

Oklahoma Firefighters Pension and Retirement System

GASB 67 Accounting Supplement

For the Fiscal Year ending
June 30, 2015

October 2015





David Kent
Director, Retirement

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October 2015

Mr. Robert E. Jones, Jr.
Executive Director
Oklahoma Firefighters Pension and Retirement System
4545 North Lincoln Blvd., Suite 265
Oklahoma City, OK 73105

Dear Mr. Jones:

Buck Consultants, LLC (Buck) was retained to complete this actuarial valuation of the Oklahoma Firefighters Pension and Retirement System. This report presents the results of the GASB 67 accounting valuation for the fiscal year ending June 30, 2015.

Purpose of this Report

The Board of Trustees of the Fund may use this report for the review of the operation of the plan, and in the preparation of the plan's audited financial statements.

Use of this report for any other purpose or by anyone other than the Board may not be appropriate and may result in mistaken conclusions because of failure to understand applicable assumptions, methods, or inapplicability of the report for that purpose. No one may make any representations or warranties based on any statements or conclusions contained in this report without Buck Consultants' written consent.

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law. An analysis of the potential range of such future differences is beyond the scope of this report.

Recent Guidance

This report reflects information required pursuant to GASB Statement No. 67, which was issued in 2012. This standard came into effect for the fiscal year that ended June 30, 2014 and will continue to apply for future fiscal years. The corresponding standard covering employers' accounting and financial reporting (GASB Statement No. 68) will be implemented for fiscal years beginning after June 15, 2014.

Data Used

Buck performed the valuation using participant and financial data supplied by the Board of Trustees. Buck did not audit the data, although they were reviewed for reasonableness and consistency with the prior year data. The results of the valuation are dependent on the accuracy of the data.

Actuarial Certification

The Board of Trustees selected the actuarial methods and assumptions used in this valuation. The Board has sole authority to determine the expected investment return and other actuarial assumptions. In our opinion, the actuarial assumptions used are appropriate for purposes of the valuation and are reasonably related to the experience of the Fund and to reasonable long-term expectations.

Mr. Robert E. Jones, Jr.

We are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. This report has been prepared in accordance with all applicable Actuarial Standards of Practice, and we are available to answer questions about it.

Respectfully submitted,

BUCK CONSULTANTS, LLC



David Kent, FSA, EA, MAAA
Director, Consulting Actuary



Marshall Tett, A.S.A.
Consultant, Retirement

DLD/MT/km

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Net Pension Liability

The components of the net pension liability at June 30, 2015, were as follows:

Total pension liability	\$ 3,344,974,631
Plan fiduciary net position	<u>(2,283,566,382)</u>
State's net pension liability	1,061,408,249
Plan fiduciary net position as a percentage of the total pension liability	68.27%

Actuarial assumptions

The total pension liability was determined by an actuarial valuation as of June 30, 2015, using the following actuarial assumptions, applied to all periods included in the measurement:

Actuarial Assumptions

Inflation	3.00%
Investment rate of return	7.50%, net of pension plan investment expenses. This is based on an average inflation rate of 3.00% and a real rate of return of 4.50%.

Please see Section 3 of the July, 1, 2015, funding valuation report for a description of the other assumptions used.

Discount rate

The discount rate used to measure the total pension liability was 7.50%. The projection of cash flows used to determine the discount rate assumed that the Fund's contributions will continue to follow the current funding policy. Total covered employee payroll is assumed to grow at 4% per year. The total statewide insurance premium tax is assumed to grow at 3% per year. In addition, the allocation of the tax to the System is assumed to be 36% for the entire projection period. The Normal Cost Rate for future members is assumed to be 21.46% for all years. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members for all future years and hence, the blended GASB discount rate is equal to the long-term rate of return of 7.50%. Therefore, the long-term expected rate of return on pension plan investments of 7.50% was applied to all periods of projected benefit payments to determine the total pension liability. The long-term expected rate of return remained at 7.50% to reflect the expected asset allocation.

Sensitivity of the net pension liability to changes in the discount rate

The following presents the net pension liability, calculated using the discount rate of 7.50%, as well as what the Fund's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.50%) or 1-percentage-point higher (8.50%) than the current rate:

	1% Decrease (6.50%)	Current Discount Rate (7.50%)	1% Increase (8.50%)
Net Pension Liability	\$ 1,378,127,473	\$ 1,061,408,249	\$ 795,774,620

Schedule of Changes in the Fund's Net Pension Liability and Related Ratios

2015

Total pension liability

Service cost	\$	61,193,365
Interest		239,652,841
Changes of benefit terms		0
Differences between expected and actual experience		1,225,109
Changes of assumptions		0
Benefit payments		<u>(182,549,070)</u>
Net change in total pension liability	\$	119,522,245

Total pension liability-beginning	\$	3,225,452,386
Total pension liability-ending (a)	\$	3,344,974,631

Plan fiduciary net pension

Contributions-employer	\$	130,111,642
Contributions-employee		24,310,588
Net investment income		116,617,766
Benefit payments, including refunds of employee contributions		(182,549,070)
Administrative expense		(2,029,087)
Other (Professional services)		<u>0</u>
Net change in plan fiduciary net position	\$	86,461,839

Plan fiduciary net position-beginning	\$	2,197,104,543
Plan fiduciary net position-ending (b)		<u>2,283,566,382</u>
State's net pension liability-ending (a)-(b)	\$	1,061,408,249

Plan fiduciary net position as a percentage of the total pension liability 68.27%

Covered-employee payroll	\$	270,535,966
Net pension liability as a percentage of covered-employee payroll		392.34%

Schedule of Fund Contributions

	2015
Actuarially determined contribution	\$ 142,494,951
Contributions related to the actuarially determined contribution	<u>\$ 120,237,245</u>
Contribution deficiency (excess)	\$ 22,257,706

Plan membership

Please see Section 3 of the July, 1, 2015, funding valuation report for a description of the plan membership.

Benefits provided

Please see Section 3 of the July, 1, 2015, funding valuation report for a summary of plan provisions.

Table 1 - Projection of Fiduciary Net Position

Fiscal Year Ending 6/30	Beginning Fiduciary Net Position	Member Contributions	Employer Contributions	Benefit Payments	Expenses	Investment Earnings	Ending Fiduciary Net Position
2015	\$ 2,197,104,543	\$ 23,899,679	\$ 120,654,849	\$ 206,233,718	\$ 3,017,752	\$ 162,400,565	\$ 2,294,808,166
2016	2,294,808,166	23,852,913	123,258,010	218,836,370	3,108,285	169,355,079	2,389,329,513
2017	2,389,329,513	23,835,395	125,983,338	231,830,772	3,201,534	176,061,974	2,480,177,914
2018	2,480,177,914	23,817,550	128,792,401	245,817,497	3,297,580	182,459,825	2,566,132,613
2019	2,566,132,613	23,791,226	131,676,509	260,519,507	3,396,507	188,466,656	2,646,150,990
2020	2,646,150,990	23,706,754	134,569,569	276,886,920	3,498,402	193,965,018	2,718,007,009
2021	2,718,007,009	23,485,036	137,364,834	294,064,419	3,603,354	198,812,608	2,780,001,714
2022	2,780,001,714	23,263,109	140,254,868	312,404,916	3,711,455	202,881,140	2,830,284,460
2023	2,830,284,460	23,009,918	143,199,604	332,119,672	3,822,799	206,021,416	2,866,572,927
2024	2,866,572,927	22,707,301	146,176,926	353,757,659	3,937,483	208,040,561	2,885,802,573
2025	2,885,802,573	22,313,112	149,131,598	223,771,925	4,055,607	214,359,060	3,043,778,811
2026	3,043,778,811	21,801,749	152,031,389	233,276,169	4,177,275	225,940,780	3,206,099,285
2027	3,206,099,285	21,221,530	154,946,506	243,379,653	4,302,593	237,824,145	3,372,409,220
2028	3,372,409,220	20,586,564	157,899,901	253,787,577	4,431,671	249,994,765	3,542,671,202
2029	3,542,671,202	19,922,367	160,930,418	264,917,005	4,564,621	262,436,843	3,716,479,204
2030	3,716,479,204	19,187,590	163,984,447	277,119,376	4,701,560	275,103,484	3,892,933,789
2031	3,892,933,789	18,370,071	167,048,895	290,087,765	4,842,607	287,937,598	4,071,359,981
2032	4,071,359,981	17,483,199	170,146,163	304,309,992	4,987,885	300,871,912	4,250,563,378
2033	4,250,563,378	16,387,666	173,087,366	319,707,730	5,137,522	313,807,642	4,429,000,800
2034	4,429,000,800	15,165,496	175,990,172	336,819,008	5,291,648	326,616,585	4,604,662,397
2035	4,604,662,397	13,910,742	178,989,027	344,034,442	5,450,397	339,583,894	4,787,661,221
2036	4,787,661,221	12,731,545	182,238,010	351,179,698	5,613,909	353,115,895	4,978,953,064
2037	4,978,953,064	11,594,573	185,695,483	358,707,568	5,782,326	367,264,836	5,179,018,062
2038	5,179,018,062	10,348,567	189,156,679	366,550,983	5,955,796	382,056,081	5,388,072,610
2039	5,388,072,610	9,014,786	192,655,817	374,515,306	6,134,470	397,515,063	5,606,608,500
2040	5,606,608,500	7,739,907	196,400,904	381,458,388	6,318,504	413,733,778	5,836,706,197
2041	5,836,706,197	6,497,167	200,359,982	388,103,344	6,508,059	430,839,465	6,079,791,408
2042	6,079,791,408	5,375,784	204,661,820	393,636,647	6,703,301	448,977,030	6,338,466,094
2043	6,338,466,094	4,377,105	209,313,700	398,116,446	6,904,400	468,339,789	6,615,475,842
2044	6,615,475,842	3,425,642	214,216,700	400,661,291	7,111,532	489,159,691	6,914,505,052

Table 1 - Projection of Fiduciary Net Position

Fiscal Year Ending 6/30	Beginning Fiduciary Net Position	Member Contributions	Employer Contributions	Benefit Payments	Expenses	Investment Earnings	Ending Fiduciary Net Position
2045	6,914,505,052	2,605,582	219,493,133	400,248,722	7,324,878	511,758,310	7,240,788,477
2046	7,240,788,477	2,013,560	225,282,725	398,650,148	7,544,624	536,471,724	7,598,361,714
2047	7,598,361,714	1,536,088	231,434,487	397,917,824	7,770,963	563,517,287	7,989,160,789
2048	7,989,160,789	964,997	237,666,541	397,543,386	8,004,092	593,040,869	8,415,285,718
2049	8,415,285,718	418,928	244,149,656	396,032,622	8,244,215	625,265,641	8,880,843,106
2050	8,880,843,106	130,516	251,212,625	391,694,990	8,491,541	660,582,512	9,392,582,228
2051	9,392,582,228	-	258,724,266	381,275,400	8,746,287	699,609,024	9,960,893,831
2052	9,960,893,831	-	266,653,824	372,842,349	9,008,676	742,825,238	10,588,521,868
2053	10,588,521,868	-	274,827,983	363,713,643	9,278,936	790,524,517	11,280,881,789
2054	11,280,881,789	-	283,254,348	352,162,264	9,557,304	843,176,882	12,045,593,451
2055	12,045,593,451	-	291,940,764	340,195,536	9,844,023	901,280,192	12,888,774,848
2056	12,888,774,848	-	300,895,325	328,900,495	10,139,344	965,253,554	13,815,883,888
2057	13,815,883,888	-	310,126,376	315,402,476	10,443,524	1,035,612,462	14,835,776,726
2058	14,835,776,726	-	319,642,526	298,017,453	10,756,830	1,113,083,445	15,959,728,414
2059	15,959,728,414	-	329,452,655	279,460,243	11,079,535	1,198,412,484	17,197,053,775
2060	17,197,053,775	-	339,565,922	260,044,149	11,411,921	1,292,286,978	18,557,450,605
2061	18,557,450,605	-	349,991,775	241,326,765	11,754,279	1,395,377,249	20,049,738,585
2062	20,049,738,585	-	360,739,957	223,526,908	12,106,907	1,508,337,061	21,683,181,788
2063	21,683,181,788	-	371,820,523	205,607,992	12,470,114	1,631,899,748	23,468,823,953
2064	23,468,823,953	-	383,243,840	189,012,851	12,844,217	1,766,840,832	25,417,051,557
2065	25,417,051,557	-	395,020,606	175,260,145	13,229,544	1,913,883,762	27,537,466,236
2066	27,537,466,236	-	407,161,852	162,601,762	13,626,430	2,073,813,423	29,842,213,319
2067	29,842,213,319	-	419,678,961	148,128,148	14,035,223	2,247,648,256	32,347,377,165
2068	32,347,377,165	-	432,583,673	133,570,933	14,456,280	2,436,531,244	35,068,464,869
2069	35,068,464,869	-	445,888,101	122,561,583	14,889,968	2,641,492,137	38,018,393,556

Table 2: Actuarial Present Value of Projected Benefit Payments

Fiscal Year Ending 6/30	Beginning Fiduciary Net Position	Benefit Payments	Benefit Payments		Present Value of Benefit Payments		
			Funded Portion	Unfunded Portion	Funded Portion at 7.50%	Unfunded Portion at 3.73%	Using a Single Discount Rate of 7.50%
2015	\$ 2,197,104,543	\$ 206,233,718	\$ 206,233,718	\$ 0	\$ 198,909,460	\$ 0	\$ 198,909,460
2016	2,294,808,166	218,836,370	218,836,370	0	196,339,105	0	196,339,105
2017	2,389,329,513	231,830,772	231,830,772	0	193,486,166	0	193,486,166
2018	2,480,177,914	245,817,497	245,817,497	0	190,846,046	0	190,846,046
2019	2,566,132,613	260,519,507	260,519,507	0	188,149,106	0	188,149,106
2020	2,646,150,990	276,886,920	276,886,920	0	186,018,393	0	186,018,393
2021	2,718,007,009	294,064,419	294,064,419	0	183,775,436	0	183,775,436
2022	2,780,001,714	312,404,916	312,404,916	0	181,616,113	0	181,616,113
2023	2,830,284,460	332,119,672	332,119,672	0	179,606,750	0	179,606,750
2024	2,866,572,927	353,757,659	353,757,659	0	177,961,247	0	177,961,247
2025	2,885,802,573	223,771,925	223,771,925	0	104,716,887	0	104,716,887
2026	3,043,778,811	233,276,169	233,276,169	0	101,548,388	0	101,548,388
2027	3,206,099,285	243,379,653	243,379,653	0	98,554,955	0	98,554,955
2028	3,372,409,220	253,787,577	253,787,577	0	95,599,604	0	95,599,604
2029	3,542,671,202	264,917,005	264,917,005	0	92,829,734	0	92,829,734
2030	3,716,479,204	277,119,376	277,119,376	0	90,330,767	0	90,330,767
2031	3,892,933,789	290,087,765	290,087,765	0	87,960,918	0	87,960,918
2032	4,071,359,981	304,309,992	304,309,992	0	85,835,727	0	85,835,727
2033	4,250,563,378	319,707,730	319,707,730	0	83,887,364	0	83,887,364
2034	4,429,000,800	336,819,008	336,819,008	0	82,211,304	0	82,211,304
2035	4,604,662,397	344,034,442	344,034,442	0	78,113,915	0	78,113,915
2036	4,787,661,221	351,179,698	351,179,698	0	74,173,269	0	74,173,269
2037	4,978,953,064	358,707,568	358,707,568	0	70,477,436	0	70,477,436
2038	5,179,018,062	366,550,983	366,550,983	0	66,993,934	0	66,993,934
2039	5,388,072,610	374,515,306	374,515,306	0	63,674,009	0	63,674,009
2040	5,606,608,500	381,458,388	381,458,388	0	60,329,723	0	60,329,723
2041	5,836,706,197	388,103,344	388,103,344	0	57,098,287	0	57,098,287
2042	6,079,791,408	393,636,647	393,636,647	0	53,871,957	0	53,871,957
2043	6,338,466,094	398,116,446	398,116,446	0	50,683,767	0	50,683,767

Table 2: Actuarial Present Value of Projected Benefit Payments

Fiscal Year Ending 6/30	Beginning Fiduciary Net Position	Benefit Payments	Benefit Payments		Present Value of Benefit Payments		
			Funded Portion	Unfunded Portion	Funded Portion at 7.50%	Unfunded Portion at 3.73%	Using a Single Discount Rate of 7.50%
2044	6,615,475,842	400,661,291	400,661,291	0	47,449,068	0	47,449,068
2045	6,914,505,052	400,248,722	400,248,722	0	44,093,218	0	44,093,218
2046	7,240,788,477	398,650,148	398,650,148	0	40,853,127	0	40,853,127
2047	7,598,361,714	397,917,824	397,917,824	0	37,933,097	0	37,933,097
2048	7,989,160,789	397,543,386	397,543,386	0	35,253,398	0	35,253,398
2049	8,415,285,718	396,032,622	396,032,622	0	32,669,233	0	32,669,233
2050	8,880,843,106	391,694,990	391,694,990	0	30,057,132	0	30,057,132
2051	9,392,582,228	381,275,400	381,275,400	0	27,216,347	0	27,216,347
2052	9,960,893,831	372,842,349	372,842,349	0	24,757,559	0	24,757,559
2053	10,588,521,868	363,713,643	363,713,643	0	22,466,412	0	22,466,412
2054	11,280,881,789	352,162,264	352,162,264	0	20,235,246	0	20,235,246
2055	12,045,593,451	340,195,536	340,195,536	0	18,183,849	0	18,183,849
2056	12,888,774,848	328,900,495	328,900,495	0	16,353,596	0	16,353,596
2057	13,815,883,888	315,402,476	315,402,476	0	14,588,323	0	14,588,323
2058	14,835,776,726	298,017,453	298,017,453	0	12,822,524	0	12,822,524
2059	15,959,728,414	279,460,243	279,460,243	0	11,185,190	0	11,185,190
2060	17,197,053,775	260,044,149	260,044,149	0	9,681,931	0	9,681,931
2061	18,557,450,605	241,326,765	241,326,765	0	8,358,184	0	8,358,184
2062	20,049,738,585	223,526,908	223,526,908	0	7,201,579	0	7,201,579
2063	21,683,181,788	205,607,992	205,607,992	0	6,162,110	0	6,162,110
2064	23,468,823,953	189,012,851	189,012,851	0	5,269,536	0	5,269,536
2065	25,417,051,557	175,260,145	175,260,145	0	4,545,229	0	4,545,229
2066	27,537,466,236	162,601,762	162,601,762	0	3,922,738	0	3,922,738
2067	29,842,213,319	148,128,148	148,128,148	0	3,324,246	0	3,324,246
2068	32,347,377,165	133,570,933	133,570,933	0	2,788,426	0	2,788,426
2069	35,068,464,869	122,561,583	122,561,583	0	2,380,088	0	2,380,088