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OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM

Sixty-Eighth
Annual Actuarial Report

OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM

as of January 1, 2020

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CONSULTING, LLC
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May 7, 2020

Board of Trustees
Omaha School Employees' Retirement System
3215 Cuming Street
Omaha, Nebraska 68131

Re: Sixty-Eighth Annual Actuarial Report

Members of the Board:

At your request, we have performed an actuarial valuation of the Omaha School Employees' Retirement System (OSERS) as of January 1, 2020. The major findings of the valuation are contained in this report, including the actuarial contribution rate and the additional School District contribution for the plan year ending December 31, 2020. There have been no changes to the System's actuarial assumptions and methods or benefit provisions since the prior valuation.

In preparing this report, we relied, without audit, on information (some oral and some written) supplied by the System's staff. This information includes, but is not limited to, statutory provisions, member data and financial information. While we found this information to be reasonably consistent and comparable with information used in prior years, we did not audit the data. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements. The Board of Trustees has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in Appendix C.

The actuarial computations presented in this report are for purposes of determining the actuarial contribution rate for the System, as set out in the Nebraska State Statutes. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes. For example, actuarial computations for purposes of fulfilling financial accounting requirements for the System under Governmental Accounting Standards No. 67 and No. 68 are presented in separate reports.

The consultants who worked on this assignment are pension actuaries. Cavanaugh Macdonald Consulting's advice is not intended to be a substitute for qualified legal or accounting counsel.

This is to certify that the independent consulting actuaries have experience in performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement system and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System. We, Patrice A. Beckham, FSA and Bryan K. Hoge, FSA, are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein. We are available to answer any questions on the material contained in this report or to provide explanations or further details as may be appropriate.

We herewith submit the following report and look forward to discussing it with you.

Respectfully Submitted,

Cavanaugh Macdonald Consulting, LLC

Patrice Beckham

Patrice A. Beckham, FSA, EA, FCA, MAAA
Principal and Consulting Actuary

Bryan K. Hoge, FSA, EA, FCA, MAAA
Consulting Actuary

The primary purposes of performing the actuarial valuation are as follows:

- to calculate the actuarial required contribution (ARC) rate necessary to maintain the solvency of the System, as set out in the Board of Trustees' Funding Policy,
- to determine the additional School District contribution amount, if any, given the fixed statutory contribution rates for members, the School District (101% of members' contributions), and the State of Nebraska;
- to evaluate the funded status of the System and disclose various asset and liability measures as of the valuation date;
- to evaluate and disclose the key risks to funding the System pursuant to Actuarial Standard of Practice Number 51;
- to determine the experience of the System since the last valuation; and
- to analyze and report on trends in System contributions, assets, and liabilities over the past several years.

This report presents the results of the January 1, 2020 actuarial valuation of the Omaha School Employees' Retirement System (OSERS). The actuarial valuation results provide a "snapshot" view of the System's financial condition on January 1, 2020 based on the System's membership, benefit structure, and assets on that date. The valuation results reflect net unfavorable actuarial experience for the 2019 plan year as demonstrated by an unfunded actuarial accrued liability that was higher than expected, based on the results of the prior valuation. The largest source of unfavorable experience ($31.4 million) resulted from the return on the actuarial value of assets (about 5.2%) being less than the expected return of 7.50%. In addition, there was also a small net liability actuarial loss of $1.5 million. During calendar year 2019, the additional contribution by the School District was $21.3 million compared to the additional actuarial contribution of $18.2 million. The higher contribution by the District resulted in a reduction in the unfunded actuarial liability compared to that expected.

Membership

The table on the following page summarizes the System's membership, by group, in the current and prior valuation. The active member count increased from 7,177 to 7,366 (2.6%) and the number of members receiving a benefit increased from 4,826 to 4,980 (3.2%). Total projected payroll increased by 3.2% from $339.5 million in the January 1, 2019 valuation to $350.4 million in the current valuation, partially due to the increase in the number of active members. The increase in payroll was very close to the assumed increase of 3.25%.

The 2017 session of the Nebraska Legislature created a new benefit structure for members hired on or after July 1, 2018 (referred to as Tier 4). The key change was moving the minimum age for retirement under Rule of 85 from age 55 to age 60. As a result, the cost of the Tier 4 benefit structure is somewhat lower than the cost of the prior benefit structures. Over time, as current active members covered by the other benefit tiers leave covered employment and are replaced by Tier 4 members the cost of the System is expected to decrease slightly. However, it will likely take ten to fifteen years before the impact on the valuation is material.

SYSTEM MEMBERSHIP	Jan. 1, 2020	Jan. 1, 2019	% Chg
1. Active Members			
a. Certificated			
(1) Tier 1	2,823	3,021	(6.6)
(2) Tier 2	778	842	(7.6)
(3) Tier 3	584	633	(7.7)
(4) Tier 4	670	233	187.6
(5) Total	**4,855**	**4,729**	**2.7**
b. Classified			
(1) Tier 1	1,183	1,363	(13.2)
(2) Tier 2	435	504	(13.7)
(3) Tier 3	304	414	(26.6)
(4) Tier 4	589	167	252.7
(5) Total	**2,511**	**2,448**	**2.6**
c. Total			
(1) Tier 1	4,006	4,384	(8.6)
(2) Tier 2	1,213	1,346	(9.9)
(3) Tier 3	888	1,047	(15.2)
(4) Tier 4	1,259	400	214.8
(5) Total	**7,366**	**7,177**	**2.6**
2. Retirees and Disabled Members	4,711	4,570	3.1
3. Beneficiaries	269	256	5.1
4. Inactive Vested Members			
(1) Tier 1	1,097	1,089	0.7
(2) Tier 2	66	25	164.0
(3) Total	**1,163**	**1,114**	**4.4**
5. Nonvested Terminations			
(1) Tier 1	278	302	(7.9)
(2) Tier 2	120	130	(7.7)
(3) Tier 3	198	163	21.5
(4) Tier 4	113	76	48.7
(5) Total	**709**	**671**	**5.7**
6. Total	14,218	13,788	3.1

Assets

As of January 1, 2020, the System had total assets of $1.324 billion measured on a market value basis. This was an increase of $129.9 million from the prior valuation and represents an annualized rate of return, as provided by the Nebraska Investment Council (NIC) of 13.8%, net of all expenses. The components of this change are shown in the following table:

Market Value Assets ($M)	
Net Assets, as of January 1, 2019	$1,193.8
• Adjustment for Late Reporting	(0.5)
Adjusted Net Assets, as of January 1, 2019	$1,193.3
• District, State and Member Contributions	102.5
• Benefits Payments and Refunds	(133.8)
• Administrative Expenses	(1.1)
• Investment Return	162.8
Net Assets, as of January 1, 2020	$1,323.7

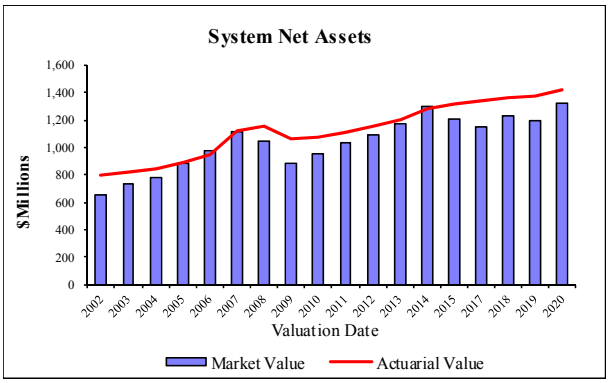
The market value of assets is not used directly in the calculation of the unfunded actuarial accrued liability (UAAL) and actuarial contribution rate. An asset valuation method, which smoothes the effect of market fluctuations, is used to determine the value of assets used in the valuation. This amount, called the "actuarial value of assets", is equal to the expected asset value, based on the actuarial value in the prior valuation and the assumed investment return in the prior valuation of 7.5%, plus 25% of the difference between the actual market value and the expected asset value. The resulting value must be no less than 80% of market value and no more than 120% of market value (referred to as a "corridor"). The corridor did not apply this year as the actuarial value of assets was 107% of market value. The actuarial value of assets as of January 1, 2020 was $1.418 billion, an increase of $39.2 million from the prior year. The components of change in the actuarial value of assets from January 1, 2019 to January 1, 2020 are shown in the following table.

Actuarial Value of Assets ($M)	
Actuarial Assets, as of January 1, 2019	$1,378.8
• Adjustment for Late Reporting	(0.1)
Adjusted Actuarial Assets, as of January 1, 2019	$1,378.7
• District, State and Member Contributions	102.5
• Benefits Payments and Refunds	(133.8)
• Expected Investment Income (Based on 7.5% assumption)	102.0
• Actuarial Investment (Gain/Loss)	(31.4)
Preliminary Actuarial Assets, January 1, 2020	$1,418.0
• Application of Corridor	N/A
Final Actuarial Assets, as of January 1, 2020	**$1,418.0**

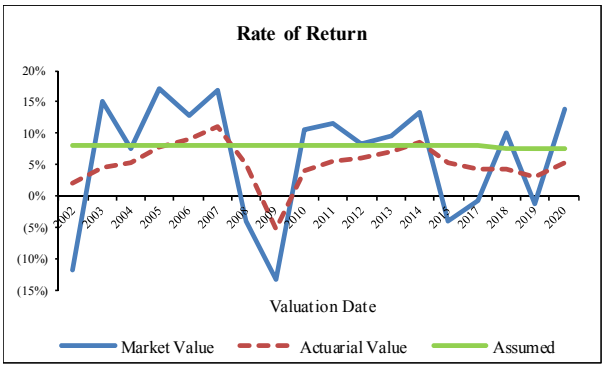
The dollar-weighted annualized rate of return, net of investment and administrative expenses, measured on the actuarial value of assets was approximately 5.2%. A comparison of asset values on both the market and actuarial basis is shown below:

	9/1/2015	1/1/2017	1/1/2018	1/1/2019	1/1/2020
Market Value of Assets	$1,211	$1,149	$1,234	$1,194	$1,324
Actuarial Value of Assets	1,313	1,338	1,365	1,379	1,418
Actuarial Value/ Market Value	108%	116%	111%	115%	107%

The actuarial value of assets continues to be higher than the market value of assets. However, the difference has decreased during 2019 and the deferred (or unrecognized) investment loss is now $94.3 million, about 7% of the market value of assets. Absent favorable investment experience in future years to offset the recognition of this significant deferred loss, it will decrease the System's funded ratio and increase the actuarial contribution rate as it is reflected through the asset smoothing method. The recognition of the deferred investment loss in future years is expected to cause the amount of any additional School District contributions to increase as well (see Exhibit 7).



With the use of an asset smoothing method, the actuarial value is expected to be both above and below the market value of assets over a long period of time. However, for most of this period, the actuarial value of assets has exceeded the market value of assets.



The estimated rate of return on both the actuarial and market value of assets for the last decade is shown in this graph. The asset smoothing method mitigates the volatility of market value returns as shown in the rates of return on the actuarial versus market value of assets.

Liabilities

The actuarial accrued liability is that portion of the present value of future benefits that will not be paid by future employer normal costs or member contributions. The difference between this liability and asset values at the same date is referred to as the unfunded actuarial accrued liability (UAAL). The unfunded actuarial accrued liability will be reduced if the employer's contributions exceed the employer's normal cost for the year, after allowing for interest earned on the previous balance of the unfunded actuarial accrued liability. Benefit improvements, experience gains and losses, and changes in actuarial assumptions and methods will also impact the total actuarial accrued liability (AAL) and the unfunded portion thereof.

The unfunded actuarial accrued liability as of January 1, 2020 is shown below:

Actuarial Accrued Liability	$ 2,265,653,000
Actuarial Value of Assets	1,417,961,000
Unfunded Actuarial Accrued Liability	$ 847,692,000

Numerous factors contributed to the change in the System's UAAL during the 2019 plan year. The components are examined in the following discussion.

Actuarial gains (or losses) result from actual experience that is more (or less) favorable than anticipated based on the actuarial assumptions. These "experience" (or actuarial) gains or losses are reflected in the UAAL and are measured as the difference between the expected unfunded actuarial accrued liability and the actual unfunded actuarial accrued liability, taking into account any changes due to assumption, method or benefit provision changes. Overall, the System experienced an actuarial loss of $33.0 million. The investment return on the actuarial value of assets of 5.2% was lower than assumed return of 7.5%, resulting in an actuarial loss of $31.4 million. There was also a small net actuarial loss of $1.5 million on the actuarial accrued liability. Exhibit 8 shows a breakdown of the sources of liability experience during the 2019 plan year.

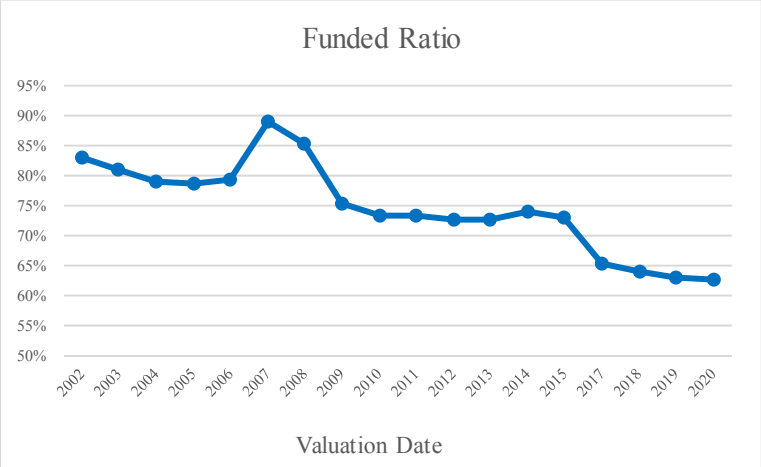
The change in the unfunded actuarial accrued liability between January 1, 2019 and January 1, 2020 is shown in the following table (in millions):

Change in Unfunded Actuarial Accrued Liability ($M)	
Unfunded Actuarial Accrued Liability, January 1, 2019	$814
• Expected Change in UAAL	
- Amortization Method	12
- Contributions greater than the actuarial required contribution	(3)
• Investment Experience	31
• Liability Experience	2
• Other Experience	(8)
Unfunded Actuarial Accrued Liability, January 1, 2020	$848

An evaluation of the unfunded actuarial accrued liability on a pure-dollar basis may not provide a complete analysis since only the difference between the assets and liabilities (which are both large numbers) is reflected. Another way to evaluate the unfunded actuarial accrued liability and the progress made in its funding is to track the funded status, the ratio of the actuarial value of assets to the actuarial accrued liability. Note that the funded ratio does not necessarily indicate whether or not additional funding is needed, nor does it indicate whether or not the plan has sufficient funds to settle all current obligations.

The funded status information for OSERS is shown below (in millions):

	9/1/14	9/1/15	1/1/17	1/1/18	1/1/19	1/1/20
Using Actuarial Value of Assets:						
Funded Ratio (AVA/AAL)	74%	73%	65%	64%	63%	63%
Unfunded AAL (AAL - AVA)	$446	$486	$713	$771	$814	$848
Using Market Value of Assets:						
Funded Ratio (MVA/AAL)	75%	67%	56%	58%	54%	58%
Unfunded AAL (AAL - MVA)	$429	$588	$902	$902	$999	$942



Changes in actuarial assumptions and methods, coupled with investment returns below the assumed rate and contributions below the actuarial rate significantly reduced the funded ratio over much of this period. However, with the adoption of the Board's current funding policy, the funded ratio is expected to increase in the future, assuming all assumptions are met and the full actuarial contribution amounts are made as required in state statute.

Contributions

The actuarial contribution rate for the System consists of:

- a "normal cost" for the portion of projected liabilities allocated by the actuarial cost method to service of members during the year following the valuation date,
- an "unfunded actuarial accrued liability contribution" for the excess of the portion of projected liabilities allocated to service to date over the actuarial value of assets.

The actuarial contribution rate is computed based on the Board of Trustees' Funding Policy. On that basis, the actuarial contribution rate (Item 3 in the table below) is equal to the normal cost rate plus the amortization payment on the UAAL. Effective with the January 1, 2017 valuation, OSERS began to amortize the UAAL using a "layered" approach. Under this method, the UAAL is split into pieces or "layers"; the initial or legacy UAAL was amortized, as a level-percent of payroll, over a closed 30-year period that began with the September 1, 2013 valuation (27 years remained as of the January 1, 2017 valuation). All ensuing UAAL bases were to be amortized, as a level-percent of payroll, over a new 25-year period commencing on the respective valuation date. At the March 6, 2019 meeting, the Board of Trustees modified the System's Funding Policy to reset the legacy amortization base to the unfunded actuarial accrued liability (UAAL) as of January 1, 2019 with payments calculated as a level percentage of payroll, over a closed 30-year period. New layers of UAAL that occur in the future are also amortized over new 30-year periods.

The actuarial contribution rate for the plan year ending December 31, 2020, and any resulting additional School District contribution, is computed based on the January 1, 2020 actuarial valuation. The ongoing, fixed contributions to the System are set by state statute and are shown below in item 4, "Statutory Contribution Rate". They include the member contribution rate of 9.78%, the State contribution rate of 2%, and the School District contribution rate which is 101% of the member contribution rate.

Based on the results of the valuation, there is a contribution shortfall for the 2020 plan year of 5.59%, or $19.8 million, as shown in the table below:

	Actuarial Valuation	
Contribution Rate	**1/1/2020**	**1/1/2019**
1. Normal Cost	12.88%	12.96%
2. UAAL Contribution	14.37%	14.01%
3. Total Actuarial Contribution Rate	27.25%	26.97%
4. Statutory Contribution Rate	21.66%	21.66%
5. Contribution Shortfall / (Margin) (3)-(4)	5.59%	5.31%
6. Additional District Contribution ($M)	$19.8	$18.2

The unfavorable experience on the actuarial value of assets during 2019, along with partial recognition of the deferred investment experience from the 2019 valuation, resulted in an increase in the actuarial contribution rate from the prior valuation. Overall, there was an increase of 0.28% in the actuarial contribution rate from the January 1, 2019 valuation to the January 1, 2020 valuation, as shown in the following table.

Total Actuarial Contribution Rate	
Total Contribution Rate as of January 1, 2019	26.97%
• Contributions Different Than Actuarial Rate	(0.05%)
• Investment Experience	0.52%
• Liability Experience	0.03%
• Change in Normal Cost Rate	(0.08%)
• Payroll Growth Different Than Expected	0.00%
• Other Experience	(0.14%)
Total Contribution Rate as of January 1, 2020	27.25%

The difference in the actuarial contribution rate and the statutory contribution rate results in a contribution shortfall for 2020 of 5.59% of covered payroll, or $19.8 million. Note that the expected contribution shortfall for 2020 estimated in the 2019 valuation assuming all assumptions would be met, was 6.04% or $21.4 million. Due to the favorable investment experience on the market value of assets for the 2019 plan year, about half of the $185.1 million deferred investment loss in the prior valuation has been recognized and $94.3 million of deferred investment loss currently exists (market value is lower than actuarial value of assets). Absent favorable investment experience in future years to offset the recognition of the deferred investment loss, the actuarial contribution rate is expected to increase as the deferred investment experience is reflected through the asset smoothing method. If this occurs, the System's funded status is expected to decrease and the contribution shortfall is expected to increase. The following table illustrates the impact of the deferred investment experience on the District's additional contribution, if all assumptions are met in the future:

Year Ended December 31,	Total Payroll	Actuarial Recommended Contribution	Member and State Statutory	District Statutory	District Additional	District Additional (August 31)
2020	$350,406,483	27.25%	11.78%	9.88%	5.59%	$19,825,251
2021	362,435,316	27.56%	11.78%	9.88%	5.90%	21,642,990
2022	374,726,106	27.78%	11.78%	9.88%	6.12%	23,211,335
2023	387,903,344	27.92%	11.78%	9.88%	6.26%	24,577,211
2024	401,264,074	28.03%	11.78%	9.88%	6.37%	25,870,478
2025	414,868,090	28.09%	11.78%	9.88%	6.43%	26,999,502
2026	428,816,919	28.13%	11.78%	9.88%	6.47%	28,080,894

Comments

The System's unfunded actuarial accrued liability increased from $814.1 million in the January 1, 2019 valuation to $847.7 million in the January 1, 2020 actuarial valuation, and the funded ratio held steady at 63%. Net unfavorable experience occurred during the 2019 plan year, the result of a $31.4 million actuarial loss on assets and a $1.5 million loss on liabilities. This experience increased the unfunded actuarial accrued liability and the payment thereon. In addition, during calendar year 2019, the additional contribution by the School District was $21.3 million compared to the additional actuarial contribution of $18.2 million. The higher contribution by the District resulted in a reduction in the unfunded actuarial liability compared to that expected

The Nebraska statutes provide that the School District shall contribute the greater of (a) one hundred and one percent of the contributions made by the employees or (b) such amount as may be necessary to maintain the solvency of the System, as determined annually by the Board of Education upon recommendation of the actuary retained by the Board of Trustees. The Trustees have adopted a Funding Policy that sets the criteria for determining the contribution amount necessary to maintain the solvency of the System. On this basis, the Actuarial Contribution Rate for the plan year ending December 31, 2020 is 27.25% of payroll. The total of contributions made by members, the State, and the School District for plan year ending December 31, 2020 is 21.66% of payroll, so the actuarial contribution rate exceeds the statutory contribution rates by 5.59% of payroll, or $19.8 million. This contribution shortfall of $19.8 million represents the additional required contribution by the School District needed for the 2020 plan year. With the current funded status and the amount of unrecognized investment losses, the additional District contribution is expected to be needed for many years in the future.

The deferred investment loss (actuarial value less market value of assets) is $94.3 million as of January 1, 2020. Absent favorable investment experience in future years, the deferred investment loss will eventually be reflected in the actuarial value of assets in future years. While the use of an asset smoothing method is a common method used by public retirement systems, it is important to identify the potential impact of the deferred investment experience. This is accomplished by comparing the key valuation results using both the actuarial and market value of assets:

	Using Actuarial Value of Assets	Using Market Value of Assets
Actuarial Accrued Liability	$2,265,653,000	$2,265,653,000
Asset Value	1,417,961,000	1,323,663,000
Unfunded Actuarial Accrued Liability	$847,692,000	$941,990,000
Funded Ratio	62.59%	58.42%
Normal Cost Rate	12.88%	12.88%
UAAL Contribution Rate	14.37%	15.95%
Actuarial Contribution Rate	27.25%	28.83%
Total Statutory Contribution Rate	(21.66%)	(21.66%)
Contribution Shortfall	5.59%	7.17%
Additional District Contribution	$19,825,251	$25,428,810

A typical retirement plan faces many different risks. The term "risk" is most commonly associated with an outcome with undesirable results. However, in the actuarial world risk can be translated as uncertainty. The actuarial valuation process uses many actuarial assumptions to project how future contributions and investment returns will meet the cash flow needs for future benefit payments. Of course, we know that actual experience will not unfold exactly as anticipated by the assumptions and that uncertainty, whether favorable or unfavorable, creates risk. Actuarial Standard of Practice Number 51 defines risk as the potential of actual future measurements to deviate from expected results due to actual experience that is different than the actuarial assumptions. Risk evaluation is an important part of managing a defined benefit plan. Please see the Risk Considerations section of this report for an in-depth discussion of the specific risks facing OSERS.

We conclude this executive summary by presenting comparative statistics and actuarial information from both the January 1, 2019 and January 1, 2020 valuations.

	Jan. 1, 2020	Jan. 1, 2019	% Chg
SYSTEM MEMBERSHIP			
1. Active Membership			
- Number of Members	7,366	7,177	2.6
- Projected Payroll for Upcoming Fiscal Year	$350.4M	$339.5M	3.2
- Average Salary	47,571	47,300	0.6
2. Inactive Membership			
- Number Not in Pay Status	1,872	1,785	4.9
- Number of Retirees/Beneficiaries/Disableds	4,980	4,826	3.2
- Total Annual Benefits in Pay	$132.2M	$126.0M	4.9
ASSETS AND LIABILITIES			
1. Net Assets			
- Market Value	$1,324M	$1,194M	10.9
- Actuarial Value	1,418M	1,379M	2.8
2. Projected Liabilities			
- Retired Members	$1,364M	$1,311M	4.0
- Inactive Members	50M	45M	11.1
- Active Members	1,246M	1,223M	1.9
- Total Liability	2,660M	2,580M	3.1
3. Actuarial Accrued Liability (AAL)	$2,266M	$2,193M	3.3
4. Unfunded Actuarial Accrued Liability	$848M	$814M	4.2
5. Funded Ratio			
a. Actuarial Value Assets/AAL	62.59%	62.88%	(0.5)
b. Market Value Assets/AAL	58.42%	54.44%	7.3
SYSTEM CONTRIBUTIONS			
1. Total Actuarial Contribution Rate	27.25%	26.97%	1.0
2. Statutory Contribution Rate			
a. Member Contribution Rate	9.78%	9.78%	0.0
b. Employer Contribution Rate	9.88%	9.88%	0.0
c. State Contribution Rate	2.00%	2.00%	0.0
d. Total	21.66%	21.66%	0.0
3. Contribution Shortfall/(Margin) (1.) - (2.d.)	5.59%	5.31%	5.3
4. Additional District Contribution*	$19,825,251	$18,244,371	8.7

M = ($)Millions

Note: Numbers may not add due to rounding

* Contribution amount is calculated as of August 31

HISTORICAL CHANGES IN THE OSERS UNFUNDED ACTUARIAL ACCRUED LIABILITY

(dollars in millions)

	Valuation Date											
	9/1/03	9/1/04	9/1/05	9/1/06	9/1/07	9/1/08	9/1/09	9/1/10	9/1/11	9/1/12	9/1/13	9/1/14
Prior Valuation UAAL	163	191	223	240	246	138	198	349	390	406	437	455
Amortization Method	4	5	6	7	5	3	4	6	2	8	9	10
Actual Contributions												
Less than ARC	0	0	2	0	3	0	0	2	4	0	2	0
More than ARC	0	0	0	(2)	0	(7)	(2)	0	0	(4)	0	(4)
Actual vs Expected Experience												
Investment	27	23	1	(10)	(29)	33	151	42	26	20	12	(6)
Salary	(5)	(6)	(1)	4	1	1	0	(13)	(15)	(12)	(6)	(8)
Retirement	3	0	3	2	2	3	(2)	(4)	(1)	4	4	6
Mortality	2	5	4	3	3	1	(2)	0	(2)	2	(2)	(1)
Termination of Employment	(4)	(1)	2	3	1	7	2	3	2	0	1	(1)
Other	1	3	0	(1)	(3)	(1)	0	0	0	13	(8)	(5)
Benefit Changes	0	0	0	0	(3)[2]	0	0	0	0	0	(4)	0
Assumption Changes	0	0	0	0	0	20	0	0	0	0	10	0
Change to Actuarial Methods	0	3[1]	0	0	(88)[3]	0	0	5	0	0	0	0
Total Change for Year End	28	32	17	6	(108)	60	151	41	16	31	18	(9)
UAAL on Valuation Date	**191**	**223**	**240**	**246**	**138**	**198**	**349**	**390**	**406**	**437**	**455**	**446**

[1]Included part-time members who are vested
[2]Increase in member contribution rate
[3]Actuarial asset value reset to market value

HISTORICAL CHANGES IN THE OSERS UNFUNDED ACTUARIAL ACCRUED LIABILITY (CONT.)

(dollars in millions)

	Valuation Date					
	9/1/15	1/1/17	1/1/18	1/1/19	1/1/20	Total
Prior Valuation UAAL	446	486	713	771	814	
Amortization Method	9	12	7	7	12	116
Actual Contributions						
Less than ARC	0	0	3	0	0	16
More than ARC	(5)	(4)	0	0	(3)	(31)
Actual vs Expected Experience						
Investment	34	63	44	62	31	524
Salary	(3)	*	3	(29)	(12)	(101)
Retirement	9	*	7	6	8	50
Mortality	2	*	(1)	6	6	26
Termination of Employment	(2)	*	(1)	(6)	(8)	(2)
Other	(4)	(6)	(4)	(3)	0	(18)
Benefit Changes	0	0	0	0	0	(7)
Assumption Changes	0	138	0	0	0	168
Change to Actuarial Methods	0	0	0	0	0	(80)
Total Change for Year End	40	227*	58	43	34	
UAAL on Valuation Date	**486**	**713**	**771**	**814**	**848**	

* Not calculated. Total liability experience was a $24 million loss, which is included in the total change at year end.

Note: Although a total column is shown, the amounts in each year are not additive because they are calculated on each valuation date and, therefore, represent a value at a different point in time.

SUMMARY OF FUND ACTIVITY
(Market Value Basis)

For Period Ended December 31, 2019

NET ASSETS ON JANUARY 1, 2019	**$**	**1,193,800,000**
ADJUSTMENT FOR LATE REPORTING*		**(464,000)**
ADJUSTED NET ASSETS ON JANUARY 1, 2019	**$**	**1,193,336,000**
ADDITIONS		
Salary deductions	$	35,677,000
School District payroll-related contributions		36,035,000
School District additional contributions		21,300,000
Purchases of service		319,000
State service annuity receipts		1,717,000
Sec. 79-916 deposits		7,420,000
Income from investments, including realized and unrealized gains		162,795,000
Total additions	**$**	**265,263,000**
DEDUCTIONS		
Retirement benefits	$	(125,573,000)
Refunds to employees		(8,251,000)
Professional fees		(587,000)
Other		(54,000)
Personnel costs		(471,000)
Total deductions	**$**	**(134,936,000)**
NET ASSETS ON JANUARY 1, 2020*	**$**	**1,323,663,000**

* As provided by the Nebraska Investment Council (NIC). Please note that December 31 statements are typically not available when the NIC investment reports are prepared for a few of OSERS' investment managers. As a result, it is necessary for the NIC to subsequently adjust the market values in their reports to account for the late data. These adjustments are shown as an "adjustment for late reporting" in this exhibit.

ACTUARIAL VALUE OF NET ASSETS

As of January 1, 2020

1. Actuarial Value of Assets as of January 1, 2019	$	1,378,824,000
2. Adjustment for Late Reporting		(116,000)
3. Adjusted Actuarial Value of Assets as of January 1, 2019	$	1,378,708,000
4. Actual Contributions/Disbursements		
a. Contributions		102,468,000
b. Benefit payments		(133,824,000)
c. Net change		(31,356,000)
5. Expected Value of Assets as of January 1, 2020		1,449,393,000
6. Market Value of Assets as of January 1, 2020		1,323,663,000
7. Difference between Market and Expected Values (6) – (5)		(125,730,000)
8. Initial Actuarial Value of Assets as of January 1, 2020 (5) + [(7) x 25%]		1,417,961,000
9. Corridor as of January 1, 2020		
a. 120% of Market Value of Assets as of January 1, 2020		1,588,396,000
b. 80% of Market Value of Assets as of January 1, 2020		1,058,930,000
10. Final Actuarial Value of Assets as of January 1, 2020* (8), but not greater than (9a), nor less than (9b)		1,417,961,000
11. Actuarial value divided by market value (10) / (6)		107.1%
12. Market value less actuarial value	$	(94,298,000)

** The estimated annualized rate of return on the actuarial value of assets for the period ended December 31, 2019 is about 5.2%*

ACTUARIAL BALANCE SHEET

As of January 1, 2020

ASSETS

Actuarial Value of Assets		$ 1,417,961,000
Present Value of Contributions for Unfunded Actuarial Accrued Liability		847,692,000
Present Value of Future Normal Costs		394,719,000
Total Assets		**$ 2,660,372,000**

LIABILITIES

Present Value of Future Benefits		
Retirees, Beneficiaries, and Disableds		$ 1,364,109,000
Inactive Vesteds		46,252,000
Nonvested Terminations		4,080,000
Active Members		
Retirement benefits	$ 1,177,660,000	
Termination benefits	58,036,000	
Death benefits	10,235,000	
		1,245,931,000
Total Liabilities		**$ 2,660,372,000**

UNFUNDED ACTUARIAL ACCRUED LIABILITY

As of January 1, 2020

1. Present Value of Future Benefits	$	2,660,372,000
2. Present Value of Future Normal Costs	$	394,719,000
3. Actuarial Accrued Liability (1) – (2)	$	2,265,653,000
4. Actuarial Value of Assets	$	1,417,961,000
5. Unfunded Actuarial Accrued Liability (3) – (4)	$	847,692,000

AMORTIZATION OF THE UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)

Effective with the January 1, 2017 valuation, OSERS began to amortize the UAAL using a "layered" approach. Under this method, the UAAL is split into pieces or layers; the initial or legacy UAAL was amortized, as a level-percent of payroll, over a closed 30-year period that began with the September 1, 2013 valuation (27 years remaining as of the January 1, 2017 valuation). All ensuing UAAL bases were to be amortized, as a level-percent of payroll, over a new 25-year period commencing on the respective valuation date. At the March 6, 2019 meeting, the Board of Trustees modified the System's Funding Policy to reset the legacy amortization base to the unfunded actuarial accrued liability (UAAL) as of January 1, 2019 with payments calculated as a level percentage of payroll over a closed 30-year period. New layers of UAAL that occur in the future are also amortized over new 30-year periods.

Amortization Bases	Original Amount	1/1/2020 Remaining Payments	Date of Last Payment	Outstanding Balance as of 1/1/2020	Annual Contribution*
2019 UAAL Base	$ 814,069,000	29	1/1/2048	$ 825,828,207	$ 49,090,474
2020 Experience Base	21,863,793	30	1/1/2049	21,863,793	1,276,943
Total				**$ 847,692,000**	**$ 50,367,417**

* Contribution amount reflects mid-year timing.

1. Total UAAL Amortization Payments	$ 50,367,417
2. Projected Payroll for plan year ending December 31, 2020	$ 350,406,483
3. UAAL Amortization Payment Rate	14.37%

ANALYSIS OF CONTRIBUTION RATE

The System is financed by contributions from the members, the School District and the State. Effective September 1, 2013, the members contribute 9.78% of pay. The District is obligated to pay the greater of (a) one hundred and one percent of the member contributions or (b) such amount as may be necessary to maintain the solvency of the System. Under the Funding Policy adopted by the Board in May, 2013, the Actuarial Recommended Contribution rate (ARC) is the normal cost rate plus the contribution necessary to amortize the UAAL. Effective July 1, 2014, the State of Nebraska contributes 2.0% of pay.

1. Normal Cost	$	41,443,490
2. a. Expected Payroll for Current Actives for Year End December 31, 2020		321,664,300
b. Total Expected Payroll for Year End December 31, 2020		350,406,483
3. Normal Cost Rate (1)/(2a)		12.88%
4. Unfunded Actuarial Accrued Liability at Valuation Date		847,692,000
5. UAAL Contribution at Mid-Year		50,367,417
6. UAAL Contribution Rate (5)/(2b)		14.37%
7. Actuarial Recommended Contribution Rate (3) + (6)		27.25%
8. Statutory Contribution Rate:		
(a) Member		9.78%
(b) District		9.88%
(c) State		2.00%
(d) Total		21.66%
9. Contribution Shortfall (7) - (8d)		5.59%
10. Additional District Contribution at August 31, 2020 (9) * (2b) * (1.075 ^ (2/12))	$	19,825,251

PROJECTION OF ADDITIONAL DISTRICT CONTRIBUTIONS

The projections below are based on the open group projection model prepared in conjunction with the January 1, 2020 actuarial valuation. It is assumed that all actuarial assumptions are met each year in the future, including a 7.5% assumed rate of return on the market value of assets. The projections also assume the number of active members remains constant in the future. To the extent actual experience differs from that assumed, the actual valuation results in future years will also differ and the additional contribution required by the District will vary from the amounts shown below. The projections are not intended to predict the specific amount of the additional District contributions in the future, but rather to indicate the general trend and magnitude of such contributions if the actuarial assumptions are met.

Year Ended December 31,	Total Payroll	Actuarial Recommended Contribution	Member and State Statutory	District Statutory	District Additional	District Additional (August 31)
2020	$350,406,483	27.25%	11.78%	9.88%	5.59%	$19,825,251
2021	362,435,316	27.56%	11.78%	9.88%	5.90%	21,642,990
2022	374,726,106	27.78%	11.78%	9.88%	6.12%	23,211,335
2023	387,903,344	27.92%	11.78%	9.88%	6.26%	24,577,211
2024	401,264,074	28.03%	11.78%	9.88%	6.37%	25,870,478
2025	414,868,090	28.09%	11.78%	9.88%	6.43%	26,999,502
2026	428,816,919	28.13%	11.78%	9.88%	6.47%	28,080,894

CALCULATION OF ACTUARIAL GAIN/(LOSS)

The overall actuarial gain/(loss) is comprised of both a liability gain/(loss) and an actuarial asset gain/(loss). Each of these represents the difference between the expected and actual values as of January 1, 2020.

1.	Expected Actuarial Accrued Liability		
	a. Actuarial Accrued Liability as of January 1, 2019	$	2,192,893,000
	b. Normal Cost for plan year ending December 31, 2019		40,361,000
	c. Benefit payments for plan year ending December 31, 2019		(133,824,000)
	d. Additional liability for state service annuities and service purchases		2,036,000
	e. Interest on a., b., c., and d. to end of year		162,641,000
	f. Expected Actuarial Accrued Liability	$	2,264,107,000
2.	Actuarial Accrued Liability as of January 1, 2020	$	2,265,653,000
3.	Liability Gain/(Loss) (1.f.) – (2)	$	(1,546,000)
4.	Liability Gain/(Loss) as a Percent of Actuarial Accrued Liability		(0.07%)
5.	Expected Actuarial Value of Assets		
	a. Adjusted actuarial value of assets as of January 1, 2019	$	1,378,708,000
	b. Contributions for plan year ending December 31, 2019 (including state service annuities and service purchases)		102,468,000
	c. Benefit payments for plan year ending December 31, 2019		(133,824,000)
	d. Interest on a., b., and c. to end of year		102,041,000
	e. Expected actuarial value of assets	$	1,449,393,000
6.	Actuarial Value of Assets as of January 1, 2020	$	1,417,961,000
7.	Asset Gain/(Loss) (6) – (5.e.)	$	(31,432,000)
8.	Asset Gain/(Loss) as a Percent of Actuarial Value of Assets		(2.22%)
9.	Overall Actuarial Gain/(Loss) (3) + (7)	$	(32,978,000)

Gain/(Loss) By Source

The System experienced a net actuarial loss on liabilities of about $1.5 million during the plan year ended December 31, 2019. The major components of this overall loss are shown below:

Liability Sources	$Millions
Salary Increases	$ 11.7
Mortality	(6.0)
Terminations	7.5
Retirements	(7.5)
Disability	0.0
New Entrants/Rehires	(7.3)
Miscellaneous	0.1
Total Liability Gain/(Loss)	**$ (1.5)**
Asset Gain/(Loss)	**$ (31.4)**
Net Actuarial Gain/(Loss)	**$ (33.0)**

Comments

The purpose of conducting an actuarial valuation of a retirement system is to determine the costs and liabilities for the benefits under the system, to determine the annual level of contribution required to support these benefits and, finally, to analyze the system's overall experience as it compares with the actuarial assumptions used in the valuation. The costs and liabilities of a retirement system reported in the valuation depend not only upon the level of benefits provided, but also upon factors such as investment return on invested funds, mortality rates for active and retired members, withdrawal rates among active members, rates at which salaries increase, and rates of retirement for ages at which members retire. The actuarial assumptions employed as to these and other contingencies in the current valuation are set forth in Appendix C of this report.

Net demographic actuarial experience for the year was a loss of $1.5 million, about 0.1% of actuarial accrued liability. The largest sources of unfavorable experience were a $7.5 million loss due to unfavorable retirement experience, a $6.0 million loss from mortality, and a $7.3 million loss due to new active and rehired members.

Another significant component of the experience for the year ending December 31, 2019 was the investment experience. Due to the deferred investment loss in last year's valuation of $185.1 million, there was a loss on the actuarial value of assets of $31.4 million despite favorable experience on the market value of assets. As of January 1, 2020, there remains a deferred investment loss of $94.3 million. Absent favorable investment experience, the deferred loss will flow through the valuation over the next few years and increase both the UAAL and the actuarial contribution rate.

SCHEDULE OF CONTRIBUTIONS FROM THE EMPLOYER AND OTHER CONTRIBUTING ENTITIES

HISTORICAL FUNDING INFORMATION

Year Ending	Annual Required Contribution (a)	Total Employer Contribution* (b)	Percentage of ARC Contribution (b) / (a)
8/31/2005	$22,459,221	$20,210,403	89.99%
8/31/2006	24,311,628	26,766,000	110.10%
8/31/2007	28,143,388	24,981,000	88.76%
8/31/2008	19,491,557	26,162,000	134.22%
8/31/2009	24,103,114	25,918,000	107.53%
8/31/2010	30,900,224	29,182,000	94.44%
8/31/2011	34,180,566	30,255,000	88.52%
8/31/2012	32,957,547	37,109,000	112.60%
8/31/2013	35,032,074	33,623,000	95.98%
8/31/2014	34,225,147	38,198,000	111.61%
8/31/2015	34,614,093	39,562,000	114.29%
8/31/2016	37,665,061	40,564,000	107.70%
12/31/2016**	12,836,281	13,861,000	107.98%
12/31/2017	57,941,493	55,145,000	95.17%
12/31/2018	63,111,681	63,112,000	100.00%
12/31/2019	40,399,371	43,455,000	107.56%

* Includes State and School District contributions.

** For the short Plan Year from September 1, 2016 through December 31, 2016.

Note: The Total Employer Contribution for fiscal year ending 8/31/2014 was changed because during our work on the GASB reports, we discovered the Service Annuity contribution was different from what was initially reported to us. This figure now matches the number found in the GASB reports.

SCHEDULE OF FUNDING PROGRESS

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b - a)/c]
9/1/2005	$ 887,165,000	$ 1,126,967,000	$ 239,802,000	78.72%	$ 231,708,783	103.49%
9/1/2006	948,938,000	1,195,354,000	246,416,000	79.39%	248,759,070	99.06%
9/1/2007	1,117,628,000 *	1,255,527,000	137,899,000	89.02%	272,844,149	50.54%
9/1/2008	1,149,289,000	1,346,999,000	197,710,000	85.32%	272,720,007	72.50%
9/1/2009	1,061,326,000	1,410,318,000	348,992,000	75.25%	287,770,291	121.27%
9/1/2010	1,078,269,000	1,467,850,000	389,581,000	73.46%	302,229,282	128.90%
9/1/2011	1,110,033,000	1,516,284,000	406,251,000	73.21%	310,228,916	130.95%
9/1/2012	1,155,495,000	1,592,738,000	437,243,000	72.55%	307,258,065	142.30%
9/1/2013	1,205,265,000	1,660,287,000	455,022,000	72.59%	313,946,237	144.94%
9/1/2014	1,277,546,000	1,723,970,000	446,424,000	74.10%	323,077,710	138.18%
9/1/2015	1,312,905,000	1,798,706,000	485,801,000	72.99%	333,166,135	145.81%
1/1/2017	1,337,983,000	2,050,581,000	712,598,000	65.25%	351,940,122 **	202.48%
1/1/2018	1,365,013,000	2,136,385,000	771,372,000	63.89%	359,359,507	214.65%
1/1/2019	1,378,824,000	2,192,893,000	814,069,000	62.88%	375,598,301	216.74%
1/1/2020	1,417,961,000	2,265,653,000	847,692,000	62.59%	364,799,331	232.37%

* The actuarial value of assets was reset to market value as of 9/1/2007.
** Covered Payroll was annualized for the short Plan Year in 2016.

SOLVENCY TEST

A short-term solvency test, which is one method of determining a system's progress under its funding program, compares the plan's present assets with: 1) the liability for active member contributions on deposit; 2) the liability for future benefits to present retirees; and (3) the liability for service already rendered by active members. In a system that has been following the level-percent of payroll financing discipline, the obligation for active member contributions on deposit (Item 1) and the liabilities for future benefits to present retired lives (Item 2) will be fully covered by present assets with the exception of rare circumstances. The obligation for service already rendered by active members (Item 3) will be partially covered by the remainder of present assets. Absent any significant benefit changes, if the system has been using level cost financing, the funded portion of Item 3 usually will increase over a period of time.

Actuarial Valuation*	Active Member Contributions (1)	Retirees, Beneficiaries, and Inactives (2)	Active Members Employer Financed Portion (3)	Actuarial Value of Assets	Portion of Liabilities Covered by Assets (1)	(2)	(3)
2012	$249,903,000	$955,399,000	$387,436,000	$1,155,495,000	100%	95%	0%
2013	272,347,000	1,001,953,000	385,987,000	1,205,265,000	100%	93%	0%
2014	281,672,000	1,058,156,000	384,142,000	1,277,546,000	100%	94%	0%
2015	292,731,000	1,129,399,000	376,576,000	1,312,905,000	100%	90%	0%
2017	306,276,000	1,266,557,000	477,748,000	1,337,983,000	100%	81%	0%
2018	316,337,000	1,311,949,000	508,099,000	1,365,013,000	100%	80%	0%
2019	326,524,000	1,356,615,000	509,754,000	1,378,824,000	100%	78%	0%
2020	334,253,000	1,414,441,000	516,959,000	1,417,961,000	100%	77%	0%

* The actuarial valuation date for years prior to 2017 was September 1.

ESTIMATED BENEFIT PAYMENTS*

Year End	Currently In-Pay	Currently Not-In-Pay	Total
2020	$129,067,000	$ 7,039,000	$136,106,000
2021	128,787,000	11,893,000	140,680,000
2022	128,297,000	16,734,000	145,031,000
2023	127,573,000	21,626,000	149,199,000
2024	126,650,000	26,756,000	153,406,000
2025	125,623,000	32,271,000	157,894,000
2026	124,427,000	38,478,000	162,905,000
2027	123,118,000	45,060,000	168,178,000
2028	121,742,000	51,705,000	173,447,000
2029	119,979,000	58,773,000	178,752,000
2030	118,016,000	66,588,000	184,604,000
2031	115,768,000	74,693,000	190,461,000
2032	113,311,000	83,249,000	196,560,000
2033	110,404,000	92,047,000	202,451,000
2034	107,352,000	101,532,000	208,884,000

*Amounts shown are the cash flows for current members only, based on the current benefit structure and assuming that all actuarial assumptions are met in each future year. To the extent that actual experience deviates from that expected, results will vary. Amounts are shown in future nominal dollars and have not been discounted to the valuation date.

RISK CONSIDERATIONS

Actuarial Standards of Practice are issued by the Actuarial Standards Board and are binding on credentialed actuaries practicing in the United States. These standards generally identify what the actuary should consider, document and disclose when performing an actuarial assignment. In September, 2017, Actuarial Standard of Practice Number 51, *Assessment and Disclosure of Risk in Measuring Pension Obligations*, (ASOP 51) was issued as final with application to measurement dates on or after November 1, 2018. This ASOP, which applies to funding valuations, actuarial projections, and actuarial cost studies of proposed plan changes, is first applicable for the January 1, 2019 actuarial valuation for the Omaha School Employees' Retirement System (System).

A typical retirement plan faces many different risks. The term "risk" is most commonly associated with an outcome with undesirable results. However, in the actuarial world, risk can be translated as uncertainty. The actuarial valuation process uses many actuarial assumptions to project how future contributions and investment returns will meet the cash flow needs for future benefit payments. Of course, we know that actual experience will not unfold exactly as anticipated by the assumptions and that uncertainty, whether favorable or unfavorable, creates risk. ASOP 51 defines risk as the potential of actual future measurements to deviate from expected results due to actual experience that is different than the actuarial assumptions.

The various risk factors for a given plan can have a significant impact – positive or negative – on the actuarial projection of liability and contribution rates.

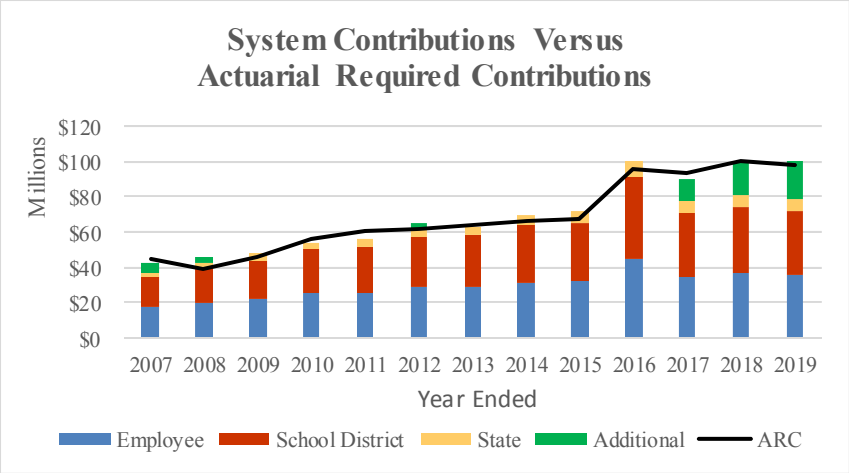
There are a number of risks inherent in the funding of any defined benefit plan. These include:

- economic risks, such as investment return and price inflation;
- demographic risks such as mortality, active membership size, payroll growth, aging population including impact of baby boomers, and retirement ages;
- contribution risk, i.e., the potential for contribution rates to be too high for the plan sponsor/employer to pay; and
- external risks such as the regulatory and political environment.

The last two risk are not required to be assessed by the actuary under ASOP 51.

In assessing the risks associated with funding a pension plan, it is important to realize that each retirement system is unique and may have different risks. This discussion is intended to identify and disclose the more significant risks to the funding of OSERS.

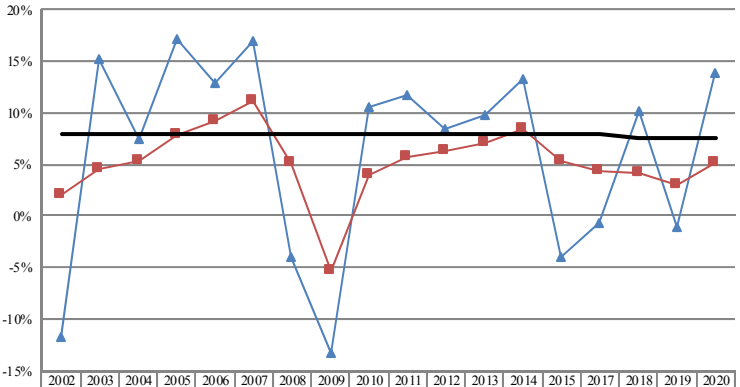
The biggest risk to any retirement system is the inability to pay benefits when they are due. That risk is minimized by the accumulation of assets in the System's trust. There is generally a direct correlation between healthy, well-funded retirement plans and consistent contributions equal to the full actuarial contribution each year. As the following graph illustrates, the School District has contributed at least the full actuarial required contribution in eight of the past thirteen years and has contributed an amount very close to the actuarial contribution in the other years.



Current state statutes require the School District to contribute any shortfall between the actuarial required contribution rate and the statutory contributions by members, the State of Nebraska and the School District on or before August 31. As a result, the full actuarial contribution rate can be expected to be contributed in future years and the funded status of OSERS should improve over time, if actuarial assumptions are met.

The System's funding policy, as modified in 2019, amortizes each amortization layer, including the legacy UAAL, over a closed 30-year period, with payments calculated as a level-percent of pay. This is a relatively long amortization period and will thus tend to improve the System's funded status relatively slowly. The payment pattern which develops a payment schedule that is level as a percent of payroll is the most common method used by public plans, but it is less conservative than the level-dollar amortization method because the dollar amount of the unfunded actuarial accrued liability increases for many years before finally starting to decline, particularly over long periods like 30 years even if all assumptions are met. In addition, amortization as a level percent of pay requires the use of an assumption regarding the growth of covered payroll in future years (currently 3.25% per year). This introduces another possible source of variation between actual and expected experience, thus increasing the funding risk for the System. If actual payroll does not increase as assumed, which could be due to a decline in the number of active members or actual salary increases that are less than expected, the UAAL contribution rate will increase. The dollar payment on the UAAL is the same, but the higher UAAL contribution rate ultimately pushes more of the UAAL funding to the District's additional contribution.

Perhaps the most significant risk factor for most Systems, including OSERS, is investment return because of the volatility of returns associated with the asset allocations. Historically, actual returns each year have varied significantly from the assumed rate of return (see following graph). This is to be expected, given the underlying capital market assumptions and the System's asset allocation and standard deviation, but it does create a high degree of uncertainty or risk. The compound rate of return over this time period was about 5.8%, but the range of returns varied from +17% to -13%. When actual investment returns are lower than the assumed rate of return, there is an increasing trend in the actuarial contribution rate absent offsetting gains on liabilities or changes in actuarial methods. The investment experience of the last decade has been significantly lower than the assumption, resulting in a higher actuarial contribution rate.



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2017	2018	2019	2020
MVA	-11.7%	15.2%	7.5%	17.1%	12.9%	16.9%	-3.9%	-13.3%	10.5%	11.7%	8.3%	9.7%	13.3%	-4.1%	-0.7%	10.1%	-1.2%	13.8%
AVA	2.0%	4.6%	5.2%	7.9%	9.1%	11.2%	5.0%	-5.3%	4.0%	5.6%	6.2%	7.0%	8.5%	5.3%	4.4%	4.2%	2.9%	5.2%
Assumption	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	7.5%	7.5%	7.5%

The System is currently 63% funded using the actuarial value of assets and 58% funded on a market value basis. The low funded ratio has increased the actuarial required contribution rate and the School District now has an obligation to make an additional contribution of around 6% of covered payroll. As the District's obligation to make the additional contributions is statutory, some risk of unmanageable contribution levels exists. The risk associated with investment returns has the potential to create significant volatility in the amount of additional District contributions. Given the asset allocation of the portfolio and the associated volatility of returns in any one year, it would not be unexpected to have returns that are more than 10% lower than the assumed return of 7.50%. In that case, the District's additional contribution could increase significantly (around 0.50% of pay or $1.8 million in the first year alone) because the full impact of the "miss" on investments would flow through to the District's additional contribution rate.

A key demographic risk for all retirement systems, including OSERS, is improvements in mortality (longevity) greater than anticipated. While the actuarial assumptions reflect small, continuous improvements in mortality experience over time and these assumptions are refined in every experience study, the risk arises because there is a possibility of some sudden shift, perhaps from a significant medical breakthrough that could quickly increase liabilities. Likewise, there is some possibility of a significant public health crisis that could result in a significant number of additional deaths in a short time period, which would also be significant, although more easily absorbed. While either of these events could happen, it represents a relatively small probability and thus represents much less risk than the volatility associated with investment returns.

The following exhibits in this section summarize certain historical information that helps indicate how certain key risk metrics may have changed over time. Many of the changes are due to the maturing of the retirement plan.

As a retirement plan matures, the size of the market value of assets usually increases relative to the covered payroll of active members, on which the Plan is funded. The size of the plan assets relative to covered payroll, sometimes referred to as the asset volatility ratio, is an important indicator of the contribution risk for the plan. The higher this ratio, the more sensitive a plan's contribution rate is to investment return volatility. In other words, it will be harder to recover from investment losses with increased contributions (contribution rates will be higher).

OSERS' historical trends are somewhat different than those observed in most public plans. This is due both to the length of time the System has been in existence (since 1909) and the slow growth of assets over this period compared to payroll. The result is a stable or decreasing asset volatility ratio rather than an increasing trend which is more typical. As the System's funding improves over the long term, the asset volatility ratio is expected to increase.

Actuarial Valuation Date	Market Value of Assets	Actual Covered Payroll	Asset Volatility Ratio	Increase in ACR with a Return 10% Lower than Assumed*
9/1/2006	$978,431,000	$248,759,070	3.93	2.30%
9/1/2007	1,117,628,000	272,844,149	4.10	2.39%
9/1/2008	1,050,281,000	272,720,007	3.85	2.25%
9/1/2009	884,438,000	287,770,291	3.07	1.79%
9/1/2010	951,214,000	302,229,282	3.15	1.84%
9/1/2011	1,033,128,000	310,228,916	3.33	1.94%
9/1/2012	1,095,565,000	307,258,065	3.57	2.09%
9/1/2013	1,170,347,000	313,946,237	3.73	2.18%
9/1/2014	1,294,722,000	323,077,710	4.01	2.34%
9/1/2015	1,211,107,000	333,166,135	3.64	2.13%
1/1/2017	1,148,582,000	351,940,122	3.26	1.90%
1/1/2018	1,234,040,000	359,359,507	3.43	2.00%
1/1/2019	1,193,800,000	375,598,301	3.18	1.86%
1/1/2020	1,323,663,000	364,799,331	3.63	2.12%

Note: Years prior to the 9/1/2010 valuation were provided by the prior actuary.

* The impact of asset smoothing is not reflected in the increase in the Actuarial Contribution Rate (ACR). Current year assumptions and methods are used for all years shown. With asset smoothing, the first year impact on contributions would be about 25% of the amount shown.

The assets at January 1, 2020 are 363% of payroll, so underperforming the investment return assumption by 10.00% (i.e., earning -2.50% for one year) is equivalent to a loss of about 36.3% of payroll. The impact on the actuarial contribution rate would be 2.12% once the full amount of actuarial loss worked through the asset smoothing method. While the impact in the first year is mitigated by the asset smoothing method, this illustrates the contribution risk associated with volatile investment returns.

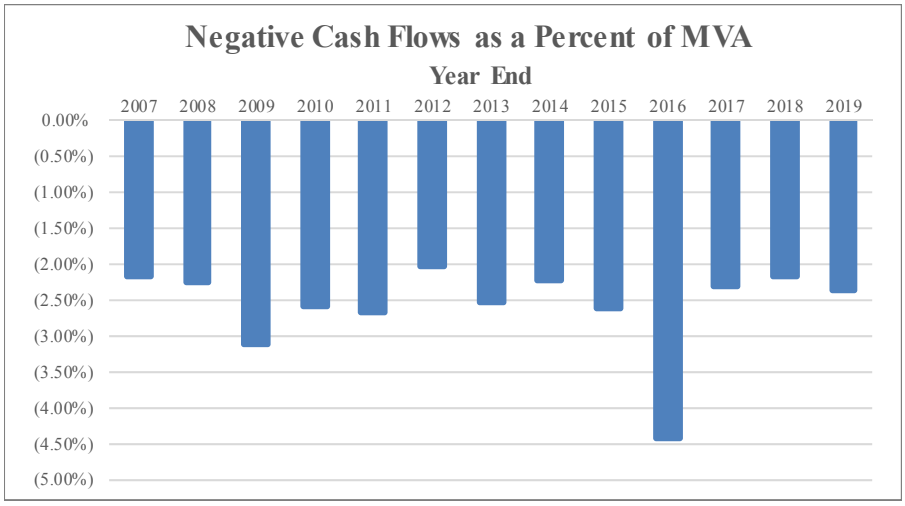
EXHIBIT 14 – HISTORICAL CASH FLOWS

Plans with negative cash flows will experience increased sensitivity to investment return volatility. Cash flows, for this purpose, are measured as contributions less benefit payments. If the System has negative cash flows and experiences returns below the assumed rate, there are fewer assets to be reinvested to earn the higher returns that typically follow. While any negative cash flow will produce such a result, it is typically a negative cash flow of more than 4% to 5% of MVA that may cause significant concerns. In general, large negative cash flow is not a major risk for OSERS at this time.

Year End	Market Value of Assets (MVA)	Contributions*	Benefit Payments	Net Cash Flow	Net Cash Flow as a Percent of MVA
8/31/2007	$1,117,628,000	$44,037,000	$68,286,000	($24,249,000)	(2.17%)
8/31/2008	1,050,281,000	49,099,000	72,912,000	(23,813,000)	(2.27%)
8/31/2009	884,438,000	49,943,000	77,503,000	(27,560,000)	(3.12%)
8/31/2010	951,214,000	56,616,000	81,260,000	(24,644,000)	(2.59%)
8/31/2011	1,033,128,000	58,242,000	86,015,000	(27,773,000)	(2.69%)
8/31/2012	1,095,565,000	68,139,000	90,621,000	(22,482,000)	(2.05%)
8/31/2013	1,170,347,000	65,248,000	95,107,000	(29,859,000)	(2.55%)
8/31/2014	1,294,722,000	72,072,000	100,810,000	(28,738,000)	(2.22%)
8/31/2015	1,211,107,000	75,065,000	106,735,000	(31,670,000)	(2.61%)
12/31/2016	1,148,582,000	101,826,000	152,808,000	(50,982,000)	(4.44%)
12/31/2017	1,234,040,000	92,397,000	121,005,000	(28,608,000)	(2.32%)
12/31/2018	1,193,800,000	101,704,000	127,578,000	(25,874,000)	(2.17%)
12/31/2019	1,323,663,000	102,468,000	133,824,000	(31,356,000)	(2.37%)

Note: Years prior to Year End 8/31/2010 were provided by the prior actuary.

** Contributions include additional revenue coming into the System such as Purchases of Service and State Service Annuity receipts.*



Like OSERS (which was created in its current form in 1951), most public sector retirement systems have been in operation for many years. As a result, they have aging plan populations, and in some cases declining active populations, resulting in an increasing ratio of retirees to active members and a growing percentage of retiree liability. With more of the total liability residing with retirees, investment volatility has a greater impact on the funding of the plan since it is more difficult to restore the system financially after losses occur when there is comparatively less payroll over which to spread costs. Because OSERS has been in existence for a very long time (prior systems dating back to 1909 were consolidated to create OSERS), there has been no significant change in the percent of liability attributable to retirees over the last 13 years. The ratio of retiree liability to covered payroll has increased over this time period, however, which indicates an increase in contribution risk.

Actuarial Valuation Date	Retiree Liability (a)	Total Actuarial Accrued Liability (b)	Retiree Percentage (a) / (b)	Covered Payroll (c)	Ratio (b) / (c)
9/1/2007	$725,838,000	$1,255,527,000	57.8%	$272,844,149	4.60
9/1/2008	783,518,000	1,346,999,000	58.2%	272,720,007	4.94
9/1/2009	818,000,000	1,410,318,000	58.0%	287,770,291	4.90
9/1/2010	850,325,000	1,467,850,000	57.9%	302,229,282	4.86
9/1/2011	874,656,000	1,516,284,000	57.7%	310,228,916	4.89
9/1/2012	935,442,000	1,592,738,000	58.7%	307,258,065	5.18
9/1/2013	978,397,000	1,660,287,000	58.9%	313,946,237	5.29
9/1/2014	1,028,802,000	1,723,970,000	59.7%	323,077,710	5.34
9/1/2015	1,099,161,000	1,798,706,000	61.1%	333,166,135	5.40
1/1/2017	1,230,588,000	2,050,581,000	60.0%	351,940,122	5.83
1/1/2018	1,274,528,000	2,136,385,000	59.7%	359,359,507	5.94
1/1/2019	1,311,452,000	2,192,893,000	59.8%	375,598,301	5.84
1/1/2020	1,364,109,000	2,265,653,000	60.2%	364,799,331	6.21

Note: Years prior to the 9/1/2010 valuation were provided by the prior actuary.

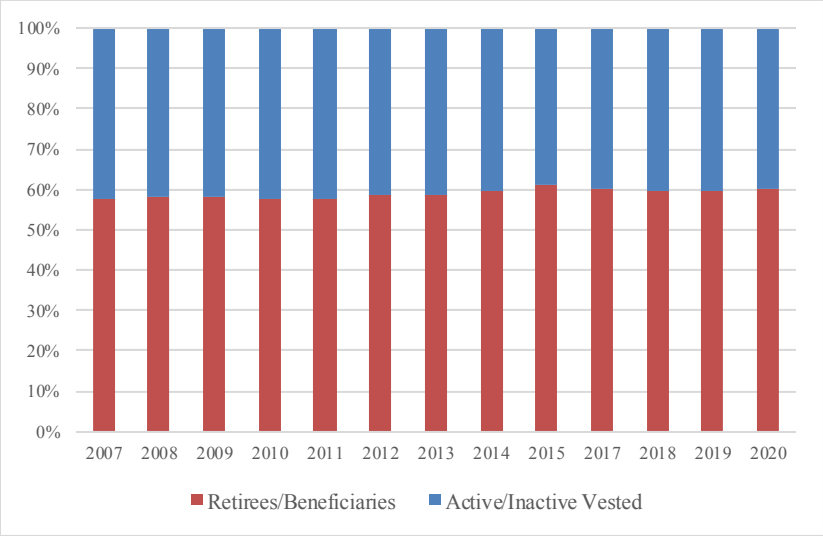


EXHIBIT 16 – COMPARISON OF VALUATION RESULTS UNDER ALTERNATE INVESTMENT RETURN ASSUMPTIONS

This exhibit is a sensitivity analysis that compares the key January 1, 2020 valuation results under the current investment return assumption and four (4) alternate investment return assumptions, both higher and lower than the current assumption. This information is intended to illustrate the impact of the investment return assumption on the funding of the System. Note that only the investment return assumption is changed for this purpose, as identified in the heading below. This may not result in a set of economic actuarial assumptions that complies with Actuarial Standard of Practice Number 27. The alternate return assumptions are only for purposes of identifying the impact of different investment return assumptions on the funding results. All other actuarial assumptions are unchanged for purposes of this analysis.

Investment Return Assumption	**7.00%**	**7.25%**	**7.50%**	**7.75%**	**8.00%**
Contributions					
Normal Cost Rate	14.52%	13.67%	12.88%	12.15%	11.47%
UAAL Contribution	15.75%	15.06%	14.37%	13.68%	12.98%
Total Actuarial Contribution Rate	30.27%	28.73%	27.25%	25.83%	24.45%
Statutory Contribution Rate	21.66%	21.66%	21.66%	21.66%	21.66%
Contribution Shortfall/(Margin)	8.61%	7.07%	5.59%	4.17%	2.79%
Additional District Contribution	$30,512,134	$25,064,426	$19,825,251	$14,794,867	$9,902,548
Actuarial Accrued Liability ($ in millions)	$2,402.2	$2,332.3	$2,265.7	$2,202.0	$2,141.2
Actuarial Value of Assets ($ in millions)	$1,418.0	$1,418.0	$1,418.0	$1,418.0	$1,418.0
Unfunded Actuarial Accrued Liability ($ in millions)	$984.3	$914.4	$847.7	$784.0	$723.2
Funded Ratio	59.0%	60.8%	62.6%	64.4%	66.2%

APPENDIX A

HISTORICAL BACKGROUND

Historical Background

Since 1909, the Omaha School District has maintained a retirement system for its teachers. Since then, systems covering other employees were added. In 1951, the Nebraska Legislature consolidated the existing systems into one new System. Amendments of significance in the Nebraska statutes and federal Social Security Act have occurred from time to time. These changes in order of their occurrence are outlined briefly below:

1951 - New System

Prior to 1951, three separate retirement systems existed. In 1951 the Nebraska Legislature repealed these three separate systems and created the present single System covering all employees. This act provided, however, that a member of a pre-existing system might elect to retain his benefit and contribution rights under one of the former systems in lieu of the new System benefits and contributions. The members who so elected then became known by the following titles for retirement purposes:

(1) Employees covered by the former Omaha Teachers Retirement System were known as "Teachers,"

(2) Employees covered by the former Non-Teaching Employee Retirement System were known as "Non-Teachers,"

(3) Employees covered by the former Cafeteria Employee Retirement System were known as "Cafeteria."

All other employees became members of the new System and received credit for membership service starting September 1, 1951. Benefits as well as contributions under the new System became directly related to a member's compensation by formula. The maximum covered annual compensation under the new System became $5,000, but the maximum for Teachers, Non-Teachers and Cafeteria remained $3,000.

1955 Amendments

On September 24, 1955, Omaha School employees voted to become participants in the federal Social Security program. All Social Security benefits are payable in addition to the System benefits. As a result of Social Security coverage, changes were made in the benefit and contribution formulas of the System effective August 31, 1955. In general, the changes reduced contributions and benefits to 60% of the rates formerly in effect. In addition, the maximum covered compensation was increased from $5,000 to $6,000 except for Teachers, Non-Teachers and Cafeteria which remained at $3,000.

The amount contributed by the School District was also reduced to 60% of the rates in effect prior to the change and the School District's contributions, matching the refunds paid upon the withdrawal or death of employees, were retained in the retirement fund rather than being returned to the School District.

1963 Amendments

Effective September 1, 1963, several changes were made in the new System. The limit on covered compensation for contributions and benefits of members was removed.

The service retirement annuity credit was increased in order to integrate with the modifications in federal Social Security between 1955 and 1963. The disability annuity for members was increased to 100% of the service retirement annuity accrued to date of disability and the restriction as to the number of years for which it was payable was removed. The offset in the benefit formula for the Nebraska State Service Annuity credit was placed on a year-to-year basis for all members, increasing the annuity credit for service after September 1, 1951 for active and retired alike.

The employees who were participating as Teachers, Non-Teachers and Cafeteria began to make contributions and receive benefit credits at the same rates as other members of the System. It should be noted that any employee who retained rights under a pre-existing system still receives credit in accordance with the provisions of the former system if this is more than the credit, after the State service annuity offset, would be under the 1963 amendments.

The contribution rate for employees was changed to integrate with the modifications in Social Security and was no longer subject to revision depending upon the degree of actuarial soundness of the System as had been provided in 1962. The School District became solely responsible for maintaining the solvency of the System on the basis of annual actuarial valuations. The School District again became entitled to refunds equal to the refunds paid upon withdrawal or death of employees.

The restriction prohibiting the crediting of interest on refunds to employees who withdraw from employment during the first ten years of service was removed. Thus, all employees who withdraw after one year or more of service receive interest on their contributions made since September 1, 1951.

1965 Amendments

Effective September 1, 1965, a pre-retirement survivor's annuity was added to the System for long-service employees. This change gave an employee with 25 or more years of service protection at death approximately equivalent in value to the vesting which already existed at termination of employment for an employee with the same period of service.

Effective January 1, 1966, the Social Security tax base was increased from $4,800 to $6,600 per year. This change became effective in the System's contribution and benefit formulas as of September 1, 1966.

1967 Amendments

The 77th Session of the Nebraska Legislature enacted LB 494 which amended the Nebraska School Retirement System, effective October 23, 1967. A major change was the increase in the State service annuity credit from $1.50 to $3.00 per month for each year of credited service after July 1, 1968 and the removal of the 35 year limitation on credited State service. For the purpose of determining the new State service annuity offset in calculating the net Omaha annuity, the additional $1.50 per month for each year of service after July 1, 1968 is not applicable, but removal of the 35 year limitation does apply. This means that the State service annuity offset is still determined on the basis of $1.50 per month for each year of service. The increase in the State service annuity offset by virtue of eliminating the 35 year limitation represents a lower cost to the Omaha System for those members having more than 35 years of State service by age 65.

Another change with regard to the State service annuity was the manner in which the funds are transferred from the State to the Omaha System to pay these annuities. For retirements occurring after the effective date of the amendments (October 23, 1967), the State transfers the commuted value (equivalent single sum) of the individual State service annuity to the Omaha System and then the payment of the monthly annuity to the retired member is the School District's responsibility.

In 1967 the eligibility provisions for the pre-retirement survivors' annuity and the vested retirement rights were changed, reducing the service required from 25 years to 20 years and thereby granting these options to a larger number of employees.

Effective January 1, 1968, the federal Social Security taxable wage base was increased from $6,600 to $7,800 per year. This change became effective in the System's contribution and benefit formulas as of September 1, 1968.

1969 Amendments

The 80th Session of the Nebraska Legislature enacted LB 530 which amended the System effective August 11, 1969. The provisions of this bill improved the benefit structure of the System in two ways. The membership annuity credits (credits after 9/1/51) were increased approximately 10% and the Social Security wage base was "frozen" at the $7,800 level for purposes of calculating benefit credits and employee contributions.

By freezing the Social Security base, benefit credits and employee contributions for service after September 1, 1969 will not be reduced by virtue of future increases in the Social Security wage base. The System benefits will remain integrated with the Social Security program at the level provided by the $7,800 base.

1972 Amendments

During 1972, the Nebraska Legislature enacted LB 1116 which amended the System. These amendments were to become effective for retirements occurring on or after September 1, 1972. The provisions of this bill improved the benefit structure of the System and liberalized the eligibility condition for qualification upon termination for the deferred vested retirement benefit.

The benefits of the System were improved by increasing the membership annuity credits (credits after 9/1/51) by approximately 20% over those in existence on September 1, 1971.

In order to be eligible upon resignation to elect a deferred vested service annuity, the years of creditable service was reduced from 20 years to 15 years.

1973 Amendments

The 1973 Session of the Nebraska Legislature enacted LB 445 which created increases in the State service annuity of the Nebraska School Retirement System. LB 445 provides for (a) a State service annuity credit of $3.00 per month for each year of creditable service for all emeritus members and for all full time school employees who retire on or after July 1, 1973 and (b) for increases in the State service annuity for members who retired prior to July 1, 1973 based upon the difference between the Consumers Price Index on the date of retirement and July 1, 1973.

1976 Amendments

The 1976 Session of the Nebraska Legislature enacted LB 994 which increased the membership annuity credits (credits after 9/1/51) by 20%.
The members' contributions were increased to 2.90% of compensation up to $7,800 per year plus 5.25% of salary in excess of that amount.

1979 Amendments

The 1979 Session of the Nebraska Legislature changed the mandatory retirement date from age 65 to age 70. Late retirement benefits are actuarially increased from what would have been payable at the normal retirement date.

1982 Amendments

The 1982 Session of the Nebraska Legislature enacted LB 131 which made considerable changes to the System. LB 131 was approved by the Governor on February 19, 1982.

The most major revision in the System was to change the previous primary benefit formula from the step rate formula based on each year of salary to a final average compensation formula. The primary benefit formula became 1.5% of final average compensation for each year of creditable service not in excess of 30. Final average compensation was then defined to be 1/36 of the total compensation received during the three fiscal years of highest compensation. Also, the creditable service not in excess of 30 years was allowed to continue to accrue after the fiscal year in which the employee attains age 65. In addition, the State service annuity offset of $1.50 per year of creditable service was removed with respect to the final average compensation formula. The prior provisions of the System were retained as a minimum benefit, recognizing creditable service for those provisions through the earlier of the date of retirement or August 31, 1983.

Another major revision in the System was to change the step rate formula for employee contributions to a level 4.90% of compensation. In addition, the provision entitling the School District to receive refunds of its own contributions equal to the contributions refunded to employees was removed.

The early retirement date was liberalized. Previously an employee needed to have either 35 years of creditable service or to have attained age 60 with 25 years of creditable service. Now an employee can retire early if he has at least 10 years of creditable service and has attained age 55.

The actuarial equivalent of the annuity payable at the end of the fiscal year in which the employee attains age 65 was changed in the following two ways:

1. For employees retiring before age 62, the monthly formula retirement annuity is a reduced amount based on the actuarial equivalent of the annuity deferred to the employee's 62nd birthday. If retirement is at age 62 or later, there is no actuarial reduction. Previously there was an actuarial reduction, based on the benefit deferred to age 65, for any retirement before age 65.

2. For employees retiring on or after age 65, the monthly formula retirement annuity is to be based on total years of creditable service (not in excess of 30) and the employee's entire compensation history at date of retirement. Consequently, for retirements after the fiscal year in which the employee attains age 65 there is no longer an actuarial increase from the benefit available at the normal retirement date.

The eligibility provision to elect a deferred vested service annuity upon resignation was changed from 15 years of creditable service to 10 years.

1983 Amendments

The 1983 Session of the Nebraska Legislature enacted LB 488 which created benefit increases effective September 1, 1983 for members having retired before February 21, 1982. The amount of benefit increase was limited to the smaller of:

1. The percentage increase in the Consumer Price Index for all Urban consumers from the effective date of retirement to June 30, 1983 applied to benefits being paid and

2. The sum of $1.50 per month for each year of creditable service and $1.00 per month for each completed year of retirement from the effective date of retirement to June 30, 1983, actuarially adjusted for joint and survivor elections.

1985 Amendments

The 1985 Session of the Nebraska Legislature enacted LB 215 which removed the 30 year limit on years of service used in the benefit formula, provided for vesting after five years of service rather than ten years, and reduced the eligibility period for disability from ten years of service to five years of service.

LP215 also provided for the employer "pick up" of employee contribution under IRC 414(h), thereby allowing employee contributions to be made on a pre-tax basis.

Unisex factors are now being used for determining early retirement reductions and actuarial equivalents for joint and survivor optional benefits.

1986 Amendments

The 1985 Session of the Nebraska Legislature enacted LB 1048 which granted increases in benefits for most retirees to reflect cost-of-living increases over the last several years. The increases ranged up to a maximum of 10.5%.

1987 Amendments

A "window of opportunity" was created for the buy-in or buy-back of service credits for participants qualifying for that right.

1989 Amendments

LB 237 was enacted by the 1989 Session of the Nebraska Legislature and provided: annual benefit accruals of 1.65% of final average compensation (up from 1.50%), unreduced benefits if a member retires with 35 or more years of service, a five year certain and life thereafter annuity as the normal form of benefit (instead of just a life annuity), employee contributions of 5.8% of pay (up from 4.9%), and increased benefits to retirees (the increases ranged up to 9.0%). There were some other changes as a result of this bill, but none that had a direct actuarial cost impact.

1992 Amendments

The 1992 Session of the Nebraska Legislature enacted LB 1001 which increased annual benefit accruals from 1.65% of final average compensation to 1.70%, and increased benefits to retirees (3% increase per year of retirement, not exceeding 9% total increase), a change in the preretirement joint and survivor option to allow it to become effective automatically after 20 years of service, and allowed employees to "buy-in" their time with other public school systems by means of a tax-deferred rollover of their refund from that System.

1995 Amendments

The 1995 Session of the Nebraska Legislature enacted LB 505 which increased annual benefit accruals from 1.70% to 1.80% of final average compensation. It also provided for unreduced retirement benefits when the sum of age and service equals or exceeds 85 (still maintaining the age 55 minimum), and reduced early retirement reductions to .25% per month prior to age 62. Early retirement at 84, 83, or 82 points is also allowed with a maximum reduction of 3%, 6% and 9% respectively. Employee contributions were increased to 6.3% of pay. The bill also provided for a one time increase to current retirees of 3% per year since retirement (not to exceed 9%), or if larger, 90% restoration of the purchasing power of their original pension. There are other changes resulting from this bill, which are not included since they did not have a direct actuarial impact. One change with no actuarial impact but worth noting is the provision for employer "pick up" of employee contributions to the System used to buy in outside service, pursuant to Section 414(h) of the Internal Revenue Code.

1998 Amendments

The 1998 Session of the Nebraska Legislature enacted LB 497 which increased annual benefit accruals from 1.80% to 1.85% of final average compensation. The bill also provided for a one time increase to current retirees of 3% per year since retirement (not to exceed 9%) and provides an annual automatic cost of living adjustment, not greater than 1.5%, beginning January 1, 2000.

2000 Amendments and Cost of Living Adjustment

The 2000 session of the Nebraska Legislature enacted LB 155 which increased accruals from 1.85% to 2.00% of final average compensation.

Pursuant to LB 497, the OSERS Board and the Omaha School District Board authorized a 1.5% discretionary COLA beginning January 1, 2000 in addition to the automatic COLA.

2001 Amendments and Cost of Living Adjustment

The 2001 session of the Nebraska Legislature enacted LB 711 which provided that certain members who previously left employment due to pregnancy could purchase their "lost" service. It also provided a post-retirement supplemental benefit to assist with medical costs. The supplement commences 10 years after retirement, beginning at $10 per month for each year retired and increasing by $10 each year to a maximum of $250 per month. For retirees with less than twenty years of service, the benefit is reduced proportionately.

Additionally, the OSERS Board and the Omaha School Board authorized a discretionary COLA to restore full purchasing power, beginning January 1, 2001, in addition to the automatic COLA.

2002 Cost of Living Adjustment

The automatic 1.5% COLA was granted beginning January 1, 2002.

2003 Cost of Living Adjustment

The automatic 1.5% COLA was granted beginning January 1, 2003.

2004 Cost of Living Adjustment

The automatic 1.5% COLA was granted beginning January 1, 2004.

2005 Cost of Living Adjustment

The automatic 1.5% COLA was granted beginning January 1, 2005.

2006 Cost of Living Adjustment

The automatic 1.5% COLA was granted beginning January 1, 2006.

2007 Amendment and Cost of Living Adjustment

The 2007 session of the Nebraska Legislature enacted Section 79-9, 113 which changed the employee contribution rate from 6.30% of compensation to 7.30% and provided for an employer contribution equal to 101% of the employee contribution rate.

The automatic 1.5% COLA was granted beginning January 1, 2007.

2008 Cost of Living Adjustment

The automatic 1.5% COLA was granted beginning January 1, 2008.

2009 Amendment and Cost of Living Adjustment

The 2009 session of the Nebraska Legislature enacted Legislative Bill 187 (LB 187), which increased the State's contribution from 0.7% to 1.0% of covered pay from July 1, 2009 to July 1, 2014. On July 1, 2014 the State's contribution returns to 0.7%. LB 187 also increased the employee contribution rate from 7.30% of compensation to 8.30%. The School District's contribution is equal to 101% of the employee contribution rate so the District's contribution rate increased from 7.373% of compensation to 8.383% as a result of the increase in the member contribution rate.

The automatic 1.5% COLA was granted beginning January 1, 2009.

2010 Amendment and Cost of Living Adjustment

The automatic 1.5% COLA was granted beginning January 1, 2010.

2011 Amendment and Cost of Living Adjustment

The 2011 session of the Nebraska Legislature enacted Legislative Bill 382 (LB 382), which increased the Member's contribution from 8.30% of compensation to 9.30%. The School District's contribution is equal to 101% of the employee contribution rate so the District's contribution rate increased from 8.383% of compensation to 9.393% as a result of the increase in the member contribution rate. LB 382 also extended the 1% of payroll contribution by the State from July 1, 2014 to July 1, 2017.

The automatic 1.5% COLA was granted beginning January 1, 2011.

2012 Cost of Living Adjustment

The automatic 1.5% COLA was granted beginning January 1, 2012.

2013 Amendments and Cost of Living Adjustment

The 2013 session of the Nebraska Legislature enacted Legislative Bill 553 (LB 553), which increased the Member contribution rate from 9.30% of pay to 9.78% of pay. The School District's contribution is equal to 101% of the employee contribution rate so the District's contribution rate increased from 9.393% of pay to 9.878% of pay as a result of the increase in the member contribution rate. LB 553 also ended the scheduled decrease in the State contribution rate and instead increased the State contribution from 1.0% of pay to 2.0% of pay, effective July 1, 2014. LB 553 also created a new benefit structure for members hired on or after July 1, 2013. For these members, annual cost of living adjustments will be the lesser of 1.0% or CPI, and the final average compensation is defined as 1/60 of the total compensation received during the five fiscal years of highest compensation.

The automatic 1.5% COLA was granted beginning January 1, 2013.

2014 Cost of Living Adjustment

The automatic 1.5% COLA was granted beginning January 1, 2014.

2015 Cost of Living Adjustment

The automatic 1.5% COLA was granted beginning January 1, 2015.

2016 Amendments and Cost of Living Adjustment

The 2016 session of the Nebraska Legislature enacted Legislative Bill 447 (LB 447), which created a new benefit structure for members hired on or after July 1, 2016. The changes result in the same benefit structure for new OSERS members as for new members of the Nebraska School Retirement System. These members will not receive the supplemental medical COLA offered to employees hired before July 1, 2016. Other changes for these employees include a revised early retirement benefit reduction schedule and different retirement eligibility requirements.

The automatic 1.5% COLA was granted beginning January 1, 2016.

2017 Cost of Living Adjustment

The automatic 1.5% COLA was granted beginning January 1, 2017.

2018 Amendments and Cost of Living Adjustment

The 2017 session of the Nebraska Legislature enacted Legislative Bill 415 (LB 415), which created a new benefit structure for members hired on or after July 1, 2018. The changes result in the same benefit structure for new OSERS members as for new members of the Nebraska School Retirement System. The changes for these employees include a revised early retirement benefit reduction schedule and different retirement eligibility requirements.

The 2018 session of the Nebraska Legislature enacted Legislative Bill 1005 (LB 1005), which also affects the benefit provisions for members hired on or after July 1, 2018. As a result of LB 1005, the Board has the authority to set the actuarial assumptions used to determine the benefit amounts payable under optional forms of payment for members hired on or after July 1, 2018.

The automatic 1.5% COLA was granted beginning January 1, 2018.

2019 Cost of Living Adjustment

The automatic 1.5% COLA for members hired before July 1, 2013 was granted beginning January 1, 2019.

2020 Cost of Living Adjustment

The automatic 1.5% COLA for members hired before July 1, 2013 was granted beginning January 1, 2020.

APPENDIX B

SUMMARY OF PLAN PROVISIONS

Contributions

Employee Contributions: Employees contribute 9.78% of compensation, effective September 1, 2013. Such contributions are payable each year while employed. Contributions accumulated with interest are refundable at resignation unless the vested retirement benefit has been elected and at death unless the pre-retirement survivor's benefit has been elected.

State Contribution: The State contributes annually an amount equal to 2.0% of the members' compensation, effective July 1, 2014.

School District Contribution: The School District contributes the greater of (a) one hundred and one percent of the contributions by the employees or (b) such amount as may be necessary to maintain the solvency of the system, as determined annually by the board upon recommendation of the actuary engaged by the trustees.

Interest Credited on Refunds: Contributions made prior to September 1, 1951 and refunded at withdrawal or death are not credited with interest. Contributions after September 1, 1951 are credited with interest beginning September 1, 2016 at the rate equal to the daily treasury yield curve for one-year treasury securities, as published by the secretary of the treasury of the United States, that applies on September 1 of each year.

Benefits

General: The System provides annuities upon retirement from service or disability and upon death to designated survivors.

The service retirement formula is 2.0% per year of creditable service times the final average compensation.

Final average compensation is defined as 1/36 of the total compensation received during the three fiscal years of highest compensation for those who became members before July 1, 2013. For those who became members on or after July 1, 2013, final average compensation is defined as 1/60 of the total compensation received during the five fiscal years of highest compensation.

Annuities are paid for life, with 5 years guaranteed. Optional forms of payment are available.

The disability annuity, the pre-retirement survivor annuity and the vested retirement right are summarized in the following sections.

Benefits in pay status are subject to an annual cost of living adjustment equal to the lesser of 1.5% or CPI for those who became members before July 1, 2013. There is an additional COLA if surplus assets exist beginning January 1, 2000. Effective October 3, 2001, a medical cost of living adjustment is payable to retired members. Such amount will commence after the 10^{th} year of retirement and shall be an amount equal to $10 per month for each year retired (subject to a maximum of $250 per month), prorated for years of service less than 20. For those who became members on or after July 1, 2013, the annual cost of living adjustment is capped at 1.0%.

Those who became members on or after July 1, 2016 are not eligible to receive the medical COLA benefit.

Retirement Annuities: An employee who becomes a member before July 1, 2016 may begin receiving a retirement benefit once the employee has left the employment of the School district, selected a retirement date and

(a) has completed 35 years of creditable service,
or
(b) has 10 years of creditable service (with at least five of those years being creditable Omaha service) and attained age 55,
or
(c) remained employed until his or her 65th birthday and completed at least five years of creditable Omaha service.

If an employee who was a member before July 1, 2016 begins receiving an annuity at or after age 62, or when age and service equals or exceeds 85, there is no adjustment for the retirement annuity. If, however, such employee begins receiving an annuity before age 62, the annuity shall be reduced by 0.25% for each month prior to age 62, but if 84 points have been achieved then the reduction is limited to 3%, if 83 points, 6%, and 82 points, 9%.

An employee who became a member on or after July 1, 2016 and before July 1, 2018 may begin receiving a retirement benefit once the employee has left the employment of the School district, selected a retirement date and

(a) has attained age 55 and the sum of the member's attained age and creditable service totals 85,
or
(b) has 5 years of creditable service and attained age 60.

For employees who became members on or after July 1, 2016 and before July 1, 2018, if an employee begins receiving an annuity before age 65, such annuity shall be reduced by 0.25% for each month prior to age 65. If, however, the employee has achieved 85 points and is at least age 55, then there is no reduction to the annuity.

An employee hired on or after July 1, 2018 may begin receiving a retirement benefit once the employee has left the employment of the School district, selected a retirement date and

(a) has attained age 60 and the sum of the member's attained age and creditable service totals 85,
or
(b) has 5 years of creditable service and attained age 60.

For employees who were hired on or after July 1, 2018, if an employee begins receiving an annuity before age 65, such annuity shall be reduced by 0.25% for each month prior to age 65. If, however, the employee has achieved 85 points and is at least age 60, then there is no reduction to the annuity.

Disability Retirement Annuities: Each employee who becomes totally disabled and who has completed five or more years of creditable Omaha service is entitled to a disability retirement annuity equal to the amount of service annuity earned to date of disability. Alternatively, the employee may defer the disability retirement and accrue service and compensation increases in the interim. The disability retirement annuity is payable each month until disability ceases, if before unreduced retirement, or death.

Pre-Retirement Survivor Annuities: Upon the death of a member who has completed 20 or more years of creditable service and who has not retired, a pre-retirement survivor annuity shall be paid to the member's primary beneficiary. The survivor must be a spouse or one other person whose attained age in the calendar year of the member's death is no more than 10 years less than the attained age of the member in such calendar year. If there is no beneficiary form on file with OSERS, the member's spouse at the time of death is deemed to be the beneficiary and eligible for a pre-retirement survivor annuity. The survivor annuity is the actuarial equivalent of the member's annuity accrued to the date of death, determined on the basis of the member's and beneficiary's attained ages on said date. The survivor annuity is payable in lieu of a refund of the member's accumulated contributions. However, a member may elect out of the survivor annuity and specify that such a refund be paid in lieu of the annuity. An election out of the pre-retirement survivor annuity is entirely independent of the election of a joint and survivor option at retirement. Within 60 days after the member's death, the beneficiary may request a refund of the member's accumulated contributions instead of the annuity; provided, however, that the member may direct the System to pay only an annuity.

If the member (not retired) has less than 20 years of creditable service, or the beneficiary does not meet the requirements stated above, a refund of the member's accumulated contributions shall be paid.

Vested Retirement Right: Each employee who has completed five or more years of creditable Omaha service is eligible upon resignation to elect a deferred vested benefit, first payable as an unreduced amount at age 65, in lieu of a refund of his accumulated contributions. With ten or more years of total creditable service (including at least five years of creditable Omaha service), the deferred vested benefit could commence, unreduced, at age 62 for employees who became members before July 1, 2016. If benefits start before age 62 (but not earlier than attained age 55), the benefit shall then be reduced as described above.

For employees who became members on or after July 1, 2016 and before July 1, 2018, the deferred vested benefit could commence, unreduced, at age 65. If benefits start before age 65 (but not earlier than attained age 55), the benefit shall then be reduced as described above.

For employees who were hired on or after July 1, 2018, the deferred vested benefit could commence, unreduced, at age 65. If benefits start before age 65 (but not earlier than attained age 60), the benefit shall then be reduced as described above.

APPENDIX C

ACTUARIAL ASSUMPTIONS AND METHODS

The valuation assumptions and methods used in conducting the current actuarial valuation are as follows:

Actuarial Assumptions

Investment Return Assumption: 7.50% per annum, compounded annually, net of expenses.

Mortality Rates: RP-2014 Mortality Table for males, set forward one year.
RP-2014 Mortality Table for females, set back one year.

Future mortality rates are projected on a generational basis using Scale MP-2016, which reflects the expectation that mortality rates will decline over time.

Disabled retirees use the RP-2014 Disabled Retiree Mortality Table, without generational improvement.

Disability: None assumed.

Termination of Employment: (prior to retirement eligibility) Illustrative rates of termination are as follows:

Certificated:

	Percent Terminating
Duration	Rate
1	11.25%
5	8.00
10	4.50
15	2.25
20	1.00
25	1.00

Classified:

	Percent Terminating	
Duration	Male	Female
1	11.00%	15.00%
5	6.00	9.00
10	2.40	4.00
15	1.00	1.75
20	1.00	1.00
25	1.00	1.00

Retirement Rates:

Early retirement rates are assumed to occur according to the schedule illustrated below:

Became members before July 1, 2016

Certificated:		Classified:	
Age	Early	Age	Early
55	10%	55	3%
56	6	56	3
57	6	57	3
58	6	58	3
59	8	59	3
60	12	60	5
61	12	61	10

Became members on or after July 1, 2016

Certificated:		Classified:	
Age	Early	Age	Early
60	12%	60	5%
61	12	61	10
62	12	62	10
63	12	63	10
64	12	64	10

Unreduced retirement rates are assumed to occur according to the schedule illustrated below:

Became members before July 1, 2018

Certificated:

Age	1st Year Eligible	Ultimate
55	60%	
56	50	35%
57	45	35
58	45	35
59	45	25
60	35	25
61	25	25
62	25	25
63	25	25
64	30	30
65	35	35
66	35	35
67	35	35
68	35	35
69	100	35
70	100	100

Classified:

Age	1st Year Eligible	Ultimate
55	20%	
56	10	12%
57	10	12
58	10	12
59	15	12
60	15	12
61	15	20
62	20	20
63	20	20
64	20	20
65	25	35
66	20	23
67	20	23
68	20	23
69	20	23
70	100	100

Members hired on or after July 1, 2018

Certificated:

Age	1st Year Eligible	Ultimate
60	65%	
61	25	25%
62	25	25
63	25	25
64	30	30
65	35	35
66	35	35
67	35	35
68	35	35
69	100	35
70	100	100

Classified:

Age	1st Year Eligible	Ultimate
60	40%	
61	15	20%
62	20	20
63	20	20
64	20	20
65	25	35
66	20	23
67	20	23
68	20	23
69	20	23
70	100	100

Deferred vested members are assumed to retire at first unreduced retirement age.

Salary Scale:

Salaries are assumed to increase according to the schedule illustrated below:

	Annual Salary Increase	
Duration	Certificated	Classified
0	5.75%	6.25%
1	5.75	5.75
2	5.75	5.25
3	5.75	5.00
4-6	5.75	4.75
7-11	5.75	4.25
12-14	5.75	3.75
15-21	5.25	3.75
22+	4.25	3.75

Note: Salaries are assumed to increase by 2.0% for members who have not yet finalized their contract negotiations as of the valuation date.

Pre-Retirement Survivor Annuity:

It is assumed that females are three years younger than males, and that all members are married.

Probability of Electing a Refund:

The proportion of terminating vested members electing a refund of member contributions:

20% for Certificated members
40% for Classified members

Assumed Interest Rate Credited on Employee Contributions:

2.75% compounded annually.

Inflation (CPI):

2.75% compounded annually.

Total Payroll Growth:

3.25% compounded annually.

Decrement Timing:

Middle of year

Cost of Living Adjustments:

1.5% if became member before 7/1/2013
1.0% if became member on or after 7/1/2013

Inactive Vested Load

A 5% load on deferred monthly benefits is included to reflect that some inactive vested members' account balances are greater than the present value of their deferred benefit.

Actuarial Cost Method

The actuarial cost method is a procedure for allocating the actuarial present value of pension plan benefits and expenses to time periods. The method used for the valuation is known as the individual entry-age actuarial cost method, and has the following characteristics.

(i) The annual normal costs for individual active member are sufficient to accumulate the value of the member's pension at time of retirement.
(ii) Each annual normal cost is a constant percentage of the member's year-by-year projected pensionable compensation.

The entry-age actuarial cost method allocates the actuarial present value of each member's projected benefits on a level basis over the member's pensionable compensation between the entry-age of the member and the assumed exit-ages.

The portion of the actuarial present value allocated to the valuation year is called the normal cost. The portion of the actuarial present value not provided for by the actuarial present value of future normal costs is called the actuarial accrued liability. Deducting accrued assets from the actuarial accrued liability determines the unfunded actuarial accrued liability (UAAL).

Asset Valuation Method

Assets are valued at expected value at the valuation date plus 25% of the difference between the market value and expected value. As a starting point for implementation of this asset valuation method, the actuarial value of assets as of September 1, 1996 was set equal to the market value. As of September 1, 2007, the actuarial value was again reset to market value. The smoothing method was again implemented in the 2008 valuation. Effective September 1, 2008, the actuarial value must fall within a corridor of 80% to 120% of market value.

UAAL Amortization Method

Effective with the January 1, 2019 valuation, OSERS amortizes the UAAL using a "layered" approach. Under this method, the UAAL is split into pieces; the first piece is amortized, as a level-percent of pay, over a closed 30-year period beginning with the January 1, 2019 valuation (so 29 years remain as of the January 1, 2020 valuation). All ensuing UAAL bases that result from future actuarial experience will be amortized, as a level-percent of pay, over a new 30-year closed period commencing on the respective valuation date.

APPENDIX D

MEMBERSHIP DATA

SUMMARY OF MEMBERSHIP DATA

	Active	Inactive Vesteds	Nonvested Terminations	Retirees*	Beneficiaries	Disabled Members	Total
Members on 1/1/2019	7,177	1,114	671	4,550	256	20	13,788
Terminated – vested	(178)	178	0	0	0	0	0
Terminated – refund due	(177)	0	177	0	0	0	0
Terminated – refunded	(295)	(53)	(97)	0	0	0	(445)
Retired	(217)	(25)	0	242	0	0	0
Disability retirement	(1)	(5)	0	0	0	6	0
Death	(7)	(2)	(2)	(106)	(6)	(2)	(125)
Payments ended	0	0	0	0	(10)	(1)	(11)
New beneficiaries	0	0	0	0	29	0	29
New Alternate Payees	0	0	0	0	0	0	0
New members	925	0	54	2	0	0	981
Rehires	139	(46)	(93)	0	0	0	0
Corrections/adjustments	0	2	(1)	0	0	0	1
Members on 1/1/2020	7,366	1,163	709	4,688	269	23	14,218

* Includes QDROs

HISTORICAL SUMMARY OF MEMBERS

The following table displays selected historical data that was used in the actuarial valuation for the System.

Valuation		Active Members						Number			
			Average								
Date January 1*	Total Count	Number	Age	Entry Age	Service	Annual Pay ($)	Pay Increase	Inactive Vested	Inactive Nonvested	Retired	Act/Ret Ratio
1998	8,204	5,680	44.2	33.7	10.5	28,912		330		2,194	2.59
1999	8,564	5,864	43.9	34.0	9.9	29,493	2.01%	386		2,314	2.53
2000	8,885	6,057	43.8	34.1	9.7	30,544	3.56%	380		2,448	2.47
2001	9,156	6,259	44.0	34.4	9.6	32,091	5.06%	368		2,529	2.47
2002	9,409	6,383	43.9	34.5	9.4	33,406	4.10%	384		2,642	2.42
2003	9,425	6,279	44.0	34.5	9.5	33,877	1.41%	385		2,761	2.27
2004	9,711	6,399	44.2	34.6	9.6	34,698	2.42%	473		2,839	2.25
2005	10,124	6,623	44.1	34.8	9.3	35,234	1.54%	485		3,016	2.20
2006	10,522	6,972	44.1	34.9	9.2	35,732	1.41%	442		3,108	2.24
2007	10,769	7,041	44.2	35.1	9.1	36,720	2.77%	483		3,245	2.17
2008	11,228	7,313	44.2	35.2	9.0	37,725	2.74%	515		3,400	2.15
2009	11,480	7,438	44.5	35.5	9.0	38,686	2.55%	553		3,489	2.13
2010	11,644	7,491	44.7	35.4	9.3	39,152	1.20%	566		3,587	2.09
2011	11,602	7,215	45.1	35.2	9.9	40,394	3.17%	680		3,707	1.95
2012	11,881	7,315	44.9	35.0	9.9	40,793	0.99%	723		3,843	1.90
2013	12,152	7,372	44.9	34.9	10.0	41,731	2.30%	813		3,967	1.86
2014	12,477	7,415	44.7	34.8	9.9	42,427	1.67%	937		4,125	1.80
2015	12,938	7,393	44.5	34.7	9.8	44,050	3.83%	984	210	4,351	1.70
2017	13,386	7,462	44.5	34.1	10.4	44,998	2.15%	1,035	347	4,542	1.64
2018	13,703	7,569	44.5	34.1	10.4	46,233	2.74%	1,043	413	4,678	1.62
2019	13,788	7,177	44.8	33.8	11.0	47,300	2.31%	1,114	671	4,826	1.49
2020	14,218	7,366	44.5	33.9	10.6	47,571	0.57%	1,163	709	4,980	1.48

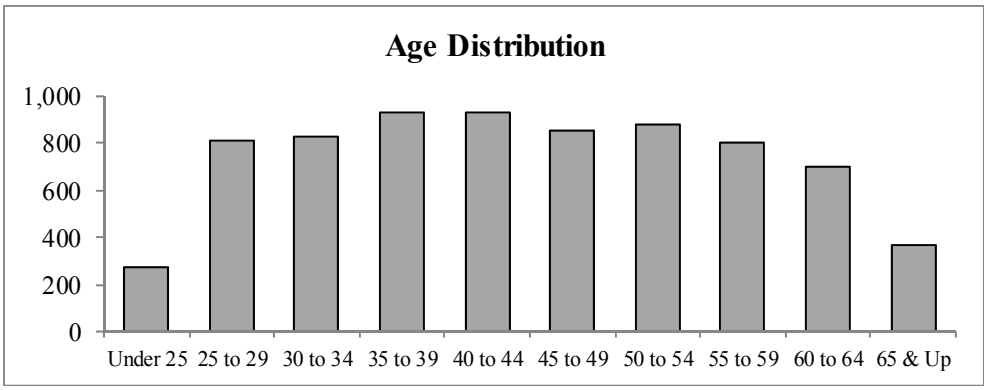
* Years prior to 2017 have a valuation date of September 1.

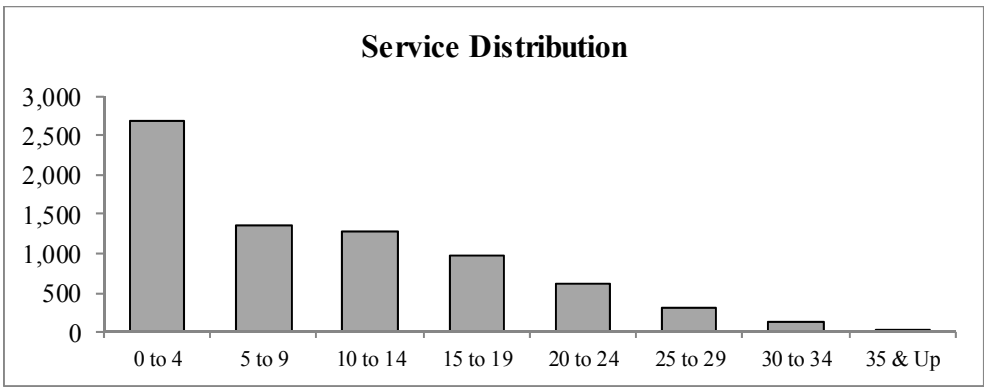
OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM
DISTRIBUTION OF ACTIVE MEMBERS

as of January 1, 2020

Total

	Service								
Age	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Up	Total
Under 25	277	0	0	0	0	0	0	0	277
25 to 29	708	105	0	0	0	0	0	0	813
30 to 34	410	360	58	0	0	0	0	0	828
35 to 39	281	222	363	60	0	0	0	0	926
40 to 44	242	138	211	295	43	0	0	0	929
45 to 49	192	121	150	160	199	26	0	0	848
50 to 54	157	141	147	138	145	120	29	0	877
55 to 59	173	103	145	138	101	70	58	10	798
60 to 64	157	122	126	111	95	56	22	11	700
65 & Up	87	54	77	64	34	33	12	9	370
Total	2,684	1,366	1,277	966	617	305	121	30	7,366





OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM
SALARY DISTRIBUTION OF ACTIVE MEMBERS

as of January 1, 2020

Total

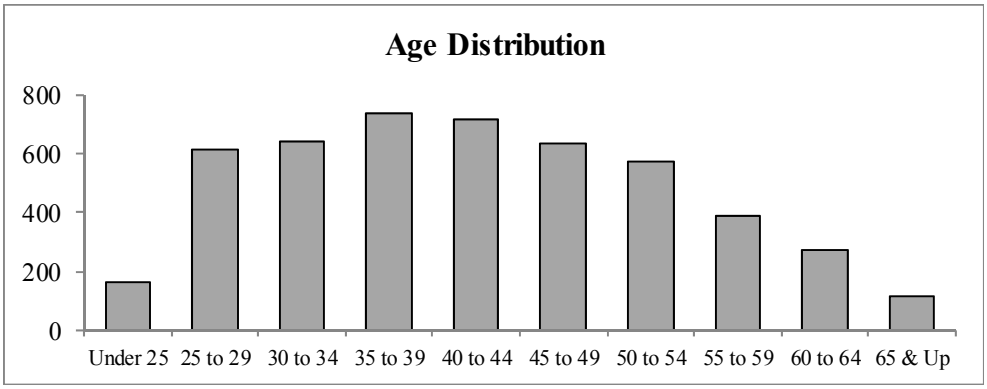
	Service								
Age	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Up	Total
Under 25	9,174,264	0	0	0	0	0	0	0	9,174,264
25 to 29	27,759,941	4,484,866	0	0	0	0	0	0	32,244,807
30 to 34	16,480,104	17,251,678	2,840,999	0	0	0	0	0	36,572,781
35 to 39	10,730,767	10,608,850	20,401,541	3,457,221	0	0	0	0	45,198,379
40 to 44	9,647,353	6,507,763	11,406,951	19,496,953	2,633,050	0	0	0	49,692,070
45 to 49	7,550,104	5,330,185	8,101,080	9,771,154	14,265,694	2,087,798	0	0	47,106,015
50 to 54	6,539,817	5,816,714	6,998,355	7,123,196	9,576,919	9,170,546	2,257,507	0	47,483,054
55 to 59	6,131,782	3,721,673	6,453,925	6,591,094	5,469,230	4,556,175	4,348,158	701,883	37,973,920
60 to 64	5,574,790	4,556,968	5,104,167	5,446,441	4,709,341	2,849,905	1,372,547	835,539	30,449,698
65 & Up	2,721,834	1,950,095	2,669,575	2,777,639	1,519,970	1,323,343	812,709	736,330	14,511,495
Total	102,310,756	60,228,792	63,976,593	54,663,698	38,174,204	19,987,767	8,790,921	2,273,752	350,406,483

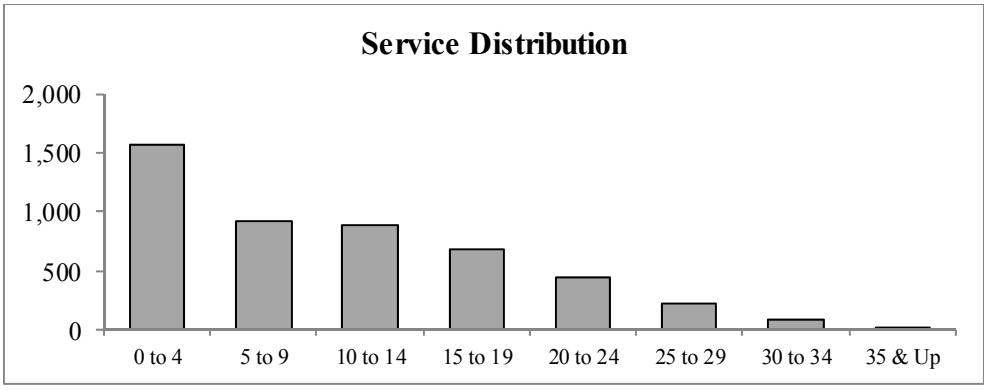
OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM
DISTRIBUTION OF ACTIVE MEMBERS

as of January 1, 2020

Certificated - Total

	Service								
Age	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Up	Total
Under 25	162	0	0	0	0	0	0	0	162
25 to 29	532	81	0	0	0	0	0	0	613
30 to 34	282	314	43	0	0	0	0	0	639
35 to 39	165	185	333	51	0	0	0	0	734
40 to 44	129	99	180	273	32	0	0	0	713
45 to 49	101	75	116	131	187	24	0	0	634
50 to 54	75	75	85	81	118	115	26	0	575
55 to 59	55	35	70	69	58	47	49	6	389
60 to 64	51	36	45	59	44	22	12	7	276
65 & Up	23	18	21	22	13	9	8	6	120
Total	1,575	918	893	686	452	217	95	19	4,855





OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM
SALARY DISTRIBUTION OF ACTIVE MEMBERS

as of January 1, 2020

Certificated - Total

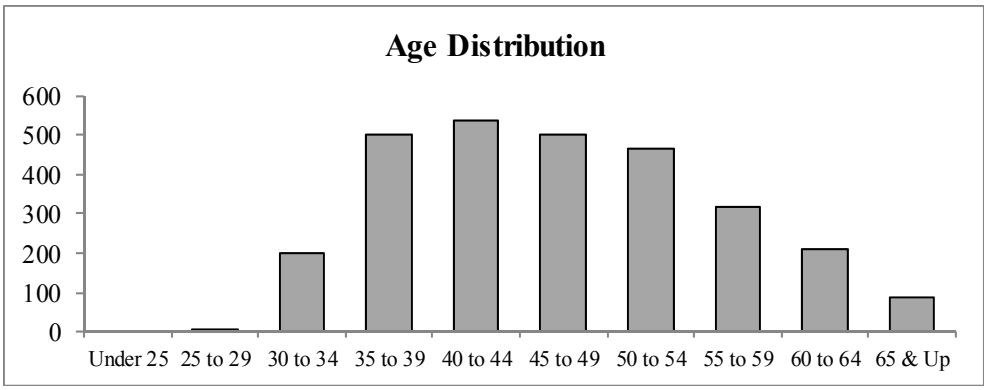
	Service								
Age	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Up	Total
Under 25	6,711,379	0	0	0	0	0	0	0	6,711,379
25 to 29	23,916,537	3,891,568	0	0	0	0	0	0	27,808,105
30 to 34	13,631,993	15,992,069	2,381,964	0	0	0	0	0	32,006,026
35 to 39	8,135,928	9,498,978	19,516,374	3,177,017	0	0	0	0	40,328,297
40 to 44	6,967,218	5,491,942	10,553,734	18,715,297	2,183,365	0	0	0	43,911,556
45 to 49	5,444,658	4,079,837	7,068,752	8,743,947	13,796,233	1,986,423	0	0	41,119,850
50 to 54	4,400,350	4,041,603	5,062,802	5,280,864	8,440,518	9,016,673	2,109,219	0	38,352,029
55 to 59	3,273,966	1,887,919	4,038,706	4,492,300	3,963,639	3,526,813	3,892,793	477,995	25,554,131
60 to 64	3,002,435	2,184,679	2,616,084	3,854,558	3,133,245	1,556,148	932,922	657,686	17,937,757
65 & Up	1,310,725	1,068,880	1,271,209	1,471,825	877,305	627,133	575,813	638,270	7,841,160
Total	76,795,189	48,137,475	52,509,625	45,735,808	32,394,305	16,713,190	7,510,747	1,773,951	281,570,290

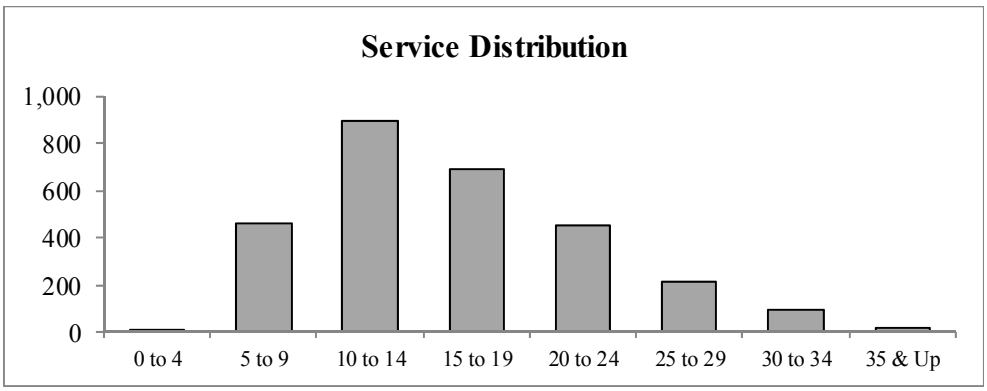
OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM
DISTRIBUTION OF ACTIVE MEMBERS

as of January 1, 2020

Certificated - Tier 1

	Service								
Age	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Up	Total
Under 25	0	0	0	0	0	0	0	0	0
25 to 29	0	3	0	0	0	0	0	0	3
30 to 34	3	156	43	0	0	0	0	0	202
35 to 39	1	115	333	51	0	0	0	0	500
40 to 44	0	51	180	273	32	0	0	0	536
45 to 49	0	42	116	131	187	24	0	0	500
50 to 54	0	40	85	81	118	115	26	0	465
55 to 59	0	20	70	69	58	47	49	6	319
60 to 64	0	23	45	59	44	22	12	7	212
65 & Up	0	7	21	22	13	9	8	6	86
Total	4	457	893	686	452	217	95	19	2,823



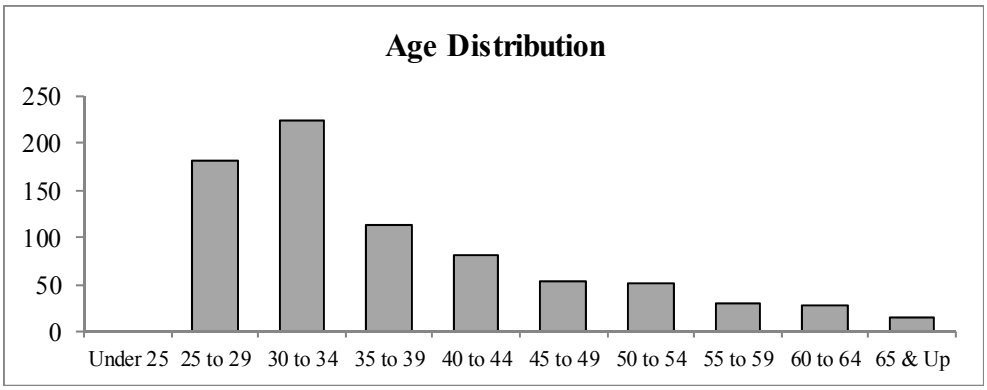


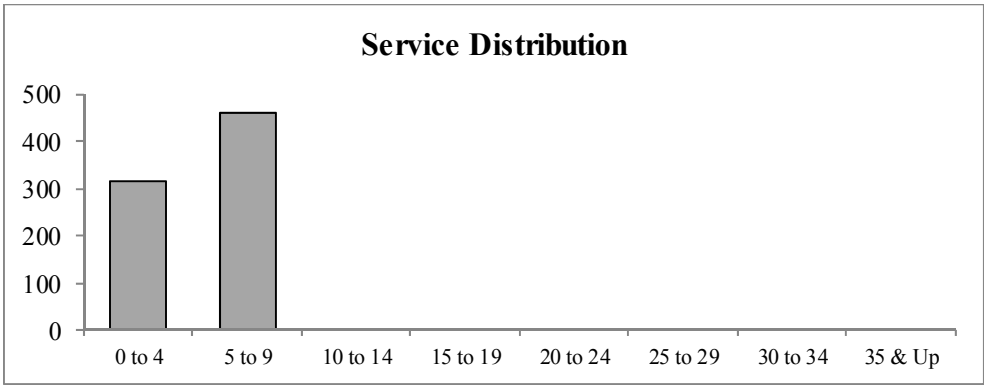
OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM
DISTRIBUTION OF ACTIVE MEMBERS

as of January 1, 2020

Certificated - Tier 2

	Service								
Age	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Up	Total
Under 25	0	0	0	0	0	0	0	0	0
25 to 29	103	78	0	0	0	0	0	0	181
30 to 34	66	158	0	0	0	0	0	0	224
35 to 39	42	70	0	0	0	0	0	0	112
40 to 44	34	48	0	0	0	0	0	0	82
45 to 49	20	33	0	0	0	0	0	0	53
50 to 54	16	35	0	0	0	0	0	0	51
55 to 59	15	15	0	0	0	0	0	0	30
60 to 64	16	13	0	0	0	0	0	0	29
65 & Up	5	11	0	0	0	0	0	0	16
Total	317	461	0	0	0	0	0	0	778



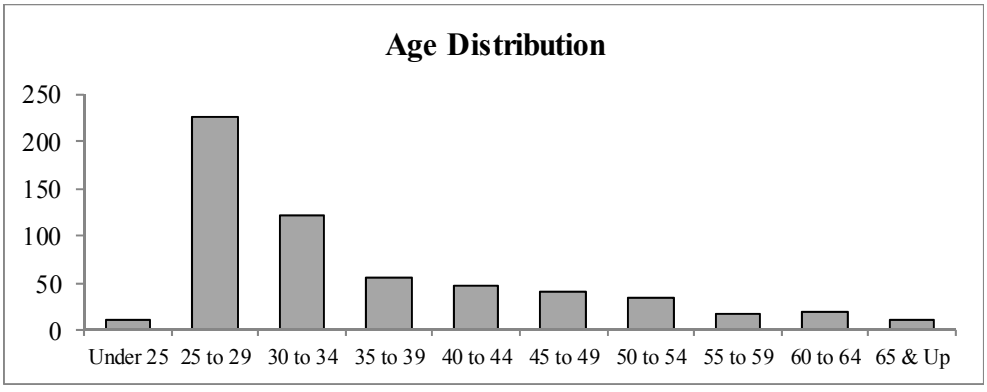


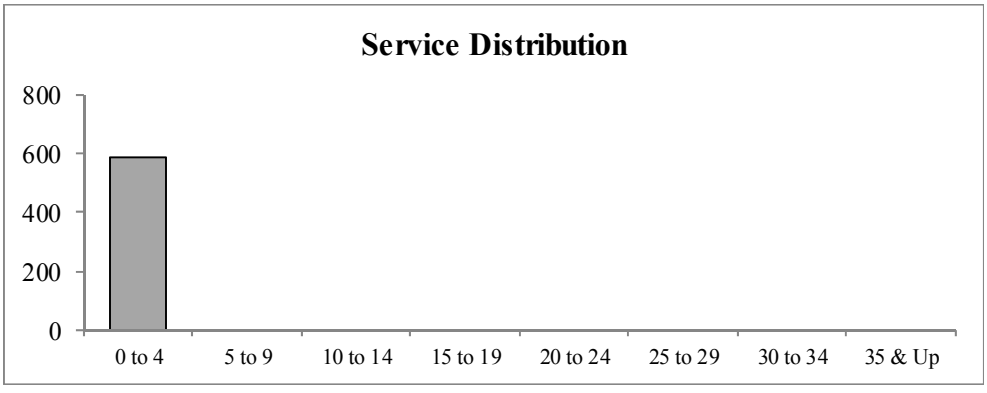
OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM
DISTRIBUTION OF ACTIVE MEMBERS

as of January 1, 2020

Certificated - Tier 3

	Service								
Age	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Up	Total
Under 25	10	0	0	0	0	0	0	0	10
25 to 29	226	0	0	0	0	0	0	0	226
30 to 34	121	0	0	0	0	0	0	0	121
35 to 39	56	0	0	0	0	0	0	0	56
40 to 44	47	0	0	0	0	0	0	0	47
45 to 49	41	0	0	0	0	0	0	0	41
50 to 54	35	0	0	0	0	0	0	0	35
55 to 59	18	0	0	0	0	0	0	0	18
60 to 64	19	0	0	0	0	0	0	0	19
65 & Up	11	0	0	0	0	0	0	0	11
Total	584	0	0	0	0	0	0	0	584



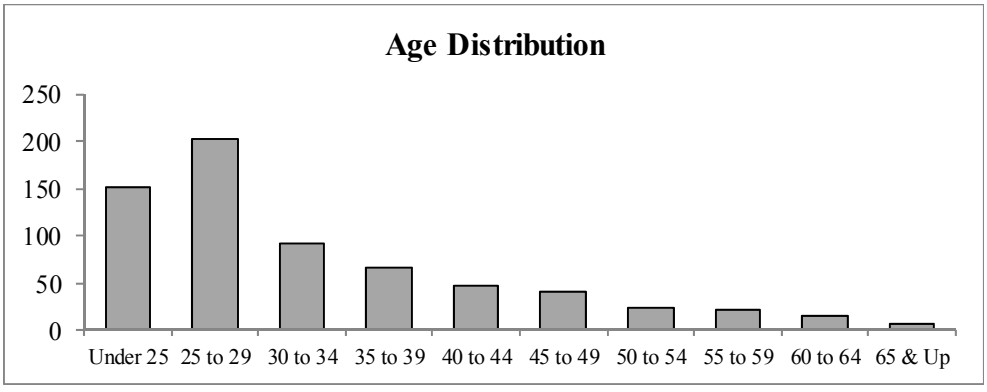


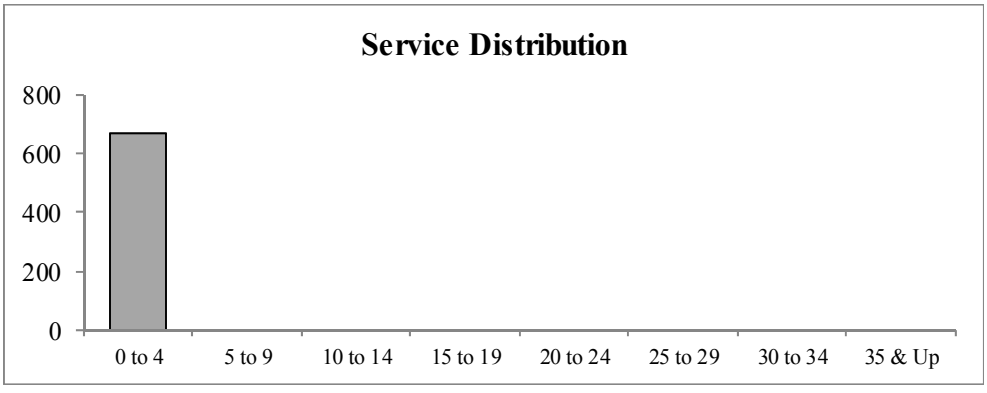
OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM
DISTRIBUTION OF ACTIVE MEMBERS

as of January 1, 2020

Certificated - Tier 4

	Service								
Age	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Up	Total
Under 25	152	0	0	0	0	0	0	0	152
25 to 29	203	0	0	0	0	0	0	0	203
30 to 34	92	0	0	0	0	0	0	0	92
35 to 39	66	0	0	0	0	0	0	0	66
40 to 44	48	0	0	0	0	0	0	0	48
45 to 49	40	0	0	0	0	0	0	0	40
50 to 54	24	0	0	0	0	0	0	0	24
55 to 59	22	0	0	0	0	0	0	0	22
60 to 64	16	0	0	0	0	0	0	0	16
65 & Up	7	0	0	0	0	0	0	0	7
Total	670	0	0	0	0	0	0	0	670



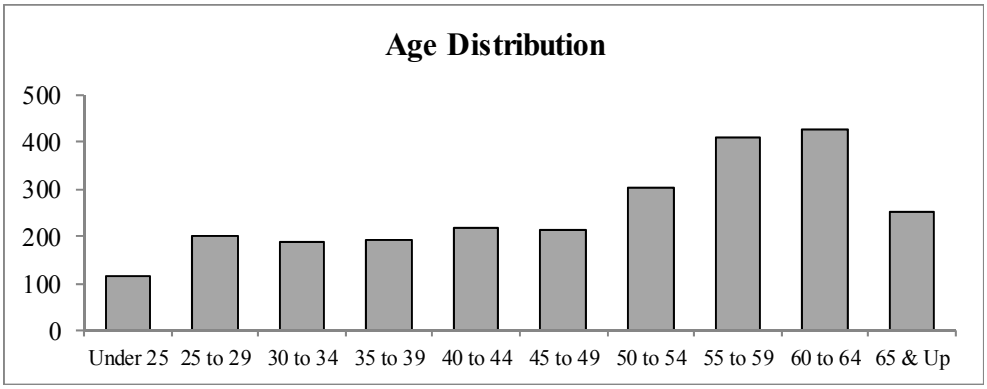


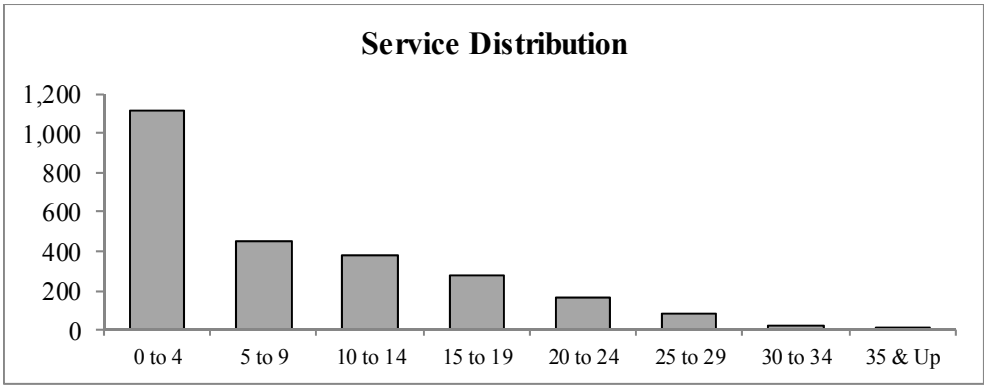
OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM
DISTRIBUTION OF ACTIVE MEMBERS

as of January 1, 2020

Classified - Total

	Service								
Age	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Up	Total
Under 25	115	0	0	0	0	0	0	0	115
25 to 29	176	24	0	0	0	0	0	0	200
30 to 34	128	46	15	0	0	0	0	0	189
35 to 39	116	37	30	9	0	0	0	0	192
40 to 44	113	39	31	22	11	0	0	0	216
45 to 49	91	46	34	29	12	2	0	0	214
50 to 54	82	66	62	57	27	5	3	0	302
55 to 59	118	68	75	69	43	23	9	4	409
60 to 64	106	86	81	52	51	34	10	4	424
65 & Up	64	36	56	42	21	24	4	3	250
Total	1,109	448	384	280	165	88	26	11	2,511





OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM
SALARY DISTRIBUTION OF ACTIVE MEMBERS

as of January 1, 2020

Classified - Total

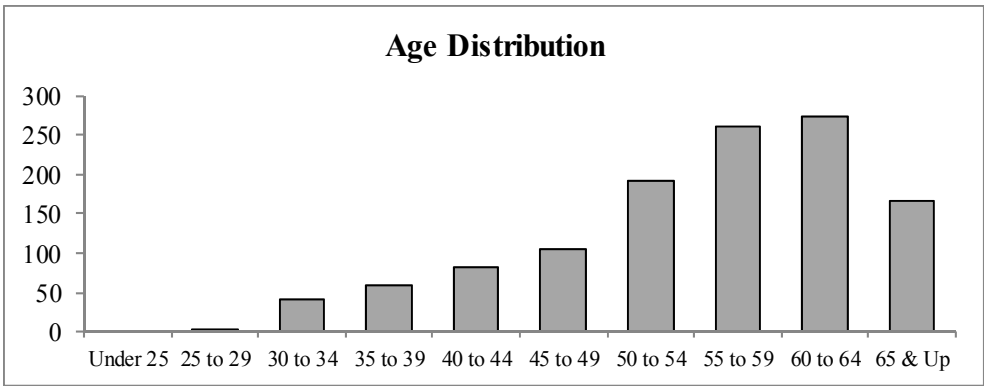
Age	Service 0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Up	Total
Under 25	2,462,885	0	0	0	0	0	0	0	2,462,885
25 to 29	3,843,404	593,298	0	0	0	0	0	0	4,436,702
30 to 34	2,848,111	1,259,609	459,035	0	0	0	0	0	4,566,755
35 to 39	2,594,839	1,109,872	885,167	280,204	0	0	0	0	4,870,082
40 to 44	2,680,135	1,015,821	853,217	781,656	449,685	0	0	0	5,780,514
45 to 49	2,105,445	1,250,348	1,032,328	1,027,207	469,461	101,376	0	0	5,986,165
50 to 54	2,139,469	1,775,111	1,935,552	1,842,332	1,136,401	153,873	148,287	0	9,131,025
55 to 59	2,857,814	1,833,754	2,415,219	2,098,794	1,505,591	1,029,363	455,366	223,888	12,419,789
60 to 64	2,572,356	2,372,288	2,488,083	1,591,883	1,576,096	1,293,756	439,626	177,853	12,511,941
65 & Up	1,411,108	881,216	1,398,366	1,305,814	642,665	696,210	236,896	98,060	6,670,335
Total	25,515,566	12,091,317	11,466,967	8,927,890	5,779,899	3,274,578	1,280,175	499,801	68,836,193

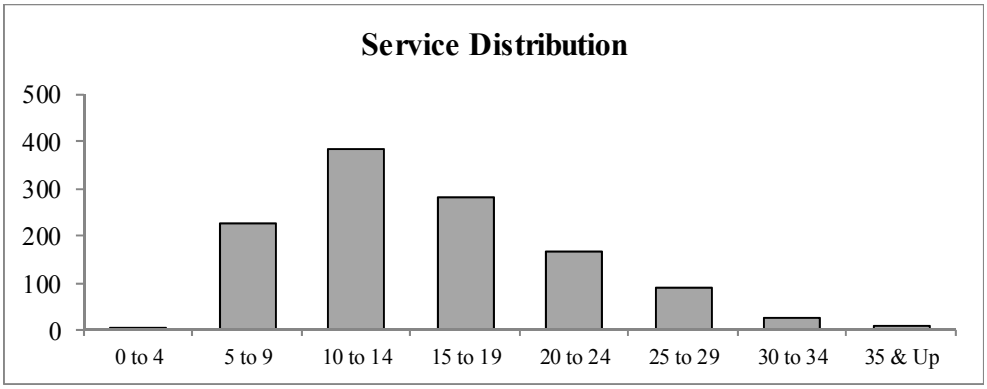
OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM
DISTRIBUTION OF ACTIVE MEMBERS

as of January 1, 2020

Classified - Tier 1

	Service								
Age	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Up	Total
Under 25	0	0	0	0	0	0	0	0	0
25 to 29	0	4	0	0	0	0	0	0	4
30 to 34	0	27	15	0	0	0	0	0	42
35 to 39	0	19	30	9	0	0	0	0	58
40 to 44	1	16	31	22	11	0	0	0	81
45 to 49	0	28	34	29	12	2	0	0	105
50 to 54	0	38	62	57	27	5	3	0	192
55 to 59	2	36	75	69	43	23	9	4	261
60 to 64	0	41	81	52	51	34	10	4	273
65 & Up	0	17	56	42	21	24	4	3	167
Total	3	226	384	280	165	88	26	11	1,183



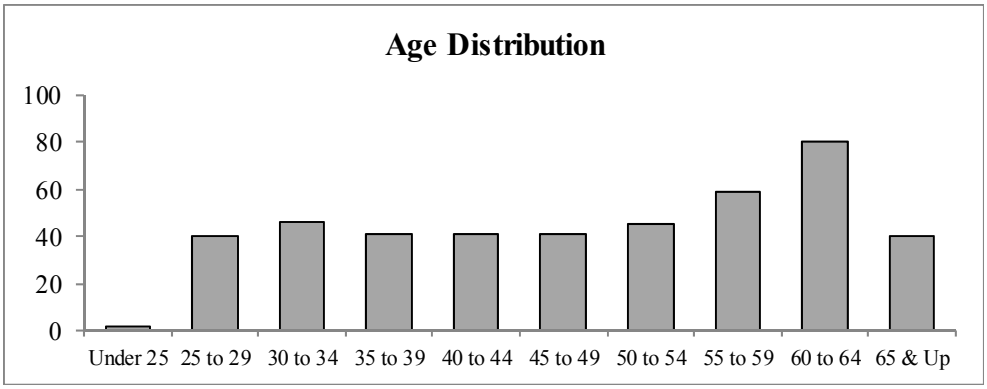


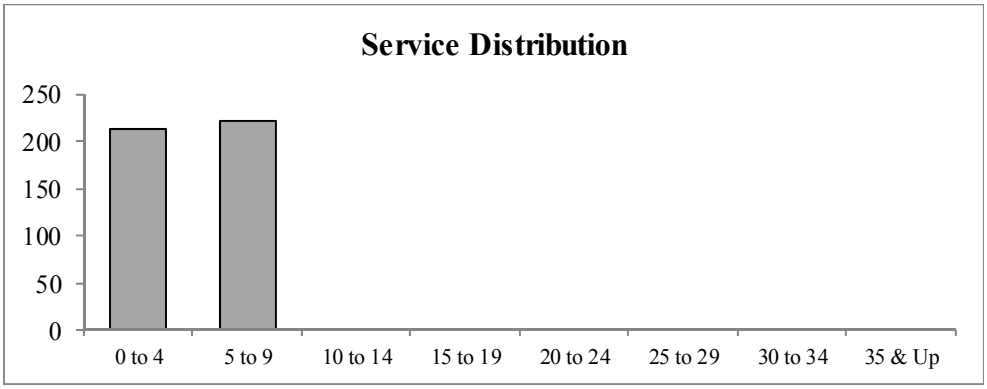
OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM
DISTRIBUTION OF ACTIVE MEMBERS

as of January 1, 2020

Classified - Tier 2

	Service								
Age	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Up	Total
Under 25	2	0	0	0	0	0	0	0	2
25 to 29	20	20	0	0	0	0	0	0	40
30 to 34	27	19	0	0	0	0	0	0	46
35 to 39	23	18	0	0	0	0	0	0	41
40 to 44	18	23	0	0	0	0	0	0	41
45 to 49	23	18	0	0	0	0	0	0	41
50 to 54	18	27	0	0	0	0	0	0	45
55 to 59	27	32	0	0	0	0	0	0	59
60 to 64	35	45	0	0	0	0	0	0	80
65 & Up	21	19	0	0	0	0	0	0	40
Total	214	221	0	0	0	0	0	0	435



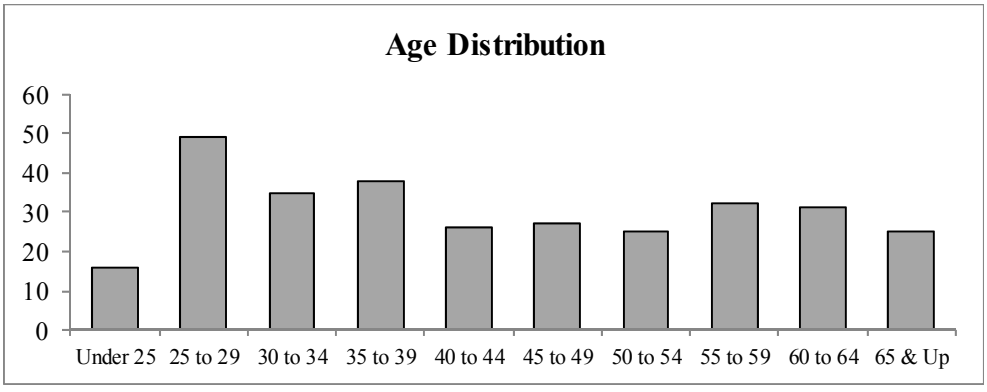


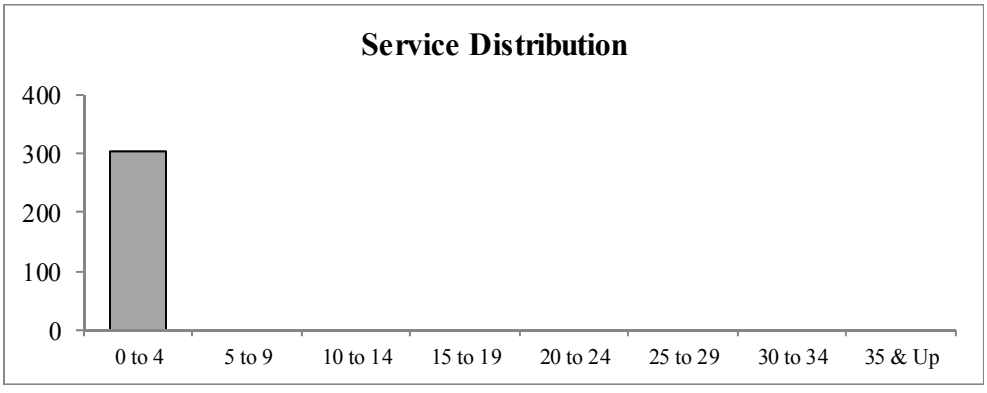
OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM
DISTRIBUTION OF ACTIVE MEMBERS

as of January 1, 2020

Classified - Tier 3

	Service								
Age	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Up	Total
Under 25	16	0	0	0	0	0	0	0	16
25 to 29	49	0	0	0	0	0	0	0	49
30 to 34	35	0	0	0	0	0	0	0	35
35 to 39	38	0	0	0	0	0	0	0	38
40 to 44	26	0	0	0	0	0	0	0	26
45 to 49	27	0	0	0	0	0	0	0	27
50 to 54	25	0	0	0	0	0	0	0	25
55 to 59	32	0	0	0	0	0	0	0	32
60 to 64	31	0	0	0	0	0	0	0	31
65 & Up	25	0	0	0	0	0	0	0	25
Total	304	0	0	0	0	0	0	0	304



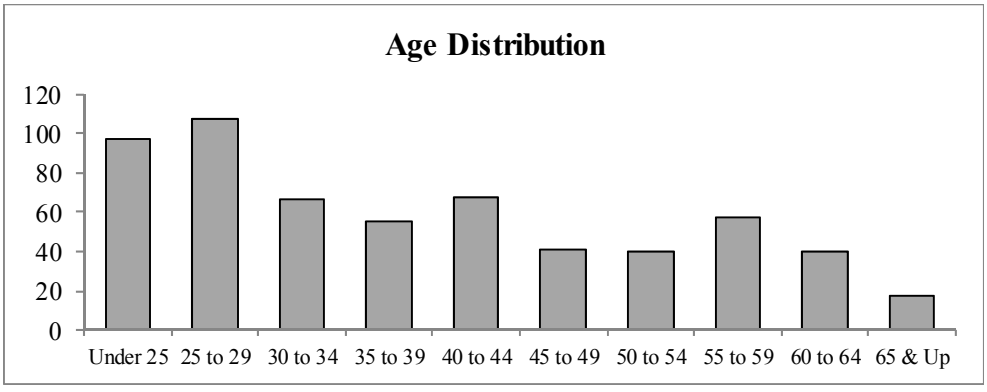


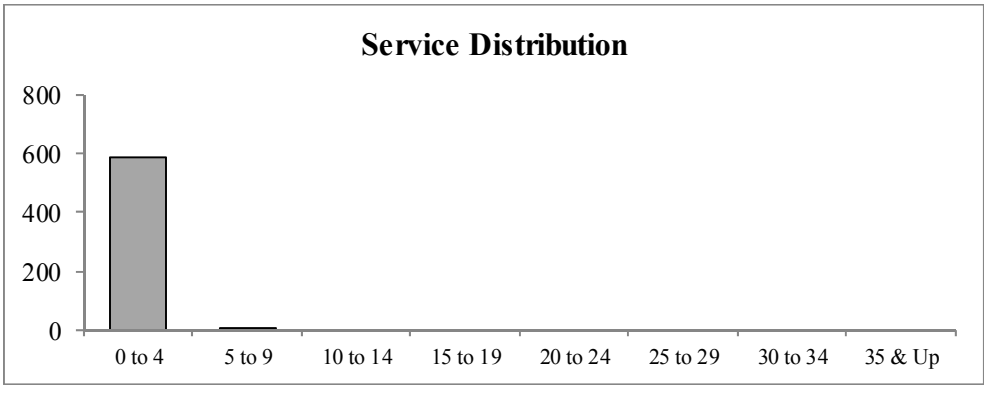
OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM
DISTRIBUTION OF ACTIVE MEMBERS

as of January 1, 2020

Classified - Tier 4

	Service								
Age	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Up	Total
Under 25	97	0	0	0	0	0	0	0	97
25 to 29	107	0	0	0	0	0	0	0	107
30 to 34	66	0	0	0	0	0	0	0	66
35 to 39	55	0	0	0	0	0	0	0	55
40 to 44	68	0	0	0	0	0	0	0	68
45 to 49	41	0	0	0	0	0	0	0	41
50 to 54	39	1	0	0	0	0	0	0	40
55 to 59	57	0	0	0	0	0	0	0	57
60 to 64	40	0	0	0	0	0	0	0	40
65 & Up	18	0	0	0	0	0	0	0	18
Total	588	1	0	0	0	0	0	0	589



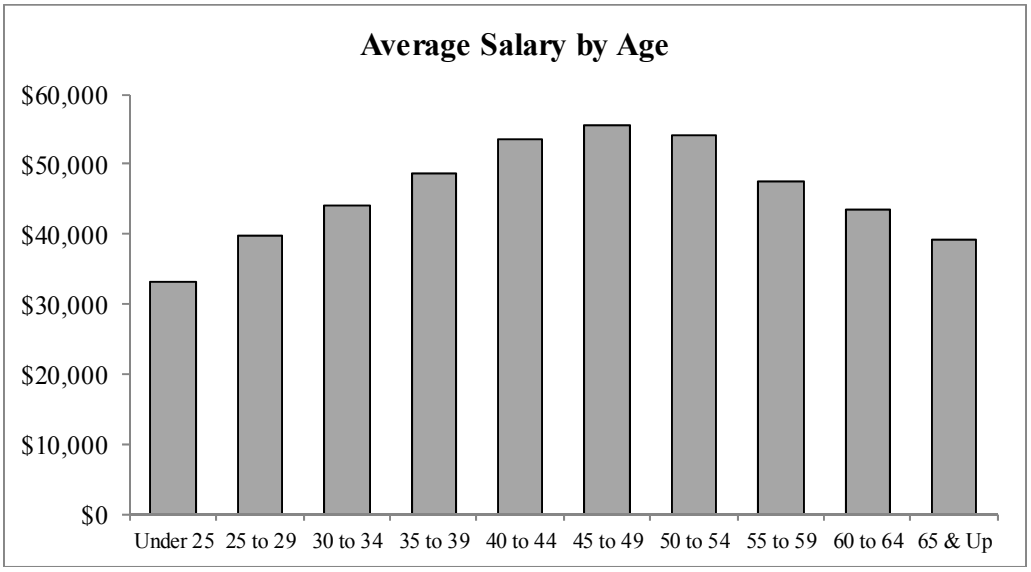


OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM
SUMMARY OF ACTIVE MEMBERS

as of January 1, 2020

Total

	Number			Salaries		
Age	Males	Females	Total	Males	Females	Total
Under 25	69	208	277	$ 2,400,250	$ 6,774,014	$ 9,174,264
25 to 29	173	640	813	6,788,492	25,456,315	32,244,807
30 to 34	201	627	828	8,835,650	27,737,131	36,572,781
35 to 39	242	684	926	12,067,213	33,131,166	45,198,379
40 to 44	247	682	929	14,079,069	35,613,001	49,692,070
45 to 49	206	642	848	12,501,678	34,604,337	47,106,015
50 to 54	218	659	877	12,980,333	34,502,721	47,483,054
55 to 59	230	568	798	11,470,576	26,503,344	37,973,920
60 to 64	201	499	700	9,205,686	21,244,012	30,449,698
65 & Up	135	235	370	5,820,597	8,690,898	14,511,495
Total	1,922	5,444	7,366	$ 96,149,544	$ 254,256,939	$ 350,406,483

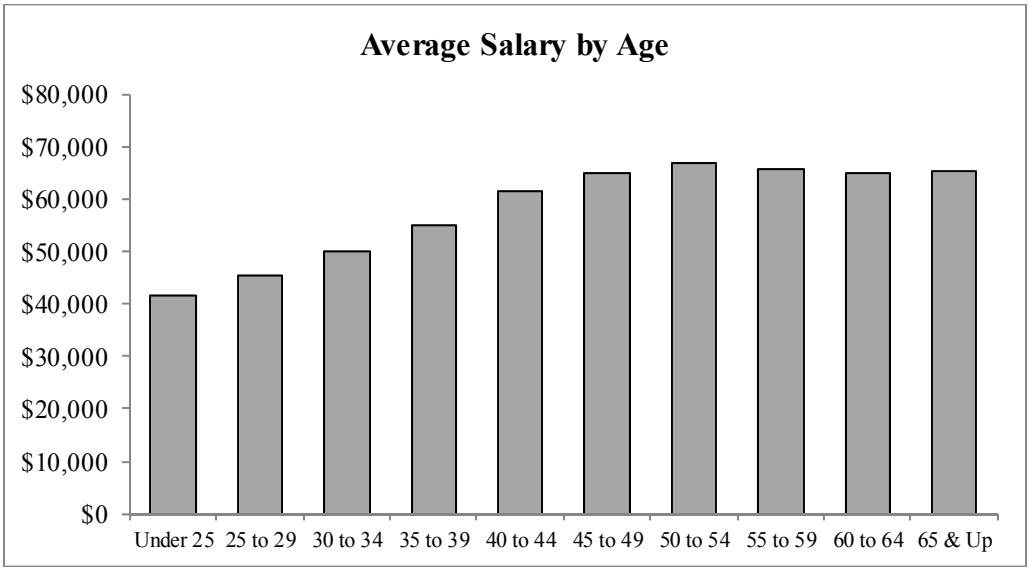


OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM
SUMMARY OF ACTIVE MEMBERS

as of January 1, 2020

Certificated

	Number			Salaries		
Age	Males	Females	Total	Males	Females	Total
Under 25	32	130	162	$ 1,361,139	$ 5,350,240	$ 6,711,379
25 to 29	118	495	613	5,274,412	22,533,693	27,808,105
30 to 34	134	505	639	6,785,445	25,220,581	32,006,026
35 to 39	183	551	734	10,107,178	30,221,119	40,328,297
40 to 44	180	533	713	11,685,175	32,226,381	43,911,556
45 to 49	149	485	634	10,256,799	30,863,051	41,119,850
50 to 54	129	446	575	9,061,995	29,290,034	38,352,029
55 to 59	87	302	389	5,676,834	19,877,297	25,554,131
60 to 64	56	220	276	3,520,658	14,417,099	17,937,757
65 & Up	42	78	120	2,831,831	5,009,329	7,841,160
Total	1,110	3,745	4,855	$ 66,561,466	$ 215,008,824	$ 281,570,290



OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM
SUMMARY OF ACTIVE MEMBERS

as of January 1, 2020

Classified

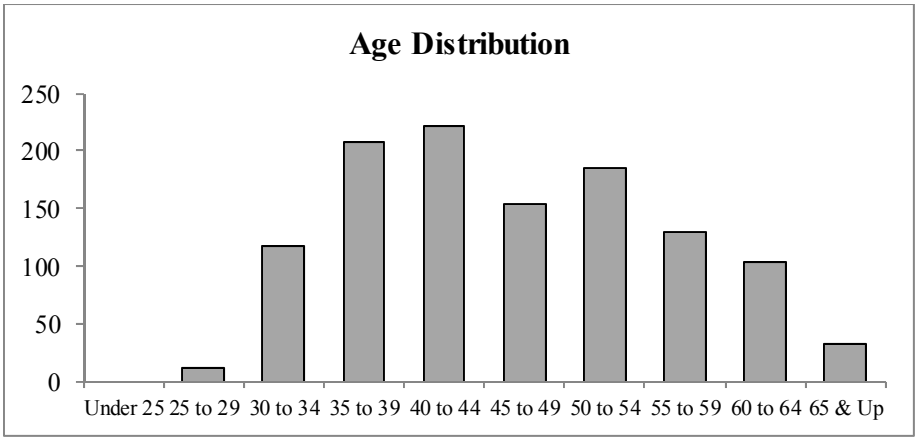
	Number			Salaries		
Age	Males	Females	Total	Males	Females	Total
Under 25	37	78	115	$ 1,039,111	$ 1,423,774	$ 2,462,885
25 to 29	55	145	200	1,514,080	2,922,622	4,436,702
30 to 34	67	122	189	2,050,205	2,516,550	4,566,755
35 to 39	59	133	192	1,960,035	2,910,047	4,870,082
40 to 44	67	149	216	2,393,894	3,386,620	5,780,514
45 to 49	57	157	214	2,244,879	3,741,286	5,986,165
50 to 54	89	213	302	3,918,338	5,212,687	9,131,025
55 to 59	143	266	409	5,793,742	6,626,047	12,419,789
60 to 64	145	279	424	5,685,028	6,826,913	12,511,941
65 & Up	93	157	250	2,988,766	3,681,569	6,670,335
Total	812	1,699	2,511	$ 29,588,078	$ 39,248,115	$ 68,836,193

OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM
SUMMARY OF INACTIVE VESTED MEMBERS

as of January 1, 2020

Total

	Number			Monthly Benefit at Unreduced Retirement		
Age	Males	Females	Total	Males	Females	Total
Under 25	0	0	0	$ 0	$ 0	$ 0
25 to 29	3	8	11	1,391	2,854	4,245
30 to 34	28	89	117	14,192	40,626	54,818
35 to 39	51	157	208	33,689	102,008	135,697
40 to 44	51	171	222	44,007	121,345	165,352
45 to 49	29	124	153	28,560	95,537	124,097
50 to 54	45	140	185	59,899	92,546	152,445
55 to 59	24	106	130	20,682	70,912	91,594
60 to 64	18	86	104	12,121	38,190	50,311
65 & Up	2	31	33	702	11,430	12,132
Total	251	912	1,163	$ 215,243	$ 575,448	$ 790,691

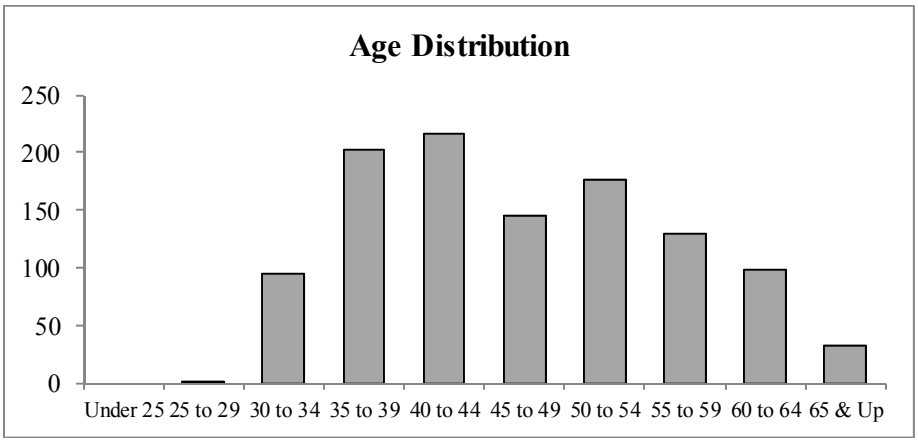


OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM
SUMMARY OF INACTIVE VESTED MEMBERS

as of January 1, 2020

Tier 1

	Number			Monthly Benefit at Unreduced Retirement		
Age	Males	Females	Total	Males	Females	Total
Under 25	0	0	0	$ 0	$ 0	$ 0
25 to 29	0	2	2	0	410	410
30 to 34	20	75	95	10,991	35,033	46,024
35 to 39	49	153	202	32,743	100,243	132,986
40 to 44	48	169	217	41,792	120,857	162,649
45 to 49	27	118	145	27,314	93,564	120,878
50 to 54	44	132	176	59,314	89,371	148,685
55 to 59	23	106	129	20,224	70,912	91,136
60 to 64	16	83	99	9,173	37,086	46,259
65 & Up	1	31	32	330	11,430	11,760
Total	228	869	1,097	$ 201,881	$ 558,906	$ 760,787

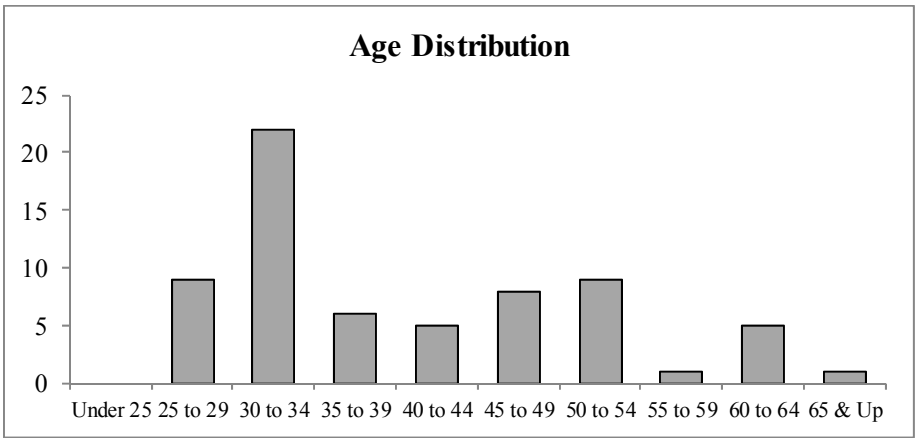


OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM
SUMMARY OF INACTIVE VESTED MEMBERS

as of January 1, 2020

Tier 2

	Number			Monthly Benefit at Unreduced Retirement		
Age	Males	Females	Total	Males	Females	Total
Under 25	0	0	0	$ 0	$ 0	$ 0
25 to 29	3	6	9	1,391	2,444	3,835
30 to 34	8	14	22	3,201	5,593	8,794
35 to 39	2	4	6	946	1,765	2,711
40 to 44	3	2	5	2,215	488	2,703
45 to 49	2	6	8	1,246	1,973	3,219
50 to 54	1	8	9	585	3,175	3,760
55 to 59	1	0	1	458	0	458
60 to 64	2	3	5	2,948	1,104	4,052
65 & Up	1	0	1	372	0	372
Total	23	43	66	$ 13,362	$ 16,542	$ 29,904

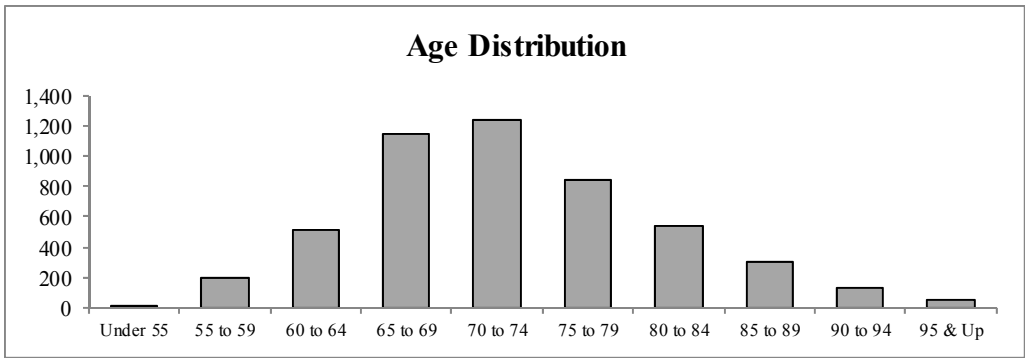


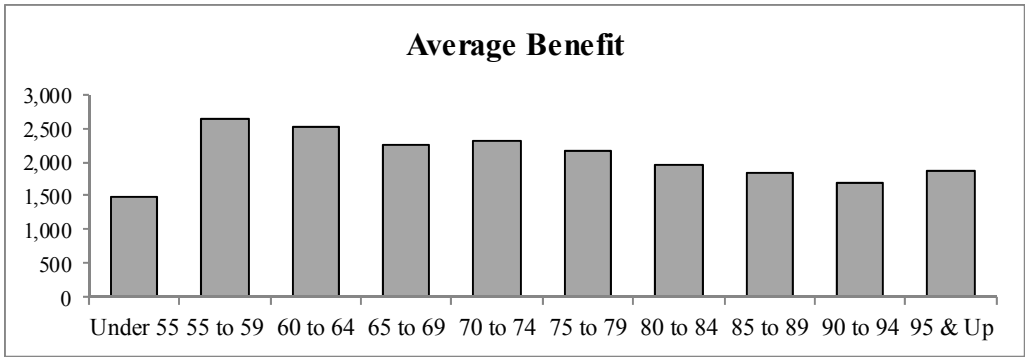
OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM
SUMMARY OF RETIREES, BENEFICIARIES AND DISABLED MEMBERS

as of January 1, 2020

Total

	Number			Total Monthly Benefit		
Age	Males	Females	Total	Males	Females	Total
Under 55	4	12	16	$ 1,640	$ 21,929	$ 23,569
55 to 59	50	143	193	140,324	369,160	509,484
60 to 64	120	399	519	290,615	1,009,487	1,300,102
65 to 69	295	855	1,150	734,168	1,856,384	2,590,552
70 to 74	345	892	1,237	877,379	1,967,215	2,844,594
75 to 79	288	555	843	707,440	1,121,544	1,828,984
80 to 84	171	374	545	375,667	684,285	1,059,952
85 to 89	68	233	301	171,918	382,527	554,445
90 to 94	31	99	130	63,132	158,145	221,277
95 & Up	8	38	46	17,872	67,819	85,691
Total	1,380	3,600	4,980	$3,380,155	$7,638,495	$11,018,650



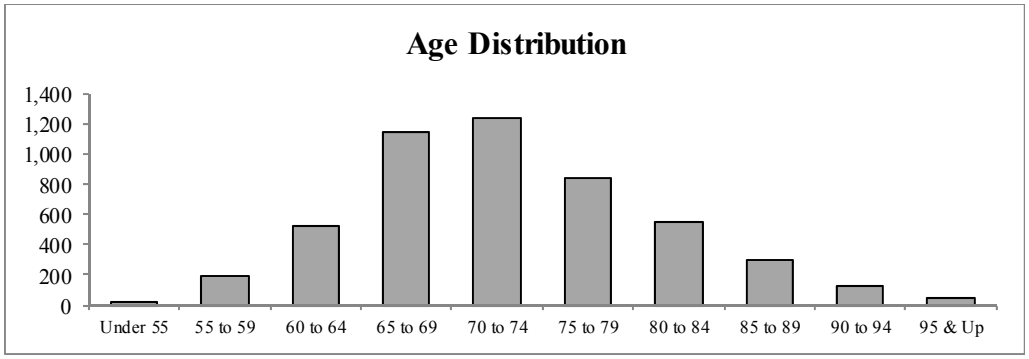


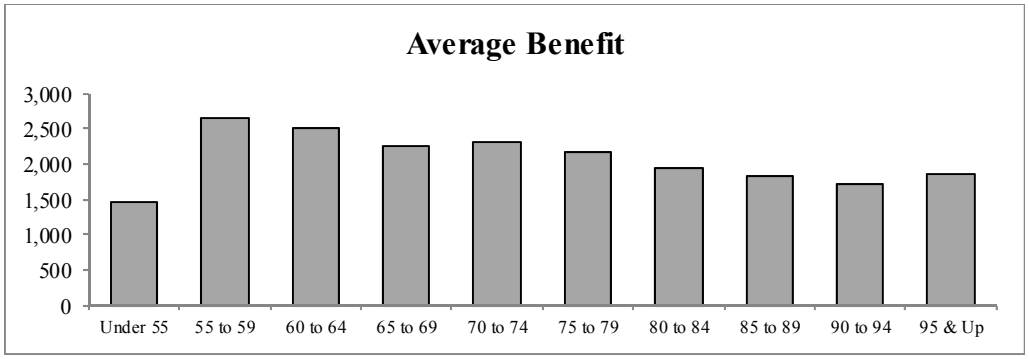
OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM
SUMMARY OF RETIREES, BENEFICIARIES AND DISABLED MEMBERS

as of January 1, 2020

Tier 1

	Number			Total Monthly Benefit		
Age	Males	Females	Total	Males	Females	Total
Under 55	4	12	16	$ 1,640	$ 21,929	$ 23,569
55 to 59	50	143	193	140,324	369,160	509,484
60 to 64	120	399	519	290,615	1,009,487	1,300,102
65 to 69	290	853	1,143	732,270	1,854,666	2,586,936
70 to 74	344	891	1,235	877,210	1,967,043	2,844,253
75 to 79	288	555	843	707,440	1,121,544	1,828,984
80 to 84	171	374	545	375,667	684,285	1,059,952
85 to 89	68	233	301	171,918	382,527	554,445
90 to 94	31	99	130	63,132	158,145	221,277
95 & Up	8	38	46	17,872	67,819	85,691
Total	1,374	3,597	4,971	$3,378,088	$7,636,605	$11,014,693





OMAHA SCHOOL EMPLOYEES' RETIREMENT SYSTEM
SUMMARY OF RETIREES, BENEFICIARIES AND DISABLED MEMBERS

as of January 1, 2020

Tier 2

	Number			Total Monthly Benefit		
Age	Males	Females	Total	Males	Females	Total
Under 55	0	0	0	$ 0	$ 0	$ 0
55 to 59	0	0	0	0	0	0
60 to 64	0	0	0	0	0	0
65 to 69	5	2	7	1,898	1,718	3,616
70 to 74	1	1	2	169	172	341
75 to 79	0	0	0	0	0	0
80 to 84	0	0	0	0	0	0
85 to 89	0	0	0	0	0	0
90 to 94	0	0	0	0	0	0
95 & Up	0	0	0	0	0	0
Total	6	3	9	$ 2,067	$1,890	$3,957