

# Oklahoma Firefighters Pension and Retirement System

## GASB 67 Accounting Supplement

For the Fiscal Year ending  
June 30, 2014

October 2014





**David Kent**  
*Director, Retirement*

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October 2014

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, 2014.

### **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.

September 2014

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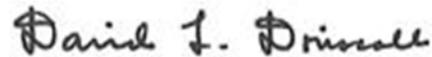
This report was prepared under the supervision of David Driscoll and David Kent. They are Fellows of the Society of Actuaries and Members of the American Academy of Actuaries. They meet the Academy's Qualification Standards to issue this Statement of Actuarial Opinion. This report has been prepared in accordance with all applicable Actuarial Standards of Practice and they are available to answer questions about it.

Respectfully submitted,

BUCK CONSULTANTS, LLC



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



David L. Driscoll, FSA, EA, MAAA, FCA  
Principal, Consulting Actuary

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## Net Pension Liability

The components of the net pension liability at June 30, 2014, were as follows:

Total pension liability	\$ 3,225,452,386
Plan fiduciary net position	<u>(2,197,104,543)</u>
State's net pension liability	1,028,347,843
Plan fiduciary net position as a percentage of the total pension liability	68.12%

## Actuarial assumptions

The total pension liability was determined by an actuarial valuation as of June 30, 2014, 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, 2014, 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 21.52% 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	\$ 1,342,805,189	\$ 1,028,347,843	\$ 764,710,067

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

2014

### Total pension liability

Service cost	\$	58,783,664
Interest		229,050,716
Changes of benefit terms		0
Differences between expected and actual experience		29,064,592
Changes of assumptions		0
Benefit payments		<u>(173,344,947)</u>
Net change in total pension liability	\$	143,554,025

Total pension liability-beginning	\$	3,081,898,361
Total pension liability-ending (a)	\$	3,225,452,386

### Plan fiduciary net pension

Contributions-employer	\$	115,649,189
Contributions-employee		22,057,504
Net investment income		335,602,149
Benefit payments, including refunds of employee contributions		(173,344,947)
Administrative expense		(1,958,101)
Other ( Professional services)		<u>0</u>
Net change in plan fiduciary net position	\$	298,005,794

Plan fiduciary net position-beginning	\$	1,899,098,749
Plan fiduciary net position-ending (b)		<u>2,197,104,543</u>
State's net pension liability-ending (a)-(b)	\$	1,028,347,843

Plan fiduciary net position as a percentage of the total pension liability 68.12%

Covered-employee payroll \$ 271,572,339

Net pension liability as a percentage of covered-employee payroll 378.66%

## Schedule of Fund Contributions

	2014
Actuarially determined contribution	\$162,103,277
Contributions related to the actuarially determined contribution	<u>\$111,064,274</u>
Contribution deficiency (excess)	\$ 51,039,003

### Plan membership

Please see Section 3 of the July, 1, 2014, funding valuation report for a description of the plan membership.

### Benefits provided

Please see Section 3 of the July, 1, 2014, 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
2014	\$ 1,899,098,749	\$ 22,009,467	\$ 116,389,638	\$ 194,290,189	\$ 2,988,309	\$ 140,264,346	\$ 1,980,483,702
2015	1,980,483,702	22,860,705	121,430,948	205,922,010	3,077,958	146,153,584	2,061,928,971
2016	2,061,928,971	22,812,639	124,092,048	218,333,309	3,170,297	151,897,786	2,139,227,838
2017	2,139,227,838	22,735,791	126,796,510	231,507,859	3,265,406	157,303,339	2,211,290,213
2018	2,211,290,213	22,630,288	129,547,077	245,361,080	3,363,368	162,291,702	2,277,034,832
2019	2,277,034,832	22,530,818	132,394,647	259,909,060	3,464,269	166,784,338	2,335,371,306
2020	2,335,371,306	22,375,587	135,255,986	275,931,065	3,568,197	170,665,428	2,384,169,045
2021	2,384,169,045	22,099,897	138,043,899	293,226,083	3,675,243	173,776,983	2,421,188,498
2022	2,421,188,498	21,763,747	140,844,751	311,602,326	3,785,500	175,963,487	2,444,372,657
2023	2,444,372,657	21,404,708	143,713,796	330,751,499	3,899,065	177,085,428	2,451,926,025
2024	2,451,926,025	21,065,046	146,712,907	219,425,672	4,016,037	181,844,797	2,578,107,066
2025	2,578,107,066	20,621,930	149,674,393	228,564,129	4,136,518	191,060,173	2,706,762,915
2026	2,706,762,915	20,075,353	152,601,514	238,256,109	4,260,614	200,435,571	2,837,358,630
2027	2,837,358,630	19,453,603	155,537,000	248,568,991	4,388,432	209,930,998	2,969,322,808
2028	2,969,322,808	18,781,273	158,518,543	259,197,502	4,520,085	219,517,129	3,102,422,166
2029	3,102,422,166	18,084,974	161,586,750	270,673,316	4,655,688	229,159,364	3,235,924,250
2030	3,235,924,250	17,312,037	164,672,056	283,227,661	4,795,359	238,789,746	3,368,675,069
2031	3,368,675,069	16,461,625	167,777,107	296,592,561	4,939,220	248,331,658	3,499,713,678
2032	3,499,713,678	15,543,787	170,919,820	311,265,612	5,087,397	257,695,730	3,627,520,006
2033	3,627,520,006	14,425,410	173,919,075	327,192,994	5,240,019	266,758,363	3,750,189,841
2034	3,750,189,841	13,178,378	176,879,053	335,193,640	5,397,220	275,721,286	3,875,377,698
2035	3,875,377,698	11,975,254	180,044,123	342,219,014	5,559,137	284,917,967	4,004,536,891
2036	4,004,536,891	10,841,896	183,454,701	348,430,517	5,725,911	294,453,898	4,139,130,958
2037	4,139,130,958	9,725,965	187,042,563	354,674,270	5,897,688	304,403,241	4,279,730,769
2038	4,279,730,769	8,510,914	190,650,309	361,342,533	6,074,619	314,784,276	4,426,259,116
2039	4,426,259,116	7,259,121	194,369,589	367,826,708	6,256,858	325,619,289	4,579,423,549
2040	4,579,423,549	6,137,661	198,437,851	373,229,995	6,444,564	337,009,257	4,741,333,759
2041	4,741,333,759	5,068,839	202,752,195	377,329,634	6,637,901	349,113,953	4,914,301,211
2042	4,914,301,211	4,103,207	207,388,293	379,934,548	6,837,038	362,118,416	5,101,139,541
2043	5,101,139,541	3,252,185	212,367,544	383,153,911	7,042,149	376,157,204	5,302,720,414

**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
2044	5,302,720,414	2,430,903	217,577,566	384,075,523	7,253,413	391,395,658	5,522,795,605
2045	5,522,795,605	1,762,868	223,196,038	382,222,229	7,471,015	408,143,812	5,766,205,079
2046	5,766,205,079	1,326,466	229,338,045	379,419,497	7,695,145	426,704,564	6,036,459,512
2047	6,036,459,512	976,193	235,807,411	377,433,636	7,925,999	447,263,587	6,335,147,068
2048	6,335,147,068	514,726	242,336,068	375,890,237	8,163,779	469,936,635	6,663,880,481
2049	6,663,880,481	73,566	249,113,578	371,271,273	8,408,692	494,986,021	7,028,373,681
2050	7,028,373,681	-	256,629,891	364,798,387	8,660,953	522,826,124	7,434,370,356
2051	7,434,370,356	-	264,483,035	357,065,832	8,920,782	553,840,205	7,886,706,982
2052	7,886,706,982	-	272,577,945	348,176,827	9,188,405	588,380,980	8,390,300,675
2053	8,390,300,675	-	280,922,118	338,464,085	9,464,057	626,805,251	8,950,099,902
2054	8,950,099,902	-	289,523,290	326,257,699	9,747,979	669,545,915	9,573,163,429
2055	9,573,163,429	-	298,389,437	313,612,060	10,040,418	717,057,020	10,264,957,408
2056	10,264,957,408	-	307,528,787	301,495,848	10,341,631	769,713,150	11,030,361,866
2057	11,030,361,866	-	316,949,823	287,180,256	10,651,880	827,981,093	11,877,460,646
2058	11,877,460,646	-	326,661,297	269,005,147	10,971,436	892,528,576	12,816,673,936
2059	12,816,673,936	-	336,672,235	251,128,661	11,300,579	963,984,326	13,854,901,257
2060	13,854,901,257	-	346,991,944	233,068,551	11,639,596	1,042,883,895	15,000,068,949
2061	15,000,068,949	-	357,630,027	215,594,325	11,988,784	1,129,793,768	16,259,909,635
2062	16,259,909,635	-	368,596,385	198,978,413	12,348,448	1,225,284,212	17,642,463,371
2063	17,642,463,371	-	379,901,233	182,126,265	12,718,901	1,329,998,900	19,157,518,338
2064	19,157,518,338	-	391,555,105	166,868,495	13,100,468	1,444,604,915	20,813,709,395
2065	20,813,709,395	-	403,568,866	154,473,267	13,493,482	1,569,703,562	22,619,015,074
2066	22,619,015,074	-	415,953,724	143,002,268	13,898,286	1,705,965,004	24,584,033,248
2067	24,584,033,248	-	428,721,239	129,634,485	14,315,235	1,854,288,370	26,723,093,137
2068	26,723,093,137	-	441,883,335	116,184,168	14,744,692	2,015,681,972	29,049,729,584
2069	29,049,729,584	-	455,452,313	107,736,516	15,187,033	2,190,974,116	31,573,232,464

**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 3.66%	Using a Single Discount Rate of 7.50%
2014	\$ 1,899,098,749	\$ 194,290,189	\$ 194,290,189	\$ -	\$ 187,390,098	\$ -	\$ 187,390,098
2015	1,980,483,702	205,922,010	205,922,010	-	184,752,393	-	184,752,393
2016	2,061,928,971	218,333,309	218,333,309	-	182,221,173	-	182,221,173
2017	2,139,227,838	231,507,859	231,507,859	-	179,736,431	-	179,736,431
2018	2,211,290,213	245,361,080	245,361,080	-	177,201,578	-	177,201,578
2019	2,277,034,832	259,909,060	259,909,060	-	174,612,313	-	174,612,313
2020	2,335,371,306	275,931,065	275,931,065	-	172,443,004	-	172,443,004
2021	2,384,169,045	293,226,083	293,226,083	-	170,466,528	-	170,466,528
2022	2,421,188,498	311,602,326	311,602,326	-	168,511,190	-	168,511,190
2023	2,444,372,657	330,751,499	330,751,499	-	166,387,774	-	166,387,774
2024	2,451,926,025	219,425,672	219,425,672	-	102,683,003	-	102,683,003
2025	2,578,107,066	228,564,129	228,564,129	-	99,497,172	-	99,497,172
2026	2,706,762,915	238,256,109	238,256,109	-	96,480,210	-	96,480,210
2027	2,837,358,630	248,568,991	248,568,991	-	93,633,807	-	93,633,807
2028	2,969,322,808	259,197,502	259,197,502	-	90,825,559	-	90,825,559
2029	3,102,422,166	270,673,316	270,673,316	-	88,229,587	-	88,229,587
2030	3,235,924,250	283,227,661	283,227,661	-	85,880,785	-	85,880,785
2031	3,368,675,069	296,592,561	296,592,561	-	83,658,896	-	83,658,896
2032	3,499,713,678	311,265,612	311,265,612	-	81,672,256	-	81,672,256
2033	3,627,520,006	327,192,994	327,192,994	-	79,861,772	-	79,861,772
2034	3,750,189,841	335,193,640	335,193,640	-	76,106,588	-	76,106,588
2035	3,875,377,698	342,219,014	342,219,014	-	72,280,668	-	72,280,668
2036	4,004,536,891	348,430,517	348,430,517	-	68,458,242	-	68,458,242
2037	4,139,130,958	354,674,270	354,674,270	-	64,823,246	-	64,823,246
2038	4,279,730,769	361,342,533	361,342,533	-	61,434,413	-	61,434,413
2039	4,426,259,116	367,826,708	367,826,708	-	58,173,798	-	58,173,798
2040	4,579,423,549	373,229,995	373,229,995	-	54,910,100	-	54,910,100
2041	4,741,333,759	377,329,634	377,329,634	-	51,640,228	-	51,640,228
2042	4,914,301,211	379,934,548	379,934,548	-	48,369,050	-	48,369,050

**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 3.66%	Using a Single Discount Rate of 7.50%
2043	5,101,139,541	383,153,911	383,153,911	-	45,375,724	-	45,375,724
2044	5,302,720,414	384,075,523	384,075,523	-	42,311,505	-	42,311,505
2045	5,522,795,605	382,222,229	382,222,229	-	39,169,616	-	39,169,616
2046	5,766,205,079	379,419,497	379,419,497	-	36,169,671	-	36,169,671
2047	6,036,459,512	377,433,636	377,433,636	-	33,470,103	-	33,470,103
2048	6,335,147,068	375,890,237	375,890,237	-	31,007,663	-	31,007,663
2049	6,663,880,481	371,271,273	371,271,273	-	28,489,896	-	28,489,896
2050	7,028,373,681	364,798,387	364,798,387	-	26,040,179	-	26,040,179
2051	7,434,370,356	357,065,832	357,065,832	-	23,709,963	-	23,709,963
2052	7,886,706,982	348,176,827	348,176,827	-	21,506,711	-	21,506,711
2053	8,390,300,675	338,464,085	338,464,085	-	19,448,148	-	19,448,148
2054	8,950,099,902	326,257,699	326,257,699	-	17,438,855	-	17,438,855
2055	9,573,163,429	313,612,060	313,612,060	-	15,593,424	-	15,593,424
2056	10,264,957,408	301,495,848	301,495,848	-	13,945,099	-	13,945,099
2057	11,030,361,866	287,180,256	287,180,256	-	12,356,241	-	12,356,241
2058	11,877,460,646	269,005,147	269,005,147	-	10,766,733	-	10,766,733
2059	12,816,673,936	251,128,661	251,128,661	-	9,349,990	-	9,349,990
2060	13,854,901,257	233,068,551	233,068,551	-	8,072,166	-	8,072,166
2061	15,000,068,949	215,594,325	215,594,325	-	6,946,008	-	6,946,008
2062	16,259,909,635	198,978,413	198,978,413	-	5,963,421	-	5,963,421
2063	17,642,463,371	182,126,265	182,126,265	-	5,077,543	-	5,077,543
2064	19,157,518,338	166,868,495	166,868,495	-	4,327,598	-	4,327,598
2065	20,813,709,395	154,473,267	154,473,267	-	3,726,640	-	3,726,640
2066	22,619,015,074	143,002,268	143,002,268	-	3,209,213	-	3,209,213
2067	24,584,033,248	129,634,485	129,634,485	-	2,706,249	-	2,706,249
2068	26,723,093,137	116,184,168	116,184,168	-	2,256,242	-	2,256,242
2069	29,049,729,584	107,736,516	107,736,516	-	1,946,226	-	1,946,226