

WISCONSIN RETIREMENT SYSTEM
GASB STATEMENT NO. 67 PLAN REPORTING AND
ACCOUNTING SCHEDULES
DECEMBER 31, 2015

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October 27, 2016

Employee Trust Funds Board
Wisconsin Department of Employee
Trust Funds
801 West Badger Road
Madison, Wisconsin 53713

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

The actuarial calculations in connection with this report were prepared for the purpose of complying with the requirements of GASB Statement No. 67. These calculations have been made on a basis that is consistent with our understanding of this Statement.

The calculation of the plan’s liability for this report is not applicable for funding purposes of the plan. A calculation of the plan’s liability for purposes other than satisfying the requirements of GASB Statement No. 67 may produce significantly different results. This report may be provided to parties other than the WRS only in its entirety and only with the permission of the WRS. GRS is not responsible for unauthorized use of this report.

The report was based upon information, furnished by the Department of Employee Trust Funds (DETF), concerning Retirement System benefits, financial transactions, and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of any data provided by DETF.

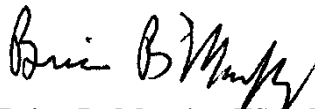
This report complements the actuarial valuation report that we provided to the Board and should be considered in conjunction with that report. Please see the actuarial valuation report as of December 31, 2014 for additional discussion of the nature of actuarial calculations and more information related to participant data, economic and demographic assumptions, and benefit provisions.

This report is intended to assist in preparation of the financial statements of WRS and its participating employers. Financial statements are the responsibility of the reporting entity and not the actuary. The statements are subject to an auditor’s review. Please let us know if the plan’s auditor recommends any changes

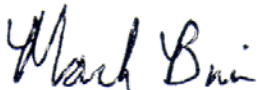
Employee Trust Funds Board
Wisconsin Department of Employee
Trust Funds
October 27, 2016
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To the best of our knowledge, the information contained in this report is accurate, and fairly represents the actuarial position of WRS. All calculations have been made in conformity with generally accepted actuarial principles and practices as well as with the Actuarial Standards of Practice issued by the Actuarial Standards Board. Brian B. Murphy, Mark Buis and James D. Anderson 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 actuaries are independent of the plan sponsor.

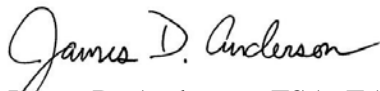
Respectfully submitted,



Brian B. Murphy, FSA, EA, MAAA



Mark Buis, FSA, EA, MAAA



James D. Anderson, FSA, EA, MAAA

BBM/MB/JDA:ah

SECTION A
EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

AS OF DECEMBER 31, 2015

	2015
Actuarial Valuation Date	December 31, 2015
Pension Plan's Fiscal Year Ending Date (Measurement Date & Reporting Date)	December 31, 2015
 Membership	
Number of	
- Retirees and Beneficiaries	191,795
- Inactive, Nonretired Members	158,240
- Active Members	255,014
- Total	605,049
Covered Payroll	\$ 13,530,500,000
 Net Pension Liability	
Total Pension Liability	\$ 89,999,506,492
Plan Fiduciary Net Position	88,504,670,309
Net Pension Liability	\$ 1,494,836,183
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	98.34%
Net Pension Liability as a Percentage of Covered Payroll	11.05%
 Development of the Single Discount Rate	
Single Discount Rate	7.20%
Long-Term Expected Rate of Return	7.20%
Long-Term Municipal Bond Rate	3.57%
Last year ending December 31 in the 2016 to 2115 projection period for which projected benefit payments are fully funded	2115

DISCUSSION

Accounting Standard

For pension plans that are administered through trusts or equivalent arrangements, Governmental Accounting Standards Board (GASB) Statement No. 67, “Financial Reporting for Pension Plans,” replaces the requirements of GASB Statement No. 25, “Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans,” and GASB Statement No. 50, “Pension Disclosures.” GASB Statement No. 67 establishes standards of financial reporting for separately issued financial reports and specifies the required approach for measuring the pension liability of employers and non-employer contributing entities for benefits provided through the pension plan.

The following discussion provides a summary of the information that is required to be disclosed under this accounting standard. 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 your internal staff will be responsible for preparing that information to comply with this accounting standard.

Financial Statements

GASB Statement No. 67 requires defined benefit pension plans to present two financial statements – a statement of fiduciary net position and a statement of changes in fiduciary net position.

The *statement of fiduciary net position* presents the following items as of the end of the pension plan’s reporting period, such as:

- assets;
- deferred inflows and outflows of resources;
- liabilities; and
- fiduciary net position (assets, plus deferred outflows, minus liabilities, minus deferred inflows).

The *statement of changes in fiduciary net position* presents the following for the plan’s reporting period:

- additions, such as contributions and investment income;
- deductions, such as benefit payments and expenses; and
- net increase or decrease in the fiduciary net position (the difference between additions and deductions).

Notes to Financial Statements

GASB Statement No. 67 also requires the notes of the plan's financial statements to include additional disclosure information. This disclosure information should include:

- a description of the types of benefits provided by the plan, as well as automatic or ad hoc COLAs;
- the number and classes of employees covered by the benefit terms;
- the composition of the pension plan's Board and the authority under which benefit terms may be amended;
- a description of the plan's funding policy, which includes member and employer contribution requirements;
- the pension plan's investment policies;
- a description of how fair value is determined;
- concentrations of investments greater than or equal to 5%;
- annual money-weighted rate of return on pension plan investments;
- the portion of the present value of benefits to be provided through the pension plan to current active and inactive plan members;
- the pension plan's fiduciary net position;
- the net pension liability;
- the pension plan's fiduciary net position as a percentage of the total pension liability;
- 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.

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;
- comparison of the actual employer contributions to the actuarially determined contributions based on the plan's funding policy; and
- the annual money-weighted rate of return on pension plan investments for each year.

While the first two tables may be built prospectively as the information becomes available, sufficient information is currently available for the third and fourth tables.

Measurement of the Net Pension Liability

The net pension liability is to be measured as the total pension liability, less the amount of the pension plan's fiduciary net position. In actuarial terms, this will be 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).

General Implications of Contribution Allocation Procedure or Funding Policy on Future Expected Plan Contributions and Funded Status

Given the plan's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the plan earning 7.2% on the actuarial value of assets), it is expected that:

1. The employer normal cost as a percentage of pay will decrease to the level of the future service normal cost as time passes.
2. The unfunded liability is expected to decrease in dollar amount until it is fully funded.
3. The funded status of the plan will remain very close to a 100% funded ratio.

This funding policy results in the expectation that the plan's assets will be able to fully pay for promised benefits through at least 2016. The projections in this report are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.

Timing of the Valuation

An actuarial valuation to determine the total pension liability is required to be performed at least every two years. If the actuarial valuation is not calculated as of the plan's fiscal year end, the total pension liability is required to be rolled forward from the actuarial valuation date to the pension plan's fiscal year end.

The total pension liability shown in this report is based on an actuarial valuation performed as of December 31, 2015 and a measurement date of December 31, 2015.

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 Bond Buyer Index) 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 7.20%; the municipal bond rate is 3.57% (based on the weekly rate closest to but not later than the measurement date of the "20-Bond GO Index" rate published from the Bond Buyer Index); and the resulting single discount rate is 7.20%.

Effective Date and Transition

GASB Statement No. 67 is effective for a pension plan's fiscal years beginning after June 15, 2013.

Actuarial Assumptions and Methods and Member Census Data

The liability and asset values used in this study are taken from the December 31, 2014 and 2015 Actuarial Valuation Reports of the Wisconsin Retirement System. Therefore, the actuarial assumptions and methods employed for purposes of our Actuarial Study are the same actuarial assumptions and methods shown in the Actuarial Valuation Reports.

The member census data employed for purposes of our Actuarial Study was provided by DETF and is the same member census data used for the December 31, 2014 and December 31, 2015 Actuarial Valuation Reports of the Retirement System.

The Wisconsin Retirement System uses the Frozen Initial Liability cost method for determining funding requirements. GASB Statement No. 67 requires the use of the Entry Age Normal method for accounting purposes. Therefore, we developed the Entry Age Normal Accrued Liability to reflect the Total Pension Liability for GASB purposes.

SECTION B

FINANCIAL STATEMENTS

STATEMENT OF FIDUCIARY NET POSITION
AS OF DECEMBER 31, 2015

	2015
Assets	
Cash and Deposits	\$ 5,163,923,722
Receivables	
Accounts Receivable - Sale of Investments	\$ 1,041,413,822
Accrued Interest and Other Dividends	226,908,981
Contributions	205,565,654
Accounts Receivable - Other	11,837,425
Total Receivables	\$ 1,485,725,882
Investments	
Fixed Income	\$ 24,955,170,031
Domestic and International Equities	47,185,253,775
Real Estate	1,119,024,432
Other	14,986,905,690
Total Investments	\$ 88,246,353,928
Total Assets	\$ 94,896,003,532
Liabilities	
Payables	
Accounts Payable - Purchase of Investments	\$ 5,855,943,040
Accrued Expenses	75,619,698
Accounts Payable - Other	459,770,485
Total Liabilities	\$ 6,391,333,223
Net Position Restricted for Pensions	\$ 88,504,670,309

**STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR YEAR ENDED DECEMBER 31, 2015**

	2015
Additions	
Contributions	
Employer	\$ 977,733,921
Employee	937,225,184
Other	-
Total Contributions	\$ 1,914,959,105
Investment Income	
Net Appreciation in Fair Value of Investments	\$ (2,076,585,085)
Interest and Dividends	1,756,365,397
Less Investment Expense	(352,903,124)
Net Investment Income	\$ (673,122,812)
Other	\$ -
Total Additions	\$ 1,241,836,293
 Deductions	
Benefit payments, including refunds of employee contributions	\$ 4,861,228,917
Pension Plan Administrative Expense	22,708,614
Other Benefit Expenses	-
Total Deductions	\$ 4,883,937,531
Net Increase in Net Position	\$ (3,642,101,238)
 Net Position Restricted for Pensions	
Beginning of Year	\$ 92,146,771,547
End of Year	\$ 88,504,670,309

SECTION C

REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULES OF REQUIRED SUPPLEMENTARY INFORMATION

MULTIYEAR SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years (which may be built prospectively)

Fiscal year ending December 31,	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
Total Pension Liability										
Service Cost	\$ 1,787,870,316	\$ 1,757,020,910	\$ 1,745,048,505							
Interest on the Total Pension Liability	6,349,703,745	6,089,287,273	5,680,664,977							
Benefit Changes	-	-	-							
Difference between Expected and Actual Experience	(4,488,825,613)	473,101,546	2,659,920,220							
Assumption Changes	1,484,977,863	-	-							
Benefit Payments	(4,823,586,513)	(4,540,247,874)	(4,224,700,261)							
Refunds	(37,642,404)	(34,401,181)	(33,271,143)							
Net Change in Total Pension Liability	272,497,394	3,744,760,674	5,827,662,298							
Total Pension Liability - Beginning	89,727,009,098	85,982,248,424	80,154,586,126							
Total Pension Liability - Ending (a)	\$ 89,999,506,492	\$ 89,727,009,098	\$85,982,248,424							
Plan Fiduciary Net Position										
Employer Contributions	\$ 977,733,921	\$ 987,792,834	\$ 914,698,118							
Employee Contributions	937,225,184	941,903,267	871,259,789							
Pension Plan Net Investment Income	(673,122,812)	4,891,014,826	11,347,296,075							
Benefit Payments	(4,823,586,513)	(4,540,247,874)	(4,224,700,261)							
Refunds	(37,642,404)	(34,401,181)	(33,271,143)							
Pension Plan Administrative Expense	(22,708,614)	(24,036,951)	(22,857,502)							
Other	-	-	-							
Net Change in Plan Fiduciary Net Position	(3,642,101,238)	2,222,024,921	8,852,425,076							
Plan Fiduciary Net Position - Beginning	92,146,771,547	89,924,746,626	81,072,321,550							
Plan Fiduciary Net Position - Ending (b)	\$ 88,504,670,309	\$ 92,146,771,547	\$89,924,746,626							
Net Pension Liability - Ending (a) - (b)	1,494,836,183	(2,419,762,449)	(3,942,498,202)							
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	98.34 %	102.70 %	104.59 %							
Covered-Employee Payroll*	\$ 13,530,500,000	\$ 13,219,500,000	\$12,884,800,000							
Net Pension Liability as a Percentage of Covered-Employee Payroll	11.05 %	(18.30)%	(30.60)%							
Notes to Schedule:										
N/A										

* Provided by DETF.

SCHEDULES OF REQUIRED SUPPLEMENTARY INFORMATION
MULTIYEAR SCHEDULE OF THE NET PENSION LIABILITY

Last 10 Fiscal Years (which may be built prospectively)

FY Ending December 31,	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
2006			-			
2007			-			
2008			-			
2009			-			
2010			-			
2011			-			
2012			-			
2013	\$ 85,982,248,424	\$ 89,924,746,626	\$ (3,942,498,202)	104.59%	\$ 12,884,800,000	(30.60)%
2014	89,727,009,098	92,146,771,547	(2,419,762,449)	102.70%	13,219,500,000	(18.30)%
2015	89,999,506,492	88,504,670,309	1,494,836,183	98.34%	13,530,500,000	11.05 %

* *Provided by DETF.*

MULTIYEAR SCHEDULE OF CONTRIBUTIONS

Last 10 Fiscal Years

FY Ending December 31,	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll*	Actual Contribution as a % of Covered Payroll
2006					
2007					
2008					
2009					
2010					
2011					
2012					
2013	\$ 914,698,118	\$ 914,698,118	-	\$ 12,884,800,000	7.47%
2014	987,792,834	987,792,834	-	13,219,500,000	7.47%
2015	977,733,921	977,733,921	-	13,530,500,000	7.23%

* Provided by DETF.

NOTES TO SCHEDULE OF CONTRIBUTIONS

Valuation Date: December 31, 2013

Methods and Assumptions used to Determine Actuarial Contribution on prior page:

Actuarial Cost Method	Frozen Entry Age
Amortization Method	Level Percentage of Payroll, Closed
Amortization Period	30-Year closed from date of participation in WRS
Asset Valuation Method	5-Year smoothed value
Inflation	2.0% to 2.7% -- approximate; No explicit price inflation assumption is used in this valuation.
Salary Increases	3.2% to 8.8% including inflation
Net Investment Rate of Return	5.50%
Weighted based on assumed rate for:	
Retired participants	5.00%
Post-retirement active participants	5.00%
Pre-retirement active participants	7.20%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2012 valuation pursuant to an experience study of the period 2009 - 2011.
Mortality	WRS experience projected to 2017 with scale BB

Other Information:

Notes The actuarially determined contribution for calendar 2015 was determined from the December 31, 2013 actuarial valuation.

MULTIYEAR SCHEDULE OF INVESTMENT RETURNS

Last 10 Fiscal Years

FY Ending December 31,	Core Annual Return¹	Variable Annual Return¹
2006		
2007		
2008		
2009		
2010		
2011		
2012		
2013	13.18 %	28.78 %
2014	5.44 %	7.24 %
2015	(0.63)%	(1.11)%

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

The money weighted rate of return expresses investment performance net of pension plan investment expense, adjusted for the changing amounts actually invested.

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 (expected returns, net of pension plan investment expense and inflation) 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 inflation. The long-term expected rate of return is reviewed every three years in conjunction with the WRS experience study. For each major asset class that is included in the pension plan's target asset allocation as of December 31, 2014, these best estimates of geometric real rates of return were provided by DETF and are summarized in the following tables:

Core Asset Allocation

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>
Domestic Equity	21.00%	5.30%
International Equity	23.00%	5.70%
Fixed Income	36.00%	1.70%
Inflation Sens. Assets	20.00%	2.30%
Real Estate	7.00%	4.20%
Private Equity/Debt	7.00%	6.90%
Multi-asset	6.00%	3.90%
Cash	-20.00%	0.90%
Total	<u>100.00%</u>	

Variable Asset Allocation

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>
Domestic Equity	70.00%	5.30%
International Equity	30.00%	5.70%
Fixed Income	N/A	N/A
Inflation Sens. Assets	N/A	N/A
Real Estate	N/A	N/A
Private Equity/Debt	N/A	N/A
Multi-asset	N/A	N/A
Cash	N/A	N/A
Total	<u>100.00%</u>	

Single Discount Rate

A single discount rate of 7.20% 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 7.20% and a long-term bond rate of 3.57%. Because of the unique structure of WRS, the 7.2% expected rate of return implies that a dividend of approximately 2.1% will always be paid. For purposes of the single discount rate, it was assumed that the dividend would always be paid. 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 (including expected dividends) 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 7.20%, as well as what the plan's net pension liability would be if it were calculated using a single discount rate that is 100 basis points lower or 100 basis points higher:

Sensitivity of Net Pension Liability to the Single Discount Rate Assumption

Discount Rate	Current Single Discount		
	1% Decrease	Rate Assumption	1% Increase
Ultimate Dividend Rate	6.20%	7.20%	8.20%
Total Pension Liability	\$ 99,782,254,782	\$ 89,999,506,492	\$ 82,390,299,577
Plan Fiduciary Net Position	88,504,670,309	88,504,670,309	88,504,670,309
Net Pension Liability/(Asset)	\$ 11,277,584,473	\$ 1,494,836,183	\$ (6,114,370,732)

For the WRS, the determination of liabilities also depends on the assumed dividend which is linked to the interest rate used in the liability calculation. Therefore, we have also shown an alternative set of Sensitivity Analysis which varies the assumed dividend in conjunction with the change in the discount rate. For the liabilities shown below, the assumed dividend was 1.1% for the 6.2% discount rate, 2.1% for the 7.2% discount rate, and 3.0% for the 8.2% discount rate.

Sensitivity of Net Pension Liability to the Single Discount Rate Assumption

Discount Rate	Current Single Discount		
	1% Decrease	Rate Assumption	1% Increase
Ultimate Dividend Rate	1.10%	2.10%	3.00%
Total Pension Liability	\$ 93,505,531,921	\$ 89,999,506,492	\$ 86,501,368,157
Plan Fiduciary Net Position	88,504,670,309	88,504,670,309	88,504,670,309
Net Pension Liability/(Asset)	\$ 5,000,861,612	\$ 1,494,836,183	\$ (2,003,302,152)

Summary of Population Statistics

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	191,795
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	158,240
Active Plan Members	<u>255,014</u>
Total Plan Members	605,049

SECTION E

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 municipal bond 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 Bond Buyer Index) 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 7.20%; the municipal bond rate is 3.57%; and the resulting single discount rate is 7.20%.

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 contribution rate for the first year was developed from the 2014 actuarial valuations (13.60%). Expected contribution rates gradually increase as the unrecognized asset losses from the Market Recognition Account are phased in over the next 5 years. The expected contribution rate then remains level for 20 years and is assumed to migrate to the ultimate contribution rate of 13.4% once the Experience Amortization Reserve (EAR) component is paid down.

The **Projection of Plan Fiduciary Net Position** table shows the development of expected asset levels in future years. Please note, that for the purposes of this projection, we have reduced the Plan Fiduciary Net Position as of December 31, 2013 to the Actuarial Accrued Liability as of December 31, 2013 (the amount of overfunding was set to zero to simplify the projection).

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.

The WRS funding policy as it affects the closed group cannot be modelled with 100% accuracy. In reality, assets that appear to be left over after all benefit obligations are satisfied would be assigned to the funding benefits of people who enter the plan after the measurement date.

SINGLE DISCOUNT RATE DEVELOPMENT

PROJECTION OF CONTRIBUTIONS ENDING DECEMBER 31, 2115

Year	Payroll for Current Employees	Contributions from Current Employees	Normal Cost Contributions	UAL Contributions	Total Contributions
0	\$ 13,273,088,436				
1	13,276,474,329	\$ 902,800,255	\$ 902,800,255	\$ -	\$ 1,805,600,510
2	12,935,200,015	905,464,001	905,464,001	-	1,810,928,002
3	12,634,392,472	884,407,473	884,407,473	-	1,768,814,946
4	12,341,302,304	873,147,138	873,147,138	-	1,746,294,276
5	12,043,512,125	876,165,507	876,165,507	-	1,752,331,014
6	11,738,604,914	874,619,975	874,619,975	-	1,749,239,950
7	11,425,512,815	851,292,109	851,292,109	-	1,702,584,218
8	11,104,965,790	827,408,791	827,408,791	-	1,654,817,582
9	10,777,867,059	803,037,319	803,037,319	-	1,606,074,638
10	10,440,684,744	777,914,539	777,914,539	-	1,555,829,078
11	10,092,957,638	752,006,088	752,006,088	-	1,504,012,176
12	9,735,495,337	725,372,287	725,372,287	-	1,450,744,574
13	9,368,252,300	698,009,743	698,009,743	-	1,396,019,486
14	8,990,986,344	669,900,411	669,900,411	-	1,339,800,822
15	8,605,861,035	641,205,494	641,205,494	-	1,282,410,988
16	8,214,391,932	612,037,914	612,037,914	-	1,224,075,828
17	7,814,568,030	582,247,835	582,247,835	-	1,164,495,670
18	7,408,104,065	551,963,018	551,963,018	-	1,103,926,036
19	6,996,324,876	521,282,174	521,282,174	-	1,042,564,348
20	6,577,368,904	490,066,603	490,066,603	-	980,133,206
21	6,152,974,255	458,445,806	458,445,806	-	916,891,612
22	5,725,794,077	426,617,465	426,617,465	-	853,234,930
23	5,296,465,595	394,629,059	394,629,059	-	789,258,118
24	4,866,445,076	362,589,090	362,589,090	-	725,178,180
25	4,438,782,956	330,724,841	330,724,841	-	661,449,682
26	4,014,728,431	299,129,386	299,129,386	-	598,258,772
27	3,593,365,885	267,734,506	267,734,506	-	535,469,012
28	3,173,499,696	212,624,480	212,624,480	-	425,248,960
29	2,756,210,756	184,666,121	184,666,121	-	369,332,242
30	2,348,195,560	157,329,103	157,329,103	-	314,658,206
31	1,964,055,510	131,591,719	131,591,719	-	263,183,438
32	1,616,231,404	108,287,504	108,287,504	-	216,575,008
33	1,309,598,732	87,743,115	87,743,115	-	175,486,230
34	1,047,105,313	70,156,056	70,156,056	-	140,312,112
35	828,901,725	55,536,416	55,536,416	-	111,072,832
36	650,820,285	43,604,959	43,604,959	-	87,209,918
37	506,161,343	33,912,810	33,912,810	-	67,825,620
38	389,491,641	26,095,940	26,095,940	-	52,191,880
39	296,557,017	19,869,320	19,869,320	-	39,738,640
40	223,575,890	14,979,585	14,979,585	-	29,959,170
41	167,031,119	11,191,085	11,191,085	-	22,382,170
42	123,712,682	8,288,750	8,288,750	-	16,577,500
43	90,888,897	6,089,556	6,089,556	-	12,179,112
44	66,280,269	4,440,778	4,440,778	-	8,881,556
45	47,729,204	3,197,857	3,197,857	-	6,395,714
46	33,835,309	2,266,966	2,266,966	-	4,533,932
47	23,641,258	1,583,965	1,583,965	-	3,167,930
48	16,125,749	1,080,425	1,080,425	-	2,160,850
49	10,634,717	712,526	712,526	-	1,425,052
50	6,534,869	437,836	437,836	-	875,672

SINGLE DISCOUNT RATE DEVELOPMENT
PROJECTION OF CONTRIBUTIONS ENDING DECEMBER 31, 2115
(CONCLUDED)

Year	Payroll for Current Employees	Contributions from Current Employees	Normal Cost Contributions	UAL Contributions	Total Contributions
51	\$ 3,592,075	\$ 240,669	\$ 240,669	\$ -	\$ 481,338
52	1,760,337	117,943	117,943	-	235,886
53	787,037	52,732	52,732	-	105,464
54	340,120	22,788	22,788	-	45,576
55	140,362	9,405	9,405	-	18,810
56	44,395	2,975	2,975	-	5,950
57	8,750	587	587	-	1,174
58	413	28	28	-	56
59	-	-	-	-	-
60	-	-	-	-	-
61	-	-	-	-	-
62	-	-	-	-	-
63	-	-	-	-	-
64	-	-	-	-	-
65	-	-	-	-	-
66	-	-	-	-	-
67	-	-	-	-	-
68	-	-	-	-	-
69	-	-	-	-	-
70	-	-	-	-	-
71	-	-	-	-	-
72	-	-	-	-	-
73	-	-	-	-	-
74	-	-	-	-	-
75	-	-	-	-	-
76	-	-	-	-	-
77	-	-	-	-	-
78	-	-	-	-	-
79	-	-	-	-	-
80	-	-	-	-	-
81	-	-	-	-	-
82	-	-	-	-	-
83	-	-	-	-	-
84	-	-	-	-	-
85	-	-	-	-	-
86	-	-	-	-	-
87	-	-	-	-	-
88	-	-	-	-	-
89	-	-	-	-	-
90	-	-	-	-	-
91	-	-	-	-	-
92	-	-	-	-	-
93	-	-	-	-	-
94	-	-	-	-	-
95	-	-	-	-	-
96	-	-	-	-	-
97	-	-	-	-	-
98	-	-	-	-	-
99	-	-	-	-	-
100	-	-	-	-	-

SINGLE DISCOUNT RATE DEVELOPMENT
PROJECTION OF PLAN FIDUCIARY NET POSITION ENDING
DECEMBER 31, 2115

Year	Projected Beginning Plan Net Position*	Projected Total Contributions	Projected Benefit		Projected Ending Plan Net Position
			Payments Including Dividends	Projected Investment Earnings at 7.20%	
	(a)	(b)	(c)	(d)	(e)=(a)+(b)-(c)+(d)
1	\$ 88,504,670,309	\$ 1,805,600,510	\$ 4,926,824,052	\$ 6,261,925,076	\$ 91,645,371,842
2	91,645,371,842	1,810,928,002	5,103,051,644	6,482,010,110	94,835,258,310
3	94,835,258,310	1,768,814,946	5,241,833,334	6,705,282,905	98,067,522,827
4	98,067,522,827	1,746,294,276	5,365,681,135	6,932,828,264	101,380,964,231
5	101,380,964,231	1,752,331,014	5,502,413,989	7,166,772,758	104,797,654,014
6	104,797,654,014	1,749,239,950	5,754,056,695	7,403,763,386	108,196,600,655
7	108,196,600,655	1,702,584,218	6,028,648,542	7,637,123,627	111,507,659,957
8	111,507,659,957	1,654,817,582	6,316,494,809	7,863,647,816	114,709,630,545
9	114,709,630,545	1,606,074,638	6,611,595,899	8,082,026,446	117,786,135,730
10	117,786,135,730	1,555,829,078	6,913,838,283	8,291,065,795	120,719,192,321
11	120,719,192,321	1,504,012,176	7,222,531,118	8,489,493,080	123,490,166,459
12	123,490,166,459	1,450,744,574	7,534,946,098	8,676,067,442	126,082,032,377
13	126,082,032,377	1,396,019,486	7,846,770,782	8,849,715,336	128,480,996,417
14	128,480,996,417	1,339,800,822	8,153,146,210	9,009,614,224	130,677,265,254
15	130,677,265,254	1,282,410,988	8,451,230,920	9,155,170,907	132,663,616,230
16	132,663,616,230	1,224,075,828	8,747,915,547	9,285,629,591	134,425,406,102
17	134,425,406,102	1,164,495,670	9,040,955,601	9,400,004,759	135,948,950,930
18	135,948,950,930	1,103,926,036	9,324,989,309	9,497,509,875	137,225,397,531
19	137,225,397,531	1,042,564,348	9,599,613,558	9,577,528,753	138,245,877,074
20	138,245,877,074	980,133,206	9,865,873,935	9,639,376,038	138,999,512,384
21	138,999,512,384	916,891,612	10,120,616,714	9,682,389,297	139,478,176,579
22	139,478,176,579	853,234,930	10,357,258,776	9,706,230,253	139,680,382,985
23	139,680,382,985	789,258,118	10,576,172,648	9,710,782,046	139,604,250,502
24	139,604,250,502	725,178,180	10,781,678,465	9,695,764,092	139,243,514,309
25	139,243,514,309	661,449,682	10,972,832,955	9,660,774,772	138,592,905,807
26	138,592,905,807	598,258,772	11,145,739,814	9,605,579,159	137,651,003,924
27	137,651,003,924	535,469,012	11,304,231,143	9,529,934,554	136,412,176,347
28	136,412,176,347	425,248,960	11,448,878,368	9,431,723,210	134,820,270,149
29	134,820,270,149	369,332,242	11,579,320,034	9,310,513,661	132,920,796,017
30	132,920,796,017	314,658,206	11,693,203,175	9,167,788,926	130,710,039,975
31	130,710,039,975	263,183,438	11,782,748,217	9,003,626,010	128,194,101,206
32	128,194,101,206	216,575,008	11,840,588,276	8,818,783,624	125,388,871,561
33	125,388,871,561	175,486,230	11,861,783,861	8,614,603,822	122,317,177,752
34	122,317,177,752	140,312,112	11,847,474,859	8,392,703,778	119,002,718,784
35	119,002,718,784	111,072,832	11,799,439,730	8,154,727,623	115,469,079,508
36	115,469,079,508	87,209,918	11,716,378,031	7,902,399,712	111,742,311,107
37	111,742,311,107	67,825,620	11,601,278,498	7,637,458,250	107,846,316,479
38	107,846,316,479	52,191,880	11,458,748,438	7,361,435,508	103,801,195,429
39	103,801,195,429	39,738,640	11,288,837,939	7,075,756,738	99,627,852,868
40	99,627,852,868	29,959,170	11,091,784,736	6,781,900,756	95,347,928,058
41	95,347,928,058	22,382,170	10,866,305,177	6,481,454,326	90,985,459,377
42	90,985,459,377	16,577,500	10,610,270,364	6,176,208,304	86,567,974,817
43	86,567,974,817	12,179,112	10,324,885,440	5,868,089,126	82,123,357,616
44	82,123,357,616	8,881,556	10,015,621,265	5,558,900,051	77,675,517,958
45	77,675,517,958	6,395,714	9,688,990,566	5,250,122,003	73,243,045,109
46	73,243,045,109	4,533,932	9,348,405,909	4,942,966,052	68,842,139,183
47	68,842,139,183	3,167,930	8,995,312,984	4,638,542,929	64,488,537,058
48	64,488,537,058	2,160,850	8,631,524,106	4,337,916,738	60,197,090,540
49	60,197,090,540	1,425,052	8,258,435,638	4,042,104,314	55,982,184,268
50	55,982,184,268	875,672	7,877,528,624	3,752,085,959	51,857,617,275

SINGLE DISCOUNT RATE DEVELOPMENT
PROJECTION OF PLAN FIDUCIARY NET POSITION ENDING
DECEMBER 31, 2115 (CONCLUDED)

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit		Projected Ending Plan Net Position
			Payments Including Dividends	Projected Investment Earnings at 7.20%	
	(a)	(b)	(c)	(d)	(e)=(a)+(b)-(c)+(d)
51	\$ 51,857,617,275	\$ 481,338	\$ 7,489,824,021	\$ 3,468,817,976	\$ 47,837,092,567
52	47,837,092,567	235,886	7,096,293,731	3,193,252,384	43,934,287,106
53	43,934,287,106	105,464	6,698,484,188	2,926,318,023	40,162,226,405
54	40,162,226,405	45,576	6,298,223,850	2,668,886,474	36,532,934,606
55	36,532,934,606	18,810	5,897,303,655	2,421,758,801	33,057,408,561
56	33,057,408,561	5,950	5,497,315,525	2,185,669,782	29,745,768,768
57	29,745,768,768	1,174	5,099,783,937	1,961,293,961	26,607,279,966
58	26,607,279,966	56	4,706,373,956	1,749,239,341	23,650,145,407
59	23,650,145,407	-	4,318,897,586	1,550,032,368	20,881,280,189
60	20,881,280,189	-	3,939,305,698	1,364,101,880	18,306,076,371
61	18,306,076,371	-	3,569,679,466	1,191,762,485	15,928,159,391
62	15,928,159,391	-	3,212,186,753	1,033,198,527	13,749,171,164
63	13,749,171,164	-	2,868,984,499	888,451,924	11,768,638,589
64	11,768,638,589	-	2,542,136,527	757,415,606	9,983,917,667
65	9,983,917,667	-	2,233,499,106	639,833,541	8,390,252,102
66	8,390,252,102	-	1,944,590,753	535,309,559	6,980,970,908
67	6,980,970,908	-	1,676,580,628	443,321,992	5,747,712,272
68	5,747,712,272	-	1,430,340,543	363,237,947	4,680,609,677
69	4,680,609,677	-	1,206,459,782	294,326,192	3,768,476,088
70	3,768,476,088	-	1,005,260,656	235,769,858	2,998,985,289
71	2,998,985,289	-	826,817,349	186,678,832	2,358,846,773
72	2,358,846,773	-	670,924,041	146,103,480	1,834,026,212
73	1,834,026,212	-	537,020,024	113,053,165	1,410,059,353
74	1,410,059,353	-	424,103,772	86,521,887	1,072,477,468
75	1,072,477,468	-	330,665,247	65,521,317	807,333,538
76	807,333,538	-	254,724,931	49,117,291	601,725,899
77	601,725,899	-	194,008,439	36,461,346	444,178,806
78	444,178,806	-	146,165,856	26,810,355	324,823,306
79	324,823,306	-	108,954,197	19,533,096	235,402,205
80	235,402,205	-	80,354,436	14,106,475	169,154,243
81	169,154,243	-	58,621,706	10,105,402	120,637,940
82	120,637,940	-	42,289,183	7,189,980	85,538,736
83	85,538,736	-	30,150,198	5,092,246	60,480,784
84	60,480,784	-	21,228,135	3,603,685	42,856,335
85	42,856,335	-	14,744,818	2,564,068	30,675,584
86	30,675,584	-	10,090,596	1,851,694	22,436,683
87	22,436,683	-	6,794,436	1,375,093	17,017,339
88	17,017,339	-	4,496,836	1,066,176	13,586,679
89	13,586,679	-	2,923,114	874,838	11,538,403
90	11,538,403	-	1,864,301	764,817	10,438,918
91	10,438,918	-	1,165,774	710,364	9,983,507
92	9,983,507	-	713,397	693,577	9,963,687
93	9,963,687	-	425,027	702,350	10,241,011
94	10,241,011	-	244,262	728,712	10,725,461
95	10,725,461	-	132,962	767,530	11,360,029
96	11,360,029	-	66,548	815,568	12,109,050
97	12,109,050	-	29,850	870,796	12,949,995
98	12,949,995	-	12,164	931,969	13,869,801
99	13,869,801	-	4,877	998,453	14,863,377
100	14,863,377	-	2,672	1,070,069	15,930,773

SINGLE DISCOUNT RATE DEVELOPMENT

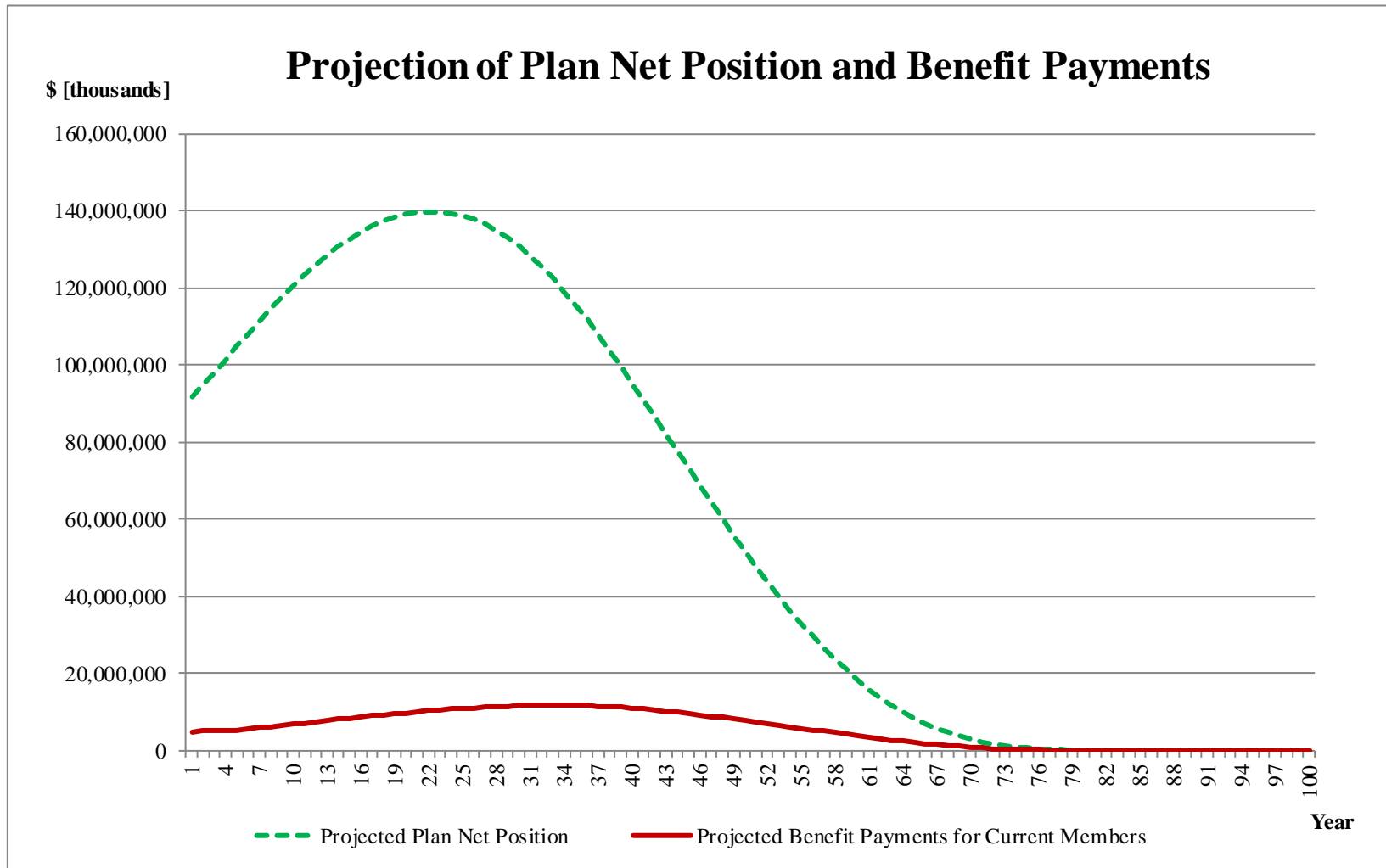
PRESENT VALUES OF PROJECTED BENEFITS

ENDING DECEMBER 31, 2115

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	\$ 88,504,670,309	\$ 4,926,824,052	\$ 4,926,824,052	\$ -	\$ 4,758,495,470	\$ -	\$ 4,758,495,470
2	91,645,371,842	5,103,051,644	5,103,051,644	-	4,597,669,885	-	4,597,669,885
3	94,835,258,310	5,241,833,334	5,241,833,334	-	4,405,510,543	-	4,405,510,543
4	98,067,522,827	5,365,681,135	5,365,681,135	-	4,206,715,209	-	4,206,715,209
5	101,380,964,231	5,502,413,989	5,502,413,989	-	4,024,173,794	-	4,024,173,794
6	104,797,654,014	5,754,056,695	5,754,056,695	-	3,925,570,825	-	3,925,570,825
7	108,196,600,655	6,028,648,542	6,028,648,542	-	3,836,664,833	-	3,836,664,833
8	111,507,659,957	6,316,494,809	6,316,494,809	-	3,749,861,724	-	3,749,861,724
9	114,709,630,545	6,611,595,899	6,611,595,899	-	3,661,429,077	-	3,661,429,077
10	117,786,135,730	6,913,838,283	6,913,838,283	-	3,571,648,865	-	3,571,648,865
11	120,719,192,321	7,222,531,118	7,222,531,118	-	3,480,520,334	-	3,480,520,334
12	123,490,166,459	7,534,946,098	7,534,946,098	-	3,387,194,366	-	3,387,194,366
13	126,082,032,377	7,846,770,782	7,846,770,782	-	3,290,456,466	-	3,290,456,466
14	128,480,996,417	8,153,146,210	8,153,146,210	-	3,189,301,876	-	3,189,301,876
15	130,677,265,254	8,451,230,920	8,451,230,920	-	3,083,866,582	-	3,083,866,582
16	132,663,616,230	8,747,915,547	8,747,915,547	-	2,977,730,633	-	2,977,730,633
17	134,425,406,102	9,040,955,601	9,040,955,601	-	2,870,783,081	-	2,870,783,081
18	135,948,950,930	9,324,989,309	9,324,989,309	-	2,762,101,278	-	2,762,101,278
19	137,225,397,531	9,599,613,558	9,599,613,558	-	2,652,468,416	-	2,652,468,416
20	138,245,877,074	9,865,873,935	9,865,873,935	-	2,542,946,640	-	2,542,946,640
21	138,999,512,384	10,120,616,714	10,120,616,714	-	2,433,402,096	-	2,433,402,096
22	139,478,176,579	10,357,258,776	10,357,258,776	-	2,323,041,359	-	2,323,041,359
23	139,680,382,985	10,576,172,648	10,576,172,648	-	2,212,818,844	-	2,212,818,844
24	139,604,250,502	10,781,678,465	10,781,678,465	-	2,104,306,129	-	2,104,306,129
25	139,243,514,309	10,972,832,955	10,972,832,955	-	1,997,774,781	-	1,997,774,781
26	138,592,905,807	11,145,739,814	11,145,739,814	-	1,892,961,905	-	1,892,961,905
27	137,651,003,924	11,304,231,143	11,304,231,143	-	1,790,932,498	-	1,790,932,498
28	136,412,176,347	11,448,878,368	11,448,878,368	-	1,692,023,319	-	1,692,023,319
29	134,820,270,149	11,579,320,034	11,579,320,034	-	1,596,363,078	-	1,596,363,078
30	132,920,796,017	11,693,203,175	11,693,203,175	-	1,503,790,468	-	1,503,790,468
31	130,710,039,975	11,782,748,217	11,782,748,217	-	1,413,531,998	-	1,413,531,998
32	128,194,101,206	11,840,588,276	11,840,588,276	-	1,325,066,094	-	1,325,066,094
33	125,388,871,561	11,861,783,861	11,861,783,861	-	1,238,281,778	-	1,238,281,778
34	122,317,177,752	11,847,474,859	11,847,474,859	-	1,153,720,173	-	1,153,720,173
35	119,002,718,784	11,799,439,730	11,799,439,730	-	1,071,867,965	-	1,071,867,965
36	115,469,079,508	11,716,378,031	11,716,378,031	-	992,838,239	-	992,838,239
37	111,742,311,107	11,601,278,498	11,601,278,498	-	917,056,697	-	917,056,697
38	107,846,316,479	11,458,748,438	11,458,748,438	-	844,953,354	-	844,953,354
39	103,801,195,429	11,288,837,939	11,288,837,939	-	776,515,273	-	776,515,273
40	99,627,852,868	11,091,784,736	11,091,784,736	-	711,717,117	-	711,717,117
41	95,347,928,058	10,866,305,177	10,866,305,177	-	650,418,808	-	650,418,808
42	90,985,459,377	10,610,270,364	10,610,270,364	-	592,437,933	-	592,437,933
43	86,567,974,817	10,324,885,440	10,324,885,440	-	537,782,745	-	537,782,745
44	82,123,357,616	10,015,621,265	10,015,621,265	-	486,636,557	-	486,636,557
45	77,675,517,958	9,688,990,566	9,688,990,566	-	439,147,672	-	439,147,672
46	73,243,045,109	9,348,405,909	9,348,405,909	-	395,252,684	-	395,252,684
47	68,842,139,183	8,995,312,984	8,995,312,984	-	354,779,698	-	354,779,698
48	64,488,537,058	8,631,524,106	8,631,524,106	-	317,566,866	-	317,566,866
49	60,197,090,540	8,258,435,638	8,258,435,638	-	283,433,186	-	283,433,186
50	55,982,184,268	7,877,528,624	7,877,528,624	-	252,201,761	-	252,201,761

SINGLE DISCOUNT RATE DEVELOPMENT PRESENT VALUES OF PROJECTED BENEFITS ENDING DECEMBER 31, 2115 (CONTINUED)

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)
51	\$ 51,857,617,275	\$ 7,489,824,021	\$ 7,489,824,021	\$ -	\$ 223,684,017	\$ -	\$ 223,684,017
52	47,837,092,567	7,096,293,731	7,096,293,731	-	197,697,027	-	197,697,027
53	43,934,287,106	6,698,484,188	6,698,484,188	-	174,080,572	-	174,080,572
54	40,162,226,405	6,298,223,850	6,298,223,850	-	152,685,247	-	152,685,247
55	36,532,934,606	5,897,303,655	5,897,303,655	-	133,363,716	-	133,363,716
56	33,057,408,561	5,497,315,525	5,497,315,525	-	115,968,510	-	115,968,510
57	29,745,768,768	5,099,783,937	5,099,783,937	-	100,356,707	-	100,356,707
58	26,607,279,966	4,706,373,956	4,706,373,956	-	86,394,536	-	86,394,536
59	23,650,145,407	4,318,897,586	4,318,897,586	-	73,956,775	-	73,956,775
60	20,881,280,189	3,939,305,698	3,939,305,698	-	62,925,975	-	62,925,975
61	18,306,076,371	3,569,679,466	3,569,679,466	-	53,191,802	-	53,191,802
62	15,928,159,391	3,212,186,753	3,212,186,753	-	44,650,002	-	44,650,002
63	13,749,171,164	2,868,984,499	2,868,984,499	-	37,200,957	-	37,200,957
64	11,768,638,589	2,542,136,527	2,542,136,527	-	30,748,930	-	30,748,930
65	9,983,917,667	2,233,499,106	2,233,499,106	-	25,201,253	-	25,201,253
66	8,390,252,102	1,944,590,753	1,944,590,753	-	20,467,735	-	20,467,735
67	6,980,970,908	1,676,580,628	1,676,580,628	-	16,461,569	-	16,461,569
68	5,747,712,272	1,430,340,543	1,430,340,543	-	13,100,608	-	13,100,608
69	4,680,609,677	1,206,459,782	1,206,459,782	-	10,307,897	-	10,307,897
70	3,768,476,088	1,005,260,656	1,005,260,656	-	8,012,003	-	8,012,003
71	2,998,985,289	826,817,349	826,817,349	-	6,147,198	-	6,147,198
72	2,358,846,773	670,924,041	670,924,041	-	4,653,141	-	4,653,141
73	1,834,026,212	537,020,024	537,020,024	-	3,474,310	-	3,474,310
74	1,410,059,353	424,103,772	424,103,772	-	2,559,502	-	2,559,502
75	1,072,477,468	330,665,247	330,665,247	-	1,861,560	-	1,861,560
76	807,333,538	254,724,931	254,724,931	-	1,337,720	-	1,337,720
77	601,725,899	194,008,439	194,008,439	-	950,429	-	950,429
78	444,178,806	146,165,856	146,165,856	-	667,959	-	667,959
79	324,823,306	108,954,197	108,954,197	-	464,465	-	464,465
80	235,402,205	80,354,436	80,354,436	-	319,539	-	319,539
81	169,154,243	58,621,706	58,621,706	-	217,459	-	217,459
82	120,637,940	42,289,183	42,289,183	-	146,337	-	146,337
83	85,538,736	30,150,198	30,150,198	-	97,324	-	97,324
84	60,480,784	21,228,135	21,228,135	-	63,922	-	63,922
85	42,856,335	14,744,818	14,744,818	-	41,417	-	41,417
86	30,675,584	10,090,596	10,090,596	-	26,440	-	26,440
87	22,436,683	6,794,436	6,794,436	-	16,608	-	16,608
88	17,017,339	4,496,836	4,496,836	-	10,253	-	10,253
89	13,586,679	2,923,114	2,923,114	-	6,217	-	6,217
90	11,538,403	1,864,301	1,864,301	-	3,699	-	3,699
91	10,438,918	1,165,774	1,165,774	-	2,158	-	2,158
92	9,983,507	713,397	713,397	-	1,232	-	1,232
93	9,963,687	425,027	425,027	-	685	-	685
94	10,241,011	244,262	244,262	-	367	-	367
95	10,725,461	132,962	132,962	-	186	-	186
96	11,360,029	66,548	66,548	-	87	-	87
97	12,109,050	29,850	29,850	-	36	-	36
98	12,949,995	12,164	12,164	-	14	-	14
99	13,869,801	4,877	4,877	-	5	-	5
100	14,863,377	2,672	2,672	-	3	-	3
Totals					\$ 106,881,257,084	\$ -	\$ 106,881,257,084



SECTION F

SUMMARY OF ASSUMPTIONS

**SUMMARY OF ASSUMPTIONS
USED TO DEVELOP TOTAL PENSION LIABILITY
ASSUMPTIONS ADOPTED BY ETF BOARD AFTER
CONSULTING WITH ACTUARY**

Economic Assumptions

In determining plan liabilities for accounting purposes, a discount rate of 7.2% is used for both actives and retirees. However, a long term assumed dividend of 2.1% is also assumed. For retirees, this produces the same result as assuming a 5% discount rate. Dividends are not guaranteed, and this valuation develops dividends that reflect known entries (phased-in gains and losses) in the Market Recognition Account (MRA), based on the 7.2% return assumption. The dividend rates used in developing the Total Pension Liability for accounting purposes is as follows:

2016: 0.5% Core, -5% Variable
 2017: 1.5% Core, 2.1% Variable
 2018: 0.5% Core, 2.1% Variable
 2019: 0.0% Core, 2.1% Variable
 2020: 0.0% Core, 2.1% Variable
 2021 and later: 2.1% Core, 2.1% Variable

The **Wage Inflation Rate** assumed in this valuation was 3.20% per year. The wage inflation rate is defined to be the portion of total pay increases for an individual that are due to macro economic forces including productivity, price inflation, and labor market conditions. The wage inflation rate does not include pay changes rated to individual merit and seniority effects.

No specific **Price Inflation** assumption is required to perform this valuation. The price inflation assumption used to evaluate the investment return assumption is 2.7%.

The assumed **Real Rate of Return** over wage inflation is defined to be the portion of total investment return that is more than the assumed total wage growth rate. Considering other economic assumptions, the 7.2% pre-retirement investment return rate translates to an assumed real rate of return over wage inflation of 4.0%. The assumed real rate of return over price inflation is 4.5% considering an inflation assumption of 2.7%.

Pay increase assumptions for individual active members are shown for sample services below. Part of the assumption for each age is for merit and/or seniority increase, and the other 3.2% recognizes wage inflation, including price inflation, productivity increases, and other macro economic forces.

% Merit and Longevity Increase Next Year						
Service	Gen.	University Teachers	Public School Teachers	Protective		Exec. & Elec.
				With S.S.	W/O S.S.	
1	3.5 %	3.0 %	5.6 %	4.8 %	5.5 %	2.5 %
2	3.5 %	3.0 %	5.6 %	4.8 %	5.5 %	2.5 %
3	3.1 %	2.9 %	5.2 %	4.1 %	4.7 %	2.0 %
4	2.8 %	2.8 %	4.7 %	3.5 %	3.8 %	1.6 %
5	2.5 %	2.7 %	4.3 %	2.8 %	3.0 %	1.1 %
10	1.5 %	2.2 %	2.6 %	1.1 %	0.9 %	0.2 %
15	1.1 %	1.7 %	1.4 %	0.8 %	0.5 %	0.2 %
20	0.9 %	1.2 %	0.6 %	0.7 %	0.4 %	0.2 %
25	0.6 %	0.9 %	0.3 %	0.6 %	0.3 %	0.2 %
30	0.4 %	0.7 %	0.2 %	0.5 %	0.2 %	0.2 %

DECREMENT PROBABILITIES

The mortality table used to measure mortality for retired participants was the Wisconsin 2012 Mortality Table. The rates in this table were based on actual WRS experience adjusted for future mortality improvements using the MP-2015 fully generational improvement scale (multiplied by 50%). This mortality assumption was adopted by the Board in connection with the 2012-2014 Experience Study. Sample retirement values from this table are shown below. This assumption is used to measure the probabilities of participants dying before retirement and the probabilities of each benefit payment being made after retirement.

Single Life Retirement Values Wisconsin 2012 Mortality Table with 5% Interest

Sample Attained Ages in 2015	Present Value of \$1 Monthly for Life		Future Life Expectancy (years)	
	Males	Females	Males	Females
40	\$212.10	\$217.24	44.6	47.8
45	203.48	209.77	39.6	42.8
50	192.71	200.54	34.6	37.8
55	179.86	189.35	29.8	32.9
60	165.48	176.01	25.2	28.1
65	148.22	159.83	20.8	23.5
70	128.60	140.64	16.6	19.0
75	106.86	118.97	12.7	14.8
80	84.12	95.73	9.3	11.0
85	62.91	72.64	6.5	7.7

The values shown above are for non-disabled participants in 2015. For disabled participants, the following table was used:

Sample Attained Ages in 2015	Present Value of \$1 Monthly for Life		Future Life Expectancy (years)	
	Males	Females	Males	Females
40	\$198.57	\$207.38	37.1	41.4
45	186.57	197.56	32.2	36.4
50	172.73	185.67	27.4	31.5
55	156.72	171.51	22.9	26.8
60	138.06	154.59	18.6	22.2
65	117.55	134.77	14.6	17.8
70	95.28	112.57	10.9	13.7
75	72.99	89.09	7.8	10.0
80	53.57	66.61	5.4	7.0
85	37.90	48.58	3.6	4.8

ACTIVE PARTICIPANT MORTALITY RATES

Sample Attained Ages in 2015	Mortality Rates	
	Males	Females
20	0.000138	0.000079
25	0.000165	0.000088
30	0.000206	0.000118
35	0.000359	0.000210
40	0.000485	0.000298
45	0.000642	0.000466
50	0.000866	0.000690
55	0.002011	0.001221
60	0.002854	0.001755
65	0.004354	0.002683
70	0.007198	0.004555
75	0.012242	0.008257
80	0.022508	0.015445

This assumption is used to measure the probability of participants dying while in service.

RATES OF RETIREMENT FOR THOSE ELIGIBLE TO RETIRE

Normal Retirement

Age	General		Public School		University		Protective*		Exec. & Elected
	Male	Female	Male	Female	Male	Female	With S.S.	W/O S.S.	
50							6%	4%	
51							7%	4%	
52							9%	5%	
53							23%	17%	
54							19%	25%	
55							19%	21%	
56							19%	27%	
57	18%	15%	36%	28%	12%	14%	19%	30%	12%
58	18%	15%	31%	28%	12%	12%	18%	30%	12%
59	18%	15%	24%	28%	12%	10%	16%	30%	12%
60	18%	15%	30%	28%	12%	12%	20%	26%	12%
61	18%	15%	28%	28%	12%	16%	20%	15%	12%
62	25%	25%	37%	36%	12%	14%	22%	20%	12%
63	30%	25%	32%	30%	12%	19%	26%	40%	12%
64	25%	25%	27%	27%	12%	13%	17%	40%	12%
65	25%	28%	29%	35%	15%	18%	30%	40%	12%
66	32%	32%	33%	35%	17%	22%	25%	40%	20%
67	26%	26%	27%	30%	16%	17%	30%	40%	15%
68	19%	22%	24%	30%	16%	16%	30%	40%	15%
69	19%	20%	24%	30%	16%	14%	30%	40%	10%
70	19%	20%	20%	35%	16%	18%	100%	100%	10%
71	19%	20%	20%	30%	18%	18%	100%	100%	10%
72	19%	20%	20%	22%	14%	18%	100%	100%	15%
73	19%	20%	20%	22%	14%	18%	100%	100%	15%
74	19%	20%	20%	22%	10%	18%	100%	100%	15%
75	100%	100%	100%	100%	100%	100%	100%	100%	100%

* Includes reduced retirements for protective with 20+ years of service.

Reduced Retirement

Age	% Retiring Next Year							Exec. & Elected
	General		Public School		University			
	Male	Female	Male	Female	Male	Female		
55	9.0%	7.0%	13.0%	12.0%	4.0%	5.5%	3.0%	
56	9.0%	7.0%	13.0%	12.0%	3.0%	5.5%	3.0%	
57	4.8%	5.0%	12.0%	12.0%	2.5%	4.0%	3.0%	
58	5.8%	6.0%	13.0%	12.0%	2.5%	5.5%	3.0%	
59	6.5%	6.0%	14.0%	13.0%	3.0%	6.5%	3.0%	
60	8.5%	8.5%	14.0%	17.0%	4.3%	8.0%	5.0%	
61	8.5%	8.5%	15.0%	17.0%	5.0%	6.0%	5.0%	
62	16.0%	16.0%	21.0%	23.0%	6.0%	12.0%		
63	17.0%	16.0%	21.0%	23.0%	7.0%	12.0%		
64	17.0%	16.0%	21.0%	23.0%	7.0%	12.0%		

The assumed rates of separation from employment prior to service retirement due to disability and other causes are shown below for sample ages. For other terminations it was assumed that a percentage depending on age of participants terminating after age 35 with 5 or more years service will leave their contributions on deposit and be paid a benefit at normal retirement age and that the remaining participants would take a separation benefit. The percentage taking a separation benefit is 25% at age 35, grading downward to 0% at retirement eligibility. All participants terminating prior to normal retirement age with less than 5 years of service were assumed to take a separation benefit.

**Assumed Termination Rates
by Attained Age and Years of Service**

Age	Service	% of Active Participants Terminating								
		Protective		Public Schools		University		Exec. & Elected	General	
		With Soc. Sec.	Without Soc. Sec.	Males	Females	Males	Females		Males	Females
	0	17.0%	4.0%	18.3%	16.0%	16.0%	16.0%	18.0%	16.8%	20.0%
	1	8.0%	3.5%	11.0%	10.8%	14.0%	15.0%	14.0%	12.7%	14.1%
	2	5.0%	1.5%	7.8%	7.7%	12.0%	13.0%	12.0%	9.0%	11.0%
	3	4.3%	1.3%	5.9%	5.8%	10.0%	10.0%	10.0%	7.3%	8.9%
	4	3.8%	1.2%	4.9%	5.0%	8.5%	9.9%	10.0%	7.0%	8.5%
	5	3.1%	1.1%	3.6%	4.3%	8.0%	8.4%	8.0%	4.8%	6.7%
	6	3.0%	1.0%	3.2%	3.8%	7.5%	6.4%	7.0%	4.3%	5.6%
	7	2.9%	0.9%	2.6%	3.4%	5.7%	5.7%	6.0%	4.2%	5.0%
	8	2.5%	0.8%	2.6%	2.8%	4.6%	4.7%	6.0%	3.4%	4.7%
	9	2.2%	0.7%	2.4%	2.5%	4.0%	4.2%	6.0%	3.1%	4.5%
25	10 & Over	2.0%	0.7%	1.3%	2.2%	4.0%	5.0%	6.0%	2.5%	4.5%
30		1.8%	0.7%	1.3%	1.9%	3.9%	4.6%	5.1%	2.5%	4.3%
35		1.6%	0.7%	1.3%	1.6%	3.6%	4.2%	4.3%	2.4%	3.5%
40		1.3%	0.6%	1.3%	1.3%	3.1%	3.4%	4.1%	2.1%	2.7%
45		1.1%	0.6%	1.3%	1.1%	2.3%	2.6%	3.2%	1.8%	2.2%
50		1.0%	0.5%	1.3%	1.0%	1.9%	2.1%	2.5%	1.5%	1.9%
55		1.0%	0.5%	1.3%	1.0%	1.8%	2.0%	2.4%	1.5%	1.8%
60		1.0%	0.5%	1.3%	1.0%	1.8%	2.0%	2.4%	1.5%	1.8%

Disability Rates

Age	% of Active Participants Becoming Disabled									
	Protective		Public Schools		University		Exec. & Elected		General	
	With SS	W/O SS	Males	Females	Males	Females	Males	Females	Males	Females
20	0.01%	0.04%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%
25	0.01%	0.04%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%
30	0.01%	0.04%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.01%	0.02%
35	0.02%	0.04%	0.01%	0.01%	0.00%	0.02%	0.01%	0.01%	0.01%	0.03%
40	0.02%	0.06%	0.01%	0.02%	0.01%	0.03%	0.01%	0.01%	0.03%	0.04%
45	0.03%	0.11%	0.03%	0.05%	0.01%	0.03%	0.01%	0.01%	0.06%	0.06%
50	0.06%	0.64%	0.08%	0.10%	0.02%	0.06%	0.02%	0.02%	0.13%	0.09%
55	0.87%	0.48%	0.16%	0.14%	0.05%	0.09%	0.09%	0.09%	0.24%	0.16%
60	1.46%	0.14%	0.26%	0.21%	0.07%	0.13%	0.11%	0.11%	0.43%	0.23%

SECTION G

PLAN PROVISIONS

SUMMARY OF BENEFIT PROVISIONS

Normal Retirement Eligibility

The age a participant becomes eligible for an unreduced age and service annuity is:

General		Protective		Executive & Elected	
Age	Service	Age	Service	Age	Service
65	Any*	54	Any*	62	Any*
57	30	53	25	57	30

* Participants first employed after 1989 and terminated before April 24, 1998 must have creditable service in 5 calendar years.

Normal Retirement Annuity

The age and service annuity payable at Normal Retirement Age is based on Final Average Earnings (FAE) and Creditable Service (CS) as follows:

Multiplier for Service Rendered			Group
Before 2000	Between 2000 and 2011	After 2011	
2.165%	2.0%	1.6%	Executive group and elected officials
2.165%	2.0%	2.0%	Protective occupation participants covered by Social Security
2.665%	2.5%	2.5%	Protective occupation participants not covered by Social Security
1.765%	1.6%	1.6%	All other participants

FAE is generally the average of the 3 highest years of earnings (July 1 - June 30 for teachers, educational support staff, and judges; calendar year for others) preceding retirement. These years do not have to be consecutive. For legislators and state constitutional officers who are ineligible to receive pay increases during their term, FAE is the statutory rate of earnings at termination.

Maximum formula annuity is 85% of FAE for protective occupation participants not covered by Social Security, 65% of FAE for protectives covered by Social Security, and 70% for all other participants. If greater than the formula amount, an annuity equal to the actuarial equivalent of two times the required accumulated contributions is paid in lieu of the formula amount.

Early Retirement. Any participant who has attained age 55 and any Protective occupation participant who has attained age 50 may apply for an early retirement annuity. The benefit is reduced 0.4% for each month that the annuity effective date precedes the Normal Retirement Age. For Non-Protective participants terminating after 6/30/90, the 0.4% is reduced for months after the attainment of age 57 and before the annuity effective date by .001111% for each month of creditable service.

Voluntary Termination Before Immediate Benefit Eligibility. Participant may either (i) receive a refund of accumulated contributions, or (ii) leave contributions on deposit and apply for a retirement annuity on or after the minimum retirement age based upon age and accrued service at time of termination.

Post-Retirement Adjustments. Annuities are increased annually if the investment income credited to retired life funds is in excess of the assumed benefit rate (presently 5%), other plan experiences are within projected ranges, and the resulting adjustment would be at least 0.5%.

Disability Annuity. Eligibility: generally total and permanent incapacity to engage in gainful employment. Participant must have completed at least 6 months of creditable service (in at least 5 out of the last 7 calendar years) preceding application for disability. Service requirement is waived if disability is from service-related causes.

For protective occupations, eligibility also can be met if a member has 15 years of service, is between the ages of 50 and 55 and unable to safely and efficiently perform one's duties.

Disability Amounts. Amounts payable in case of disability depend upon the plan from which payment is made and are described below.

	Pre-10/16/92 WRS Plan	Post-10/15/92 LTDI Plan
Participants covered	Participants hired before 10/16/92 who do not elect LTDI coverage.	Participants entering after 10/15/92 and participants on 10/15/92 who elect LTDI coverage.
Benefit to age 65*	WRS formula benefit based on service projected to normal retirement age.	40% of FAE for participants covered by Social Security; 50% of FAE for non-covered participants who cannot qualify for Social Security disability benefits.
Benefit at age 65*	Continuation of pre-65 amount.	WRS benefit accrued to date of disability plus 7% of FAE money purchase benefit during disability period, both of which are adjusted in accordance with dividend rate.

* Conversion age is later for participants becoming disabled after age 61.

Death-in-Service.

- (a) Prior to age 50 for Protective participants, age 55 for others, the benefit is the equivalent of twice the accumulated employee contributions required and all additional contributions and employer amounts contributed prior to 1974 for teachers, or 1966 for others.
- (b) After age 50 for Protective participants, age 55 for others, the benefit is the amount that would have been paid if participant had retired and elected 100% survivor option. Benefit is payable to any natural living person.

Interest Credits. For years after 1999, and for people with some active service after 1999, participant core accounts (including the variable at core accounts) are credited with interest at the full (core) effective rate. For others, accounts are credited with interest as follows:

Date of Participation	Rate Credited For Purpose of	
	Money Purchase	Refunds
	Minimum	
Prior to 1982	Actual	Actual
January 1, 1982 & Later	5%	3%

Participant variable accounts are credited with interest based on the earnings in the variable portfolio.

Contribution Rates. The financial objective of WRS is to establish and receive contributions that will remain level from year to year and decade to decade.

Statutory required participant contributions prior to July 1, 2011 were as follows:

General	5.0%
Executives & Elected	
Officials	5.5
Protectives	
- With Social Security	6.0
- Without Social Security	8.0

Statutory required participant contributions after July 1, 2011 are set equal to one-half of the actuarially determined rate for General participants and Executive and Elected Officials. Participant contributions for Protective participants are set equal to the participant contribution for General members.

Normal Form of Benefit. The normal form of benefit is a straight life annuity with no death benefits. Optional forms of benefit which are actuarially reduced are listed below:

- A life annuity with 60 or 180 monthly payments guaranteed.
- A joint survivorship annuity with 75% continued to beneficiary.
- A joint survivorship annuity with 100% continued to beneficiary.
- A joint survivorship annuity reduced 25% upon either your death or your beneficiary's death.
- A joint survivorship annuity with 100% continued to beneficiary combined with 180 monthly payments guaranteed.

For formula benefit calculations, optional forms are calculated at the lower of the current age or age 62 (Normal Retirement Age for Protective occupations).

Vesting. Participants hired prior to July 1, 2011 vest immediately. After July 1, 2011, participants vest after 5 years of service.

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 plans’ 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.