
Oklahoma Municipal Retirement Fund

ACTUARIAL VALUATIONS UNDER GASB STATEMENT 68

For Fiscal Years Ending on or Before July 1, 2020

April 24, 2020

Prepared by

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GASB Statement 68

Introduction

Discount Rate

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Introduction

Determines pension expense and balance sheet recognition for government entities on accrual method accounting

Effective for fiscal years beginning after June 15, 2014

Balance sheet entries determined on a measurement date no earlier than the end of the prior fiscal year

Pension expense determined over the 12-month period ending on the measurement date

Measurement date: July 1, 2019

Introduction

123 plans with active participants

- Accrual method entities: 76
- Cash and modified cash method entities: 47

8 plans with no active participants

- Accrual method entities: 6
- Cash and modified cash method entities: 2

Discount Rate

General Rule

General Rule Applied to Funding Policy

Possible Exceptions

General Rule

A single blended discount rate reflecting

- the expected long term rate of return to the extent assets are expected to be sufficient to meet benefit payments
- the yield on 20-year, tax exempt general obligation municipal bonds rated AA/Aa or higher on payments due after assets are depleted

Benefit payments are for all current participants, including expected future accruals

Assets include anticipated future contributions on behalf of current participants, and other contributions expected to be applied to the current unfunded liability

General Rule Applied to Funding Policy

The funding policy is designed to fund all participants' benefits over their working lifetimes

Unfunded liabilities may arise from:

- granting of past service upon joining OkMRF
- benefit improvements applied to past service
- actual experience less favorable than assumed

Unfunded liabilities funded over a fixed period not to exceed 30 years

General conclusion: member cities that faithfully contribute their actuarially determined contribution will not face a projected depletion date

Possible Exceptions

Plans with large unfunded liabilities relative to payroll

- Shawnee: 368%
- Mountain Park MCD: 340%
- Wetumka: 214%

Plans with an unusually high average employee age

- Wetumka: 55.9
- Chandler: 54.6
- Bartlesville: 53.6

Plans with a high ratio of retirees to active employees

- Wetumka: 200%
- Shawnee: 180%
- Drumright: 173%

Plans with no active participants reviewed for individual circumstances

DEAN ACTUARIES, LLC

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April 20, 2020

Ms. Jodi Cox
CEO/ Executive Director
Oklahoma Municipal Retirement Fund
1001 NW 63rd Street
Suite 260
Oklahoma City, OK 73116

Re: Discount Rate for Member Cities under GASB 68 at the July 1, 2019 Measurement Date

Dear Jodi:

As you know, GASB 68 prescribes a discount rate that reflects the long-term expected rate of return on pension plan investments to the extent that plan assets are projected to be sufficient to make projected benefit payments, and the yield on high quality 20-year tax-exempt general obligation municipal bonds on any payments due after plan assets are projected to be depleted. This determination is generally made by a projection of future trust cashflows: benefit payments to current participants and beneficiaries, contributions from current participants, employer contributions on behalf of current participants, employer contributions on behalf of future participants in excess of their projected service costs, trust investment earnings, and administrative expenses. GASB 68 paragraph 29 also provides, however, that if plan assets can be shown to be sufficient without a separate projection of cashflows, the expected return on plan assets is used for the discount rate.

OkMRF has adopted a funding policy for its members that is designed to fund all benefits payable to participants over the course of their working careers. Any differences between actual and expected experience are funded over a fixed period to ensure all funds necessary to pay benefits have been contributed to the trust before those benefits are payable. Because the assumptions prescribed for the cashflow projection are the same as those used to determine funding requirements (while the funding assumes a net 7.25% return, the cashflow projection uses a 7.50% return with 0.25% assumed administrative expenses), and because the cashflow projection assumes no demographic or investment gains or losses in the future, to the extent that members make their actuarially determined contributions, they will not have a depletion date which would trigger the municipal bond rate for subsequent cashflows.

This conclusion is a mathematical certainty for any plan that does not have an unfunded liability (new plans that did not grant past service credit, and plans in a surplus position). Thus, the only risk for other plans is that the amortization period would defer contributions beyond the time they were needed to pay benefits. While this presents no risk to most plans as benefits to current participants are still being paid 50-75 years into the future (versus a fixed amortization period of 30 years), we ran a number of sample cashflow projections for cities most at risk. These included:

Ms. Jodi Cox
April 20, 2020
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- plans with large unfunded liabilities relative to payroll
- plans with an unusually high average employee age
- plans with a high ratio of retirees to active employees
- plans with no active participants.

In all these cashflow projections, the plans had no depletion date.

In conclusion, in accordance with our analysis, all OkMRF members reporting on an accrual basis who consistently make their actuarially determined contributions should use the long-term expected rate of return (7.50%) as their discount rate as of the July 1, 2019 measurement date, as none of these members have a depletion date which would trigger the municipal bond rate for subsequent cashflows.

Sincerely,

A handwritten signature in black ink, appearing to read "Sean M. Sullivan", with a horizontal line extending to the right.

Sean M. Sullivan, FSA
Consulting Actuary

Valuation Results

Summary for all OkMRF plans combined

Sample Exhibits -- Miami

**Oklahoma Municipal Retirement Fund
All Plans Combined**

CHANGES IN NET PENSION LIABILITY

	Increase (Decrease)		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
Balance at 7/1/2018	\$ 604,308,086	\$ 570,171,261	\$ 34,136,825
Changes for the Year:			
Service cost	15,407,193		15,407,193
Interest cost	44,066,988		44,066,988
Difference between expected and actual experience	(2,825,218)		(2,825,218)
Assumption changes	14,581,825		14,581,825
Contributions -- Employer		16,854,878	(16,854,878)
Contributions -- Employee		6,714,244	(6,714,244)
Net investment income		38,753,068	(38,753,068)
Benefit payments, including ee contributions refunds	(34,113,132)	(34,113,132)	0
Benefit changes due to plan amendments	1,930,759		1,930,759
Administrative expense		(1,182,498)	1,182,498
Other changes		0	0
Net changes	39,048,415	27,026,560	12,021,855
Balance at 7/1/2019	\$ 643,356,501	\$ 597,197,821	\$ 46,158,680

SENSITIVITY OF NET PENSION LIABILITY TO CHANGES IN THE DISCOUNT RATE

	1% Decrease 6.50%	Current Disc Rate 7.50%	1% Increase 8.50%
	Net Pension Liability	\$ 125,149,686	\$ 46,158,680

**Oklahoma Municipal Retirement Fund
All Plans Combined**

PENSION EXPENSE

Service Cost	\$ 15,407,193
Interest Cost	44,066,988
Expected Return on Plan Investments	(42,331,054)
Administrative Expenses	1,182,498
Employee Contributions	(6,714,244)
Amortization of Deferred Outflows and Inflows	
Actuarial gains and losses	(4,827,552)
Changes in assumptions	6,559,692
Investment gains and losses	7,196,411
Benefit Changes Due to Plan Amendments	<u>1,930,759</u>
Pension Expense for Fiscal 2020	<u><u>\$ 22,470,691</u></u>

**Oklahoma Municipal Retirement Fund
All Plans Combined**

AMORTIZATION OF DEFERRED (INFLOWS) AND OUTFLOWS

	Fiscal Year Established	Deferred (Inflow)/Outflow	Amortization Years	Balance before Current Recognition	Current Recognition	Balance after Current Recognition
Actuarial (gains)/losses						
	2015	\$ 0	N/A	\$ 0	\$ 0	0
	2016	(4,767,004)	0.00-9.64	(688,704)	(504,444)	(184,260)
	2017	(6,589,585)	0.00-9.19	(1,966,393)	(911,030)	(1,055,363)
	2018	(3,953,602)	0.00-8.40	(2,177,992)	(980,947)	(1,197,045)
	2019	(6,056,158)	0.00-7.97	(4,207,076)	(1,534,248)	(2,672,828)
	2020	(2,825,218)	0.00-7.46	(2,825,218)	(896,883)	(1,928,335)
Total current recognition					\$ (4,827,552)	
Remaining deferred (inflows)						\$ (13,514,630)
Remaining deferred outflows						\$ 6,476,799
Changes in assumptions						
	2018	\$ 11,550,341	0.00-8.40	\$ 6,282,377	\$ 2,445,432	\$ 3,836,945
	2020	14,581,825	0.00-7.46	14,581,825	4,114,260	10,467,565
Total current recognition					\$ 6,559,692	
Remaining deferred (inflows)						\$ (7,348)
Remaining deferred outflows						\$ 14,311,858
Investment (gains)/losses						
	2016	22,325,862	5	\$ 4,459,350	\$ 4,459,350	\$ 0
	2017	32,091,746	5	12,818,025	6,409,067	6,408,958
	2018	(22,353,647)	5	(13,392,906)	(4,464,282)	(8,928,624)
	2019	382,795	5	306,655	76,684	229,971
	2020	3,577,986	5	3,577,986	715,592	2,862,394
Total current recognition					\$ 7,196,411	
Remaining deferred (inflows)						\$ (8,961,549)
Remaining deferred outflows						\$ 9,534,248

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

CHANGES IN NET PENSION LIABILITY

	Increase (Decrease)		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
Balance at 7/1/2018	\$ 14,410,533	\$ 10,816,305	\$ 3,594,228
Changes for the Year:			
Service cost	346,075		346,075
Interest cost	1,044,256		1,044,256
Difference between expected and actual experience	(272,005)		(272,005)
Assumption changes	208,546		208,546
Contributions -- Employer		646,533	(646,533)
Contributions -- Employee		182,834	(182,834)
Net investment income		735,845	(735,845)
Benefit payments, including refunds of employee contributions	(992,188)	(992,188)	0
Benefit changes due to plan amendments	35,013		35,013
Administrative expense		(22,670)	22,670
Other changes			0
Net changes	369,697	550,354	(180,657)
x	\$ 14,780,230	\$ 11,366,659	\$ 3,413,571

SENSITIVITY OF NET PENSION LIABILITY TO CHANGES IN THE DISCOUNT RATE

	1% Decrease 6.50%	Current Discount Rate 7.50%	1% Increase 8.50%
Total Pension Liability	\$ 16,566,401	\$ 14,780,230	\$ 13,311,348
Plan Fiduciary Net Position	11,366,659	11,366,659	11,366,659
Net Pension Liability	\$ 5,199,742	\$ 3,413,571	\$ 1,944,689

The discount rate used to value benefits was the long-term expected rate of return on plan investments, 7.50% (see Exhibit 11), as prescribed by paragraph 26 of GASB 68 when the plan's fiduciary net position is projected to be sufficient to make projected benefit payments.

The employer has adopted a funding method that is designed to fund all benefits payable to participants over the course of their working careers. Any differences between actual and expected experience are funded over a fixed period to ensure all funds necessary to pay benefits have been contributed to the trust before those benefits are payable. Thus, in accordance with paragraph 29, the evaluations required by paragraph 27 to determine the sufficiency pension plan assets can be made without a separate projection of cashflows.

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

PENSION EXPENSE

Service Cost	\$ 346,075
Interest Cost	1,044,256
Expected Return on Plan Investments	(804,393)
Administrative Expenses	22,670
Contributions -- Employee	(182,834)
Amortization of Deferred (Inflows) and Outflows	
Actuarial (gains) and losses	(312,405)
Changes in assumptions	116,688
Investment (gains) and losses	133,373
Benefit Changes Due to Plan Amendments	<u>35,013</u>
Pension Expense for Fiscal 2020	<u><u>\$ 398,443</u></u>

**Oklahoma Municipal Retirement Fund
Employee Retirement System of Miami, Oklahoma
AMORTIZATION OF DEFERRED (INFLOWS) AND OUTFLOWS**

	Fiscal Year Established	Deferred (Inflow)/Outflow	Amortization Years	Balance before Current Recognition	Current Recognition	Balance after Current Recognition
Actuarial (gains)/losses						
	2015	\$ 0	N/A	\$ 0	\$ 0	\$ 0
	2016	102,207	5.39	26,358	18,963	7,395
	2017	(202,315)	5.32	(88,228)	(38,029)	(50,199)
	2018	(535,480)	4.64	(304,670)	(115,405)	(189,265)
	2019	(541,596)	4.67	(425,623)	(115,974)	(309,649)
	2020	(272,005)	4.39	(272,005)	(61,960)	(210,045)
Total current recognition					\$ (312,405)	
Remaining deferred (inflows)						\$ (759,158)
Remaining deferred outflows						\$ 7,395
Changes in assumptions						
	2018	\$ 321,010	4.64	\$ 182,644	69,183	113,461
	2020	208,546	4.39	208,546	47,505	161,041
Total current recognition					\$ 116,688	
Remaining deferred (inflows)						\$ 0
Remaining deferred outflows						\$ 274,502
Investment (gains)/losses						
	2016	\$ 388,543	5	\$ 77,708	\$ 77,708	\$ 0
	2017	626,966	5	250,787	125,394	125,393
	2018	(426,574)	5	(255,944)	(85,315)	(170,629)
	2019	9,379	5	7,503	1,876	5,627
	2020	68,548	5	68,548	13,710	54,838
Total current recognition					\$ 133,373	
Remaining deferred (inflows)						\$ (170,629)
Remaining deferred outflows						\$ 185,858

Amounts reported as deferred (inflows) of resources and deferred outflows of resources related to pensions will be recognized in pension expense as follows:

Fiscal 2021	\$ (151,620)
Fiscal 2022	(241,910)
Fiscal 2023	(76,573)
Fiscal 2024	8,071
Fiscal 2025	0
Thereafter	0

Oklahoma Municipal Retirement Fund
Employee Retirement System of Miami, Oklahoma

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

SINCE INITIAL APPLICATION

	Fiscal Year 2020	Fiscal Year 2019	Fiscal Year 2018	Fiscal Year 2017	Fiscal Year 2016
Total Pension Liability					
Service cost	\$ 346,075	\$ 283,926	\$ 330,866	\$ 344,545	\$ 308,701
Interest cost	1,044,256	1,061,577	1,087,717	1,073,154	1,037,326
Benefit changes due to plan amendments	35,013	0	0	0	0
Difference between expected and actual experience	(272,005)	(541,596)	(535,480)	(202,315)	102,207
Changes of assumptions	208,546	0	321,010	0	0
Benefit payments, including refunds of employee contributions	(992,188)	(1,076,009)	(1,092,673)	(964,663)	(1,006,438)
Net change in total pension liability	<u>369,697</u>	<u>(272,102)</u>	<u>111,440</u>	<u>250,721</u>	<u>441,796</u>
Total pension liability -- beginning	<u>14,410,533</u>	<u>14,682,635</u>	<u>14,571,195</u>	<u>14,320,474</u>	<u>13,878,678</u>
Total pension liability -- ending	<u><u>\$ 14,780,230</u></u>	<u><u>\$ 14,410,533</u></u>	<u><u>\$ 14,682,635</u></u>	<u><u>\$ 14,571,195</u></u>	<u><u>\$ 14,320,474</u></u>
Plan Fiduciary Net Position					
Contributions -- Employer	\$ 646,533	\$ 635,453	\$ 650,799	\$ 640,172	\$ 618,748
Contributions -- Employee	182,834	179,680	183,989	181,046	175,420
Net investment income	735,845	755,918	1,149,965	83,267	261,920
Benefit payments, including refunds of employee contributions	(992,188)	(1,076,009)	(1,092,673)	(964,663)	(1,006,438)
Administrative expense	(22,670)	(21,162)	(20,155)	(18,698)	(19,533)
Other	0	0	0	0	0
Net change in total pension liability	<u>550,354</u>	<u>473,880</u>	<u>871,925</u>	<u>(78,876)</u>	<u>30,117</u>
Plan fiduciary net position -- beginning	<u>10,816,305</u>	<u>10,342,425</u>	<u>9,470,500</u>	<u>9,549,376</u>	<u>9,519,259</u>
Plan fiduciary net position -- ending	<u><u>\$ 11,366,659</u></u>	<u><u>\$ 10,816,305</u></u>	<u><u>\$ 10,342,425</u></u>	<u><u>\$ 9,470,500</u></u>	<u><u>\$ 9,549,376</u></u>
Net pension liability -- ending	<u><u>\$ 3,413,571</u></u>	<u><u>\$ 3,594,228</u></u>	<u><u>\$ 4,340,210</u></u>	<u><u>\$ 5,100,695</u></u>	<u><u>\$ 4,771,098</u></u>
Plan fiduciary net position as percentage of total pension liability	76.90%	75.06%	70.44%	64.99%	66.68%
Covered employee payroll	\$ 4,576,812	\$ 4,920,014	\$ 4,735,571	\$ 4,657,554	\$ 4,742,831
Net pension liability position as percentage of covered employee payroll	74.58%	73.05%	91.65%	109.51%	100.60%

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

**SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS
SINCE INITIAL APPLICATION**

	Fiscal Year 2015
Total Pension Liability	
Service cost	\$ 276,403
Interest cost	1,034,763
Benefit changes due to plan amendments	0
Difference between expected and actual experience	0
Changes of assumptions	0
Benefit payments, including refunds of employee contributions	(997,138)
Net change in total pension liability	<u>314,028</u>
Total pension liability -- beginning	<u>13,564,650</u>
Total pension liability -- ending	<u><u>\$ 13,878,678</u></u>
Plan Fiduciary Net Position	
Contributions -- Employer	\$ 569,542
Contributions -- Employee	166,578
Net investment income	1,363,071
Benefit payments, including refunds of employee contributions	(997,138)
Administrative expense	(20,151)
Other	0
Net change in total pension liability	<u>1,081,902</u>
Plan fiduciary net position -- beginning	<u>8,437,357</u>
Plan fiduciary net position -- ending	<u><u>\$ 9,519,259</u></u>
Net pension liability -- ending	<u><u>\$ 4,359,419</u></u>
Plan fiduciary net position as percentage of total pension liability	68.59%
Covered employee payroll	\$ 4,356,987
Net pension liability position as percentage of covered employee payroll	100.06%

Retiree Health Plans

Covered by GASB Statement 75

Relevance to OkMRF

Effect of Plan Design