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Local Governmental Employees' Retirement System Actuarially Determined Employer Contributions (ADEC) Projections for the Local System

January 31, 2019 Board of Trustees Meeting

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Projections

- Projections of contribution requirements and funded status into the future can be helpful planning tools for stakeholders. This section provides such projections. The projections of the actuarial valuation are known as deterministic projections. Deterministic projections are based on one scenario in the future. The baseline deterministic projection is based on December 31, 2017 valuation results and assumptions.
- Key Projection Assumptions
 - Valuation interest rate of 7.00% for all years in conjunction with direct rate smoothing of the employer contribution rate over a 3-year period beginning July 1, 2019.
 - 7.00% investment return on market value of assets
 - Actuarial assumptions and methods as described in Appendix D of the latest actuarial valuation report. All future demographic experience is assumed to be exactly realized.
 - The contribution rate under the Employer Contribution Rate Stabilization Policy (ECRSP) and Direct Rate Smoothing is contributed until fiscal year ending 2022.
 - The actuarially determined employer contribution rate is contributed for fiscal years ending 2023 and beyond.
 - 0% increase in the total active member population
 - No cost-of-living adjustments granted
 - Future pay increases based on long-term salary increase assumptions



Projections

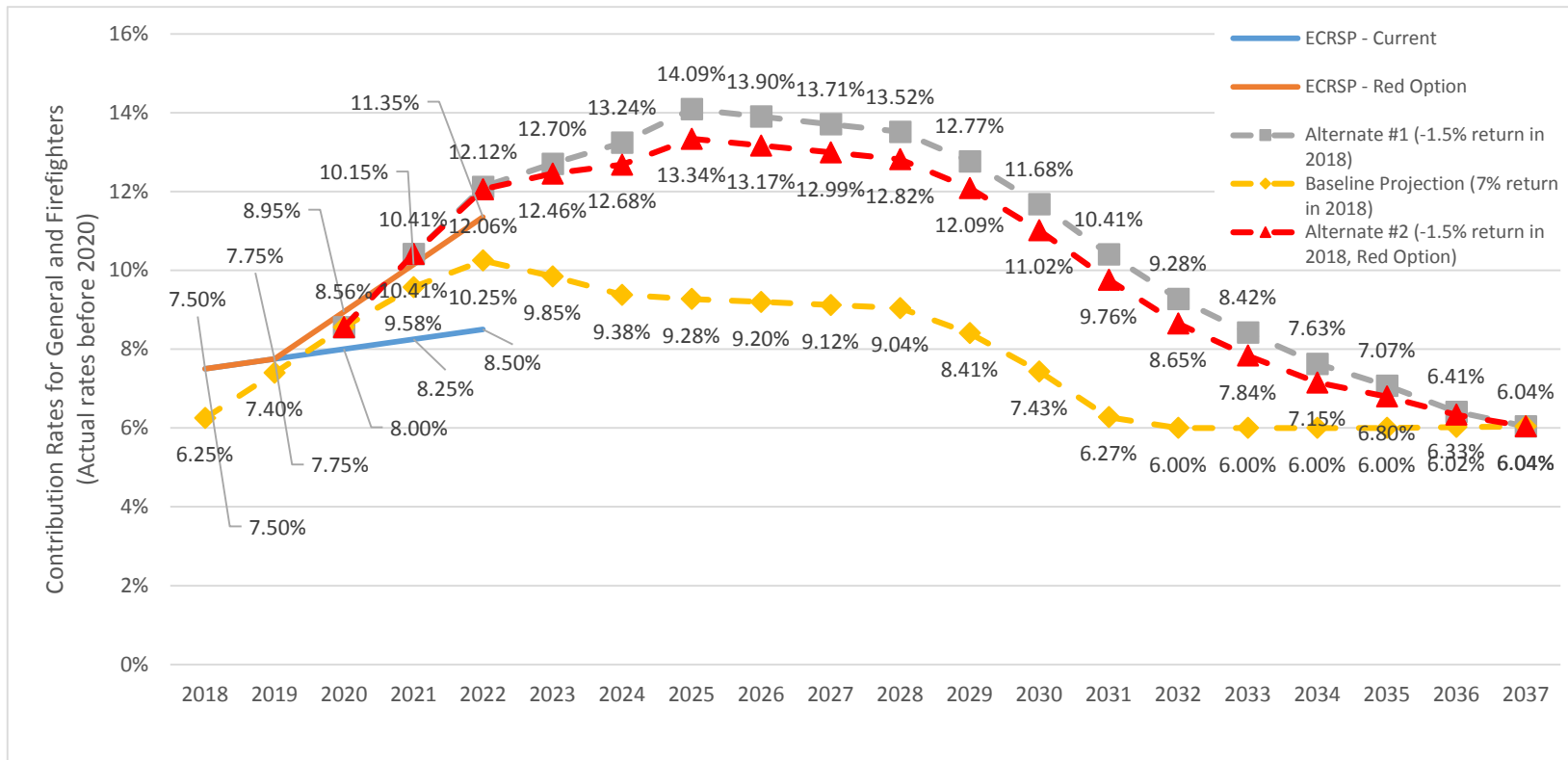
- The ECRSP adopted by the Board of Trustees on January 21, 2016 requires that recommended contributions for general employees be set at 7.25% of payroll for fiscal year ending 2017 and will increase each fiscal year by 0.25% per year, with the following additional adjustments, if applicable:
 - If the underlying actuarially determined employer contribution rate (ADEC) for a given fiscal year is 50% higher than the scheduled employer contribution rate for that fiscal year, the scheduled employer contribution rate for the current and future fiscal years increases 0.50%;
 - If the underlying ADEC for a given fiscal year is 50% lower than the scheduled employer contribution rate for that fiscal year, the scheduled employer contribution rate for the current and future fiscal year decreases 0.50%;
 - If the General Assembly grants any additional COLA beyond the amount of COLA granted by the Board, increases the multiplier for active employees, or changes the benefit structure in a way that has a cost to the system, the schedule of contributions for the current and future fiscal years will be increased by the cost of the benefit enhancement. The cost of any COLA granted by the Board under the authority allowed by statute will not impact the scheduled contribution rates.
 - Contribution rates for law enforcement officers will be 0.75% higher than contribution rates for general employees.



Projections

- In addition to the baseline projection, we have provided two alternate deterministic projections.
 - Alternate #1 is based on the same assumptions as the baseline deterministic projection except that it is based asset return of -1.5% for calendar year 2018. The preliminary return of -1.5% for calendar year 2018 was provided by RSD Staff.
 - Alternate #2 is based on Alternate #1 with the “Red Option” ECRSP summarized below:
 - Increase the non-LEO contribution rate as follows:
 - From 8.00% to 8.95% of payroll effective 7/1/2019
 - From 8.25% to 10.15% of payroll effective 7/1/2020
 - From 8.50% to 11.35% of payroll effective 7/1/2021
 - LEO spread would remain at 0.75 percent.

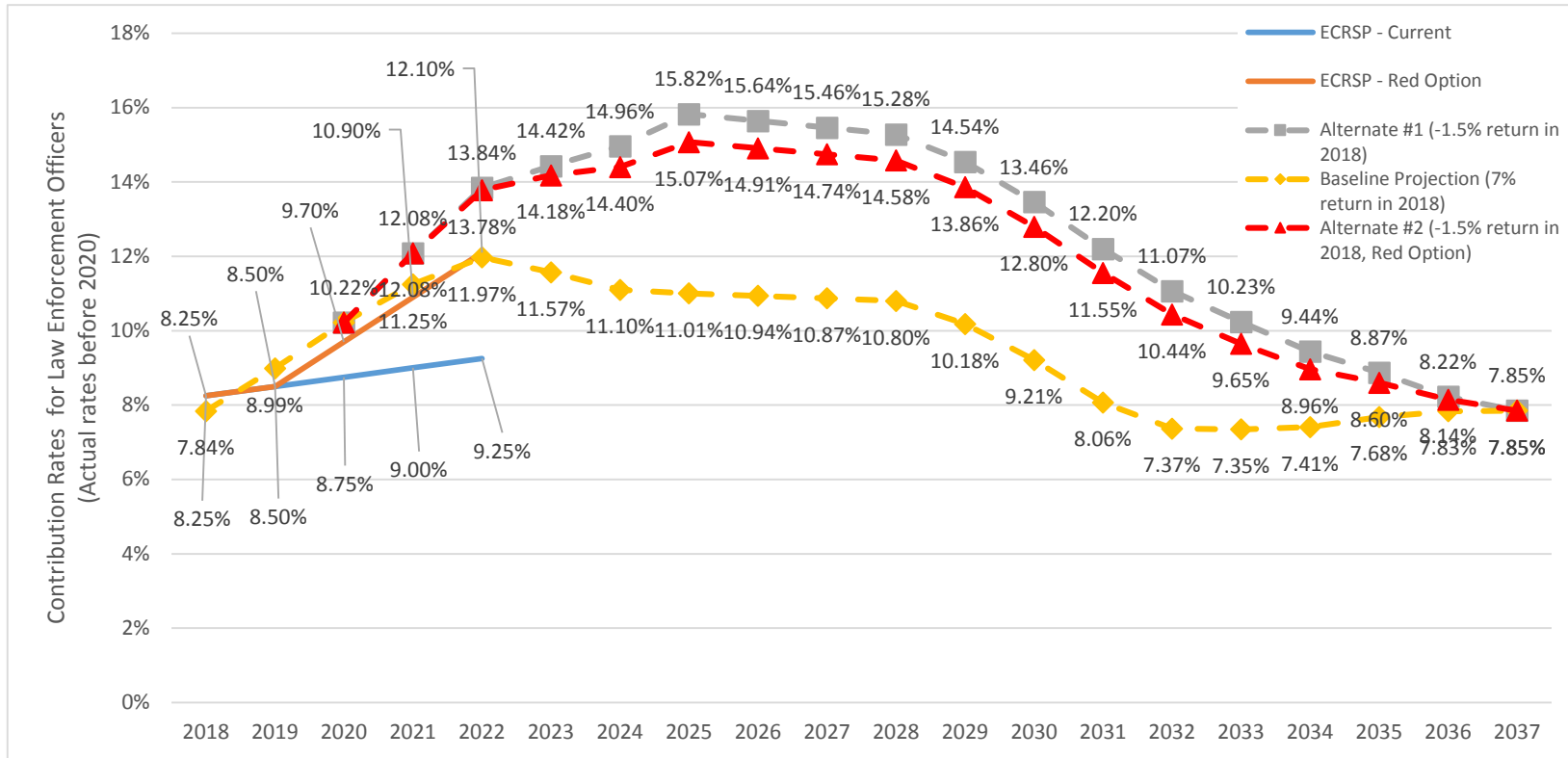
Projected Contribution Rates: Non-LEO



Estimated returns were 8.5% lower than expected. As a result we are projecting that the unfunded actuarial accrued liability will be higher resulting in a higher employer contribution rates under Alternate #1.

Alternative #2, the Red Option, provides for less contribution disruption when the ECRSP expires in anticipation of new assumptions being adopted for FY 2023 rates.

Projected Contribution Rates: LEO

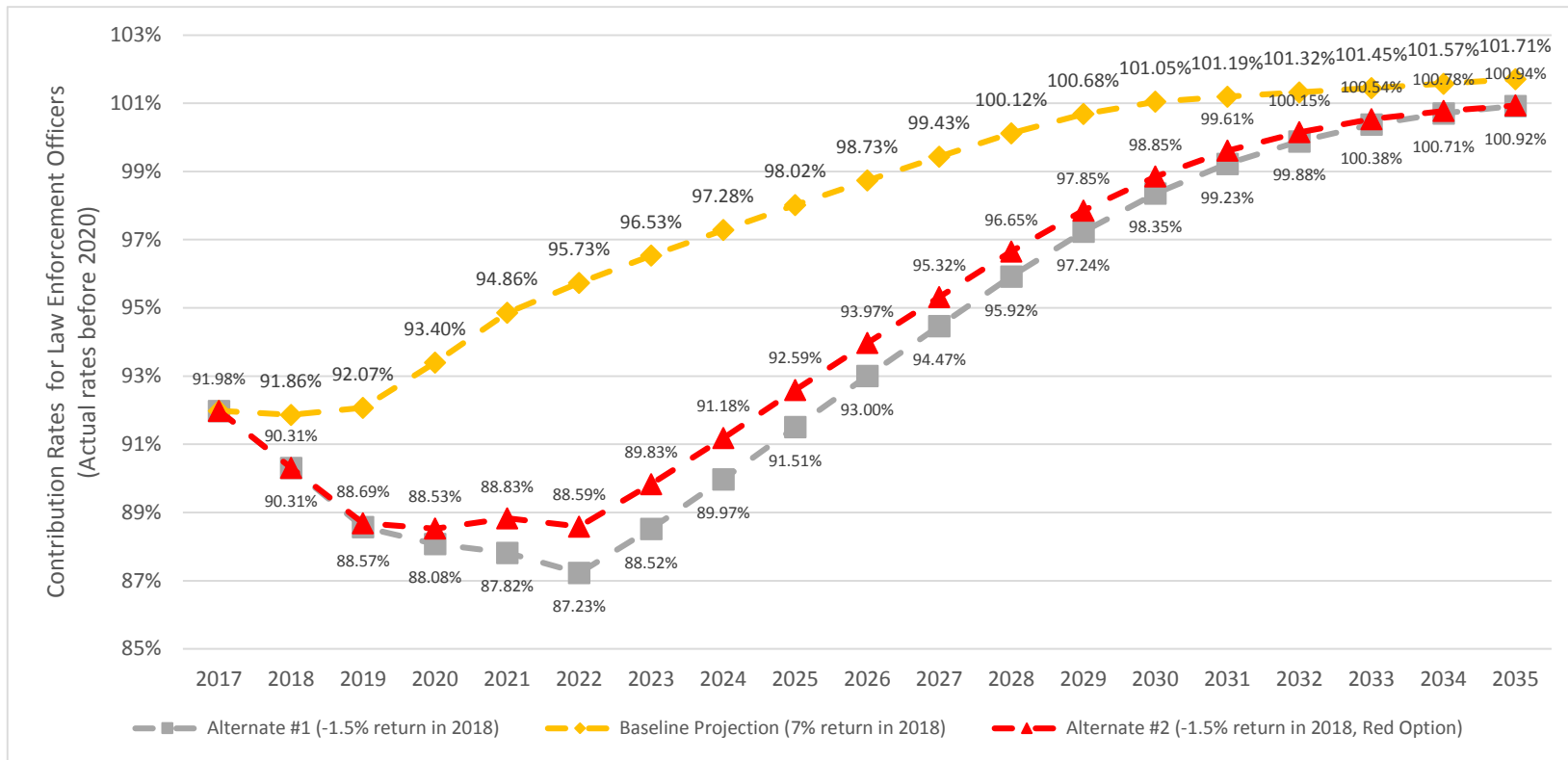


Estimated returns were 8.5% lower than expected. As a result we are projecting that the unfunded actuarial accrued liability will be higher resulting in a higher employer contribution rates under Alternate #1.

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Projected Funded Ratio



Estimated returns were 8.5% lower than expected. As a result we are projecting that the unfunded actuarial accrued liability will be higher resulting in a higher employer contribution rates.



Certification

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. Because of limited scope, Cavanaugh Macdonald performed no analysis of the potential range of such future differences, except for some limited analysis in financial projections or required disclosure information. Results prior to December 31, 2017 were provided by the prior consulting actuary.

We 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.

Larry Langer, ASA, EA, FCA, MAAA
Principal and Consulting Actuary

Jonathan T. Craven, ASA, EA, FCA, MAAA
Consulting Actuary

APPENDIX

Fiscal Year Contribution Projection Baseline



Baseline Projection (7% return in 2018)

Fiscal Year Ending	Employer Contribution Rate - General and Firefighters	Employer Contribution Rate - Law Enforcement Officers	Employer Contributions	Member Contributions	Benefit Payments
6/30/2020	8.00%	8.75%	508,573,000	379,993,000	1,299,578,000
6/30/2021	8.25%	9.00%	546,146,000	390,814,000	1,399,923,000
6/30/2022	8.50%	9.25%	573,353,000	398,393,000	1,476,109,000
6/30/2023	9.85%	11.57%	688,388,000	406,609,000	1,555,583,000
6/30/2024	9.38%	11.10%	670,778,000	415,508,000	1,636,454,000
6/30/2025	9.28%	11.01%	678,856,000	424,924,000	1,721,133,000
6/30/2026	9.20%	10.94%	688,975,000	434,725,000	1,811,804,000
6/30/2027	9.12%	10.87%	699,469,000	444,944,000	1,905,040,000
6/30/2028	9.04%	10.80%	710,462,000	455,664,000	2,000,914,000
6/30/2029	8.41%	10.18%	678,744,000	466,964,000	2,096,997,000
6/30/2030	7.43%	9.21%	618,312,000	478,876,000	2,193,907,000
6/30/2031	6.27%	8.06%	539,735,000	491,431,000	2,290,599,000
6/30/2032	6.00%	7.37%	524,857,000	504,650,000	2,387,030,000
6/30/2033	6.00%	7.35%	539,017,000	518,575,000	2,482,992,000
6/30/2034	6.00%	7.41%	555,267,000	533,295,000	2,577,387,000
6/30/2035	6.00%	7.68%	575,738,000	548,802,000	2,670,273,000
6/30/2036	6.02%	7.83%	597,327,000	565,026,000	2,762,328,000
6/30/2037	6.04%	7.85%	616,701,000	581,954,000	2,854,248,000

Fiscal Year Contribution Projection Alternate #1



Alternate #1 (-1.5% return in 2018)

Fiscal Year Ending	Employer Contribution Rate - General and Firefighters	Employer Contribution Rate - Law Enforcement Officers	Employer Contributions	Member Contributions	Benefit Payments
6/30/2020	8.00%	8.75%	508,573,000	379,993,000	1,299,578,000
6/30/2021	8.25%	9.00%	546,146,000	390,814,000	1,399,923,000
6/30/2022	8.50%	9.25%	573,353,000	398,393,000	1,476,109,000
6/30/2023	12.70%	14.42%	881,951,000	406,609,000	1,555,583,000
6/30/2024	13.24%	14.96%	938,443,000	415,508,000	1,636,454,000
6/30/2025	14.09%	15.82%	1,020,105,000	424,924,000	1,721,133,000
6/30/2026	13.90%	15.64%	1,029,881,000	434,725,000	1,811,804,000
6/30/2027	13.71%	15.46%	1,039,945,000	444,944,000	1,905,040,000
6/30/2028	13.52%	15.28%	1,050,467,000	455,664,000	2,000,914,000
6/30/2029	12.77%	14.54%	1,018,280,000	466,964,000	2,096,997,000
6/30/2030	11.68%	13.46%	957,389,000	478,876,000	2,193,907,000
6/30/2031	10.41%	12.20%	878,357,000	491,431,000	2,290,599,000
6/30/2032	9.28%	11.07%	806,739,000	504,650,000	2,387,030,000
6/30/2033	8.42%	10.23%	755,555,000	518,575,000	2,482,992,000
6/30/2034	7.63%	9.44%	706,402,000	533,295,000	2,577,387,000
6/30/2035	7.07%	8.87%	675,902,000	548,802,000	2,670,273,000
6/30/2036	6.41%	8.22%	633,739,000	565,026,000	2,762,328,000
6/30/2037	6.04%	7.85%	616,701,000	581,954,000	2,854,248,000

Fiscal Year Contribution Projection

Alternate #2



Alternate #2 (-1.5% return in 2018, Option Red)

Fiscal Year Ending	Employer Contribution Rate - General and Firefighters	Employer Contribution Rate - Law Enforcement Officers	Employer Contributions	Member Contributions	Benefit Payments
6/30/2020	8.95%	9.70%	567,955,000	379,993,000	1,299,578,000
6/30/2021	10.15%	10.90%	669,903,000	390,814,000	1,399,923,000
6/30/2022	11.35%	12.10%	762,590,000	398,393,000	1,476,109,000
6/30/2023	12.46%	14.18%	865,055,000	406,609,000	1,555,583,000
6/30/2024	12.68%	14.40%	899,627,000	415,508,000	1,636,454,000
6/30/2025	13.34%	15.07%	966,726,000	424,924,000	1,721,133,000
6/30/2026	13.17%	14.91%	976,555,000	434,725,000	1,811,804,000
6/30/2027	12.99%	14.74%	986,686,000	444,944,000	1,905,040,000
6/30/2028	12.82%	14.58%	997,282,000	455,664,000	2,000,914,000
6/30/2029	12.09%	13.86%	965,168,000	466,964,000	2,096,997,000
6/30/2030	11.02%	12.80%	904,349,000	478,876,000	2,193,907,000
6/30/2031	9.76%	11.55%	825,389,000	491,431,000	2,290,599,000
6/30/2032	8.65%	10.44%	753,847,000	504,650,000	2,387,030,000
6/30/2033	7.84%	9.65%	704,795,000	518,575,000	2,482,992,000
6/30/2034	7.15%	8.96%	664,032,000	533,295,000	2,577,387,000
6/30/2035	6.80%	8.60%	650,667,000	548,802,000	2,670,273,000
6/30/2036	6.33%	8.14%	626,538,000	565,026,000	2,762,328,000
6/30/2037	6.04%	7.85%	616,701,000	581,954,000	2,854,248,000

Asset and Liability Projection Baseline



Baseline Projection (7% return in 2018)

Fiscal Year Ending	Market Value of Assets	Actuarial Value of Assets	Accrued Liability	Unfunded Accrued Liability	Funded Ratio
12/31/2017	25,918,361,000	25,520,733,000	27,745,868,000	2,225,134,000	91.98%
12/31/2018	25,445,829,000	24,980,549,000	27,193,686,000	2,213,138,000	91.86%
12/31/2019	26,642,676,000	26,109,742,000	28,358,384,000	2,248,641,000	92.07%
12/31/2020	27,877,216,000	27,587,999,000	29,538,265,000	1,950,266,000	93.40%
12/31/2021	29,153,060,000	29,153,060,000	30,734,198,000	1,581,138,000	94.86%
12/31/2022	30,581,123,000	30,581,123,000	31,944,387,000	1,363,264,000	95.73%
12/31/2023	32,015,174,000	32,015,174,000	33,164,511,000	1,149,337,000	96.53%
12/31/2024	33,459,158,000	33,459,158,000	34,393,420,000	934,262,000	97.28%
12/31/2025	34,923,650,000	34,923,650,000	35,629,846,000	706,197,000	98.02%
12/31/2026	36,408,522,000	36,408,522,000	36,875,493,000	466,971,000	98.73%
12/31/2027	37,915,349,000	37,915,349,000	38,131,416,000	216,067,000	99.43%
12/31/2028	39,447,750,000	39,447,750,000	39,400,000,000	(47,750,000)	100.12%
12/31/2029	40,961,694,000	40,961,694,000	40,683,834,000	(277,860,000)	100.68%
12/31/2030	42,424,760,000	42,424,760,000	41,985,974,000	(438,786,000)	101.05%
12/31/2031	43,828,475,000	43,828,475,000	43,311,076,000	(517,399,000)	101.19%
12/31/2032	45,253,775,000	45,253,775,000	44,663,764,000	(590,010,000)	101.32%
12/31/2033	46,714,622,000	46,714,622,000	46,048,375,000	(666,248,000)	101.45%
12/31/2034	48,215,862,000	48,215,862,000	47,468,772,000	(747,090,000)	101.57%
12/31/2035	49,764,390,000	49,764,390,000	48,928,515,000	(835,875,000)	101.71%
12/31/2036	51,363,591,000	51,363,591,000	50,432,421,000	(931,169,000)	101.85%
12/31/2037	53,012,759,000	53,012,759,000	51,981,511,000	(1,031,248,000)	101.98%

Asset and Liability Projection

Alternate #1



Alternate #1 (-1.5% return in 2018)

Fiscal Year Ending	Market Value of Assets	Actuarial Value of Assets	Accrued Liability	Unfunded Accrued Liability	Funded Ratio
12/31/2017	25,918,361,000	25,520,733,000	27,745,868,000	2,225,134,000	91.98%
12/31/2018	23,335,479,000	24,558,479,000	27,193,686,000	2,635,208,000	90.31%
12/31/2019	24,384,601,000	25,117,878,000	28,358,384,000	3,240,506,000	88.57%
12/31/2020	25,461,076,000	26,015,999,000	29,538,265,000	3,522,266,000	88.08%
12/31/2021	26,567,791,000	26,989,861,000	30,734,198,000	3,744,338,000	87.82%
12/31/2022	27,864,137,000	27,864,137,000	31,944,387,000	4,080,250,000	87.23%
12/31/2023	29,357,666,000	29,357,666,000	33,164,511,000	3,806,845,000	88.52%
12/31/2024	30,945,394,000	30,945,394,000	34,393,420,000	3,448,026,000	89.97%
12/31/2025	32,603,340,000	32,603,340,000	35,629,846,000	3,026,506,000	91.51%
12/31/2026	34,295,490,000	34,295,490,000	36,875,493,000	2,580,003,000	93.00%
12/31/2027	36,023,623,000	36,023,623,000	38,131,416,000	2,107,793,000	94.47%
12/31/2028	37,793,172,000	37,793,172,000	39,400,000,000	1,606,829,000	95.92%
12/31/2029	39,560,380,000	39,560,380,000	40,683,834,000	1,123,453,000	97.24%
12/31/2030	41,294,790,000	41,294,790,000	41,985,974,000	691,184,000	98.35%
12/31/2031	42,976,497,000	42,976,497,000	43,311,076,000	334,579,000	99.23%
12/31/2032	44,611,794,000	44,611,794,000	44,663,764,000	51,970,000	99.88%
12/31/2033	46,221,522,000	46,221,522,000	46,048,375,000	(173,148,000)	100.38%
12/31/2034	47,805,040,000	47,805,040,000	47,468,772,000	(336,267,000)	100.71%
12/31/2035	49,380,867,000	49,380,867,000	48,928,515,000	(452,352,000)	100.92%
12/31/2036	50,965,394,000	50,965,394,000	50,432,421,000	(532,973,000)	101.06%
12/31/2037	52,593,911,000	52,593,911,000	51,981,511,000	(612,400,000)	101.18%

Asset and Liability Projection

Alternate #2



Alternate #2 (-1.5% return in 2018, Option Red)

Fiscal Year Ending	Market Value of Assets	Actuarial Value of Assets	Accrued Liability	Unfunded Accrued Liability	Funded Ratio
12/31/2017	25,918,361,000	25,520,733,000	27,745,868,000	2,225,134,000	91.98%
12/31/2018	23,335,479,000	24,558,479,000	27,193,686,000	2,635,208,000	90.31%
12/31/2019	24,416,904,000	25,150,181,000	28,358,384,000	3,208,203,000	88.69%
12/31/2020	25,594,480,000	26,149,403,000	29,538,265,000	3,388,862,000	88.53%
12/31/2021	26,878,774,000	27,300,844,000	30,734,198,000	3,433,354,000	88.83%
12/31/2022	28,299,015,000	28,299,015,000	31,944,387,000	3,645,372,000	88.59%
12/31/2023	29,792,611,000	29,792,611,000	33,164,511,000	3,371,900,000	89.83%
12/31/2024	31,360,751,000	31,360,751,000	34,393,420,000	3,032,669,000	91.18%
12/31/2025	32,990,341,000	32,990,341,000	35,629,846,000	2,639,505,000	92.59%
12/31/2026	34,651,543,000	34,651,543,000	36,875,493,000	2,223,950,000	93.97%
12/31/2027	36,346,731,000	36,346,731,000	38,131,416,000	1,784,685,000	95.32%
12/31/2028	38,081,204,000	38,081,204,000	39,400,000,000	1,318,796,000	96.65%
12/31/2029	39,811,066,000	39,811,066,000	40,683,834,000	872,767,000	97.85%
12/31/2030	41,504,831,000	41,504,831,000	41,985,974,000	481,143,000	98.85%
12/31/2031	43,143,235,000	43,143,235,000	43,311,076,000	167,841,000	99.61%
12/31/2032	44,732,391,000	44,732,391,000	44,663,764,000	(68,626,000)	100.15%
12/31/2033	46,294,891,000	46,294,891,000	46,048,375,000	(246,517,000)	100.54%
12/31/2034	47,837,090,000	47,837,090,000	47,468,772,000	(368,317,000)	100.78%
12/31/2035	49,387,669,000	49,387,669,000	48,928,515,000	(459,154,000)	100.94%
12/31/2036	50,971,197,000	50,971,197,000	50,432,421,000	(538,776,000)	101.07%
12/31/2037	52,600,120,000	52,600,120,000	51,981,511,000	(618,610,000)	101.19%