Municipal Fire and Police Retirement System of Iowa

Required GASB 68 Reporting Information as of and for
the Year Ended June 30, 2019, and
Related Independent Auditor's Report

Independent Auditor's Report

To the Board of Trustees
Municipal Fire and Police Retirement System of Iowa
Des Moines, Iowa

Report on Schedule of Allocations and Net Pension Amounts by Employer
We have audited the accompanying schedules of net pension liability (NPL) by city (proportionate share, share of NPL, covered payroll, NPL as a percent of covered payroll) as of June 30, 2019, and the schedules of deferred outflows of resources by city (expected and actual experience, changes in assumptions, difference between projected and actual earnings and total deferred outflows), deferred inflows of resources by city (expected and actual experience, changes in assumptions, difference between projected and actual earnings and total deferred inflows), for the Municipal Fire and Police Retirement System of Iowa (the System) as of June 30, 2019, and the related schedule of pension expense by city (collectively the Schedules) for the year then ended, and the related notes to the Schedules.

Management's Responsibility for the Schedules
Management is responsible for the preparation and fair presentation of the Schedules in accordance with accounting principles generally accepted in the United States of America; this includes design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of the Schedules that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility
Our responsibility is to express opinions on these Schedules based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the Schedules are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the Schedules. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the Schedules, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the System's preparation and fair presentation of the Schedules in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of System's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the Schedules.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions
In our opinion, the Schedules referred to above present fairly, in all material respects, the schedules of NPL by city (proportionate share, share of NPL, covered payroll, NPL as a percent of covered payroll), deferred outflows of resources by city (expected and actual experience, changes in assumptions, projected and actual earnings and total deferred outflows), deferred inflows of resources by city (expected and actual experience, changes in assumptions, projected and actual earnings and total deferred inflows), and pension expense by city for the System as of and for the year ended June 30, 2019, in accordance with accounting principles generally accepted in the United States of America.

Other Matters

We have audited, in accordance with auditing standards generally accepted in the United States of America, the financial statements of the System as of and for the year ended June 30, 2019, and our report thereon, dated October 9, 2019, expressed an unmodified opinion on those financial statements.

Restriction on Use
Our report is intended solely for the information and use of the System's management, the System's Board of Trustees, System employers and their auditors and is not intended to be and should not be used by anyone other than these specified parties.

Eide Bailly LLP

Boise, Idaho
March 30, 2020

City	Proportionate Share (%)	Share of NPL	Covered Payroll *	NPL as % of Covered Payroll
Ames	2.66%	$ 17,470,814	$ 8,062,871	216.68%
Ankeny	2.39%	15,708,812	7,249,698	216.68%
Bettendorf	1.88%	12,300,663	5,676,820	216.68%
Boone	0.57%	3,713,227	1,713,673	216.68%
Burlington	1.88%	12,327,602	5,689,252	216.68%
Camanche	0.23%	1,536,593	709,146	216.68%
Carroll	0.28%	1,830,022	844,565	216.68%
Cedar Falls	1.86%	12,232,171	5,645,210	216.68%
Cedar Rapids	9.07%	59,465,024	27,443,416	216.68%
Centerville	0.24%	1,566,576	722,983	216.68%
Charles City	0.32%	2,070,741	955,657	216.68%
Clinton	1.95%	12,817,487	5,915,337	216.68%
Clive	0.59%	3,848,072	1,775,905	216.68%
Council Bluffs	5.77%	37,818,712	17,453,531	216.68%
Creston	0.27%	1,771,218	817,426	216.68%
Davenport	7.78%	51,029,867	23,550,548	216.68%
Decorah	0.30%	1,990,435	918,596	216.68%
Des Moines	18.44%	120,934,295	55,811,804	216.68%
Dewitt	0.21%	1,386,962	640,091	216.68%
Dubuque	4.69%	30,775,196	14,202,912	216.68%
Estherville	0.23%	1,541,093	711,222	216.68%
Evansdale	0.13%	884,701	408,294	216.68%
Fairfield	0.30%	1,959,148	904,157	216.68%
Fort Dodge	1.56%	10,258,796	4,734,488	216.68%
Fort Madison	0.69%	4,524,260	2,087,969	216.68%
Grinnell	0.41%	2,692,887	1,242,781	216.68%
Indianola	0.46%	3,035,117	1,400,722	216.68%
Iowa City	3.68%	24,170,107	11,154,629	216.68%
Keokuk	0.77%	5,029,520	2,321,150	216.68%
Knoxville	0.25%	1,651,820	762,323	216.68%
Lemars	0.33%	2,143,253	989,122	216.68%
Maquoketa	0.21%	1,353,406	624,604	216.68%
Marion	2.03%	13,327,405	6,150,666	216.68%
Marshalltown	1.44%	9,473,600	4,372,115	216.68%
Mason City	1.95%	12,806,619	5,910,321	216.68%
Muscatine	1.77%	11,597,674	5,352,386	216.68%
Newton	0.99%	6,463,756	2,983,057	216.68%
Oelwein	0.21%	1,368,276	631,466	216.68%
Oskaloosa	0.43%	2,827,949	1,305,113	216.68%
Ottumwa	1.42%	9,334,747	4,308,034	216.68%
Pella	0.35%	2,327,523	1,074,164	216.68%
Sioux City	6.23%	40,879,981	18,866,323	216.68%
Spencer	0.48%	3,119,029	1,439,448	216.68%
Storm Lake	0.38%	2,478,438	1,143,812	216.68%
Urbandale	2.18%	14,309,773	6,604,034	216.68%
Waterloo	5.58%	36,614,772	16,897,907	216.68%
Waverly	0.37%	2,397,339	1,106,385	216.68%
Webster City	0.29%	1,871,267	863,599	216.68%
West Des Moines	3.49%	22,889,824	10,563,772	216.68%
Total	100.00%	$ 655,926,569	$ 302,713,506	

*   Represents reported covered payroll. Amount reported is based on pensionable payroll and not total payroll.
 Please consult your auditor when presenting covered payroll in your reports.

City	Proportionate Share (%)	Difference Between Expected and Actual Experience	Changes in Assumptions	Difference Between Projected and Actual Earnings	Contributions Made After Measurement Date	Total Deferred Outflows
Ames	2.66%	$ 601,603	$ 877,178	$ 2,012,494	TBD	$ 3,491,275
Ankeny	2.39%	540,929	788,711	1,809,526	TBD	3,139,166
Bettendorf	1.88%	423,570	617,594	1,416,935	TBD	2,458,099
Boone	0.57%	127,864	186,434	427,733	TBD	742,031
Burlington	1.88%	424,498	618,946	1,420,038	TBD	2,463,482
Camanche	0.23%	52,912	77,150	177,003	TBD	307,065
Carroll	0.28%	63,016	91,882	210,804	TBD	365,702
Cedar Falls	1.86%	421,212	614,155	1,409,046	TBD	2,444,413
Cedar Rapids	9.07%	2,047,663	2,985,631	6,849,882	TBD	11,883,176
Centerville	0.24%	53,945	78,655	180,457	TBD	313,057
Charles City	0.32%	71,305	103,968	238,532	TBD	413,805
Clinton	1.95%	441,367	643,543	1,476,469	TBD	2,561,379
Clive	0.59%	132,507	193,205	443,266	TBD	768,978
Council Bluffs	5.77%	1,302,278	1,898,809	4,356,405	TBD	7,557,492
Creston	0.27%	60,991	88,930	204,030	TBD	353,951
Davenport	7.78%	1,757,201	2,562,117	5,878,222	TBD	10,197,540
Decorah	0.30%	68,540	99,936	229,282	TBD	397,758
Des Moines	18.44%	4,164,342	6,071,889	13,930,638	TBD	24,166,869
Dewitt	0.21%	47,760	69,637	159,767	TBD	277,164
Dubuque	4.69%	1,059,736	1,545,167	3,545,050	TBD	6,149,953
Estherville	0.23%	53,067	77,375	177,521	TBD	307,963
Evansdale	0.13%	30,464	44,419	101,910	TBD	176,793
Fairfield	0.30%	67,463	98,365	225,678	TBD	391,506
Fort Dodge	1.56%	353,259	515,075	1,181,729	TBD	2,050,063
Fort Madison	0.69%	155,792	227,155	521,158	TBD	904,105
Grinnell	0.41%	92,729	135,205	310,198	TBD	538,132
Indianola	0.46%	104,513	152,388	349,620	TBD	606,521
Iowa City	3.68%	832,292	1,213,537	2,784,198	TBD	4,830,027
Keokuk	0.77%	173,190	252,523	579,359	TBD	1,005,072
Knoxville	0.25%	56,880	82,935	190,276	TBD	330,091
Lemars	0.33%	73,802	107,609	246,885	TBD	428,296
Maquoketa	0.21%	46,604	67,952	155,901	TBD	270,457
Marion	2.03%	458,926	669,145	1,535,208	TBD	2,663,279
Marshalltown	1.44%	326,221	475,652	1,091,281	TBD	1,893,154
Mason City	1.95%	440,993	642,997	1,475,217	TBD	2,559,207
Muscatine	1.77%	399,363	582,298	1,335,957	TBD	2,317,618
Newton	0.99%	222,578	324,533	744,572	TBD	1,291,683
Oelwein	0.21%	47,116	68,699	157,614	TBD	273,429
Oskaloosa	0.43%	97,380	141,986	325,756	TBD	565,122
Ottumwa	1.42%	321,440	468,681	1,075,286	TBD	1,865,407
Pella	0.35%	80,148	116,861	268,111	TBD	465,120
Sioux City	6.23%	1,407,692	2,052,509	4,709,038	TBD	8,169,239
Spencer	0.48%	107,403	156,601	359,287	TBD	623,291
Storm Lake	0.38%	85,344	124,438	285,496	TBD	495,278
Urbandale	2.18%	492,753	718,468	1,648,368	TBD	2,859,589
Waterloo	5.58%	1,260,820	1,838,361	4,217,721	TBD	7,316,902
Waverly	0.37%	82,552	120,366	276,154	TBD	479,072
Webster City	0.29%	64,437	93,953	215,555	TBD	373,945
West Des Moines	3.49%	788,205	1,149,256	2,636,720	TBD	4,574,181
Total	100.00%	$ 22,586,665	$ 32,932,879	$ 75,557,353		$ 131,076,897

Municipal Fire and Police Retirement System of Iowa
Deferred Inflows of Resources by City
As of June 30, 2019

City	Proportionate Share (%)	Difference Between Expected and Actual Experience	Changes in Assumptions	Difference Between Projected and Actual Earnings	Contributions Made After Measurement Date	Total Deferred Inflows
Ames	2.66%	$ (163,484)	$ (76,038)	$ (1,049,919)	TBD	$ (1,289,442)
Ankeny	2.39%	(146,996)	(68,370)	(944,030)	TBD	(1,159,396)
Bettendorf	1.88%	(115,104)	(53,536)	(739,216)	TBD	(907,856)
Boone	0.57%	(34,747)	(16,161)	(223,149)	TBD	(274,056)
Burlington	1.88%	(115,356)	(53,654)	(740,835)	TBD	(909,844)
Camanche	0.23%	(14,379)	(6,688)	(92,342)	TBD	(113,409)
Carroll	0.28%	(17,125)	(7,965)	(109,976)	TBD	(135,066)
Cedar Falls	1.86%	(114,463)	(53,238)	(735,100)	TBD	(902,801)
Cedar Rapids	9.07%	(556,448)	(258,810)	(3,573,586)	TBD	(4,388,844)
Centerville	0.24%	(14,659)	(6,818)	(94,144)	TBD	(115,622)
Charles City	0.32%	(19,377)	(9,012)	(124,442)	TBD	(152,832)
Clinton	1.95%	(119,940)	(55,786)	(770,275)	TBD	(946,001)
Clive	0.59%	(36,009)	(16,748)	(231,252)	TBD	(284,009)
Council Bluffs	5.77%	(353,891)	(164,599)	(2,272,738)	TBD	(2,791,228)
Creston	0.27%	(16,574)	(7,709)	(106,442)	TBD	(130,726)
Davenport	7.78%	(477,515)	(222,098)	(3,066,670)	TBD	(3,766,283)
Decorah	0.30%	(18,626)	(8,663)	(119,616)	TBD	(146,905)
Des Moines	18.44%	(1,131,650)	(526,343)	(7,267,619)	TBD	(8,925,612)
Dewitt	0.21%	(12,979)	(6,036)	(83,350)	TBD	(102,365)
Dubuque	4.69%	(287,981)	(133,943)	(1,849,454)	TBD	(2,271,378)
Estherville	0.23%	(14,421)	(6,707)	(92,613)	TBD	(113,741)
Evansdale	0.13%	(8,279)	(3,850)	(53,167)	TBD	(65,296)
Fairfield	0.30%	(18,333)	(8,527)	(117,736)	TBD	(144,596)
Fort Dodge	1.56%	(95,997)	(44,649)	(616,509)	TBD	(757,155)
Fort Madison	0.69%	(42,336)	(19,691)	(271,888)	TBD	(333,915)
Grinnell	0.41%	(25,199)	(11,720)	(161,831)	TBD	(198,750)
Indianola	0.46%	(28,401)	(13,210)	(182,397)	TBD	(224,008)
Iowa City	3.68%	(226,173)	(105,196)	(1,452,517)	TBD	(1,783,886)
Keokuk	0.77%	(47,064)	(21,890)	(302,252)	TBD	(371,206)
Knoxville	0.25%	(15,457)	(7,189)	(99,267)	TBD	(121,913)
Lemars	0.33%	(20,056)	(9,328)	(128,800)	TBD	(158,184)
Maquoketa	0.21%	(12,665)	(5,890)	(81,334)	TBD	(99,889)
Marion	2.03%	(124,712)	(58,005)	(800,918)	TBD	(983,635)
Marshalltown	1.44%	(88,650)	(41,232)	(569,322)	TBD	(699,203)
Mason City	1.95%	(119,839)	(55,738)	(769,621)	TBD	(945,198)
Muscatine	1.77%	(108,526)	(50,477)	(696,969)	TBD	(855,972)
Newton	0.99%	(60,485)	(28,132)	(388,443)	TBD	(477,061)
Oelwein	0.21%	(12,804)	(5,955)	(82,227)	TBD	(100,986)
Oskaloosa	0.43%	(26,463)	(12,308)	(169,947)	TBD	(208,718)
Ottumwa	1.42%	(87,350)	(40,628)	(560,977)	TBD	(688,955)
Pella	0.35%	(21,780)	(10,130)	(139,874)	TBD	(171,784)
Sioux City	6.23%	(382,537)	(177,922)	(2,456,707)	TBD	(3,017,166)
Spencer	0.48%	(29,187)	(13,575)	(187,440)	TBD	(230,201)
Storm Lake	0.38%	(23,192)	(10,787)	(148,943)	TBD	(182,922)
Urbandale	2.18%	(133,905)	(62,281)	(859,954)	TBD	(1,056,139)
Waterloo	5.58%	(342,625)	(159,359)	(2,200,387)	TBD	(2,702,370)
Waverly	0.37%	(22,433)	(10,434)	(144,070)	TBD	(176,937)
Webster City	0.29%	(17,510)	(8,144)	(112,455)	TBD	(138,110)
West Des Moines	3.49%	(214,193)	(99,624)	(1,375,578)	TBD	(1,689,394)
Total	100.00%	$ (6,137,873)	$ (2,854,794)	$ (39,418,299)		$ (48,410,966)

City	Proportionate Share (%)	Share of Pension Expense
Ames	2.66%	$ 3,722,263
Ankeny	2.39%	3,346,858
Bettendorf	1.88%	2,620,731
Boone	0.57%	791,126
Burlington	1.88%	2,626,471
Camanche	0.23%	327,381
Carroll	0.28%	389,897
Cedar Falls	1.86%	2,606,139
Cedar Rapids	9.07%	12,669,386
Centerville	0.24%	333,768
Charles City	0.32%	441,184
Clinton	1.95%	2,730,844
Clive	0.59%	819,855
Council Bluffs	5.77%	8,057,507
Creston	0.27%	377,369
Davenport	7.78%	10,872,224
Decorah	0.30%	424,074
Des Moines	18.44%	25,765,790
Dewitt	0.21%	295,501
Dubuque	4.69%	6,556,843
Estherville	0.23%	328,339
Evansdale	0.13%	188,491
Fairfield	0.30%	417,408
Fort Dodge	1.56%	2,185,699
Fort Madison	0.69%	963,921
Grinnell	0.41%	573,736
Indianola	0.46%	646,650
Iowa City	3.68%	5,149,589
Keokuk	0.77%	1,071,570
Knoxville	0.25%	351,930
Lemars	0.33%	456,633
Maquoketa	0.21%	288,351
Marion	2.03%	2,839,485
Marshalltown	1.44%	2,018,408
Mason City	1.95%	2,728,528
Muscatine	1.77%	2,470,955
Newton	0.99%	1,377,143
Oelwein	0.21%	291,520
Oskaloosa	0.43%	602,512
Ottumwa	1.42%	1,988,825
Pella	0.35%	495,893
Sioux City	6.23%	8,709,729
Spencer	0.48%	664,528
Storm Lake	0.38%	528,046
Urbandale	2.18%	3,048,784
Waterloo	5.58%	7,801,000
Waverly	0.37%	510,768
Webster City	0.29%	398,685
West Des Moines	3.49%	4,876,816
Total	100.00%	$ 139,749,153

Plan Administration

The Municipal Fire and Police Retirement System of Iowa (System) was created by the Iowa General Assembly in 1990 to establish a statewide retirement system for fire and police personnel covered by the provisions of Iowa Code Chapter 411. The programs of the System include the payment of pension benefits for service retirement, ordinary disability retirement, accidental disability retirement, survivors of deceased members and the refund of contributions upon withdrawal by a terminated member.

The System is managed by a Board of Trustees established by Iowa Code Chapter 411. The Board of Trustees represents the police officer and firefighter memberships, Cities, and citizens of Iowa, while the Iowa General Assembly provides the System with direction and oversight.

Basis of Accounting

Contributions for employers and net pension liability are recognized on an accrual basis of accounting.

Use of Estimates in the Preparation of the Schedules

The preparation of the Schedules in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect certain amounts and disclosures. Actual results could differ from those estimates.

Plan Membership

As of July 1, 2019, System membership consisted of the following:

Inactive members (or beneficiaries) currently receiving benefits	4,148
Inactive members entitled to but not yet receiving benefits	374
Active members	4,086
Total	8,608

Plan Description

The System's membership is mandatory for firefighters and police officers of the Cities. Members of the System are provided with pensions through a cost-sharing multiple employer defined benefit pension plan administered by the System. The System issues a stand-alone financial report which is available to the public by mail at 7155 Lake Drive, Suite 201, West Des Moines, IA 50266 or at www.MFPRSI.org.

System benefits are established under Iowa Code chapter 411 and the administrative rules thereunder. Chapter 411 and the administrative rules are the official plan documents. The following brief description is provided for general informational purposes only. Refer to the plan documents for more information.

Pension Benefits

Participating members are entitled to the benefit provisions in effect on the member's date of termination. The following is a summary of System benefit provisions as of June 30, 2019:

Retirement - Members with four or more years of service are entitled to pension benefits beginning at age 55. Full service retirement benefits are granted to members with 22 years of service, while partial benefits are available to those members with 4 to 22 years of service based on the ratio of years completed to years required (22 years). Members with less than four years of service are entitled to a refund of their contribution only, with interest for the period of employment.

Benefits are calculated based upon the member's highest three years of compensation. The average of these 3 years becomes the member's average final compensation. The base benefit is 66 percent of the member's average final compensation. Additional benefits are available to members who perform more than 22 years of service (2 percent for each additional year of service, up to a maximum of eight years). Survivor benefits are available to the beneficiary of a retired member according to the provisions of the benefit option chosen plus an additional benefit for each child. Survivor benefits are subject to a minimum benefit for those members who chose the basic benefit with a 50 percent surviving spouse benefit.

Disability and Death - Disability coverage is broken down into two types, accidental and ordinary. Accidental disability is defined as permanent disability incurred in the line of duty, with benefits equivalent to the greater of 60 percent of the member's average final compensation or the member's service retirement benefit calculation amount. Ordinary disability occurs outside the call of duty and pays benefits equivalent to the greater of 50 percent of the member's average final compensation, for those with 5 or more years of service, or the member's service retirement benefit calculation amount, and 25 percent of average final compensation for those with less than 5 years of service.

Death benefits are similar to disability benefits. Benefits for accidental death are 50 percent of the average final compensation of the member plus an additional amount for each child, or the provisions for ordinary death. Ordinary death benefits consist of a pension equal to 40 percent of the average final compensation of the member plus an additional amount for each child, or a lump-sum distribution to the designated beneficiary equal to 50 percent of the previous year's earnable compensation of the member or equal to the amount of the member's total contributions plus interest.

Benefits are increased (escalated) annually in accordance with Iowa Code Chapter 411.6 which states a standard formula for the increases.

Traumatic Personal Injury - The surviving spouse or dependents of an active member who dies due to a traumatic personal injury incurred in the line of duty receives a $100,000 lump-sum payment.

Deferred Retirement Option Program (DROP) - Active members, at least 55 years of age, with 22 or more years of service have the option to participate in the DROP Program. The DROP is an arrangement whereby a member who is otherwise eligible to retire and commence benefits opts to continue to work. A member can elect a 3, 4, or 5 year DROP period. By electing to participate in DROP the member is signing a contract indicating the member will retire at the end of the selected DROP period. During the DROP period the member's retirement benefit is frozen and a DROP benefit is credited to a DROP account established for the member. Assuming the member completes the DROP period, the DROP benefit is equal to 52% of the member's retirement benefit at the member's earliest date eligible and 100% if the member delays enrollment for 24 months. At the member's actual date of retirement, the member's DROP account will be distributed to the member in the form of a lump sum or rollover to an eligible plan.

Contributions

Member - Member contribution rates are set by state statute. In accordance with Iowa Code Chapter 411 as modified by act of the 1994 General Assembly, to establish compliance with the Federal Older Workers Benefit Protections Act, the contribution rate was 9.40% of earnable compensation for the year ended June 30, 2019.

Employer - Employer contribution rates are based upon an actuarially determined normal contribution rate and set by state statute. The required actuarially determined contributions are calculated on the basis of the entry age normal method as adopted by the Board of Trustees as permitted under Chapter 411 of the Code of Iowa. The normal contribution rate is provided by state statute to be the actuarial liabilities of the plan less current plan assets, with such total divided by 1 percent of the actuarially determined present value of prospective future compensation of all members, further reduced by member contributions and state appropriations. Under the Code of Iowa the employer's contribution rate cannot be less than 17.00% of earnable compensation. The contribution rate was 26.02% for the year ended June 30, 2019.

State Appropriations - State appropriations are approved by the state legislature and may further reduce the employer's contribution rate, but not below the minimum statutory contribution rate of 17.00% of earnable compensation. The State therefore is considered to be a nonemployer contributing entity.   There were no appropriations for the year ended June 30, 2019.

The allocation amongst all Cities of the contributions to the System for the period ended June 30, 2019 was as follows:

City	Proportionate Share (%)	Actuarially Determined Contribution (ADC)	Contributions in Relation to the ADC	Contribution Deficiency/ (Excess)	Covered Payroll *	Contributions as a % of Covered Payroll
Ames	2.66%	$ 2,097,958	$ 2,097,958	$ -	$ 8,062,871	26.02%
Ankeny	2.39%	1,886,371	1,886,371	-	7,249,698	26.02%
Bettendorf	1.88%	1,477,108	1,477,108	-	5,676,820	26.02%
Boone	0.57%	445,898	445,898	-	1,713,673	26.02%
Burlington	1.88%	1,480,343	1,480,343	-	5,689,252	26.02%
Camanche	0.23%	184,520	184,520	-	709,146	26.02%
Carroll	0.28%	219,756	219,756	-	844,565	26.02%
Cedar Falls	1.86%	1,468,883	1,468,883	-	5,645,210	26.02%
Cedar Rapids	9.07%	7,140,774	7,140,774	-	27,443,416	26.02%
Centerville	0.24%	188,120	188,120	-	722,983	26.02%
Charles City	0.32%	248,662	248,662	-	955,657	26.02%
Clinton	1.95%	1,539,170	1,539,170	-	5,915,337	26.02%
Clive	0.59%	462,090	462,090	-	1,775,905	26.02%
Council Bluffs	5.77%	4,541,407	4,541,407	-	17,453,531	26.02%
Creston	0.27%	212,694	212,694	-	817,426	26.02%
Davenport	7.78%	6,127,849	6,127,849	-	23,550,548	26.02%
Decorah	0.30%	239,018	239,018	-	918,596	26.02%
Des Moines	18.44%	14,522,225	14,522,225	-	55,811,804	26.02%
Dewitt	0.21%	166,551	166,551	-	640,091	26.02%
Dubuque	4.69%	3,695,596	3,695,596	-	14,202,912	26.02%
Estherville	0.23%	185,060	185,060	-	711,222	26.02%
Evansdale	0.13%	106,238	106,238	-	408,294	26.02%
Fairfield	0.30%	235,261	235,261	-	904,157	26.02%
Fort Dodge	1.56%	1,231,913	1,231,913	-	4,734,488	26.02%
Fort Madison	0.69%	543,290	543,290	-	2,087,969	26.02%
Grinnell	0.41%	323,371	323,371	-	1,242,781	26.02%
Indianola	0.46%	364,467	364,467	-	1,400,722	26.02%
Iowa City	3.68%	2,902,433	2,902,433	-	11,154,629	26.02%
Keokuk	0.77%	603,963	603,963	-	2,321,150	26.02%
Knoxville	0.25%	198,356	198,356	-	762,323	26.02%
Lemars	0.33%	257,369	257,369	-	989,122	26.02%
Maquoketa	0.21%	162,522	162,522	-	624,604	26.02%
Marion	2.03%	1,600,403	1,600,403	-	6,150,666	26.02%
Marshalltown	1.44%	1,137,624	1,137,624	-	4,372,115	26.02%
Mason City	1.95%	1,537,865	1,537,865	-	5,910,321	26.02%
Muscatine	1.77%	1,392,690	1,392,690	-	5,352,386	26.02%
Newton	0.99%	776,191	776,191	-	2,983,057	26.02%
Oelwein	0.21%	164,308	164,308	-	631,466	26.02%
Oskaloosa	0.43%	339,590	339,590	-	1,305,113	26.02%
Ottumwa	1.42%	1,120,950	1,120,950	-	4,308,034	26.02%
Pella	0.35%	279,498	279,498	-	1,074,164	26.02%
Sioux City	6.23%	4,909,015	4,909,015	-	18,866,323	26.02%
Spencer	0.48%	374,544	374,544	-	1,439,448	26.02%
Storm Lake	0.38%	297,620	297,620	-	1,143,812	26.02%
Urbandale	2.18%	1,718,369	1,718,369	-	6,604,034	26.02%
Waterloo	5.58%	4,396,834	4,396,834	-	16,897,907	26.02%
Waverly	0.37%	287,881	287,881	-	1,106,385	26.02%
Webster City	0.29%	224,708	224,708	-	863,599	26.02%
West Des Moines	3.49%	2,748,692	2,748,692	-	10,563,772	26.02%
Total	100.00%	$ 78,766,019	$ 78,766,019	$ -	$ 302,713,506	

* Represents reported covered payroll. Amount reported is based on pensionable payroll and not total payroll. Please consult your auditor when presenting covered payroll in your reports.

Net Pension Liability

The components of the net pension liability of the System at June 30, 2019, were as follows:

Total Pension Liability	$ 3,269,051,818
Plan Fiduciary Net Position	(2,613,125,249)
Net Pension Liability	$ 655,926,569
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	79.94%

The following schedule presents the changes in net pension liability for fiscal year ended June 30, 2019.

Total Pension Liability - Beginning of Year	$ 3,145,031,474
Service Cost	53,017,674
Interest	233,282,508
Difference between Expected and Actual Experience	16,177,781
Benefit Payments, Including Refunds	(178,457,619)
Total Pension Liability - End of Year	3,269,051,818
Plan Fiduciary Net Position - Beginning of Year	2,549,627,987
Contributions - Employer and State	78,766,019
Contributions - Member	28,472,627
Net Investment Income	136,635,233
Benefit Payments, Including Refunds	(178,457,619)
Administrative Expenses	(1,797,284)
Other	(121,714)
Plan Fiduciary Net Position - End of Year	2,613,125,249
Net Pension Liability - End of Year	$ 655,926,569
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	79.94%
Covered Payroll*	$ 302,713,506
Net Pension Liability as a Percentage of the Covered Payroll	216.68%

*Represents reported covered payroll. Amount reported is based on pensionable payroll and not total payroll. Please consult your auditor when presenting covered payroll in your reports.

Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following presents the net pension liability, calculated using the current discount rate of 7.50%, as well as the net pension liability 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%
Total Pension Liability	$ 3,681,088,710	$ 3,269,051,818	$ 2,927,804,623
Plan Fiduciary Net Position	(2,613,125,249)	(2,613,125,249)	(2,613,125,249)
Net Pension Liability	$ 1,067,963,461	$ 655,926,569	$ 314,679,374

The allocation amongst all Cities of the sensitivity in Net Pension Liability of the System at June 30, 2019, was as follows:

City	Proportionate Share (%)	1% Decrease 6.50%	Current Discount Rate 7.50%	1% Increase 8.50%
Ames	2.66%	$ 28,445,549	$ 17,470,814	$ 8,381,586
Ankeny	2.39%	25,576,700	15,708,812	7,536,269
Bettendorf	1.88%	20,027,636	12,300,663	5,901,217
Boone	0.57%	6,045,784	3,713,227	1,781,413
Burlington	1.88%	20,071,498	12,327,602	5,914,141
Camanche	0.23%	2,501,843	1,536,593	737,177
Carroll	0.28%	2,979,597	1,830,022	877,949
Cedar Falls	1.86%	19,916,120	12,232,171	5,868,358
Cedar Rapids	9.07%	96,819,485	59,465,024	28,528,218
Centerville	0.24%	2,550,660	1,566,576	751,561
Charles City	0.32%	3,371,529	2,070,741	993,433
Clinton	1.95%	20,869,117	12,817,487	6,149,162
Clive	0.59%	6,265,336	3,848,072	1,846,104
Council Bluffs	5.77%	61,575,495	37,818,712	18,143,447
Creston	0.27%	2,883,854	1,771,218	849,738
Davenport	7.78%	83,085,571	51,029,867	24,481,470
Decorah	0.30%	3,240,778	1,990,435	954,907
Des Moines	18.44%	196,902,239	120,934,297	58,017,971
Dewitt	0.21%	2,258,219	1,386,963	665,393
Dubuque	4.69%	50,107,415	30,775,196	14,764,335
Estherville	0.23%	2,509,169	1,541,093	739,336
Evansdale	0.13%	1,440,448	884,701	424,433
Fairfield	0.30%	3,189,836	1,959,148	939,897
Fort Dodge	1.56%	16,703,119	10,258,796	4,921,636
Fort Madison	0.69%	7,366,289	4,524,260	2,170,504
Grinnell	0.41%	4,384,492	2,692,887	1,291,907
Indianola	0.46%	4,941,702	3,035,117	1,456,091
Iowa City	3.68%	39,353,172	24,170,107	11,595,557

City	Proportionate Share (%)	1% Decrease 6.50%	Current Discount Rate 7.50%	1% Increase 8.50%
Keokuk	0.77%	8,188,941	5,029,520	2,412,902
Knoxville	0.25%	2,689,452	1,651,820	792,457
Lemars	0.33%	3,489,592	2,143,253	1,028,221
Maquoketa	0.21%	2,203,582	1,353,406	649,294
Marion	2.03%	21,699,352	13,327,405	6,393,794
Marshalltown	1.44%	15,424,682	9,473,600	4,544,939
Mason City	1.95%	20,851,421	12,806,619	6,143,948
Muscatine	1.77%	18,883,046	11,597,674	5,563,959
Newton	0.99%	10,524,128	6,463,756	3,100,973
Oelwein	0.21%	2,227,793	1,368,276	656,427
Oskaloosa	0.43%	4,604,396	2,827,949	1,356,702
Ottumwa	1.42%	15,198,605	9,334,747	4,478,325
Pella	0.35%	3,789,615	2,327,523	1,116,624
Sioux City	6.23%	66,559,776	40,879,981	19,612,084
Spencer	0.48%	5,078,326	3,119,029	1,496,348
Storm Lake	0.38%	4,035,332	2,478,438	1,189,025
Urbandale	2.18%	23,298,819	14,309,773	6,865,083
Waterloo	5.58%	59,615,269	36,614,772	17,565,859
Waverly	0.37%	3,903,289	2,397,339	1,150,118
Webster City	0.29%	3,046,750	1,871,267	897,736
West Des Moines	3.49%	37,268,646	22,889,824	10,981,344
Total	100.00%	$ 1,067,963,461	$ 655,926,569	$ 314,679,374

Deferred Inflows and Outflows of Resources

As of June 30, 2019, the deferred inflows and outflows of resources are as follows:

	Deferred Inflows of Resources	Deferred Outflows of Resources
Differences between expected and actual experience	$ (6,137,873)	$ 22,586,665
Changes of assumptions	(2,854,794)	32,932,879
Net difference between projected and actual earnings	(39,418,299)	75,557,353
Contributions made subsequent to measurement date*	TBD	TBD
Total	$ (48,410,966)	$ 131,076,897

*Contributions made subsequent to the measurement date will not be known until after the end of the reporting period.

Other amounts currently reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in future years' pension expense as follows:

Years Ending June 30,	Annual Recognition
2020	$ 42,958,415
2021	5,647,107
2022	18,860,997
2023	14,283,691
2024	915,721

The allocation amongst all cities of amounts currently reported as deferred (inflows)/outflows of the System to be recognized in Pension Expense was as follows:

City	Proportionate Share (%)	Year Ending June 30,				
		2020	2021	2022	2023	2024
Ames	2.66%	$ 1,144,211	$ 150,413	$ 502,369	$ 380,451	$ 24,391
Ankeny	2.39%	1,028,813	135,243	451,703	342,081	21,931
Bettendorf	1.88%	805,604	105,901	353,702	267,864	17,173
Boone	0.57%	243,189	31,968	106,773	80,861	5,184
Burlington	1.88%	807,368	106,133	354,477	268,450	17,210
Camanche	0.23%	100,636	13,229	44,184	33,461	2,145
Carroll	0.28%	119,853	15,755	52,622	39,851	2,555
Cedar Falls	1.86%	801,118	105,311	351,733	266,372	17,077
Cedar Rapids	9.07%	3,894,526	511,956	1,709,901	1,294,932	83,017
Centerville	0.24%	102,599	13,487	45,046	34,114	2,187
Charles City	0.32%	135,618	17,828	59,544	45,093	2,891
Clinton	1.95%	839,452	110,350	368,563	279,118	17,894
Clive	0.59%	252,021	33,129	110,650	83,797	5,372
Council Bluffs	5.77%	2,476,850	325,595	1,087,467	823,554	52,798
Creston	0.27%	116,002	15,249	50,931	38,571	2,473
Davenport	7.78%	3,342,085	439,334	1,467,350	1,111,245	71,241
Decorah	0.30%	130,359	17,136	57,234	43,344	2,779
Des Moines	18.44%	7,920,316	1,041,167	3,477,434	2,633,508	168,833
Dewitt	0.21%	90,836	11,941	39,882	30,203	1,936
Dubuque	4.69%	2,015,551	264,955	884,933	670,172	42,964
Estherville	0.23%	100,930	13,268	44,314	33,559	2,151
Evansdale	0.13%	57,941	7,617	25,439	19,266	1,235
Fairfield	0.30%	128,310	16,867	56,335	42,663	2,735
Fort Dodge	1.56%	671,876	88,322	294,989	223,399	14,322
Fort Madison	0.69%	296,306	38,951	130,094	98,522	6,316
Grinnell	0.41%	176,364	23,184	77,433	58,641	3,759
Indianola	0.46%	198,778	26,130	87,274	66,094	4,237
Iowa City	3.68%	1,582,966	208,089	695,005	526,337	33,743
Keokuk	0.77%	329,397	43,301	144,623	109,525	7,022
Knoxville	0.25%	108,182	14,221	47,498	35,971	2,306
Lemars	0.33%	140,367	18,452	61,629	46,672	2,992
Maquoketa	0.21%	88,638	11,652	38,917	29,472	1,889
Marion	2.03%	872,848	114,740	383,226	290,222	18,606
Marshalltown	1.44%	620,452	81,562	272,411	206,300	13,226

City	Proportionate Share (%)	Year Ending June 30,				
		2020	2021	2022	2023	2024
Mason City	1.95%	838,740	110,257	368,251	278,881	17,879
Muscatine	1.77%	759,563	99,849	333,488	252,555	16,191
Newton	0.99%	423,329	55,649	185,864	140,757	9,024
Oelwein	0.21%	89,612	11,780	39,344	29,796	1,910
Oskaloosa	0.43%	185,210	24,347	81,317	61,582	3,948
Ottumwa	1.42%	611,358	80,366	268,418	203,277	13,032
Pella	0.35%	152,436	20,038	66,927	50,685	3,249
Sioux City	6.23%	2,677,341	351,950	1,175,493	890,217	57,071
Spencer	0.48%	204,274	26,853	89,687	67,921	4,354
Storm Lake	0.38%	162,320	21,338	71,267	53,971	3,460
Urbandale	2.18%	937,186	123,198	411,474	311,615	19,977
Waterloo	5.58%	2,398,001	315,230	1,052,848	797,336	51,117
Waverly	0.37%	157,008	20,640	68,935	52,205	3,347
Webster City	0.29%	122,554	16,110	53,808	40,749	2,612
West Des Moines	3.49%	1,499,117	197,067	658,191	498,457	31,956
Total	100.00%	$ 42,958,415	$ 5,647,107	$ 18,860,997	$ 14,283,691	$ 915,721

Expected Remaining Service Lives

Gains and losses which are amortized over future years are referred to as deferred inflows or gains, and deferred outflows or losses. Investment gains and losses are recognized over a closed five year period. Economic and demographic gains and losses and changes in the total pension liability due to changes in assumptions are recognized over a closed period equal to the average expected remaining service lives of all covered active and inactive members, determined as of the beginning of the measurement period. The amortization period is calculated as the weighted average of expected remaining service lives assuming zero years for all inactive members.

The amortization period for the June 30, 2018 to June 30, 2019, measurement period was determined as follows:

As of June 30, 2019	Members	Expected Remaining Service Lives
Active Members	4,003	11.239
Inactive Members	4,474	0.000
Weighted Average Rounded to the Nearest Tenth	N/A	5.300

Pension expense for the period ended June 30, 2019 was as follows:

Service Cost	$ 53,017,674
Interest on Total Pension Liability	233,282,508
Administrative Expenses	1,797,284
Other Changes in Fiduciary Net Position	121,714
Member Contributions	(28,472,627)
Expected Investment Return Net of Investment Expenses	(188,525,786)
Recognition of Deferred (Inflows)/Outflows of Resources	
Economic/Demographic (Gains)/Losses	7,635,727
Assumption Changes	16,017,449
Investment (Gains)/Losses	44,875,210
Pension Expense	$ 139,749,153

Actuarial Assumptions

The total pension liability in the June 30, 2019, actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	3.00 percent
Salary Increases	3.75 to 15.11 percent including inflation
Investment Rate of Return	7.50 percent, net of pension plan investment expense

The actuarial assumptions used in the June 30, 2019, valuation were based on the results of an actuarial experience study for the period of July 1, 2007 to June 30, 2017. There were no significant changes of benefit terms.

Mortality rates as of June 30, 2019, were based on RP 2014 Blue Collar Healthy Annuitant table with males set-forward zero years, females set forward two years and disabled set-forward three years (male only rates), with generational projection of future mortality improvement with 50% of Scale BB beginning in 2017.

The investment policy and decisions are governed by the Board of Trustees. The long-term expected rate of return on pension plan investments was determined using a building block method in which best-estimate 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 weighing the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of geometric real rates of return for each major asset class included in the pension plan's target asset allocation as of September 30, 2016 (see the discussion of the pension plan's investment policy) are summarized in the following table:

Asset Class	Long-Term Expected Real Rate of Return
Large Cap	5.5%
Small Cap	5.8%
International Large Cap	7.3%
Emerging Markets	9.0%
Emerging Market Debt	6.3%
Private Non-Core Real Estate	8.0%
Master Limited Partnerships	9.0%
Private Equity	9.0%
Core Plus Fixed Income	3.3%
Private Core Real Estate	6.0%
Tactical Asset Allocation	6.4%

Discount rate – The discount rate used to measure the total pension liability was 7.50 percent. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that City contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.