Seattle City Employees' Retirement System

Actuarial Valuation

As of January 1, 2012

By

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July 6, 2012

Retirement Board
Seattle City Employees' Retirement System
720 Third Avenue, Suite 1000
Seattle, WA 98104

Dear Members of the Board:

As requested, we have made an actuarial valuation of the Seattle City Employees' Retirement System (SCERS) as of January 1, 2012. This report reflects the benefit provisions and contribution rates in effect as of January 1, 2012.

Actuarial Certification

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by SCERS staff. This information includes, but is not limited to, statutory provisions, employee data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. It should be noted that the valuation was based on the unaudited financial statements, as the final audited statements were not yet available. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations), and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

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 plan'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 Retirement Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in Appendix A.

Actuarial computations presented in this report are for purposes of determining the recommended funding amounts for SCERS. Actuarial computations under GASB Statement No. 25 are for purposes of fulfilling financial accounting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of SCERS' 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.

Milliman's work is prepared solely for the internal business use of SCERS. To the extent that Milliman's work is not subject to disclosure under applicable public records laws, Milliman's work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. Milliman's consent to release its work product to any third party may be conditioned on the third party signing a Release, subject to the following exception(s):

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b) SCERS may provide a copy of Milliman's work, in its entirety, to other governmental entities, as required by law.

No third party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

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

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report, along with the information contained in the CAFR, is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

We would like to express appreciation to the system staff who gave substantial assistance in supplying the data on which this report is based.

Respectfully submitted,

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Principal and Consulting Actuary

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NJC/JS/nlo

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Section 1 Summary of the Findings

Actuarial Required Contribution Rate

Based on the actuarial valuation of the benefits in effect under the Seattle City Employees' Retirement System as of January 1, 2012, we recommend the total contribution rate be increased from 21.04% to 22.92%. Based on a fixed member contribution rate of 10.03%, this means the City's contribution rate should be increased from 11.01% to 12.89% effective January 1, 2013. This reflects the City's commitment to fund the actuarial required contribution rate. It should be noted that this rate is not equivalent to the current GASB Annual Required Contribution (ARC) because the actuarial required rate assumes an increase in membership, which is not consistent with current GASB reporting requirements.

The current Retirement Board funding policy states that "…if the Funding Ratio is less than 100% and a UAAL (Unfunded Actuarial Accrued Liability) occurs which cannot be amortized over a period of less than 20 years by the combined total contribution rates, additional employer contributions may be considered." The practical goal of SCERS is to amortize the UAAL over a period of 30 years or less, which the recommended contribution rate meets.

It should be noted that a 30-year amortization period is the longest acceptable period under current GASB standards and is often used by retirement systems as a benchmark for funding. We generally prefer an amortization period shorter than 30 years, as it provides stronger funding.

In the January 1, 2011 valuation report, the actuarial required contribution rate to meet a 30-year amortization was 21.30%. The following chart shows the factors that caused the rate to increase this year. Note that the biggest factor was the investment loss which includes the partial recognition of the 2008 loss.

Sources of Change	Actuarial Req. Rate
January 1, 2011 Actuarial Valuation	**21.30 %**
Revision to Member Crediting Rate	(0.26)%
2012 Actuarial Required Contribution Rate	**21.04 %**
Expected Valuation-to-Valuation Change	(0.13)%
Asset (Gain)/Loss on Actuarial Value	1.48 %
Salary/Membership Growth Less Than Expected	0.23 %
Data Revisions	0.28 %
Other	0.02 %
Total Change	1.88 %
January 1, 2012 Actuarial Valuation	**22.92 %**

Actuarial Required Contribution Rate (continued)

It should be noted that this 22.92% of pay is calculated based on the Actuarial Value of Assets (AVA); see Section 3 of this report for details. This AVA currently defers a large asset loss under the asset smoothing method. This means that if no actuarial asset gains or losses occur in the future, the actuarial required contribution rate would increase as the deferred asset losses are phased into the AVA.

The current contribution rates for the death benefit program are sufficient to finance the $2,000 death benefit.

Funding Progress

On the basis of the January 1, 2011 actuarial valuation, the Funding Ratio was 74.3%. Based on the January 1, 2012 valuation, the Funding Ratio is 68.3%. The decrease in the Funding Ratio is due mainly to recognition of asset losses, both from previous years and from 2011 (see Section 3 of this report for a full discussion). A summary of the historical Funding Ratio and other measurements are shown on Graphs 1 and 2. A summary of the changes in the Funding Ratio is shown below.

Sources of Change	Funding Ratio
January 1, 2011 Actuarial Valuation	**74.3 %**
Revision to Member Crediting Rate	0.2 %
Expected Valuation-to-Valuation Change	0.1 %
Asset Gain/(Loss) on Actuarial Value	(6.1)%
Salary Less/(Greater) Than Expected	0.8 %
Data Revisions	(0.7)%
Other	(0.1)%
Total Change	**(6.0)%**
January 1, 2012 Actuarial Valuation	**68.3 %**

Contingent COLA Benefits

The Seattle Municipal Code allows for an increase in the cost-of-living adjustment (COLA) available to current and future retired members. Currently, the Floor COLA is at the 65% level. The enhanced COLA benefit (70% Floor COLA) does not become effective until the System attains at least a 100% funding level.

Since it is unknown when this benefit will become effective, especially given the current funded status of the System, we have not included the valuation of these potential benefit changes in this valuation.

Summary Exhibit

A summary of the key results of this valuation, along with a comparison to the January 1, 2011 valuation, is shown in Table 1. Note that the valuation measures are based on the Actuarial Value of Assets, which smoothes asset gains and losses over a five-year period; however, we have also shown key measures using the Market Value of Assets (MVA).

Projected Contribution Rates

As outlined above (and discussed further in Section 3 of this report), the actuarial required contribution calculated in this valuation is based on the Actuarial Value of Assets. This AVA is currently deferring a relatively large asset loss.

All other things being equal, if assets earned 7.75% on a market value basis and no other actuarial asset gains or losses occurred, the actuarial required contribution rate would be projected to increase as the deferred asset losses are phased in over the coming years.

We have performed a five-year projection of the contribution rates if 7.75% were returned on the market value of assets in each future year. Additionally, we have performed a projection of the contribution rates at the 5th and 95th percentile expected returns (thereby yielding a 90% asset-return-based confidence interval for the specified rates). These projections are illustrated in the chart below.

The 90% confidence interval results are based on the 5th and 95th percentile compounded returns for one-, two-, three-, four- and five-year periods. Since actuarial assets are used, deferred gains or losses would continue to decrease or increase the actuarial required contribution rate after these dates.

Please see Section 8 of this report for a detailed discussion of the projected contribution rates, as well as an analysis of phased-in contribution rate increases.

Projected Total Actuarial Required Contribution Rate

Contribution Year*	Assuming 7.75% Future Returns	90% Confidence Interval
2013	22.92%	22.92% - 22.92%
2014	24.31%	23.67% - 24.92%
2015	24.12%	22.67% - 25.53%
2016	24.07%	21.80% - 26.36%
2017	23.92%	20.84% - 27.09%
2018	23.95%	20.23% - 27.78%

** Contribution year lags valuation year by 1. For example: Contribution Year 2013 is based on the 2012 valuation results, amortized over 30 years beginning in 2012, if the increase takes place in 2013.*

Compounded average return for period

	Percentile 5th	Percentile 95th
1-Year Period	*29.0%*	*-11.4%*
2-Year Period	*22.1%*	*-6.4%*
3-Year Period	*19.1%*	*-4.1%*
4-Year Period	*17.4%*	*-2.7%*
5-Year Period	*16.3%*	*-1.7%*

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Table 1 Summary of Results

	Valuation January 1, 2012	Valuation January 1, 2011	Percentage Change
I. Total Membership			
A. Active Members	8,430	8,599	(2.0)%
B. Retired Members & Beneficiaries	5,580	5,428	2.8%
C. Vested Terminated Members	2,049	1,998	2.6%
D. Total	16,059	16,025	0.2%
II. Pay Rate as of January 1, 2012			
A. Annual Total ($millions)	$ 560.4	$ 569.5	(1.6)%
B. Annual Average	$ 66,476	$ 66,225	0.4%
III. Average Monthly Benefit Paid to Current Retirees and Beneficiaries			
A. Service Retirement	$ 2,066	$ 1,977	4.5%
B. Disability Retirement	1,155	1,104	4.7%
C. Surviving Spouse and Dependents	1,182	1,081	9.3%
D. Total	$ 1,922	$ 1,826	5.3%
IV. Actuarial Accrued Liability			
A. Active Members	$ 1,465.6	$ 1,418.1	3.3%
B. Retired Members	1,264.7	1,169.0	8.2%
C. Vested Terminated Members	129.0	121.9	5.8%
D. Total	$ 2,859.3	$ 2,709.0	5.5%
V. Assets			
A. Actuarial Value of Assets ($millions)	$ 1,954.3	$ 2,013.7	(2.9)%
VI. Unfunded Actuarial Accrued Liability or Surplus Funding ($millions)	$ 905.0	$ 695.4	30.1%
VII. Amortization of UAAL Total Contribution Rate Needed for 30-Year Amortization (as a % of Payroll)*	22.92%	21.30%	7.6%
VIII. Funding Ratio	68.3%	74.3%	(8.0)%
IX. Normal Cost as a Percent of Salary*	14.95%	15.19%	(1.6)%
Market Value of Assets (MVA) -- For Informational Purposes Only			
X. Assets Based on MVA			
A. Market Value of Assets ($millions)	$ 1,753.5	$ 1,812.8	(3.3)%
XI. Amortization of UAAL Based on MVA			
A. Total Contribution Rate Needed for 30-Year Amortization (as a % of Payroll)	24.76%	25.30%	(2.1)%
XII. Funding Ratio Based on MVA	61.3%	66.9%	(8.4)%

* *Actuarial Required Contribution Rate for January 1, 2011 valuation was updated after the 2011 valuation to reflect the new method for determining interest credit on member contributions subsequently adopted by the Retirement Board. The revised rate is 21.04%, based on a revised Normal Cost Rate of 14.99%.*

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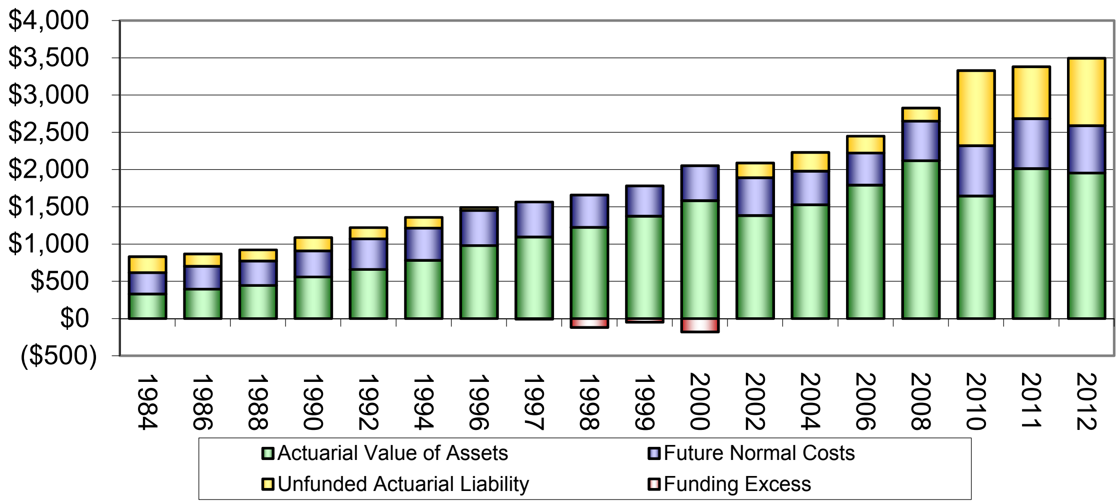
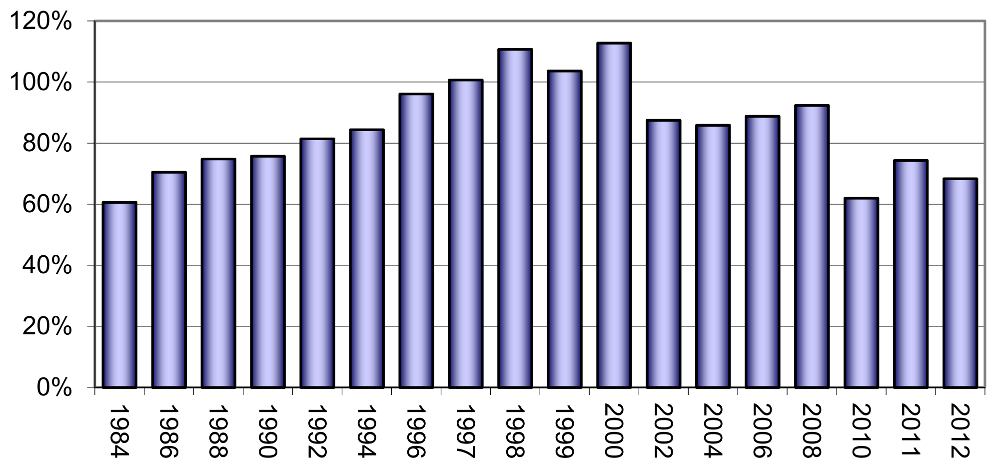
Graph 1 Historical Asset and Liability Comparison



Graph 2 Historical Funding Ratios



	(in Millions)				Funding
Year	**PVB**	**Assets**	**PVFNC**	**UAAL**	**Ratio**
1996	1,492.0	980.2	472.3	39.5	96.1%
1998	1,539.3	1,224.6	433.5	(118.8)	110.7%
2000	1,872.4	1,582.7	469.3	(179.6)	112.8%
2002	2,088.7	1,383.7	507.3	197.7	87.5%
2004	2,229.8	1,527.5	450.9	251.4	85.9%
2006	2,448.5	1,791.8	431.0	225.8	88.8%
2008	2,825.8	2,119.4	531.2	175.2	92.4%
2010	3,328.7	1,645.3	674.9	1,008.5	62.0%
2011	3,379.6	2,013.7	670.6	695.4	74.3%
2012	3,494.1	1,954.3	634.8	905.0	68.3%

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Section 2 Scope of the Report

This report presents the actuarial valuation of the Seattle City Employees' Retirement System as of January 1, 2012.

A summary of the findings resulting from this valuation is presented in the previous section. Section 3 describes the assets of the System. A summary of the assets is set forth in Table 2. Sections 3, 4, and 5 describe how the obligations of the System are to be met under the actuarial cost method in use.

Section 6 discloses actuarial information based on the requirements of Statements No. 25 and 27 of the Governmental Accounting Standards Board. Section 7 sets forth estimated actuarial gains or losses from the various sources. Section 8 shows projections of the System's funding under both optimistic and pessimistic scenarios.

Appendix A is a summary of the actuarial procedures and assumptions used to compute the liabilities and contributions shown in this report.

The current benefit structure, as determined by the provisions of the governing law on January 1, 2012, is summarized in Appendix B. Schedules of valuation data classifying the data used in the valuation by various categories of contributing members, former contributing members and beneficiaries make up Appendix C.

Comparative statistics are presented on the System's membership and contribution rates. Appendix D is a glossary of actuarial terms used in this report.

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Section 3 Assets

In many respects, an actuarial valuation can be regarded as an inventory process. The inventory is taken as of the actuarial valuation date, which for this valuation is January 1, 2012. On that date, the assets available for the payment of benefits are appraised. These assets are compared with the actuarial liabilities, which are generally well in excess of the assets. The actuarial process thus leads to a method of determining what contributions by members and their employers are needed to pay expected benefits.

This section of the report deals with the asset determination. In the next section, the actuarial liabilities will be discussed. Section 5 will deal with the process for determining required contributions, based on the relationship between the assets and the actuarial liabilities.

Beginning with the January 1, 2011 actuarial valuation, SCERS adopted five-year asset smoothing. This smoothing process recognizes the asset gain or loss occurring in each year evenly over a five-year period.

Table 2 shows the calculation of the Actuarial Value of Assets as of January 1, 2012. Note that a large net loss is currently being deferred due to the asset losses in both 2008 and 2011. This means that, even if the system earns 7.75% in the future, the AVA will experience an actuarial loss over upcoming years as the remaining portions of deferred losses are recognized. In both the Executive Summary and Section 8 of this report, we discuss projections of the required contribution rates resulting from this expected decrease in the AVA.

Table 3 summarizes the financial resources of the System on January 1, 2012 on a Market Value basis. Of the total assets, a minor portion is set aside for the payment of current liabilities and expenses. Table 3 shows the Market Value of Assets at January 1, 2012 and January 1, 2011. For years prior to 2011, the Actuarial Value of Assets is equal to the Market Value.

Table 2 Calculation of Actuarial Value of Assets at January 1, 2012

(All dollar amounts in millions)

Five-Year Asset Smoothing

Year Ended		Market Value at Beginning of Year	Total Contributions	Benefit Payments Plus Admin. Expenses	Interest	Market Value of Assets Expected*	Market Value of Assets Actual	Asset Gain/(Loss)	Current Phase Out	Deferred Amount
December 31,	2007					2,135.0	2,119.4	(15.6)	0%	-
December 31,	2008	2,119.4	91.9	115.0	163.4	2,259.7	1,477.4	(782.3)	20%	(156.5)
December 31,	2009	1,477.4	93.0	120.3	113.5	1,563.6	1,645.3	81.7	40%	32.7
December 31,	2010	1,645.3	90.6	131.7	125.9	1,730.1	1,812.8	82.7	60%	49.6
December 31,	2011	1,812.8	100.7	140.7	139.0	1,911.8	1,753.5	(158.3)	80%	(126.6)

Total Deferred at Jan. 1, 2012:	(200.8)
Market Value of Assets at Jan. 1, 2012:	1,753.5
Less Total Deferred at Jan. 1, 2012:	(200.8)
Actuarial Value of Assets at Jan. 1, 2012:	**1,954.3**

**Expected Market Value of Assets assumes 7.75% return, taking into account actual cashflows during year.*

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Table 3 Summary of Plan Net Assets (at Market Value)

	January 1,2012		January 1,2011	
	Market Value	Distribution	Market Value	Distribution
Assets				
Cash and short-term investments	64,654,222	3.7%	16,066,155	0.9%
Securities lending collateral	3,489,721	0.2%	33,896,148	1.9%
Receivables				
Employee	2,110,074	0.1%	1,864,510	0.1%
Employer	1,536,698	0.1%	1,438,899	0.1%
Interest and Dividends	2,281,373	0.1%	1,746,071	0.1%
Total Receivables	5,928,145	0.3%	5,049,480	0.3%
Investments at fair value				
US Government obligations	82,648,609	4.7%	75,344,540	4.2%
Corporate bonds	137,745,087	7.9%	95,241,727	5.3%
Mortgage Backed	130,049,800		86,955,883	
Government Related & Other	21,303,889		22,296,344	
Domestic stocks	506,950,005	28.9%	757,207,813	41.8%
International stocks	417,843,380	23.8%	368,335,407	20.3%
Real estate	208,281,171	11.9%	191,755,600	10.6%
Alternative	183,042,736	10.4%	209,280,812	11.5%
Total investments	1,687,864,677	96.3%	1,806,418,126	99.7%
Equipment	-	0.0%	-	0.0%
Total assets	1,761,936,765	100.5%	1,861,429,909	102.7%
Liabilities				
Pension & Other payables	1,501,302	-0.1%	11,380,120	-0.6%
Securities lending obligation	6,911,249	-0.4%	37,295,301	-2.1%
Total Liabilities	8,412,551	-0.5%	48,675,421	-2.7%
Market Value of Net Assets Held in Trust For Pension Benefits	**1,753,524,214**	**100.0%**	**1,812,754,488**	**100.0%**

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Section 4 Actuarial Liabilities

In the previous section, an actuarial valuation was related to an inventory process and an analysis was given of the inventory of assets of the System as of the valuation date, January 1, 2012. In this section, the discussion will focus on the commitments of the System, which will be referred to as its actuarial liabilities.

Table 4 contains an analysis of the actuarial present value of all future benefits for contributing members, for former contributing members, and for beneficiaries. The analysis is given by type of benefit.

The actuarial liabilities summarized in Table 4 include the actuarial present value of all future benefits expected to be paid with respect to each member. For an active member, this value includes a measure of both benefits already earned and future benefits to be earned. Thus, for all members, active and retired, the value extends over benefits earnable and payable for the rest of their lives and, if an optional benefit is chosen, for the lives of their surviving beneficiaries.

Table 4 Actuarial Present Value of Future Benefits

(All dollar amounts in millions)

	January 1, 2012	January 1, 2011
A. Active Members		
Service Retirement	$ 1,976.1	$ 1,959.5
Vested Retirement	55.1	58.1
Disability Retirement	11.7	12.0
Survivor Benefits	24.7	24.9
Refund of Member Contributions	32.8	34.2
Total	$ 2,100.4	$ 2,088.7
B. Inactive Members and Annuitants		
Service Retirement	$ 1,165.9	$ 1,076.4
Disability Retirement	10.0	9.8
Beneficiaries	88.8	82.8
Inactive Members	129.0	121.9
Total	$ 1,393.7	$ 1,290.9
C. Grand Total	$ 3,494.1	$ 3,379.6

Section 5 Employer Contributions

Funding

As shown in Tables 2 and 4, the total actuarial liability exceeds the current Actuarial Value of Assets. This is to be expected, because the System is anticipating future member and employer contributions. The actuarial valuation develops a contribution method to fund this shortfall.

The actuarial cost method utilized is the Entry Age Actuarial Cost Method. This cost method has two components:

1. A normal cost
2. An amortization of the unfunded actuarial accrued liability

Most actuarial cost methods utilize a cost method with these two components. The vast majority of public pension plans utilize the entry age (EA) actuarial cost method, as does SCERS.

The normal cost under EA is developed so that benefits are funded as a level percentage of payroll for each member from the member's membership date to the member's termination date. One key feature of this method is that costs tend to be stable from year to year because most members' entry age cost percentages do not change materially from year to year, and because the population does not change considerably from year to year. Normal costs by benefit type are shown in Table 5.

The Normal Cost Rate for the January 1, 2012 actuarial valuation is slightly lower than the rate as of the January 1, 2011 valuation. This is primarily because of the reduced crediting rate on member contributions made after December 31, 2011, which went into effect for the January 1, 2012 valuation.

When the present value of future normal costs is subtracted from the present value of total benefits, the result is the actuarial accrued liability. This can also be thought of as the present value of past normal costs, or the amount which would be in the fund if all prior assumptions had been exactly met. To the extent that this actuarial accrued liability exceeds plan assets, an unfunded actuarial accrued liability (UAAL) exists. This is currently the situation for the SCERS.

Because a UAAL exists, the total System costs must reflect an amortization of this UAAL. In general, a UAAL exists when liabilities increase more than anticipated or assets increase less than anticipated.

Actuarial Gains and Losses

When experience is different from actuarial expectation, an actuarial gain or loss occurs. Section 7 illustrates the historical actuarial gains and losses by source. Ongoing actuarial gains and losses decrease and increase the UAAL.

Amortization of UAAL

Table 7 compares the current 21.04% total contribution rate with the necessary funding components: normal cost and amortization of UAAL. The table shows that the total contribution rate exceeds the normal cost, with the remaining contribution going toward an amortization of the UAAL. The resulting amortization payment of 6.05% was projected to amortize the UAAL over 30 years as of January 1, 2011, based on the 2011 valuation (as revised to reflect the revised member crediting policy, adopted by the Board subsequent to the 2011 valuation report).

As of the January 1, 2012 valuation, the actuarial required contribution rate for the employer has increased to 12.89% beginning January 1, 2013. This is mainly due to the partial reflection of deferred 2008 asset losses, as well as the partial reflection of the 2011 asset loss. The total contribution rate of 21.04% being paid in 2012 amortizes the January 1, 2011 UAAL over a 30-year period; however, it is not sufficient to amortize the UAAL based on the 2012 valuation over 30 years.

The current Retirement Board funding policy states that "…if the Funding Ratio is less than 100% and a UAAL occurs which cannot be amortized over a period of less than 20 years by the combined total contribution rates, additional employer contributions may be considered." It is our understanding that the City is currently committed to contributing the actuarial required contribution rate, with the goal of amortizing the UAAL over a period of 30 years.

The total contribution rate needs to be immediately (i.e., as of the beginning of the next calendar year) increased from 21.04% of pay to 22.92% of pay to amortize the UAAL over 30 years from January 1, 2012. Because this figure is based on an Actuarial Value of Assets which is currently deferring a large loss, this 22.92% is projected to increase over the next year if no other actuarial asset gains or losses were to occur.

In Section 8 of this report, we have included a five-year projection of the actuarial required contribution, including optimistic and pessimistic investment return scenarios.

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Table 5 Normal Cost Contribution Rates as Percentages of Salary

	January 1, 2012	January 1, 2011 *
Service Retirement	11.60 %	11.80 %
Vested Retirement	1.28	1.31
Disability Retirement	0.14	0.14
Survivor Benefits	0.19	0.20
Refund of Member Contributions	1.34	1.34
Administrative Expenses	0.40	0.40
Total	14.95 %	15.19 %

** The January 1, 2011 Normal Cost Rate was updated after the 2011 valuation to reflect the new method for determining interest credit on member contributions subsequently adopted by the Retirement Board. The revised 2011 rate is 14.99%.*

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Table 6 Unfunded Actuarial Accrued Liability

(All dollar amounts in millions)

		January 1, 2012	January 1, 2011
A.	Actuarial present value of all future benefits for present and former members and their survivors (Table 3)	$ 3,494.1	$ 3,379.6
B.	Less actuarial present value of total future normal costs for present members	634.8	670.6
C.	Actuarial accrued liability [A - B]	$ 2,859.3	$ 2,709.0
D.	Less actuarial value of assets available for benefits (Table 2)	1,954.3	2,013.7
E.	Unfunded actuarial accrued liability (Funding Excess, if negative) [C - D]	$ 905.0	$ 695.4
F.	Funding Ratio [D ÷ C]	68.3%	74.3%

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Table 7 Contribution Rates as Percentages of Salary

		Actuarial Required Contribution Beginning	
		January 1, 2013	January 1, 2012 [1]
A.	Total normal cost rate	14.95 %	14.99 %
B.	UAAL amortization rate	7.97	6.05
C.	Actuarial required contribution rate	22.92 %	21.04 %
D.	Member contribution rate	10.03	10.03
E.	Allocation of employer contribution rate [2]		
	Normal cost	4.92 %	4.96 %
	Amortization payment	7.97	6.05
	Total employer contribution rate	12.89 %	11.01 %

[1] Actuarial required rate beginning January 1, 2012 reflects revision to Normal Cost for new Member Contribution Rate Crediting Policy, adopted after the January 1, 2011 valuation was completed.

[2] If member contributions are all allocated to paying normal cost.

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Section 6 Actuarial Information for Accounting Purposes

The Governmental Accounting Standards Board (GASB) has issued standards under Statements No. 25 and 27. Statement 25 is required reporting by the plan (the System) and Statement 27 is reporting by state and local governmental employers (the City). Statement 25 includes certain supplementary information:

1. A schedule of funding progress
2. A schedule of employer contributions

It should be noted that GASB has recently issued new statements that will supersede Statements No. 25 and 27. These will result in significant accounting changes and will be effective within a few years.

The schedule of funding progress is shown in Table 9 and compares assets and liabilities over the years. Primarily due to the poor investment returns of 2000 through 2003, as well as the extreme market downturn of 2008, the plan is not fully funded. Another material factor in the current funding shortfall is the benefit enhancements triggered in 2007 (i.e., 65% floor COLA and the 1.5% COLA for all retirees).

The schedule of employer contributions is shown in Table 11 and shows that, except for the most recent two years, the employer has consistently made contributions equal to or greater than the Actuarial Required Contribution (ARC).

Table 8 develops the Annual Pension Cost (APC) and Net Pension Obligation (NPO). The NPO can be thought of as the accumulated value of APC in excess of employer contributions. Because contributions have exceeded the APC in prior years, a negative NPO has built up. The current Board policy is to set the ARC equal to the fixed contribution rate, solving for the amortization period.

If the fixed rate is not sufficient to fund the UAAL over a period of 30 years or less, the ARC will be equal to the amount needed to fund the normal cost for the year plus a 30-year amortization payment of the UAAL. This is the minimum allowed for accounting purposes under current GASB parameters. Note that, per GASB requirements, the ARC does not include an assumption for expected future growth in membership.

Actuarial Information (continued)

Despite the large increase in the ARC, which was not fully funded by SCERS, the NPO remains negative due to the large negative balance previously accumulated through past contributions in excess of the ARC. However, this has been significantly depleted and a large buffer no longer exists.

Table 8 GASB Statement No. 27 Annual Pension Cost and Net Pension Obligation

For Fiscal Year Ending December 31, 2011
Based on January 1, 2011 Valuation

		Fiscal Year Ended December 31	
		2010	**2011**
1a	Total Normal Cost Rate	15.23%	15.19%
1b	Employee Contribution Rate	8.03%	9.03%
1c	Employer Normal Cost Rate (1a - 1b)	7.20%	6.16%
2a	Total Employer Contribution Rate	8.03%	9.03%
2b	Amortization Payment Rate (2a - 1c)	0.83%	2.87%
2c	Amortization Period	does not amortize	does not amortize
2d	GASB 27 Amortization Rate	9.80%	6.95%
3	Total Annual Required Contribution (ARC) Rate (1c + 2d)*	17.00%	13.11%
4	Covered Employee Payroll**	563,197,846	557,046,102
5a	ARC (3 x 4)	95,743,634	73,028,744
5b	Interest on Net Pension Obligation (NPO)	(6,034,612)	(2,260,465)
5c	ARC Adjustment	4,214,432	1,578,656
5d	Annual Pension Cost (APC) (5a + 5b + 5c)	93,923,454	72,346,935
6	Employer Contribution	45,224,787	50,301,263
7a	Change in NPO (5d - 6)	48,698,667	22,045,672
7b	NPO at Beginning of Year	(77,865,963)	(29,167,296)
7c	NPO at End of Year (7a + 7b)	(29,167,296)	(7,121,624)

* *If the amortization period determined by the actual contribution rate exceeds the maximum amortization period required by GASB Statement No. 27, the ARC is determined using an amortization of the UAAL over 30 years.*

** *Covered payroll includes compensation paid to all active employees on which contributions were made in the year preceding the valuation date.*

Table 9 Schedule of Funding Progress

(All dollar amounts in millions)

Actuarial Valuation Date January 1	Actuarial Value of Assets	Actuarial Accrued Liabilities (AAL)	Unfunded Actuarial Accrued Liabilities (UAAL)	Funded Ratio	Covered Payroll[(1)]	UAAL as a Percentage of Covered Payroll
1984	$ 329.8	$ 544.0	$ 214.2	60.6%	$ 159.4	134.4%
1986	395.7	561.3	165.6	70.5	182.0	91.0
1988	445.4	595.3	149.9	74.8	199.0	75.3
1990	558.8	737.9	179.1	75.7	212.3	84.4
1992	660.0	810.5	150.5	81.4	239.4	62.9
1994	781.8	926.2	144.4	84.4	291.8	49.5
1996	980.2	1,019.7	39.5	96.1	310.6	12.7
1997	1,094.8	1,087.3	(7.5)	100.7	316.9	(2.4)
1998 [(2)]	1,224.6	1,266.7	42.1	96.7	341.5	12.3
1999	1,375.0	1,326.6	(48.4)	103.6	370.4	(13.1)
2000	1,582.7	1,403.1	(179.6)	112.8	383.6	(46.5)
2002	1,383.7	1,581.4	197.7	87.5	405.1	48.8
2004	1,527.5	1,778.9	251.4	85.9	424.7	59.2
2006	1,791.8	2,017.5	225.8	88.8	447.0	50.5
2008	2,119.4	2,294.6	175.2	92.4	501.9	34.9
2010	1,645.3	2,653.8	1,008.5	62.0	580.9	173.6
2011	2,013.7	2,709.0	695.4	74.3	563.2	123.5
2012	1,954.3	2,859.3	905.0	68.3	557.0	162.5

(1) *Covered Payroll includes compensation paid to all active employees on which contributions are calculated. Covered Payroll differs from the Active Member Valuation Payroll shown in Table 1, which is an annualized compensation of only those members who were active on the actuarial valuation date.*

(2) *Reflects increased COLA benefits adopted by the City Council after the valuation was completed.*

Table 10 Solvency Test

(All dollar amounts in millions)

		Actuarial Accrued Liabilities for				Portion of Actuarial Accrued Liabilities Covered by Assets			
		(A)	(B)	(C)	(D)				
Actuarial Valuation Date January 1	Actuarial Value of Valuation Assets	Active Member Contributions	Inactives, Retirees and Beneficiaries	Active Members (Employer Financed Portion)	Total	(A)	(B)	(C)	(D)
1984	$ 329.8	$ 90.1	$ 243.0	$ 210.9	$ 544.0	100.0%	98.6%	0.0%	60.6%
1986	395.7	110.7	263.1	187.5	561.3	100.0	100.0	11.7	70.5
1988	445.4	136.0	303.6	155.7	595.3	100.0	100.0	3.7	74.8
1990	558.8	164.0	332.8	241.1	737.9	100.0	100.0	25.7	75.7
1992	660.0	202.6	357.9	250.0	810.5	100.0	100.0	39.8	81.4
1994	781.8	248.4	383.1	294.7	926.2	100.0	100.0	51.0	84.4
1996	980.2	294.1	409.3	316.3	1,019.7	100.0	100.0	87.5	96.1
1997	1,094.8	313.1	449.8	324.4	1,087.3	100.0	100.0	100.0	100.7
1998 (1)	1,224.6	337.3	551.8	377.6	1,266.7	100.0	100.0	88.9	96.7
1999	1,375.0	358.4	577.6	390.6	1,326.6	100.0	100.0	100.0	103.6
2000	1,582.7	385.2	599.4	418.5	1,403.1	100.0	100.0	100.0	112.8
2002	1,383.7	434.3	675.6	471.5	1,581.4	100.0	100.0	58.1	87.5
2004	1,527.5	482.5	758.9	537.5	1,778.9	100.0	100.0	53.2	85.9
2006	1,791.8	539.7	902.2	575.6	2,017.5	100.0	100.0	60.8	88.8
2008	2,119.4	590.1	1,084.9	619.6	2,294.6	100.0	100.0	71.7	92.4
2010	1,645.3	684.7	1,176.4	792.7	2,653.8	100.0	81.7	0.0	62.0
2011	2,013.7	683.7	1,290.9	734.4	2,709.0	100.0	100.0	5.3	74.3
2012	1,954.3	730.9	1,393.7	734.7	2,859.3	100.0	87.8	0.0	68.3

(1) *Reflects increased COLA benefits adopted by the City Council after the valuation was completed.*

Table 11 Schedule of Employer Contributions

(All dollar amounts in millions)

Fiscal Year Ending December 31	Covered Employee Payroll[1]	Actual Employer Contributions[2]	Actual Employer Contribution %[3]	Annual Required Contribution (ARC) %[4]	Percentage of ARC Contributed
1989	$ 212.3	$ 25.1	8.91%	8.91%	159.4%
1990	243.2	21.8	8.91	8.91	100.0
1991	239.4	21.5	8.91	8.91	100.0
1992	280.4	25.1	8.91	8.91	100.0
1993	291.8	26.1	8.91	8.91	100.0
1994	298.0	26.7	8.91	8.91	100.0
1995	310.6	27.8	8.91	8.91	100.0
1996	316.9	28.4	8.91	8.91	100.0
1997	316.3	28.3	8.91	8.91	100.0
1998 [4]	341.5	30.6	8.91	8.91	100.0
1999	370.4	29.7	8.03	4.50	178.0
2000	383.6	30.8	8.03	4.50	178.0
2001	405.1	32.7	8.03	3.04	264.0
2002	454.5	36.6	8.03	3.04	264.0
2003	424.7	34.2	8.03	8.03	100.0
2004	456.8	36.7	8.03	8.03	100.0
2005	447.0	35.9	8.03	8.03	100.0
2006	472.5	37.9	8.03	8.03	100.0
2007	501.9	40.3	8.03	8.03	100.0
2008	572.4	46.0	8.03	8.03	100.0
2009	580.9	46.7	8.03	8.03	100.0
2010	563.2	45.2	8.03	17.00	47.2
2011	557.0	50.3	9.03	13.11	68.9

(1) *Computed as the dollar amount of the actual employer contribution made as a percentage of payroll divided by the contribution rate, expressed as a percentage of payroll.*

(2) *The actual and required employer contributions are expressed as a percentage of payroll, after first recognizing the $12 per employee assessment made the death benefits. This assessment per employee is included in the actual employer contributions reported and has been previously recognized by the actuary in determining the ARC.*

(3) *The City makes employer contributions as a percentage of actual payroll as set in the City Ordinance. Thus, as long as the percentage equals the percentage required by the most recent actuarial valuation, the dollar amount of the Annual Required Contributions (ARC) is equal to the actual dollar amount of the employer contributions. The City Ordinance does not permit a reduction in the employer contribution rate less than the employee contribution rate. Thus, the City's contributions exceeded the ARC for 1999 through 2001 and resulted in a negative NPO amount.*

(4) *ARC reflects the increased COLA benefits adopted in 1998. ARC is calculated assuming 0.0% population growth.*

Table 12 GASB Statement No. 27 Five-Year Trend Information

Fiscal Year Ending	Annual Pension Cost (APC)	Contribution as a Percentage of APC	Net Pension Obligation (NPO)
December 31, 2007	40,114,562	100%	(78,433,500)
December 31, 2008	46,245,324	99%	(78,149,216)
December 31, 2009	46,933,422	99%	(77,865,963)
December 31, 2010	93,923,454	48%	(29,167,296)
December 31, 2011	72,346,935	70%	(7,121,624)

Table 13 GASB Statement No. 27 Annual Development of Pension Cost

Fiscal Year Ending	ARC at EOY	Interest on NPO	ARC Adjustment	Annual Pension Cost (APC)	Total Employer Contributions	Change in NPO	NPO Balance	Gain/Loss	Amort. Factor	Amort. Of Gain/Loss	Ending Balance
December 31, 2007	40,299,506	(6,064,263)	5,879,319	40,114,562	40,299,506	(184,944)	(78,433,500)	-	13.30912	(5,879,319)	(78,433,500)
December 31, 2008	45,961,040	(6,078,596)	6,362,880	46,245,324	45,961,040	284,284	(78,149,216)	-	12.32673	(6,362,880)	(78,149,216)
December 31, 2009	46,650,169	(6,056,564)	6,339,817	46,933,422	46,650,169	283,253	(77,865,963)	-	12.32673	(6,339,817)	(77,865,963)
December 31, 2010	95,743,634	(6,034,612)	4,214,432	93,923,454	45,224,787	48,698,667	(29,167,296)	50,518,847	18.47603	(4,214,432)	(29,167,296)
December 31, 2011	73,028,744	(2,260,465)	1,578,656	72,346,935	50,301,263	22,045,672	(7,121,624)	22,727,481	18.47603	(1,578,656)	(7,121,624)

Amortization Period: Open 30 years, unless fixed rate amortizes in less than 30 years.
Amortization Method: Level Percentage of Projected Payroll.

Section 7 Actuarial Gains or Losses

An analysis of actuarial gains or losses was performed in conjunction with the January 1, 2010, January 1, 2011 and January 1, 2012 actuarial valuations.

The results of our analysis of the financial experience of the System in the three most recent actuarial valuations are presented in Table 14. Each gain or loss shown represents our estimate of how much the given type of experience caused the UAAL to change in the period since the previous actuarial valuation.

Gains and losses due to demographic sources are approximate. Demographic experience is analyzed in greater detail in our periodic assumption studies.

There were two non-recurring items that are reflected in the current year's actuarial gains and losses:

- The revision to the member crediting rate policy for member contributions made after January 1, 2012 is reflected in this valuation. This change caused a decrease in the UAAL.

- A small number of SCERS members (those employed by Metro/King County) were not reported in the 2011 valuation data. These employees were reported in the valuation data for January 1, 2012, causing an increase in the UAAL.

Seattle City Employees' Retirement System
Actuarial Valuation

Table 14 Analysis of Actuarial Gains or Losses

(All dollar amounts in millions)*

	Gain (Loss) for Period		
	2011	**2010**	**2008-2009**
Investment Income. Investment income on AVA was greater (less) than assumed.	$(173.9)	$82.7	$(765.5)
Pay Increases. Pay increases were less (greater) than expected.	31.7	96.0	(6.4)
Age and Service Retirements. Members retired at older (younger) ages or with less (greater) final average pay than expected.	14.4	0.7	2.1
Disability Retirements. Disability claims were less (greater) than expected.	(0.1)	(0.2)	(0.3)
Death-in-Service Benefits. Survivor claims were less (greater) than expected.	0.0	0.0	0.0
Withdrawal from Employment. More (less) reserves were released by withdrawals than expected.	(16.8)	(8.5)	34.8
Death after Retirement. Retirees died younger (lived longer) than expected.	(7.8)	(3.7)	(3.9)
Total Gain or (Loss) during Period from Financial Experience.	$(152.5)	$167.0	$(739.2)
Nonrecurring Items:			
Changes in actuarial assumptions and plan amendments caused a gain (loss).	9.1	23.8	(119.1)
Data revisions	(30.5)	0.0	0.0
Change in actuarial asset valuation method caused a gain (loss).	N/A	200.9	N/A
Composite Gain (Loss) during Period.	$(173.9)	$391.7	$(858.3)

* *Effects related to losses are shown in parentheses. Numerical results are expressed as a decrease (increase) in the UAAL.*

Section 8 Contribution Rate Projections and Increases

This section of the January 1, 2012 actuarial valuation is devoted to a detailed discussion of the contribution rates currently needed, and projected to be needed, in order to effectively fund the System.

This section illustrates two key points:

1. As mentioned throughout this report, the current AVA is deferring a relatively large loss based on the 2008 market downturn and the 2011 asset loss. As a result, if no actuarial asset gains or losses were to occur over the next several years (i.e., the market return equals 7.75%), the Funding Ratio would be projected to decrease as the remaining deferred losses are fully phased in.

2. Currently, SCERS is contributing a total rate of 21.04% of payroll. The actual contribution rate needed will vary in the future. We have shown projections to roughly quantify the potential impact of good and bad experience.

Projection of Actuarial Required Contribution Rate

We have performed a five-year projection of the actuarial required contribution rate under three different scenarios:

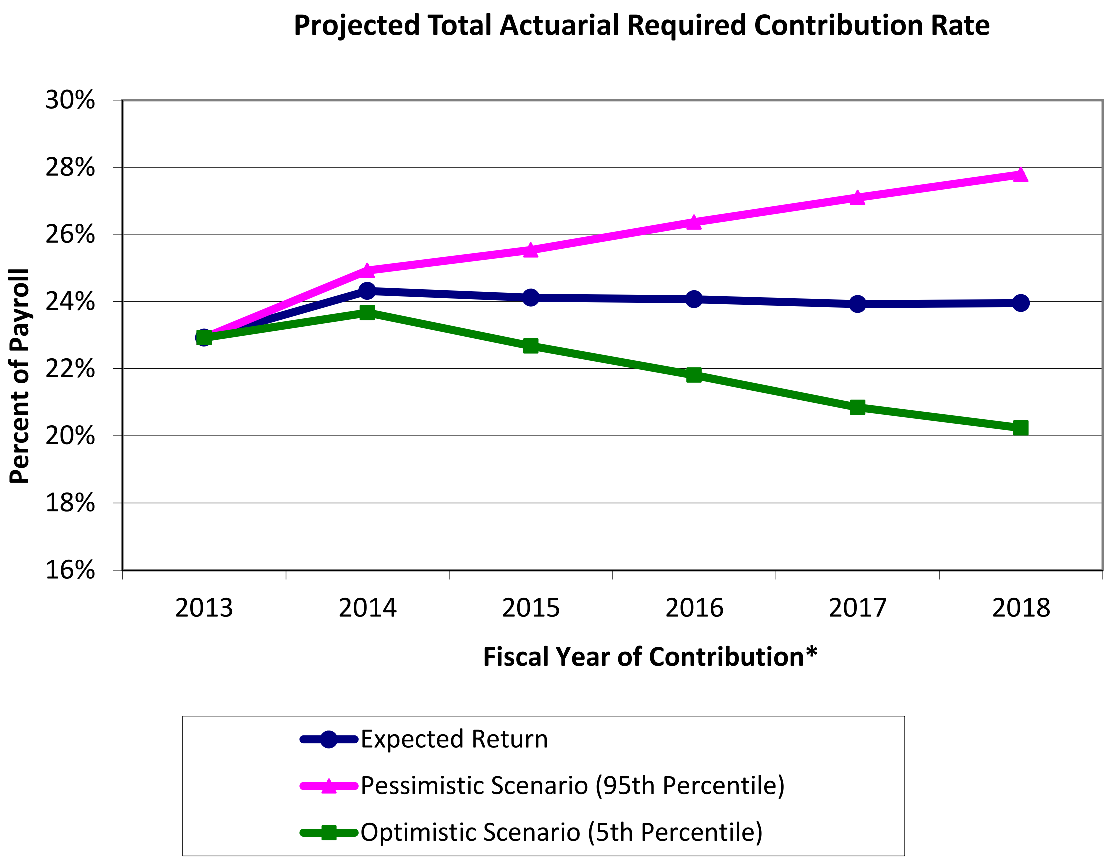
1. Assuming that the investment return assumption is met in each future year.
2. Assuming that the assets return at the 5th percentile.
3. Assuming that the assets return at the 95th percentile.

The result is effectively a 90% confidence interval (based on asset returns) of the projected contribution rates in these years.

The projections assume the City contributes the actuarial required contribution rate each year in the future. Future returns are stochastically generated based on Milliman's capital market assumptions and SCERS's target asset allocation.

Table 15 provides the results of these projections.

Table 15 Projected Total Contribution Rates



Projected Actuarial Required Total Contribution Rate

Contribution Year*	95th Percentile	Assuming 7.75% Future Returns	5th Percentile
2013	22.92%	22.92%	22.92%
2014	24.92%	24.31%	23.67%
2015	25.53%	24.12%	22.67%
2016	26.36%	24.07%	21.80%
2017	27.09%	23.92%	20.84%
2018	27.78%	23.95%	20.23%

** Contribution year lags calculation year by 1. For example: Contribution Year 2013 is based on the 2012 valuation results, amortized over 30 years beginning in 2012, if the increase takes place in 2013.*

Contribution Increases

The current contribution rate needs to be increased in order to be sufficient to amortize the UAAL over a 30-year period. As of January 1, 2013, the actuarial required contribution rate of 22.92% is projected to be needed.

This represents a needed increase of 1.88% of pay, in addition to the current 21.04% of pay being contributed (by the employer and members combined). Note that due to the future recognition of deferred asset losses, this amount is expected to increase in the next valuation.

Appendix A Actuarial Procedures and Assumptions

This section of the report describes the actuarial procedures and assumptions used in this valuation. The assumptions used in this valuation were adopted by the SCERS Board at their June, 2011 meeting.

The actuarial assumptions used in the valuation are intended to estimate the future experience of the members of the System and of the System itself in areas that affect the projected benefit flow and anticipated investment earnings. Any variations in future experience from that expected from these assumptions will result in corresponding changes in the estimated costs of the System's benefits. Table A-1 summarizes the actuarial assumptions.

Table A-2 presents expected annual salary increases for various years of service. Tables A-3 through A-6 show rates of decrement for service retirement, disablement, mortality, and other terminations of employment. Table A-7 shows probabilities of vesting upon termination.

Actuarial Cost Method

The actuarial valuation was prepared using the entry age actuarial cost method. Under this method, the actuarial present value of the projected benefits of each individual included in the valuation is allocated as a level percentage of the individual's projected compensation between entry age and assumed exit. The portion of this actuarial present value allocated to a valuation year is called the normal cost. The portion of this actuarial present value not provided for at a valuation date by the sum of (a) the actuarial value of the assets, and (b) the actuarial present value of future normal costs is called the unfunded actuarial accrued liability or UAAL. The UAAL is amortized as a level percentage of the projected salaries of present and future members of the System.

Records and Data

The data used in the valuation consist of financial information; records of age, sex, service, salary, and contribution rates and account balances of contributing members; and records of age, sex, and amount of benefit for retired members and beneficiaries. All of the data were supplied by the System and are accepted for valuation purposes without audit.

Replacement of Terminated Members

The ages at entry and distribution by sex of future members are assumed to average the same as those of the present members they replace. If the number of active members should increase, it is further assumed that the average entry age of the larger group will be the same, from an actuarial standpoint, as that of the present group. Under these assumptions, the normal cost rates for active members will not vary with the termination of present members.

Employer Contributions

For 2012, the total employer contribution rate for normal costs and amortization of the UAAL was 11.01% of members' salaries. The employer contribution rate is determined as of the prior year's valuation such that the combined employee and employer contribution rate is sufficient to amortize the UAAL over a 30-year period. The amortization payment is based on a level percent of pay.

Administrative Expense

The annual contribution assumed to be necessary to meet general administrative expenses of the system, excluding investment expenses, is 0.40% of members' salaries. This figure is included in the calculation of the normal cost rate.

Valuation of Assets

The assets are valued using a five-year smoothing method based on the difference between the expected market value and the actual market value of the assets in each year. The expected market value is the prior year's market value increased with the net increase in the cash flow, all increased with interest during the past fiscal year at the expected investment return rate assumption.

Investment Earnings

The annual rate of investment earnings of the assets of the System is assumed to be 7.75%. This rate is compounded annually and is net of investment expenses.

Postretirement Benefit Increases

Postretirement benefit increases include:

- Automatic 1.5% Annual COLA. This benefit applies to all members.
- 65% Restoration of Purchasing Power (ROPP). The member's benefit is the greater of 65% of the annual initial benefit adjusted for CPI or their applicable benefit. This minimum benefit is available to all retirees and beneficiaries. The financial impact of the ROPP benefit is valued, assuming an annual price inflation rate of 3.5%.

Additional contingent COLA increases that were adopted in 2001, but will not be effective until the System reaches at least a 100% Funding Ratio, are not included in the valuation results.

Future Salaries	Table A-2 illustrates the rates of future salary increases assumed for the purpose of the valuation. In addition to increases in salary due to promotions and longevity, this scale includes an assumed 4.0% per annum rate of increase in the general wage level of the membership.
Service Retirement	Table A-3 shows the annual assumed rates of retirement among members eligible for service retirement or reduced retirement. Separate rates are also used during the first year a member is eligible for service retirement.
Disablement	The rates of disablement used in this valuation are illustrated in Table A-4. It is assumed that one-third of all disabilities are duty related and two-thirds occur while off duty.
Mortality	The mortality rates used in this valuation are illustrated in Table A-5. A written description of each table used is included in Table A-1.
Other Terminations of Employment	The rates of assumed future withdrawal from active service for reasons other than death, disability or retirement are shown for representative ages in Table A-6. Note that this assumption only applies to members who terminate and are not yet eligible for retirement.
Probability of Refund	Terminating members may forfeit a vested right to a deferred benefit if they elect a refund of their accumulated contributions. Table A-7 gives the assumed probability, at selected ages, that a terminating member will elect to receive a refund of his accumulated contributions instead of a deferred benefit. If a member terminates with more than 20 years of service, there is assumed to be a 20% probability that the member will elect a refund. Note that the probability of refund assumption only applies to members who terminate with a vested benefit and are not yet eligible for retirement.
Interest on Member Contributions	Interest on member contributions made prior to January 1, 2012 is assumed to accrue at a rate of 5.75% per annum, compounded annually. Interest on member contributions made on or after January 1, 2012 is assumed to accrue at 5.00%.
Portability	The cost of portability with other public retirement systems is not included in this valuation.

Probability of Marriage	We assumed 60% of the active members are married or have a registered domestic partner.
Commencement for Terminated Vested Members	Vested members who terminate but elect to leave their contributions in the System are assumed to commence receiving benefits at age 62.

Table A-1 Summary of Valuation Assumptions as of January 1, 2012

I. Economic assumptions

A.	Price inflation	3.50%
B.	General wage increases	4.00
C.	Investment return	7.75
D.	Increase in membership	1.00
E.	Interest on member accounts	5.75/5.00*

II. Demographic assumptions

A.	Salary increases due to promotion and longevity	Table A-2
B.	Retirement	Table A-3
C.	Disablement	Table A-4
D.	Mortality** among contributing members Men RP 2000 Employees Table for Males, with ages set back three years. Women RP 2000 Employees Table for Females, with ages set back three years.	Table A-5
E.	Mortality** among service retired members and beneficiaries Men RP2000 Combined Healthy Males, with ages set back one year. Women RP2000 Combined Healthy Females, with ages set back one year.	Table A-5
F.	Mortality** among disabled members Men RP2000 Disabled Males, with ages set back four years. Women RP2000 Disabled Females, with ages set back four years.	Table A-5
G.	Other terminations of employment	Table A-6
H.	Probabilities of vesting on termination	Table A-7

* *Member contributions made prior to January 1, 2012 are assumed to accrue interest at 5.75%; contributions made on or after that date are assumed to accrue at 5.00%.*

** *All mortality tables are generational using Projection Scale AA to reflect expected future mortality improvement.*

Table A-2 Future Salaries

Annual Rate of Increase

Years of Service	Promotion and Longevity	Total
0 to 1	4.50%	8.68%
1 to 2	3.50	7.64
2 to 3	2.75	6.86
3 to 4	2.00	6.08
4 to 5	1.50	5.56
9 to 10	0.80	4.83
14 to 15	0.45	4.47
19 to 20	0.29	4.30
24 to 25	0.25	4.26
29 to 30	0.25	4.26
35 or more	0.25	4.26

Table A-3 Retirement

	Annual Probability					
	Men			Women		
		Eligible for Full Benefits			Eligible for Full Benefits	
Age	**Eligible for Reduced Benefits**	**Less than 30 years of service**	**30 years or more of service**	**Eligible for Reduced Benefits**	**Less than 30 years of service**	**30 years or more of service**
Less than 50	0.0%	10.0%	8.0%	0.0%	10.0%	10.0%
50	6.0	10.0	10.0	5.0	10.0	12.0
51	6.0	10.0	10.0	5.0	10.0	12.0
52	6.0	12.0	12.0	5.0	10.0	12.0
53	5.0	9.0	12.0	4.0	10.0	12.0
54	5.0	8.0	12.0	5.0	10.0	13.0
55	6.0	10.0	12.0	5.0	10.0	15.0
56	6.0	8.0	12.0	5.0	10.0	13.0
57	6.0	8.0	12.0	5.0	13.0	15.0
58	6.0	8.0	12.0	5.0	13.0	13.0
59	6.0	10.0	15.0	8.0	13.0	14.0
60	7.0	10.0	15.0	8.0	15.0	17.0
61	9.0	16.0	15.0	13.0	15.0	16.0
62	16.0	27.0	30.0	18.0	21.0	28.0
63	12.0	18.0	22.0	13.0	17.0	22.0
64	12.0	18.0	22.0	13.0	17.0	22.0
65		40.0	32.0		35.0	30.0
66		37.0	32.0		40.0	33.0
67		32.0	32.0		35.0	33.0
68		28.0	26.0		30.0	30.0
69		28.0	26.0		30.0	30.0
70		*	*		*	*

* *Immediate retirement is assumed for every person age 70 or over.*

Table A-4 Disablement

	Annual Rates	
Age	**Men**	**Women**
20	.00%	.00%
25	.00	.00
30	.04	.04
35	.04	.04
40	.05	.05
45	.05	.05
50	.08	.08
55	.08	.08
60	.08	.08
65	.00	.00

Note: It is assumed that one-third of all disabilities are duty related and two-thirds are non-duty related.

Table A-5 Mortality

	Annual Probability*					
	Contributing Members		Members Retired for Service and Beneficiaries of Members		Disabled Members	
Age	Men	Women	Men	Women	Men	Women
22	0.03 %	0.02 %	0.04 %	0.02 %	2.26 %	0.74 %
27	0.04	0.02	0.04	0.02	2.26	0.74
32	0.04	0.02	0.05	0.03	2.26	0.74
37	0.07	0.04	0.08	0.05	2.26	0.74
42	0.10	0.06	0.11	0.08	2.26	0.74
47	0.14	0.10	0.16	0.12	2.26	0.74
52	0.20	0.16	0.24	0.19	2.64	0.98
57	0.28	0.23	0.42	0.31	3.29	1.45
62	0.44	0.36	0.77	0.58	3.93	1.97
67	0.70	0.54	1.44	1.10	4.66	2.53
72	N/A	N/A	2.46	1.86	5.69	3.32
77	N/A	N/A	4.22	3.10	7.33	4.58
82	N/A	N/A	7.20	5.08	9.76	6.35
87	N/A	N/A	12.28	8.64	12.83	8.78
92	N/A	N/A	19.98	14.46	16.22	12.25

**The mortality rates shown above are generationally projected on an individual basis using Projection Scale AA for the valuation.*

Table A-6 Other Terminations of Employment Among Members Not Eligible to Retire

Years of Service	Annual Rates for Men	Annual Rates for Women
0 to 1	7.0%	8.5%
1 to 2	6.5	8.3
2 to 3	6.3	8.0
3 to 4	6.0	7.8
4 to 5	5.5	7.5
5 to 6	5.0	7.0
6 to 7	4.5	6.3
7 to 8	4.0	5.7
8 to 9	3.6	5.1
9 to 10	3.2	4.5
10 to 11	2.8	4.0
11 to 12	2.5	3.5
12 to 13	2.3	3.2
13 to 14	2.0	2.9
14 to 15	1.8	2.6
15 to 16	1.6	2.3
16 to 17	1.4	2.0
17 to 18	1.2	1.7
18 to 19	1.1	1.4
19 to 20	1.0	1.2
20 to 21	0.9	1.1
21 to 22	0.8	1.0
22 to 23	0.8	0.9
23 to 24	0.7	0.8
24 to 25	0.7	0.8
25 to 26	0.6	0.7
26 to 27	0.6	0.7
27 to 28	0.5	0.6
28 to 29	0.5	0.6
29 to 30	0.4	0.5
30 and up	0.5	0.5

Table A-7 Probability of Refund

Age	Probabilities of Refund upon Termination*
25	70.0%
30	65.0
35	55.0
40	48.0
45	43.0
50	38.0
55	36.0
60	40.0

* *If service is 20 or more years at termination, probability of refund is equal to 20%.*

Appendix B Provisions of Governing Law

All actuarial calculations are based upon our understanding of the provisions governing the Seattle City Employees' Retirement System, Chapter 4.36 of the Seattle City Code. The benefit and contribution provisions are summarized briefly below, along with corresponding references to the City code. This summary encompasses the major provisions of the System; it does not attempt to cover all of the detailed provisions.

Effective Date

The effective date of the retirement system was July 1, 1929. (Section 4.36.080)

Members' Contribution Rate

The members' contribution rate is 10.03% of salary as of January, 2012. Certain members who were contributing at a lower rate on June 23, 1972 continue to contribute at a lower rate.
(Section 4.36.110A)

City Contribution Rate

The City contribution rate is the amount that is actuarially determined to be necessary to fund that portion of the retirement allowances not covered by the members' contributions. This amount shall be at least the members' contribution rate.
(Sections 4.36.110C and 4.36.170)

Final Compensation

Final compensation is based on highest average compensation (excluding overtime) during any consecutive 24 months.
(Sections 4.36.040C and 4.36.050B)

Service Retirement

Eligibility
30 years of service;

Age 52 and 20 years of service;

Age 57 and 10 years of service; or

Age 62 and 5 years of service.

Normal Form
Straight life benefit.

Optional Forms
Actuarial equivalent according to the mortality and interest basis adopted by the Retirement Board for such purposes.

Service Retirement (continued)

Amount of Allowance
The total monthly allowance is generally 2% times final compensation times total years of creditable service.

However, if the member does not qualify in one of the following ways, the 2% factor is reduced by 0.1% for each year that retirement precedes the earliest date the member would be:

(a) any age with 30 years of service
(b) age 51-59, providing the member's age and years of service total 80 or more
(c) age 60 or older with 20 years of service
(d) age 65 or older with five years of service

The reduction is somewhat less than 0.1% for members with less than 20 years of service.

For those hired on or after January 1, 1988, creditable service excludes the first six months of service.

Maximum Allowance
The formula-based retirement allowance (as described above) of any member shall be limited to 60% of final compensation, except where the minimum allowance described below applies.

Minimum Allowance
A monthly benefit based on twice the actuarial value of accumulated member contributions. This is not subject to the 60% of final compensation maximum.
(Sections 4.36.200, 4.36.210 and 4.36.260)

Note: Effective January 1, 2011, the conversion of the contributions to an annuity benefit in the minimum allowance reflects option factors that use the new mortality rates.

Disability Retirement

Eligibility
Ten years of service credited within the 15 years preceding disability retirement. If disablement occurs in the course of City employment, there is no service requirement.

Normal Form
Modified cash refund annuity. An optional survivor's benefit is available if the spouse is the beneficiary.

Amount of Allowance
The total monthly disability allowance is the greater of:

(a) 1.5% times final compensation times completed years of creditable service.
(b) 1.5% times final compensation times total years of creditable service that could have been earned to age 62, but not to exceed one-third of final compensation.

Maximum Allowance
The maximum disability allowance is 60% of final compensation.

Minimum Allowance
The minimum disability allowance is $140 per month.

(Sections 4.36.220 and 4.36.230)

Death Benefits

Retired Members
Death benefits to retired members are payable according to the form of retirement allowance elected.

Active Members
(a) Payment to the beneficiary of accumulated contributions, including interest; or
(b) If the member had completed 10 years of service at the time of death, a surviving spouse or a registered domestic partner may elect to receive, in place of (a) above, either:
  (1) A monthly allowance for life equal to the benefit the spouse would have received had the member just retired with a 100% contingent annuitant option in force; or
  (2) A cash payment of no more than one-half of the member's accumulated contributions, along with a correspondingly reduced retirement allowance.

(Section 4.36.270)

Withdrawal Benefits

Form
Payment of accumulated contributions, with interest.

(Section 4.36.190)

Vested Withdrawal Benefits	*Eligibility* Five years of service. *Amount of Allowance* Same as service retirement benefit. *Benefits Commence* Age 52, if 20 or more years of service; Age 57, if 10-19 years of service; or Age 62, regardless of years of service. (Section 4.36.200)
Postretirement Benefit Increases	*Provisions* Effective January 1, 2007, the City Council adopted a 65% Restoration of Purchasing Power benefit and an automatic 1.5% annual COLA to all members. If the System reaches a 100% Funding Ratio, the restoration amount increases to 70%. (Sections 4.36.155 and 4.36.215)
Death Benefit System	*Eligibility* Mandatory for all active members; optional for retired members. *Benefits* $2,000 upon the death of an active member or a participating retired member. *Assessment* Members pay an assessment of $12 per year; the City pays a matching amount. If these assessments are not adequate, additional amounts may be transferred from the interest earnings in the retirement fund. (Sections 4.36.320 and 4.36.330)
Additional Contributions	*Provisions* Members may voluntarily make contributions in excess of the regular rate; these are make-up contributions that apply only in specific situations. *Retirement Benefit* A monthly annuity which is the actuarial equivalent of accumulated additional contributions with interest. *Other Benefits* Accumulated additional contributions, with interest, generally become payable upon termination other than retirement. (Sections 4.36.030 and 4.36.210)

Appendix C Valuation Data

This valuation is based upon the membership of the system as of January 1, 2012. Membership data were supplied by the System and accepted for valuation purposes without audit. However, extensive tests were performed to ensure that the data are sufficiently accurate for valuation purposes.

The data for all contributing members, former contributing members, and their survivors are summarized in Table C-1.

Tables C-2 through C-4 present distributions of members receiving service retirement benefits, members receiving disability retirement benefits, and survivors receiving benefits. Shown in the tables are the numbers of persons receiving benefits, the total annual benefits received (including payments for the annual bonus), and the average annual benefit per recipient.

Table C-5 contains summaries of the data for contributing members. Values shown in the tables are the numbers of members and their total and average annual salaries.

The valuation also includes liabilities attributable to members who have terminated employment but have neither retired nor withdrawn their contributions.

Seattle City Employees' Retirement System
Actuarial Valuation

Table C-1 Summary of Membership Data

	Contributing Members			Annuitants		
	Number	Annual Salaries ($1,000)	Average Annual Salaries	Number	Annual Benefits ($1,000)	Average Annual Benefits
January 1, 2012	8,430	$ 560,412	$ 66,476	5,580	$ 128,645	$ 23,056
January 1, 2011	8,599	569,472	66,225	5,428	118,920	21,909
January 1, 2010	9,071	596,892	65,802	5,304	108,886	20,529
January 1, 2008	8,842	529,062	59,835	5,201	102,772	19,760
January 1, 2006	8,521	468,096	54,934	5,011	83,988	16,761
January 1, 2004	8,382	441,562	52,680	4,876	74,341	15,246
January 1, 2002	8,758	418,908	47,831	4,733	61,801	13,058
January 1, 2000	8,669	382,620	44,137	4,681	55,542	11,865
January 1, 1999	7,779	333,984	42,934	4,644	52,482	11,301
January 1, 1998	7,926	329,028	41,512	4,649	50,394	10,840
January 1, 1996	8,078	314,448	38,926	4,619	44,271	9,585

Seattle City Employees' Retirement System
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Inactive Lives

Table C-2 Members Receiving Service Retirement Benefits as of January 1, 2012

	<50	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85-89	90+	Totals
Number of Persons											
Male	1	21	127	445	715	503	363	261	241	145	2,822
Female	0	17	129	383	479	261	179	141	137	125	1,851
Total	1	38	256	828	1,194	764	542	402	378	270	4,673
Annual Benefits in Thousands											
Male	$ *	$ 922	$ 4,510	$ 14,693	$ 20,208	$ 13,562	$ 8,280	$ 5,721	$ 5,117	$ 2,707	$ 75,720
Female	0	576	4,000	10,791	11,187	5,149	3,263	2,234	1,621	1,267	40,088
Total	0	1,498	8,510	25,484	31,395	18,711	11,543	7,955	6,738	3,974	115,808
Average Annual Benefits											
Male	$ *	$ 43,905	$ 35,512	$ 33,018	$ 28,263	$ 26,962	$ 22,810	$ 21,920	$ 21,232	$ 18,669	$ 26,832
Female	0	33,882	31,008	28,175	23,355	19,728	18,229	15,844	11,832	10,136	21,657
Total	0	39,421	33,242	30,778	26,294	24,491	21,297	19,789	17,825	14,719	24,782

** Benefit amounts for groups with only one member not shown.*

Seattle City Employees' Retirement System
Actuarial Valuation

Inactive Lives

Table C-3 Members Receiving Disability Retirement Benefits as of January 1, 2012

	<50	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85-89	90+	Totals
Number of Persons											
Male	0	2	5	3	6	5	4	3	4	2	34
Female	2	5	10	5	2	3	3	0	0	1	31
Total	2	7	15	8	8	8	7	3	4	3	65
Annual Benefits in Thousands											
Male	$ 0	$ 28	$ 85	$ 44	$ 81	$ 64	$ 43	$ 36	$ 45	$ 18	$ 444
Female	40	79	164	81	22	27	34	0	0	*	447
Total	40	107	249	125	103	91	77	36	45	18	891
Average Annual Benefits											
Male	$ 0	$ 14,000	$ 17,000	$ 14,667	$ 13,500	$ 12,800	$ 10,750	$ 12,000	$ 11,250	$ 9,000	$ 13,059
Female	20,000	15,800	16,400	16,200	11,000	9,000	11,333	0	0	*	14,419
Total	20,000	15,286	16,600	15,625	12,875	11,375	11,000	12,000	11,250	6,000	13,694

** Benefit amounts for groups with only one member not shown.*

Seattle City Employees' Retirement System
Actuarial Valuation

Inactive Lives

Table C-4 Survivors Receiving Retirement Benefits as of January 1, 2012*

	<50	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85-89	90+	Totals
Number of Persons											
Male	0	3	6	5	6	7	3	7	2	4	43
Female	11	7	22	43	54	58	66	103	168	182	714
Total	11	10	28	48	60	65	69	110	170	186	757
Annual Benefits in Thousands											
Male	$ 0	$ 47	$ 79	$ 41	$ 116	$ 59	$ 22	$ 57	$ 9	$ 17	$ 447
Female	136	79	386	717	858	875	961	1,609	2,316	2,283	10,220
Total	136	126	465	758	974	934	983	1,666	2,325	2,300	10,667
Average Annual Benefits											
Male	$ 0	$ 15,667	$ 13,167	$ 8,200	$ 19,333	$ 8,429	$ 7,333	$ 8,143	$ 4,500	$ 4,250	$ 10,395
Female	12,364	11,286	17,545	16,674	15,889	15,086	14,561	15,621	13,786	12,544	14,314
Total	12,364	12,600	16,607	15,792	16,233	14,369	14,246	15,145	13,676	12,366	14,091

* *In addition, 31 male survivors are receiving $385,415 and 54 female survivors are receiving $894,069 in Option B or Option C benefits for a certain period only.*

Seattle City Employees’ Retirement System
Actuarial Valuation

Active Lives

Table C-5 Distribution of Employees and Salaries as of January 1, 2012

Number of Employees - By Age Group - Males

Nearest Year of Service	<20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70+	Totals
0		8	14	16	16	16	12	12	6	3	1	1	105
1	1	9	15	12	23	13	18	7	15	7	2	2	124
2	2	8	21	21	18	23	24	18	12	9	3		159
3-4		11	70	105	97	97	83	87	49	29	9	1	638
5-9		4	55	143	169	171	141	151	132	76	22	5	1,069
10-14			2	33	93	151	184	176	152	107	33	12	943
15-19					8	70	89	102	84	57	20	4	434
20-24						19	83	122	126	83	23	5	461
25-29							15	73	107	81	23	6	305
30-34							2	49	94	65	22	1	233
35-39								1	27	44	10	3	85
40+										12	15	6	33
Totals	3	40	177	330	424	560	651	798	804	573	183	46	4,589

Monthly Salaries in Thousands - By Age Group - Males

Nearest Year of Service	<20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70+	Totals
0	$	$ 22	$ 64	$ 82	$ 92	$ 78	$ 62	$ 61	$ 41	$ 11	$ 6	$ 1	$ 520
1	1	25	59	61	124	91	108	43	68	58	17	2	657
2	3	15	85	93	104	139	117	110	62	33	24		785
3-4		32	302	554	578	496	487	490	285	163	45	3	3,435
5-9		20	224	732	927	982	775	880	706	410	118	13	5,787
10-14			4	148	533	883	1,113	1,078	863	639	197	58	5,516
15-19					41	427	528	609	487	359	126	29	2,606
20-24						119	527	756	795	523	139	31	2,890
25-29							96	486	690	523	150	32	1,977
30-34							17	329	639	433	129	8	1,555
35-39								6	170	305	61	14	556
40+										80	90	34	204
Totals	4	114	738	1,670	2,399	3,215	3,830	4,848	4,806	3,537	1,102	225	26,488

Seattle City Employees' Retirement System
Actuarial Valuation

Active Lives

Table C-5 Distribution of Employees and Salaries as of January 1, 2012

Average Monthly Salaries - By Age Group - Males

Nearest Year of Service	<20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70+	Totals
0	$	$ 2,750	$ 4,571	$ 5,125	$ 5,750	$ 4,875	$ 5,167	$ 5,083	$ 6,833	$ 3,667	$ 6,000	$ 1,000	$ 4,952
1	1,000	2,778	3,933	5,083	5,391	7,000	6,000	6,143	4,533	8,286	8,500	1,000	5,298
2	1,500	1,875	4,048	4,429	5,778	6,043	4,875	6,111	5,167	3,667	8,000		4,937
3-4		2,909	4,314	5,276	5,959	5,113	5,867	5,632	5,816	5,621	5,000	3,000	5,384
5-9		5,000	4,073	5,119	5,485	5,743	5,496	5,828	5,348	5,395	5,364	2,600	5,413
10-14			2,000	4,485	5,731	5,848	6,049	6,125	5,678	5,972	5,970	4,833	5,849
15-19					5,125	6,100	5,933	5,971	5,798	6,298	6,300	7,250	6,005
20-24						6,263	6,349	6,197	6,310	6,301	6,043	6,200	6,269
25-29							6,400	6,658	6,449	6,457	6,522	5,333	6,482
30-34							8,500	6,714	6,798	6,662	5,864	8,000	6,674
35-39								6,000	6,296	6,932	6,100	4,667	6,541
40+										6,667	6,000	5,667	6,182
Totals	1,333	2,850	4,169	5,061	5,658	5,741	5,883	6,075	5,978	6,173	6,022	4,891	5,772

Seattle City Employees' Retirement System
Actuarial Valuation

Active Lives

Table C-5 Distribution of Employees and Salaries as of January 1, 2012

Number of Employees - By Age Group - Females

Nearest Year of Service	<20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70+	Totals
0	1	5	10	16	13	6	7	6	4	1	1		70
1		8	12	12	20	15	13	11	9	2			102
2	1	7	18	17	19	16	10	7	10	8	1	1	115
3-4		7	51	93	75	52	72	50	40	24	4	1	469
5-9		2	48	109	138	144	127	103	85	59	24	5	844
10-14			3	31	86	127	136	138	113	71	28	9	742
15-19					13	62	62	71	72	48	14	8	350
20-24					2	24	108	132	128	109	33	1	537
25-29							17	101	91	82	18	1	310
30-34								45	84	70	13	1	213
35-39								2	26	39	7	2	76
40+										6	7		13
Totals	2	29	142	278	366	446	552	666	662	519	150	29	3,841

Monthly Salaries in Thousands - By Age Group - Females

Nearest Year of Service	<20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70+	Totals
0	$ 1	$ 9	$ 43	$ 70	$ 83	$ 32	$ 35	$ 32	$ 28	$ 12	$ 7	$	$ 352
1		14	52	51	93	71	62	73	41	8			465
2	1	15	70	69	69	99	58	47	49	32	1	1	511
3-4		15	202	414	399	256	362	277	243	105	13	10	2,296
5-9		8	169	481	721	781	656	538	461	295	116	12	4,238
10-14			9	118	453	696	780	782	621	352	111	16	3,938
15-19					69	315	332	390	410	245	76	27	1,864
20-24					10	114	620	719	776	588	177	7	3,011
25-29							88	611	553	479	103	4	1,838
30-34								268	469	401	74	9	1,221
35-39								13	127	218	44	8	410
40+										31	38		69
Totals	2	61	545	1,203	1,897	2,364	2,993	3,750	3,778	2,766	760	94	20,213

Seattle City Employees' Retirement System
Actuarial Valuation

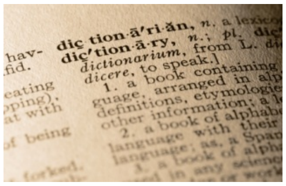
Active Lives

Table C-5 Distribution of Employees and Salaries as of January 1, 2012

Average Monthly Salaries - By Age Group - Females

Nearest Year of Service	<20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70+	Totals
0	$ 1,000	$ 1,800	$ 4,300	$ 4,375	$ 6,385	$ 5,333	$ 5,000	$ 5,333	$ 7,000	$ 12,000	$ 7,000	$	$ 5,029
1		1,750	4,333	4,250	4,650	4,733	4,769	6,636	4,556	4,000			4,559
2	1,000	2,143	3,889	4,059	3,632	6,188	5,800	6,714	4,900	4,000	1,000	1,000	4,443
3-4		2,143	3,961	4,452	5,320	4,923	5,028	5,540	6,075	4,375	3,250	10,000	4,896
5-9		4,000	3,521	4,413	5,225	5,424	5,165	5,223	5,424	5,000	4,833	2,400	5,021
10-14			3,000	3,806	5,267	5,480	5,735	5,667	5,496	4,958	3,964	1,778	5,307
15-19					5,308	5,081	5,355	5,493	5,694	5,104	5,429	3,375	5,326
20-24					5,000	4,750	5,741	5,447	6,063	5,394	5,364	7,000	5,607
25-29							5,176	6,050	6,077	5,841	5,722	4,000	5,929
30-34								5,956	5,583	5,729	5,692	9,000	5,732
35-39								6,500	4,885	5,590	6,286	4,000	5,395
40+										5,167	5,429		5,308
Totals	1,000	2,103	3,838	4,327	5,183	5,300	5,422	5,631	5,707	5,329	5,067	3,241	5,262

Appendix D Glossary



The following definitions are largely excerpts from a list adopted in 1981 by the major actuarial organizations in the United States. In some cases the definitions have been modified for specific applicability to the Seattle City Employees' Retirement System. Defined terms are capitalized throughout this Appendix.

Accrued Benefit

The amount of an individual's benefit (whether or not vested) as of a specific date, determined in accordance with the terms of a pension plan and based on compensation and service to that date.

Actuarial Accrued Liability

That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of pension plan benefits and expenses which is not provided for by future Normal Costs.

Actuarial Assumptions

Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement, and retirement; changes in compensation, rates of investment earnings, and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; and other relevant items.

Actuarial Cost Method

A procedure for determining the Actuarial Present Value of pension plan benefits and expenses and for developing an actuarially equivalent allocation of such value to time periods, usually in the form of a Normal Cost and an Actuarial Accrued Liability.

Actuarial Gain (Loss)

A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions during the period between two Actuarial Valuation dates, as determined in accordance with a particular Actuarial Cost Method.

Actuarial Present Value

The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions.

Actuarial Valuation

The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a pension plan.

Actuarial Value of Assets

The value of cash, investments and other property belonging to a pension plan, as used by the actuary for the purpose of an Actuarial Valuation.

Actuarially Equivalent	Of equal Actuarial Present Value, determined as of a given date with each value based on the same set of Actuarial Assumptions.
Amortization Payment	That portion of the pension plan contribution that is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability or (UAAL).
Entry Age Actuarial Cost Method	A method under which the Actuarial Present Value of the Projected Benefits of each individual included in an Actuarial Valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages. The portion of this Actuarial Present Value allocated to a valuation year is called the Normal Cost. The portion of this Actuarial Present Value not provided for at a valuation date by the Actuarial Present Value of future Normal Costs is called the Actuarial Accrued Liability.
Normal Cost	That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method.
Projected Benefits	Those pension plan benefit amounts which are expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and past and anticipated future compensation and service credits.
Surplus Funding	The excess of the Actuarial Value of Assets over the Actuarial Accrued Liability.
Unaccrued Benefit	The excess of an individual's Projected Benefits over the Accrued Benefits as of a specified date.
Unfunded Actuarial Accrued Liability	The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets.