

Kentucky County Employees Retirement System

GASB No. 67 Accounting Valuation Report
As of June 30, 2021





December 1, 2021

Board of Trustees
County Employees Retirement System
Perimeter Park West
1260 Louisville Road
Frankfort, KY 40601

Re: GASB 67 Reporting – Actuarial Information – County Employees Retirement System

Dear Members of the Board:

This report provided herein contains certain information for the County Employees Retirement System (CERS) in connection with the Governmental Accounting Standards Board (GASB) Statement No. 67, “Financial Reporting for Pension Plans” for the fiscal year ending June 30, 2021. A separate report will be provided at a later date with additional accounting information determined in accordance with GASB Statement No. 68, “Accounting and Financial Reporting for Pensions”.

The liability calculations presented in this report were performed for the purpose of satisfying the requirements of GASB No. 67 and are not applicable for other purposes, such as determining the plan’s funding requirements. The plan’s liability for other purposes may produce significantly different results. This report may be provided to parties other than the Board of Trustees of the County Employees Retirement System only in its entirety and only with the permission of the Board.

The total pension liability, net pension liability, and sensitivity information shown in this report are based on an actuarial valuation date of June 30, 2020. The total pension liability was rolled-forward from the valuation date to the plan’s fiscal year ending June 30, 2021 using generally accepted actuarial principles. This information was determined separately for the non-hazardous pension fund and the hazardous pension fund before being aggregated together. GASB 67 requires the disclosure of a 10-year history of certain information in the Required Supplementary Information within the annual financial report. The exhibits provided in this report include the applicable information for historical years that were calculated in accordance with this accounting standard. Information disclosed for years prior to June 30, 2017 were prepared by the prior actuary.

Actuarial Assumptions and Plan Provisions

There have been no actuarial assumption or method changes since June 30, 2020. Senate Bill 169 passed during the 2021 legislative session and increased the disability benefits for certain qualifying members who become “totally and permanently disabled” in the line of duty or as a result of a duty-related disability. The total pension liability as of June 30, 2021 is determined using these updated benefit provisions. There were no other material plan provision changes and it is our opinion that these procedures are reasonable and appropriate, and comply with applicable requirements under GASB No. 67.

Single Discount Rate

In accordance with paragraph 40 of GASB Statement No. 67, a single discount rate of 6.25% was used for the reporting and disclosure of the CERS pension plan. Note, this single discount rate disclosed for the plan is based on the 6.25% discount rate used for both the non-hazardous fund and the hazardous fund to measure the total pension liability for the fiscal year ending June 30, 2021. The single discount rate determined for each fund is based on the expected rate of return on pension plan investments for each fund.

Separate contribution rates are determined and separate assets are maintained for the non-hazardous and hazardous funds. Based on the stated assumptions and the projection of cash flows as of each fiscal year ending, the non-hazardous and hazardous pension funds' fiduciary net position and future contributions were separately projected and were each sufficient to finance all the future benefit payments of the current fund members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of the projected benefit payments to determine the total pension liability for each fund.

The projection of cash flows used to determine the single discount rate for each fund must include an assumption regarding actual employer contributions made each future year. Except where noted below, future contributions are projected assuming that each participating employer in each pension fund contributes the actuarially determined employer contribution each future year calculated in accordance with the current funding policy, as most recently revised by House Bill 8, passed during the 2021 legislative session. The assumed future employer contributions reflect the provisions of House Bill 362 (passed during the 2018 legislative session) which limit the increases to the employer contribution rates to 12% over the prior fiscal year through June 30, 2028.

If there is a future pattern of legislation that has a resulting effect of employers making contributions less than the actuarially determined rate, we may be required to project contributions that are reflective of recent actual contribution efforts regardless of the stated funding policy (as required by paragraph 42 of GASB Statement No. 67).

401(h) Subaccount

Based on guidance issued by GASB in connection with GASB Statement No. 74, the 1% of pay member contributions for Tier 2 and Tier 3 members to a 401(h) subaccount is considered an OPEB asset. As a result, the reported fiduciary net positions as of June 30, 2017 and later are net of the 401(h) asset balance.

Additional Disclosures

This report is based upon information, furnished to us by the Kentucky Public Pensions Authority (KPPA), which includes benefit provisions, membership information, and financial data. We did not audit this data and information, but we did apply a number of tests and concluded that it was reasonable and consistent. GRS is not responsible for the accuracy or completeness of the information provided by KPPA. Please see the "Actuarial Valuation Report as of June 30, 2020" for additional discussion of the nature of the actuarial calculations and more information related to participant data, economic and demographic assumptions, and



benefit provisions. These reports should be considered together as a complete report for the fiscal year ending June 30, 2021.

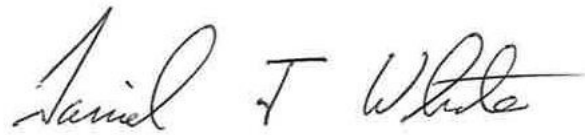
To the best of our knowledge, this report is complete and accurate and is in accordance with generally recognized actuarial practices and methods. Both of the undersigned are Enrolled Actuaries, members of the American Academy of Actuaries and meet all of the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. In addition, both are independent of KPPA and are experienced in performing valuations for large public retirement systems. This communication shall not be construed to provide tax advice, legal advice or investment advice.

Sincerely,

Gabriel, Roeder, Smith & Company



Jamie Shaw, ASA, EA, MAAA
Consultant and Actuary



Daniel J. White, FSA, EA, MAAA
Senior Consultant and Actuary



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SECTION 1

EXHIBIT 1

Development of the Single Discount Rate

	<u>CERS</u>	<u>CERS Non-Hazardous</u>	<u>CERS Hazardous</u>
Single Discount Rate	6.25% ¹	6.25%	6.25%
Long-Term Expected Rate of Return		6.25%	6.25%
Long-Term Municipal Bond Rate ²		1.92%	1.92%

Notes:

¹ In accordance with paragraph 40 of GASB Statement No. 67, a single discount rate of 6.25% was used for the reporting and disclosure of the CERS pension plan. Note, this single discount rate disclosed for the plan is based on the 6.25% discount rate used for both the non-hazardous fund and the hazardous fund to measure the total pension liability for the fiscal year ending June 30, 2021. The single discount rate determined for each fund is based on the expected rate of return on pension plan investments for each fund.

² Fixed-income municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of June 30, 2021.

EXHIBIT 1

Schedule of the Employers' Net Pension Liability (\$ thousands)

Fiscal Year Ending June 30, (1)	Total Pension Liability (2)	Plan Fiduciary Net Position (3)	Employers' Net Pension Liability (Asset) (4) = (2) - (3)	Plan Fiduciary Net Position as a Percentage of the Total Pension Liability (5) = (3) / (2)	Covered Employee Payroll ¹ (6)	Net Pension Liability as a Percentage of Covered Employee Payroll (7) = (4) / (6)
2021	\$ 20,518,004	\$ 11,480,060	\$ 9,037,944	55.95%	\$ 3,019,096	299.36%
2020	20,091,976	9,407,031	10,684,945	46.82%	3,022,303	353.54%
2019	19,368,969	9,573,629	9,795,340	49.43%	2,978,337	328.89%
2018	17,876,062	9,367,300	8,508,762	52.40%	3,017,780	281.95%
2017	16,995,820	8,905,233	8,090,587	52.40%	2,902,849	278.71%
2016	14,791,128	8,151,569	6,639,559	55.11%	2,943,521	225.57%
2015	14,353,633	8,519,002	5,834,631	59.35%	2,780,357	209.85%
2014	13,061,348	8,615,148	4,446,200	65.96%	2,751,434	161.60%

Note:

¹ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.



EXHIBIT 2

Schedule of the Employers' Net Pension Liability (\$ thousands)

Change in the Net Pension Liability	2021	2020	2019	2018	2017	2016	2015	2014
Total pension liability								
Service Cost	\$ 389,515	\$ 389,979	\$ 332,069	\$ 335,272	\$ 251,425	\$ 275,350	\$ 279,334	\$ 259,243
Interest	1,220,272	1,176,482	1,084,676	1,031,316	1,074,415	1,043,473	980,010	949,191
Benefit Changes	4,439	0	0	17,880	0	0	0	0
Difference between actual and expected experience	(52,926)	247,041	114,741	485,283	(115,427)	0	91,901	0
Assumption Changes	0	0	1,003,892	0	1,925,467	0	773,142	0
Benefit Payments	(1,135,272)	(1,090,495)	(1,042,471)	(989,509)	(931,190)	(881,327)	(832,102)	(789,435)
Net Change in Total Pension Liability	\$ 426,028	\$ 723,007	\$ 1,492,907	\$ 880,242	\$ 2,204,691	\$ 437,494	\$ 1,292,285	\$ 418,999
Total Pension Liability - Beginning	\$ 20,091,976	\$ 19,368,969	\$ 17,876,062	\$ 16,995,820	\$ 14,791,128	\$ 14,353,633	\$ 13,061,348	\$ 12,642,349
Total Pension Liability - Ending (a)	\$ 20,518,004	\$ 20,091,976	\$ 19,368,969	\$ 17,876,062	\$ 16,995,820	\$ 14,791,128	\$ 14,353,633	\$ 13,061,348
Plan Fiduciary Net Position¹								
Contributions - Employer	\$ 644,433	\$ 643,859	\$ 531,506	\$ 485,677	\$ 449,501	\$ 389,818	\$ 406,636	\$ 439,471
Contributions - Member ²	228,065	232,230	217,725	221,459	210,816	194,646	188,003	172,290
Refunds of contributions to members	(18,524)	(18,732)	(17,241)	(18,822)	(16,745)	(16,632)	(16,634)	(16,950)
Retirement benefits	(1,116,748)	(1,071,762)	(1,025,230)	(970,687)	(914,445)	(864,694)	(815,469)	(772,485)
Net Investment Income ²	2,359,380	72,092	522,896	765,153	1,096,373	(49,820)	147,672	1,184,020
Administrative Expense ²	(23,577)	(24,285)	(23,385)	(21,096)	(21,030)	(20,751)	(19,500)	(20,336)
Other	0	0	58 ⁵	472 ⁵	(50,806) ⁴	0	13,145	0
Net Change in Plan Fiduciary Net Position	\$ 2,073,029	\$ (166,598)	\$ 206,329	\$ 462,156	\$ 753,665	\$ (367,433)	\$ (96,147)	\$ 986,010
Plan Fiduciary Net Position - Beginning	\$ 9,407,031	\$ 9,573,629	\$ 9,367,300	\$ 8,905,233	\$ 8,151,569	\$ 8,519,002	\$ 8,615,148	\$ 7,629,138
Prior Year Adjustment	0	0	0	(89)	0	0	0	0
Plan Fiduciary Net Position - Ending (b)	\$ 11,480,060	\$ 9,407,031	\$ 9,573,629	\$ 9,367,300	\$ 8,905,233	\$ 8,151,569	\$ 8,519,002	\$ 8,615,148
Net Pension Liability - Ending (a) - (b)	\$ 9,037,944	\$ 10,684,945	\$ 9,795,340	\$ 8,508,762	\$ 8,090,587	\$ 6,639,559	\$ 5,834,631	\$ 4,446,200
Plan Fiduciary Net Position as a Percentage	55.95%	46.82%	49.43%	52.40%	52.40%	55.11%	59.35%	65.96%
Covered Employee Payroll³	\$ 3,019,096	\$ 3,022,303	\$ 2,978,337	\$ 3,017,780	\$ 2,902,849	\$ 2,943,521	\$ 2,780,357	\$ 2,751,434
Net Pension Liability as a Percentage of Covered Employee Payroll	299.36%	353.54%	328.89%	281.95%	278.71%	225.57%	209.85%	161.60%

Notes:

¹ Does not include 401(h) assets for fiscal years 2017 and later

² Does not include 401(h) contributions, associated administrative expenses, and investment income on 401(h) contributions for fiscal years 2017 and later

³ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later

⁴ Adjustment due to 401(h) plan asset balance being considered an OPEB asset under GASB 74 for fiscal years 2017 and later

⁵ Northern Trust Settlement



EXHIBIT 3

Schedule of Employers' Contributions (\$ thousands)

Fiscal Year Ending	Actuarially Determined Contribution ¹	Total Employer Contributions	Contribution Deficiency (Excess)	Covered Employee Payroll ²	Actual Contributions as a Percentage of Covered Payroll
2021	\$ 823,096	\$ 644,433	\$ 178,663	\$ 3,019,096	21.35%
2020	761,534	643,859	117,675	3,022,303	21.30%
2019	727,134	531,506	195,628	2,978,337	17.85%
2018	480,426	485,677	(5,251)	3,017,780	16.09%
2017	445,808	449,501	(3,693)	2,902,849	15.48%
2016	387,719	389,819	(2,100)	2,943,521	13.24%
2015	405,229	406,637	(1,408)	2,780,357	14.63%
2014	439,471	439,471	-	2,751,434	15.97%
2013	415,054	415,054	-	2,697,950	15.38%
2012	345,353	365,065	(19,712)	2,700,775	13.52%

Notes:

¹ Actuarially determined contribution for fiscal year ending 2021 is based on the contribution rates calculated with the June 30, 2019 actuarial valuation, as amended by SB249 (2020 legislative session) which reset the amortization period to 30 years. Separate contribution rates are determined for the non-hazardous pension fund and hazardous pension fund.

² Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.

Notes to Schedule of Employers' Contributions for FYE 2021

The actuarially determined contribution effective for fiscal year ending 2021 that is documented in the schedule on the previous page was calculated as of June 30, 2019. Separate contribution rates are determined for the non-hazardous fund and the hazardous fund based on the liabilities associated with the current active members, former inactive members, and members receiving benefits from each respective fund, as well as the separately maintained asset balances for each fund.

Based on the June 30, 2019 actuarial valuation report (as amended by SB249, passed during the 2020 legislative session), the actuarial methods and assumptions used to calculate the required contributions are below.

Determined by the Actuarial Valuation as of:	June 30, 2019
Actuarial Cost Method:	Entry Age Normal
Asset Valuation Method:	20% of the difference between the market value of assets and the expected actuarial value of assets is recognized
Amortization Method:	Level Percent of Pay
Amortization Period:	30-year closed period at June 30, 2019 <i>Gains/losses incurring after 2019 will be amortized over separate closed 20-year amortization bases</i>
Payroll Growth Rate	2.00%
Investment Return:	6.25%
Inflation:	2.30%
Salary Increases:	3.30% to 10.30% for non-hazardous members, varies by service 3.55% to 19.05% for hazardous members, varies by service
Mortality:	System-specific mortality table based on mortality experience from 2013-2018, projected with the ultimate rates from MP-2014 mortality improvement scale using a base year of 2019
Phase-In provision:	Board certified rate is phased into the actuarially determined rate in accordance with HB 362 enacted in 2018

EXHIBIT 4

Sensitivity of the Net Pension Liability to Changes in the Discount Rate (\$ thousands)

1.00% Decrease	Current Discount Rate	1.00% Increase
\$ 11,570,537	\$ 9,037,944	\$ 6,951,407

APPENDIX 1

EXHIBIT 1a

Schedule of the Employers' Net Pension Liability – CERS Non-Hazardous Fund (\$ thousands)

Fiscal Year Ending June 30, (1)	Total Pension Liability (2)	Plan Fiduciary Net Position (3)	Employers' Net Pension Liability (Asset) (4) = (2) - (3)	Plan Fiduciary Net Position as a Percentage of the Total Pension Liability (5) = (3) / (2)	Covered Employee Payroll ¹ (6)	Net Pension Liability as a Percentage of Covered Employee Payroll (7) = (4) / (6)
2021	\$ 14,941,437	\$ 8,565,652	\$ 6,375,785	57.33%	\$ 2,446,612	260.60%
2020	14,697,244	7,027,327	7,669,917	47.81%	2,462,752	311.44%
2019	14,192,966	7,159,921	7,033,045	50.45%	2,424,796	290.05%
2018	13,109,268	7,018,963	6,090,305	53.54%	2,454,927	248.08%
2017	12,540,545	6,687,237	5,853,308	53.32%	2,376,290	246.32%
2016	11,065,013	6,141,395	4,923,618	55.50%	2,417,187	203.69%
2015	10,740,325	6,440,800	4,299,525	59.97%	2,296,716	187.20%
2014	9,772,522	6,528,146	3,244,376	66.80%	2,272,270	142.78%

Note:

¹ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.



EXHIBIT 1b

Schedule of the Employers' Net Pension Liability – CERS Hazardous Fund (\$ thousands)

Fiscal Year Ending June 30, (1)	Total Pension Liability (2)	Plan Fiduciary Net Position (3)	Employers' Net Pension Liability (Asset) (4) = (2) - (3)	Plan Fiduciary Net Position as a Percentage of the Total Pension Liability (5) = (3) / (2)	Covered Employee Payroll ¹ (6)	Net Pension Liability as a Percentage of Covered Employee Payroll (7) = (4) / (6)
2021	\$ 5,576,567	\$ 2,914,408	\$ 2,662,159	52.26%	\$ 572,484	465.02%
2020	5,394,732	2,379,704	3,015,028	44.11%	559,551	538.83%
2019	5,176,003	2,413,708	2,762,295	46.63%	553,541	499.02%
2018	4,766,794	2,348,337	2,418,457	49.26%	562,853	429.68%
2017	4,455,275	2,217,996	2,237,279	49.78%	526,559	424.89%
2016	3,726,115	2,010,174	1,715,941	53.95%	526,334	326.02%
2015	3,613,308	2,078,202	1,535,106	57.52%	483,641	317.41%
2014	3,288,826	2,087,002	1,201,824	63.46%	479,164	250.82%

Note:

¹ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.



EXHIBIT 2a

Schedule of the Employers' Net Pension Liability – CERS Non-Hazardous Fund (\$ thousands)

Change in the Net Pension Liability	2021	2020	2019	2018	2017	2016	2015	2014
Total pension liability								
Service Cost	\$ 280,165	\$ 280,092	\$ 254,643	\$ 254,169	\$ 193,082	\$ 209,101	\$ 207,400	\$ 192,482
Interest	892,309	861,720	794,935	760,622	803,555	780,587	733,002	710,526
Benefit Changes	4,106	0	0	15,708	0	0	0	0
Difference between actual and expected experience	(91,776)	173,345	87,377	279,401	(208,015)	0	49,966	0
Assumption Changes	0	0	727,351	0	1,388,800	0	606,293	0
Benefit Payments	(840,611)	(810,879)	(780,608)	(741,177)	(701,891)	(665,000)	(628,858)	(597,136)
Net Change in Total Pension Liability	\$ 244,193	\$ 504,278	\$ 1,083,698	\$ 568,723	\$ 1,475,532	\$ 324,687	\$ 967,803	\$ 305,872
Total Pension Liability - Beginning	\$ 14,697,244	\$ 14,192,966	\$ 13,109,268	\$ 12,540,545	\$ 11,065,013	\$ 10,740,325	\$ 9,772,522	\$ 9,466,650
Total Pension Liability - Ending (a)	\$ 14,941,437	\$ 14,697,244	\$ 14,192,966	\$ 13,109,268	\$ 12,540,545	\$ 11,065,013	\$ 10,740,325	\$ 9,772,522
Plan Fiduciary Net Position¹								
Contributions - Employer	\$ 472,228	\$ 475,416	\$ 393,453	\$ 358,017	\$ 333,554	\$ 284,105	\$ 298,565	\$ 324,231
Contributions - Member ²	165,698	168,994	159,064	160,370	150,715	141,674	140,311	128,568
Refunds of contributions to members	(13,862)	(14,918)	(14,387)	(14,608)	(14,430)	(13,753)	(13,523)	(14,286)
Retirement benefits	(826,749)	(795,960)	(766,221)	(726,569)	(687,461)	(651,246)	(615,335)	(582,850)
Net Investment Income ²	1,762,739	56,178	390,664	573,829	825,900	(40,800)	110,568	895,530
Administrative Expense ²	(21,729)	(22,304)	(21,659)	(19,592)	(19,609)	(19,385)	(18,212)	(18,615)
Other	0	0	44 ⁵	361 ⁵	(42,827) ⁴	0	10,280	0
Net Change in Plan Fiduciary Net Position	\$ 1,538,325	\$ (132,594)	\$ 140,958	\$ 331,808	\$ 545,843	\$ (299,405)	\$ (87,346)	\$ 732,578
Plan Fiduciary Net Position - Beginning	\$ 7,027,327	\$ 7,159,921	\$ 7,018,963	\$ 6,687,237	\$ 6,141,395	\$ 6,440,800	\$ 6,528,146	\$ 5,795,568
Prior Year Adjustment	0	0	0	(82)	0	0	0	0
Plan Fiduciary Net Position - Ending (b)	\$ 8,565,652	\$ 7,027,327	\$ 7,159,921	\$ 7,018,963	\$ 6,687,237	\$ 6,141,395	\$ 6,440,800	\$ 6,528,146
Net Pension Liability - Ending (a) - (b)	\$ 6,375,785	\$ 7,669,917	\$ 7,033,045	\$ 6,090,305	\$ 5,853,308	\$ 4,923,618	\$ 4,299,525	\$ 3,244,376
Plan Fiduciary Net Position as a Percentage	57.33%	47.81%	50.45%	53.54%	53.32%	55.50%	59.97%	66.80%
Covered Employee Payroll³	\$ 2,446,612	\$ 2,462,752	\$ 2,424,796	\$ 2,454,927	\$ 2,376,290	\$ 2,417,187	\$ 2,296,716	\$ 2,272,270
Net Pension Liability as a Percentage of Covered Employee Payroll	260.60%	311.44%	290.05%	248.08%	246.32%	203.69%	187.20%	142.78%

Notes:

¹ Does not include 401(h) assets for fiscal years 2017 and later

² Does not include 401(h) contributions, associated administrative expenses, and investment income on 401(h) contributions for fiscal years 2017 and later

³ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later

⁴ Adjustment due to 401(h) plan asset balance being considered an OPEB asset under GASB 74 for fiscal years 2017 and later

⁵ Northern Trust Settlement



EXHIBIT 2b

Schedule of the Employers' Net Pension Liability – CERS Hazardous Fund (\$ thousands)

Change in the Net Pension Liability	2021	2020	2019	2018	2017	2016	2015	2014
Total pension liability								
Service Cost	\$ 109,350	\$ 109,887	\$ 77,426	\$ 81,103	\$ 58,343	\$ 66,249	\$ 71,934	\$ 66,761
Interest	327,963	314,762	289,741	270,694	270,860	262,886	247,008	238,665
Benefit Changes	333	0	0	2,172	0	0	0	0
Difference between actual and expected experience	38,850	73,696	27,364	205,882	92,588	0	41,935	0
Assumption Changes	0	0	276,541	0	536,667	0	166,849	0
Benefit Payments	(294,661)	(279,616)	(261,863)	(248,332)	(229,299)	(216,327)	(203,244)	(192,299)
Net Change in Total Pension Liability	\$ 181,835	\$ 218,729	\$ 409,209	\$ 311,519	\$ 729,159	\$ 112,807	\$ 324,482	\$ 113,127
Total Pension Liability - Beginning	\$ 5,394,732	\$ 5,176,003	\$ 4,766,794	\$ 4,455,275	\$ 3,726,115	\$ 3,613,308	\$ 3,288,826	\$ 3,175,699
Total Pension Liability - Ending (a)	\$ 5,576,567	\$ 5,394,732	\$ 5,176,003	\$ 4,766,794	\$ 4,455,275	\$ 3,726,115	\$ 3,613,308	\$ 3,288,826
Plan Fiduciary Net Position¹								
Contributions - Employer	\$ 172,205	\$ 168,443	\$ 138,053	\$ 127,660	\$ 115,947	\$ 105,713	\$ 108,071	\$ 115,240
Contributions - Member ²	62,367	63,236	58,661	61,089	60,101	52,972	47,692	43,722
Refunds of contributions to members	(4,662)	(3,814)	(2,854)	(4,214)	(2,315)	(2,879)	(3,111)	(2,664)
Retirement benefits	(289,999)	(275,802)	(259,009)	(244,118)	(226,984)	(213,448)	(200,134)	(189,635)
Net Investment Income ²	596,641	15,914	132,232	191,324	270,473	(9,020)	37,104	288,490
Administrative Expense ²	(1,848)	(1,981)	(1,726)	(1,504)	(1,421)	(1,366)	(1,288)	(1,721)
Other	0	0	14 ⁵	111 ⁵	(7,979) ⁴	0	2,865	0
Net Change in Plan Fiduciary Net Position	\$ 534,704	\$ (34,004)	\$ 65,371	\$ 130,348	\$ 207,822	\$ (68,028)	\$ (8,801)	\$ 253,432
Plan Fiduciary Net Position - Beginning	\$ 2,379,704	\$ 2,413,708	\$ 2,348,337	\$ 2,217,996	\$ 2,010,174	\$ 2,078,202	\$ 2,087,002	\$ 1,833,570
Prior Year Adjustment	0	0	0	(7)	0	0	0	0
Plan Fiduciary Net Position - Ending (b)	\$ 2,914,408	\$ 2,379,704	\$ 2,413,708	\$ 2,348,337	\$ 2,217,996	\$ 2,010,174	\$ 2,078,202	\$ 2,087,002
Net Pension Liability - Ending (a) - (b)	\$ 2,662,159	\$ 3,015,028	\$ 2,762,295	\$ 2,418,457	\$ 2,237,279	\$ 1,715,941	\$ 1,535,106	\$ 1,201,824
Plan Fiduciary Net Position as a Percentage	52.26%	44.11%	46.63%	49.26%	49.78%	53.95%	57.52%	63.46%
Covered Employee Payroll³	\$ 572,484	\$ 559,551	\$ 553,541	\$ 562,853	\$ 526,559	\$ 526,334	\$ 483,641	\$ 479,164
Net Pension Liability as a Percentage of Covered Employee Payroll	465.02%	538.83%	499.02%	429.68%	424.89%	326.02%	317.41%	250.82%

Notes:

¹ Does not include 401(h) assets for fiscal years 2017 and later

² Does not include 401(h) contributions, associated administrative expenses, and investment income on 401(h) contributions for fiscal years 2017 and later

³ Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later

⁴ Adjustment due to 401(h) plan asset balance being considered an OPEB asset under GASB 74 for fiscal years 2017 and later

⁵ Northern Trust Settlement



EXHIBIT 3a

Schedule of Employers' Contributions – CERS Non-Hazardous Fund (\$ thousands)

Fiscal Year Ending	Actuarially Determined Contribution ¹	Total Employer Contributions	Contribution Deficiency (Excess)	Covered Employee Payroll ²	Actual Contributions as a Percentage of Covered Payroll
2021	\$ 582,538	\$ 472,228	\$ 110,310	\$ 2,446,612	19.30%
2020	554,612	475,416	79,196	2,462,752	19.30%
2019	529,575	393,453	136,122	2,424,796	16.23%
2018	355,473	358,017	(2,544)	2,454,927	14.58%
2017	331,492	333,554	(2,062)	2,376,290	14.04%
2016	282,767	284,106	(1,339)	2,417,187	11.75%
2015	297,715	298,566	(851)	2,296,716	13.00%
2014	324,231	324,231	0	2,272,270	14.27%
2013	294,914	294,914	0	2,236,277	13.19%
2012	261,764	275,736	(13,972)	2,236,546	12.33%

Notes:

¹ Actuarially determined contribution for fiscal year ending 2021 is based on the contribution rate calculated with the June 30, 2019 actuarial valuation, as amended by SB249 (2020 legislative session) which reset the amortization period to 30 years.

² Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.

EXHIBIT 3b

Schedule of Employers' Contributions – CERS Hazardous Fund (\$ thousands)

Fiscal Year Ending	Actuarially Determined Contribution ¹	Total Employer Contributions	Contribution Deficiency (Excess)	Covered Employee Payroll ²	Actual Contributions as a Percentage of Covered Payroll
2021	\$ 240,558	\$ 172,205	\$ 68,353	\$ 572,484	30.08%
2020	206,922	168,443	38,479	559,551	30.10%
2019	197,559	138,053	59,506	553,541	24.94%
2018	124,953	127,660	(2,707)	562,853	22.68%
2017	114,316	115,947	(1,631)	526,559	22.02%
2016	104,952	105,713	(761)	526,334	20.08%
2015	107,514	108,071	(557)	483,641	22.35%
2014	115,240	115,240	0	479,164	24.05%
2013	120,140	120,140	0	461,673	26.02%
2012	83,589	89,329	(5,740)	464,229	19.24%

Notes:

¹ Actuarially determined contribution for fiscal year ending 2021 is based on the contribution rate calculated with the June 30, 2019 actuarial valuation, as amended by SB249 (2020 legislative session) which reset the amortization period to 30 years.

² Based on derived compensation using the provided employer contribution information for fiscal years 2017 and later.

EXHIBIT 4

Sensitivity of the Net Pension Liability to Changes in the Discount Rate (\$ thousands)

Table 1. CERS Non-Hazardous Fund

1.00% Decrease (5.25%)	Current Discount Rate (6.25%)	1.00% Increase (7.25%)
\$ 8,177,246	\$ 6,375,785	\$ 4,885,117

Table 2. CERS Hazardous Fund

1.00% Decrease (5.25%)	Current Discount Rate (6.25%)	1.00% Increase (7.25%)
\$ 3,393,291	\$ 2,662,159	\$ 2,066,290