

**ARKANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM
(INCLUDING DISTRICT JUDGES)
GASB STATEMENT NOS. 67 AND 68 ACCOUNTING AND
FINANCIAL REPORTING FOR PENSIONS
JUNE 30, 2016**

November 1, 2016

Board of Trustees
Arkansas Public Employees Retirement System
Little Rock, Arkansas

Ladies and Gentlemen:

This report provides information required by the Arkansas Public Employees Retirement System (APERS) 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. In accordance with the auditor's request, these calculations are made for all members of APERS (including all District Judges) as if APERS is one cost-sharing plan.

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 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 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, 2016 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 and Heidi G. Barry are Members of the American Academy of Actuaries (MAAA) and meet 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, MAAA



Heidi G. Barry, ASA, MAAA



David L. Hoffman

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SECTION A
EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

AS OF JUNE 30, 2016

Actuarial Valuation Date	June 30, 2016
Measurement Date of the Net Pension Liability and Pension Expense	June 30, 2016

Membership

Number of	
- Retirees and Beneficiaries	34,359
- Inactive, Nonretired Members	13,743
- Active Members	45,718
- Total	93,820
Covered Payroll	\$ 1,795,174,463

Net Pension Liability

Total Pension Liability	\$ 9,762,106,222
Plan Fiduciary Net Position	7,370,758,150
Net Pension Liability	\$ 2,391,348,072
Plan Fiduciary Net Position as a Percentage	
of Total Pension Liability	75.50%
Net Pension Liability as a Percentage	
of Covered Payroll	133.21%

Development of the Single Discount Rate

Single Discount Rate	7.50%
Long-Term Expected Rate of Investment Return	7.50%
Long-Term Municipal Bond Rate*	2.85%
Last year ending June 30 in the 2017 to 2116 projection period	
for which projected benefit payments are fully funded	2116

Total Pension Expense \$ 356,274,519

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	\$ 2,257,866	\$ 85,782,747
Changes in assumptions	183,252,749	-
Net difference between projected and actual earnings		
on pension plan investments	696,532,068	279,021,501
Total	\$ 882,042,683	\$ 364,804,248

* Source: "20-Bond GO Index" is the Bond Buyer Index, general obligation, 20 years to maturity, mixed quality. In describing this index, the Bond Buyer notes that the bonds' average credit quality is roughly equivalent to Moody's Investors Service's Aa2 rating and Standard & Poor's Corp.'s AA. The rate shown is as of June 30, 2016, the most recent date available on or before the measurement date.

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 Public Employees Retirement System subsequent to the measurement date of June 30, 2016.

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; and a description of the terms of the plan's deferred retirement option program (DROP) and the total DROP balance for those members currently participating in the DROP.

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, 2016 and a measurement date of June 30, 2016.

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 the Bond Buyer Index, general obligation, 20 years to maturity, mixed quality. The Bond Buyer notes that the bonds' average credit quality is roughly equivalent to Moody's Investors Service's Aa2 rating and Standard & Poor's Corp.'s AA 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 7.50%; the municipal bond rate is 2.85% (based on the weekly rate closest to but not later than the measurement date of the "20-Bond GO Index" from the Bond Buyer Index, general obligation, 20 years to maturity, mixed quality); and the resulting Single Discount Rate is 7.50%.

SECTION B

FINANCIAL STATEMENTS

PENSION EXPENSE UNDER GASB STATEMENT NO. 68
FISCAL YEAR ENDED JUNE 30, 2016

1. Service Cost	\$ 169,112,934
2. Interest on the Total Pension Liability	692,210,941
3. Current-Period Benefit Changes	0
4. Employee Contributions (made negative for addition here)	(55,000,117)
5. Projected Earnings on Plan Investments (made negative for addition here)	(559,697,275)
6. Pension Plan Administrative Expense	6,929,103
7. Other Changes in Plan Fiduciary Net Position	(6,594,649)
8. Recognition of Outflow (Inflow) of Resources due to Liabilities	54,244,139
9. Recognition of Outflow (Inflow) of Resources due to Assets	<u>55,069,443</u>
10. Total Pension Expense	\$ 356,274,519

**STATEMENT OF OUTFLOWS AND INFLOWS ARISING FROM CURRENT
REPORTING PERIOD
FISCAL YEAR ENDED JUNE 30, 2016**

A. Outflows (Inflows) of Resources due to Liabilities

1. Difference between expected and actual experience of the Total Pension Liability (gains) or losses	\$ 2,912,566
2. Assumption Changes (gains) or losses	\$ -
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}	4.4487
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	\$ 654,700
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>\$ 654,700</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.	\$ 2,257,866
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>\$ 2,257,866</u>

B. Outflows (Inflows) of Resources due to Assets

1. Net difference between projected and actual earnings on pension plan investments (gains) or losses	\$ 563,957,450
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	\$ 112,791,490
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets: 1. - 3.	\$ 451,165,960

**STATEMENT OF OUTFLOWS AND INFLOWS ARISING FROM CURRENT AND
PRIOR REPORTING PERIODS
FISCAL YEAR ENDED JUNE 30, 2016**

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

	<u>Outflows of Resources</u>	<u>Inflows of Resources</u>	<u>Net Outflows of Resources</u>
1. Due to Liabilities	\$ 89,202,585	\$ 34,958,446	\$ 54,244,139
2. Due to Assets	194,580,193	139,510,750	55,069,443
3. Total	\$ 283,782,778	\$ 174,469,196	\$ 109,313,582

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

	<u>Outflows of Resources</u>	<u>Inflows of Resources</u>	<u>Net Outflows of Resources</u>
1. Differences between expected and actual experience	\$ 654,700	\$ 34,958,446	\$ (34,303,746)
2. Assumption Changes	88,547,885	-	88,547,885
3. Net Difference between projected and actual earnings on pension plan investments	194,580,193	139,510,750	55,069,443
4. Total	\$ 283,782,778	\$ 174,469,196	\$ 109,313,582

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

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>	<u>Net Deferred Outflows of Resources</u>
1. Differences between expected and actual experience	\$ 2,257,866	\$ 85,782,747	\$ (83,524,881)
2. Assumption Changes	183,252,749	-	183,252,749
3. Net Difference between projected and actual earnings on pension plan investments	696,532,068	279,021,501	417,510,567
4. Total	\$ 882,042,683	\$ 364,804,248	\$ 517,238,435

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

<u>Year Ending June 30</u>	<u>Net Deferred Outflows of Resources</u>
2017	\$ 109,313,582
2018	92,511,791
2019	202,327,806
2020	113,085,256
2021	0
Thereafter	0
Total	\$ 517,238,435

**STATEMENT OF FIDUCIARY NET POSITION
AS OF JUNE 30, 2016**

To be provided by System

Assets

Cash and Deposits	\$	-
Receivables		
Accounts Receivable - Sale of Investments	\$	-
Accrued Interest and Other Dividends		-
Contributions		-
Accounts Receivable - Other		-
Total Receivables	<u>\$</u>	<u>-</u>
Investments		
Fixed Income	\$	-
Domestic Equities		-
International Equities		-
Real Estate		-
Other		-
Total Investments	<u>\$</u>	<u>-</u>
Total Assets	<u>\$</u>	<u>-</u>

Liabilities

Payables		
Accounts Payable - Purchase of Investments	\$	-
Accrued Expenses		-
Accounts Payable - Other		-
Total Liabilities	<u>\$</u>	<u>-</u>

Net Position Restricted for Pensions	<u>\$ 7,370,758,150</u>
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**STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR YEAR ENDED JUNE 30, 2016**

Additions

Contributions

Employer	\$ 264,216,252
Employee	55,000,117
Other	6,843,752
Total Contributions	<u>\$ 326,060,121</u>

Investment Income

Net Appreciation in Fair Value of Investments	\$ 26,459,831
Interest and Dividends	-
Less Investment Expense	(30,720,006)
Net Investment Income	<u>\$ (4,260,175)</u>

Other

Total Additions	<u>\$ 321,799,946</u>
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Deductions

Benefit Payments, Including Refunds of Employee Contributions	\$ 494,105,931
Pension Plan Administrative Expense	6,929,103
Other	249,103
Total Deductions	<u>\$ 501,284,137</u>

Net Increase in Net Position	\$ (179,484,191)
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Net Position Restricted for Pensions

Beginning of Year	<u>\$ 7,550,242,341</u>
End of Year	<u><u>\$ 7,370,758,150</u></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, 2016

A. Total pension liability	
1. Service cost	\$ 169,112,934
2. Interest on the total pension liability	692,210,941
3. Changes of benefit terms	0
4. Difference between expected and actual experience of the total pension liability	2,912,566
5. Changes of assumptions	0
6. Benefit payments, including refunds of employee contributions	<u>(494,105,931)</u>
7. Net change in total pension liability	\$ 370,130,510
8. Total pension liability – beginning	<u>9,391,975,712</u>
9. Total pension liability – ending	<u><u>\$ 9,762,106,222</u></u>
B. Plan fiduciary net position	
1. Contributions – employer	\$ 264,216,252
2. Contributions – employee	55,000,117
3. Net investment income	(4,260,175)
4. Benefit payments, including refunds of employee contributions	(494,105,931)
5. Pension plan administrative expense	(6,929,103)
6. Other	<u>6,594,649</u>
7. Net change in plan fiduciary net position	\$ (179,484,191)
8. Plan fiduciary net position – beginning	<u>7,550,242,341</u>
9. Plan fiduciary net position – ending	<u><u>\$ 7,370,758,150</u></u>
C. Net pension liability	<u><u>\$ 2,391,348,072</u></u>
D. Plan fiduciary net position as a percentage of the total pension liability	75.50%
E. Covered-employee payroll	\$ 1,795,174,463
F. Net pension liability as a percentage of covered-employee payroll	133.21%

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,	<u>2016</u>	<u>2015</u>	<u>2014</u>
Total Pension Liability			
Service Cost	\$ 169,112,934	\$ 168,811,990	\$ 160,924,334
Interest on the Total Pension Liability	692,210,941	682,217,546	658,535,986
Benefit Changes	-	-	-
Difference between Expected and Actual Experience	2,912,566	(137,672,890)	(23,038,076)
Assumption Changes	-	192,273,597	214,798,742
Benefit Payments	(480,913,495)	(451,912,791)	(414,548,645)
Refunds	(13,192,436)	(12,198,396)	(9,455,347)
Net Change in Total Pension Liability	\$ 370,130,510	\$ 441,519,056	\$ 587,216,994
Total Pension Liability - Beginning	\$9,391,975,712	\$8,950,456,656	\$8,363,239,662
Total Pension Liability - Ending (a)	\$9,762,106,222	\$9,391,975,712	\$8,950,456,656
Plan Fiduciary Net Position			
Employer Contributions	\$ 264,216,252	\$ 263,332,831	\$ 264,050,160
Employee Contributions	55,000,117	50,750,458	47,215,843
Pension Plan Net Investment Income	(4,260,175)	168,929,698	1,207,897,156
Benefit Payments	(480,913,495)	(451,912,791)	(414,548,645)
Refunds	(13,192,436)	(12,198,396)	(9,455,347)
Pension Plan Administrative Expense	(6,929,103)	(6,949,282)	(6,854,975)
Other	6,594,649	6,745,403	8,302,355
Net Change in Plan Fiduciary Net Position	\$ (179,484,191)	\$ 18,697,921	\$1,096,606,547
Plan Fiduciary Net Position - Beginning	\$7,550,242,341	\$7,531,544,420	\$6,434,937,873
Plan Fiduciary Net Position - Ending (b)	\$7,370,758,150	\$7,550,242,341	\$7,531,544,420
Net Pension Liability - Ending (a) - (b)	\$2,391,348,072	\$1,841,733,371	\$1,418,912,236
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	75.50 %	80.39 %	84.15 %
Covered-Employee Payroll	\$1,795,174,463	\$1,757,056,813	\$1,748,350,136
Net Pension Liability as a Percentage of Covered-Employee Payroll	133.21 %	104.82 %	81.16 %
Notes to Schedule:	N/A	N/A	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	\$8,950,456,656	\$7,531,544,420	\$ 1,418,912,236	84.15%	\$1,748,350,136	81.16%
2015	9,391,975,712	7,550,242,341	1,841,733,371	80.39%	1,757,056,813	104.82%
2016	9,762,106,222	7,370,758,150	2,391,348,072	75.50%	1,795,174,463	133.21%

SCHEDULE OF CONTRIBUTIONS
(\$ IN MILLIONS)

FY Ending June 30,	Actuarially Determined Contribution	Actual Contribution*	Contribution Deficiency (Excess)	Covered Payroll	Actual Contribution as a % of Covered Payroll
2007	\$ 165.0	\$ 165.0	\$ -	\$ 1,306	12.63%
2008	175.0	175.0	-	1,384	12.65%
2009	160.8	160.8	-	1,437	11.19%
2010	171.5	171.5	-	1,527	11.24%
2011	197.6	197.6	-	1,626	12.15%
2012	231.4	231.4	-	1,689	13.70%
2013	251.4	251.4	-	1,696	14.82%
2014	264.1	264.1	-	1,748	15.11%
2015	263.3	263.3	-	1,757	14.98%
2016	264.2	264.2	-	1,795	14.72%

* 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. Based upon the limitations of this schedule, the final column cannot be compared to the contribution rates actually charged to APERS participating employers.

NOTES TO SCHEDULE OF CONTRIBUTIONS

Valuation Date:	June 30, 2016
Methods and Assumptions used to Determine Contribution Rates:	
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percentage of Payroll, Closed (Level Dollar, Closed for District Judges New Plan and Paid Off Old Plan and District Judges Still Paying Old Plan)
Remaining Amortization Period	21 years (12 years for District Judges New Plan/Paid Off Old Plan and 19 years for District Judges Still Paying Old Plan)
Asset Valuation Method	4-Year smoothed market; 25% corridor (Market Value for Still Paying Old Plan)
Inflation	3.25% wage inflation, 2.50% price inflation
Salary Increases	3.25% to 9.85% including inflation (3.25% to 6.96% including inflation for District Judges)
Investment Rate of Return	7.50%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition
Mortality	Based on RP-2000 Combined Healthy mortality table, projected to 2020 using Projection Scale BB, set-forward 2 years for males and 1-year for females
Other Information:	
Notes	There were no benefit changes during the year

SCHEDULE OF INVESTMENT RETURNS (MULTIYEAR)**To be provided by System**

FY Ending June 30,	Annual Return¹
2007	
2008	
2009	
2010	
2011	
2012	
2013	
2014	
2015	
2016	

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 current asset allocation percentage and by adding expected price inflation. Best estimates of arithmetic real rates of return for the 10-year period from 2015 to 2024 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 current asset allocation as of June 30, 2016, these best estimates are summarized in the following table:

Asset Class	Current Allocation	Long-Term Expected Real Rate of Return
Broad Domestic Equity	38%	6.82%
International Equity	24%	6.88%
Real Assets	16%	3.07%
Absolute Return	5%	3.35%
Domestic Fixed	17%	0.83%
Total	100%	
Total Real Rate of Return		5.04%
Plus: Price Inflation - Actuary's Assumption		2.50%
Net Expected Return		7.54%

Single Discount Rate

A single discount rate of 7.50% 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 7.50%. 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 7.50%, 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 6.50%	Current Single Rate Assumption 7.50%	1% Increase 8.50%		
TPL	\$	10,990,660,488	\$	9,762,106,222	\$	8,739,653,875
PFNP		7,370,758,150		7,370,758,150		7,370,758,150
NPL	\$	3,619,902,338	\$	2,391,348,072	\$	1,368,895,725

Disclosure Regarding the Deferred Retirement Option Program

To be Provided by the System

SUMMARY OF POPULATION STATISTICS

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	34,359
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	13,743
Active Plan Members	<u>45,718</u>
Total Plan Members	93,820

SECTION E

SUMMARY OF BENEFITS

**SUMMARY OF PROVISIONS EVALUATED
(EXCLUDES SPECIAL PROVISIONS FOR GENERAL ASSEMBLY)
(LAST CHANGED AS OF 7/1/2009)**

The Old Contributory Plan is available to persons who became members of APERS before January 1, 1978. The Non-Contributory Plan applies to all persons first hired after January 1, 1978 and before July 1, 2005 in APERS-covered employment. The New Contributory Plan applies to all persons hired after July 1, 2005 in APERS-covered employment or Non-Contributory members who elected to participate in the New Contributory Plan.

New Contributory Plan

Non-Contributory Plan

Voluntary Retirement

With a full benefit, after either (a) age 65 with 5 years of service, or (b) 28 years of actual service, regardless of age. For sheriff and public safety members, the age 65 requirement is reduced 1 month for each 2 months of actual service, but not below age 55 (age 52 for sheriff members with a minimum of 10 years of actual service).

With a full benefit, after either (a) age 65 with 5 years of service, or (b) 28 years of actual service, regardless of age. For sheriff and public safety members, the age 65 requirement is reduced 1 month for each 2 months of actual service, but not below age 55 (age 52 for sheriff members with a minimum of 10 years of actual service).

With a reduced benefit, after age 55 with 5 years of service or any age with 25 years of service. The reduction is equal to $\frac{1}{2}$ of 1% for each month retirement proceeds normal retirement age or 1% for each month below 28 years of actual service, whichever is less.

With a reduced benefit, after age 55 with 5 years of service or any age with 25 years of service. The reduction is equal to $\frac{1}{2}$ of 1% for each month retirement proceeds normal retirement age or 1% for each month below 28 years of actual service, whichever is less.

Final Average Compensation (FAC)

Average of highest 36 calendar months of covered compensation.

Average of highest 36 calendar months of covered compensation.

Full Age & Service Retirement Benefit

2.00% of FAC times years of service (2.03% for service prior to July 1, 2007), plus .5% of FAC times years of service over 28 years for service after July 1, 2009. The minimum monthly benefit is \$150 minus any age and beneficiary option reductions.

1.72% of FAC times years and months of credited service (1.75% for service prior to July 1, 2007), plus .5% of FAC times years of service over 28 years for service after July 1, 2009. If retirement is prior to age 62, an additional .33% of FAC times years of service will be paid until age 62. The portion of the APERS benefit based on service before 1978 cannot be less than the amount provided by contributory provisions in effect at the time of retirement. The minimum monthly benefit is \$150 minus any age and beneficiary option reductions.

SUMMARY OF PROVISIONS EVALUATED

New Contributory Plan

Non-Contributory Plan

Benefit Increases After Retirement

Annually, there will be a cost-of-living adjustment equal to 3% of the current benefit.

Annually, there will be a cost-of-living adjustment equal to 3% of the current benefit.

Member Contribution Rates

5% of covered compensation (pre-tax). Member contributions are refundable if APERS-covered employment terminates before a monthly benefit is payable. Members will earn interest on the contributions at a rate of 4% annually.

No employee contributions for service after January 1, 1978. If there is service before January 1, 1978, contributions for that period are refundable later in the same manner as under the Contributory Plan.

Vested Retirement Benefits

5 years service, and leaving APERS-covered employment before full retirement age. Deferred full retirement benefit, based on service and pay at termination, begins at age 65. A death benefit is payable to surviving spouse of member who dies before benefit commencement.

5 years service and leaving APERS-covered employment before full retirement age. Deferred full retirement benefit, based on service and pay at termination, begins at age 65. A death benefit is payable to surviving spouse of member who dies before benefit commencement.

In place of deferred full benefit, at age 55 or older, a qualifying member can elect an immediate reduced benefit.

In place of deferred full benefit, at age 55 or older, a qualifying member can elect an immediate reduced benefit.

Total and Permanent Disability

Disabled after 5 years of service, including credit for 18 of the 24 months preceding disability.

Disabled after 5 years of service, including credit for 18 of the 24 months preceding disability.

Amount is computed as an age & service benefit, based on service and pay at disability.

Amount is computed as an age & service benefit, based on service and compensation at disability.

SUMMARY OF PROVISIONS EVALUATED

New Contributory Plan

Non-Contributory Plan

Death After Retirement

If death occurs before total monthly benefit payments equal member's accumulated contributions, the difference is refunded.

Member contributions before 1978 are protected in the same manner as under the Contributory Plan.

A retiring member can also elect an optional form of benefit, which provides beneficiary protection paid for by reducing the retired member's benefit amount. Should the member elect a straight life benefit and die within 12 months of the date of retirement, a benefit may be payable to the surviving spouse under certain conditions.

A retiring member can also elect an optional form of benefit, which provides beneficiary protection paid for by reducing the retired member's benefit amount. Should the member elect a straight life benefit and die within 12 months of the date of retirement, a benefit may be payable to the surviving spouse under certain conditions.

Death While in APERS-Covered Employment

Member's accumulated contributions are refundable.

Member's accumulated contributions before 1978 are refundable.

If the member had 5 years service, monthly benefits are payable instead. Surviving spouse receives a benefit computed as if member had retired and elected the Joint & 75% Survivor Option. Payment begins immediately.

If the member had 5 years service, monthly benefits are payable instead. Surviving spouse receives a benefit computed as if member had retired and elected the Joint & 75% Survivor Option. Payment begins immediately.

Each dependent child receives benefit of 10% of compensation (maximum of 25% for all children).

Each dependent child receives benefit of 10% of compensation (maximum of 25% for all children).

Dependent parents benefits are payable if neither spouse nor children's benefits are payable.

Dependent parents benefits are payable if neither spouse nor children's benefits are payable.

SUMMARY OF PROVISIONS EVALUATED CREDITED SERVICE

Membership Group	Service Credits
Public Safety Members (including State Capitol Police and Wildlife Sub-Division members) hired before July 1, 1997	1-1/2 times regular rate with 5 years actual service required to meet benefit eligibility rules.
Governor (hired before July 1, 1999)	3 times regular rate with 5 years actual service required to meet death-in-service eligibility and 4 years actual service required for other benefit eligibility.
Elected State Constitutional Officers (hired before July 1, 1999)	2-1/2 times regular rate with 5 years actual service required to meet benefit eligibility.
General Assembly	Regular crediting rate with 5 years of actual service required to meet death-in-service eligibility and 10 years of actual service required for other benefit eligibility.
Other Elected Public Officials (municipal and county officials)	2 times regular rate with 5 years actual service required to meet benefit eligibility.
All Other Members	Regular rate.

ARKANSAS PUBLIC EMPLOYEES DEFERRED RETIREMENT OPTION PLAN

Members with 28 years of actual service in APERS or in combination with a reciprocal system are eligible to participate.

Members, for a maximum of 7 years, may continue employment and have 75% of their accrued benefit (at date of participation with 30 or more years of service) paid into the Deferred Retirement Option Plan in lieu of any further benefit accruals.

The payments into the Deferred Retirement Option Plan accumulate with interest at a rate established by the Board. The interest is paid on the mean balance and is paid to the member at termination of active membership in either a lump sum or as an annuity.

Employer contributions continue for members participating in the DROP.

**SUMMARY OF PROVISIONS EVALUATED
GENERAL ASSEMBLY DIVISION
ADDITIONAL BENEFIT PROVISIONS**

VOLUNTARY RETIREMENT ELIGIBILITY

Age 65 with 10 or more years of credited service, 28 years of actual service regardless of age, or age 55 with 12 or more years of actual service, 10 of which must be as a member of the General Assembly. In addition, a member of the General Assembly who was a member of the General Assembly on July 1, 1979, or holding any other Arkansas elective office on July 1, 1979, is eligible to retire with 17.5 years of actual service regardless of age.

VESTING

Termination of employment prior to normal retirement age after completing 10 or more years of credited service.

RETIREMENT BENEFIT

\$35.00 per month times years of General Assembly service. The amount is \$40.00 per month per year of service for any member who served as Speaker of the House of Representatives or President Pro Tempore of the Senate.

DISABILITY

Eligibility: 10 years of credited service.

Amount: Accrued retirement benefit.

DEATH-IN-SERVICE

Eligibility: 5 years of service.

Amount - Less than 10 years in General Assembly: Same as for regular members.

Amount - 10 or more years in General Assembly: 100% of the benefit the member would have been entitled to had he or she been at retirement age payable to an eligible surviving spouse.

DEATH-AFTER-RETIREMENT

100% of the benefit the member was receiving payable to an eligible surviving spouse.

PARTICIPATION

A member of the General Assembly may, at any time, elect either (i) to be covered by regular benefit provisions, or (ii) to discontinue an APERS membership.

DISTRICT JUDGES SUMMARY OF PROVISIONS EVALUATED

VOLUNTARY RETIREMENT	With a full benefit, after either (a) age 50 with 20 years of eligibility service, (b) age 60 with 16 years of eligibility service, or (c) age 65 with 8 years of eligibility service.
FINAL AVERAGE COMPENSATION (FAC)	Average of the final three calendar years of employment.
BENEFIT SERVICE	Service performed on or after January 1, 2005.
ELIGIBILITY SERVICE	Benefit service plus service in Old Local District Judges Plan.
FULL AGE & SERVICE RETIREMENT BENEFIT	2.50% of FAC times actual service.
BENEFIT INCREASES AFTER RETIREMENT	Annually, there will be a cost-of-living adjustment equal to 3% of the current benefit.
MEMBER CONTRIBUTION RATES	Active members contribute 5% of their salaries. If a member leaves service before becoming eligible to retire, accumulated contributions may be refunded.
VESTED RETIREMENT BENEFITS	8 years of eligibility service. Deferred full retirement benefit, based on benefit service and pay at termination, begins when member would have been eligible for voluntary retirement.
TOTAL AND PERMANENT DISABILITY	An active member with 3 or more consecutive years of eligibility 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.
DEATH AFTER RETIREMENT	If the member was eligible for normal retirement at the time of death, an eligible beneficiary will begin receiving a 50% joint and survivor pension computed in the same manner as a service retirement pension as if the member had retired the last day of his life.

SECTION F

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS

**SUMMARY OF ASSUMPTIONS USED FOR
APERS ACTUARIAL VALUATIONS
ASSUMPTIONS ADOPTED BY BOARD OF TRUSTEES
AFTER CONSULTING WITH ACTUARY**

In accordance with Section 24-4-105 of the Arkansas Code, the Board of Trustees adopts the actuarial assumptions used for actuarial valuation purposes.

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, 2007 through June 30, 2012 (please see report dated February 13, 2013). Economic assumptions have been subsequently updated based on the Experience Study and the results of the Economic Assumption Review performed for the Arkansas Judicial Retirement System (please see our report dated August 6, 2015). The actuarial assumptions represent estimates of future experience.

ECONOMIC ASSUMPTIONS

The investment return rate used in making the valuation was 7.50% per year, compounded annually (net after investment expenses). This rate of return is not the assumed real rate of return. The real rate of return is the portion of investment return which is more than the wage inflation rate. Considering the assumed wage inflation rate of 3.25%, the 7.50% investment return rate translates to an assumed net real rate of return of 4.25%. This assumption was first used for the June 30, 2015 valuation and for the District Judges division for the June 30, 2015 valuation.

Pay increase assumptions for individual active members are shown on pages 33 and 35. Part of the assumption for each age is for a merit and/or seniority increase, and the other 3.25% recognizes wage inflation. The wage inflation assumption consists of 2.50% for price inflation and 0.75% for real wage growth. These assumptions were first used for the June 30, 2015 valuation and for the District Judges division for the June 30, 2015 valuation.

Total active member payroll is assumed to increase 3.25% a year, which is the portion of the individual pay increase assumptions attributable to wage inflation. This assumption was first used for the June 30, 2015 valuation and for the District Judges division for the June 30, 2015 valuation.

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

NON-ECONOMIC ASSUMPTIONS

The mortality table used to measure retired life mortality was the RP-2000 Combined Healthy mortality table, projected to 2020 using Projection Scale BB, set-forward 2 years for males and 1 year for females. Related values are shown on page 28. Based upon the experience observed during the most recent experience study, it appears that at the time of the study the current table provides for an approximate 15% margin for future mortality improvement. This assumption was first used for the June 30, 2013 valuation.

The probabilities of retirement for members eligible to retire are shown on pages 29 through 32. These probabilities were first used for the June 30, 2013 valuation and for the June 30, 2007 valuation for the District Judges division.

The probabilities of withdrawal from service, death-in-service and disability are shown for sample ages on pages 33 through 35. These probabilities were first used for the June 30, 2013 valuation and for the District Judges division for the June 30, 2013 valuation.

The individual entry-age normal actuarial cost method of the valuation was used in determining liabilities and normal cost. For calculating actuarially determined contributions, for members who are assumed to enter the DROP, normal costs are assumed to be collected until the ultimate date of retirement. For GASB Statement No. 67 purposes for members who are assumed to enter the DROP, the date of entry into the DROP was considered to be the plan member's retirement date.

Differences in the past between assumed experience and actual experience (actuarial gains and losses) become part of actuarial accrued liabilities.

Unfunded actuarial accrued liabilities are amortized to produce contribution amounts (principal and interest) which are level percent-of-payroll contributions.

Recognizing the special circumstances of the General Assembly division, modifications of the above assumptions were made where appropriate.

Present assets (cash & investments) were valued on a market related basis in which differences between actual and assumed returns are phased-in over a four-year period. The funding value of assets may not deviate from the market value of assets by more than 25%. District Judges Still Paying Old Plan present assets (cash & investments) were valued on a market value basis.

The data about persons now covered and about present assets were 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).

SINGLE LIFE RETIREMENT VALUES
BASED ON RP-2000 COMBINED, PROJECTED TO 2020
7.50% INTEREST
JUNE 30, 2016

Sample Attained Ages	Present Value of \$1.00 Monthly for Life		Present Value of \$1.00 Monthly for Life Increasing 3% Annually		Future Life Expectancy (Years)	
	Men	Women	Men	Women	Men	Women
40	\$ 152.73	\$ 155.50	\$ 221.02	\$ 228.64	40.56	44.21
45	148.14	151.73	209.34	218.29	35.81	39.39
50	142.02	146.73	195.44	205.97	31.13	34.64
55	134.13	140.11	179.30	191.41	26.58	29.98
60	124.36	131.56	161.13	174.51	22.23	25.44
65	112.66	121.10	141.22	155.67	18.14	21.14
70	98.84	108.87	119.72	135.45	14.35	17.16
75	83.43	95.07	97.62	114.39	10.95	13.56
80	67.17	79.89	76.00	92.98	8.02	10.35
85	51.06	64.05	56.01	72.24	5.60	7.59

Sample Attained Ages	Benefit Increasing 3.0% Yearly	Portion of Age 60 Lives Still Alive	
		Men	Women
60	\$100	100 %	100 %
65	116	96	97
70	134	90	92
75	155	80	84
80	180	66	72

The mortality table was set forward 10 years for disabilities.

Based on RP-2000 Combined Healthy mortality table, projected to 2020 using Projection Scale BB, set forward 2 years for males and 1 year for females.

**STATE AND LOCAL GOVERNMENT DIVISION
AGE-BASED RETIREMENT
JUNE 30, 2016**

Retirement Ages (with less than 28 years of service)	Percent of Eligible Active Members Retiring Within Next Year	
	Unreduced	Reduced
55		2 %
56		2
57		3
58		3
59		4
60		5
61		5
62		18
63		17
64		13
65	23 %	
66	23	
67	23	
68	15	
69	15	
70	17	
71	17	
72	17	
73	17	
74-77	20	
78	15	
79	20	
80-82	20	
83	20	
84	20	
85 & Over	100	

A member was assumed eligible for unreduced retirement after attaining age 65 with 5 years of service or 28 years regardless of age. A member was assumed eligible for reduced retirement after attaining age 55 with 10 or more years of service. These rates represent the point at which members ultimately terminate employment (after participating in the DROP, for those that do).

**STATE AND LOCAL GOVERNMENT DIVISION
SERVICE BASED RETIREMENT
JUNE 30, 2016**

Service	Percent of Eligible Active Members Retiring Within Next Year
28	15 %
29	13
30	11
31	11
32	12
33	12
34	12
35	20
36	25
37	25
38	30
39	30
40 & Over	100

**GENERAL ASSEMBLY DIVISION
PROBABILITIES OF RETIREMENT
FOR MEMBERS ELIGIBLE TO RETIRE
JUNE 30, 2016**

Retirement Ages	Percent of Eligible Active Members Retiring Within Next Year
50	30 %
51	30
52	30
53	30
54	30
55	30
56	30
57	30
58	30
59	30
60	30
61	30
62	50
63	30
64	30
65	50
66	30
67-79	20
80 & Over	100

Member may retire at age 50 with 20 or more years of service, age 60 with 16 or more years of service, or age 65 with 8 or more years of service.

**DISTRICT JUDGES DIVISION
AGE-BASED RETIREMENT
JUNE 30, 2016**

Retirement Ages	Percent of Eligible Active Members Retiring Within Next Year
50	10 %
51	10
52	10
53	10
54	10
55	12
56	12
57	14
58	14
59	14
60	18
61	18
62-73	30
74 & Over	100

Members may retire at age 50 with 20 or more years of service, age 60 with 16 or more years of service, or age 65 with 8 or more years of service.

STATE AND LOCAL GOVERNMENT DIVISION
SEPARATIONS FROM ACTIVE EMPLOYMENT BEFORE SERVICE RETIREMENT
JUNE 30, 2016

Sample Ages	Years of Service	Percent of Active Members Separating within the Next Year						Pay Increase Assumptions For An Individual Employee		
		Withdrawal		Death		Disability		Merit & Seniority	Base (Economy)	Increase Next Year
		Men	Women	Men	Women	Men	Women			
	0	40.0 %	40.0 %							
	1	25.0	25.0							
	2	20.0	20.0							
	3	15.0	15.0							
	4	12.0	12.0							
20	5+	10.0	10.0	0.02 %	0.01 %	0.01 %	0.01 %	6.60 %	3.25 %	9.85 %
25		10.0	10.0	0.02	0.01	0.05	0.05	5.10	3.25	8.35
30		8.8	8.8	0.03	0.01	0.08	0.08	3.20	3.25	6.45
35		6.2	6.2	0.04	0.02	0.10	0.10	2.30	3.25	5.55
40		4.4	4.4	0.06	0.03	0.15	0.15	1.90	3.25	5.15
45		3.4	3.4	0.08	0.05	0.20	0.20	1.50	3.25	4.75
50		2.7	2.7	0.13	0.08	0.40	0.40	1.10	3.25	4.35
55		1.9	1.9	0.22	0.12	0.70	0.70	0.80	3.25	4.05
60		1.2	1.2	0.37	0.21	1.00	1.00	0.70	3.25	3.95

Pay increase rates are age based only, and not service based.

**GENERAL ASSEMBLY DIVISION
SEPARATIONS FROM ACTIVE EMPLOYMENT BEFORE
SERVICE RETIREMENT
JUNE 30, 2016**

		Percent of Active Members Separating within the Next Year					
Sample Ages	Years of Service	Withdrawal		Death		Disability	
		Men	Women	Men	Women	Men	Women
	0	30.0 %	30.0 %				
	1	25.0	25.0				
	2	20.0	20.0				
	3	15.0	15.0				
	4	12.0	12.0				
20	5+	9.0	9.0	0.02 %	0.01 %	0.06 %	0.06 %
25		8.3	8.3	0.02	0.01	0.06	0.06
30		5.3	5.3	0.03	0.01	0.06	0.06
35		3.0	3.0	0.04	0.02	0.06	0.06
40		2.6	2.6	0.06	0.04	0.16	0.16
45		2.4	2.4	0.08	0.06	0.22	0.22
50		1.1	1.1	0.13	0.09	0.39	0.39
55		0.8	0.8	0.22	0.14	0.71	0.71
60		0.8	0.8	0.37	0.23	1.13	1.13

**DISTRICT JUDGES
SEPARATIONS FROM ACTIVE EMPLOYMENT BEFORE
SERVICE RETIREMENT
JUNE 30, 2016**

Sample Ages	Percent of Active Members Separating within the Next Year				Pay Increase Assumptions For An Individual Employee		
	Withdrawal		Disability		Merit & Seniority	Base (Economy)	Increase Next
	Men	Women	Men	Women			
20	2.0 %	2.0 %	0.08 %	0.08 %	2.70 %	3.25 %	5.95 %
25	2.0	2.0	0.08	0.08	2.60	3.25	5.85
30	2.0	2.0	0.08	0.08	2.20	3.25	5.45
35	2.0	2.0	0.08	0.08	1.90	3.25	5.15
40	2.0	2.0	0.20	0.20	1.40	3.25	4.65
45	2.0	2.0	0.27	0.27	1.20	3.25	4.45
50	2.0	2.0	0.49	0.49	0.70	3.25	3.95
55	2.0	2.0	0.89	0.89	0.70	3.25	3.95
60	2.0	2.0	1.41	1.41	0.00	3.25	3.25

SUMMARY OF ASSUMPTIONS USED
JUNE 30, 2016
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. District Judges division - 100% of males and 100% of females are assumed to be married for purposes of death-in-service benefits. 80% of males and 80% of females are assumed to be married for purposes of death-after-retirement benefits for active member 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.

Other Liability Adjustments. Active member non-refund normal costs and actuarial accrued liabilities were increased by 1.5% to reflect non-reported reciprocal service.

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.

Normal Form of Benefit. The assumed normal form of benefit is the straight life form.

District Judges Division Old Plan Deferred Members. For members that are eligible for a deferred benefit in the Old Plan and are currently active in the New Plan, it is assumed that the deferred benefit will commence at the first age at which the member is eligible to receive the 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. New entrant normal cost contributions are applied to the funding of new entrant benefits.

DROP Duration. We assume on average the total DROP duration is 4 years for those members currently participating in the DROP.

SUMMARY OF ASSUMPTIONS USED
JUNE 30, 2016
MISCELLANEOUS AND TECHNICAL ASSUMPTIONS (CONCLUDED)

DROP Interest Credit. The current interest rate credit for DROP accounts is assumed to be 3.0%.

Payroll for DROP Participants and Retired Members Returned to Work. Employers now contribute on the pays of DROP participants and retired members returned to work. We estimated payroll subject to this provision. For the June 30, 2016 valuation, the reported payroll for these members was \$105,350,988.

Pre-Retirement Mortality. The weighting of duty and ordinary deaths-in-service is 0%/100%.

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 (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 7.50%; the municipal bond rate is 2.85%; and the resulting SDR is 7.50%.

The tables in this section provide background for the development of the SDR.

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 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	Payroll for Current Employees	Contributions from Current Employees	Normal Cost Contributions	Administrative Expense	UAL Contributions	Total Contributions
1	\$ 1,665,053,128	\$ 54,547,958	\$ 120,965,064	\$ 6,660,213	\$ 135,239,081	\$ 317,412,316
2	1,549,117,996	50,111,274	112,332,762	6,196,472	143,715,394	312,355,902
3	1,472,909,228	47,644,291	106,391,762	5,891,637	168,420,551	328,348,241
4	1,413,540,878	45,995,800	101,550,179	5,654,164	187,240,479	340,440,623
5	1,362,953,031	44,775,404	97,257,823	5,451,812	193,281,855	340,766,895
6	1,316,048,572	43,730,518	93,204,865	5,264,194	199,519,577	341,719,154
7	1,269,141,606	42,692,111	89,163,562	5,076,566	205,960,021	342,892,260
8	1,221,210,120	41,616,425	85,065,144	4,884,840	212,609,784	344,176,194
9	1,172,660,213	40,527,259	80,929,399	4,690,641	219,475,660	345,622,959
10	1,123,356,332	39,419,942	76,769,292	4,493,425	226,564,680	347,247,338
11	1,074,096,859	38,311,219	72,651,025	4,296,387	233,884,093	349,142,723
12	1,025,390,177	37,222,094	68,612,881	4,101,561	241,441,385	351,377,922
13	977,166,779	36,145,640	64,652,865	3,908,667	248,753,936	353,461,107
14	929,764,617	35,076,220	60,805,854	3,719,058	256,810,436	356,411,568
15	883,305,956	33,999,632	57,081,377	3,533,224	265,128,771	359,743,004
16	837,376,422	32,900,208	53,449,005	3,349,506	273,717,454	363,416,172
17	790,925,782	31,740,560	49,832,745	3,163,703	282,585,268	367,322,276
18	743,570,732	30,463,488	46,241,208	2,974,283	291,741,286	371,420,266
19	696,239,102	29,079,093	42,756,823	2,784,956	301,194,875	375,815,748
20	649,061,718	27,621,811	39,366,012	2,596,247	310,955,705	380,539,776
21	602,048,884	26,111,071	36,053,555	2,408,196	320,172,130	384,744,952
22	555,756,542	24,576,318	32,852,238	2,223,026	145,101,062	204,752,644
23	510,455,027	23,017,810	29,788,568	2,041,820	0	54,848,198
24	465,564,306	21,411,800	26,813,209	1,862,257	0	50,087,266
25	420,685,741	19,726,822	23,915,145	1,682,743	0	45,324,710
26	376,317,908	17,952,497	21,140,325	1,505,272	0	40,598,094
27	332,255,009	16,087,871	18,468,792	1,329,020	0	35,885,683
28	288,716,649	14,165,535	15,895,361	1,154,867	0	31,215,763
29	248,251,531	12,323,594	13,550,070	993,006	0	26,866,669
30	212,163,529	10,599,389	11,517,323	848,654	0	22,965,366
31	179,096,775	8,950,759	9,698,325	716,387	0	19,365,471
32	148,186,753	7,406,747	8,005,270	592,747	0	16,004,764
33	119,746,390	5,985,832	6,450,479	478,986	0	12,915,297
34	93,944,898	4,696,511	5,049,541	375,780	0	10,121,832
35	70,293,559	3,514,319	3,770,845	281,174	0	7,566,339
36	49,495,874	2,474,535	2,649,072	197,983	0	5,321,590
37	32,578,417	1,628,810	1,738,619	130,314	0	3,497,743
38	19,398,876	969,944	1,032,010	77,596	0	2,079,550
39	9,463,638	473,182	499,637	37,855	0	1,010,674
40	2,659,556	132,978	142,265	10,638	0	285,881
41	-	-	-	-	0	0
42	-	-	-	-	0	0
43	-	-	-	-	0	0
44	-	-	-	-	0	0
45	-	-	-	-	0	0
46	-	-	-	-	0	0
47	-	-	-	-	0	0
48	-	-	-	-	0	0
49	-	-	-	-	0	0
50	-	-	-	-	0	0

SINGLE DISCOUNT RATE DEVELOPMENT PROJECTION OF PLAN FIDUCIARY NET POSITION

Year	Projected	Projected Total	Projected Benefit	Projected	Projected	Projected Ending Plan
	Beginning Plan			Administrative	Investment	
	Net Position	Contributions	Payments	Expenses	Earnings at 7.50 %	
	(a)	(b)	(c)	(d)	(e)	(f)=(a)+(b)-(c)-(d)+(e)
1	\$ 7,370,758,150	\$ 317,412,316	\$ 661,169,880	\$ 6,660,213	\$ 539,903,754	\$ 7,560,244,127
2	7,560,244,127	312,355,902	566,848,606	6,196,472	557,419,195	7,856,974,146
3	7,856,974,146	328,348,241	587,412,442	5,891,637	579,516,839	8,171,535,147
4	8,171,535,147	340,440,623	610,748,235	5,654,164	602,703,653	8,498,277,024
5	8,498,277,024	340,766,895	636,010,632	5,451,812	626,298,545	8,823,880,019
6	8,823,880,019	341,719,154	663,693,718	5,264,194	649,741,394	9,146,382,655
7	9,146,382,655	342,892,260	693,392,803	5,076,566	672,885,615	9,463,691,160
8	9,463,691,160	344,176,194	723,481,414	4,884,840	695,630,165	9,775,131,265
9	9,775,131,265	345,622,959	754,549,470	4,690,641	717,904,606	10,079,418,719
10	10,079,418,719	347,247,338	784,265,492	4,493,425	739,699,035	10,377,606,175
11	10,377,606,175	349,142,723	813,745,331	4,296,387	761,054,633	10,669,761,813
12	10,669,761,813	351,377,922	843,820,085	4,101,561	781,948,369	10,955,166,458
13	10,955,166,458	353,461,107	872,381,243	3,908,667	802,385,847	11,234,723,502
14	11,234,723,502	356,411,568	898,865,945	3,719,058	822,493,027	11,511,043,095
15	11,511,043,095	359,743,004	923,931,046	3,533,224	842,423,561	11,785,745,390
16	11,785,745,390	363,416,172	948,853,723	3,349,506	862,250,547	12,059,208,881
17	12,059,208,881	367,322,276	974,399,141	3,163,703	881,970,347	12,330,938,659
18	12,330,938,659	371,420,266	1,001,199,163	2,974,283	901,521,119	12,599,706,599
19	12,599,706,599	375,815,748	1,026,130,324	2,784,956	920,929,520	12,867,536,586
20	12,867,536,586	380,539,776	1,050,086,883	2,596,247	940,315,536	13,135,708,769
21	13,135,708,769	384,744,952	1,073,726,889	2,408,196	959,719,743	13,404,038,380
22	13,404,038,380	204,752,644	1,095,906,204	2,223,026	972,406,905	13,483,068,699
23	13,483,068,699	54,848,198	1,113,737,238	2,041,820	972,164,484	13,394,302,323
24	13,394,302,323	50,087,266	1,132,513,519	1,862,257	964,646,929	13,274,660,743
25	13,274,660,743	45,324,710	1,149,639,610	1,682,743	954,874,436	13,123,537,536
26	13,123,537,536	40,598,094	1,163,973,609	1,505,272	942,844,879	12,941,501,628
27	12,941,501,628	35,885,683	1,179,259,475	1,329,020	928,462,298	12,725,261,113
28	12,725,261,113	31,215,763	1,191,997,477	1,154,867	911,609,676	12,474,934,208
29	12,474,934,208	26,866,669	1,201,964,491	993,006	892,313,970	12,191,157,350
30	12,191,157,350	22,965,366	1,207,201,770	848,654	870,699,519	11,876,771,811
31	11,876,771,811	19,365,471	1,208,518,387	716,387	846,944,438	11,533,846,945
32	11,533,846,945	16,004,764	1,205,876,739	592,747	821,203,148	11,164,585,371
33	11,164,585,371	12,915,297	1,196,349,932	478,986	793,749,755	10,774,421,506
34	10,774,421,506	10,121,832	1,184,187,052	375,780	764,836,267	10,364,816,773
35	10,364,816,773	7,566,339	1,169,122,390	281,174	734,580,009	9,937,559,557
36	9,937,559,557	5,321,590	1,146,933,023	197,983	703,273,183	9,499,023,324
37	9,499,023,324	3,497,743	1,119,254,531	130,314	671,337,479	9,054,473,702
38	9,054,473,702	2,079,550	1,087,964,451	77,596	639,098,143	8,607,609,347
39	8,607,609,347	1,010,674	1,054,030,799	37,855	606,794,929	8,161,346,296
40	8,161,346,296	285,881	1,015,420,285	10,638	574,721,233	7,720,922,487
41	7,720,922,487	-	966,845,913	-	543,467,921	7,297,544,495
42	7,297,544,495	-	933,061,528	-	512,958,582	6,877,441,549
43	6,877,441,549	-	898,267,847	-	482,732,037	6,461,905,738
44	6,461,905,738	-	862,727,174	-	452,875,532	6,052,054,096
45	6,052,054,096	-	826,432,883	-	423,473,090	5,649,094,302
46	5,649,094,302	-	789,243,496	-	394,620,495	5,254,471,301
47	5,254,471,301	-	751,258,524	-	366,422,455	4,869,635,232
48	4,869,635,232	-	712,719,213	-	338,978,847	4,495,894,866
49	4,495,894,866	-	673,973,033	-	312,375,034	4,134,296,868
50	4,134,296,868	-	635,204,440	-	286,682,724	3,785,775,152

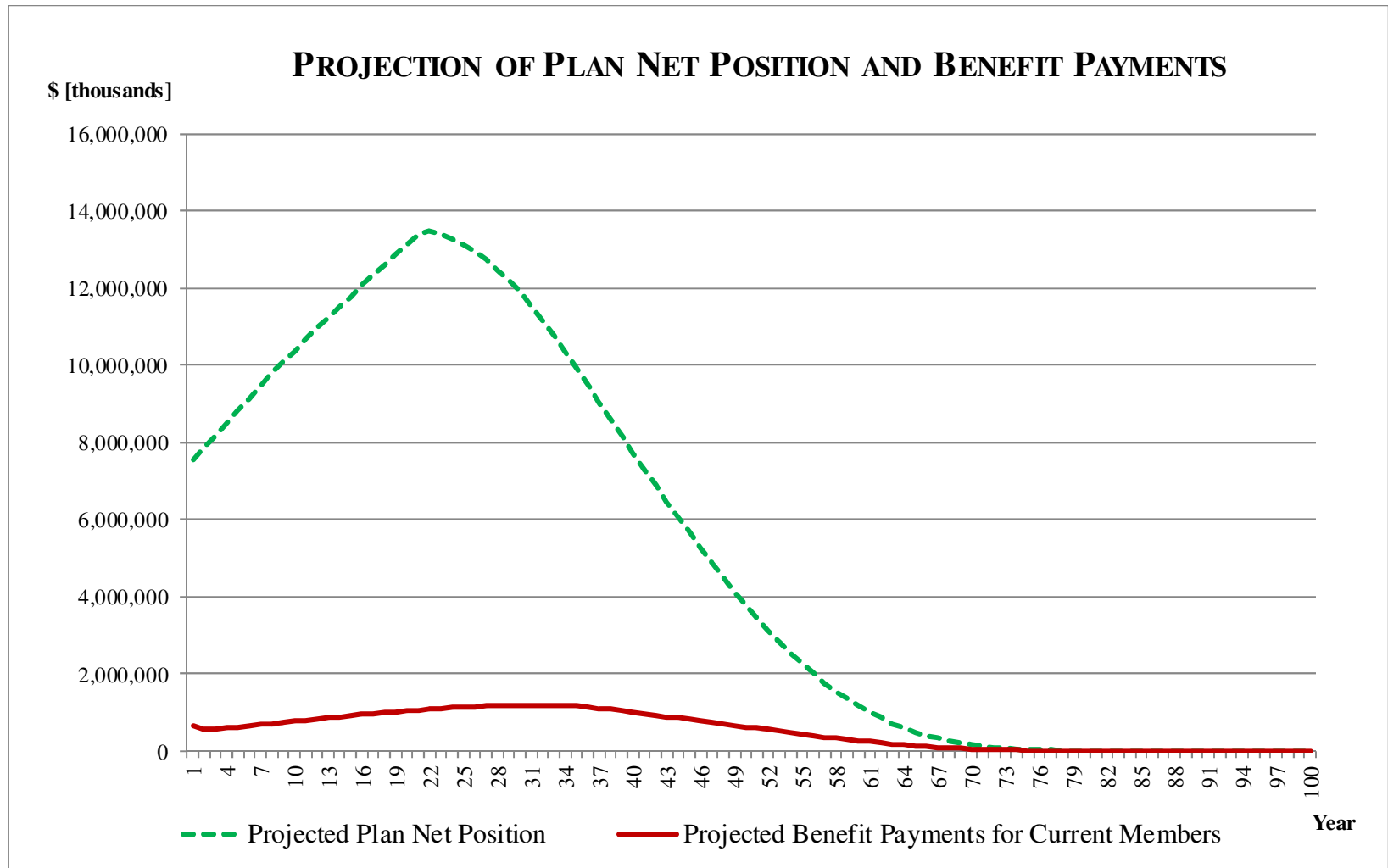
First year's benefit payments include distribution of the DROP reserve.

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)-.5}	(g)=(e)*vf ^{^(a)-.5}	(h)=((c)/(1+sdr)) ^{^(a)-.5}
1	\$ 7,370,758,150	\$ 661,169,880	\$ 661,169,880	\$ -	\$ 637,688,858	\$ -	\$ 637,688,858
2	7,560,244,127	566,848,606	566,848,606	-	508,574,272	-	508,574,272
3	7,856,974,146	587,412,442	587,412,442	-	490,254,942	-	490,254,942
4	8,171,535,147	610,748,235	610,748,235	-	474,168,387	-	474,168,387
5	8,498,277,024	636,010,632	636,010,632	-	459,331,561	-	459,331,561
6	8,823,880,019	663,693,718	663,693,718	-	445,883,245	-	445,883,245
7	9,146,382,655	693,392,803	693,392,803	-	433,335,543	-	433,335,543
8	9,463,691,160	723,481,414	723,481,414	-	420,594,798	-	420,594,798
9	9,775,131,265	754,549,470	754,549,470	-	408,052,245	-	408,052,245
10	10,079,418,719	784,265,492	784,265,492	-	394,532,419	-	394,532,419
11	10,377,606,175	813,745,331	813,745,331	-	380,802,364	-	380,802,364
12	10,669,761,813	843,820,085	843,820,085	-	367,326,719	-	367,326,719
13	10,955,166,458	872,381,243	872,381,243	-	353,264,922	-	353,264,922
14	11,234,723,502	898,865,945	898,865,945	-	338,595,092	-	338,595,092
15	11,511,043,095	923,931,046	923,931,046	-	323,755,257	-	323,755,257
16	11,785,745,390	948,853,723	948,853,723	-	309,291,561	-	309,291,561
17	12,059,208,881	974,399,141	974,399,141	-	295,459,006	-	295,459,006
18	12,330,938,659	1,001,199,163	1,001,199,163	-	282,404,982	-	282,404,982
19	12,599,706,599	1,026,130,324	1,026,130,324	-	269,243,938	-	269,243,938
20	12,867,536,586	1,050,086,883	1,050,086,883	-	256,306,831	-	256,306,831
21	13,135,708,769	1,073,726,889	1,073,726,889	-	243,792,484	-	243,792,484
22	13,404,038,380	1,095,906,204	1,095,906,204	-	231,468,237	-	231,468,237
23	13,483,068,699	1,113,737,238	1,113,737,238	-	218,822,661	-	218,822,661
24	13,394,302,323	1,132,513,519	1,132,513,519	-	206,987,674	-	206,987,674
25	13,274,660,743	1,149,639,610	1,149,639,610	-	195,458,402	-	195,458,402
26	13,123,537,536	1,163,973,609	1,163,973,609	-	184,088,770	-	184,088,770
27	12,941,501,628	1,179,259,475	1,179,259,475	-	173,494,244	-	173,494,244
28	12,725,261,113	1,191,997,477	1,191,997,477	-	163,133,280	-	163,133,280
29	12,474,934,208	1,201,964,491	1,201,964,491	-	153,020,778	-	153,020,778
30	12,191,157,350	1,207,201,770	1,207,201,770	-	142,965,145	-	142,965,145
31	11,876,771,811	1,208,518,387	1,208,518,387	-	133,135,877	-	133,135,877
32	11,533,846,945	1,205,876,739	1,205,876,739	-	123,576,615	-	123,576,615
33	11,164,585,371	1,196,349,932	1,196,349,932	-	114,046,810	-	114,046,810
34	10,774,421,506	1,184,187,052	1,184,187,052	-	105,011,474	-	105,011,474
35	10,364,816,773	1,169,122,390	1,169,122,390	-	96,442,389	-	96,442,389
36	9,937,559,557	1,146,933,023	1,146,933,023	-	88,011,126	-	88,011,126
37	9,499,023,324	1,119,254,531	1,119,254,531	-	79,895,058	-	79,895,058
38	9,054,473,702	1,087,964,451	1,087,964,451	-	72,243,253	-	72,243,253
39	8,607,609,347	1,054,030,799	1,054,030,799	-	65,106,962	-	65,106,962
40	8,161,346,296	1,015,420,285	1,015,420,285	-	58,346,055	-	58,346,055
41	7,720,922,487	966,845,913	966,845,913	-	51,679,043	-	51,679,043
42	7,297,544,495	933,061,528	933,061,528	-	46,393,701	-	46,393,701
43	6,877,441,549	898,267,847	898,267,847	-	41,547,617	-	41,547,617
44	6,461,905,738	862,727,174	862,727,174	-	37,119,771	-	37,119,771
45	6,052,054,096	826,432,883	826,432,883	-	33,077,367	-	33,077,367
46	5,649,094,302	789,243,496	789,243,496	-	29,385,013	-	29,385,013
47	5,254,471,301	751,258,524	751,258,524	-	26,019,313	-	26,019,313
48	4,869,635,232	712,719,213	712,719,213	-	22,962,354	-	22,962,354
49	4,495,894,866	673,973,033	673,973,033	-	20,199,099	-	20,199,099
50	4,134,296,868	635,204,440	635,204,440	-	17,709,021	-	17,709,021

**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)=(c)*vf ^{^(a)-.5}	(h)=(c)/(1+sdr) ^{^(a)-.5}
51	\$ 3,785,775,152	\$ 596,534,856	\$ 596,534,856	\$ -	\$ 15,470,644	\$ -	\$ 15,470,644
52	3,451,207,785	558,085,928	558,085,928	-	13,463,723	-	13,463,723
53	3,131,412,564	519,981,016	519,981,016	-	11,669,255	-	11,669,255
54	2,827,140,714	482,352,333	482,352,333	-	10,069,584	-	10,069,584
55	2,539,062,724	445,341,503	445,341,503	-	8,648,322	-	8,648,322
56	2,267,752,531	409,101,458	409,101,458	-	7,390,286	-	7,390,286
57	2,013,668,550	373,792,125	373,792,125	-	6,281,334	-	6,281,334
58	1,777,137,767	339,578,787	339,578,787	-	5,308,280	-	5,308,280
59	1,558,340,320	306,626,003	306,626,003	-	4,458,757	-	4,458,757
60	1,357,299,238	275,090,862	275,090,862	-	3,721,110	-	3,721,110
61	1,173,876,404	245,120,743	245,120,743	-	3,084,381	-	3,084,381
62	1,007,770,539	216,848,167	216,848,167	-	2,538,255	-	2,538,255
63	858,520,364	190,385,185	190,385,185	-	2,073,023	-	2,073,023
64	725,513,830	165,819,352	165,819,352	-	1,679,569	-	1,679,569
65	608,002,204	143,211,517	143,211,517	-	1,349,373	-	1,349,373
66	505,117,508	122,595,059	122,595,059	-	1,074,530	-	1,074,530
67	415,892,059	103,977,113	103,977,113	-	847,764	-	847,764
68	339,278,197	87,338,543	87,338,543	-	662,422	-	662,422
69	274,169,533	72,632,688	72,632,688	-	512,451	-	512,451
70	219,425,075	59,785,545	59,785,545	-	392,381	-	392,381
71	173,894,983	48,696,723	48,696,723	-	297,306	-	297,306
72	136,447,270	39,243,593	39,243,593	-	222,876	-	222,876
73	105,992,192	31,286,028	31,286,028	-	165,286	-	165,286
74	81,503,562	24,672,567	24,672,567	-	121,253	-	121,253
75	62,035,267	19,246,570	19,246,570	-	87,988	-	87,988
76	46,732,643	14,851,997	14,851,997	-	63,161	-	63,161
77	34,838,713	11,337,709	11,337,709	-	44,852	-	44,852
78	25,696,429	8,561,544	8,561,544	-	31,506	-	31,506
79	18,746,864	6,394,492	6,394,492	-	21,890	-	21,890
80	13,522,928	4,722,455	4,722,455	-	15,038	-	15,038
81	9,640,802	3,447,175	3,447,175	-	10,211	-	10,211
82	6,789,755	2,485,825	2,485,825	-	6,850	-	6,850
83	4,721,629	1,769,869	1,769,869	-	4,537	-	4,537
84	3,240,712	1,243,421	1,243,421	-	2,965	-	2,965
85	2,194,559	861,558	861,558	-	1,911	-	1,911
86	1,465,869	588,558	588,558	-	1,214	-	1,214
87	965,579	396,317	396,317	-	761	-	761
88	627,087	263,020	263,020	-	470	-	470
89	401,414	172,001	172,001	-	286	-	286
90	253,186	110,832	110,832	-	171	-	171
91	157,262	70,369	70,369	-	101	-	101
92	96,097	44,005	44,005	-	59	-	59
93	57,679	27,100	27,100	-	34	-	34
94	33,907	16,415	16,415	-	19	-	19
95	19,431	9,748	9,748	-	10	-	10
96	10,781	5,649	5,649	-	6	-	6
97	5,733	3,171	3,171	-	3	-	3
98	2,875	1,704	1,704	-	1	-	1
99	1,324	859	859	-	-	-	-
100	533	533	533	-	-	-	-
Totals	\$ 11,125,802,744	\$ -	\$ 11,125,802,744	\$ -	\$ -	\$ -	\$ 11,125,802,744



SECTION H

GLOSSARY OF TERMS

GLOSSARY OF TERMS

<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>Accrued Service</i>	Service credited under the system which was rendered before the date of the actuarial valuation.
<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.

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<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>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>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; and 2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.

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<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 ages(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>GASB</i>	The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.
<i>Fiduciary Net Position</i>	The fiduciary net position is the value of the assets of the trust.
<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.

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<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 Cost 2. Interest on the Total Pension Liability 3. Current-Period Benefit Changes 4. Employee Contributions (made negative for addition here) 5. Projected Earnings on Plan Investments (made negative for addition here) 6. Pension Plan Administrative Expense 7. Other Changes in Plan Fiduciary Net Position 8. Recognition of Outflow (Inflow) of Resources due to Liabilities 9. 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.



November 1, 2016

Ms. Gail H. Stone, Executive Director
Arkansas Public Employees Retirement System
One Union National Plaza
124 West Capitol, Suite 400
Little Rock, Arkansas 72201

Dear Gail:

Please find the enclosed copies of the June 30, 2016 GASB Statement Nos. 67 and 68 Accounting and Financial Reporting for Pensions report of the Arkansas Public Employees Retirement System (Including District Judges).

Sincerely,

Mita D. Drazilov, ASA, MAAA

MDD:dks:sc

Enclosures