

# Oklahoma Police Pension and Retirement System

## GASB 67 Accounting Supplement

For the Fiscal Year ending  
June 30, 2014

November 2014





**David Kent**  
*Director, Retirement*

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November 2014

Mr. Steven K. Snyder  
Executive Director / Chief Investment Officer  
Oklahoma Police Pension and Retirement System  
1001 NW 63rd Street, Suite 305  
Oklahoma City, OK 73116-7335

Dear Mr. Snyder:

Buck Consultants, LLC (Buck) was retained to complete this actuarial valuation of the Oklahoma Police 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**

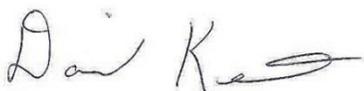
The Board of Trustees selected the actuarial methods and assumptions used in this valuation. The Board has sole authority to determine the expected investment return and other actuarial assumptions. In our opinion, the actuarial assumptions used are appropriate for purposes of the valuation and are reasonably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

Mr. Steven K. Snyder

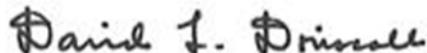
This report was prepared under the supervision of David Driscoll and David Kent. They are Fellows of the Society of Actuaries and Members of the American Academy of Actuaries. They meet the Academy's Qualification Standards to issue this Statement of Actuarial Opinion. This report has been prepared in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

Respectfully submitted,

BUCK CONSULTANTS, LLC

A handwritten signature in black ink, appearing to read "David Kent".

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

A handwritten signature in black ink, appearing to read "David L. Driscoll".

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

DLD/DK/ms

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## Net Pension Liability

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

Total pension liability	\$ 2,204,797,154
Plan fiduciary net position	<u>(2,238,466,000)</u>
State's net pension liability	(33,668,846)
Plan fiduciary net position as a percentage of the total pension liability	101.53%

## 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 investment expenses, per annum, compounded annually. This is based on an average inflation rate of 3.00% and a real rate of return of 4.50%.

Please see Section 4.2 of the July 1, 2014 actuarial 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, employer payroll contribution percentage, and employee payroll contribution percentage are assumed to remain constant for the entire projection period. The Normal Cost Rate for future members is assumed to be 19.90% 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	\$ 200,324,385	\$ (33,668,846)	\$ (230,873,040)

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

2014

### Total pension liability

Service cost	\$	53,041,713
Interest		159,256,454
Changes of benefit terms		0
Differences between expected and actual experience		(18,258,185)
Changes of assumptions		0
Benefit payments		<u>(119,241,000)</u>
Net change in total pension liability	\$	74,798,982
Total pension liability-beginning	\$	2,129,998,172
Total pension liability-ending (a)	\$	2,204,797,154

### Plan fiduciary net pension

Contributions-employer	\$	66,876,000
Contributions-employee		22,131,000
Net investment income		294,897,000
Benefit payments, including refunds of employee contributions		(119,241,000)
Administrative expense		(1,862,000)
Other ( Professional services)		<u>0</u>
Net change in plan fiduciary net position	\$	262,801,000
Plan fiduciary net position-beginning	\$	1,975,665,000
Plan fiduciary net position-ending (b)		<u>2,238,466,000</u>
State's net pension liability-ending (a)-(b)	\$	(33,668,846)
Plan fiduciary net position as a percentage of the total pension liability		101.53%
Covered-employee payroll	\$	289,502,327
Net pension liability as a percentage of covered-employee payroll		(11.63)%

## Schedule of Fund Contributions

	2014
Actuarially determined contribution	\$ 90,283,459
Contributions related to the actuarially determined contribution	<u>66,876,000</u>
Contribution deficiency (excess)	\$ 23,407,459

### Plan membership

Please see Section 4.1 of the July 1, 2014 actuarial valuation report for a description of the system membership.

### Benefits provided

Please see Section 4.3 of the July 1, 2014 actuarial valuation report for a summary of system 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	\$ 1,969,169,000	\$ 22,153,614	\$ 68,353,983	\$ 177,456,869	\$ 2,913,500	\$ 144,378,742	\$ 2,023,684,970
2015	2,023,684,970	21,088,178	67,861,623	141,786,196	3,000,905	146,719,423	2,117,567,998
2016	2,117,567,998	20,840,936	68,620,319	149,546,711	3,090,932	153,400,383	2,210,882,925
2017	2,210,882,925	20,484,763	69,252,041	147,040,414	3,183,660	160,405,293	2,313,984,608
2018	2,313,984,608	20,325,100	70,212,235	156,797,040	3,279,170	167,709,111	2,415,434,014
2019	2,415,434,014	20,015,940	70,987,356	161,022,186	3,377,545	175,077,397	2,520,492,521
2020	2,520,492,521	19,701,248	71,792,720	173,872,909	3,478,871	182,396,606	2,620,510,186
2021	2,620,510,186	19,142,976	72,275,446	180,824,572	3,583,237	189,530,965	2,720,635,001
2022	2,720,635,001	18,585,657	72,800,528	179,290,124	3,690,734	196,984,186	2,829,715,248
2023	2,829,715,248	18,150,791	73,549,985	188,523,073	3,801,456	204,722,013	2,937,614,964
2024	2,937,614,964	17,596,112	74,164,774	185,743,586	3,915,500	212,800,808	3,056,433,072
2025	3,056,433,072	17,287,604	75,190,677	195,273,469	4,032,965	221,265,882	3,174,903,766
2026	3,174,903,766	16,753,843	75,927,862	207,670,794	4,153,954	229,576,735	3,289,491,412
2027	3,289,491,412	16,005,528	76,393,708	210,439,562	4,278,573	237,929,248	3,409,380,334
2028	3,409,380,334	15,298,294	76,969,982	220,438,791	4,406,930	246,414,820	3,527,624,639
2029	3,527,624,639	14,456,405	77,396,834	226,395,261	4,539,138	254,911,454	3,647,994,071
2030	3,647,994,071	13,567,602	77,806,386	239,776,422	4,675,312	263,287,605	3,762,879,242
2031	3,762,879,242	12,502,541	78,007,897	238,386,961	4,815,571	271,777,933	3,886,780,652
2032	3,886,780,652	11,644,889	78,573,787	247,480,733	4,960,038	280,575,157	4,010,093,752
2033	4,010,093,752	10,511,993	78,787,875	256,258,294	5,108,839	289,312,320	4,132,447,646
2034	4,132,447,646	9,283,759	78,919,593	250,997,318	5,262,104	298,483,297	4,268,136,977
2035	4,268,136,977	8,384,705	79,602,292	265,903,177	5,419,967	307,939,490	4,398,160,287
2036	4,398,160,287	7,392,322	80,209,437	271,908,941	5,582,566	317,287,322	4,531,140,427
2037	4,531,140,427	6,368,751	80,835,467	276,072,689	5,750,043	326,919,233	4,669,191,189
2038	4,669,191,189	5,319,381	81,490,468	278,554,795	5,922,544	336,988,270	4,814,434,513
2039	4,814,434,513	4,282,943	82,234,184	277,309,898	6,100,220	347,732,361	4,971,374,103
2040	4,971,374,103	3,333,036	83,178,301	269,342,095	6,283,227	359,606,262	5,148,149,607
2041	5,148,149,607	2,589,651	84,503,581	258,727,180	6,471,724	373,081,277	5,349,596,936
2042	5,349,596,936	2,069,649	86,237,453	276,421,966	6,665,876	387,381,665	5,548,863,737
2043	5,548,863,737	1,156,995	87,465,989	270,427,954	6,865,852	402,351,679	5,769,410,446

**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	5,769,410,446	368,554	88,960,530	249,373,973	7,071,828	419,480,372	6,028,845,929
2045	6,028,845,929	0	91,163,474	228,840,195	7,283,983	439,541,709	6,330,710,917
2046	6,330,710,917	0	94,001,128	224,394,162	7,502,502	462,223,218	6,662,541,101
2047	6,662,541,101	0	96,928,022	219,806,917	7,727,577	487,153,805	7,026,816,011
2048	7,026,816,011	0	99,946,996	215,075,944	7,959,404	514,519,429	7,426,206,492
2049	7,426,206,492	0	103,060,985	210,197,670	8,198,186	544,520,432	7,863,590,239
2050	7,863,590,239	0	106,273,018	205,165,233	8,444,132	577,372,790	8,342,070,814
2051	8,342,070,814	0	109,586,219	199,973,120	8,697,456	613,309,364	8,864,993,277
2052	8,864,993,277	0	113,003,817	194,615,149	8,958,380	652,581,152	9,435,963,097
2053	9,435,963,097	0	116,529,144	189,089,768	9,227,131	695,458,508	10,058,860,981
2054	10,058,860,981	0	120,165,638	183,394,773	9,503,945	742,232,446	10,737,864,292
2055	10,737,864,292	0	123,916,852	177,531,952	9,789,063	793,216,087	11,477,465,279
2056	11,477,465,279	0	127,786,452	171,508,085	10,082,735	848,745,973	12,282,489,619
2057	12,282,489,619	0	131,778,224	165,331,813	10,385,217	909,183,587	13,158,119,617
2058	13,158,119,617	0	135,896,077	159,012,252	10,696,774	974,917,134	14,109,920,576
2059	14,109,920,576	0	140,144,045	152,559,943	11,017,677	1,046,363,494	15,143,868,172
2060	15,143,868,172	0	144,526,296	145,985,557	11,348,207	1,123,970,308	16,266,379,219
2061	16,266,379,219	0	149,047,131	139,304,751	11,688,653	1,208,218,123	17,484,339,722
2062	17,484,339,722	0	153,710,993	132,533,924	12,039,313	1,299,622,638	18,805,139,429
2063	18,805,139,429	0	158,522,470	125,692,688	12,400,492	1,398,737,214	20,236,706,425
2064	20,236,706,425	0	163,486,296	118,805,145	12,772,507	1,506,155,417	21,787,542,993
2065	21,787,542,993	0	168,607,363	111,899,224	13,155,682	1,622,513,734	23,466,764,866
2066	23,466,764,866	0	173,890,722	105,001,132	13,550,352	1,748,494,718	25,284,149,174
2067	25,284,149,174	0	179,341,586	98,140,300	13,956,863	1,884,830,403	27,250,180,863
2068	27,250,180,863	0	184,965,342	91,342,855	14,375,569	2,032,306,032	29,376,109,382
2069	29,376,109,382	0	190,767,552	84,637,592	14,806,836	2,191,764,074	31,674,003,416

**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	\$ 1,969,169,000	\$ 177,456,869	\$ 177,456,869	\$ 0	\$ 171,154,603	\$ 0	\$ 171,154,603
2015	2,023,684,970	141,786,196	141,786,196	0	127,210,001	0	127,210,001
2016	2,117,567,998	149,546,711	149,546,711	0	124,811,817	0	124,811,817
2017	2,210,882,925	147,040,414	147,040,414	0	114,158,195	0	114,158,195
2018	2,313,984,608	156,797,040	156,797,040	0	113,239,976	0	113,239,976
2019	2,415,434,014	161,022,186	161,022,186	0	108,178,054	0	108,178,054
2020	2,520,492,521	173,872,909	173,872,909	0	108,661,802	0	108,661,802
2021	2,620,510,186	180,824,572	180,824,572	0	105,122,085	0	105,122,085
2022	2,720,635,001	179,290,124	179,290,124	0	96,958,172	0	96,958,172
2023	2,829,715,248	188,523,073	188,523,073	0	94,838,374	0	94,838,374
2024	2,937,614,964	185,743,586	185,743,586	0	86,921,047	0	86,921,047
2025	3,056,433,072	195,273,469	195,273,469	0	85,005,280	0	85,005,280
2026	3,174,903,766	207,670,794	207,670,794	0	84,094,893	0	84,094,893
2027	3,289,491,412	210,439,562	210,439,562	0	79,270,778	0	79,270,778
2028	3,409,380,334	220,438,791	220,438,791	0	77,244,095	0	77,244,095
2029	3,527,624,639	226,395,261	226,395,261	0	73,796,563	0	73,796,563
2030	3,647,994,071	239,776,422	239,776,422	0	72,705,424	0	72,705,424
2031	3,762,879,242	238,386,961	238,386,961	0	67,241,032	0	67,241,032
2032	3,886,780,652	247,480,733	247,480,733	0	64,935,891	0	64,935,891
2033	4,010,093,752	256,258,294	256,258,294	0	62,547,921	0	62,547,921
2034	4,132,447,646	250,997,318	250,997,318	0	56,989,594	0	56,989,594
2035	4,268,136,977	265,903,177	265,903,177	0	56,161,868	0	56,161,868
2036	4,398,160,287	271,908,941	271,908,941	0	53,423,587	0	53,423,587
2037	4,531,140,427	276,072,689	276,072,689	0	50,457,361	0	50,457,361
2038	4,669,191,189	278,554,795	278,554,795	0	47,359,081	0	47,359,081
2039	4,814,434,513	277,309,898	277,309,898	0	43,858,072	0	43,858,072
2040	4,971,374,103	269,342,095	269,342,095	0	39,625,972	0	39,625,972
2041	5,148,149,607	258,727,180	258,727,180	0	35,408,643	0	35,408,643
2042	5,349,596,936	276,421,966	276,421,966	0	35,190,977	0	35,190,977

**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	5,548,863,737	270,427,954	270,427,954	0	32,025,940	0	32,025,940
2044	5,769,410,446	249,373,973	249,373,973	0	27,472,170	0	27,472,170
2045	6,028,845,929	228,840,195	228,840,195	0	23,451,233	0	23,451,233
2046	6,330,710,917	224,394,162	224,394,162	0	21,391,265	0	21,391,265
2047	6,662,541,101	219,806,917	219,806,917	0	19,492,063	0	19,492,063
2048	7,026,816,011	215,075,944	215,075,944	0	17,741,888	0	17,741,888
2049	7,426,206,492	210,197,670	210,197,670	0	16,129,742	0	16,129,742
2050	7,863,590,239	205,165,233	205,165,233	0	14,645,184	0	14,645,184
2051	8,342,070,814	199,973,120	199,973,120	0	13,278,659	0	13,278,659
2052	8,864,993,277	194,615,149	194,615,149	0	12,021,282	0	12,021,282
2053	9,435,963,097	189,089,768	189,089,768	0	10,865,099	0	10,865,099
2054	10,058,860,981	183,394,773	183,394,773	0	9,802,665	0	9,802,665
2055	10,737,864,292	177,531,952	177,531,952	0	8,827,247	0	8,827,247
2056	11,477,465,279	171,508,085	171,508,085	0	7,932,770	0	7,932,770
2057	12,282,489,619	165,331,813	165,331,813	0	7,113,580	0	7,113,580
2058	13,158,119,617	159,012,252	159,012,252	0	6,364,348	0	6,364,348
2059	14,109,920,576	152,559,943	152,559,943	0	5,680,092	0	5,680,092
2060	15,143,868,172	145,985,557	145,985,557	0	5,056,108	0	5,056,108
2061	16,266,379,219	139,304,751	139,304,751	0	4,488,114	0	4,488,114
2062	17,484,339,722	132,533,924	132,533,924	0	3,972,067	0	3,972,067
2063	18,805,139,429	125,692,688	125,692,688	0	3,504,217	0	3,504,217
2064	20,236,706,425	118,805,145	118,805,145	0	3,081,114	0	3,081,114
2065	21,787,542,993	111,899,224	111,899,224	0	2,699,549	0	2,699,549
2066	23,466,764,866	105,001,132	105,001,132	0	2,356,403	0	2,356,403
2067	25,284,149,174	98,140,300	98,140,300	0	2,048,776	0	2,048,776
2068	27,250,180,863	91,342,855	91,342,855	0	1,773,835	0	1,773,835
2069	29,376,109,382	84,637,592	84,637,592	0	1,528,951	0	1,528,951