

Arkansas Judicial Retirement System

GASB Statement Nos. 67 and 68 Accounting and
Financial Reporting for Pensions

June 30, 2019



November 5, 2019

Board of Trustees
Arkansas Judicial Retirement System
Little Rock, Arkansas

Ladies and Gentlemen:

This report provides information required by the Retirement System in connection with the Governmental Accounting Standards Board (GASB) Statement No. 67 “Financial Reporting for Pension Plans” and Governmental Accounting Standards Board (GASB) Statement No. 68 “Accounting and Financial Reporting for Pensions.”

Our actuarial calculations for this report were prepared for the purpose of complying with the requirements of GASB Statement Nos. 67 and 68. These calculations have been made on a basis that is consistent with our understanding of these accounting standards.

Our calculation of the liability associated with the benefits described in this report was performed for the purpose of satisfying the requirements of GASB Statement Nos. 67 and 68. The Net Pension Liability is not an appropriate measure for measuring the sufficiency of plan assets to cover the estimated cost of settling the employer’s benefit obligation. The Net Pension Liability is not an appropriate measure for assessing the need for or amount of future employer contributions. The calculation of the plan’s liability for this report may not be applicable for funding purposes of the plan. A calculation of the plan’s liability for purposes other than satisfying the requirements of GASB Statement Nos. 67 and 68 may produce significantly different results. This report may be provided to parties other than the System only in its entirety and only with the permission of the Retirement Board. GRS is not responsible for unauthorized use of this report.

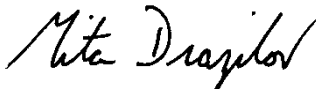
This report is based upon information, furnished to us by Retirement System staff, concerning retirement and ancillary benefits, active members, deferred vested members, retirees and beneficiaries, and financial data. If your understanding of this information is different, please let us know. This information was checked for internal consistency, but it was not audited.

This information is presented in draft form for review by the plan’s auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the plan’s financial statements.

Please see the actuarial valuation report as of June 30, 2019 for additional discussions of the nature of actuarial calculations and more information related to participant data, economic and demographic assumptions, and benefit provisions.

To the best of our knowledge, this report is complete, accurate, and in accordance with generally recognized actuarial methods. Mita D. Drazilov is a Member of the American Academy of Actuaries (MAAA) and meets the Qualification Standards of the Academy of Actuaries to render the actuarial opinions herein. The signing individuals are independent of the plan sponsor.

Respectfully submitted,



Mita D. Drazilov, ASA, FCA, MAAA



David L. Hoffman

MDD/DLH:sc

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SECTION A



EXECUTIVE SUMMARY

Executive Summary as of June 30, 2019

Actuarial Valuation Date	June 30, 2019
Measurement Date of the Net Pension Liability	June 30, 2019
Employer's Fiscal Year Ending Date (Reporting Date)	June 30, 2019

Membership

Number of	
- Retirees and Beneficiaries	149
- Inactive, Nonretired Members	8
- Active Members	140
- Total	297
Covered Payroll	\$ 23,602,735

Net Pension Liability

Total Pension Liability	\$ 284,488,459
Plan Fiduciary Net Position	267,279,487
Net Pension Liability	\$ 17,208,972
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	93.95%
Net Pension Liability as a Percentage of Covered Payroll	72.91%

Development of the Single Discount Rate

Single Discount Rate	5.75%
Long-Term Expected Rate of Investment Return	5.75%
Long-Term Municipal Bond Rate*	3.13%
Last year ending June 30 in the 2020 to 2119 projection period for which projected benefit payments are fully funded	2119

Total Pension Expense \$ 5,249,936

Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	\$ -	\$ 4,317,342
Changes in assumptions	229,842	-
Net difference between projected and actual earnings on pension plan investments	3,102,900	9,124,548
Total	\$ 3,332,742	\$ 13,441,890

**Source: Fixed-income municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of June 30, 2019. In describing this index, Fidelity notes that the municipal curves are constructed using option-adjusted analytics of a diverse population of over 10,000 tax-exempt securities.*

Discussion

Accounting Standard

For pension plans that are administered through trusts or equivalent arrangements, Governmental Accounting Standards Board (GASB) Statement No. 67 establishes standards of financial reporting for separately issued financial reports and specifies the required approach for measuring the pension liability. Similarly, GASB Statement No. 68 establishes standards for state and local government employers (as well as non-employer contributing entities) to account for and disclose the net pension liability, pension expense, and other information associated with providing retirement benefits to their employees (and former employees) on their basic financial statements.

The following discussion provides a summary of the information that is required to be disclosed under these accounting standards. A number of these disclosure items are provided in this report. However, certain information, such as notes regarding accounting policies and investments, is not included in this report and the Retirement System and/or plan sponsor will be responsible for preparing and disclosing that information to comply with these accounting standards.

Financial Statements

GASB Statement No. 68 requires state or local governments to recognize the net pension liability and the pension expense on their financial statements. The net pension liability is the difference between the total pension liability and the plan's fiduciary net position. In traditional actuarial terms, this is analogous to the accrued liability less the market value of assets (not the smoothed actuarial value of assets that is often encountered in actuarial valuations performed to determine the employer's contribution requirement).

Paragraph 57 of GASB Statement No. 68 states, "Contributions to the pension plan from the employer subsequent to the measurement date of the collective net pension liability and before the end of the employer's reporting period should be reported as a deferred outflow of resources related to pensions." The information contained in this report does not incorporate any contributions made to the Arkansas Judicial Retirement System subsequent to the measurement date of June 30, 2019.

The pension expense recognized each fiscal year is equal to the change in the net pension liability from the beginning of the year to the end of the year, adjusted for deferred recognition of the liability and investment experience.

Pension plans that prepare their own, stand-alone financial statements are required to present two financial statements – a statement of fiduciary net position and a statement of changes in fiduciary net position in accordance with GASB Statement No. 67. The *statement of fiduciary net position* presents the assets and liabilities of the pension plan at the end of the pension plan's reporting period. The *statement of changes in fiduciary net position* presents the additions, such as contributions and investment income, and deductions, such as benefit payments and expenses, and net increase or decrease in the fiduciary net position.

Notes to Financial Statements

GASB Statement No. 68 requires the notes of the employer's financial statements to disclose the total pension expense, the pension plan's liabilities and assets, and deferred outflows and inflows of resources related to pensions.

GASB Statement Nos. 67 and 68 require the notes of the financial statements for the employers and pension plans, to include certain additional information. The list of disclosure items should include:

- a description of benefits provided by the plan;
- the type of employees and number of members covered by the pension plan;
- a description of the plan's funding policy, which includes member and employer contribution requirements;
- the pension plan's investment policies;
- the pension plan's fiduciary net position, net pension liability, and the pension plan's fiduciary net position as a percentage of the total pension liability;
- the net pension liability using a discount rate that is 1% higher and 1% lower than used to calculate the total pension liability and net pension liability for financial reporting purposes;
- significant assumptions and methods used to calculate the total pension liability;
- inputs to the discount rates; and
- certain information about mortality assumptions and the dates of experience studies.

Retirement systems that issue stand-alone financial statements are required to disclose additional information in accordance with GASB Statement No. 67. This information includes:

- the composition of the pension plan's Board and the authority under which benefit terms may be amended;
- a description of how fair value is determined;
- information regarding certain reserves and investments, which include concentrations of investments greater than or equal to 5%, receivables, and insurance contracts excluded from plan assets; and
- annual money-weighted rate of return.

Required Supplementary Information

GASB Statement No. 67 requires a 10-year fiscal history of:

- sources of changes in the net pension liability;
- information about the components of the net pension liability and related ratios, including the pension plan's fiduciary net position as a percentage of the total pension liability, and the net pension liability as a percent of covered-employee payroll; and
- a comparison of the actual employer contributions to the actuarially determined contributions based on the plan's funding policy.

Timing of the Valuation

An actuarial valuation to determine the total pension liability is required to be performed at least every two years. The net pension liability and pension expense should be measured as of the pension plan's fiscal year end (measurement date) on a date that is within the employer's prior fiscal year. If the actuarial valuation used to determine the total pension liability is not calculated as of the measurement date, the total pension liability is required to be rolled forward from the actuarial valuation date to the measurement date.

The total pension liability shown in this report is based on an actuarial valuation performed as of June 30, 2019 and a measurement date of June 30, 2019.

Single Discount Rate

Projected benefit payments are required to be discounted to their actuarial present values using a Single Discount Rate that reflects (1) a long-term expected rate of return on pension plan investments (to the extent that the plan's fiduciary net position is projected to be sufficient to pay benefits) and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating (which is published by the Federal Reserve) as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is 5.75%; the municipal bond rate is 3.13% (based on the weekly rate closest to but not later than the measurement date of the "20-Year Municipal GO AA Index" rate from Fidelity; and the resulting Single Discount Rate is 5.75%.

SECTION B

FINANCIAL STATEMENTS

Statement of Pension Expense Under GASB Statement No. 68

Fiscal Year Ended June 30, 2019

A. Expense

1. Service Cost	\$ 6,919,400
2. Interest on the Total Pension Liability	15,877,675
3. Current-Period Benefit Changes	0
4. Employee Contributions (made negative for addition here)	(988,612)
5. Projected Earnings on Plan Investments (made negative for addition here)	(14,637,540)
6. Pension Plan Administrative Expense	147,062
7. Other Changes in Plan Fiduciary Net Position (made negative for addition here)	(41,854)
8. Recognition of Outflow (Inflow) of Resources due to Liabilities	(2,239,365)
9. Recognition of Outflow (Inflow) of Resources due to Assets	213,170
10. Total Pension Expense	\$ 5,249,936

Statement of Outflows and Inflows Arising from Current Reporting Period Fiscal Year Ended June 30, 2019

A. Outflows (Inflows) of Resources due to Liabilities

1. Difference between expected and actual experience of the Total Pension Liability (gains) or losses	\$ (4,481,503)
2. Assumption Changes (gains) or losses	\$ -
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}	4.7201
4. Outflow (Inflow) of Resources to be recognized in the current pension expense for the difference between expected and actual experience of the Total Pension Liability	\$ (949,451)
5. Outflow (Inflow) of Resources to be recognized in the current pension expense for Assumption Changes	\$ -
6. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Liabilities: 4. + 5.	<u>\$ (949,451)</u>
7. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for the difference between expected and actual experience of the Total Pension Liability: 1. - 4.	\$ (3,532,052)
8. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for Assumption Changes: 2. - 5.	\$ -
9. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Liabilities: 7. + 8.	<u>\$ (3,532,052)</u>

B. Outflows (Inflows) of Resources due to Assets

1. Net difference between projected and actual earnings on pension plan investments (gains) or losses	\$ (18,247)
2. Recognition period for Assets {in years}	5.0000
3. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Assets	\$ (3,649)
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets: 1. - 3.	\$ (14,598)

Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods Fiscal Year Ended June 30, 2019

A. Outflows and Inflows of Resources due to Liabilities and Assets to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Due to Liabilities	\$ 713,134	\$ 2,952,499	\$ (2,239,365)
2. Due to Assets	4,230,260	4,017,090	213,170
3. Total	\$ 4,943,394	\$ 6,969,589	\$ (2,026,195)

B. Outflows and Inflows of Resources by Source to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Differences between expected and actual experience	\$ -	\$ 2,952,499	\$ (2,952,499)
2. Assumption Changes	713,134	-	713,134
3. Net Difference between projected and actual earnings on pension plan investments	4,230,260	4,017,090	213,170
4. Total	\$ 4,943,394	\$ 6,969,589	\$ (2,026,195)

C. Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows of Resources
1. Differences between expected and actual experience	\$ -	\$ 4,317,342	\$ (4,317,342)
2. Assumption Changes	229,842	-	229,842
3. Net Difference between projected and actual earnings on pension plan investments	3,102,900	9,124,548	(6,021,648)
4. Total	\$ 3,332,742	\$ 13,441,890	\$ (10,109,148)

D. Deferred Outflows and Deferred Inflows of Resources by Year to be Recognized in Future Pension Expenses

Year Ending June 30	Net Deferred Outflows of Resources
2020	\$ (2,116,994)
2021	(5,113,808)
2022	(2,183,439)
2023	(694,907)
2024	0
Thereafter	0
Total	\$ (10,109,148)

Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods Fiscal Year Ended June 30, 2019

Year Established	Initial Amount	Initial Recognition Period	Current Year Recognition	Remaining Recognition	Remaining Recognition Period
Deferred Outflow (Inflow) due to Differences Between Expected and Actual Experience on Liabilities					
2016	\$ (5,184,045)	3.5584	\$ (813,504)	\$ -	0.0000
2017	(3,462,751)	3.3223	(1,042,275)	(335,926)	0.3223
2018	(743,902)	5.0513	(147,269)	(449,364)	3.0513
2019	(4,481,503)	4.7201	(949,451)	(3,532,052)	3.7201
Total			\$ (2,952,499)	\$ (4,317,342)	
Deferred Outflow (Inflow) due to Assumption Changes					
2016	\$ -	3.5584	\$ -	\$ -	0.0000
2017	2,369,244	3.3223	713,134	229,842	0.3223
2018	-	5.0513	-	-	3.0513
2019	-	4.7201	-	-	3.7201
Total			\$ 713,134	\$ 229,842	
Deferred Outflow (Inflow) due to Differences Between Projected and Actual Earnings on Plan Investments					
2015	\$ 5,636,791	5.0000	\$ 1,127,359	\$ -	0.0000
2016	15,514,504	5.0000	3,102,901	3,102,900	1.0000
2017	(14,651,848)	5.0000	(2,930,370)	(5,860,738)	2.0000
2018	(5,415,354)	5.0000	(1,083,071)	(3,249,212)	3.0000
2019	(18,247)	5.0000	(3,649)	(14,598)	4.0000
Total			\$ 213,170	\$ (6,021,648)	

Statement of Fiduciary Net Position as of June 30, 2019

Assets

Cash and Deposits \$ 2,504,651

Receivables

Accounts Receivable - Sale of Investments \$ 2,415,675

Accrued Interest and Other Dividends -

Contributions -

Accounts Receivable - Other -

Total Receivables \$ 2,415,675

Investments

Fixed Income \$ 89,198,776

Domestic Equities 102,421,397

International Equities 41,115,396

Real Estate 23,993,350

Other 8,328,147

Total Investments \$ 265,057,066

Total Assets \$ 269,977,392

Liabilities

Payables

Accounts Payable - Purchase of Investments \$ -

Accrued Expenses 339,416

Accounts Payable - Other 2,358,489

Total Liabilities \$ 2,697,905

Net Position Restricted for Pensions \$ 267,279,487

Statement of Changes in Fiduciary Net Position for Year Ended June 30, 2019

Additions

Contributions		
Employer	\$	8,233,959
Employee		988,612
Other		41,854
Total Contributions	<u>\$</u>	<u>9,264,425</u>
Investment Income		
Net Appreciation in Fair Value of Investments	\$	15,931,897
Interest and Dividends		-
Less Investment Expense		(1,276,110)
Net Investment Income	<u>\$</u>	<u>14,655,787</u>
Other	<u>\$</u>	<u>-</u>
Total Additions	<u>\$</u>	<u>23,920,212</u>

Deductions

Benefit payments, including refunds of employee contributions	\$	13,001,793
Pension Plan Administrative Expense		147,062
Other		-
Total Deductions	<u>\$</u>	<u>13,148,855</u>
Net Increase in Net Position	<u>\$</u>	<u>10,771,357</u>

Net Position Restricted for Pensions

Beginning of Year	<u>\$</u>	<u>256,508,130</u>
End of Year	<u>\$</u>	<u>267,279,487</u>

SECTION C

REQUIRED SUPPLEMENTARY INFORMATION

Schedules of Required Supplementary Information
Schedule of Changes in Net Pension Liability and Related Ratios
Current Period
Fiscal Year Ended June 30, 2019

A. Total pension liability	
1. Service Cost	\$ 6,919,400
2. Interest on the Total Pension Liability	15,877,675
3. Changes of benefit terms	0
4. Difference between expected and actual experience of the Total Pension Liability	(4,481,503)
5. Changes of assumptions	0
6. Benefit payments, including refunds of employee contributions	<u>(13,001,793)</u>
7. Net change in total pension liability	\$ 5,313,779
8. Total pension liability – beginning	<u>279,174,680</u>
9. Total pension liability – ending	<u><u>\$ 284,488,459</u></u>
B. Plan fiduciary net position	
1. Contributions – employer	\$ 8,233,959
2. Contributions – employee	988,612
3. Net investment income	14,655,787
4. Benefit payments, including refunds of employee contributions	(13,001,793)
5. Pension Plan Administrative Expense	(147,062)
6. Other	<u>41,854</u>
7. Net change in plan fiduciary net position	\$ 10,771,357
8. Plan fiduciary net position – beginning	<u>256,508,130</u>
9. Plan fiduciary net position – ending	<u><u>\$ 267,279,487</u></u>
C. Net pension liability	<u><u>\$ 17,208,972</u></u>
D. Plan fiduciary net position as a percentage of the total pension liability	93.95%
E. Covered-employee payroll	\$ 23,602,735
F. Net pension liability as a percentage of covered-employee payroll	72.91%

Schedules of Required Supplementary Information

Schedule of Changes in Net Pension Liability and Related Ratios

Ultimately 10 Fiscal Years will be Displayed

Fiscal year ending June 30,	2019	2018	2017	2016	2015	2014
Total Pension Liability						
Service Cost	\$ 6,919,400	\$ 6,927,257	\$ 7,221,153	\$ 7,230,267	\$ 5,342,168	\$ 5,319,836
Interest on the Total Pension Liability	15,877,675	15,378,982	16,121,127	15,770,309	14,883,382	14,607,426
Benefit Changes	-	-	-	-	-	-
Difference between Expected and Actual Experience	(4,481,503)	(743,902)	(3,462,751)	(5,184,045)	12,969,853	(5,751,106)
Assumption Changes	-	-	2,369,244	-	24,290,229	-
Benefit Payments	(12,979,769)	(12,769,175)	(12,310,422)	(12,007,538)	(10,762,871)	(9,966,020)
Refunds	(22,024)	-	(79,011)	(800)	(14,320)	(18,836)
Net Change in Total Pension Liability	5,313,779	8,793,162	9,859,340	5,808,193	46,708,441	4,191,300
Total Pension Liability - Beginning	\$ 279,174,680	\$ 270,381,518	\$ 260,522,178	\$ 254,713,985	\$ 208,005,544	\$ 203,814,244
Total Pension Liability - Ending (a)	\$ 284,488,459	\$ 279,174,680	\$ 270,381,518	\$ 260,522,178	\$ 254,713,985	\$ 208,005,544
Plan Fiduciary Net Position						
Employer Contributions	\$ 8,233,959	\$ 8,421,173	\$ 8,485,361	\$ 5,561,289	\$ 5,690,381	\$ 6,117,327
Employee Contributions	988,612	1,016,180	1,016,646	1,011,372	946,149	925,324
Pension Plan Net Investment Income	14,655,787	19,162,603	28,044,374	(1,744,085)	9,971,823	29,793,113
Benefit Payments	(12,979,769)	(12,769,175)	(12,310,422)	(12,007,538)	(10,762,871)	(9,966,020)
Refunds	(22,024)	-	(79,011)	(800)	(14,320)	(18,836)
Pension Plan Administrative Expense	(147,062)	(142,311)	(168,701)	(158,420)	(137,951)	(130,529)
Other	41,854	12	45,832	-	-	-
Net Change in Plan Fiduciary Net Position	\$ 10,771,357	\$ 15,688,482	\$ 25,034,079	\$ (7,338,182)	\$ 5,693,211	\$ 26,720,379
Plan Fiduciary Net Position - Beginning	\$ 256,508,130	\$ 240,819,648	\$ 215,785,569	\$ 223,123,751	\$ 217,430,540	\$ 190,710,161
Plan Fiduciary Net Position - Ending (b)	\$ 267,279,487	\$ 256,508,130	\$ 240,819,648	\$ 215,785,569	\$ 223,123,751	\$ 217,430,540
Net Pension Liability - Ending (a) - (b)	\$ 17,208,972	\$ 22,666,550	\$ 29,561,870	\$ 44,736,609	\$ 31,590,234	\$ (9,424,996)
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	93.95 %	91.88 %	89.07 %	82.83 %	87.60 %	104.53 %
Covered-Employee Payroll	\$ 23,602,735	\$ 23,434,639	\$ 22,917,870	\$ 22,308,000	\$ 22,308,000	\$ 19,781,628
Net Pension Liability as a Percentage of Covered-Employee Payroll	72.91 %	96.72 %	128.99 %	200.54 %	141.61 %	(47.65)%
Notes to Schedule:						
N/A						

Schedules of Required Supplementary Information

Schedule of the Net Pension Liability

Ultimately 10 Fiscal Years will be Displayed

FY Ending June 30,	Total Pension Liability	Plan Net Position	Net Pension Liability	Plan Net Position as a % of Total Pension Liability	Covered Payroll	Net Pension Liability as a % of Covered Payroll
2014	\$ 208,005,544	\$ 217,430,540	\$ (9,424,996)	104.53%	\$ 19,781,628	(47.65)%
2015	254,713,985	223,123,751	31,590,234	87.60%	22,308,000	141.61%
2016	260,522,178	215,785,569	44,736,609	82.83%	22,308,000	200.54%
2017	270,381,518	240,819,648	29,561,870	89.07%	22,917,870	128.99%
2018	279,174,680	256,508,130	22,666,550	91.88%	23,434,639	96.72%
2019	284,488,459	267,279,487	17,208,972	93.95%	23,602,735	72.91%

Schedule of Contributions

Last 10 Fiscal Years

FY Ending June 30,	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll	Actual Contribution as a % of Covered Payroll*
2009	\$ 4,466,571	\$ 4,466,571	\$ -	\$ 18,874,986	24.20%
2010	4,667,612	4,667,612	-	18,629,861	24.59%
2011	5,220,623	5,220,623	-	19,337,991	27.43%
2012	5,465,079	5,465,079	-	19,201,734	29.08%
2013	5,672,291	5,672,291	-	19,585,755	29.93%
2014	6,117,327	6,117,327	-	19,781,628	31.46%
2015	5,690,381	5,690,381	-	22,308,000	29.12%
2016	5,561,289	5,561,289	-	22,308,000	25.09%
2017	8,485,361	8,485,361	-	22,917,870	37.99%
2018	8,421,173	8,421,173	-	23,434,639	37.37%
2019	8,233,959	8,233,959	-	23,602,735	35.87%

* Actual contributions are based on covered payroll at the time of the contribution. This payroll is not reported to the actuary. The covered payroll shown on this page is the valuation payroll.

Notes to Schedule of Contributions

Valuation Date: June 30, 2017

Methods and Assumptions Used to Determine Contribution Rates for Fiscal Year Ending June 30, 2019:

Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percentage of Payroll, Closed
Remaining Amortization Period	20 years for assumption changes, 15 years for all other liabilities.
Asset Valuation Method	4-Year smoothed market; 25% corridor
Inflation	2.50% price inflation
Salary Increases	3.25%
Investment Rate of Return	5.75%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition.
Mortality	RP-2014 mortality tables, adjusted for mortality improvement back to the observation period base year of 2006, and using the MP-2016 improvement scale.

Other Information:

Notes Assumptions were updated based on the five-year Experience Study covering the period July 1, 2011 through June 30, 2016. There were no benefit changes reflected in the June 30, 2017 valuation.

Schedule of Investment Returns Multiyear

To be provided by System

Last 10 Fiscal Years

FY Ending June 30,	Annual Return¹
2010	
2011	
2012	
2013	
2014	
2015	
2016	
2017	
2018	
2019	

¹ Annual money-weighted rate of return, net of investment expenses.

SECTION D

NOTES TO FINANCIAL STATEMENTS

Long-Term Expected Return on Plan Assets

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected price inflation. Best estimates of arithmetic real rates of return for the 10-year period from 2019 to 2028 were based upon capital market assumptions provided by plan's investment consultant(s). For each major asset class that is included in the pension plan's target asset allocation as of June 30, 2019, these best estimates are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Broad Domestic Equity	37%	6.21%
International Equity	15%	6.79%
Real Estate	8%	5.02%
Cash Equivalents	0%	0.25%
Domestic Fixed	40%	1.56%
Total	100%	
Total Real Rate of Return		4.34%
Plus: Price Inflation - Actuary's Assumption		2.50%
Less: Investment Expenses		0.00%
Net Expected Return		6.84%

Single Discount Rate

A single discount rate of 5.75% was used to measure the total pension liability. This single discount rate was based on the expected rate of return on pension plan investments of 5.75%. The projection of cash flows used to determine this single discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Regarding the sensitivity of the net pension liability to changes in the single discount rate, the following presents the plan's net pension liability, calculated using a single discount rate of 5.75%, as well as what the plan's net pension liability would be if it were calculated using a single discount rate that is 1-percentage-point lower or 1-percentage-point higher:

Sensitivity of Net Pension Liability to the Single Discount Rate Assumption

	1% Decrease 4.75%	Current Single Discount Rate Assumption 5.75%	1% Increase 6.75%
Total Pension Liability (TPL)	\$ 318,830,763	\$ 284,488,459	\$ 255,399,031
Net Position Restricted for Pensions	267,279,487	267,279,487	267,279,487
Net Pension Liability (NPL)	\$ 51,551,276	\$ 17,208,972	\$ (11,880,456)

Summary of Population Statistics as of June 30, 2019

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	149
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	8
Active Plan Members	<u>140</u>
Total Plan Members	297

SECTION E

SUMMARY OF BENEFITS

Summary of Provisions Considered (July 1, 2019)

Tier One

Tier Two

Description

Elected or appointed prior to the effective date of Act 399 of 1999 and who do not elect to participate in Tier Two.

Elected or appointed after the effective date of Act 399 of 1999 or elected to participate in Tier Two.

Regular Retirement

An active member may retire at age 65 with 10 or more years of credited service, or after 20 years of credited service regardless of age. Persons who become members after June 30, 1983 must also have at least 8 years of actual service as a justice of the Supreme Court, or as a judge of the Circuit or Chancery Courts or the Court of Appeals.

An active member or former member may retire at age 65 with 8 or more years of credited service, or after 20 years of credited service regardless of age.

Compulsory Retirement

Any judge or justice who attains 70 years of age during a term of office to which he has been elected may complete the term without forfeiting rights to retirement benefits. Any judge or justice who is not eligible to retire at age 70 may continue to serve as judge until completion of the term in which there has accrued sufficient credited service to retire. Otherwise, judges or justices must retire by their 70th birthday or lose their retirement benefits.

Any judge or justice who attains 70 years of age during a term of office to which he has been elected may complete the term without forfeiting rights to retirement benefits. Any judge or justice who is not eligible to retire at age 70 may continue to serve as judge until completion of the term in which there has accrued sufficient credited service to retire. Otherwise, judges or justices must retire by their 70th birthday or lose their retirement benefits.

Final Salary

The annual salary for the last judicial office held.

The annual salary for the last judicial office held.

Age & Service Annuity

60% of the judge's final salary, for life.

3.2% of the salary of the last judicial office held multiplied by the number of years of service not to exceed 80% of the salary of the last judicial office held.

Each year of additional service after twenty (20) years of judicial service, the benefit shall be increased by two and one-half percent (2.5%) with a maximum benefit payable of seventy-five percent (75%) of the judge's final salary.

Summary of Provisions Considered (Continued)

Tier One

Tier Two

Deferred Retirement

An inactive member who has 14 or more years of credited service and left judicial service before attaining age 65 will be entitled to an age and service annuity beginning at age 65. Persons who become members after June 30, 1983 must also have at least 8 years of actual service as a justice of the Supreme Court, or as a judge of the Circuit or Chancery Courts or the Court of Appeals.

An inactive member who has 8 or more years of credited service and left judicial service before attaining age 65 will be entitled to an age and service annuity beginning at age 65.

Disability Retirement

An active member with 3 or more consecutive years of credited service who becomes totally and permanently disabled may be retired and receive a disability annuity computed in the same manner as an age and service annuity. The 3 years of service is not required for persons who were members before July 1, 1983.

An active member with 3 or more consecutive years of credited service who becomes totally and permanently disabled may be retired and receive a disability annuity computed in the same manner as an age and service annuity, except that the benefit shall not be less than 25.6% of final salary.

Early Retirement

A member who became a member before July 1, 1983 and who has 18 but less than 20 years credited service may retire, regardless of age, and receive an immediate annuity. The amount is the full age and service amount reduced proportionately for service less than 20 years.

A member with 8 years of credited service may retire between ages 62 and 65 and receive an immediate annuity. The amount is the full age and service amount reduced 1/2 of 1% for each month retirement age is younger than age 65.

A member with 14 years of credited service may retire between ages 62 and 65 and receive an immediate annuity. The amount is the full age and service amount reduced 1/2 of 1% for each month that retirement age is younger than age 65. Persons who become members after June 30, 1983 must also have at least 8 years of actual service as a justice of the Supreme Court, or as a judge of the Circuit Court or Chancery Courts or the Court of Appeals.

Summary of Provisions Considered (Concluded)

Tier One

Tier Two

Survivor Benefits

Upon the death of a member with 3 or more years of service, before or after retirement, an annuity of 67% of the judge's benefit is payable to the following survivors (shared if there is more than one eligible survivor):

- A surviving spouse married to the judge more than 1 year at the time of death.
- A minor child of the judge.

The 3-year service requirement is not required of those who became members prior to July 1, 1983.

Upon the death of a member with 3 or more years of service, before or after retirement, an annuity of 67% of the judge's benefit, but not less than 17.152% of final salary, is payable to the following survivors (shared if there is more than one eligible survivor):

- A surviving spouse married to the judge more than 1 year at the time of death.
- A minor child of the judge.

The 3-year service requirement is not required of those who became members prior to July 1, 1983.

Increases After Retirement

For any person who was a member on or before June 30, 1983, the retirement benefits are increased or decreased from time to time as the salary for the particular judicial office is increased or decreased. For all judges or justices first elected after June 30, 1983, and who have received retirement benefits from the System for at least 12 full calendar months, the retirement benefits are increased each July 1st by 3%.

For all judges or justices who have received retirement benefits from the System for at least 12 full calendar months, the retirement benefits are increased each July 1st by 3%.

Member Contributions

Active members contribute 6% of their salaries. Members with 20 or more years of service and members age 65 or older with 10 or more years of service do not contribute to the Retirement System. At any time a member is accruing the additional 2.5% of final salary benefit, member contributions would be required. If a member leaves service before becoming eligible to retire, accumulated contributions may be refunded.

Active members contribute 5% of their salaries. Members with 25 or more years of service do not contribute to the Retirement System. If a member leaves service before becoming eligible to retire, accumulated contributions may be refunded.

SECTION F

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS

Summary of Assumptions Used for Arkansas Judicial Actuarial Valuations Assumptions Adopted by Board of Trustees After Consulting with the Actuary

The actuarial assumptions used in the valuation are shown in this Section. Assumptions were established based upon an Experience Study covering the period July 1, 2011 through June 30, 2016 (please see report dated May 2, 2017). The actuarial assumptions represent estimates of future experience.

Economic Assumptions

The investment return rate used in making the valuation was 5.75% per year, compounded annually (net after investment expenses). Adopted 2017.

Pay increase assumptions for individual active members are shown on page 25. Part of the assumption for each age is for a merit and/or seniority increase, and the other 3.25% recognizes wage inflation. This wage inflation assumption consists of 2.50% for price inflation and 0.75% for real wage growth. Adopted 2015 and readopted 2017.

Total active member payroll is assumed to increase 3.25% a year, which is the portion of the individual pay increase assumptions recognizing inflation.

The number of active members is assumed to continue at the present number.

Non-Economic Assumptions

The healthy mortality tables, for post-retirement mortality, used in evaluating allowances to be paid were the RP-2014 Healthy Annuitant table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The **disabled retiree mortality tables**, for post-retirement mortality, used in evaluating allowances to be paid were the RP-2014 disabled mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The **pre-retirement mortality tables** used were the RP-2014 employees mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. It was assumed that 100% of pre-retirement deaths would be non-duty related. Mortality rates for a particular calendar year are determined by applying the MP- 2016 improvement scale to the above described tables. Related values are shown on pages 25 and 27. Adopted 2017.

(Concluded on the following page.)

Summary of Assumptions Used for Arkansas Judicial Actuarial Valuations Assumptions Adopted by Board of Trustees After Consulting with the Actuary (Concluded)

The probabilities of retirement for members eligible to retire are shown on page 26. Adopted 2012.

The probabilities of withdrawal from service, death-in-service and disability are shown for sample ages on page 25. Adopted 2017.

Normal Cost. Normal Cost and the allocation of benefit values between service rendered before and after the valuation date was determined using an individual entry-age actuarial cost method having the following characteristics.

- The annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement; and
- Each annual normal cost is a constant percentage of the member's year-by-year projected covered pay.

The normal cost, the present value of future normal cost and the present value of benefits are based on the benefit levels available to each member. The accrued liability is the difference between the present value of benefits and the present value of future normal cost.

Funding value of assets (cash & investments) was determined by phasing-in differences between actual market return and the assumed rate of return over a four-year period.

The data about persons now covered and about present assets was furnished by the System's administrative staff. Although examined for general reasonableness, the data was not audited by the actuary.

The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (MAAA).

Decrement and Pay Increase Assumptions for Active Members June 30, 2019

2019 Sample Ages	Years of Service	Percent of Active Members Separating Within the Next Year					Pay Increase Assumptions for Individual Member		
		Male		Female		Withdrawal	Merit & Seniority	Base (Economic)	Increase Next Year
		Death	Disability	Death	Disability				
	0					6.00%			
	1					6.00%			
	2					6.00%			
	3					6.00%			
	4					6.00%			
30	5+	0.05%	0.04%	0.02%	0.05%	1.00%	0.00%	3.25%	3.25%
35		0.06%	0.04%	0.03%	0.05%	1.00%	0.00%	3.25%	3.25%
40		0.06%	0.10%	0.04%	0.18%	1.00%	0.00%	3.25%	3.25%
45		0.09%	0.13%	0.07%	0.20%	1.00%	0.00%	3.25%	3.25%
50		0.16%	0.25%	0.11%	0.28%	1.00%	0.00%	3.25%	3.25%
55		0.27%	0.45%	0.17%	0.38%	1.00%	0.00%	3.25%	3.25%
60		0.48%	0.71%	0.26%	0.51%	1.00%	0.00%	3.25%	3.25%
65		0.86%	0.83%	0.38%	0.62%	1.00%	0.00%	3.25%	3.25%

The pay increase assumptions are age based only, and not service based.

Probabilities of death are for calendar year 2019.

Probabilities of Retirement for Members Eligible to Retire June 30, 2019

Retirement Ages	Percent of Eligible Active Members Electing Early Retirement Within Next Year
62	2%
63	2%
64	2%

Normal Retirement

- 1) For ages under 70, a 4% probability of retirement is used.
- 2) For ages 70 and over
 - a. If the future year of consideration is an odd year, then a 4% probability of retirement is used.
 - b. If the future year of consideration is an even year,
 - i. For members under the age of 76, a 33% probability of retirement is used.
 - ii. For members ages 76 or older, a 100% probability of retirement is used.

For Tier One, a member was assumed eligible to retire at age 50 with 20 years of service, or at age 65 with 10 years of service. A member was assumed eligible to retire early at age 62 with 14 years of service.

For Tier Two, a member was assumed eligible to retire at age 50 with 20 years of service, or at age 65 with 8 years of service. A member was assumed eligible to retire early at age 62 with 8 years of service.

Single Life Retirement Values June 30, 2019

Attained Age in 2019	Percent Dying Next Year		Present Value of \$1 Monthly for Life Increasing 3% Annually		Future Life Expectancy (Years)	
	Men	Women	Men	Women	Men	Women
50	0.3920%	0.2657%	\$235.14	\$245.25	34.68	37.28
55	0.5637%	0.3720%	217.03	227.85	29.92	32.34
60	0.7919%	0.5576%	196.52	207.82	25.35	27.56
65	1.1411%	0.8324%	173.74	185.37	21.00	22.99
70	1.7008%	1.2852%	148.93	160.43	16.92	18.66
75	2.6982%	2.0951%	122.58	133.55	13.13	14.61
80	4.5382%	3.5790%	96.03	106.05	9.75	10.97

Sample Attained Ages	\$100 Benefit Increasing 3% Annually	Portion of Age 65 Lives in 2017 Still Alive	
		Men	Women
65	\$100.00	100%	100%
70	115.93	93%	95%
75	134.39	85%	88%
80	155.80	73%	78%
85	180.61	56%	64%

Probabilities of death are for calendar year 2019.

Summary of Assumptions Used

June 30, 2019

Miscellaneous and Technical Assumptions

Marriage Assumption:	80% of males and 80% of females are assumed to be married for purposes of death-in-service benefits. 80% of members are assumed to be married at retirement. Male spouses are assumed to be six years older than female spouses for active member valuation purposes. Actual data is used for retired valuation purposes.
Pay Increase Timing:	Beginning of (Fiscal) year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.
Decrement Timing:	Decrements of all types are assumed to occur mid-year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Benefit Service:	Exact fractional service is used to determine the amount of benefit payable.
Decrement Relativity:	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Decrement Operation:	Disability and withdrawal do not operate during retirement eligibility.
Normal Form of Benefit:	The assumed normal form of benefit is the 67% joint and survivor benefit.
Incidence of Contributions:	Contributions are assumed to be received continuously throughout the year based upon the computed percent-of-payroll shown in this report, and the actual payroll payable at the time contributions are made.
Tier 1 2.5% Benefit Multiplier Election:	For present value of future benefit purposes, it was assumed that all Tier 1 members will elect to accrue the additional 2.5% benefit multiplier (if they have not already done so). Member contribution rates are based upon those members that have elected to accrue the additional 2.5% benefit multiplier as of the valuation date.
Administrative Expenses:	The computed contribution rate was increased by 0.7% of payroll to fund for administrative expenses.
Additional Adjustments:	The actuarial accrued liabilities were increased by \$4.1 million to reflect potential future salary/COLA increases in excess of the actuarial assumptions.

SECTION G

CALCULATION OF THE SINGLE DISCOUNT RATE

Calculation of the Single Discount Rate

GASB Statement No. 67 includes a specific requirement for the discount rate that is used for the purpose of the measurement of the Total Pension Liability. This rate considers the ability of the fund to meet benefit obligations in the future. To make this determination, employer contributions, employee contributions, benefit payments, expenses and investment returns are projected into the future. The Plan Net Position (assets) in future years can then be determined and compared to its obligation to make benefit payments in those years. As long as assets are projected to be on hand in a future year, the assumed valuation discount rate is used. In years where assets are not projected to be sufficient to meet benefit payments, the use of a “risk-free” rate is required, as described in the following paragraph.

The *Single Discount Rate* (SDR) is equivalent to applying these two rates to the benefits that are projected to be paid during the different time periods. The SDR reflects (1) the long-term expected rate of return on pension plan investments (during the period in which the fiduciary net position is projected to be sufficient to pay benefits) and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is 5.75%; the municipal bond rate is 3.13%; and the resulting single discount rate is 5.75%.

The tables in this section provide background for the development of the single discount rate.

The **Projection of Contributions** table shows the development of expected contributions in future years. Normal Cost contributions for future hires are not included (nor are their liabilities).

The **Projection of Plan Fiduciary Net Position** table shows the development of expected asset levels in future years.

The **Present Values of Projected Benefit Payments** table shows the development of the Single Discount Rate (SDR). It breaks down the benefit payments into present values for funded and unfunded portions and shows the equivalent total at the SDR.

Single Discount Rate Development Projection of Contributions

Year	Contributions from Current Employees	Normal Cost and Expense Contributions	UAL Contributions	Total Contributions
0				
1	\$ 904,920	\$ 6,358,410	\$ 2,165,868	\$ 9,429,199
2	827,965	6,018,364	1,743,524	8,589,853
3	761,029	5,653,474	1,646,800	8,061,303
4	695,552	5,308,627	1,706,386	7,710,565
5	632,250	4,946,398	1,782,127	7,360,775
6	533,883	4,627,297	1,859,599	7,020,780
7	496,114	4,231,684	1,950,943	6,678,741
8	465,708	3,944,741	2,042,243	6,452,693
9	394,180	3,684,514	2,108,616	6,187,309
10	361,183	3,448,828	2,177,146	5,987,157
11	317,206	3,211,895	2,247,903	5,777,003
12	290,354	2,995,056	2,320,960	5,606,370
13	243,758	2,785,995	2,396,391	5,426,144
14	232,537	2,578,159	(282,792)	2,527,904
15	200,964	2,379,906	(291,982)	2,288,887
16	173,209	2,246,705	(301,472)	2,118,442
17	156,943	2,094,654	(311,270)	1,940,327
18	150,456	1,944,380	(321,386)	1,773,450
19	118,872	1,812,455	(598,502)	1,332,825
20	104,353	1,655,053	(575,966)	1,183,441
21	89,516	1,488,167	-	1,577,683
22	84,726	1,353,172	-	1,437,897
23	52,274	1,240,598	-	1,292,873
24	49,330	1,112,772	-	1,162,103
25	1,096	1,025,155	-	1,026,250
26	-	884,868	-	884,868
27	-	738,326	-	738,326
28	-	644,201	-	644,201
29	-	546,539	-	546,539
30	-	473,314	-	473,314
31	-	397,323	-	397,323
32	-	327,800	-	327,800
33	-	255,700	-	255,700
34	-	210,501	-	210,501
35	-	163,570	-	163,570
36	-	131,522	-	131,522
37	-	98,256	-	98,256
38	-	59,826	-	59,826
39	-	20,111	-	20,111
40	-	16,733	-	16,733
41	-	13,244	-	13,244
42	-	6,723	-	6,723
43	-	-	-	-
44	-	-	-	-
45	-	-	-	-
46	-	-	-	-
47	-	-	-	-
48	-	-	-	-
49	-	-	-	-
50	-	-	-	-

Single Discount Rate Development

Projection of Plan Fiduciary Net Position

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 5.75%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)=(a)+(b)-(c)-(d)+(e)
1	\$ 267,279,487	\$ 9,429,199	\$ 13,587,860	\$ 167,076	\$ 15,245,944	\$ 278,199,694
2	278,199,694	8,589,853	14,622,798	158,109	15,820,977	287,829,617
3	287,829,617	8,061,303	15,580,014	148,823	16,332,842	296,494,926
4	296,494,926	7,710,565	16,604,846	139,777	16,792,359	304,253,227
5	304,253,227	7,360,775	17,606,453	130,376	17,200,418	311,077,590
6	311,077,590	7,020,780	18,661,952	121,057	17,553,524	316,868,885
7	316,868,885	6,678,741	19,698,775	111,388	17,847,709	321,585,172
8	321,585,172	6,452,693	20,608,598	104,231	18,086,898	325,411,934
9	325,411,934	6,187,309	21,444,296	96,749	18,275,936	328,334,134
10	328,334,134	5,987,157	22,126,411	90,718	18,419,122	330,523,283
11	330,523,283	5,777,003	22,834,778	84,406	18,519,139	331,900,242
12	331,900,242	5,606,370	23,414,084	78,789	18,577,214	332,590,953
13	332,590,953	5,426,144	23,929,029	72,901	18,597,390	332,612,556
14	332,612,556	2,527,904	24,354,776	67,827	18,504,547	329,222,404
15	329,222,404	2,288,887	24,737,102	62,507	18,292,150	325,003,833
16	325,003,833	2,118,442	24,963,875	58,674	18,038,430	320,138,156
17	320,138,156	1,940,327	25,127,410	54,664	17,749,082	314,645,491
18	314,645,491	1,773,450	25,221,601	50,997	17,425,957	308,572,300
19	308,572,300	1,332,825	25,255,500	47,170	17,063,406	301,665,860
20	301,665,860	1,183,441	25,299,040	43,097	16,660,932	294,168,095
21	294,168,095	1,577,683	25,281,590	38,792	16,241,603	286,666,999
22	286,666,999	1,437,897	25,144,256	35,348	15,810,318	278,735,611
23	278,735,611	1,292,873	24,954,160	31,775	15,355,642	270,398,191
24	270,398,191	1,162,103	24,687,869	28,621	14,880,172	261,723,976
25	261,723,976	1,026,250	24,371,916	25,344	14,386,603	252,739,569
26	252,739,569	884,868	24,071,526	21,897	13,874,605	243,405,618
27	243,405,618	738,326	23,729,507	18,324	13,343,545	233,739,659
28	233,739,659	644,201	23,223,858	15,966	12,799,485	223,943,521
29	223,943,521	546,539	22,685,029	13,518	12,248,783	214,040,296
30	214,040,296	473,314	22,073,943	11,698	11,694,647	204,122,616
31	204,122,616	397,323	21,446,584	9,807	11,140,064	194,203,612
32	194,203,612	327,800	20,798,761	8,080	10,586,164	184,310,735
33	184,310,735	255,700	20,142,473	6,288	10,033,935	174,451,609
34	174,451,609	210,501	19,418,508	5,173	9,486,309	164,724,738
35	164,724,738	163,570	18,694,532	4,014	8,946,239	155,136,001
36	155,136,001	131,522	17,940,332	3,227	8,415,381	145,739,345
37	145,739,345	98,256	17,191,813	2,409	7,895,373	136,538,752
38	136,538,752	59,826	16,473,305	1,457	7,385,645	127,509,461
39	127,509,461	20,111	15,763,493	474	6,885,484	118,651,089
40	118,651,089	16,733	14,966,022	394	6,398,641	110,100,048
41	110,100,048	13,244	14,179,338	312	5,929,161	101,862,802
42	101,862,802	6,723	13,412,501	158	5,477,077	93,933,943
43	93,933,943	-	12,657,353	-	5,042,389	86,318,979
44	86,318,979	-	11,897,956	-	4,626,056	79,047,079
45	79,047,079	-	11,152,821	-	4,229,045	72,123,302
46	72,123,302	-	10,422,702	-	3,851,625	65,552,225
47	65,552,225	-	9,708,045	-	3,494,047	59,338,227
48	59,338,227	-	9,009,776	-	3,156,537	53,484,989
49	53,484,989	-	8,329,718	-	2,839,254	47,994,525
50	47,994,525	-	7,669,993	-	2,542,255	42,866,787

Single Discount Rate Development

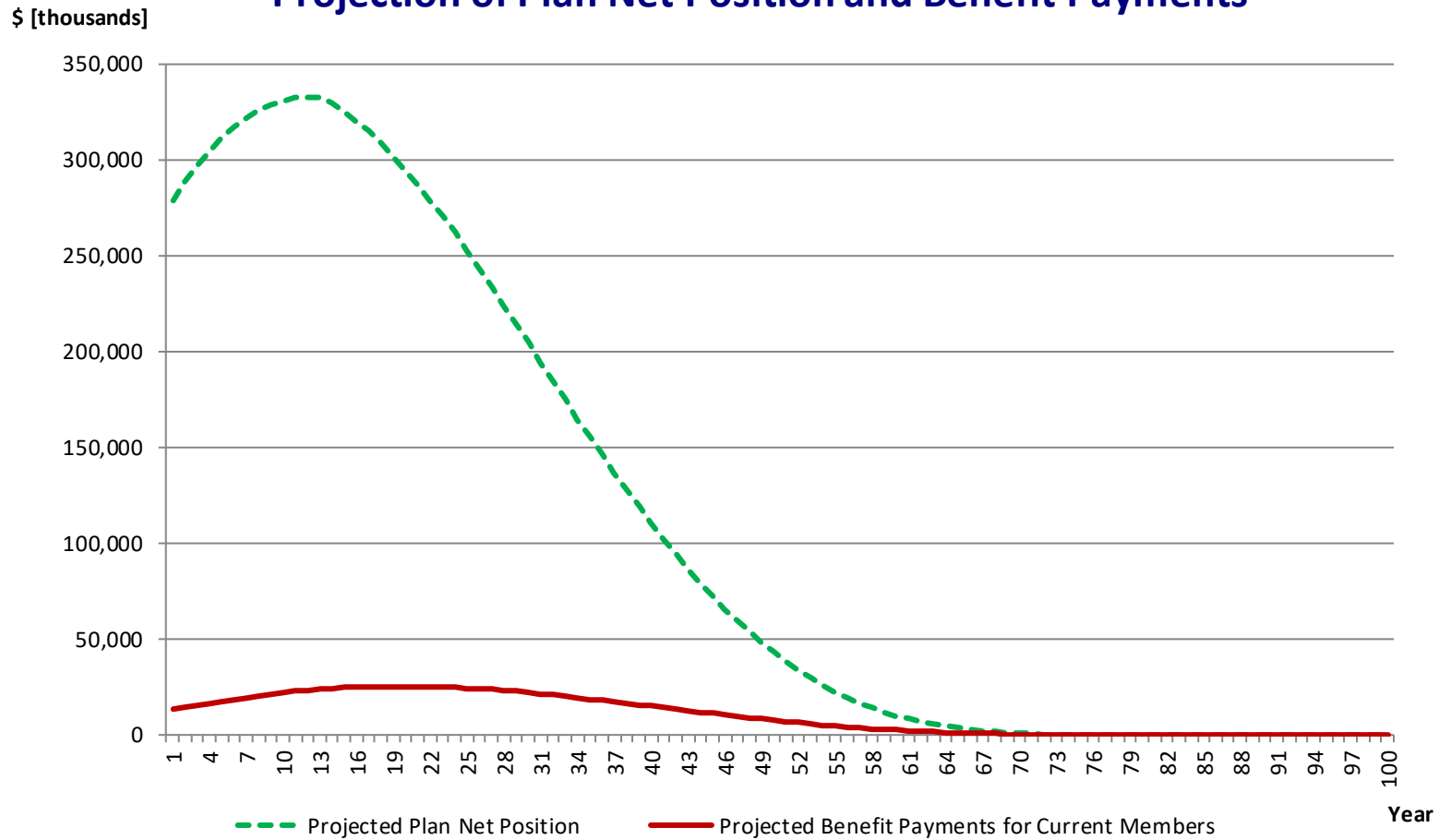
Present Values of Projected Benefits

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of Benefit Payments using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v ^a ((a)-.5)	(g)=(e)*vf ^a ((a)-.5)	(h)=(c)/((1+sdr) ^a ((a)-.5)
1	\$ 267,279,487	\$ 13,587,860	\$ 13,587,860	\$ -	\$ 13,213,287	\$ -	\$ 13,213,287
2	278,199,694	14,622,798	14,622,798	-	13,446,520	-	13,446,520
3	287,829,617	15,580,014	15,580,014	-	13,547,742	-	13,547,742
4	296,494,926	16,604,846	16,604,846	-	13,653,800	-	13,653,800
5	304,253,227	17,606,453	17,606,453	-	13,690,213	-	13,690,213
6	311,077,590	18,661,952	18,661,952	-	13,721,924	-	13,721,924
7	316,868,885	19,698,775	19,698,775	-	13,696,726	-	13,696,726
8	321,585,172	20,608,598	20,608,598	-	13,550,197	-	13,550,197
9	325,411,934	21,444,296	21,444,296	-	13,333,022	-	13,333,022
10	328,334,134	22,126,411	22,126,411	-	13,009,105	-	13,009,105
11	330,523,283	22,834,778	22,834,778	-	12,695,589	-	12,695,589
12	331,900,242	23,414,084	23,414,084	-	12,309,853	-	12,309,853
13	332,590,953	23,929,029	23,929,029	-	11,896,532	-	11,896,532
14	332,612,556	24,354,776	24,354,776	-	11,449,831	-	11,449,831
15	329,222,404	24,737,102	24,737,102	-	10,997,231	-	10,997,231
16	325,003,833	24,963,875	24,963,875	-	10,494,607	-	10,494,607
17	320,138,156	25,127,410	25,127,410	-	9,988,989	-	9,988,989
18	314,645,491	25,221,601	25,221,601	-	9,481,260	-	9,481,260
19	308,572,300	25,255,500	25,255,500	-	8,977,781	-	8,977,781
20	301,665,860	25,299,040	25,299,040	-	8,504,264	-	8,504,264
21	294,168,095	25,281,590	25,281,590	-	8,036,310	-	8,036,310
22	286,666,999	25,144,256	25,144,256	-	7,558,066	-	7,558,066
23	278,735,611	24,954,160	24,954,160	-	7,093,074	-	7,093,074
24	270,398,191	24,687,869	24,687,869	-	6,635,822	-	6,635,822
25	261,723,976	24,371,916	24,371,916	-	6,194,702	-	6,194,702
26	252,739,569	24,071,526	24,071,526	-	5,785,675	-	5,785,675
27	243,405,618	23,729,507	23,729,507	-	5,393,352	-	5,393,352
28	233,739,659	23,223,858	23,223,858	-	4,991,419	-	4,991,419
29	223,943,521	22,685,029	22,685,029	-	4,610,506	-	4,610,506
30	214,040,296	22,073,943	22,073,943	-	4,242,373	-	4,242,373
31	204,122,616	21,446,584	21,446,584	-	3,897,684	-	3,897,684
32	194,203,612	20,798,761	20,798,761	-	3,574,420	-	3,574,420
33	184,310,735	20,142,473	20,142,473	-	3,273,411	-	3,273,411
34	174,451,609	19,418,508	19,418,508	-	2,984,168	-	2,984,168
35	164,724,738	18,694,532	18,694,532	-	2,716,700	-	2,716,700
36	155,136,001	17,940,332	17,940,332	-	2,465,342	-	2,465,342
37	145,739,345	17,191,813	17,191,813	-	2,234,025	-	2,234,025
38	136,538,752	16,473,305	16,473,305	-	2,024,262	-	2,024,262
39	127,509,461	15,763,493	15,763,493	-	1,831,715	-	1,831,715
40	118,651,089	14,966,022	14,966,022	-	1,644,491	-	1,644,491
41	110,100,048	14,179,338	14,179,338	-	1,473,332	-	1,473,332
42	101,862,802	13,412,501	13,412,501	-	1,317,875	-	1,317,875
43	93,933,943	12,657,353	12,657,353	-	1,176,053	-	1,176,053
44	86,318,979	11,897,956	11,897,956	-	1,045,384	-	1,045,384
45	79,047,079	11,152,821	11,152,821	-	926,634	-	926,634
46	72,123,302	10,422,702	10,422,702	-	818,886	-	818,886
47	65,552,225	9,708,045	9,708,045	-	721,264	-	721,264
48	59,338,227	9,009,776	9,009,776	-	632,989	-	632,989
49	53,484,989	8,329,718	8,329,718	-	553,391	-	553,391
50	47,994,525	7,669,993	7,669,993	-	481,855	-	481,855

Single Discount Rate Development Present Values of Projected Benefits (Concluded)

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of Benefit Payments using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v^(a)-.5	(g)=(e)*vf^(a)-.5	(h)=(c)/(1+sdr)^(a)-.5
51	\$ 42,866,787	\$ 7,032,363	\$ 7,032,363	\$ -	\$ 417,775	\$ -	\$ 417,775
52	38,099,909	6,418,387	6,418,387	-	360,567	-	360,567
53	33,690,318	5,829,923	5,829,923	-	309,701	-	309,701
54	29,632,320	5,269,193	5,269,193	-	264,694	-	264,694
55	25,917,613	4,738,355	4,738,355	-	225,085	-	225,085
56	22,535,198	4,238,981	4,238,981	-	190,415	-	190,415
57	19,471,823	3,771,466	3,771,466	-	160,202	-	160,202
58	16,713,073	3,335,360	3,335,360	-	133,974	-	133,974
59	14,244,163	2,930,489	2,930,489	-	111,311	-	111,311
60	12,049,639	2,556,999	2,556,999	-	91,843	-	91,843
61	10,113,008	2,214,994	2,214,994	-	75,233	-	75,233
62	8,416,721	1,904,308	1,904,308	-	61,164	-	61,164
63	6,942,391	1,624,201	1,624,201	-	49,331	-	49,331
64	5,671,334	1,373,310	1,373,310	-	39,443	-	39,443
65	4,585,196	1,150,216	1,150,216	-	31,239	-	31,239
66	3,666,022	953,580	953,580	-	24,490	-	24,490
67	2,896,206	781,857	781,857	-	18,988	-	18,988
68	2,258,716	633,404	633,404	-	14,546	-	14,546
69	1,737,232	506,512	506,512	-	11,000	-	11,000
70	1,316,252	399,298	399,298	-	8,200	-	8,200
71	981,320	309,893	309,893	-	6,018	-	6,018
72	719,067	236,527	236,527	-	4,343	-	4,343
73	517,182	177,311	177,311	-	3,079	-	3,079
74	364,582	130,300	130,300	-	2,140	-	2,140
75	251,552	93,708	93,708	-	1,455	-	1,455
76	169,652	65,879	65,879	-	967	-	967
77	111,661	45,195	45,195	-	628	-	628
78	71,605	30,185	30,185	-	396	-	396
79	44,681	19,590	19,590	-	243	-	243
80	27,105	12,341	12,341	-	145	-	145
81	15,972	7,540	7,540	-	84	-	84
82	9,137	4,461	4,461	-	47	-	47
83	5,075	2,563	2,563	-	25	-	25
84	2,731	1,425	1,425	-	13	-	13
85	1,423	770	770	-	7	-	7
86	712	407	407	-	3	-	3
87	335	201	201	-	2	-	2
88	147	89	89	-	1	-	1
89	64	40	40	-	-	-	-
90	26	21	21	-	-	-	-
91	7	7	7	-	-	-	-
92	-	-	-	-	-	-	-
93	-	-	-	-	-	-	-
94	-	-	-	-	-	-	-
95	-	-	-	-	-	-	-
96	-	-	-	-	-	-	-
97	-	-	-	-	-	-	-
98	-	-	-	-	-	-	-
99	-	-	-	-	-	-	-
100	-	-	-	-	-	-	-
Totals	\$ 340,612,451	\$ -	\$ 340,612,451	\$ -	\$ -	\$ -	\$ 340,612,451

Projection of Plan Net Position and Benefit Payments



SECTION H

GLOSSARY OF TERMS

Glossary of Terms

<i>Accrued Service</i>	Service credited under the system which was rendered before the date of the actuarial valuation.
<i>Actuarial Accrued Liability (AAL)</i>	The AAL is the difference between the actuarial present value of all benefits and the actuarial value of future normal costs. The definition comes from the fundamental equation of funding which states that the present value of all benefits is the sum of the Actuarial Accrued Liability and the present value of future normal costs. The AAL may also be referred to as "accrued liability" or "actuarial liability."
<i>Actuarial Assumptions</i>	These assumptions are estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and compensation increases. Actuarial assumptions are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (compensation increases, payroll growth, inflation and investment return) consist of an underlying real rate of return plus an assumption for a long-term average rate of inflation.
<i>Actuarial Equivalent</i>	A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.
<i>Actuarial Cost Method</i>	A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of the pension trust benefits between future normal cost and actuarial accrued liability. The actuarial cost method may also be referred to as the actuarial funding method.
<i>Actuarial Gain (Loss)</i>	The difference in liabilities between actual experience and expected experience during the period between two actuarial valuations is the gain (loss) on the accrued liabilities.
<i>Actuarial Present Value (APV)</i>	The amount of funds currently required to provide a payment or series of payments in the future. The present value is determined by discounting future payments at predetermined rates of interest and probabilities of payment.
<i>Actuarial Valuation</i>	The actuarial valuation report determines, as of the actuarial valuation date, the service cost, total pension liability, and related actuarial present value of projected benefit payments for pensions.
<i>Actuarial Valuation Date</i>	The date as of which an actuarial valuation is performed.
<i>Actuarially Determined Contribution (ADC) or Annual Required Contribution (ARC)</i>	A calculated contribution into a defined benefit pension plan for the reporting period, most often determined based on the funding policy of the plan. Typically the Actuarially Determined Contribution has a normal cost payment and an amortization payment.

Glossary of Terms

<i>Amortization Method</i>	The method used to determine the periodic amortization payment may be a level dollar amount, or a level percent of pay amount. The period will typically be expressed in years, and the method will either be “open” (meaning, reset each year) or “closed” (the number of years remaining will decline each year).
<i>Amortization Payment</i>	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
<i>Cost-of-Living Adjustments</i>	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
<i>Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (cost-sharing pension plan)</i>	A multiple-employer defined benefit pension plan in which the pension obligations to the employees of more than one employer are pooled and pension plan assets can be used to pay the benefits of the employees of any employer that provides pensions through the pension plan.
<i>Covered-Employee Payroll</i>	The payroll of covered employees, which is typically only the pensionable pay and does not include pay above any pay cap.
<i>Deferred Retirement Option Program (DROP)</i>	A program that permits a plan member to elect a calculation of benefit payments based on service credits and salary, as applicable, as of the DROP entry date. The plan member continues to provide service to the employer and is paid for the service by the employer after the DROP entry date; however, the pensions that would have been paid to the plan member are credited to an individual member account within the defined benefit pension plan until the end of the DROP period. Other variations for DROP exist and will be more fully detailed in the plan provision section of the valuation report.
<i>Deferred Inflows and Outflows</i>	The deferred inflows and outflows of pension resources are amounts used under GASB Statement No. 68 in developing the annual pension expense. Deferred inflows and outflows arise with differences between expected and actual experiences; changes of assumptions. The portion of these amounts not included in pension expense should be included in the deferred inflows or outflows of resources.
<i>Discount Rate</i>	For GASB purposes, the discount rate is the single rate of return that results in the present value of all projected benefit payments to be equal to the sum of the funded and unfunded projected benefit payments, specifically: <ol style="list-style-type: none">1. The benefit payments to be made while the pension plan’s fiduciary net position is projected to be greater than the benefit payments that are projected to be made in the period; and2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.

Glossary of Terms

<i>Entry Age Actuarial Cost Method (EAN)</i>	The EAN is a funding method for allocating the costs of the plan between the normal cost and the accrued liability. The actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis (either level dollar or level percent of pay) over the earnings or service of the individual between entry age and assumed exit age(s). The portion of the actuarial present value allocated to a valuation year is the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is the actuarial accrued liability. The sum of the accrued liability plus the present value of all future normal costs is the present value of all benefits.
<i>Fiduciary Net Position</i>	The fiduciary net position is the value of the assets of the trust.
<i>GASB</i>	The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.
<i>Long-Term Expected Rate of Return</i>	The long-term rate of return is the expected return to be earned over the entire trust portfolio based on the asset allocation of the portfolio.
<i>Money-Weighted Rate of Return</i>	The money-weighted rate of return is a method of calculating the returns that adjusts for the changing amounts actually invested. For purposes of GASB Statement No. 67, money-weighted rate of return is calculated as the internal rate of return on pension plan investments, net of pension plan investment expense.
<i>Multiple-Employer Defined Benefit Pension Plan</i>	A multiple-employer plan is a defined benefit pension plan that is used to provide pensions to the employees of more than one employer.
<i>Municipal Bond Rate</i>	The Municipal Bond Rate is the discount rate to be used for those benefit payments that occur after the assets of the trust have been depleted.
<i>Net Pension Liability (NPL)</i>	The NPL is the liability of employers and non-employer contribution entities to plan members for benefits provided through a defined benefit pension plan.
<i>Non-Employer Contribution Entities</i>	Non-employer contribution entities are entities that make contributions to a pension plan that is used to provide pensions to the employees of other entities. For purposes of the GASB Accounting statement plan members are not considered non-employer contribution entities.
<i>Normal Cost</i>	The actuarial present value of the pension trust benefits allocated to the current year by the actuarial cost method.

Glossary of Terms

<i>Other Postemployment Benefits (OPEB)</i>	All postemployment benefits other than retirement income (such as death benefits, life insurance, disability, and long-term care) that are provided separately from a pension plan, as well as postemployment healthcare benefits regardless of the manner in which they are provided. Other post-employment benefits do not include termination benefits.
<i>Real Rate of Return</i>	The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.
<i>Service Cost</i>	The service cost is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year.
<i>Total Pension Expense</i>	The total pension expense is the sum of the following items that are recognized at the end of the employer’s fiscal year: <ol style="list-style-type: none">1. Service Cost2. Interest on the Total Pension Liability3. Current-Period Benefit Changes4. Employee Contributions (made negative for addition here)5. Projected Earnings on Plan Investments (made negative for addition here)6. Pension Plan Administrative Expense7. Other Changes in Plan Fiduciary Net Position8. Recognition of Outflow (Inflow) of Resources due to Liabilities9. Recognition of Outflow (Inflow) of Resources due to Assets
<i>Total Pension Liability (TPL)</i>	The TPL is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service.
<i>Unfunded Actuarial Accrued Liability (UAAL)</i>	The UAAL is the difference between actuarial accrued liability and valuation assets.
<i>Valuation Assets</i>	The valuation assets are the assets used in determining the unfunded liability of the plan. For purposes of the GASB Statement No. 67, the valuation asset is equal to the market value of assets.