Notes to the Schedules of Employer Allocations and Pension Amounts *(Continued)*

December 31, 2019

The last experience study was performed in 2017 and the next experience study is scheduled to be conducted in 2020. The Schedule of Employers' Net Pension Liability presents multi-year trend information about whether the plan fiduciary net positions are increasing or decreasing over time relative to the total pension liability. These schedules are presented in the Required Supplementary Information section. The total pension liability as of December 31, 2019, is based on the results of an actuarial valuation date of January 1, 2019, and rolled-forward using accepted actuarial procedures.

A summary of the actuarial assumptions, as of the latest actuarial valuation, is as shown in the table on page 315.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimates ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the Systems target asset allocation, as of December 31, 2019, are summarized in the top table on page 316.

Net Pension Liability by Division

Year Ended December 31, 2019

(in thousands)

System	(1) Total Pension Liability	(2) Plan Fiduciary Net Position	(3) Employers Net Pension Liability/ (Asset)	(4) Plan Fiduciary Net Position as a Percentage of the Total Plan Liability	(5) Projected Covered Employee Payroll	(6) Net Pension Liability/ (Asset) as a Percentage of Covered Employee Payroll
Noncontributory Retirement System						
Local Government	$ 5,946,957,224	5,570,070,357	376,886,867	93.7% $	796,507,855	47.3%
State and School	22,384,524,870	20,162,823,023	2,221,701,847	90.1	2,290,748,500	97.0
Higher Education	2,020,331,857	1,903,028,848	117,303,009	94.2	241,056,918	48.7
Total	30,351,813,951	27,635,922,228	2,715,891,723	91.1	3,328,313,273	81.6
Contributory Retirement System						
Local Government	460,773,061	454,219,416	6,553,645	98.6	16,251,161	40.3
State and School	652,669,427	645,765,606	6,903,821	98.9	12,598,888	54.8
Higher Education	156,666,447	162,304,767	(5,638,320)	103.6	5,467,357	(103.1)
Total	1,270,108,935	1,262,289,789	7,819,146	99.4	34,317,406	22.8
Public Safety Retirement System						
State of Utah	1,482,118,979	1,334,446,335	147,672,644	90.0	105,487,659	140.0
Other Division A (with Social Security)	1,757,706,281	1,597,144,511	160,561,770	90.9	134,007,665	119.8
Salt Lake City	404,569,021	325,190,188	79,378,833	80.4	28,862,618	275.0
Ogden	88,417,078	70,395,613	18,021,465	79.6	4,337,091	415.5
Provo	67,655,797	57,381,160	10,274,637	84.8	4,467,562	230.0
Logan	36,185,189	31,577,797	4,607,392	87.3	2,108,225	218.5
Bountiful	28,885,322	22,833,431	6,051,891	79.0	1,707,332	354.5
Other Division B (without Social Security)	594,873,878	545,213,890	49,659,988	91.7	58,726,945	84.6
Total	4,460,411,545	3,984,182,925	476,228,620	89.3	339,705,097	140.2
Firefighters Retirement System						
Division A (with Social Security)	245,925,430	258,327,423	(12,401,993)	105.0	31,103,854	(39.9)
Division B (without Social Security)	1,070,692,529	1,133,223,869	(62,531,340)	105.8	82,225,598	(76.0)
Total	1,316,617,959	1,391,551,292	(74,933,333)	105.7	113,329,452	(66.1)
Judges Retirement System	259,181,106	220,292,929	38,888,177	85.0	19,595,556	198.5
Governors and Legislators Retirement Plan	13,053,644	11,344,263	1,709,381	86.9	638,820	267.6
Tier 2 Public Employees Retirement System	634,073,976	611,583,225	22,490,751	96.5	1,380,488,281	1.6
Tier 2 Public Safety and Firefighter Retirement System	90,788,278	81,381,842	9,406,436	89.6	156,778,405	6.0
Grand Total	$ 38,396,049,394	35,198,548,493	3,197,500,901	91.7% $	5,373,166,290	59.5%