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# **Oklahoma Municipal Retirement Fund**

## **ACTUARIAL VALUATION OF FUNDING REQUIREMENTS**

**Effective for the Year Starting  
July 1, 2018**

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March 29, 2018

Prepared by

**DEAN ACTUARIES, LLC**

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## Certification

This report presents the actuarial position of the member plans of the Oklahoma Municipal Retirement Fund as of July 1, 2017, in accordance with generally accepted actuarial principles applied on a basis consistent with the preceding valuation. The purpose of the valuation is to determine the required contribution for the retirement program effective July 1, 2018.

The valuation results in this report are based on participant data provided by the member employers and financial data provided by the Oklahoma Municipal Retirement Fund.

In our opinion, each assumption used in combination to calculate liabilities and costs represents our best estimate of anticipated experience under the plan and is reasonably related to the plan experience and to reasonable expectations.

DEAN ACTUARIES, LLC

March 21, 2018

Date



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Charles E. Dean, FSA, FCA  
Enrolled Actuary 17-1249



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Sean M. Sullivan, FSA  
Enrolled Actuary 17-3649

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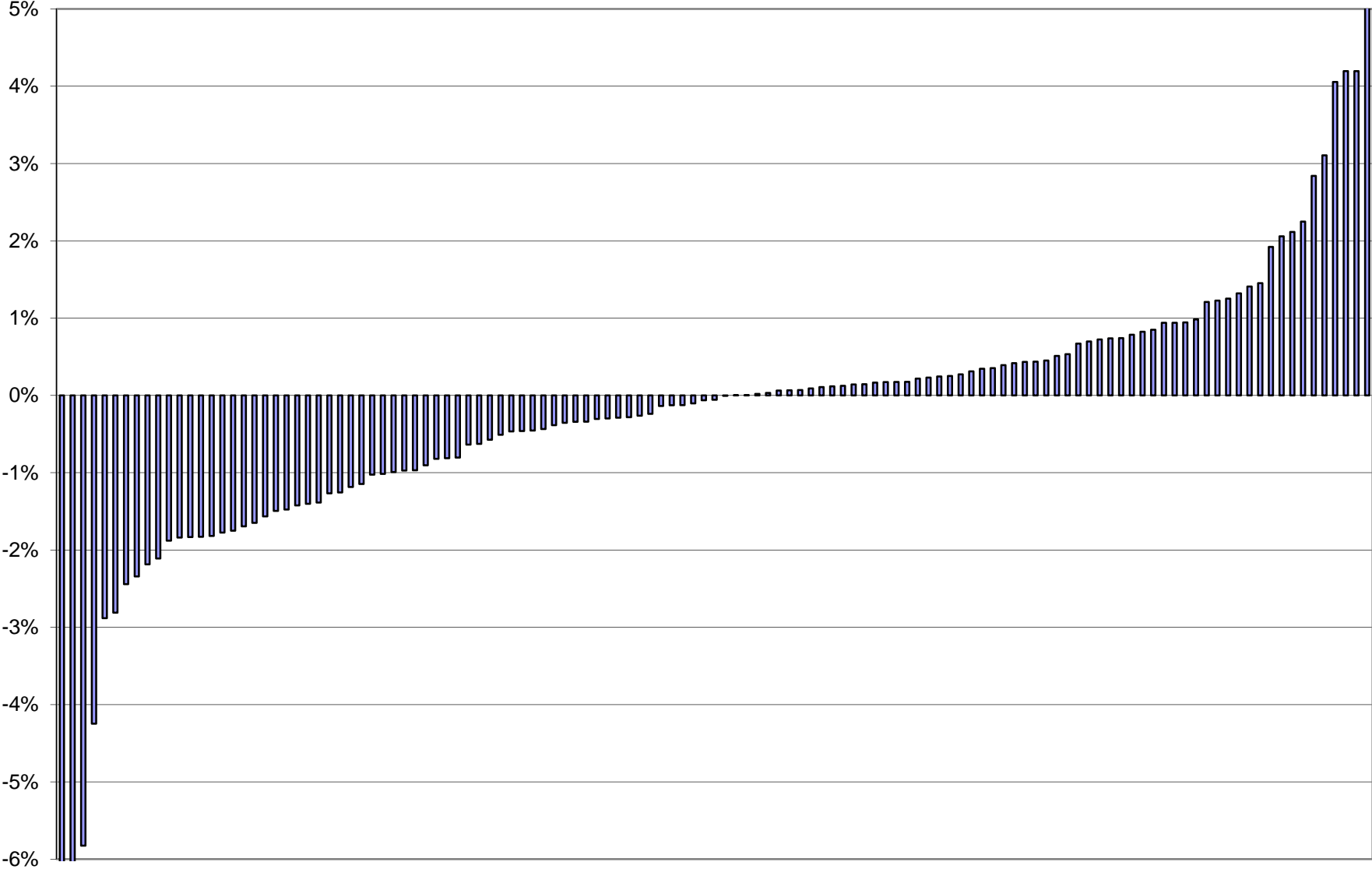
## A Comparison of Required Contribution Rates

The exhibit in this section shows the required contribution rates determined by the July 1, 2017 actuarial valuation. These rates will be in effect from July 1, 2018 through June 30, 2019. The following information is presented for each city:

- Whether the plan has an unfunded actuarial liability or a surplus (*UAL or Surplus*). In general, the unfunded actuarial accrued liability is amortized as a level dollar amount over a fixed 30-year period; this amount is then added to the normal cost to determine the total annual cost. For plans that have a surplus, the total annual cost is the normal cost reduced by interest on the surplus.
- The *total rate*. This is the aggregate contribution rate determined under the July 1, 2017 valuation for each plan. The total rate is generally equal to the total annual cost as a percentage of covered payroll, but not less than the employee contribution rate. If employees make hybrid contributions, the hybrid contribution rate is added to the total rate. The rate determined under the July 1, 2016 valuation is also shown for comparison.
- The *employee rate*. This rate, determined by plan provisions, is the percent of pay to be contributed to the plan by employees for the 2018-2019 plan year, and is equal to the employee contribution rate plus the hybrid contribution rate. The employer rate is generally determined by subtracting the employee contribution rate from the total rate. If the employee contribution rate actually exceeds the total annual cost because of favorable plan experience in the past (that is, investment performance better than assumed, or demographic changes more favorable than assumed), then the required employer contribution rate is 0.00%.
- A brief summary of the *plan provisions* elected in the adoption agreement. See Section E for a more detailed description of the plan provisions of the OkMRF Master Plan.
- Those cities which have upgraded the plan level or changed another fundamental plan provision since the prior valuation are indicated in the final column.

Oklahoma Municipal Retirement Fund

Change in Contribution Rate as Percent of Covered Payroll



**Oklahoma Municipal Retirement Fund  
COMPARISON OF REQUIRED CONTRIBUTION RATES**

City	UAL or Surplus	Total rate		Employee Rate	Plan Provisions	Changes
		7/1/2016	7/1/2017			
Adair	UAL	11.73%	9.89%	4.50%	Plan BB, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Altus	UAL	15.34%	18.22%	4.00%	Plan AA, special retirement age, 10 year vesting, 5 years certain, no COLA	
Alva	UAL	4.85%	9.05%	3.00%	Plan A, normal retirement age 65, 10 year vesting, 5 years certain, COLA	upgrade, ee cont
Antlers	Surplus	5.54%	5.63%	3.00%	Plan A, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Ardmore	Surplus	14.58%	14.75%	6.00%	Plan AAA, normal retirement age 65, 5 year vesting, 5 years certain, split COLA; 7/11 New Hires: Plan AAA, normal retirement age 65, 7 year vesting, 5 years certain, no COLA	
Bartlesville	UAL	26.17%	25.20%	6.00%	Plan BAR, normal retirement age 65, 7 year vesting, 0 years certain, no COLA	
Bethany	UAL	16.83%	15.81%	4.60%	Plan AAA, normal retirement age 65, 10 year vesting, 10 years certain, split COLA, Hybrid	
Bethany/Warr Acres	UAL	23.85%	23.39%	6.00%	Plan AAA, Rule of 80, 7 year vesting, 10 years certain, no COLA	
Billings	UAL	10.15%	9.16%	3.75%	Plan CC, normal retirement age 65, 7 year vesting, 5 years certain, no COLA	
Binger	UAL	6.05%	5.47%	2.25%	Plan B, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Blackwell	UAL	16.32%	16.01%	4.50%	Plan AAA, normal retirement age 65, 5 year vesting, 5 years certain, no COLA	
Blair	UAL	10.68%	11.20%	3.41%	Plan AA, normal retirement age 65, 5 year vesting, 5 years certain, no COLA	
Boise City	UAL	11.52%	9.69%	0.00%	Plan BB, normal retirement age 65, 5 year vesting, 5 years certain, no COLA	
Bokchito	Surplus	6.06%	4.18%	3.00%	Plan A, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Braman	UAL	33.20%	25.18%	6.00%	Plan AAA, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Bristow	Surplus	12.64%	12.35%	5.25%	Plan AA, normal retirement age 65, 5 year vesting, 5 years certain, COLA	
Broken Bow	UAL	11.95%	15.06%	6.00%	Plan AAA, Rule of 80, 10 year vesting, 5 years certain, no COLA	upgrade, ee cont
Buffalo	Surplus	6.97%	7.24%	3.50%	Plan AA, normal retirement age 62/30, 10 year vesting, 5 years certain, no COLA	
Burns Flat	UAL	10.05%	10.77%	3.75%	Plan CC, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	

**Oklahoma Municipal Retirement Fund  
COMPARISON OF REQUIRED CONTRIBUTION RATES**

City	UAL or Surplus	Total rate		Employee Rate	Plan Provisions	Changes
		7/1/2016	7/1/2017			
Calera	UAL	8.51%	8.68%	3.00%	Plan A, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Central Oklahoma MCD	Surplus	18.40%	15.52%	6.00%	Plan AAA, Rule of 80, 10 year vesting, 5 years certain, COLA	
Chandler	UAL	10.80%	11.74%	4.50%	Plan BB, normal retirement age 65, 5 year vesting, 5 years certain, no COLA	
Checotah	UAL	6.35%	6.07%	3.00%	Plan A, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Cherokee & CDA	UAL	7.94%	8.06%	2.25%	Plan B, normal retirement age 65, 7 year vesting, 5 years certain, no COLA	
Chickasha	Surplus	14.62%	13.15%	4.00%	Plan AAA, normal retirement age 65, 10 year vesting, 10 years certain, COLA	
Claremore	UAL	7.77%	6.58%	3.60%	Plan AAA, normal retirement age 65, 7 year vesting, 5 years certain, no COLA; 7/10 New Hires: Plan B, normal retirement age 65, 7 year vesting, 5 years certain, no COLA	
Cleo Springs	UAL	12.71%	11.01%	3.73%	Plan AAA, normal retirement age 65, 5 year vesting, 5 years certain, no COLA	
Cleveland	UAL	23.20%	25.31%	6.00%	Plan AAA, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Clinton	Surplus	14.55%	12.78%	5.25%	Plan AAA, normal retirement age 62/30, 7 year vesting, 10 years certain, COLA	
Collinsville	UAL	14.57%	14.57%	4.00%	Plan AA, normal retirement age 65, 7 year vesting, 5 years certain, no COLA	
Copan	UAL	8.11%	9.10%	1.50%	Plan C, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Cordell	Surplus	11.97%	9.63%	0.00%	Plan AA, normal retirement age 65, 7 year vesting, 5 years certain, COLA	
Cushing	UAL	8.59%	8.70%	0.00%	Plan AA, special retirement age, 10 year vesting, 5 years certain, no COLA	
Davis	UAL	12.35%	12.23%	4.50%	Plan BB, normal retirement age 65, 7 year vesting, 5 years certain, no COLA	
Del City	UAL	28.91%	28.47%	6.00%	Plan AAA, special retirement age, 7 year vesting, 10 years certain, split COLA, Hybrid; 2/10 new hires: Plan AAA, special retirement age, 7 year vesting, 10 years certain, no COLA	
Dewey	UAL	14.15%	14.57%	4.00%	Plan AAA, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Drumright	UAL	17.06%	19.90%	6.00%	Plan BB, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Durant	UAL	10.54%	10.93%	3.50%	Plan AA, normal retirement age 65, 7 year vesting, 5 years certain, split COLA	

**Oklahoma Municipal Retirement Fund  
COMPARISON OF REQUIRED CONTRIBUTION RATES**

City	UAL or Surplus	Total rate		Employee Rate	Plan Provisions	Changes
		7/1/2016	7/1/2017			
El Reno	UAL	12.41%	12.53%	4.50%	Plan BB, normal retirement age 65, 7 year vesting, 5 years certain, no COLA	vesting
Eufaula	Surplus	6.51%	6.57%	3.75%	Plan CC, Rule of 80, 7 year vesting, 5 years certain, no COLA	
Fort Cobb	UAL	14.33%	13.52%	3.75%	Plan CC, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Foss Reservoir Public Works	UAL	20.28%	22.20%	3.75%	Plan BB, normal retirement age 62/30, 7 year vesting, 5 years certain, no COLA	
Frederick	UAL	11.56%	9.81%	4.33%	Plan BB, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Garber	Surplus	6.69%	6.85%	3.75%	Plan CC, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Geary	UAL	10.07%	10.51%	3.15%	Plan AA, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Goodwell	UAL	6.41%	6.56%	3.00%	Plan A, normal retirement age 65, 5 year vesting, 5 years certain, no COLA	
Gore and Gore PWA	Surplus	7.17%	6.27%	3.75%	Plan CC, normal retirement age 65, 7 year vesting, 5 years certain, no COLA	
Granite	UAL	19.11%	16.30%	4.00%	Plan AA, normal retirement age 65, 10 year vesting, 5 years certain, COLA	
Guthrie	UAL	10.79%	10.73%	3.69%	Plan AA, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Harrah	UAL	18.13%	17.77%	5.25%	Plan AA, normal retirement age 65, 5 year vesting, 5 years certain, no COLA	
Healdton	UAL	16.08%	16.29%	6.00%	Plan AAA, normal retirement age 65, 5 year vesting, 5 years certain, no COLA	
Henryetta	UAL	13.30%	14.15%	4.50%	Plan BB, Rule of 80, 10 year vesting, 5 years certain, no COLA	
Hooker	UAL	16.91%	17.16%	3.75%	Plan BB, normal retirement age 65, 5 year vesting, 10 years certain, no COLA	
Hulbert	UAL	10.26%	15.82%	3.75%	Plan CC, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	upgrade, ee cont
Hydro	UAL	9.60%	10.05%	3.00%	Plan A, normal retirement age 62/30, 7 year vesting, 5 years certain, no COLA	
Kansas	UAL	3.98%	4.29%	1.50%	Plan C, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Kiefer	UAL	10.49%	9.11%	3.00%	Plan A, normal retirement age 65, 5 year vesting, 5 years certain, no COLA	



**Oklahoma Municipal Retirement Fund  
COMPARISON OF REQUIRED CONTRIBUTION RATES**

City	UAL or Surplus	Total rate		Employee Rate	Plan Provisions	Changes
		7/1/2016	7/1/2017			
Kingston	UAL	11.44%	11.10%	3.75%	Plan CC, normal retirement age 62/30, 10 year vesting, 5 years certain, no COLA	
Krebs & Krebs Utility Auth.	UAL	8.42%	8.36%	3.00%	Plan A, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Laverne	Surplus	6.48%	6.09%	3.75%	Plan CC, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Lindsay	Surplus	9.56%	8.59%	3.75%	Plan BB, normal retirement age 65, 10 year vesting, 5 years certain, COLA	
Madill	UAL	9.68%	9.91%	4.50%	Plan BB, normal retirement age 65, 7 year vesting, 5 years certain, no COLA	
Mannford	UAL	25.20%	25.94%	6.00%	Plan AAA, Rule of 80, 5 year vesting, 5 years certain, no COLA	
Marietta	UAL	9.70%	10.05%	5.25%	Plan AA, normal retirement age 65, 7 year vesting, 5 years certain, no COLA	
Marietta PWA	UAL	25.54%	23.89%	5.00%	Plan AA, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
McLoud	Surplus	5.30%	4.66%	2.25%	Plan B, normal retirement age 65, 7 year vesting, 5 years certain, COLA	
Medford	UAL	21.06%	19.49%	4.00%	Plan AA, normal retirement age 62/30, 10 year vesting, 10 years certain, split COLA, Hybrid	
Meeker	Surplus	8.12%	6.87%	3.00%	Plan BB, normal retirement age 65, 5 year vesting, 5 years certain, no COLA	
Miami	UAL	16.08%	14.25%	3.75%	Plan CC, normal retirement age 65, 10 year vesting, 10 years certain, no COLA	
Mooreland	UAL	14.45%	15.77%	4.00%	Plan AA, Rule of 80, 5 year vesting, 5 years certain, no COLA	
Mountain Park MCD	UAL	33.12%	32.67%	6.00%	Plan AAA, Rule of 80, 10 year vesting, 5 years certain, no COLA	
Muldrow	UAL	12.92%	13.85%	4.50%	Plan BB, Rule of 80, 7 year vesting, 5 years certain, no COLA	
Mustang	UAL	15.45%	15.60%	5.25%	Plan AA, Rule of 80, 10 year vesting, 5 years certain, no COLA	
Nichols Hills	Surplus	15.87%	14.05%	11.00%	Plan BB, Rule of 80, 7 year vesting, 10 years certain, split COLA, Hybrid; 7/06 New Hires: Plan BB, normal retirement age 65, 7 year vesting, 10 years certain, no COLA	
Noble	UAL	15.30%	13.19%	4.25%	Plan AA, normal retirement age 65, 5 year vesting, 5 years certain, no COLA	
Nowata	Surplus	10.75%	10.63%	5.00%	Plan AAA, normal retirement age 65, 5 year vesting, 5 years certain, no COLA	

**Oklahoma Municipal Retirement Fund  
COMPARISON OF REQUIRED CONTRIBUTION RATES**

City	UAL or Surplus	Total rate		Employee Rate	Plan Provisions	Changes
		7/1/2016	7/1/2017			
Oilton	UAL	10.60%	9.20%	4.50%	Plan BB, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Okeene	UAL	13.76%	12.94%	3.60%	Plan AAA, normal retirement age 65, 7 year vesting, 5 years certain, no COLA	
Okemah	UAL	7.86%	11.91%	3.75%	Plan CC, normal retirement age 65, 7 year vesting, 5 years certain, no COLA	upgrade, ee cont
Oklahoma Municipal League Surplus		9.91%	11.96%	0.00%	Plan AAA, normal retirement age 65, 5 year vesting, 5 years certain, COLA	
OkMRF Staff	UAL	18.12%	16.63%	4.50%	Plan BB, normal retirement age 65, 5 year vesting, 10 years certain, no COLA	
Okmulgee	Surplus	6.99%	6.85%	0.00%	Plan AA, special retirement age, 10 year vesting, 5 years certain, COLA	ret age 62/25
Owasso	UAL	11.58%	12.84%	4.26%	Plan AA, normal retirement age 62/30, 5 year vesting, 5 years certain, no COLA	
Pawnee	UAL	15.37%	14.75%	6.00%	Plan AAA, normal retirement age 62/30, 7 year vesting, 5 years certain, no COLA	
Perkins	UAL	11.89%	12.71%	4.50%	Plan BB, normal retirement age 65, 7 year vesting, 5 years certain, COLA	
Perry	UAL	12.56%	12.63%	4.00%	Plan AA, normal retirement age 65, 10 year vesting, 10 years certain, no COLA	
Piedmont	UAL	7.86%	7.35%	3.00%	Plan A, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Pond Creek	UAL	12.46%	14.71%	4.50%	Plan BB, normal retirement age 62/30, 10 year vesting, 5 years certain, no COLA	upgrade, ee cont
Porum	UAL	5.86%	5.60%	2.25%	Plan B, normal retirement age 65, 7 year vesting, 5 years certain, no COLA	
Poteau	UAL	11.84%	13.25%	4.25%	Plan BB, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Ratliff City	UAL	6.21%	6.24%	2.25%	Plan B, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Ringling	UAL	8.20%	7.05%	2.25%	Plan B, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Roland	UAL	8.94%	9.11%	3.75%	Plan CC, normal retirement age 65, 5 year vesting, 5 years certain, no COLA	
Sallisaw	UAL	21.18%	20.94%	7.00%	Plan AAA, Rule of 80, 10 year vesting, 5 years certain, no COLA; 11/14 New Hires: Plan AA, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Seiling	Surplus	6.27%	6.97%	4.90%	Plan AA, normal retirement age 65, 5 year vesting, 5 years certain, no COLA	

**Oklahoma Municipal Retirement Fund  
COMPARISON OF REQUIRED CONTRIBUTION RATES**

City	UAL or Surplus	Total rate		Employee Rate	Plan Provisions	Changes
		7/1/2016	7/1/2017			
Shawnee	UAL	19.35%	19.01%	4.25%	Plan AA, Rule of 80, 7 year vesting, 10 years certain, split COLA, Hybrid	
Skiatook	UAL	13.69%	13.76%	4.50%	Plan BB, normal retirement age 65, 7 year vesting, 5 years certain, no COLA	
Spencer	Surplus	15.50%	9.41%	5.25%	Plan AA, normal retirement age 62/30, 7 year vesting, 5 years certain, no COLA, Hybrid	ee cont, hybrid cont
Spiro	UAL	9.00%	9.24%	3.00%	Plan A, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Stilwell	Surplus	12.68%	8.43%	4.50%	Plan BB, normal retirement age 65, 5 year vesting, 5 years certain, no COLA	
Stratford	Surplus	3.39%	2.93%	1.39%	Plan B, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Stroud	UAL	13.33%	13.23%	4.50%	Plan BB, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Sulphur	UAL	19.69%	17.25%	5.00%	Plan AAA, Rule of 80, 10 year vesting, 5 years certain, no COLA	
Talihina & TPWA	Surplus	5.05%	2.87%	2.25%	Plan B, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Thomas	UAL	21.94%	22.68%	5.25%	Plan AA, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Tipton	UAL	7.03%	6.23%	2.25%	Plan B, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Tishomingo	UAL	8.55%	8.57%	3.00%	Plan A, normal retirement age 65, 5 year vesting, 5 years certain, no COLA	
Tonkawa	UAL	11.47%	11.91%	3.50%	Plan AAA, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Velma	Surplus	3.00%	3.00%	3.00%	Plan A, normal retirement age 65, 5 year vesting, 5 years certain, no COLA	
Vian	Surplus	6.50%	6.50%	3.00%	Plan A, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Vinita	UAL	24.04%	22.62%	5.25%	Plan AA, Rule of 80, 10 year vesting, 5 years certain, COLA	
Wakita	Surplus	8.08%	2.25%	2.25%	Plan B, normal retirement age 65, 7 year vesting, 5 years certain, COLA	
Warr Acres	UAL	15.58%	14.55%	4.00%	Plan AA, special retirement age, 10 year vesting, 5 years certain, no COLA; 7/11 New Hires: Plan BB, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Watonga	UAL	21.36%	20.09%	4.00%	Plan AAA, normal retirement age 62/30, 10 year vesting, 5 years certain, no COLA	

**Oklahoma Municipal Retirement Fund**  
**COMPARISON OF REQUIRED CONTRIBUTION RATES**

City	UAL or Surplus	Total rate		Employee Rate	Plan Provisions	Changes
		7/1/2016	7/1/2017			
Waukomis	Surplus	9.57%	10.79%	5.25%	Plan AA, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Waurika	Surplus	10.40%	11.61%	4.00%	Plan AAA, Rule of 80, 10 year vesting, 5 years certain, no COLA	
Weatherford	UAL	14.89%	15.24%	6.25%	Plan AA, normal retirement age 65, 7 year vesting, 5 years certain, no COLA	
Webbers Falls	Surplus	2.80%	2.50%	1.50%	Plan C, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Wellston	UAL	10.55%	11.34%	3.75%	Plan CC, normal retirement age 65, 7 year vesting, 5 years certain, no COLA	
Westville Utility Authority	UAL	10.85%	12.30%	6.00%	Plan AAA, normal retirement age 65, 7 year vesting, 5 years certain, no COLA	
Wetumka	UAL	22.62%	22.17%	5.25%	Plan AA, Rule of 80, 10 year vesting, 5 years certain, no COLA	
Wilburton	UAL	#N/A	4.88%	1.50%	Plan C, normal retirement age 65, 10 year vesting, 5 years certain, no COLA	
Yale	Surplus	13.08%	13.61%	6.00%	Plan AAA, Rule of 80, 7 year vesting, 5 years certain, no COLA	
Yukon	UAL	18.39%	19.06%	3.00%	Plan AAA, normal retirement age 62/30, 5 year vesting, 5 years certain, no COLA; 7/05 New Hires: Plan AAA, normal retirement age 62/30, 10 year vesting, 5 years certain, no COLA	
<b>Weighted Avg Contribution Rates</b>		<b>14.07%</b>	<b>13.90%</b>	<b>4.26%</b>		

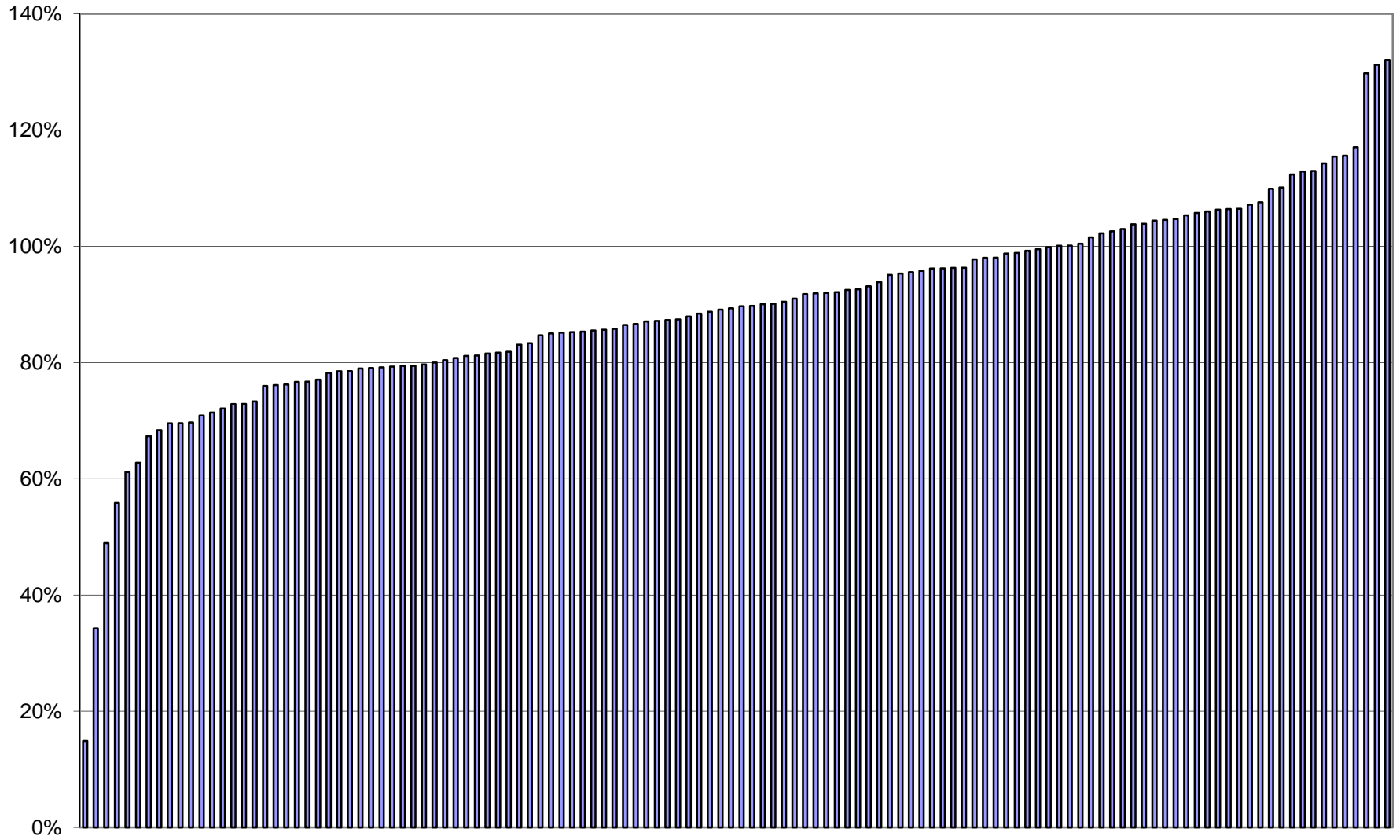
## B Comparison of Plan Assets and Obligations

The exhibit in this section shows the plan assets and obligations as of July 1, 2017, disclosure information formerly required under GASB 50 for information purposes only, and the number of active and nonactive participants. The following is presented for each plan with active participants:

- The *cost method* used for the plan. The entry age normal (EAN) cost method is used for all plans except Bartlesville, which uses the unit credit (UC) cost method. See Section E for a further description of the actuarial cost methods.
- The *valuation assets*. The valuation assets are generally the actuarial value of assets. For hybrid plans, however, the employee hybrid account balances are subtracted from the actuarial value of assets to determine the valuation assets. See Section D for the development of the actuarial value of assets.
- The *valuation payroll*. This is the total compensation paid in fiscal year 2017 to employees who were active participants on July 1, 2017. Pay for employees who worked less than a full year in fiscal 2017 is annualized in determining valuation payroll.
- The *present value of benefits (PVB)*. This is the total of all future benefits expected to be paid to plan participants as of July 1, 2017, discounted to the valuation date at the assumed rate of return (7.25% for all plans). The PVB is shown separately for active and nonactive participants.
- The *actuarial accrued liability (AAL)*. This amount is the liability for benefits attributable to past service under the cost method used for determining the required contribution rate.
- The *unfunded actuarial accrued liability (UAAL)*. This amount is the excess of the actuarial accrued liability over the valuation assets. If the assets exceed the actuarial accrued liability, the surplus is reported as a negative unfunded liability.
- The *funded ratio* is the valuation assets as a percent of the actuarial accrued liability.
- The *unfunded UAAL as % of val pay* is the unfunded actuarial accrued liability as a percent of valuation payroll.
- The number of *active and nonactive participants* included in the valuation. See Section F for more details on the participants included in the valuation.
- The *accumulated benefit obligation (ABO)*. This is the total of all benefits actually accrued under the plan as of July 1, 2017, discounted to the valuation date at the assumed rate of return (7.25% for all plans).

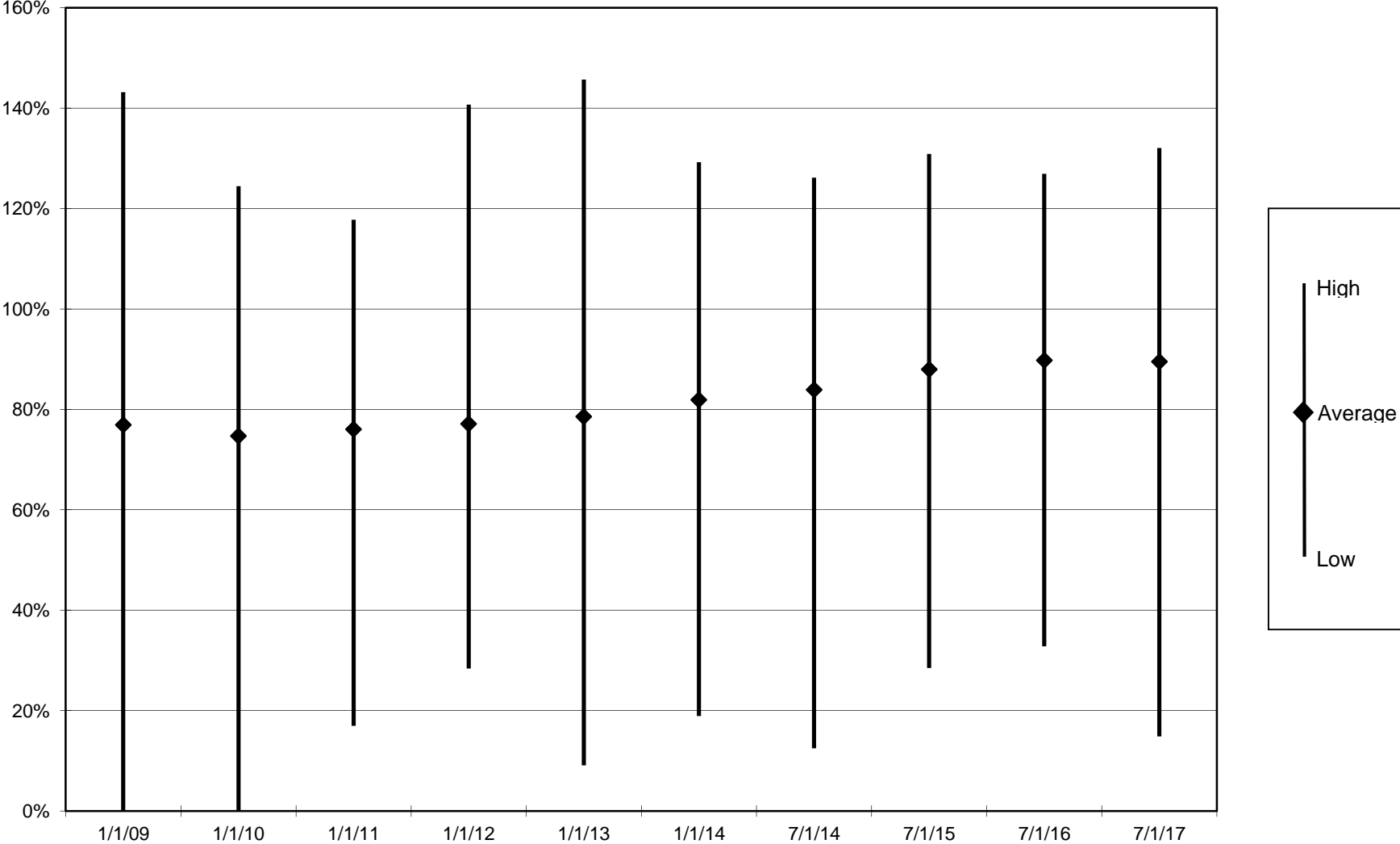
Oklahoma Municipal Retirement Fund

Funded Ratio as of 7/1/2017



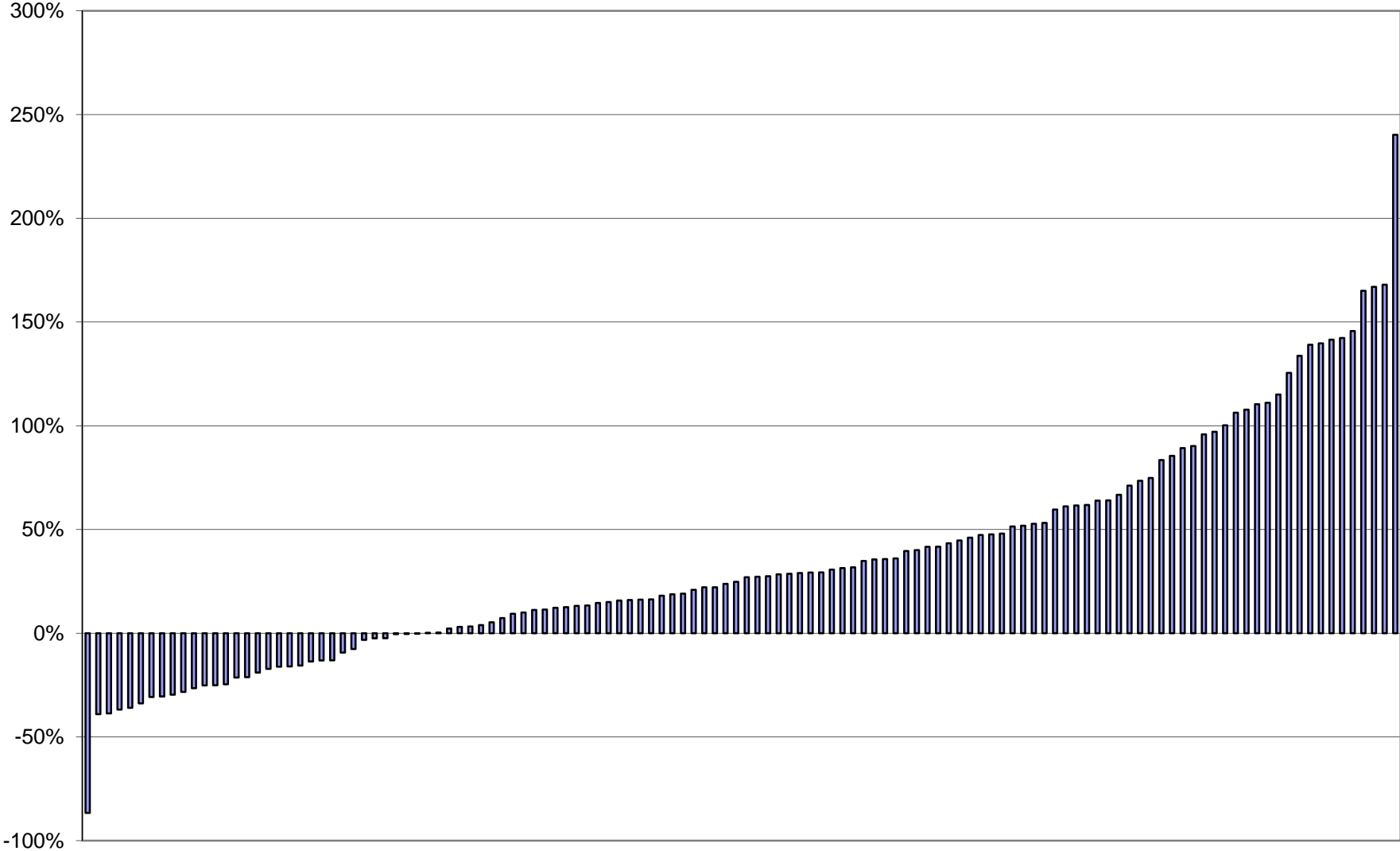
Oklahoma Municipal Retirement Fund

Funded Ratios



Oklahoma Municipal Retirement Fund

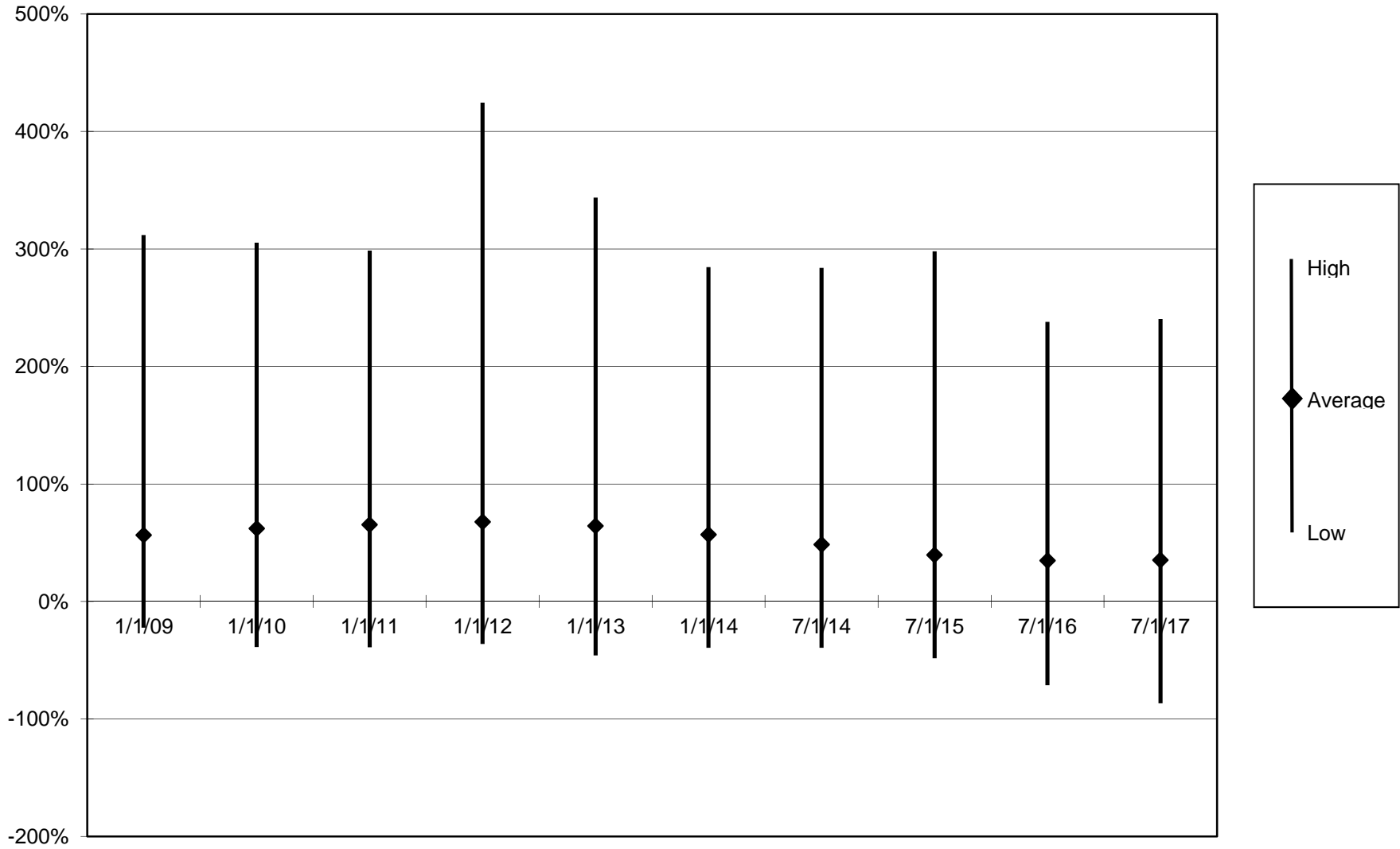
UAAL as Percent of Covered Payroll





Oklahoma Municipal Retirement Fund

UAAL as Percent of Covered Payroll



**Oklahoma Municipal Retirement Fund  
COMPARISON OF PLAN ASSETS AND OBLIGATIONS**

City	Cost Method	Valuation Assets	Valuation Payroll	PVB Actives	PVB Retired	AAL	UAAL (Surplus)	Funded Ratio	UAAL as % of Val Pay	Actives	Nonactives	ABO
Adair	UAL	252,097	161,054	157,498	201,849	263,848	11,752	95.5%	7.3%	5	6	227,986
Altus	UAL	20,598,931	4,700,997	13,261,117	14,359,238	24,795,141	4,196,210	83.1%	89.3%	119	88	21,456,866
Alva	UAL	3,613,089	2,062,398	4,090,725	907,380	4,211,002	597,914	85.8%	29.0%	53	14	3,109,849
Antlers	Surplus	1,204,252	782,263	898,665	514,870	1,131,349	(72,903)	106.4%	(9.3)%	30	13	945,531
Ardmore	Surplus	29,121,864	8,022,574	26,768,490	9,140,045	29,085,592	(36,271)	100.1%	(0.5)%	170	72	23,023,613
Bartlesville	UAL	17,773,163	5,019,586	16,633,673	11,017,168	23,181,309	5,408,146	76.7%	107.7%	123	142	23,181,309
Bethany	UAL	22,736,740	3,481,527	13,752,321	11,471,158	23,194,730	457,989	98.0%	13.2%	79	47	19,698,294
Bethany/Warr Acres	UAL	2,491,955	271,532	1,616,182	1,439,936	2,876,153	384,198	86.6%	141.5%	6	9	2,586,931
Billings	UAL	275,747	110,801	232,589	91,771	289,300	13,553	95.3%	12.2%	3	4	233,349
Binger	UAL	194,980	157,860	179,291	70,606	210,782	15,801	92.5%	10.0%	5	1	182,585
Blackwell	UAL	5,984,487	2,172,167	5,610,533	2,678,977	6,854,352	869,866	87.3%	40.0%	56	30	5,595,280
Blair	UAL	444,697	135,197	560,134	0	483,419	38,722	92.0%	28.6%	4	0	312,307
Boise City	UAL	1,572,209	429,347	945,804	888,622	1,697,674	125,465	92.6%	29.2%	13	10	1,569,816
Bokchito	Surplus	143,232	141,317	89,396	71,382	108,456	(34,777)	132.1%	(24.6)%	6	1	88,740
Braman	UAL	232,845	73,984	65,769	311,273	340,599	107,754	68.4%	145.6%	2	2	327,768
Bristow	Surplus	3,578,174	818,740	2,117,576	1,835,319	3,326,406	(251,768)	107.6%	(30.8)%	25	15	2,835,242
Broken Bow	UAL	5,148,317	2,081,618	5,781,493	1,541,228	5,801,802	653,485	88.7%	31.4%	61	18	4,229,266
Buffalo	Surplus	1,013,151	228,305	444,748	634,067	945,432	(67,718)	107.2%	(29.7)%	9	5	819,969
Burns Flat	UAL	692,376	343,329	568,958	420,010	845,871	153,495	81.9%	44.7%	10	3	675,479
Calera	UAL	929,170	731,025	936,493	516,062	1,183,600	254,430	78.5%	34.8%	21	4	895,149

**Oklahoma Municipal Retirement Fund  
COMPARISON OF PLAN ASSETS AND OBLIGATIONS**

<b>City</b>	<b>Cost Method</b>	<b>Valuation Assets</b>	<b>Valuation Payroll</b>	<b>PVB Actives</b>	<b>PVB Retired</b>	<b>AAL</b>	<b>UAAL (Surplus)</b>	<b>Funded Ratio</b>	<b>UAAL as % of Val Pay</b>	<b>Actives</b>	<b>Nonactives</b>	<b>ABO</b>
Central Oklahoma MCD	Surplus	1,663,788	260,106	893,631	967,783	1,622,076	(41,711)	102.6%	(16.0)%	6	5	1,386,696
Chandler	UAL	2,579,181	1,041,733	2,837,404	456,177	2,810,019	230,838	91.8%	22.2%	28	9	2,161,178
Checotah	UAL	2,168,048	1,277,102	1,562,555	1,104,885	2,217,916	49,868	97.8%	3.9%	41	20	1,777,985
Cherokee & CDA	UAL	327,134	440,159	398,729	221,661	485,738	158,604	67.3%	36.0%	12	7	394,577
Chickasha	Surplus	16,893,554	1,890,825	6,597,484	11,470,240	16,636,183	(257,371)	101.5%	(13.6)%	55	49	15,124,847
Claremore	UAL	17,549,523	5,927,200	10,879,801	9,244,794	17,685,158	135,635	99.2%	2.3%	144	75	14,683,469
Cleo Springs	UAL	195,626	40,981	235,885	11,175	247,060	51,434	79.2%	125.5%	1	1	247,060
Cleveland	UAL	2,595,171	609,057	1,997,249	1,740,245	3,409,570	814,399	76.1%	133.7%	13	12	2,972,794
Clinton	Surplus	12,753,610	1,895,524	8,030,302	5,848,428	12,276,812	(476,798)	103.9%	(25.2)%	49	49	10,000,841
Collinsville	UAL	3,107,017	1,313,736	3,114,199	1,386,684	3,728,946	621,929	83.3%	47.3%	37	17	2,919,063
Copan	UAL	51,777	135,246	87,252	86,695	151,124	99,347	34.3%	73.5%	3	3	128,435
Cordell	Surplus	4,907,015	876,752	2,686,129	2,601,018	4,765,454	(141,562)	103.0%	(16.1)%	25	23	4,195,151
Cushing	UAL	20,683,226	3,693,413	11,960,038	10,699,111	21,096,995	413,768	98.0%	11.2%	91	96	18,031,904
Davis	UAL	2,059,548	993,435	1,801,017	1,064,202	2,329,740	270,192	88.4%	27.2%	32	14	1,896,369
Del City	UAL	16,957,084	3,213,393	11,797,353	13,018,086	22,322,844	5,365,760	76.0%	167.0%	85	64	19,518,607
Dewey	UAL	1,697,221	561,927	1,758,681	573,589	1,993,418	296,197	85.1%	52.7%	17	9	1,407,741
Drumright	UAL	2,511,151	545,999	1,190,572	2,250,230	3,139,331	628,179	80.0%	115.1%	15	23	2,912,497
Durant	UAL	22,070,537	5,229,246	15,296,217	10,198,463	22,347,239	276,702	98.8%	5.3%	130	79	18,462,847
El Reno	UAL	4,156,697	3,176,005	5,549,461	1,848,187	5,669,376	1,512,679	73.3%	47.6%	69	27	4,010,430
Eufaula	Surplus	1,285,303	461,277	595,765	760,057	1,169,645	(115,658)	109.9%	(25.1)%	18	8	1,060,220

**Oklahoma Municipal Retirement Fund  
COMPARISON OF PLAN ASSETS AND OBLIGATIONS**

City	Cost Method	Valuation Assets	Valuation Payroll	PVB Actives	PVB Retired	AAL	UAAL (Surplus)	Funded Ratio	UAAL as % of Val Pay	Actives	Nonactives	ABO
Fort Cobb	UAL	238,396	94,951	47,477	288,770	296,461	58,064	80.4%	61.2%	4	2	292,218
Foss Reservoir Public Works	UAL	924,514	212,877	574,115	813,303	1,282,160	357,646	72.1%	168.0%	4	4	1,057,210
Frederick	UAL	3,894,654	1,078,519	2,728,253	1,805,268	4,096,723	202,069	95.1%	18.7%	29	22	3,519,531
Garber	Surplus	69,515	121,024	104,033	19,478	66,570	(2,945)	104.4%	(2.4)%	4	2	36,370
Geary	UAL	1,372,359	578,041	1,601,217	220,567	1,426,714	54,355	96.2%	9.4%	17	5	940,157
Goodwell	UAL	268,437	244,170	230,995	182,431	314,991	46,554	85.2%	19.1%	7	3	237,324
Gore and Gore PWA	Surplus	636,864	500,414	676,455	102,685	550,916	(85,949)	115.6%	(17.2)%	24	5	361,889
Granite	UAL	1,508,238	330,987	1,538,365	328,169	1,667,174	158,936	90.5%	48.0%	9	4	1,392,827
Guthrie	UAL	6,151,602	1,884,480	5,323,043	2,127,485	6,388,319	236,718	96.3%	12.6%	53	15	4,902,372
Harrah	UAL	2,306,356	753,601	2,729,936	532,901	2,842,377	536,021	81.1%	71.1%	16	8	2,076,688
Healdton	UAL	1,439,929	500,932	1,214,793	728,549	1,599,020	159,091	90.1%	31.8%	14	9	1,308,782
Henryetta	UAL	3,082,522	1,263,376	2,786,058	1,785,684	3,925,491	842,970	78.5%	66.7%	38	23	3,088,284
Hooker	UAL	1,075,816	391,330	900,542	725,448	1,402,476	326,660	76.7%	83.5%	9	7	1,176,826
Hulbert	UAL	600,861	345,681	715,728	414,901	982,558	381,697	61.2%	110.4%	9	5	749,099
Hydro	UAL	374,907	224,110	147,356	399,340	472,023	97,116	79.4%	43.3%	7	6	442,527
Kansas	UAL	118,502	169,975	113,107	61,670	145,320	26,818	81.5%	15.8%	5	4	110,917
Kiefer	UAL	65,643	191,624	159,529	46,913	134,101	68,459	49.0%	35.7%	7	1	86,875
Kingston	UAL	650,991	502,922	766,915	369,802	918,251	267,261	70.9%	53.1%	14	3	782,099
Krebs & Krebs Utility Auth.	UAL	416,955	400,017	417,483	251,308	524,915	107,959	79.4%	27.0%	11	5	425,834
Laverne	Surplus	1,184,845	536,299	762,225	581,755	1,114,617	(70,228)	106.3%	(13.1)%	16	11	936,980

**Oklahoma Municipal Retirement Fund  
COMPARISON OF PLAN ASSETS AND OBLIGATIONS**

City	Cost Method	Valuation Assets	Valuation Payroll	PVB Actives	PVB Retired	AAL	UAAL (Surplus)	Funded Ratio	UAAL as % of Val Pay	Actives	Nonactives	ABO
Lindsay	Surplus	4,514,483	1,399,231	2,801,701	2,106,912	3,999,665	(514,818)	112.9%	(36.8)%	39	18	3,270,528
Madill	UAL	2,770,539	915,713	2,563,091	787,864	2,892,725	122,186	95.8%	13.3%	27	10	2,342,016
Mannford	UAL	2,910,379	894,474	2,781,705	2,178,188	4,182,995	1,272,615	69.6%	142.3%	21	18	3,373,104
Marietta	UAL	1,125,147	611,037	1,103,436	390,319	1,126,781	1,633	99.9%	0.3%	20	8	849,591
Marietta PWA	UAL	422,404	202,356	390,556	501,608	756,386	333,981	55.8%	165.0%	6	5	626,513
McLoud	Surplus	667,021	1,220,002	712,380	239,906	637,083	(29,938)	104.7%	(2.5)%	26	12	502,521
Medford	UAL	2,528,379	451,187	2,684,946	317,934	2,817,146	288,767	89.7%	64.0%	11	3	2,190,550
Meeker	Surplus	688,972	279,392	199,270	552,620	609,890	(79,082)	113.0%	(28.3)%	10	10	591,765
Miami	UAL	10,504,607	4,735,571	7,419,021	9,480,667	15,102,595	4,597,988	69.6%	97.1%	122	91	12,819,610
Mooreland	UAL	1,357,493	386,897	384,899	1,474,037	1,596,638	239,145	85.0%	61.8%	9	9	1,513,822
Mountain Park MCD	UAL	913,543	225,590	911,236	720,460	1,455,604	542,061	62.8%	240.3%	5	3	1,248,781
Muldrow	UAL	2,046,857	832,786	1,299,271	1,647,835	2,393,882	347,025	85.5%	41.7%	23	16	2,044,213
Mustang	UAL	6,382,682	2,217,390	5,728,878	3,072,604	7,261,030	878,348	87.9%	39.6%	41	15	5,926,509
Nichols Hills	Surplus	8,609,706	1,960,970	4,407,943	4,807,878	8,090,232	(519,473)	106.4%	(26.5)%	39	24	7,566,803
Noble	UAL	1,984,624	861,074	2,055,633	720,052	2,343,147	358,523	84.7%	41.6%	20	10	1,874,662
Nowata	Surplus	2,073,606	765,329	1,452,401	976,841	1,814,712	(258,894)	114.3%	(33.8)%	24	27	1,475,872
Oilton	UAL	392,090	206,347	376,671	174,920	425,698	33,608	92.1%	16.3%	8	3	298,434
Okeene	UAL	1,045,842	265,839	855,531	426,528	1,085,834	39,992	96.3%	15.0%	7	6	872,689
Okemah	UAL	1,261,312	1,058,394	1,855,375	432,291	1,809,958	548,646	69.7%	51.8%	31	12	1,292,686
Oklahoma Municipal League Surplus		7,177,189	731,313	2,511,008	4,989,952	6,914,256	(262,932)	103.8%	(36.0)%	14	22	6,405,973

**Oklahoma Municipal Retirement Fund  
COMPARISON OF PLAN ASSETS AND OBLIGATIONS**

City	Cost Method	Valuation Assets	Valuation Payroll	PVB Actives	PVB Retired	AAL	UAAL (Surplus)	Funded Ratio	UAAL as % of Val Pay	Actives	Nonactives	ABO
OkMRF Staff	UAL	1,067,201	646,269	1,722,395	57,662	1,399,851	332,650	76.2%	51.5%	10	1	892,338
Okmulgee	Surplus	15,998,043	2,655,975	9,796,611	6,925,681	15,188,572	(809,472)	105.3%	(30.5)%	83	63	12,027,474
Owasso	UAL	15,702,190	7,002,962	17,777,813	4,181,004	17,252,071	1,549,881	91.0%	22.1%	136	55	12,108,182
Pawnee	UAL	2,714,821	963,561	2,548,979	1,153,967	2,953,784	238,963	91.9%	24.8%	26	14	2,376,628
Perkins	UAL	1,110,942	399,909	773,032	674,576	1,123,788	12,846	98.9%	3.2%	12	11	866,452
Perry	UAL	3,919,674	1,885,144	3,903,494	1,725,872	4,497,385	577,712	87.2%	30.6%	51	15	3,455,951
Piedmont	UAL	290,952	799,962	599,590	20,790	292,458	1,507	99.5%	0.2%	17	0	193,667
Pond Creek	UAL	946,266	390,467	1,263,409	223,566	1,298,563	352,297	72.9%	90.2%	11	5	1,077,943
Porum	UAL	313,610	387,996	395,289	107,473	383,883	70,273	81.7%	18.1%	9	2	247,437
Poteau	UAL	6,628,861	1,600,103	5,028,196	3,290,837	7,613,900	985,039	87.1%	61.6%	49	29	6,334,121
Ratliff City	UAL	121,590	191,511	177,442	35,119	152,628	31,037	79.7%	16.2%	5	1	109,844
Ringling	UAL	165,272	173,383	147,842	114,353	214,478	49,207	77.1%	28.4%	5	4	177,104
Roland	UAL	1,057,045	1,015,331	1,519,798	148,991	1,172,984	115,939	90.1%	11.4%	25	6	751,017
Sallisaw	UAL	14,719,330	3,511,459	12,352,384	8,813,026	18,618,611	3,899,280	79.1%	111.0%	96	57	15,418,135
Seiling	Surplus	909,895	339,809	650,809	335,284	777,387	(132,508)	117.0%	(39.0)%	9	5	600,729
Shawnee	UAL	36,439,860	3,144,344	17,003,303	24,064,567	39,127,738	2,687,878	93.1%	85.5%	105	83	35,457,016
Skiatook	UAL	949,972	2,026,672	2,254,826	164,111	1,012,322	62,350	93.8%	3.1%	49	7	708,434
Spencer	Surplus	988,256	408,973	642,793	573,408	934,596	(53,660)	105.7%	(13.1)%	12	12	741,041
Spiro	UAL	1,102,668	519,478	705,176	761,105	1,287,503	184,835	85.6%	35.6%	18	12	1,126,022
Stilwell	Surplus	9,241,711	2,066,483	4,283,147	6,117,982	9,233,618	(8,093)	100.1%	(0.4)%	63	46	7,802,976

**Oklahoma Municipal Retirement Fund  
COMPARISON OF PLAN ASSETS AND OBLIGATIONS**

City	Cost Method	Valuation Assets	Valuation Payroll	PVB Actives	PVB Retired	AAL	UAAL (Surplus)	Funded Ratio	UAAL as % of Val Pay	Actives	Nonactives	ABO
Stratford	Surplus	294,037	330,537	173,408	157,964	224,069	(69,967)	131.2%	(21.2)%	9	4	179,860
Stroud	UAL	3,329,939	1,331,141	2,667,213	2,132,629	4,123,081	793,142	80.8%	59.6%	38	30	3,398,733
Sulphur	UAL	4,788,376	1,001,302	4,220,779	1,863,539	5,537,851	749,475	86.5%	74.9%	27	15	4,485,266
Talihina & TPWA	Surplus	736,145	316,687	448,358	317,613	668,602	(67,543)	110.1%	(21.3)%	12	7	606,396
Thomas	UAL	939,215	269,007	640,041	856,952	1,315,152	375,936	71.4%	139.7%	8	10	1,109,957
Tipton	UAL	221,994	197,728	314,882	6,241	279,902	57,908	79.3%	29.3%	7	0	243,208
Tishomingo	UAL	432,701	389,885	399,138	250,702	495,027	62,326	87.4%	16.0%	13	9	416,923
Tonkawa	UAL	2,645,120	720,355	1,389,752	1,884,873	2,750,179	105,059	96.2%	14.6%	20	19	2,309,276
Velma	Surplus	327,199	113,363	74,237	254,732	283,385	(43,814)	115.5%	(38.6)%	3	7	266,558
Vian	Surplus	248,129	384,965	330,970	70,874	247,041	(1,088)	100.4%	(0.3)%	13	4	158,564
Vinita	UAL	8,588,714	1,390,474	5,264,821	5,815,002	10,066,424	1,477,710	85.3%	106.3%	42	38	8,854,391
Wakita	Surplus	225,338	59,674	24,442	169,791	173,639	(51,700)	129.8%	(86.6)%	2	2	171,214
Warr Acres	UAL	8,133,807	1,555,204	5,089,952	4,845,004	9,127,574	993,767	89.1%	63.9%	38	28	7,760,684
Watonga	UAL	4,058,087	1,179,085	2,907,787	3,062,615	5,188,577	1,130,490	78.2%	95.9%	37	26	4,459,296
Waukomis	Surplus	431,362	293,923	385,759	262,391	421,899	(9,463)	102.2%	(3.2)%	7	3	328,802
Waurika	Surplus	1,059,117	315,948	616,797	628,383	999,266	(59,851)	106.0%	(18.9)%	10	6	842,464
Weatherford	UAL	4,991,505	2,882,090	5,619,943	2,492,627	6,319,436	1,327,930	79.0%	46.1%	80	26	4,962,089
Webbers Falls	Surplus	150,055	215,976	83,038	88,070	133,540	(16,515)	112.4%	(7.6)%	8	11	117,758
Wellston	UAL	515,904	258,482	431,429	271,125	577,413	61,508	89.3%	23.8%	7	8	483,105
Westville Utility Authority	UAL	583,081	321,397	690,868	227,657	650,200	67,118	89.7%	20.9%	8	4	395,965

**Oklahoma Municipal Retirement Fund**  
**COMPARISON OF PLAN ASSETS AND OBLIGATIONS**

<b>City</b>	<b>Cost Method</b>	<b>Valuation Assets</b>	<b>Valuation Payroll</b>	<b>PVB Actives</b>	<b>PVB Retired</b>	<b>AAL</b>	<b>UAAL (Surplus)</b>	<b>Funded Ratio</b>	<b>UAAL as % of Val Pay</b>	<b>Actives</b>	<b>Nonactives</b>	<b>ABO</b>
Wetumka	UAL	1,499,511	401,564	926,816	1,356,863	2,057,975	558,464	72.9%	139.1%	16	12	1,850,903
Wilburton	UAL	45,073	937,980	416,992	27,923	302,880	257,807	14.9%	27.5%	27	1	176,275
Yale	Surplus	1,437,231	402,002	588,435	1,108,158	1,374,560	(62,672)	104.6%	(15.6)%	15	14	1,237,921
Yukon	UAL	24,459,871	5,647,672	19,090,748	14,646,183	30,119,230	5,659,359	81.2%	100.2%	93	114	23,706,460
<b>Total</b>		<b>524,502,137</b>	<b>147,101,188</b>	<b>386,356,684</b>	<b>283,735,797</b>	<b>582,371,912</b>	<b>57,869,774</b>	<b>90.1%</b>	<b>39.3%</b>	<b>3,802</b>	<b>2,366</b>	<b>487,294,070</b>

Totals exclude frozen plans and plans with only nonactive participants.



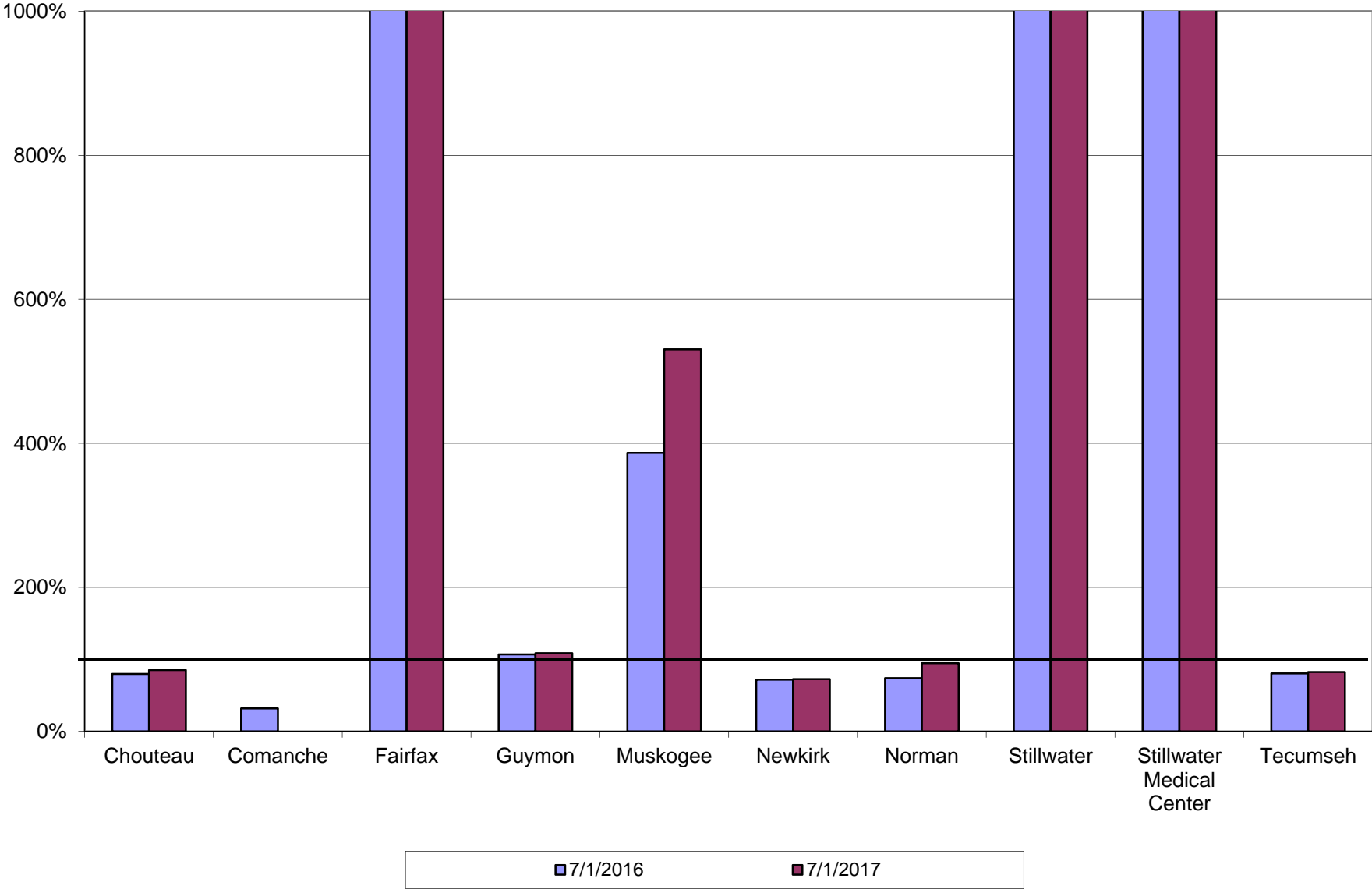
## C Funded Status of Plans with No Further Benefit Accruals

There are 9 plans that no longer have employees accruing benefits under the plan, but still have assets in the OkMRF Master Trust for paying benefits to nonactive participants. The following pages show key financial information for each of these plans:

- The number of participants due benefits from the Trust, both in total and by category. The participant categories are active employees with frozen benefits, retirees receiving benefits, beneficiaries of deceased participants entitled to benefits, participants receiving disability benefits, vested participants entitled to future benefits, and nonvested participants entitled only to a refund of their employee contributions with interest. See Section F for more details on the participants included in the valuation.
- The *present value of benefits*. This is the total of all future benefits expected to be paid to plan participants as of July 1, 2017, discounted to the valuation date at the assumed rate of return (7.25%). The present value of benefits is shown separately by participant category.
- The *market value of assets*. Assets for cities with no active participants accruing benefits are valued at fair market value. See Section D for more detail on the trust fund activity during fiscal 2017.
- The *deficiency (surplus)*. This is the excess of the plan obligations, measured as the present value of benefits, over the market value of assets. If the assets exceed the obligations, the surplus is reported as a negative amount.
- The *funded percentage*. This is the market value of assets as a percent of the plan obligations.
- The *plan funding requirement*. If plan obligations exceed assets, the annual payment required to amortize the deficiency over a specified number of years is reported.

Oklahoma Municipal Retirement Fund

Funded Status of Nonactive Plans



**Oklahoma Municipal Retirement Fund  
Employee Retirement System of Chouteau, Oklahoma**

**FUNDED STATUS OF THE PLAN AS OF JULY 1, 2017**

	<u>Count</u>	<u>Present Value of Benefits</u>
Employees with frozen benefits	0	\$0
Retirees	2	12,888
Survivors	0	0
Disabled	0	0
Deferred Vested	0	0
Nonvested (refunds due)	<u>0</u>	<u>0</u>
Totals	2	<b>\$12,888</b>
Market Value of Assets		<b>\$10,971</b>
Deficiency (Surplus)		<b>\$1,917</b>
Funded Percentage		<b>85%</b>

***Plan assets are not currently sufficient.***

***Plan Funding Requirement***

Annual contribution payable for 1 year commencing July 1, 2018 sufficient to amortize the funding deficiency	<b>\$2,056</b>
---	----------------

**Actuarial Basis**

Interest rate	7.25% per annum
Mortality	UP 94 mortality (projected)
Cost of Living Adjustments	none
Retirement Age for Deferred Vested	65

**Oklahoma Municipal Retirement Fund  
Employee Retirement System of Fairfax, Oklahoma**

**FUNDED STATUS OF THE PLAN AS OF JULY 1, 2017**

	<u>Count</u>	<u>Present Value of Benefits</u>
Employees with frozen benefits	0	\$0
Retirees	1	11,298
Survivors	0	0
Disabled	0	0
Deferred Vested	0	0
Nonvested (refunds due)	<u>0</u>	<u>0</u>
Totals	1	<b>\$11,298</b>
Market Value of Assets		<b>\$251,837</b>
Deficiency (Surplus)		<b>(\$240,539)</b>
Funded Percentage		<b>2229%</b>

***Plan assets are currently sufficient.***

***Plan Funding Requirement***

Annual contribution payable for 10 years commencing July 1, 2018 sufficient to amortize the funding deficiency	<b>N/A</b>
--	------------

**Actuarial Basis**

Interest rate	7.25% per annum
Mortality	UP 94 mortality (projected)
Cost of Living Adjustments	none
Retirement Age for Deferred Vested	65

**Oklahoma Municipal Retirement Fund  
Employee Retirement System of Guymon, Oklahoma**

**FUNDED STATUS OF THE PLAN AS OF JULY 1, 2017**

	<u>Count</u>	<u>Present Value of Benefits</u>
Employees with frozen benefits	13	\$766,611
Retirees	27	2,858,845
Survivors	5	173,075
Disabled	6	250,010
Deferred Vested	54	1,469,006
Nonvested (refunds due)	<u>0</u>	<u>0</u>
Totals	105	<b>\$5,517,547</b>
Market Value of Assets		<b>\$5,986,850</b>
Deficiency (Surplus)		<b>(\$469,303)</b>
Funded Percentage		<b>109%</b>

***Plan assets are currently sufficient.***

***Plan Funding Requirement***

Annual contribution payable for 10 years commencing July 1, 2018 sufficient to amortize the funding deficiency	<b>N/A</b>
--	------------

**Actuarial Basis**

Interest rate	7.25% per annum
Mortality	UP 94 mortality (projected)
Cost of Living Adjustments	none
Retirement Age for Deferred Vested	65

**Oklahoma Municipal Retirement Fund  
Employee Retirement System of Muskogee, Oklahoma**

**FUNDED STATUS OF THE PLAN AS OF JULY 1, 2017**

	<u>Count</u>	<u>Present Value of Benefits</u>
Employees with frozen benefits	0	\$0
Retirees	1	7,762
Survivors	0	0
Disabled	0	0
Deferred Vested	0	0
Nonvested (refunds due)	<u>0</u>	<u>0</u>
Totals	1	<b>\$7,762</b>
Market Value of Assets		<b>\$41,187</b>
Deficiency (Surplus)		<b>(\$33,425)</b>
Funded Percentage		<b>531%</b>

***Plan assets are currently sufficient.***

***Plan Funding Requirement***

Annual contribution payable for 10 years commencing July 1, 2018 sufficient to amortize the funding deficiency	<b>N/A</b>
--	------------

**Actuarial Basis**

Interest rate	7.25% per annum
Mortality	UP 94 mortality (projected)
Cost of Living Adjustments	3% per annum
Retirement Age for Deferred Vested	65

Oklahoma Municipal Retirement Fund  
Employee Retirement System of Newkirk, Oklahoma

FUNDED STATUS OF THE PLAN AS OF JULY 1, 2017

	<u>Count</u>	<u>Present Value of Benefits</u>
Employees with frozen benefits	5	\$257,425
Retirees	12	1,075,634
Survivors	1	109,550
Disabled	1	181,530
Deferred Vested	2	235,953
Nonvested (refunds due)	<u>2</u>	<u>1,899</u>
Totals	23	<b>\$1,861,990</b>
Market Value of Assets		<b>\$1,350,099</b>
Deficiency (Surplus)		<b>\$511,892</b>
Funded Percentage		<b>73%</b>

***Plan assets are not currently sufficient.***

<b><i>Plan Funding Requirement</i></b>	
Annual contribution payable for 7 years commencing July 1, 2018 sufficient to amortize the funding deficiency	<b>\$95,813</b>

**Actuarial Basis**

Interest rate	7.25% per annum
Mortality	UP 94 mortality (projected)
Cost of Living Adjustments	none
Retirement Age for Deferred Vested	65

Oklahoma Municipal Retirement Fund  
Employee Retirement System of Norman, Oklahoma

FUNDED STATUS OF THE PLAN AS OF JULY 1, 2017

	<u>Count</u>	<u>Present Value of Benefits</u>
Employees with frozen benefits	0	\$0
Retirees	7	303,044
Survivors	0	0
Disabled	0	0
Deferred Vested	0	0
Nonvested (refunds due)	<u>0</u>	<u>0</u>
Totals	7	<b>\$303,044</b>
Market Value of Assets		<b>\$287,009</b>
Deficiency (Surplus)		<b>\$16,035</b>
Funded Percentage		<b>95%</b>

***Plan assets are not currently sufficient.***

<b><i>Plan Funding Requirement</i></b>	
Annual contribution payable for 10 years commencing July 1, 2018 sufficient to amortize the funding deficiency	<b>\$2,309</b>

**Actuarial Basis**

Interest rate	7.25% per annum
Mortality	UP 94 mortality (projected)
Cost of Living Adjustments	none
Retirement Age for Deferred Vested	65



Oklahoma Municipal Retirement Fund  
Employee Retirement System of Stillwater, Oklahoma

FUNDED STATUS OF THE PLAN AS OF JULY 1, 2017

	<u>Count</u>	<u>Present Value of Benefits</u>
Employees with frozen benefits	0	\$0
Retirees	2	24,305
Survivors	0	0
Disabled	0	0
Deferred Vested	0	0
Nonvested (refunds due)	<u>0</u>	<u>0</u>
Totals	2	<b>\$24,305</b>
Market Value of Assets		<b>\$8,810,445</b>
Deficiency (Surplus)		<b>(\$8,786,140)</b>
Funded Percentage		<b>36250%</b>

*Plan assets are currently sufficient.*

<b>Plan Funding Requirement</b>	
Annual contribution payable for 10 years commencing July 1, 2018 sufficient to amortize the funding deficiency	<b>N/A</b>

**Actuarial Basis**

Interest rate	7.25% per annum
Mortality	UP 94 mortality (projected)
Cost of Living Adjustments	3% per annum
Retirement Age for Deferred Vested	65

**Oklahoma Municipal Retirement Fund  
Employee Retirement System of Stillwater Medical Center, Oklahoma**

**FUNDED STATUS OF THE PLAN AS OF JULY 1, 2017**

	<u>Count</u>	<u>Present Value of Benefits</u>
Employees with frozen benefits	0	\$0
Retirees	1	42,963
Survivors	0	0
Disabled	0	0
Deferred Vested	0	0
Nonvested (refunds due)	<u>0</u>	<u>0</u>
Totals	1	<b>\$42,963</b>
Market Value of Assets		<b>\$768,862</b>
Deficiency (Surplus)		<b>(\$725,899)</b>
Funded Percentage		<b>1790%</b>

***Plan assets are currently sufficient.***

***Plan Funding Requirement***

Annual contribution payable for 10 years commencing July 1, 2018 sufficient to amortize the funding deficiency	<b>N/A</b>
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**Actuarial Basis**

Interest rate	7.25% per annum
Mortality	UP 94 mortality (projected)
Cost of Living Adjustments	3% per annum
Retirement Age for Deferred Vested	65

**Oklahoma Municipal Retirement Fund  
Employee Retirement System of Tecumseh, Oklahoma**

**FUNDED STATUS OF THE PLAN AS OF JULY 1, 2017**

	<u>Count</u>	<u>Present Value of Benefits</u>
Employees with frozen benefits	0	\$0
Retirees	3	98,284
Survivors	0	0
Disabled	2	33,006
Deferred Vested	2	13,625
Nonvested (refunds due)	<u>23</u>	<u>29,197</u>
Totals	30	<b>\$174,112</b>
Market Value of Assets		<b>\$143,567</b>
Deficiency (Surplus)		<b>\$30,545</b>
Funded Percentage		<b>82%</b>

***Plan assets are not currently sufficient.***

***Plan Funding Requirement***

Annual contribution payable for 5 years commencing July 1, 2018 sufficient to amortize the funding deficiency	<b>\$7,500</b>
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**Actuarial Basis**

Interest rate	7.25% per annum
Mortality	UP 94 mortality (projected)
Cost of Living Adjustments	none
Retirement Age for Deferred Vested	65

## **D Development of the Actuarial Value of Assets**

This section shows the development of the actuarial value of assets as of July 1, 2017.

For pension plans with active participants accruing benefits, the actuarial value of assets is related to market value, but smoothed to reduce the volatility of contribution requirements. The market value of plan assets is compared to the expected value based on the prior year market value to determine the investment gain or loss for the year. This gain or loss is then recognized ratably over a 5-year period beginning with the year ending on that valuation date.

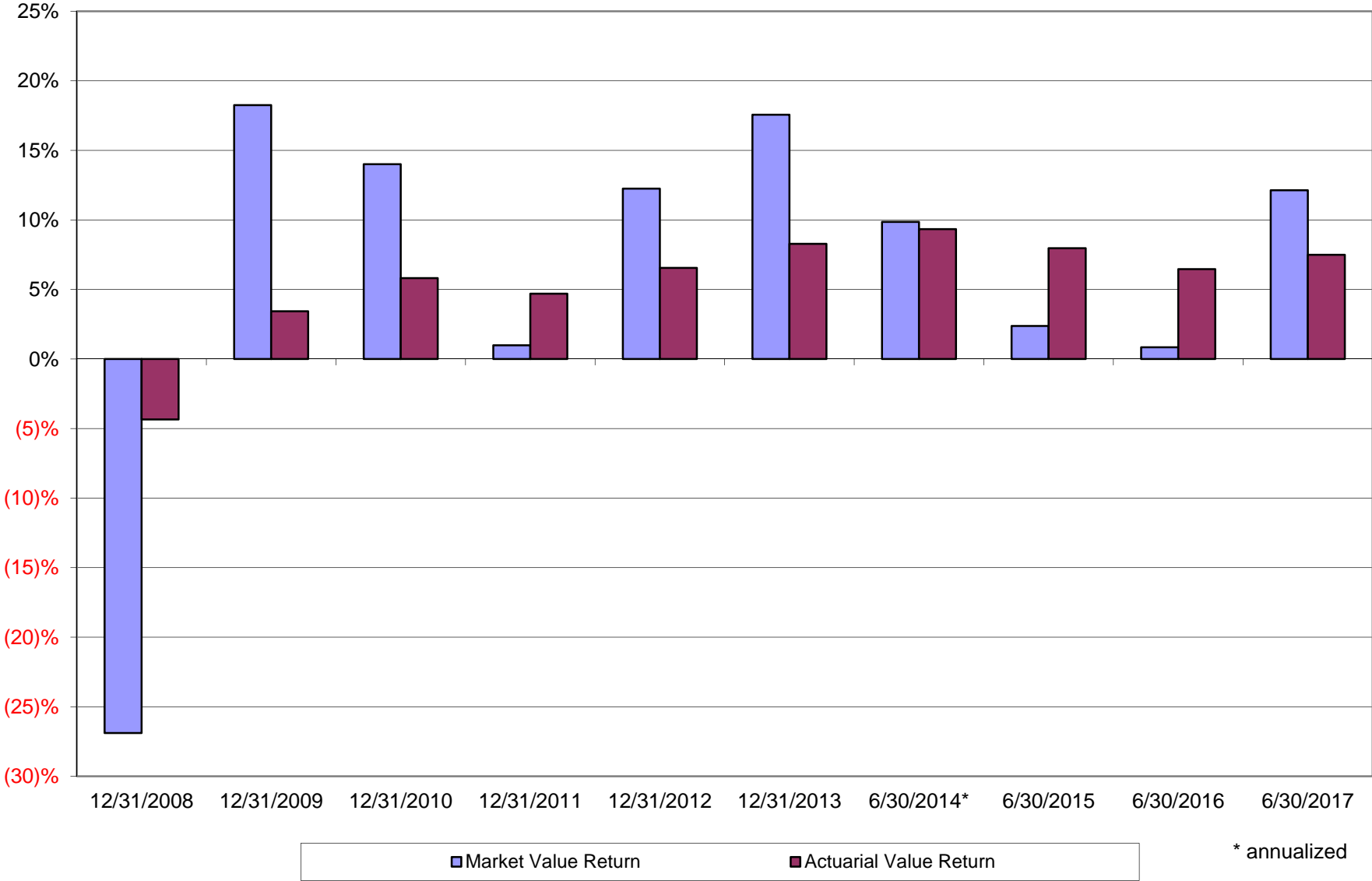
The actuarial value of assets is equal to the market value of assets, plus any unrecognized investment losses (or minus any unrecognized investment gains), subject to a 30% corridor. If the actuarial asset value would otherwise be outside this 30% corridor, it is instead equal to the relevant corridor limit.

For pension plans with no active participants accruing benefits, and for all retiree medical plans, the actuarial value of assets is equal to the current market value. All investment gains and losses are fully recognized on the valuation date.

For most plans, the actuarial value of assets also serves as the valuation assets. In a hybrid plan, however, hybrid contributions are used to provide additional benefits, and these amounts are not available to pay the regular retirement benefits. For plans that have adopted the hybrid provision, therefore, the total value of the employee hybrid accounts (accumulated hybrid contributions with earnings) is subtracted from the actuarial value of assets to determine valuation assets.

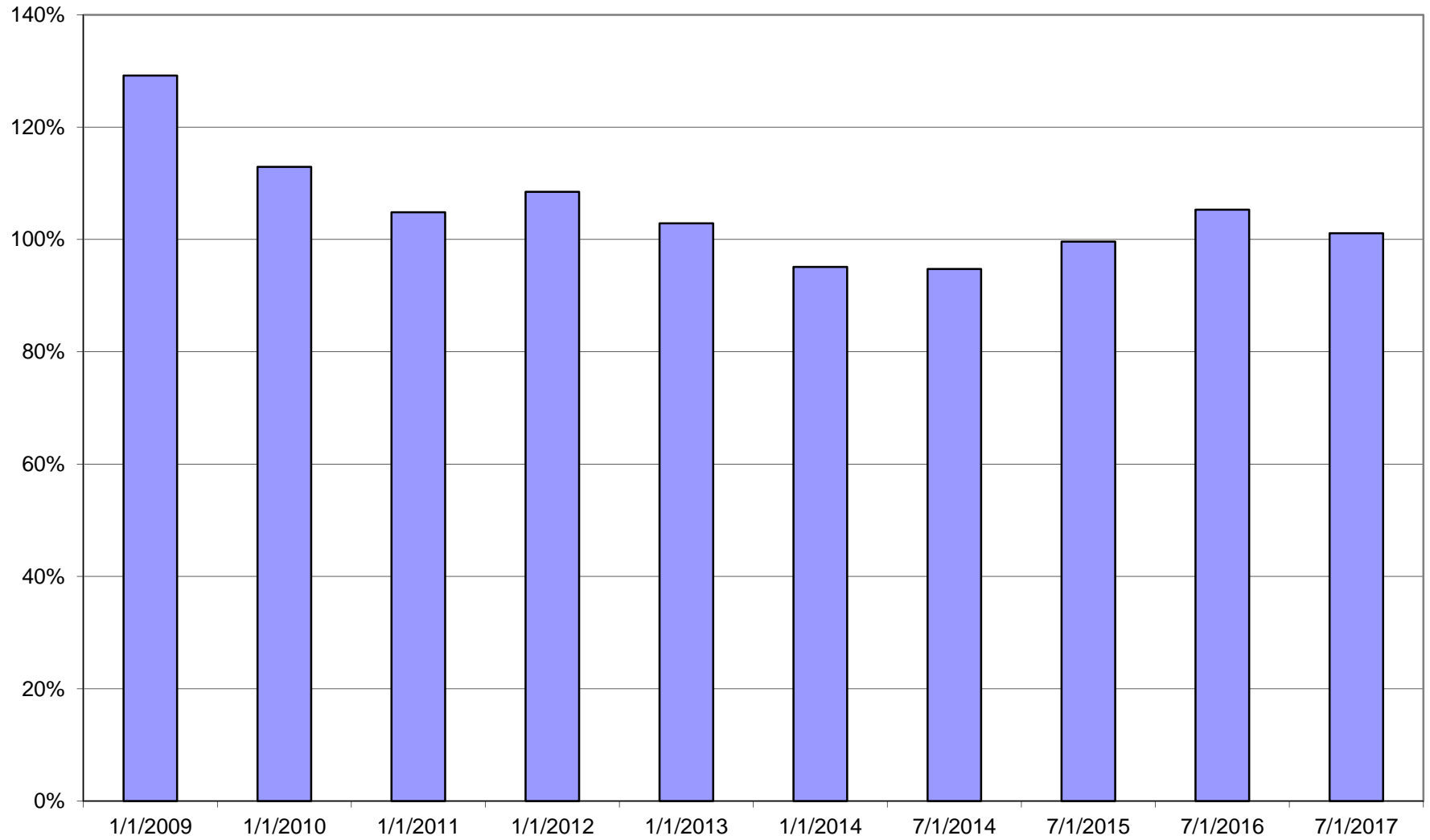
Oklahoma Municipal Retirement Fund

Historical Return on Plan Assets



Oklahoma Municipal Retirement Fund

**Actuarial Value of Assets as Percent of Market Value**



Oklahoma Municipal Retirement Fund

Exhibit D

DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS

City	Market Value of Assets as of 7/1/2015	Actuarial Value of Assets as of 7/1/2015	Market Value of Assets as of 7/1/2016	Actuarial Value of Assets as of 7/1/2016	Contributions			Assumed Yield at Valuation Rate (7.5%)	Expected Market Value	Market Value of Assets as of 7/1/2017	Investment (Gain)/Loss	Cumulative Unrec Invmnt (Gains)/Losses	Actuarial Value of Assets as of 7/1/2017
					Employer	Employee	Distributions						
Adair	220,980	219,777	221,134	233,213	10,201	6,152	(15,172)	16,629	238,944	249,244	(10,300)	2,853	252,097
Altus	19,139,884	19,054,106	18,415,252	19,439,773	703,894	203,438	(1,207,910)	1,369,872	19,484,547	20,343,560	(859,013)	255,371	20,598,931
Alva	3,403,595	3,390,176	3,380,331	3,566,088	127,780	38,621	(376,917)	245,630	3,415,445	3,558,961	(143,516)	54,128	3,613,089
Antlers	1,019,484	1,015,055	1,031,605	1,087,778	43,380	22,712	(32,447)	78,632	1,143,883	1,192,460	(48,576)	11,792	1,204,252
Ardmore	24,339,085	24,246,874	25,209,191	26,592,253	782,365	499,382	(745,201)	1,910,810	27,656,546	28,851,291	(1,194,745)	270,573	29,121,864
Bartlesville	14,816,750	14,776,509	15,298,668	16,145,324	1,118,024	317,015	(1,016,605)	1,163,091	16,880,194	17,599,884	(719,690)	173,279	17,773,163
Bethany *	23,191,056	23,052,338	22,989,373	24,225,638	558,723	164,120	(1,161,143)	1,707,767	24,258,841	25,316,823	(1,057,982)	298,001	25,614,824
Bethany/Warr Acres	2,272,151	2,261,238	2,243,231	2,365,977	52,752	18,076	(121,640)	166,337	2,358,756	2,461,849	(103,093)	30,106	2,491,955
Billings	220,543	220,008	233,799	246,395	9,748	5,193	(4,295)	17,934	262,378	273,500	(11,121)	2,248	275,747
Binger	154,865	154,388	164,945	173,841	11,050	3,552	(6,616)	12,670	185,601	193,343	(7,742)	1,637	194,980
Blackwell	5,104,802	4,920,294	5,268,228	5,433,557	273,110	99,999	(302,515)	397,764	5,736,586	5,981,476	(244,890)	3,011	5,984,487
Blair	359,372	358,295	378,693	399,173	10,685	4,610	0	28,976	422,963	440,987	(18,024)	3,710	444,697
Boise City	1,461,359	1,453,857	1,421,883	1,499,798	52,926	0	(92,642)	105,152	1,487,319	1,552,019	(64,700)	20,190	1,572,209
Bokchito	111,634	112,258	122,740	129,714	10,489	5,756	(11,977)	9,366	136,373	141,978	(5,605)	1,254	143,232
Braman	257,163	255,403	228,456	242,241	12,515	3,032	(41,833)	16,148	218,318	227,901	(9,583)	4,944	232,845
Bristow	3,380,687	3,340,700	3,288,170	3,462,472	70,914	42,307	(259,593)	241,124	3,382,922	3,529,105	(146,183)	49,069	3,578,174
Broken Bow	4,134,957	4,120,046	4,342,499	4,575,777	263,550	110,891	(152,172)	334,015	4,898,583	5,106,662	(208,079)	41,655	5,148,317
Buffalo	980,664	976,661	936,467	988,089	13,363	7,795	(69,596)	68,419	956,448	998,508	(42,060)	14,643	1,013,151
Burns Flat	543,297	542,665	593,375	625,225	28,295	13,481	(21,367)	45,268	659,053	687,401	(28,349)	4,975	692,376
Calera	743,196	741,784	797,240	840,042	52,400	22,521	(48,808)	60,772	884,125	921,870	(37,745)	7,300	929,170
Central Okla MCD	1,340,820	1,342,665	1,408,138	1,486,961	118,954	15,607	(69,691)	108,043	1,581,050	1,650,249	(69,199)	13,539	1,663,788
Chandler	2,103,115	2,097,385	2,190,966	2,312,226	90,091	46,227	(43,714)	167,795	2,451,365	2,555,972	(104,607)	23,209	2,579,181
Checotah	1,876,348	1,868,192	1,898,675	2,004,126	90,002	37,605	(113,272)	142,938	2,055,948	2,145,043	(89,094)	23,005	2,168,048
Cherokee & CDA	239,560	241,134	261,918	276,759	41,287	10,322	(22,069)	20,752	312,210	325,195	(12,986)	1,939	327,134
Chickasha	15,766,336	15,696,365	15,468,260	16,315,972	256,647	95,379	(983,514)	1,136,439	15,973,210	16,676,743	(703,533)	216,811	16,893,554
Claremore	15,982,984	15,921,413	15,857,377	16,723,225	281,445	233,785	(933,036)	1,173,636	16,613,207	17,339,150	(725,943)	210,373	17,549,523
Cleo Springs	162,051	161,449	168,414	177,504	4,180	1,529	(1,017)	12,807	185,912	193,885	(7,973)	1,740	195,626
Cleveland	2,333,519	2,325,286	2,328,902	2,456,332	107,684	39,186	(190,618)	173,027	2,458,181	2,564,561	(106,380)	30,610	2,595,171
Clinton	11,542,079	11,496,046	11,458,268	12,084,928	219,501	115,049	(567,299)	850,642	12,076,159	12,600,364	(524,205)	153,245	12,753,610
Collinsville	2,934,117	2,924,763	2,999,438	3,159,291	139,128	54,454	(469,592)	214,607	2,938,034	3,053,871	(115,836)	53,146	3,107,017

Oklahoma Municipal Retirement Fund

Exhibit D

DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS

City	Market Value of Assets as of 7/1/2015	Actuarial Value of Assets as of 7/1/2015	Market Value of Assets as of 7/1/2016	Actuarial Value of Assets as of 7/1/2016	Contributions			Assumed Yield at Valuation Rate (7.5%)	Expected Market Value	Market Value of Assets as of 7/1/2017	Investment (Gain)/Loss	Cumulative Unrec Invt (Gains)/Losses	Actuarial Value of Assets as of 7/1/2017
					Employer	Employee	Distributions						
Copan	41,832	42,300	45,946	48,729	10,488	2,583	(13,286)	3,438	49,170	51,077	(1,907)	700	51,777
Cordell	4,454,898	4,437,733	4,425,533	4,667,796	99,937	0	(208,019)	327,862	4,645,313	4,846,882	(201,569)	60,133	4,907,015
Cushing	19,497,788	19,537,295	18,902,128	20,028,933	323,497	0	(1,072,699)	1,389,565	19,542,491	20,400,326	(857,835)	282,900	20,683,226
Davis	1,894,767	1,875,801	1,867,872	1,965,716	69,544	41,036	(166,681)	137,987	1,949,757	2,033,335	(83,579)	26,213	2,059,548
Del City +	15,491,156	15,438,616	15,303,113	16,140,377	461,319	197,710	(1,032,662)	1,133,722	16,063,203	16,764,037	(700,834)	207,958	16,971,996
Dewey	1,462,492	1,459,376	1,476,321	1,557,122	69,369	23,123	(70,089)	111,564	1,610,288	1,679,623	(69,335)	17,598	1,697,221
Drumright	2,392,370	2,368,971	2,310,695	2,437,769	71,266	34,595	(213,554)	169,264	2,372,266	2,476,496	(104,230)	34,655	2,511,151
Durant	19,482,687	19,412,869	19,523,836	20,593,310	467,299	186,706	(720,157)	1,461,807	20,919,491	21,826,366	(906,876)	244,171	22,070,537
El Reno	3,232,693	3,225,419	3,456,862	3,646,409	292,173	151,647	(210,812)	268,002	3,957,873	4,125,972	(168,100)	30,725	4,156,697
Eufaula	1,260,415	1,255,590	1,150,862	1,219,319	28,762	18,302	(70,875)	85,422	1,212,472	1,265,578	(53,106)	19,725	1,285,303
Fort Cobb	214,038	213,376	222,933	235,125	8,190	3,921	(25,562)	16,216	225,698	235,537	(9,839)	2,859	238,396
Foss Reservoir Public Woi	849,222	846,588	869,297	916,033	39,108	9,983	(106,819)	63,032	874,602	913,472	(38,870)	11,042	924,514
Frederick	3,469,232	3,454,504	3,452,899	3,641,655	137,544	45,813	(203,620)	258,208	3,690,844	3,850,477	(159,632)	44,177	3,894,654
Garber	54,470	54,352	58,064	61,209	738	4,539	(1,647)	4,491	66,185	68,946	(2,760)	569	69,515
Geary	1,137,184	1,133,611	1,182,064	1,246,096	44,300	19,031	(31,235)	89,858	1,304,018	1,359,937	(55,919)	12,421	1,372,359
Goodwell	225,113	224,115	232,083	244,840	13,307	7,325	(15,301)	17,606	255,020	265,792	(10,771)	2,645	268,437
Gore and Gore PWA	475,246	474,188	527,286	555,114	37,029	20,214	(18,150)	41,012	607,392	632,895	(25,503)	3,969	636,864
Granite	1,298,517	1,294,171	1,317,032	1,388,463	48,805	11,717	(45,628)	99,336	1,431,262	1,492,842	(61,580)	15,395	1,508,238
Guthrie	5,442,841	5,300,120	5,517,546	5,737,039	154,484	76,219	(295,131)	411,400	5,864,517	6,126,494	(261,977)	25,108	6,151,602
Harrah	1,863,482	1,858,723	1,957,430	2,062,824	104,262	39,098	(56,935)	150,048	2,193,903	2,286,832	(92,929)	19,523	2,306,356
Healdton	1,272,318	1,264,819	1,262,044	1,330,733	45,517	29,621	(66,989)	94,959	1,365,152	1,423,385	(58,233)	16,544	1,439,929
Henryetta	3,021,763	3,004,234	2,998,021	3,161,073	118,259	57,161	(483,219)	213,309	2,903,531	3,043,742	(140,211)	38,779	3,082,522
Hooker	924,370	920,783	959,633	1,011,520	64,499	15,767	(90,890)	71,574	1,020,583	1,064,698	(44,116)	11,118	1,075,816
Hulbert	538,079	536,599	532,486	563,658	31,675	11,367	(46,799)	39,796	568,524	592,958	(24,434)	7,903	600,861
Hydro	349,744	348,842	342,019	361,391	21,404	7,492	(41,404)	25,182	354,694	368,268	(13,574)	6,639	374,907
Kansas	97,008	96,708	101,443	106,976	4,674	2,698	(3,906)	7,738	112,648	117,415	(4,767)	1,087	118,502
Kiefer	27,854	28,494	47,705	49,844	15,418	6,036	(9,614)	4,022	63,566	66,110	(2,544)	(467)	65,643
Kingston	543,082	541,505	562,621	592,798	42,267	18,982	(47,936)	42,696	618,631	644,444	(25,814)	6,546	650,991
Krebs & Krebs Utility Auth.	345,201	343,660	358,065	377,438	24,291	12,268	(25,683)	27,263	396,204	413,176	(16,972)	3,779	416,955
Laverne	982,075	980,250	1,010,699	1,065,635	61,637	20,730	(44,291)	77,230	1,126,005	1,173,555	(47,550)	11,290	1,184,845



Oklahoma Municipal Retirement Fund

Exhibit D

DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS

City	Market Value of Assets as of 7/1/2015	Actuarial Value of Assets as of 7/1/2015	Market Value of Assets as of 7/1/2016	Actuarial Value of Assets as of 7/1/2016	Contributions			Assumed Yield at Valuation Rate (7.5%)	Expected Market Value	Market Value of Assets as of 7/1/2017	Investment (Gain)/Loss	Cumulative Unrec Invt (Gains)/Losses	Actuarial Value of Assets as of 7/1/2017
					Employer	Employee	Distributions						
Lindsay	4,028,905	4,021,269	3,953,590	4,178,062	154,657	57,999	(189,039)	297,405	4,274,611	4,460,115	(185,504)	54,368	4,514,483
Madill	2,480,763	2,472,275	2,504,888	2,641,872	83,819	44,375	(195,076)	185,358	2,623,364	2,740,588	(117,224)	29,951	2,770,539
Mannford	2,608,231	2,599,620	2,631,402	2,775,411	176,056	55,491	(301,648)	194,726	2,756,027	2,876,139	(120,113)	34,240	2,910,379
Marietta	984,855	982,122	991,285	1,045,564	29,502	31,226	(59,486)	74,393	1,066,920	1,112,687	(45,767)	12,460	1,125,147
Marietta PWA	385,970	385,972	379,170	400,220	41,068	9,280	(57,980)	28,152	399,690	416,486	(16,796)	5,918	422,404
McLoud	530,067	528,410	561,682	591,620	40,254	16,993	(27,222)	43,252	634,959	661,597	(26,638)	5,425	667,021
Medford *	2,383,579	2,376,283	2,493,945	2,627,794	128,774	19,078	(56,838)	190,459	2,775,417	2,895,234	(119,816)	23,858	2,919,092
Meeker	611,096	608,708	612,529	646,135	29,178	9,546	(44,010)	45,741	652,985	681,582	(28,596)	7,390	688,972
Miami	9,549,376	9,621,384	9,470,500	10,082,399	650,799	183,989	(1,092,673)	700,617	9,913,233	10,342,425	(429,192)	162,182	10,504,607
Mooreland	1,306,705	1,300,381	1,265,518	1,336,191	48,566	17,921	(142,503)	92,063	1,281,566	1,337,651	(56,085)	19,842	1,357,493
Mountain Park MCD	781,409	779,002	789,550	832,916	71,738	13,535	(67,644)	59,877	867,056	903,594	(36,538)	9,948	913,543
Muldrow	1,738,566	1,730,222	1,779,271	1,875,538	104,476	41,790	(117,058)	134,541	1,943,019	2,027,065	(84,046)	19,792	2,046,857
Mustang	5,980,580	5,955,099	6,169,698	6,505,357	269,852	120,163	(970,417)	440,962	6,030,259	6,288,095	(257,837)	94,587	6,382,682
Nichols Hills *	9,001,536	9,015,857	9,049,530	9,574,657	161,647	222,265	(618,599)	669,914	9,484,758	9,903,238	(418,481)	125,674	10,028,912
Noble	1,591,841	1,587,796	1,676,328	1,766,876	114,035	37,280	(68,095)	128,845	1,888,393	1,968,403	(80,010)	16,221	1,984,624
Nowata	1,816,267	1,804,640	1,843,177	1,940,446	49,846	41,678	(105,698)	137,707	1,966,709	2,053,428	(86,719)	20,177	2,073,606
Oilton	333,911	331,578	344,500	362,287	14,258	8,953	(21,125)	25,916	372,502	388,418	(15,917)	3,672	392,090
Okeene	907,013	904,890	922,092	972,889	24,058	10,262	(33,704)	69,180	991,888	1,034,742	(42,854)	11,100	1,045,842
Okemah	978,513	976,910	1,045,797	1,102,375	77,077	32,230	(34,655)	81,234	1,201,683	1,251,724	(50,041)	9,587	1,261,312
Oklahoma Municipal Leagu	6,469,964	6,433,877	6,419,087	6,768,560	135,000	0	(235,900)	477,648	6,795,835	7,089,911	(294,076)	87,278	7,177,189
OkMRF Staff	747,639	747,278	844,114	889,184	86,434	28,066	(5,799)	67,385	1,020,199	1,061,663	(41,463)	5,538	1,067,201
Okmulgee	14,471,649	14,407,477	14,328,759	15,112,633	314,744	0	(560,376)	1,065,446	15,148,572	15,810,000	(661,428)	188,043	15,998,043
Owasso	13,026,044	12,971,147	13,467,300	14,190,851	495,503	296,884	(363,033)	1,026,148	14,922,802	15,562,628	(639,826)	139,562	15,702,190
Pawnee	2,288,493	2,279,869	2,351,641	2,478,526	89,394	58,830	(99,414)	178,203	2,578,654	2,687,056	(108,401)	27,766	2,714,821
Perkins	984,529	980,557	979,948	1,033,978	29,819	18,975	(49,362)	73,475	1,052,854	1,098,505	(45,650)	12,437	1,110,942
Perry	3,546,305	3,533,119	3,521,829	3,713,478	177,453	81,920	(332,178)	261,407	3,710,432	3,882,024	(171,593)	37,649	3,919,674
Piedmont	131,562	134,994	197,366	207,675	43,330	25,996	(2,800)	17,297	281,190	292,282	(11,092)	(1,330)	290,952
Pond Creek	692,914	691,954	753,957	793,592	106,589	15,988	(32,688)	59,918	903,763	940,534	(36,770)	5,732	946,266
Porum	224,446	223,807	253,671	267,148	26,103	8,390	(8,586)	19,997	299,576	311,858	(12,282)	1,752	313,610
Poteau	5,944,358	5,922,186	5,942,819	6,269,689	171,562	72,913	(351,252)	441,707	6,277,749	6,550,608	(272,858)	78,253	6,628,861

Oklahoma Municipal Retirement Fund

Exhibit D

DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS

City	Market Value of Assets as of 7/1/2015	Actuarial Value of Assets as of 7/1/2015	Market Value of Assets as of 7/1/2016	Actuarial Value of Assets as of 7/1/2016	Contributions			Assumed Yield at Valuation Rate (7.5%)	Expected Market Value	Market Value of Assets as of 7/1/2017	Investment (Gain)/Loss	Cumulative Unrec Invt (Gains)/Losses	Actuarial Value of Assets as of 7/1/2017
					Employer	Employee	Distributions						
Ratliff City	82,565	82,619	96,585	101,578	9,931	4,416	(2,279)	7,696	116,350	121,260	(4,910)	331	121,590
Ringling	143,262	142,247	144,054	151,510	15,196	4,169	(17,352)	10,880	156,947	163,498	(6,551)	1,774	165,272
Roland	818,122	815,495	861,952	908,981	66,749	40,022	(28,639)	67,576	1,007,660	1,047,271	(39,610)	9,774	1,057,045
Sallisaw	13,081,785	13,031,122	13,107,289	13,824,590	604,182	259,627	(1,001,518)	977,883	13,947,463	14,552,216	(604,753)	167,114	14,719,330
Seiling	806,647	803,694	803,232	847,167	13,660	16,651	(31,365)	60,203	862,380	899,850	(37,469)	10,045	909,895
Shawnee +	35,165,804	35,035,255	33,948,398	35,855,907	510,788	141,609	(1,942,998)	2,497,732	35,155,529	36,704,496	(1,548,967)	505,008	37,209,504
Skiatook	369,078	377,491	622,131	651,129	187,633	88,321	(32,374)	55,794	921,505	957,333	(35,828)	(7,361)	949,972
Spencer +	997,882	993,606	987,661	1,041,812	26,452	23,030	(64,693)	73,504	1,045,955	1,090,816	(44,861)	13,750	1,104,566
Spiro	1,017,971	1,013,892	998,571	1,054,211	31,005	15,461	(76,055)	73,783	1,042,765	1,088,535	(45,771)	14,133	1,102,668
Stilwell	7,516,008	7,482,611	7,426,561	7,845,667	1,256,166	96,017	(561,431)	586,645	8,803,958	9,106,808	(302,850)	134,903	9,241,711
Stratford	237,183	236,562	255,054	268,475	7,839	5,501	(8,028)	19,328	279,694	291,756	(12,062)	2,280	294,037
Stroud	2,926,511	2,918,606	2,964,775	3,125,185	165,523	62,071	(257,142)	221,250	3,156,477	3,294,677	(138,200)	35,262	3,329,939
Sulphur	4,165,722	4,147,350	4,213,352	4,442,804	154,988	48,434	(192,003)	316,430	4,541,201	4,737,569	(196,369)	50,806	4,788,376
Talihina & TPWA	644,628	642,519	667,557	703,935	11,202	8,052	(38,291)	49,353	697,872	727,895	(30,024)	8,250	736,145
Thomas	857,623	853,147	851,759	897,425	44,607	13,932	(84,069)	62,924	889,152	927,483	(38,331)	11,732	939,215
Tipton	168,987	168,997	183,724	193,761	9,549	3,990	0	14,287	211,551	220,333	(8,782)	1,661	221,994
Tishomingo	362,168	360,354	373,087	392,748	21,587	12,430	(24,292)	28,346	411,158	428,866	(17,707)	3,835	432,701
Tonkawa	2,529,183	2,515,692	2,438,534	2,572,811	60,568	27,603	(206,431)	178,455	2,498,730	2,608,523	(109,793)	36,597	2,645,120
Velma	323,497	322,472	296,571	315,259	7,043	3,347	(20,864)	21,850	307,948	321,375	(13,427)	5,823	327,199
Vian	182,985	182,549	201,703	212,296	17,014	12,096	(9,826)	15,851	236,837	246,623	(9,786)	1,506	248,129
Vinita	7,773,187	7,730,157	7,687,063	8,104,964	302,679	79,163	(508,391)	571,784	8,132,298	8,485,936	(353,638)	102,779	8,588,714
Wakita	227,133	226,139	212,313	224,697	2,556	1,317	(19,285)	15,346	212,247	221,606	(9,359)	3,732	225,338
Warr Acres	7,129,496	7,124,686	7,302,068	7,703,837	261,283	62,063	(457,343)	542,630	7,710,701	8,045,894	(335,193)	87,913	8,133,807
Watonga	3,749,451	3,735,226	3,675,205	3,875,726	237,106	49,996	(394,876)	271,599	3,839,029	4,008,580	(169,551)	49,507	4,058,087
Waukomis	380,258	379,019	381,823	402,919	11,919	14,832	(28,228)	28,581	408,927	425,944	(17,016)	5,418	431,362
Waurika	981,280	976,692	961,706	1,014,782	21,285	12,803	(65,012)	70,968	1,001,751	1,045,505	(43,754)	13,612	1,059,117
Weatherford	3,806,249	3,794,522	4,148,456	4,371,874	325,440	181,555	(220,678)	321,871	4,756,644	4,958,241	(201,596)	33,265	4,991,505
Webbers Falls	111,608	111,906	121,821	128,473	16,312	3,995	(8,599)	9,576	143,105	149,054	(5,949)	1,001	150,055
Wellston	442,752	441,087	447,938	472,174	20,342	9,258	(21,710)	33,891	489,719	510,595	(20,877)	5,309	515,904
Westville Utility Authority	463,136	461,390	492,587	518,893	19,217	18,718	(13,316)	37,867	555,073	578,874	(23,801)	4,207	583,081

## DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS

City	Market Value of Assets as of 7/1/2015	Actuarial Value of Assets as of 7/1/2015	Market Value of Assets as of 7/1/2016	Actuarial Value of Assets as of 7/1/2016	Contributions			Assumed Yield at Valuation Rate (7.5%)	Expected Market Value	Market Value of Assets as of 7/1/2017	Investment (Gain)/Loss	Cumulative Unrec Invt (Gains)/Losses	Actuarial Value of Assets as of 7/1/2017
					Employer	Employee	Distributions						
Wetumka	1,298,959	1,293,765	1,323,632	1,394,944	96,803	20,342	(117,590)	99,256	1,422,442	1,483,285	(60,843)	16,225	1,499,511
Wilburton			0	0	29,885	13,793	(407)	1,623	44,894	45,793	(899)	(719)	45,073
Yale	1,335,073	1,332,312	1,299,486	1,371,885	39,157	23,950	(99,555)	96,095	1,359,133	1,418,292	(59,158)	18,940	1,437,231
Yukon	21,084,102	21,030,015	21,729,802	22,911,719	1,032,268	172,045	(1,354,360)	1,624,108	23,203,864	24,207,646	(1,003,782)	252,225	24,459,871
Bartlesville **	494,682	494,682	464,835	464,835	44,363	0	(59,140)	34,308	484,366	505,208	(20,842)		505,208
Mannford **	59,231	59,231	55,894	55,894	490	0	(2,250)	4,126	58,260	60,769	(2,509)		60,769
Weatherford **	0	0	32,630	32,630	35,149	0	(8,162)	3,459	63,077	65,375	(2,298)		65,375
Chouteau *	12,329	12,329	10,630	10,630	1,493	0	(2,336)	766	10,553	10,971	(419)		10,971
Comanche *	30,515	30,515	23,183	23,183	49,920	0	(78,495)	667	(4,725)	0	(4,725)		0
Fairfax *	227,826	227,826	226,884	226,884	0	0	(2,502)	16,922	241,305	251,837	(10,533)		251,837
Guymon *	6,915,762	6,892,928	5,697,753	5,697,753	0	0	(380,019)	413,081	5,730,814	5,986,850	(256,036)		5,986,850
Muskogee *	41,055	41,055	39,085	39,085	0	0	(2,239)	2,847	39,693	41,187	(1,493)		41,187
Newkirk *	1,524,486	1,524,486	1,332,284	1,332,284	30,000	0	(164,718)	94,869	1,292,436	1,350,099	(57,663)		1,350,099
Norman *	362,588	362,588	312,310	312,310	0	0	(59,147)	21,205	274,367	287,009	(12,642)		287,009
Stillwater *	7,810,054	7,810,054	7,859,686	7,859,686	0	0	(5,976)	589,252	8,442,963	8,810,445	(367,482)		8,810,445
Stillwater Medical Center *	711,814	711,814	700,619	700,619	0	0	(15,963)	51,948	736,603	768,862	(32,259)		768,862
Tecumseh *	152,275	152,275	140,009	140,009	7,248	0	(19,638)	10,036	137,655	143,567	(5,912)		143,567
<b>Total</b>	<b>488,528,392</b>	<b>486,652,406</b>	<b>488,247,370</b>	<b>514,068,493</b>	<b>18,218,333</b>	<b>6,445,902</b>	<b>(29,476,308)</b>	<b>36,438,100</b>	<b>519,873,397</b>	<b>542,379,412</b>	<b>(22,506,015)</b>	<b>5,993,774</b>	<b>548,373,186</b>

\* Frozen plan, or plan with only nonactive participants; the Actuarial Value of Assets is equal to the Market Value.

\*\* Retiree medical plan; the Actuarial Value of Assets is equal to the Market Value.

\* Hybrid city; hybrid account balances are subtracted from the Actuarial Value of Assets to determine the Valuation Assets.

## **E Summary of Plan Provisions and Actuarial Method and Assumptions**

This section outlines the plan provisions and actuarial method and assumptions used in the valuation.

The first exhibit outlines the provisions of the OkMRF Master Plan. The second exhibit outlines the provisions for the City of Bartlesville, which has not adopted the OkMRF Master Plan.

The following exhibits outline the two actuarial methods used to value plan obligations: the entry age normal cost method and the unit credit cost method. See Section D for a description of the actuarial methods used to value assets.

The final exhibit in this section presents the actuarial assumptions. Actuarial assumptions were revised this year based on a detailed analysis of the demographic experience of OkMRF member cities. Specifically, turnover rates, salary increase rates, and retirement rates were changed. In addition, in consultation with OkMRF's investment advisor, the long term assumed rate of return and the assumed cost-of-living adjustment (COLA) were both reduced 25 basis points. Revised assumptions in this exhibit are in bold text.

## Oklahoma Municipal Retirement Fund

### Summary of Plan Provisions

<b>Eligibility</b>	All regular, full-time employees of a participating employer except police, firefighters and other employees covered under a state system. Cities may elect to cover part-time employees.
<b>Probationary period</b>	Participation may begin immediately, or may commence after completion of a probationary period, as specified in the adoption agreement.
<b>Service</b>	
Credited service	The last period of continuous employment with the employer excluding any periods before the effective date of the plan specified in the adoption agreement. Cities may elect to limit the maximum service credited. Employees of Collinsville may receive additional credit for unused sick leave.
Vesting	Credited service plus transferred service from other OkMRF employers.
<b>Employee contributions</b>	As specified in the adoption agreement. The options that may be elected are the standard contribution rate, a fixed amount which is less than the standard contribution rate, a fixed percentage of the total contribution rate determined each year (but not in excess of the standard contribution rate), or no employee contributions. The standard contribution rates are:  <ul style="list-style-type: none"><li>- Plan AAA     6.00%</li><li>- Plan AA      5.25%</li><li>- Plan BB      4.50%</li><li>- Plan CC      3.75%</li><li>- Plan A       3.00%</li><li>- Plan B       2.25%</li><li>- Plan C       1.50%</li></ul>
<b>Service requirement for benefit eligibility</b>	5, 7 or 10 years of vesting service, as specified in the adoption agreement.
<b>Final Average Compensation</b>	The average of the five highest consecutive annual salaries out to the last 10 calendar years of service.
<b>Accrued Benefit</b>	The percentage of final average compensation specified in the adoption agreement, multiplied by the number of years of credited service. The percentages that may be elected are:  <ul style="list-style-type: none"><li>- Plan AAA     3.000%</li><li>- Plan AA      2.625%</li><li>- Plan BB      2.250%</li><li>- Plan CC      1.875%</li><li>- Plan A       1.500%</li><li>- Plan B       1.125%</li><li>- Plan C       0.750%</li></ul>

## Oklahoma Municipal Retirement Fund

### Summary of Plan Provisions

<b>Normal Retirement Age</b>	<p>Age 65 with service requirement fulfilled.</p> <p>If specified in the adoption agreement, normal retirement age for an employee with 30 years of vesting service may be as early as age 62.</p> <p>Also if specified in the adoption agreement, normal retirement age may be as early as 55 when the sum of an employee's age in years and number of years of credited service equals 80 or more, as provided under the Rule of 80 alternative.</p> <p>Four cities have adopted special retirement provisions not provided in the standard adoption agreements:</p> <ul style="list-style-type: none"><li>▪ For employees of Cushing, normal retirement age is 60 with 10 years of service.</li><li>▪ Normal retirement age for an employee of Altus with 25 years of vesting service may be as early as age 62.</li><li>▪ For an employee of Warr Acres normal retirement age may be as early as 55 when the sum of an employee's age in years and number of years of credited service equals 75 or more.</li><li>▪ For employees of Del City, normal retirement age is 60 with 7 years of service, or as early as age 55 with 20 years of vesting service.</li></ul>
<b>Normal Retirement Eligibility</b>	Termination of employment on or after normal retirement age.
<b>Normal Retirement Benefit</b>	The accrued benefit payable immediately.
<b>Early Retirement Eligibility</b>	Termination after age 55 with service requirement fulfilled.
<b>Early Retirement Benefit</b>	The accrued benefit payable starting at normal retirement age, or an actuarially reduced benefit starting at early retirement age.
<b>Disability Retirement Eligibility</b>	Total and permanent disability.
<b>Disability Retirement Benefit</b>	The accrued benefit is payable upon disablement without reduction for early payment.
<b>Termination of Service Before vesting</b>	Return of member contributions with interest.
<b>Termination of Service After vesting</b>	The accrued benefit payable starting at normal retirement age, or an actuarially reduced benefit starting at early retirement age.

## Oklahoma Municipal Retirement Fund

### Summary of Plan Provisions

#### In-service Death

Before vesting

Return of member contributions with interest.

After vesting (married participants only)

50% of the accrued benefit is payable to the spouse until death or remarriage. For employees of Bethany, this benefit is payable for life with 10 years certain.

After vesting (other participants)

50% of the accrued benefit is payable to the designated beneficiary for 60 or 120 months, as specified in the adoption agreement.

#### Payment Options

Normal form

The normal form of payment of the accrued benefit is a monthly lifetime annuity with 5 or 10 years certain, as specified in the adoption agreement.

Optional forms

Other annuity forms available on an actuarial equivalent basis are:

- Joint and 50% survivor annuity
- Joint and 66-2/3rds last survivor annuity (no longer allowed for employees of Chickasha)
- Joint and 100% survivor annuity
- If specified in the adoption agreement (with or without restrictions), a single lump sum payment

#### Cost of Living Option

If specified in the adoption agreement, benefits in payment status are adjusted each July 1st based on the percentage change in the CPI. The maximum increase in any year is 3%. For prior plan participants of Skiatook, the increase is 3% per year, regardless of the change in CPI.

#### Hybrid Option

If specified in the adoption agreement, any employee contributions designated as hybrid contributions are accumulated at the actual rate earned by the retirement fund and paid to the employee upon retirement in addition to the formula amount.

#### DROP Feature

If specified in the adoption agreement, after reaching age 65, an employee may start their pension, accumulating the payments with earnings as specified in the adoption agreement. This amount, and subsequent monthly payments, are payable upon retirement within 5 years of such election.

**Employee Retirement System Of  
Bartlesville, Oklahoma**

**SUMMARY OF PLAN PROVISIONS**

<b>Eligibility</b>	All regular, full-time employees except police, firefighters and other employees who are covered under an approved system, who joined the plan before 1/1/2010.
<b>Probationary period</b>	<ul style="list-style-type: none"><li>▪ Prior to 7/1/2006: 2 years.</li><li>▪ On or after 7/1/2006: none.</li></ul>
<b>Employee contributions</b>	<ul style="list-style-type: none"><li>▪ Prior to 7/1/2006: none.</li><li>▪ On or after 7/1/2006, but before 1/1/2010: 3% of pay.</li><li>▪ On or after 1/1/2010: 6% of pay.</li></ul>
<b>Service</b>	Participants receive service credit for benefit eligibility for all employment on or after joining the plan (subject to the plan's break in service rules), regardless of whether they opted out of the plan effective 1/1/2010.
<b>Accrued Benefit</b>	<p>The past service benefit plus the future service benefit:</p> <p><u>Past Service Benefit</u> is equal to 2.50% of base pay rate on 7/1/1978 times full years of service from hire to 7/1/1978. Available only to employees whose participation in the plan began before 7/1/1978.</p> <p><u>Future Service Benefit</u> is equal to the sum of: Accumulation of 2.50% of base pay rate in effect on each July 1 from 7/1/1978 through 7/1/2005. Benefit for a plan year is prorated if the employee does not complete the year. Accumulation of 2.50% of actual compensation received during plan years beginning 7/1/2006 and after. Employees who opted out of the plan effective 1/1/2010 accumulate no benefits on compensation earned on or after 1/1/2010.</p>
<b>Benefit Eligibility</b>	
Normal Retirement	Age 65. Normal retirement date is first of the month on or after age 65 and completion of 7 years of service.
Early Retirement	Age 55 with 7 years of service, or meeting the Rule of 80.
Disability Retirement	Total and permanent disability with 7 or more years of service.
Vested Termination	7 years of service.
Nonvested Termination	Not eligible for any other benefit.



**Employee Retirement System Of  
Bartlesville, Oklahoma**

**SUMMARY OF PLAN PROVISIONS**

**Benefit Amount**

Normal Retirement      The Accrued Benefit is payable as a life only annuity or another annuity option with actuarial reduction. An employee may elect to defer the start of this annuity.

Early Retirement      The Accrued Benefit is payable as a life only annuity starting at age 65. An employee may elect earlier payment as follows:

If age plus service equals 80 or more:  
The full benefit unreduced.

If age plus service are less than 80:  
Actuarially reduced (based on 6% interest and UP84 mortality).

Disability Retirement      The Accrued Benefit is payable during the period of disability up to age 65. An employee who becomes disabled after age 55 with less than 7 years of service is fully vested in the Accrued Benefit payable at age 65.

Termination      The accrued benefit payable at age 65, or at the participant's option, the actuarially reduced accrued benefit payable after age 55.

Nonvested Termination      Return of employee contributions with interest.

**Death Benefits**

Before vesting  
Return of employee contributions with interest.

After vesting (married participants)  
The surviving spouse receives 50% of the participant's accrued benefit for life or until remarriage.

After vesting (unmarried participants)  
The beneficiary receives 120 monthly payments in the amount of 50% of the participant's accrued benefit at the time of death.

**Payment Options**

Disability retirement benefits are payable during the participant's lifetime only. Benefits cease when the participant reaches age 65, at which time the participant becomes entitled to a normal retirement benefit equal to the accrued benefit.

If a disabled participant recovers from disability prior to age 65, disability retirement benefits cease. The participant is then entitled to the accrued benefit as a termination benefit.

Normal retirement, early retirement, and termination benefits may be received either as a life annuity, or an actuarially equivalent benefit under one of the following forms:

1. Life with 5, 10, 15 or 20 years certain
2. Joint and 100% survivor annuity (spouse only)
3. Joint and 100% survivor annuity with 5, 10 or 15 years certain.

Actuarial equivalency based on 6% interest, UP84 mortality.

Oklahoma Municipal Retirement Fund

**SUMMARY OF THE ACTUARIAL COST METHOD**

**(Entry Age Normal)**

Pension funding requirements are allocated to periods of time using the entry age normal cost method. Assets and liabilities reflect only benefits payable from the OkMRF Trust.

Under the entry age normal cost method, the normal cost is computed as the level percent of pay which, if paid from the time an employee became a participant until assumed retirement, would accumulate to a fund sufficient to pay all plan benefits.

The actuarial liability for active participants is the hypothetical accumulation with interest of prior normal costs less payments, from the employee's date of participation to present.

The actuarial liability for non-active participants is the present value of future benefits anticipated to be paid to current retirees, beneficiaries and deferred vested participants, discounted for interest and mortality, plus the accumulated employee contributions with interest for non-vested terminated participants.

The unfunded actuarial liability (UAL) is the excess of the total actuarial liability for active and non-active participants, over the actuarial value of plan assets. This amount (redetermined each year) is amortized as a level dollar amount over 30 years from the amortization base date. The amortization base date is initially set as the 2013 valuation date or, if later, the first amortization date after joining OkMRF. Experience gains (decreases in cost due to favorable experience), or experience losses (increases in cost due to adverse experience), attributable to deviations between the assumed and actual experience of the Plan, are amortized as part of the UAL.

The total annual cost for the year is the normal cost plus the amortization amount. This total cost is expressed as a percent of covered payroll to determine the total required contribution rate, which is then separated into the employee-paid and municipality-paid portions as specified in the adoption agreement.

If assets exceed the actuarial liability, the total annual cost for the year is the normal cost minus interest on the surplus assets. If the surplus subsequently is exhausted, either through changes in plan provisions or adverse experience, a new 30-year amortization base date is established at the first valuation date when the plan again has an unfunded actuarial liability.

Oklahoma Municipal Retirement Fund

**SUMMARY OF THE ACTUARIAL COST METHOD**

**(Unit Credit)**

Pension funding requirements are allocated to periods of time using the unit credit cost method.

Under the unit credit cost method, the normal cost is computed as the present value of the increase in accrued retirement income for each employee's service during the following year.

The actuarial liability of the plan is the present value of the accrued retirement income earned to date. Present values are discounted for interest, mortality, turnover, and retirement rates by age.

The actuarial liability for non-active participants is the present value of future benefits anticipated to be paid to current retirees, beneficiaries and deferred vested participants, discounted for interest and mortality.

The unfunded actuarial liability (UAL) is the excess of the total actuarial liability for active and non-active participants, over the actuarial value of plan assets. This amount (redetermined each year) is amortized as a level dollar amount over 30 years from the amortization base date. The amortization base date is the 2010 valuation date. Experience gains (decreases in cost due to favorable experience), or experience losses (increases in cost due to adverse experience), attributable to deviations between the assumed and actual experience of the Plan, are amortized as part of the UAL.

The total annual cost for the year is the normal cost plus the amortization amount. This total cost is expressed as a percent of covered payroll to determine the total required contribution rate, which is then separated into the employee-paid and municipality-paid portions as specified in the plan document.

If assets exceed the actuarial liability, the total annual cost for the year is the normal cost minus interest on the surplus assets. If the surplus subsequently is exhausted, either through changes in plan provisions or adverse experience, a new 30-year amortization base date is established at the first valuation date when the plan again has an unfunded actuarial liability.

**Oklahoma Municipal Retirement Fund**

**SUMMARY OF ACTUARIAL ASSUMPTIONS**

<b>Interest Rates</b>	<b>Purpose</b>	<b>Rate</b>	<b>Age</b>	<b>Rates per Thousand</b>					<b>Annual Pay Increase</b>	
				<b>Mortality (M)</b>	<b>Mortality (F)</b>	<b>Turnover</b>	<b>Disability</b>	<b>Retire-N</b>		<b>Retire-E</b>
	Basic valuation		20	0.545	0.305	<b>150.00</b>	0.80	0	0	<b>7.50%</b>
	Before retirement	<b>7.25%</b>	21	0.570	0.308	<b>145.90</b>	0.85	0	0	<b>7.50%</b>
	After retirement	<b>7.25%</b>	22	0.598	0.311	<b>141.80</b>	0.91	0	0	<b>7.50%</b>
			23	0.633	0.313	<b>137.70</b>	0.96	0	0	<b>7.50%</b>
			24	0.671	0.313	<b>133.70</b>	1.01	0	0	<b>7.50%</b>
	<b>Mortality Tables</b>		25	0.711	0.313	<b>129.60</b>	1.07	0	0	<b>7.50%</b>
	Before retirement	UP 1994	26	0.749	0.316	<b>125.60</b>	1.15	0	0	<b>7.20%</b>
	After retirement	UP 1994	27	0.782	0.324	<b>121.60</b>	1.23	0	0	<b>6.90%</b>
	with projected mortality improvement		28	0.811	0.338	<b>117.60</b>	1.31	0	0	<b>6.60%</b>
			29	0.838	0.356	<b>113.60</b>	1.39	0	0	<b>6.30%</b>
	<b>Pay Increase Assumption</b>		30	0.862	0.377	<b>109.60</b>	1.47	0	0	<b>6.00%</b>
	Annual rates of pay increase as shown		31	0.883	0.401	<b>105.70</b>	1.60	0	0	<b>6.10%</b>
			32	0.902	0.427	<b>101.70</b>	1.73	0	0	<b>6.20%</b>
	<b>COLA Increase Assumption</b>		33	0.912	0.454	<b>97.80</b>	1.87	0	0	<b>6.30%</b>
	For benefits subject to adjustment based on change in CPI	<b>2.75%</b>	34	0.913	0.482	<b>93.90</b>	2.00	0	0	<b>6.40%</b>
			35	0.915	0.514	<b>90.00</b>	2.13	0	0	<b>6.50%</b>
			36	0.927	0.550	<b>87.30</b>	2.40	0	0	<b>6.40%</b>
	<b>Turnover</b>		37	0.958	0.593	<b>84.60</b>	2.67	0	0	<b>6.30%</b>
	Select and ultimate rates		38	1.010	0.643	<b>81.90</b>	2.93	0	0	<b>6.20%</b>
	Ultimate rates are age-related as shown		39	1.075	0.701	<b>79.20</b>	3.20	0	0	<b>6.10%</b>
	Additional rates per thousand are added during the first 5 years:		40	1.153	0.763	<b>76.50</b>	3.47	0	0	<b>6.00%</b>
	Year 1:	<b>225</b>	41	1.243	0.826	<b>73.80</b>	3.97	0	0	<b>5.82%</b>
	Year 2:	140	42	1.346	0.888	<b>71.10</b>	4.48	0	0	<b>5.64%</b>
	Year 3:	<b>100</b>	43	1.454	0.943	<b>68.50</b>	4.99	0	0	<b>5.49%</b>
	Year 4:	<b>70</b>	44	1.568	0.992	<b>65.80</b>	5.49	0	0	<b>5.34%</b>
	Year 5:	40	45	1.697	1.046	<b>63.20</b>	6.00	0	0	<b>5.21%</b>
			46	1.852	1.111	<b>60.50</b>	6.00	0	0	<b>5.09%</b>
			47	2.042	1.196	<b>57.90</b>	6.00	0	0	<b>4.99%</b>
	<b>Retirement Age</b>		48	2.260	1.297	<b>55.20</b>	6.00	0	0	<b>4.89%</b>
	Normal (N) and early (E) rates		49	2.501	1.408	<b>52.60</b>	6.00	0	0	<b>4.82%</b>
	Normal rates apply when employee is at or above normal retirement age.		50	2.773	1.536	<b>50.00</b>	6.00	0	0	<b>4.75%</b>
	Early rates apply when employee is eligible for early (reduced) retirement.		51	3.088	1.686	<b>53.30</b>	6.80	0	0	<b>4.71%</b>
			52	3.455	1.864	<b>56.50</b>	7.60	0	0	<b>4.67%</b>
			53	3.854	2.051	<b>59.80</b>	8.40	0	0	<b>4.63%</b>
			54	4.278	2.241	<b>63.10</b>	9.20	0	0	<b>4.61%</b>
	<b>Other Assumptions</b>		55	4.758	2.466	<b>66.40</b>	10.00	<b>250</b>	70	<b>4.58%</b>
	Percent married	100%	56	5.322	2.755	<b>69.70</b>	11.23	<b>170</b>	70	<b>4.55%</b>
	Spouse age difference (female spouses younger)	3	57	6.001	3.139	<b>73.00</b>	12.45	<b>170</b>	70	<b>4.54%</b>
			58	6.774	3.612	<b>76.40</b>	13.68	<b>170</b>	70	<b>4.53%</b>
			59	7.623	4.154	<b>79.70</b>	14.91	<b>170</b>	70	<b>4.51%</b>
			60	8.576	4.773	<b>83.10</b>	16.13	<b>170</b>	70	<b>4.50%</b>
			61	9.663	5.476	<b>86.40</b>	16.13	<b>170</b>	70	<b>4.50%</b>
			62	10.944	6.271	<b>89.80</b>	16.13	300	300	<b>4.50%</b>
			63	12.335	7.179	<b>93.20</b>	16.13	<b>200</b>	175	<b>4.50%</b>
			64	13.914	8.194	<b>96.60</b>	16.13	150	175	<b>4.50%</b>
			65	15.629	9.286	<b>100.00</b>	0.00	300	300	<b>4.50%</b>
			66	17.462	10.423	<b>100.00</b>	0.00	300	300	<b>4.50%</b>
			67	19.391	11.574	<b>100.00</b>	0.00	300	300	<b>4.50%</b>
			68	21.354	12.648	<b>100.00</b>	0.00	300	300	<b>4.50%</b>
			69	23.364	13.665	<b>100.00</b>	0.00	300	300	<b>4.50%</b>
			70	25.516	14.763			1000		

Base mortality rates are shown; valuation rates are projected for mortality improvement by the Society of Actuaries' table AA based on the employee's year of birth.

## **F Summary of Plan Participants**

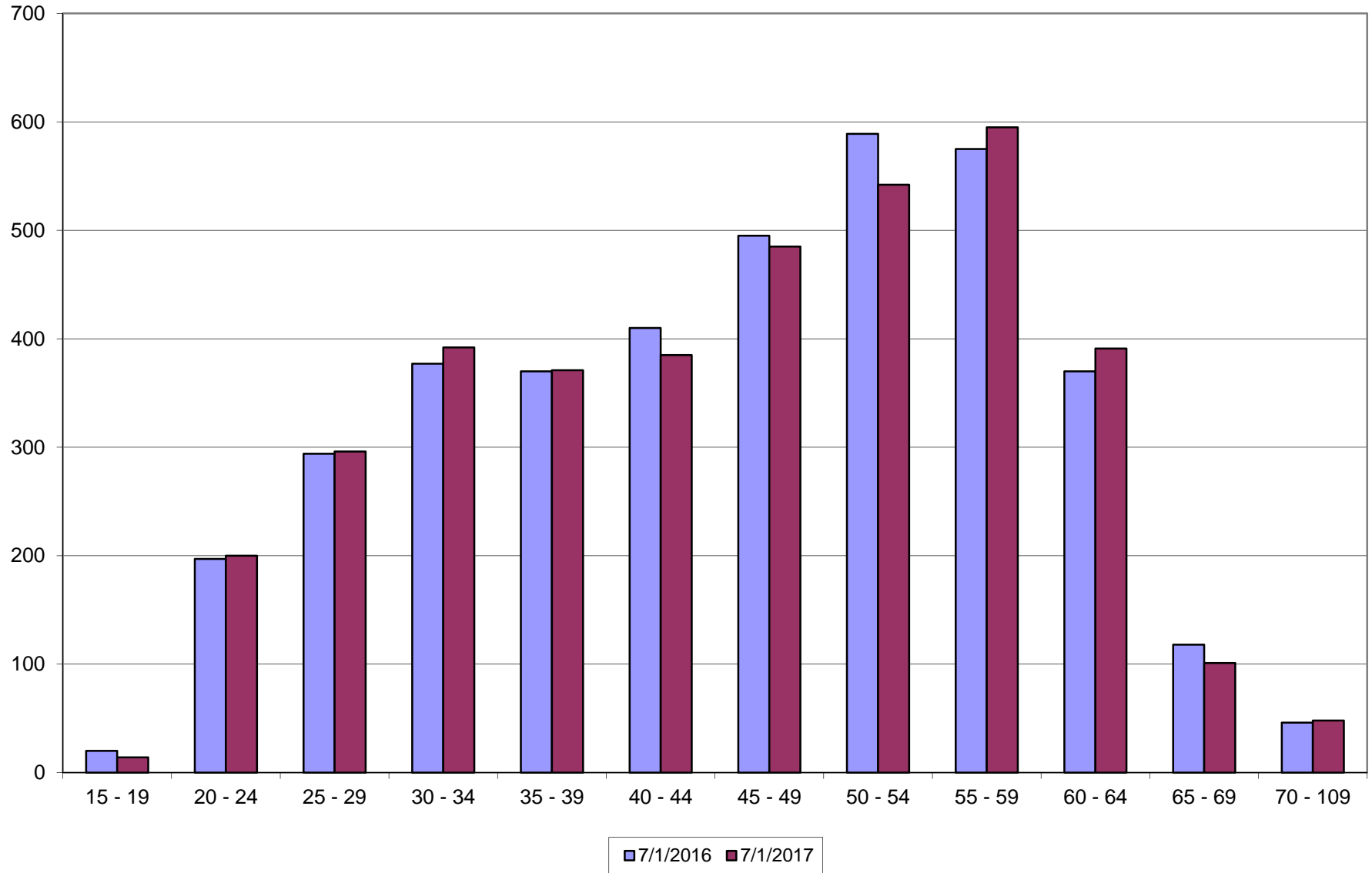
The first three exhibits in this section depict the age and service distribution for active participants as of July 1, 2017 (OkMRF Master Trust in total). The City of Bartlesville is included in the count although it has not adopted the OkMRF master plan. Exhibits F1 and F2 show the July 1, 2016 distributions for comparison, while Exhibit F3 shows more detail on the current year's distribution, including average pay.

The last three exhibits in this section depict the age distribution and average benefit for nonactive participant as of July 1, 2017 (OkMRF Master Trust in total). Again, participants in the City of Bartlesville plan are included. Exhibit F4 breaks down the distribution by each category of nonactive participants, while Exhibit F5 shows the July 1, 2016 distributions for comparison. Exhibit F6 shows more detail on the current year's distribution, including average benefit.

Participants in retiree medical plans are not separately identified.

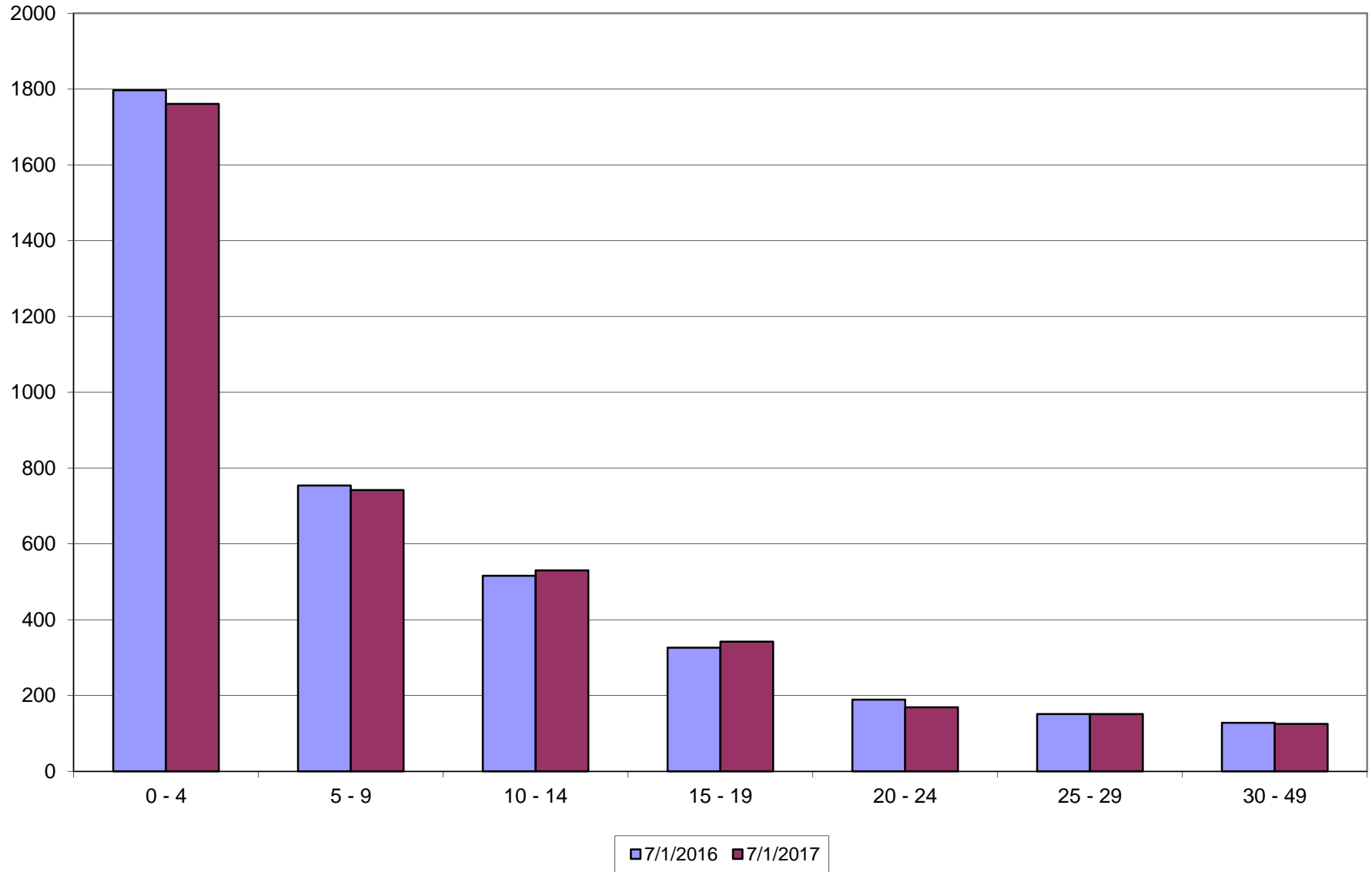
Oklahoma Municipal Retirement Fund

Distribution of Active Employees by Age



Oklahoma Municipal Retirement Fund

**Distribution of Active Employees by Service**



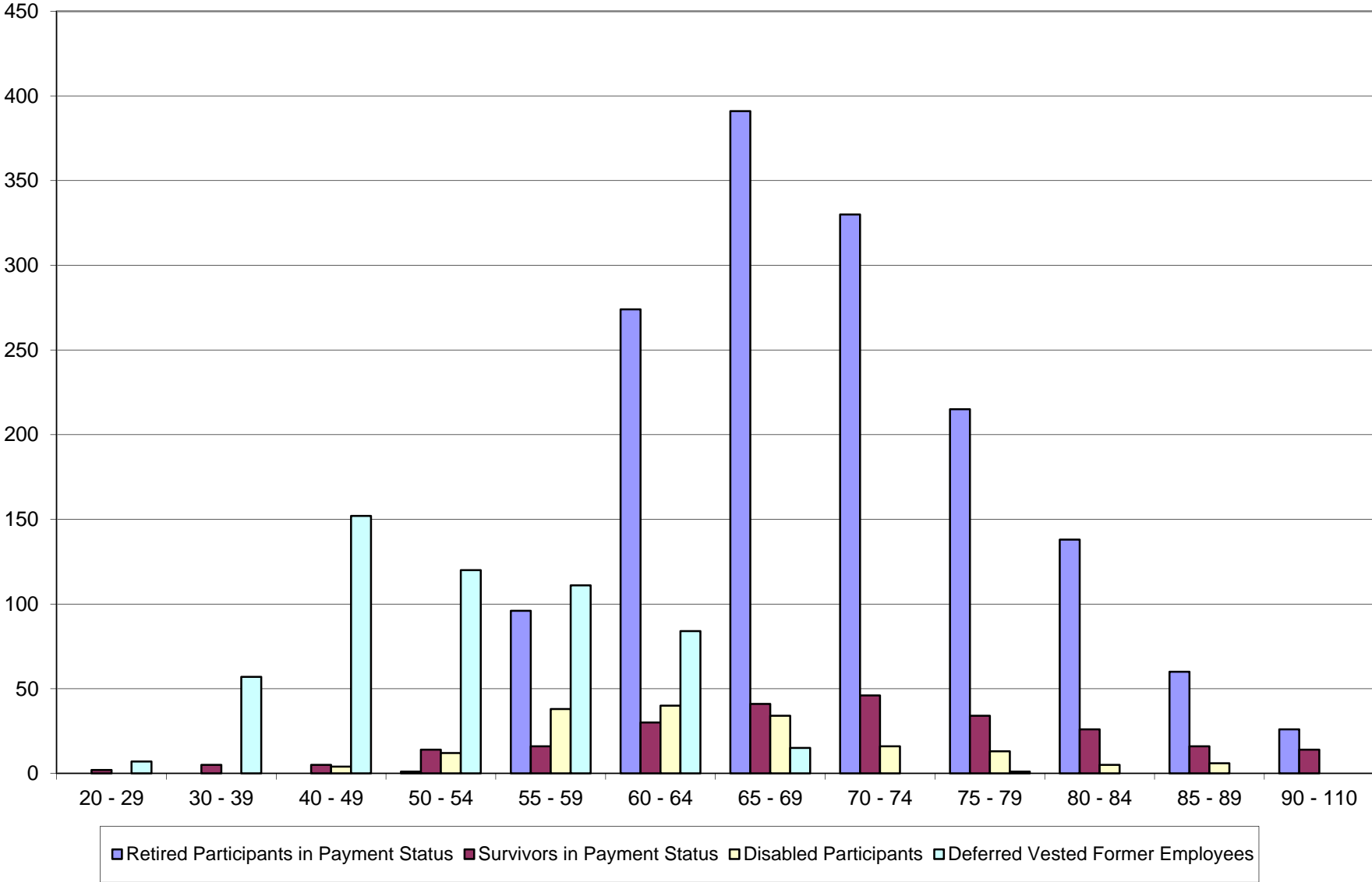
**Oklahoma Municipal Retirement Fund**  
**All Cities Combined**  
**AGE AND SERVICE OF ACTIVE PARTICIPANTS**  
 July 1, 2017

Age Group	Years of Service														All Service	
	0 - 4		5 - 9		10 - 14		15 - 19		20 - 24		25 - 29		30 - 49			
	Count	Ave Pay	Count	Ave Pay	Count	Ave Pay	Count	Ave Pay	Count	Ave Pay	Count	Ave Pay	Count	Ave Pay	Count	Ave Pay
15 - 19	14	10,994													14	10,994
20 - 24	197	22,741	3	30,414											200	22,856
25 - 29	254	26,657	41	35,500	1	46,216									296	27,948
30 - 34	255	26,611	101	38,600	34	40,546	2	41,842							392	30,987
35 - 39	212	29,460	85	40,334	53	44,508	19	43,114	2	57,033					371	34,949
40 - 44	161	30,354	96	37,326	62	42,906	47	49,957	18	54,606	1	39,516			385	37,665
45 - 49	213	31,287	87	39,691	85	42,847	59	50,750	20	46,439	20	58,284	1	50,331	485	38,965
50 - 54	168	31,348	98	42,230	95	42,481	75	45,182	39	49,202	38	54,188	29	55,156	542	41,341
55 - 59	168	30,986	109	40,815	105	43,568	69	45,674	50	44,987	53	51,693	41	49,297	595	40,993
60 - 64	80	33,766	88	36,411	65	42,288	54	46,954	33	47,242	30	46,248	41	47,647	391	41,150
65 - 69	23	42,846	23	40,972	23	41,119	11	64,082	7	36,453	6	55,519	8	56,977	101	45,768
70 - 109	16	32,188	11	38,258	7	37,163	6	44,730			3	32,514	5	41,257	48	36,837
<b>All Ages</b>	<b>1,761</b>		<b>742</b>		<b>530</b>		<b>342</b>		<b>169</b>		<b>151</b>		<b>125</b>		<b>3,820</b>	

Age is in completed years (age last birthday) on the census date.  
 Service is completed years of benefit service on the census date.  
 Pay is the total pay for the plan year preceeding the census date.

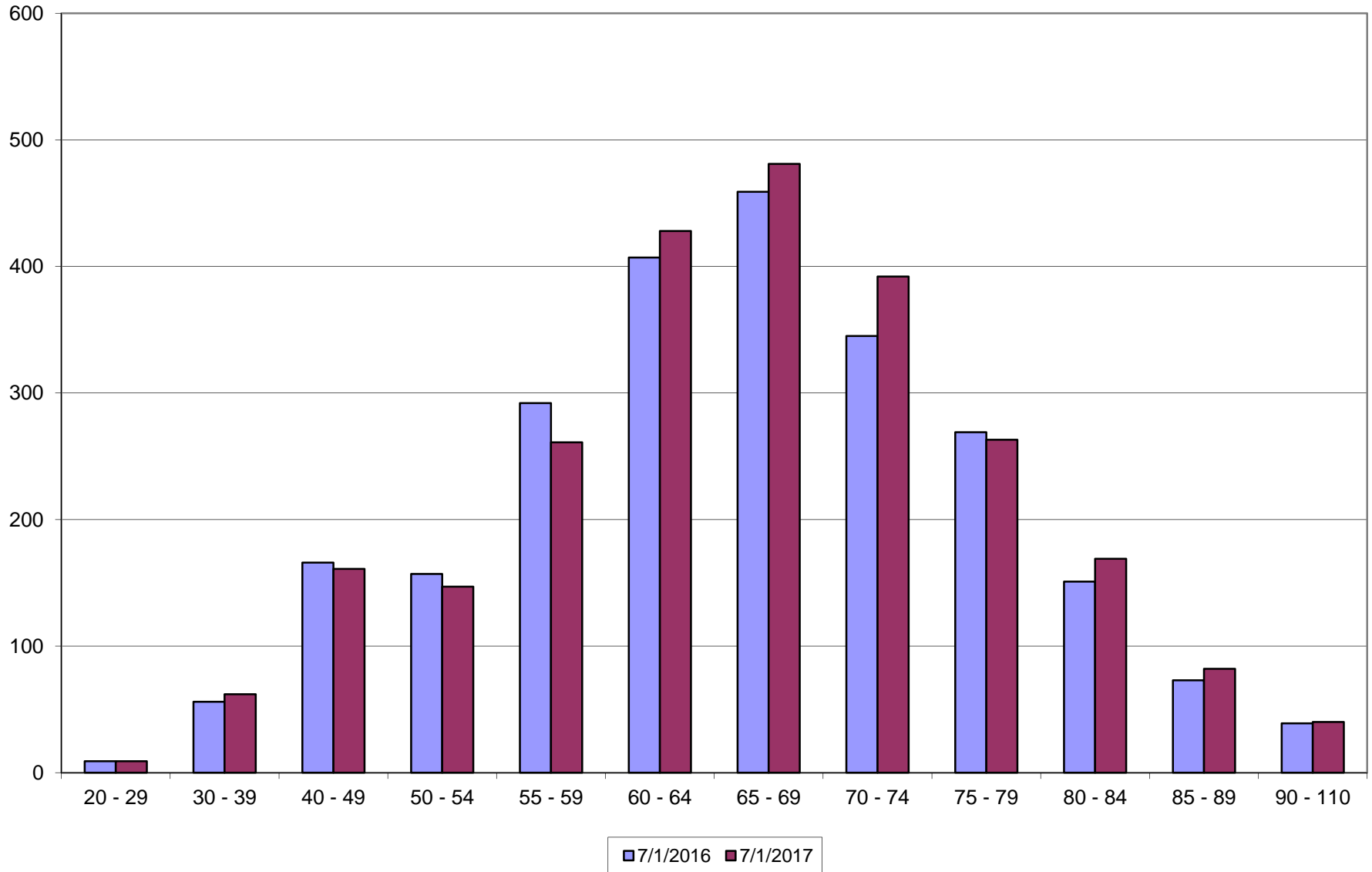


Distribution of Nonactive Participants by Status and Age



Oklahoma Municipal Retirement Fund

Distribution of Nonactive Participants by Age



**Oklahoma Municipal Retirement Fund**  
**All Cities Combined**  
**SUMMARY OF NONACTIVE PARTICIPANTS**

July 1, 2017

Age Group	Males			Females			Total		
	Count	Benefit	Weighted Ave Age	Count	Benefit	Weighted Ave Age	Count	Benefit	Weighted Ave Age
<b>Retired Participants in Payment Status</b>									
50 - 54	1	16,980	54.74	1	4,308	52.83	2	21,288	54.35
55 - 59	76	1,311,037	57.95	20	332,922	58.22	96	1,643,959	58.01
60 - 64	196	3,199,626	62.86	78	1,176,771	62.64	274	4,376,397	62.80
65 - 69	243	4,192,555	67.20	148	2,162,402	67.38	391	6,354,957	67.26
70 - 74	209	2,732,778	72.36	121	1,663,022	72.08	330	4,395,801	72.25
75 - 79	137	1,737,225	77.19	78	955,726	77.11	215	2,692,951	77.16
80 - 84	77	634,262	82.03	61	663,630	81.84	138	1,297,893	81.93
85 - 89	37	354,416	87.02	23	218,271	87.35	60	572,687	87.15
90 - 110	15	105,028	92.67	11	88,959	95.09	26	193,987	93.78
<b>Totals</b>	<b>991</b>	<b>14,283,907</b>	<b>68.90</b>	<b>541</b>	<b>7,266,012</b>	<b>70.80</b>	<b>1532</b>	<b>21,549,919</b>	<b>69.54</b>
<b>Ave amount</b>		<b>14,414</b>			<b>13,431</b>			<b>14,067</b>	
<b>Survivors in Payment Status</b>									
0 - 29	1	6,850	27.76	1	11,912	25.68	2	18,762	26.44
30 - 39	2	23,776	32.15	3	20,076	35.92	5	43,852	33.88
40 - 49				5	40,592	43.38	5	40,592	43.38
50 - 54	1	11,114	52.08	12	172,013	53.28	13	183,127	53.20
55 - 59				16	190,851	57.72	16	190,851	57.72
60 - 64	7	80,124	62.10	23	204,331	62.61	30	284,455	62.47
65 - 69	7	59,791	68.13	34	289,138	67.54	41	348,929	67.64
70 - 74	8	137,393	71.06	38	314,216	72.38	46	451,609	71.98
75 - 79	1	1,847	77.34	33	250,256	77.79	34	252,103	77.79
80 - 84	3	29,721	82.27	23	152,298	82.38	26	182,019	82.36
85 - 89	2	27,287	85.66	14	121,549	87.76	16	148,836	87.37
90 - 110	2	7,221	95.70	12	97,175	91.66	14	104,396	91.94
<b>Totals</b>	<b>34</b>	<b>385,123</b>	<b>67.41</b>	<b>214</b>	<b>1,864,408</b>	<b>69.53</b>	<b>248</b>	<b>2,249,531</b>	<b>69.16</b>
<b>Ave amount</b>		<b>11,327</b>			<b>8,712</b>			<b>9,071</b>	
<b>Disabled Participants</b>									
20 - 29									
30 - 39									
40 - 49	4	32,800	46.92				4	32,800	46.92
50 - 54	9	140,256	53.22	3	65,028	54.33	12	205,284	53.57
55 - 59	29	526,765	57.05	9	93,453	58.13	38	620,218	57.21
60 - 64	31	489,855	62.54	9	104,342	61.58	40	594,197	62.37
65 - 69	29	302,362	67.54	5	60,551	67.85	34	362,913	67.59
70 - 74	10	96,022	72.12	6	84,177	70.96	16	180,199	71.58
75 - 79	11	74,499	77.42	2	32,719	77.80	13	107,218	77.54
80 - 84	3	18,353	82.47	2	19,421	82.09	5	37,774	82.27
85 - 89	4	15,785	85.18	2	18,823	87.73	6	34,608	86.57
90 - 110									
<b>Totals</b>	<b>130</b>	<b>1,696,697</b>	<b>62.28</b>	<b>38</b>	<b>478,513</b>	<b>65.33</b>	<b>168</b>	<b>2,175,210</b>	<b>62.95</b>
<b>Ave amount</b>		<b>13,052</b>			<b>12,592</b>			<b>12,948</b>	
<b>Deferred Vested Former Employees</b>									
20 - 29	5	16,316	28.08	2	106	25.08	7	16,422	28.06
30 - 39	38	266,537	37.12	19	126,882	36.76	57	393,419	37.01
40 - 49	101	928,764	46.08	51	397,903	45.30	152	1,326,666	45.84
50 - 54	78	795,614	52.99	42	456,529	52.65	120	1,252,142	52.86
55 - 59	70	526,492	57.35	41	293,321	57.36	111	819,813	57.35
60 - 64	58	461,314	61.83	26	322,523	62.61	84	783,838	62.15
65 - 69	5	10,818	65.54	10	56,039	67.04	15	66,857	66.80
70 - 74									
75 - 79	1	129	76.82				1	129	76.82
80 - 84									
85 - 89									
90 - 110									
<b>Totals</b>	<b>356</b>	<b>3,005,983</b>	<b>51.48</b>	<b>191</b>	<b>1,653,302</b>	<b>52.93</b>	<b>547</b>	<b>4,659,285</b>	<b>51.99</b>
<b>Ave amount</b>		<b>8,444</b>			<b>8,656</b>			<b>8,518</b>	
<b>Grand Totals</b>	<b>1511</b>	<b>19,371,710</b>	<b>65.59</b>	<b>984</b>	<b>11,262,235</b>	<b>67.73</b>	<b>2495</b>	<b>30,633,946</b>	<b>66.38</b>
<b>Ave amount</b>		<b>12,820</b>			<b>11,445</b>			<b>12,278</b>	