rates (effective June 30, 2018)

Upon meeting the requirements for early retirement, the following rates apply to Regular Members:

	Assumed Retirement Rates – Early		
Age	State	School	Other
55	5.0%	6.0%	4.0%
56	5.0%	6.0%	4.0%
57	5.0%	6.0%	4.0%
58	5.0%	7.0%	4.0%
59	5.0%	8.0%	5.0%
60	5.0%	10.0%	5.0%
61	15.0%	15.0%	10.0%
62	15.0%	15.0%	15.0%
63	15.0%	15.0%	15.0%
64	15.0%	15.0%	15.0%

Upon reaching the requirements for normal retirement (unreduced benefits), the following rates apply:

	Assumed Retirement Rates – Select Unreduced		
Age	State	School	Other
55	20.0%	25.0%	20.0%
56	15.0%	25.0%	20.0%
57	15.0%	25.0%	17.0%
58	15.0%	25.0%	20.0%
59	15.0%	25.0%	20.0%
60	15.0%	25.0%	17.0%
61	20.0%	33.0%	20.0%
62	40.0%	40.0%	30.0%
63	35.0%	30.0%	25.0%
64	30.0%	30.0%	30.0%
65	30.0%	30.0%	30.0%

Age	Assumed Retirement Rates – Ultimate Unreduced		
	State	School	Other
55	15.0%	20.0%	12.0%
56	15.0%	20.0%	12.0%
57	15.0%	20.0%	12.0%
58	15.0%	20.0%	12.0%
59	15.0%	21.0%	12.0%
60	15.0%	23.0%	15.0%
61	20.0%	28.0%	20.0%
62	40.0%	35.0%	30.0%
63	30.0%	30.0%	20.0%
64	30.0%	30.0%	25.0%
65	30.0%	45.0%	40.0%
66	30.0%	35.0%	30.0%
67	20.0%	25.0%	20.0%
68	20.0%	25.0%	20.0%
69	35.0%	40.0%	40.0%
70	100.0%	100.0%	100.0%

Age	Assumed Retirement Rates	
	Sheriffs and Deputies	Protection Occupation
50	17.0%	
51	15.0%	
52	15.0%	
53	15.0%	
54	15.0%	
55	15.0%	25.0%
56	15.0%	10.0%
57	15.0%	10.0%
58	15.0%	10.0%
59	15.0%	10.0%
60	15.0%	10.0%
61	15.0%	15.0%
62	30.0%	30.0%
63	30.0%	25.0%
64	30.0%	25.0%
65	100.0%	100.0%

Terminated vested members are assumed to retire at age 62 (55 for Sheriffs/Deputies and Protection Occupation groups).

For Regular membership, retired reemployed members are assumed to retire at a rate of 25% per year until age 80 when all are assumed to retire.

All retirees are assumed to elect a modified cash refund annuity (Option 2).

Rates of Disablement (effective June 30, 2018)

	Assumed Rates					
	Males			Females		
Age	State	School	Other	State	School	Other
27	0.020%	0.020%	0.020%	0.020%	0.020%	0.020%
32	0.020%	0.020%	0.020%	0.020%	0.020%	0.020%
37	0.030%	0.034%	0.030%	0.030%	0.030%	0.030%
42	0.050%	0.056%	0.050%	0.040%	0.040%	0.040%
47	0.100%	0.098%	0.110%	0.070%	0.070%	0.070%
52	0.180%	0.142%	0.260%	0.180%	0.130%	0.160%
57	0.260%	0.230%	0.500%	0.310%	0.190%	0.280%
62	0.340%	0.318%	0.720%	0.500%	0.260%	0.400%

	Assumed Rates	
Age	Sheriffs/Deputies*	Protection Occupation*
27	0.130%	0.130%
32	0.130%	0.130%
37	0.130%	0.130%
42	0.150%	0.150%
47	0.200%	0.200%
52	0.240%	0.240%
57	0.320%	0.320%
62	0.430%	0.430%

* 66.67% of disabilities are assumed to be in-service disabilities.

Rates of Termination of Employment (effective June 30, 2018)

Regular Membership

	Male			Female		
Years of Service	State	School	Other	State	School	Other
1	11.00%	14.20%	19.00%	11.00%	14.20%	19.99%
5	4.75%	6.60%	7.50%	4.75%	6.60%	8.35%
10	2.25%	2.70%	4.10%	2.25%	2.70%	4.93%
15	1.60%	1.70%	2.64%	1.60%	1.70%	3.36%
20	1.10%	1.20%	2.10%	1.10%	1.20%	2.66%
25	0.80%	1.00%	1.60%	0.80%	1.00%	1.98%
30	0.80%	1.00%	1.10%	0.80%	1.00%	1.30%

Sheriffs/Deputies and Protection Occupation

Years of Service	Sheriffs/Deputies	Protection Occupation
1	4.00%	10.00%
5	1.00%	6.50%
10	1.00%	3.50%
15	1.00%	2.20%
20	1.00%	1.45%
25	1.00%	1.00%
30	1.00%	1.00%

Probability of Electing a Deferred Vested Benefit (effective June 30, 2018)

	Regular Membership					
	Male			**Female**		
Years of Service	State	School	Other	State	School	Other
5	62.0%	74.0%	62.0%	56.0%	80.0%	70.0%
10	71.0%	79.0%	71.0%	62.0%	80.0%	73.0%
15	76.0%	84.0%	76.0%	72.0%	85.0%	80.0%
20	81.0%	89.0%	81.0%	82.0%	90.0%	85.0%
25	86.0%	94.0%	86.0%	92.0%	95.0%	90.0%
30	90.0%	95.0%	90.0%	100.0%	100.0%	90.0%

	Sheriffs/Deputies and Protection Occupation
Years of Service	Rate
5	53.0%
10	65.0%
15	85.0%
20	95.0%
25	100.0%
30	100.0%

Rates of Salary Increase* (effective June 30, 2018)

	Annual Increase			
Years of Service	State	School	Other	Sheriffs/Deputies and Protection Occupation
1	14.25%	16.25%	14.25%	16.25%
5	7.75%	5.75%	5.35%	5.75%
10	5.50%	4.55%	4.55%	4.55%
15	4.45%	3.75%	4.05%	4.05%
20	3.85%	3.40%	3.75%	3.75%
25	3.60%	3.25%	3.65%	3.75%
30	3.35%	3.25%	3.65%	3.25%
35+	3.25%	3.25%	3.25%	3.25%

* Includes 3.25% wage growth

Marriage Assumption

100% of members are assumed to be married, with males 3 years older than females.

TECHNICAL VALUATION PROCEDURES

Data Procedures

In-pay members:

If a birth date is not available, the member is assumed to be 80. If a retirement date is also not available, the member is assumed to have retired at 65.

If a beneficiary birth date is needed but not supplied, husbands are assumed to be 3 years older than wives.

Not in-pay members:

If a birth date is not available, the member is assumed to be the average age of the members with the same status.

If gender is not provided, regular members are assumed to be female and Sheriffs/Deputies and Protection Occupation members are assumed to be male.

Salaries for first year members are annualized based on the number of quarters with wages.

Membership Transfers

IPERS provides a code in the valuation data to indicate that a member is in a membership group (Regular, Sheriffs and Deputies and Protection Occupation) different from that on the prior valuation date. The actuarial liability for these members is calculated under the assumptions and provisions of the prior membership group. A preliminary funded ratio (before asset transfer) is determined for the three membership groups. Assets are then transferred from the prior to the current membership group based on the funded ratio of the prior group times the actuarial liability of the member in the prior group. Then, the members are revalued in the current membership group for purposes of valuation calculations.

Other Valuation Procedures

No actuarial accrued liability in excess of the unclaimed member contribution balance is held for nonvested, inactive members. Inactive vested members who have died are treated in the same manner.

The wages used in the projection of benefits and liabilities are considered earnings for the current year ending June 30, increased by the salary scale.

The calculations for the actuarial contribution rate are determined as of mid-year. This is a reasonable estimate since contributions are made throughout the year.

The projected IRC Section 415 limit for active participants was not valued. The impact was assumed to be *de minimus*.

The compensation limitation under IRC Section 401(a)(17) is considered in this valuation.

No future additions to, or payments from, the Favorable Experience Dividend Reserve Account or the Active Member Supplemental Accounts are reflected in the valuation. Additions to the Favorable Experience Dividend are not allowed until the System is at least 100% funded. Further, transfers are made only to the extent that actual experience results in actuarial gains. Given the difficulty involved in valuing this provision with a reliable estimation, the impact has not been reflected in the current valuation results. The Active Member Supplemental Account provisions would only serve to redirect contributions to the System, and so result in no possible future liability to the System.

Background:
IPERS is charged with setting a "Required Contribution Rate" for each membership category within IPERS that will discharge its liabilities. Iowa Code §97B.11(3)(d) provides the basic framework for implementing this charge by stating:

> The Required Contribution Rate that is set by the system for a membership category shall be the contribution rate the system actuarially determines, based upon the most recent actuarial valuation of the system and using the actuarial methods, assumptions, and funding policy approved by the investment board, is the rate required by the system to discharge its liabilities as a percentage of the covered wages of members in that membership category. However, the Required Contribution Rate set by the system for members in regular service for a fiscal year shall not vary by more than one percentage point from the Required Contribution Rate for the prior fiscal year.

Goal:
To establish policy and procedures in setting contribution rates that combined with investment income will fund the benefits specified in Chapter 97B of the Iowa Code.

To move towards fully funding the benefits (100 percent or greater funded ratio) in as expeditious manner as is reasonable within the guidelines acknowledged herein.

Procedure:
The Investment Board shall retain a consulting actuary to conduct an annual actuarial valuation of assets and liabilities. The consulting actuary shall use the entry age normal cost method and all other actuarial assumptions and methods approved by the Investment Board.

In the annual valuation process, the consulting actuary shall calculate an Actuarial Contribution Rate and a Required Contribution Rate pursuant to this policy. Each shall be calculated as a level percent of pay.

There is a one year lag between the completion of an annual actuarial valuation report and the fiscal year to which the contribution rates calculated therein are applied. Therefore, the Actuarial Contribution Rate and the Required Contribution Rate declared in the annual valuation process are applicable to the fiscal year immediately following the completion of the valuation report (for example the rates declared in the report presented to the Investment Board in December, 2013 are applicable to the rates for the fiscal year beginning July 1, 2014).

Actuarial Contribution Rate (ACR):
1. ACR is the combined employer and employee contribution rate that is the minimum rate necessary to fund the benefits using the actuarial assumptions and methods approved by the Investment Board.

2. A separate ACR shall be determined for each membership group within IPERS according to this policy.

3. The ACR shall consist of:

    a. Normal cost and an amortization payment (not less than zero) of any unfunded actuarial liability.

b. Normal cost may only be offset by a negative amortization payment after a membership group has attained a funded ratio of 110 percent or greater for 3 consecutive years.

Required Contribution Rate:

1. The Required Contribution Rate is the combined employer and employee rate payable pursuant to this policy and Iowa Code §97B.11(3)(d).

2. The Required Contribution Rate shall be determined by comparing the ACR determined in the annual valuation process to the Required Contribution Rate of the previous year.

   a. If the ACR is less than the previous Required Contribution Rate by fewer than 50 basis points, then the Required Contribution Rate shall remain unchanged from the previous year.

   b. If the ACR is less than the previous Required Contribution Rate by 50 basis points or more, then the Required Contribution Rate shall be lowered by 50 basis points provided the funded ratio of the membership group is 95% or higher.

   c. If the ACR is greater than the Required Contribution Rate of the previous year, then the Required Contribution Rate shall be:

      i. Increased to be equal to ACR for Sheriffs and Deputies.
      ii. Increased to be equal to ACR for Protection Occupation Members.
      iii. Increased to be equal to ACR for Regular Members, or one percentage point greater than the prior year's Required Contribution Rate, whichever is smaller.

Policy Guidelines:

In adopting actuarial assumptions and methods to be used in setting contribution rates, the Investment Board shall strive to provide a balance among the following:

1. Stability in contribution rates (such as use of smoothing and amortization schedules that do not produce dramatic swings in the required contributions from year to year).

2. Disciplined funding approach (such as requiring full payment of normal cost and an amortization payment towards the unfunded actuarial liability and deferring decreases in contribution rates until strong funded ratios are attained).

3. Interperiod equity (such as shortening the amortization schedule when reasonable and amortization of retroactive benefit enhancements over a reasonable time period such as the average working lifetime for active members and the average life expectancy of retired members).

4. Support an affordable, sustainable plan (in consultation with the Benefits Advisory Committee review affordability of required contribution rates and/or the benefit provisions).

5. At a minimum, this policy will be reviewed in conjunction with the quadrennial experience study.