



State of Alaska Teachers' Retirement System

Actuarial Valuation Report
as of June 30, 2012

July 2013

buckconsultants®

Submitted By:
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State of Alaska Teachers' Retirement System

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July 19, 2013

State of Alaska
The Alaska Retirement Management Board
The Department of Revenue, Treasury Division
The Department of Administration, Division of Retirement and Benefits
P.O. Box 110203
Juneau, AK 99811-0203

Certification of Actuarial Valuation

Dear Members of The Alaska Retirement Management Board, The Department of Revenue and The Department of Administration:

This report summarizes the annual actuarial valuation results of the State of Alaska Teachers' Retirement System (TRS) as of June 30, 2012 performed by Buck Consultants, LLC.

The actuarial valuation is based on financial information provided in the financial statements audited by KPMG LLP and member data provided by the Division of Retirement and Benefits and summarized in this report. The benefits considered are those delineated in Alaska statutes effective June 30, 2012. The actuary did not verify the data submitted, but did perform tests for consistency and reasonableness.

All costs, liabilities and other factors under the System were determined in accordance with generally accepted actuarial principles and procedures. An actuarial cost method is used to measure the actuarial liabilities which we believe is reasonable. Buck Consultants, LLC is solely responsible for the actuarial data and actuarial results presented in this report. This report fully and fairly discloses the actuarial position of the System.

The State of Alaska Teachers' Retirement System is funded by Employer, State, and Member Contributions in accordance with the funding policy adopted by the Alaska Retirement Management Board (Board). The funding objective for the State of Alaska Teachers' Retirement System is to pay required contributions that remain level as a percent of total TRS Compensation. The Board has also established a funding policy objective that the required contributions be sufficient to pay the Normal Costs of active plan members, System expenses, and amortize the Unfunded Actuarial Accrued Liability as a level dollar amount over a closed 25-year period. The Board changed the amortization method used for funding from the level percentage of payroll method to the level dollar method in June 2012 effective June 30, 2012. The compensation used to determine required contributions is the total compensation of all active members in TRS, including those hired after July 1, 2006 who are members of the Defined Contribution Retirement (DCR) Plan. This objective is currently being met and is projected to continue to be met.

In our opinion, the actuarial assumptions used are reasonable, taking into account the experience of the System and reasonable long-term expectations, and represent our best estimate of the anticipated long-term experience under the System. The actuary performs an analysis of System experience periodically and recommends changes if, in the opinion of the actuary, assumption changes are needed to more accurately reflect expected future experience. The last full experience analysis was performed in 2010. A review of the healthcare assumptions was performed for this actuarial valuation and changes were made to the healthcare cost trend rates and the per capita claims cost rates, effective June 30, 2012, to better reflect expected future healthcare experience. A summary of the actuarial assumptions and methods used in this actuarial valuation are shown in Section 6 beginning on page 64.

The assumptions and methods used to determine the Annual Required Contributions (ARC) of the Employers to the State of Alaska Teachers' Retirement System as outlined in this report and all supporting schedules meet the parameters and requirements for disclosure of Governmental Accounting Standards Board (GASB) Statements No. 25, Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans, and No. 43, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans. Based on member data and asset information provided by the Division of Retirement and Benefits, we have prepared the Schedule of Funding Progress, Schedule of Employer Contributions, and trend data schedules under GASB Nos. 25 and 43 that are included in the Financial Section of the CAFR. We have also prepared the member data tables shown in Section 5 of this report for the Statistical Section of the CAFR, and the summary of actuarial assumptions, solvency test, and analysis of financial experience for the Actuarial Section of the CAFR.

The undersigned are Enrolled Actuaries, a Fellow and an Associate of the Society of Actuaries and Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. This report has been prepared in accordance with all Applicable Actuarial Standards of Practice. We are available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate.

Respectfully submitted,

BUCK CONSULTANTS, LLC



David H. Sliskinsky, ASA, EA, MAAA, FCA
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Director, Consulting Actuary

The Alaska Retirement Management Board, The Department of Revenue and The Department of
Administration
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The undersigned actuary is responsible for all assumptions related to the average annual per capita health claims cost and the health care cost trend rates, and hereby affirms her qualification to render opinions in such matters, in accordance with the qualification standards of the American Academy of Actuaries.



Melissa Bissett, FSA, MAAA
Senior Consultant, Health & Productivity

State of Alaska Teachers' Retirement System

EXECUTIVE SUMMARY

Overview

The State of Alaska Teachers' Retirement System provides pension and postemployment healthcare benefits to teachers and other eligible participants. The Commissioner of the Department of Administration is responsible for administering the System. The Alaska Retirement Management Board has fiduciary responsibility over the assets of the System. This report presents the results of the actuarial valuation of the System benefits as of the valuation date of June 30, 2012.

Purpose

An actuarial valuation is performed on the retirement plan annually as of the beginning of the fiscal year. The main purposes of the actuarial valuation detailed in this report are:

1. To determine the Employer/State contribution necessary to meet the Board's funding policy for the System;
2. To disclose the funding assets and liability measures as of the valuation date;
3. To disclose the accounting measures for the System required by GASB Nos. 25 and 43 as of the end of the last fiscal year;
4. To review the current funded status of the System;
5. To compare actual and expected experience under the System during the last fiscal year;
6. And to report trends in contributions, assets, liabilities, and funded status over the last several years.

The actuarial valuation provides a "snapshot" of the funded position of the TRS based on the plan provisions, membership, assets, and actuarial assumptions as of the valuation date. Actuarial projections are also performed to provide a long-term view of the expected future funding status and contribution patterns (see Section 4 beginning on page 39).

Funding Status

The funding status is a measure of the progress that has been made in funding the plan as of the valuation date. It is determined as a ratio of the actuarial value of assets divided by the total actuarial accrued liability on the valuation date. A ratio of over 100% represents a plan that is ahead in funding, and a ratio of less than 100% represents a plan that is behind in funding on the valuation date. A comparative summary of the funding ratio from the prior and current actuarial valuations follows:

Funding Status as of June 30 ¹	2011	2012
(a) Accrued Liability ²	\$9,128,795	\$9,346,444
(b) Valuation Assets ²	<u>4,937,937</u>	<u>4,869,154</u>
(c) Unfunded Accrued Liability ² , (a) – (b)	\$4,190,858	\$4,477,290
(d) Funding Ratio based on Valuation Assets, (b) ÷ (a)	54.1%	52.1%
(e) Fair Value of Assets ²	\$4,732,860	\$4,639,688
(f) Funding Ratio based on Fair Value of Assets, (e) ÷ (a)	51.8%	49.6%

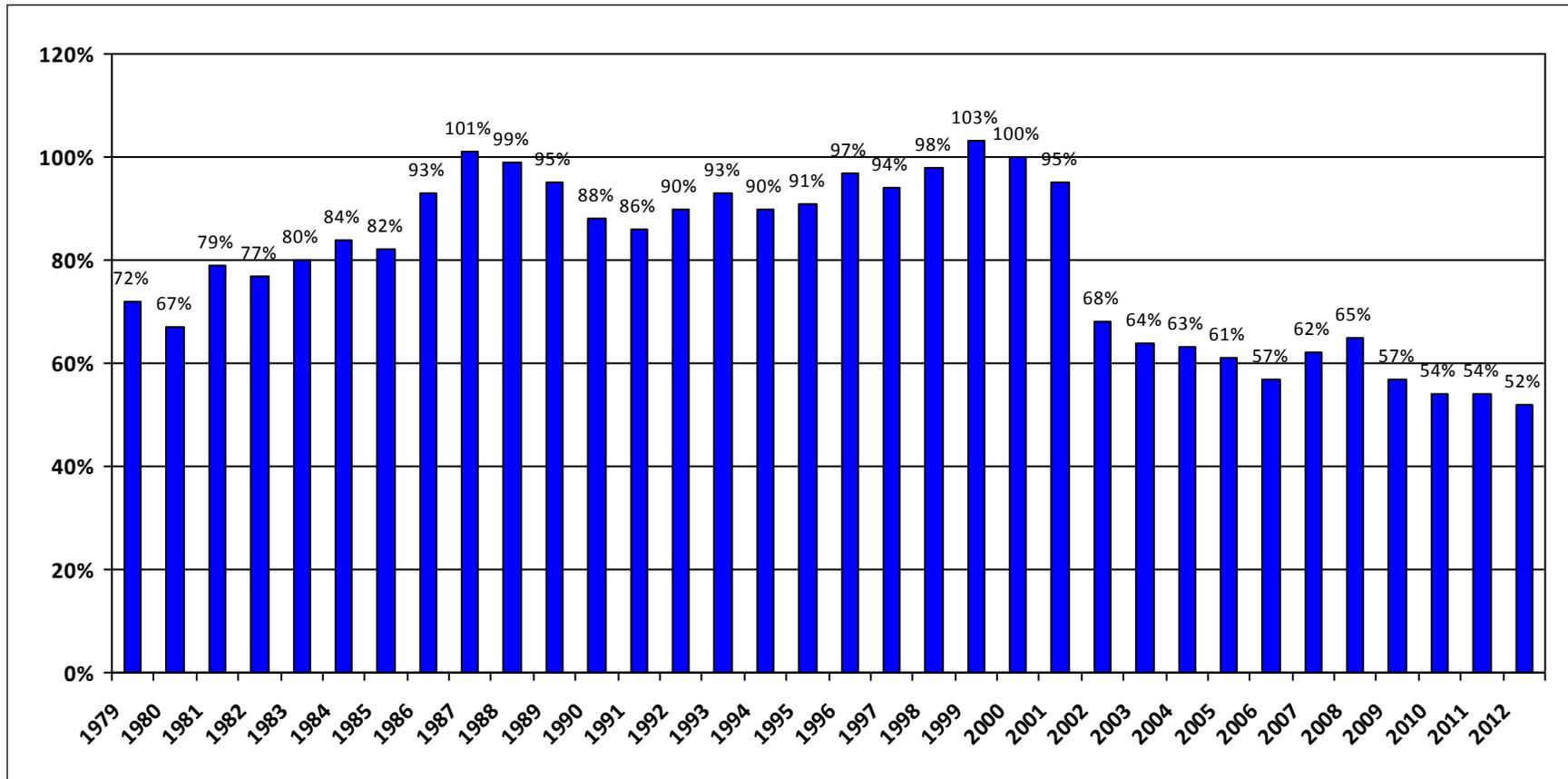
¹ Includes pension and healthcare benefits.

² In thousands.

State of Alaska Teachers' Retirement System

Executive Summary (cont'd)

TRS Funding Ratio History (Based on Valuation Assets)



State of Alaska Teachers' Retirement System

Executive Summary (cont'd)

As shown previously, the funding ratio based on valuation assets as of June 30, 2012 has decreased from 54.1% to 52.1%, a decrease of 2.0%. The total calculated Employer/State contribution rate has increased from 50.10% of total payroll for FY14 to 66.31% for FY15, an increase of 16.21%. The reasons for the change in the funded status and calculated contribution rate are explained below.

(1) Retiree Medical Costs and Assumptions

The following table summarizes the monthly premium per benefit recipient since 1977.

Time Period	Monthly Premium Per Retiree For Health Coverage	Annual Percentage Change	Average Compound Annual Increase Since FY78
2/1/77-1/31/78	\$ 57.64	66%	--
2/1/78-1/31/79	69.10	20%	20%
2/1/79-1/31/80	64.70	-6%	6%
2/1/80-1/31/81	96.34	49%	19%
2/1/81-1/31/82	96.34	0%	14%
2/1/82-1/31/83	115.61	20%	15%
2/1/83-1/31/84	156.07	35%	18%
2/1/84-1/31/85	191.85	23%	19%
2/1/85-1/31/86	168.25	-12%	14%
2/1/86-1/31/87	165.00	-2%	12%
2/1/87-1/31/88	140.25	-15%	9%
2/1/88-1/31/89	211.22	51%	13%
2/1/89-1/31/90	252.83	20%	13%
2/1/90-1/31/91	243.98	-4%	12%
2/1/91-1/31/92	243.98	0%	11%
2/1/92-1/31/93	226.90	-7%	10%
2/1/93-1/31/94	309.72	37%	11%
2/1/94-1/31/95	336.05	9%	11%
2/1/95-1/31/96	350.50	4%	11%
2/1/96-1/31/97	350.50	0%	10%
2/1/97-1/31/98	368.00	5%	10%
2/1/98-12/31/98	368.00	0%	9%
1/1/99-12/31/99	442.00	20%	10%
1/1/00-12/31/00	530.00	20%	10%
1/1/01-12/31/01	610.00	15%	10%
1/1/02-12/31/02	668.00	10%	10%
1/1/03-12/31/03	720.00	8%	10%
1/1/04-12/31/04	806.00	12%	10%
1/1/05-12/31/05	850.00	5%	10%
1/1/06-12/31/06	876.00	3%	10%
1/1/07-12/31/07	876.00	0%	10%
1/1/08-12/31/08	876.00	0%	9%
1/1/09-12/31/09	937.00	7%	9%
1/1/10-12/31/10	1,068.00	14%	9%
1/1/11-12/31/11	1,176.00	10%	9%
1/1/12-12/31/12	1,200.00	2%	9%
1/1/13-12/31/13	1,223.00	2%	9%

As shown in above table, the monthly retiree medical premium for the January 1, 2013 to December 31, 2013 time period will increase to \$1,223. This represents an increase of 2% from the previous year's medical premium of \$1,200. The health cost trend rates used for this valuation are described in Section 6.3. Over the last 10 years, annual premium rate changes have ranged from no change to up 14%. Also, over the last ten years, the increase in the premium rate has been about 5.4% compounded annually.

State of Alaska Teachers' Retirement System

Executive Summary (cont'd)

An analysis of medical costs was completed based on claims information and enrollment data provided by HealthSmart (formerly Wells Fargo Insurance Services). Costs for medical services and prescriptions were analyzed separately, and separate trend rates were developed to project expected future medical and prescription costs. An offset for costs expected to be reimbursed by Medicare was incorporated beginning at age 65. Average medical claims were then distributed across the population based on expected increases in medical expenses that occur with age.

For the 2012 valuation, we updated incurred claims cost and Medicare offset analyses using fiscal year-to-date 2012 claims and enrollment information through April 2012. For Medicare Part B only participants, we were provided a census, from HealthSmart, of all current retirees that do not have Medicare Part A. A lower average claims cost was applied to retirees covered by both Medicare Part A and B vs. retirees covered only by Medicare Part B. Based upon expected claim reserve levels as of June 2012, fiscal year-to-date 2012 paid claim experience was adjusted to estimate 2012 incurred claims. The trend assumption is based on the proposed Society of Actuaries' Healthcare Cost Trend Model updated for 2012. The trend rate varies by year declining to 4.5% over 100 years. The trends vary by medical, pre-Medicare and Medicare, and aggregate prescription drugs.

Individual claim level detail from HealthSmart and Premera were obtained for fiscal years 2009 (Premera) through April 2012 (HealthSmart). This data was reviewed and compared to management level reporting supplied by HealthSmart. For the 2012 valuation, we have not modified any management level reporting information used to develop per capita claim cost rates. However, we will continue to compare data from both sources and potentially modify future claims cost rate derivation to reflect salient information at the individual claimant level that may enhance global management level data. For the 2012 valuation, we do not recommend any changes to morbidity assumptions used to project increasing claims costs as members age. However, we will continue to compare age-based claims costs derived from individual claimant data to the current morbidity curve and potentially modify the assumed aging impact on claims costs in future valuations. Finally, explicit third-party administration (TPA) costs were added to medical and prescription claims cost rates. Per-member TPA costs are derived from the current HealthSmart contract and are projected to increase at the assumed rate of 5%.

Based upon variations in medical cost trends between Medicare-eligible and pre-Medicare populations, Buck's practice is to use separate healthcare cost trends for these populations. This, in conjunction with updates to legislation, long-term trend models and time since prior assumptions were set, indicated a need to re-set this assumption.

State of Alaska Teachers' Retirement System

Executive Summary (cont'd)

Since 2004, the funding valuation also reflects the impact of the Medicare Part D Retiree Drug Subsidy (RDS) in the projection of prescription drug benefit costs. Buck's actuaries have attested that the prescription drug benefits meet the actuarial equivalence requirements and the plan qualifies to receive the RDS under the Medicare Prescription Drug, Improvement and Modernization Act of 2003 (MMA) for calendar 2012 and 2013. Based on current plan provisions and utilization data, we anticipate the plan will continue to qualify for RDS payments. The State has shared its payments for calendar 2006 through June 2011 and this information was used to estimate future RDS payments in this valuation. Please note, Part D subsidies are not reflected for accounting purposes under GASB No. 43.

Utilization and claims cost data indicate that healthcare experience emerging since the prior valuation is increasing slightly, but still favorably, compared to industry and aggregate trend expectations. A large portion of ongoing unfavorable experience is due to members with chronic diseases (diabetes, ESRD, etc.), and the corresponding large claims that accompany those diseases. Due to the nature of these diseases, it is expected that the State will have these members as benefit recipients for some time, and that costs may be able to be controlled, but not eliminated. With the introduction of a health improvement plan for State employees, as well as disease management provided by the TPA, it is hoped that the incidence of the most severe and costly chronic conditions can be reduced to a more manageable and stable level. As with the prior valuation, a weighting methodology is employed, where each of the experience years is weighted appropriately, with more emphasis on the most recent two years, when calculating the claims costs. This has the effect of preventing any one year from unduly influencing the claims costs. In the current valuation, we averaged national trend assumptions with Alaska-specific trend, with 75% weight to Alaska-specific trend and 25% to national trend, during the experience period to give more credibility to Alaska-specific experience while still reflecting national trends.

State of Alaska Teachers' Retirement System

Executive Summary (cont'd)

The following table summarizes data sources and assumptions and the relative impact changes in each have on healthcare cost projections for 2012 as compared to 2011:

Healthcare Cost Rate Data Source or Assumption Change, 2012 vs. 2011	Gain / Loss Impact on 2012 Valuation Results
Claim lag specific to medical and prescription experience	Negligible
Individual claims level data	<ul style="list-style-type: none"> – No impact on cost data used for 2012, though potentially a source of future modifications – No impact on morbidity assumptions used for 2012, though potentially a source of future modifications
Explicit TPA fees	Negligible
Actual RDS payments received	Negligible
Averaging Alaska-specific trend during the experience period with Health Care Cost Trend Rates (HCCTR) used to bring prior data forward to the valuation year	Minor loss due to updated assumptions
Aggregate claims data	Moderate gain due to experience, but dampened by weighting methodology
Census Data – Medicare Part B only participation	Gain due to fewer Medicare Part B only participants as compared to historical estimates

State of Alaska Teachers' Retirement System

Executive Summary (cont'd)

(2) Investment Experience

The approximate FY12 investment return based on fair values was 0.2% compared to the expected investment return of 8.00%. This resulted in a loss of approximately \$367.1 million to the System from investment experience. The asset valuation method recognizes 20 percent of this loss (\$73.4 million) this year and an additional 20 percent in each of the next 4 years. In addition, 20 percent of the FY08 investment loss, 20 percent of the FY09 investment loss, 20 percent of the FY10 investment gain and 20 percent of the FY11 investment gain were recognized this year. The approximate FY12 asset return based on actuarial values was 0.7% compared to the expected asset return of 8.00%. The net result was an actuarial asset loss of \$359.1 million which decreased the funding ratio by 3.8% and increased the Employer/State contribution rate by 4.18%.

(3) Salary Increase

During the period from June 30, 2011, to June 30, 2012, salary increases for continuing active members were almost as anticipated in the valuation assumptions causing no change in the funding ratio or the Employer/State contribution rate.

(4) Demographic Experience

Section 5 provides statistics on active and inactive participants. The number of active participants decreased 6.27% from 7,303 at June 30, 2011 to 6,845 at June 30, 2012 due to the closure of the plan to new entrants as of July 1, 2006. The average age of active participants increased from 48.50 to 49.03 and average credited service increased from 14.52 to 15.16 years.

The number of retirees and beneficiaries increased 2.59% from 11,016 to 11,301, and their average age increased from 67.40 to 67.88. There was a 1.88% increase in the number of vested terminated participants from 852 to 868. Their average age decreased from 49.75 to 49.70.

The overall effect of these participant data changes along with the healthcare experience was an actuarial gain to the System, resulting in a decrease in the Employer/State contribution rate of 2.38% of total payroll. This gain is due to having a larger payroll base to spread the unfunded contribution over, and a smaller than expected growth in the per capita claims cost rates for healthcare. The gain/loss by decrement on the accrued liability is shown on the summary page.

State of Alaska Teachers' Retirement System

Executive Summary (cont'd)

(5) Effect of the Two-Year Delay in the Contribution Rate

As of June 30, 2011, the actuarially calculated rate was 50.10% for FY14 Employer/State contributions. Since Employer/State contribution rates are determined two years prior to the fiscal year, the June 30, 2009 adopted employer rate of 42.61% was contributed during FY12. The difference between the two calculated rates, 42.61% and 50.10%, or an actuarial contribution rate of 7.49% less than the actuarial rate, created a contribution deficit to the System. This deficit increased the Employer/State contribution rate by 0.71%.

(6) Actuarial Projections

At the Fall 1991 Board Meetings, the TRS Board approved the use of an enhanced actuarial projection system in the valuation report. The same actuarial cost method is used, but the enhanced system projects the associated liabilities 30 years into the future. By also projecting plan assets, this report in effect produces an actuarial valuation for each of the next 30 years. Section 4, Actuarial Funding Projections, contains the results of this analysis.

This type of information can be especially useful to multi-tiered systems, such as TRS. No new DB plan entrants are anticipated. The total active population is expected to grow at 1% per year.

(7) Changes in Methods from the Prior Valuation

There have been no changes in the asset methods and one change in the valuation methods since the prior valuation. Amortization of any funding surpluses or unfunded accrued liability was changed from a level percent of pay amount to a level dollar amount.

(8) Changes in Assumptions from the Prior Valuation

There have been no changes in actuarial assumptions since the prior valuation, except for the assumption regarding healthcare cost trend rates. The updated healthcare cost trend assumption reflects differences in Medicare eligible and non-Medicare eligible medical costs, maintains a distinct prescription drug cost trend and utilizes the Society of Actuaries long-term cost trend model to estimate ultimate trend. We also updated participant contributions to reflect the new non-Medicare and pharmacy benefit cost trend on a weighted average basis.

(9) Changes in Benefit Provisions Since the Prior Valuation

There have been no changes in benefit provisions since the prior valuation.

State of Alaska Teachers' Retirement System

Comparative Summary of Key Actuarial Valuation Results

Employer/State Contribution Rates for Pension for Fiscal Year:	2014	2015
(a) Normal Cost Rate Net of Member Contributions	2.72%	2.81%
(b) Past Service Rate	<u>28.68%</u>	<u>41.74%</u>
(c) Total Employer/State Contribution Rate (a) + (b)	31.40%	44.55%

Employer/State Contribution Rates for Postemployment Healthcare for Fiscal Year:	2014	2015
(a) Normal Cost Rate	3.87%	3.59%
(b) Past Service Rate	<u>14.83%</u>	<u>18.17%</u>
(c) Total Employer/State Contribution Rate (a) + (b)	18.70%	21.76%

Total Employer/State Contribution Rates for Fiscal Year:	2014	2015
(a) Normal Cost Rate Net of Member Contributions	6.59%	6.40%
(b) Past Service Rate	<u>43.51%</u>	<u>59.91%</u>
(c) Total Employer/State Contribution Rate (a) + (b)	50.10%	66.31%
(d) Board Adopted Total Employer/State Contribution Rate	50.10%	66.31%
(e) Defined Contribution Retirement (DCR) Rate Paid by Employers	<u>3.52%</u>	<u>4.44%</u>
(f) Board Adopted Total Rate, Including DCR Rate Paid by Employers (d) + (e)	53.62%	70.75%

Contribution rates are based on salary for both DB plan members and DCR members, combined.

The rates shown above are for funding purposes which differ from the Annual Required Contribution for GASB No. 43 reporting purposes. Under GASB No. 43, postemployment healthcare liabilities are gross of the retiree drug subsidy and are calculated with a discount rate for a partially funded plan. Under both GASB Nos. 25 and 43, the amortization of the unfunded liabilities is calculated as a level dollar amount.

Contribution rates include Employer contribution rates as limited by State statute, and include the additional State contribution required under SB 125.

State of Alaska Teachers' Retirement System

Comparative Summary of Key Actuarial Valuation Results (cont'd)

Summary of Actuarial Gain/(Loss) and Other Changes During the Year

The following table summarizes the sources of change in the total Employer/State contribution rate based on DB and DCR member payroll combined:

	<u>Pension</u>	<u>Healthcare</u>	<u>Total</u>
1. Last year's total Employer/State contribution rate	31.40%	18.70%	50.10%
2. Change due to:			
a. New Assumptions	0.00%	0.63%	0.63%
b. Change in Methods	9.52%	3.55%	13.07%
c. Effect of two-year delay in the contribution rate	0.52%	0.19%	0.71%
d. Investment experience	3.47%	0.71%	4.18%
e. Salary increases	0.00%	N/A	0.00%
f. Demographic and medical experience ¹	<u>(0.36)%</u>	<u>(2.02)%</u>	<u>(2.38)%</u>
g. Total change (<i>a + b + c + d + e + f</i>)	13.15%	3.06%	16.21%
3. Total Employer/State contribution rate this year (<i>1</i>) + (<i>2g</i>)	44.55%	21.76%	66.31%

The following table shows the gain/(loss) on total accrued liability (in thousands):

	<u>Pension</u>	<u>Healthcare</u>	<u>Total</u>	<u>% of Total Expected Accrued Liability</u>
- Retirement Experience	\$ 6,990	\$ 10,429	\$ 17,419	0.2%
- Termination Experience	(11,029)	(6,345)	(17,374)	(0.2%)
- Active Mortality Experience	1,263	766	2,029	nil
- Inactive Mortality Experience	3,112	1,049	4,161	nil
- Disability Experience	(850)	(492)	(1,342)	nil
- Rehires	(8,174)	(3,151)	(11,325)	(0.1%)
- Other Demographic Experience ²	(12,877)	20,386	7,509	0.1%
- Salary Increases	9,947	N/A	9,947	0.1%
- Alaska COLA	(2,195)	N/A	(2,195)	nil
- PRPA Other Than Expected	2,827	N/A	2,827	nil
- Medical Claims Costs	N/A	180,457	180,457	1.9%
- Total	\$ (10,986)	\$ 203,099	\$ 192,113	2.0%

A gain on total accrued liability is favorable to the System. A loss is unfavorable.

¹ Includes changes in future healthcare claims costs.

² Reflects data and programming changes

Section 1

Actuarial Funding Results

State of Alaska Teachers' Retirement System

Section 1.1

Actuarial Liabilities and Normal Cost (\$'s in 000's)

As of June 30, 2012	Present Value of Projected Benefits	Accrued (Past Service) Liability
Active Members		
Retirement Benefits	\$ 2,265,057	\$ 1,922,795
Termination Benefits	76,982	34,849
Disability Benefits	4,503	346
Death Benefits	15,147	11,851
Return of Contributions	13,548	(59,038)
Medical and Prescription Drug Benefits	1,252,873	1,084,285
Medicare Part D Subsidy	(81,829)	(70,906)
Indebtedness	(44,008)	(44,008)
Subtotal	\$ 3,502,273	\$ 2,880,174
Inactive Members		
Not Vested	\$ 44,183	\$ 44,183
Vested Terminations		
- Retirement Benefits	100,962	100,962
- Medical and Prescription Drug Benefits	173,721	173,721
- Medicare Part D Subsidy	(10,648)	(10,648)
- Indebtedness	(3,655)	(3,655)
Retirees & Beneficiaries		
- Retirement Benefits	4,391,492	4,391,492
- Medical and Prescription Drug Benefits	1,927,409	1,927,409
- Medicare Part D Subsidy	(157,194)	(157,194)
Subtotal	\$ 6,466,270	\$ 6,466,270
Total	\$ 9,968,543	\$ 9,346,444
Total Pension	\$ 6,864,211	\$ 6,399,777
Total Medical, Net of Part D Subsidy	\$ 3,104,332	\$ 2,946,667
Total Medical, Gross of Part D Subsidy	\$ 3,354,003	\$ 3,185,415

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Section 1.1 (cont'd)

Actuarial Liabilities and Normal Cost (cont'd) (\$'s in 000's)

As of June 30, 2012	Present Value of Projected Benefits	Accrued (Past Service) Liability
By Tier		
Tier 1		
- Pension	\$ 4,928,167	\$ 4,860,888
- Medical, Net of Part D Subsidy	1,975,512	1,956,806
Tier 2		
- Pension	1,936,044	1,538,889
- Medical, Net of Part D Subsidy	1,128,820	989,861
Total	\$ 9,968,543	\$ 9,346,444

As of June 30, 2012	Normal Cost
Active Members	
Retirement Benefits	\$ 51,290
Termination Benefits	5,886
Disability Benefits	601
Death Benefits	511
Return of Contributions	10,825
Medical and Prescription Drug Benefits	28,604
Medicare Part D Subsidy	(1,866)
Subtotal	\$ 95,851
Total	\$ 95,851
Total Pension	\$ 69,113
Total Medical, Net of Part D Subsidy	\$ 26,738
Total Medical, Gross of Part D Subsidy	\$ 28,604

By Tier	
Tier 1	
- Pension	\$ 15,172
- Medical, Net of Part D Subsidy	4,545
Tier 2	
- Pension	53,941
- Medical, Net of Part D Subsidy	22,193
Total	\$ 95,851

State of Alaska Teachers' Retirement System

Section 1.2

Actuarial Contributions – FY15 (\$'s in 000's)

Normal Cost Rate	Pension	Healthcare	Total
(1) Total Normal Cost	\$ 69,113	\$ 26,738	\$ 95,851
(2) DB Member Salaries Projected for FY13	554,277	554,277	554,277
(3) DCR Member Salaries Projected for FY13	189,680	189,680	189,680
(4) Total Salaries Projected for FY13	743,957	743,957	743,957
(5) Normal Cost Rate			
a. Based on DB Member Salaries, (1) ÷ (2)	12.47%	4.82%	17.29%
b. Based on Total Salaries, (1) ÷ (4)	9.29%	3.59%	12.88%
(6) Average Member Contribution Rate ¹	6.48%	0.00%	6.48%
(7) Employer Normal Cost Rate, (5b) – (6)	2.81%	3.59%	6.40%
Past Service Rate			
(1) Accrued Liability	\$ 6,399,777	\$ 2,946,667	\$ 9,346,444
(2) Valuation Assets	<u>3,194,994</u>	<u>1,674,160</u>	<u>4,869,154</u>
(3) Total Unfunded Liability, (1) – (2)	\$ 3,204,783	\$ 1,272,507	\$ 4,477,290
(4) Funded Ratio, (2) ÷ (1)	49.9%	56.8%	52.1%
(5) Past Service Cost Amortization Payment ²	310,517	135,169	445,686
(6) Total Salaries Projected for FY13	743,957	743,957	743,957
(7) Past Service Rate, (5) ÷ (6)	41.74%	18.17%	59.91%
Total Employer/State Contribution Rate	44.55%	21.76%	66.31%
Normal Cost Rate by Tier (Total Employer and Member)³			
Tier 1	13.06%	3.91%	16.97%
Tier 2	12.31%	5.07%	17.38%
Maturity Ratio	70.8%	65.6%	69.2%

¹ Assumes no member contribution from members in the DCR plan, 9.65% contributions for Tier 1 members who elected supplemental coverage and 8.65% for the remaining members.

² Amortized on a level dollar basis.

³ Rate determined considering the pay for members of the plan in this tier. DCR payroll is excluded from these calculations.

State of Alaska Teachers' Retirement System

Section 1.2 (cont'd)

Actuarial Contributions – FY15 (\$'s in 000's)

Schedule of Past Service Cost Amortizations - Pension

	Amortization Period		Balances		Beginning-of-Year Payment
	Date Created	Years Left	Initial	Outstanding	
Initial Unfunded Liability ¹	6/30/2002	15	\$ 871,526	\$ 914,503	\$ 98,927
FY03 Loss ¹	6/30/2003	16	168,666	178,187	18,640
FY04 Loss ¹	6/30/2004	17	83,331	88,298	8,963
FY05 Loss ¹	6/30/2005	18	117,313	124,258	12,276
Change in Assumptions/Methods ¹	6/30/2006	19	284,349	300,189	28,943
FY06 Gain ¹	6/30/2006	19	(21,576)	(22,778)	(2,196)
FY07 Loss	6/30/2007	20	25,203	26,490	2,498
FY08 Gain	6/30/2008	21	(51,093)	(53,342)	(4,931)
FY09 Loss	6/30/2009	22	780,078	807,248	73,274
Change in Assumptions	6/30/2010	23	351,643	359,607	32,106
FY10 Loss	6/30/2010	23	31,237	31,944	2,852
FY11 Loss	6/30/2011	24	95,744	96,900	8,522
FY12 Loss	6/30/2012	25	353,279	353,279	30,643
Total				\$ 3,204,783	\$ 310,517

¹ The pension and healthcare split was done using a ratio of unfunded accrued liability as of June 30, 2006.

State of Alaska Teachers' Retirement System

Section 1.2 (cont'd)

Actuarial Contributions – FY15 (\$'s in 000's)

Schedule of Past Service Cost Amortizations – Healthcare

	Amortization Period		Balances		Beginning-of-Year Payment
	Date Created	Years Left	Initial	Outstanding	
Initial Unfunded Liability ¹	6/30/2002	15	\$ 851,080	\$ 893,048	\$ 96,606
FY03 Loss ¹	6/30/2003	16	164,710	174,006	18,202
FY04 Loss ¹	6/30/2004	17	81,376	86,225	8,753
FY05 Loss ¹	6/30/2005	18	114,560	121,343	11,988
Change in Assumptions/Methods ¹	6/30/2006	19	277,678	293,147	28,264
FY06 Gain ¹	6/30/2006	19	(21,071)	(22,245)	(2,145)
FY07 Gain	6/30/2007	20	(375,974)	(395,187)	(37,269)
Change in Assumptions	6/30/2008	21	138,986	145,109	13,413
FY08 Gain	6/30/2008	21	(186,882)	(195,114)	(18,036)
FY09 Gain	6/30/2009	22	(95,703)	(99,036)	(8,990)
Change in Assumptions	6/30/2010	23	272,151	278,315	24,848
FY10 Loss	6/30/2010	23	65,520	67,004	5,982
FY11 Gain	6/30/2011	24	(15,652)	(15,841)	(1,393)
Change in Assumptions	6/30/2012	25	66,859	66,859	5,799
FY12 Gain	6/30/2012	25	(125,126)	(125,126)	(10,853)
Total				\$ 1,272,507	\$ 135,169

¹ The pension and healthcare split was done using a ratio of unfunded accrued liability as of June 30, 2006

State of Alaska Teachers' Retirement System

Section 1.2 (cont'd)

Actuarial Contributions – FY15 (\$'s in 000's)

Schedule of Past Service Cost Amortizations - Total

	Amortization Period		Balances		Beginning-of-Year Payment
	Date Created	Years Left	Initial	Outstanding	
Initial Unfunded Liability	6/30/2002	15	\$ 1,722,606	\$ 1,807,551	\$ 195,533
FY03 Loss	6/30/2003	16	333,376	352,193	36,842
FY04 Loss	6/30/2004	17	164,707	174,523	17,716
FY05 Loss	6/30/2005	18	231,873	245,601	24,264
Change in Assumptions/Methods	6/30/2006	19	562,027	593,336	57,207
FY06 Gain	6/30/2006	19	(42,647)	(45,023)	(4,341)
FY07 Gain	6/30/2007	20	(350,771)	(368,697)	(34,771)
Change in Assumptions	6/30/2008	21	138,986	145,109	13,413
FY08 Gain	6/30/2008	21	(237,975)	(248,456)	(22,967)
FY09 Loss	6/30/2009	22	684,375	708,212	64,284
Change in Assumptions	6/30/2010	23	623,794	637,922	56,954
FY10 Loss	6/30/2010	23	96,757	98,948	8,834
FY11 Loss	6/30/2011	24	80,092	81,059	7,129
Change in Assumptions	6/30/2012	25	66,859	66,859	5,799
FY12 Loss	6/30/2012	25	228,153	228,153	19,790
Total				\$ 4,477,290	\$ 445,686

The amortization factor for 25 years is 11.528758. The weighted average amortization factor is 10.045839. The amortization method is level dollar.

The equivalent single amortization period is 18 years.

State of Alaska Teachers' Retirement System

Section 1.3

Actuarial Gain / (Loss) for FY12 (\$'s in 000's)

	Pension	Healthcare	Total
(1) Expected Actuarial Accrued Liability			
(a) Accrued Liability, June 30, 2011	\$ 6,196,104	\$ 2,932,691	\$ 9,128,795
(b) Normal Cost for FY12	69,548	28,308	97,856
(c) Interest on (a) and (b) at 8.00%	501,252	236,880	738,132
(d) Benefit Payments for FY12	361,202	110,632	471,834
(e) Refund of Contributions for FY12	2,637	0	2,637
(f) Interest on (d) and (e) at 8.00% for one-half year	14,274	4,340	18,614
(g) Change in Assumptions	0	66,859	66,859
(h) Expected Accrued Liability as of June 30, 2012 (a) + (b) + (c) - (d) - (e) - (f) + (g)	6,388,791	3,149,766	9,538,557
(2) Actual Accrued Liability, June 30, 2012	6,399,777	2,946,667	9,346,444
(3) Liability Gain/(Loss), (1)(h) - (2)	\$ (10,986)	\$ 203,099	\$ 192,113
(4) Expected Actuarial Asset Value			
(a) Actuarial Asset Value, June 30, 2011	\$ 3,345,949	\$ 1,591,988	\$ 4,937,937
(b) Interest on (a) at 8.00%	267,676	127,359	395,035
(c) Employee Contributions for FY12	52,020	183	52,203
(d) Employer Contributions for FY12	38,189	36,281	74,470
(e) Employer Legislative Relief for FY12	157,387	77,130	234,517
(f) Medicare Part D Subsidy	0	12,533	12,533
(g) Interest on (c), (d), (e) and (f) at 8.00% for one-half year	9,713	4,948	14,661
(h) Benefit Payments for FY12	361,202	110,632	471,834
(i) Refund of Contributions for FY12	2,637	0	2,637
(j) Interest on (h) and (i) at 8.00% for one-half year	14,274	4,340	18,614
(k) Expected Actuarial Asset Value, June 30, 2012 (a)+(b)+(c)+(d)+(e)+(f)+(g)-(h)-(i)-(j)	3,492,821	1,735,450	5,228,271
(5) Actuarial Asset Value, June 30, 2012	3,194,994	1,674,160	4,869,154
(6) Actuarial Asset Gain/(Loss), (5) - (4)(k)	\$ (297,827)	\$ (61,290)	\$ (359,117)
(7) Actuarial Gain/(Loss), (3) + (6)	\$ (308,813)	\$ 141,809	\$ (167,004)
(8) Effect of the 2-Year Delay on Contributions	\$ (44,466)	\$ (16,683)	\$ (61,149)
(9) FY12 Gain/(Loss) to be Amortized, (7) + (8)	\$ (353,279)	\$ 125,126	\$ (228,153)

State of Alaska Teachers' Retirement System

Section 1.4

Development of Change in Unfunded Liability During FY12

1. 2011 Unfunded Liability		\$4,190,858
a. Interest on unfunded liability	\$335,269	
b. Normal cost	97,856	
c. Employee contributions	(52,203)	
d. Employer contributions	(74,470)	
e. State relief under SB 125	(234,517)	
f. Medicare Part D subsidy	(12,533)	
g. Interest on b., c., d., e., and f.	<u>(6,833)</u>	
h. Expected change in unfunded liability during FY12		52,569
2. Expected 2012 Unfunded Liability		\$4,243,427
a. Liability (gains)	\$(192,113)	
b. Assets losses	359,117	
c. Change in healthcare assumptions	<u>66,859</u>	
d. Other changes in unfunded liability during FY12		233,863
3. Actual 2012 Unfunded Liability		\$4,477,290

State of Alaska Teachers' Retirement System

Section 1.5

Analysis of Financial Experience

**Change in Employer/State Contribution Rate
Due to (Gains) and Losses in Accrued Liabilities During the Last Five Fiscal Years
Resulting From Differences Between Assumed Experience and Actual Experience**

Type of (Gain) or Loss	Change in Employer/State Contribution Rate During Fiscal Year				
	Pension				
	2008	2009	2010	2011	2012
(1) Health Experience	N/A	N/A	N/A	N/A	N/A
(2) Salary Experience	0.43%	0.29%	0.59%	(0.03)%	0.00%
(3) Investment Experience	(0.62)%	6.53%	(0.34)%	0.18%	3.47%
(4) Demographic Experience	(0.33)%	(0.54)%	(0.75)%	(0.03)%	(0.36)%
(5) Contribution Shortfall	(0.11)%	0.01%	0.46%	0.75%	0.52%
(6) (Gain) or Loss During Year From Experience, (1) + (2) + (3) + (4) + (5)	(0.63)%	6.29%	(0.04)%	0.87%	3.63%
(7) Asset Valuation Method	0.00%	0.00%	0.00%	0.00%	0.00%
(8) Past Service Amortization Change	0.00%	0.00%	0.00%	0.00%	9.52%
(9) Assumption and Method Changes	0.00%	0.00%	3.96%	0.00%	0.00%
(10) System Benefit Changes	0.00%	0.00%	0.00%	0.00%	0.00%
(11) Composite (Gain) or Loss During Year, (6) + (7) + (8) + (9) + (10)	(0.63)%	6.29%	3.92%	0.87%	13.15%
(12) Beginning Total Employer/State Contribution Rate	20.95%	20.32%	26.61%	30.53%	31.40%
(13) Ending Total Employer/State Contribution Rate, (11) + (12)	20.32%	26.61%	30.53%	31.40%	44.55%
(14) Fiscal Year Above Rate is Applied	FY11	FY12	FY13	FY14	FY15

State of Alaska Teachers' Retirement System

Section 1.5 (cont'd)

Analysis of Financial Experience

Change in Employer/State Contribution Rate Due to (Gains) and Losses in Accrued Liabilities During the Last Five Fiscal Years Resulting From Differences Between Assumed Experience and Actual Experience

Type of (Gain) or Loss	Change in Employer/State Contribution Rate During Fiscal Year				
	Healthcare				
	2008	2009	2010	2011	2012
(1) Health Experience	(1.22)%	(2.67)%	0.19%	(0.72)%	(2.02)%
(2) Salary Experience	N/A	N/A	N/A	N/A	N/A
(3) Investment Experience	(0.23)%	0.70%	0.39%	0.28%	0.71%
(4) Demographic Experience	N/A	N/A	N/A	N/A	N/A
(5) Contribution Shortfall	(0.87)%	(0.27)%	(0.45)%	0.11%	0.19%
(6) (Gain) or Loss During Year From Experience, (1) + (2) + (3) + (4) + (5)	(2.32)%	(2.24)%	0.13%	(0.33)%	(1.12)%
(7) Asset Valuation Method	0.00%	0.00%	0.00%	0.00%	0.00%
(8) Past Service Amortization Change	0.00%	0.00%	0.00%	0.00%	3.55%
(9) Assumption and Method Changes	1.98%	0.00%	2.90%	0.00%	0.63%
(10) System Benefit Changes	0.00%	0.00%	0.00%	0.00%	0.00%
(11) Composite (Gain) or Loss During Year, (6) + (7) + (8) + (9) + (10)	(0.34)%	(2.24)%	3.03%	(0.33)%	3.06%
(12) Beginning Total Employer/State Contribution Rate	18.58%	18.24%	16.00%	19.03%	18.70%
(13) Ending Total Employer/State Contribution Rate, (11) + (12)	18.24%	16.00%	19.03%	18.70%	21.76%
(14) Fiscal Year Above Rate is Applied	FY11	FY12	FY13	FY14	FY15

State of Alaska Teachers' Retirement System

Section 1.5 (cont'd)

Analysis of Financial Experience

Change in Employer/State Contribution Rate
Due to (Gains) and Losses in Accrued Liabilities During the Last Five Fiscal Years
Resulting From Differences Between Assumed Experience and Actual Experience

Type of (Gain) or Loss	Change in Employer/State Contribution Rate During Fiscal Year				
	Total				
	2008	2009	2010	2011	2012
(1) Health Experience	(1.22)%	(2.67)%	0.19%	(0.72)%	(2.02)%
(2) Salary Experience	0.43%	0.29%	0.59%	(0.03)%	0.00%
(3) Investment Experience	(0.85)%	7.23%	0.05%	0.46%	4.18%
(4) Demographic Experience	(0.33)%	(0.54)%	(0.75)%	(0.03)%	(0.36)%
(5) Contribution Shortfall	(0.98)%	(0.26)%	0.01%	0.86%	0.71%
(6) (Gain) or Loss During Year From Experience, (1) + (2) + (3) + (4) + (5)	(2.95)%	4.05%	0.09%	0.54%	2.51%
(7) Asset Valuation Method	0.00%	0.00%	0.00%	0.00%	0.00%
(8) Past Service Amortization Change	0.00%	0.00%	0.00%	0.00%	13.07%
(9) Assumption and Method Changes	1.98%	0.00%	6.86%	0.00%	0.63%
(10) System Benefit Changes	0.00%	0.00%	0.00%	0.00%	0.00%
(11) Composite (Gain) or Loss During Year, (6) + (7) + (8) + (9) + (10)	(0.97)%	4.05%	6.95%	0.54%	16.21%
(12) Beginning Total Employer/State Contribution Rate	39.53%	38.56%	42.61%	49.56%	50.10%
(13) Ending Total Employer/State Contribution Rate, (11) + (12)	38.56%	42.61%	49.56%	50.10%	66.31%
(14) Fiscal Year Above Rate is Applied	FY11	FY12	FY13	FY14	FY15

State of Alaska Teachers' Retirement System

Section 1.6

History of UAAL and Funded Ratio (\$'s in 000's)

Valuation Date	Aggregate Accrued Liability	Valuation Assets	Assets as a Percent of Accrued Liability	Unfunded Accrued Liabilities (UAL)
June 30, 2003	\$ 5,835,609	\$ 3,752,285	64.3%	\$ 2,083,324
June 30, 2004	\$ 6,123,600	\$ 3,845,370	62.8%	\$ 2,278,230
June 30, 2005	\$ 6,498,556	\$ 3,958,939	60.9%	\$ 2,539,617
June 30, 2006	\$ 7,229,851	\$ 4,141,700	57.3%	\$ 3,088,151
June 30, 2007	\$ 7,189,403	\$ 4,424,399	61.5%	\$ 2,765,004
June 30, 2008	\$ 7,619,178	\$ 4,936,976	64.8%	\$ 2,682,202
June 30, 2009	\$ 7,847,514	\$ 4,472,958	57.0%	\$ 3,374,556
June 30, 2010	\$ 8,847,788	\$ 4,739,128	53.6%	\$ 4,108,660
June 30, 2011	\$ 9,128,795	\$ 4,937,937	54.1%	\$ 4,190,858
June 30, 2012	\$ 9,346,444	\$ 4,869,154	52.1%	\$ 4,477,290

Section 2

Plan Assets

State of Alaska Teachers' Retirement System

Section 2.1

Summary of Fair Value of Assets (\$'s in 000's)

As of June 30, 2012	Pension	Healthcare	Total Fair Value	Allocation Percent
Cash and Short-Term Investments				
- Cash and Cash Equivalents	\$ 60,640	\$ 27,908	\$ 88,548	1.9%
- Subtotal	\$ 60,640	\$ 27,908	\$ 88,548	1.9%
Fixed Income Investments				
- Domestic Fixed Income Pool	\$ 308,693	\$ 181,476	\$ 490,169	10.5%
- International Fixed Income Pool	69,402	37,774	107,176	2.3%
- High Yield Pool	81,775	44,511	126,286	2.7%
- Treasury Inflation Protection Pool	36,556	19,898	56,454	1.2%
- Emerging Debt Pool	22,883	12,456	35,339	0.8%
- Subtotal	\$ 519,309	\$ 296,115	\$ 815,424	17.5%
Equity Investments				
- Domestic Equity Pool	\$ 890,798	\$ 484,853	\$ 1,375,651	29.6%
- International Equity Pool	491,950	267,762	759,712	16.3%
- Private Equity Pool	298,124	162,277	460,401	9.9%
- Emerging Markets Equity Pool	159,454	86,789	246,243	5.3%
- Subtotal	\$ 1,840,326	\$ 1,001,681	\$ 2,842,007	61.1%
Other Investments				
- Real Estate Pool	\$ 275,305	\$ 149,884	\$ 425,189	9.2%
- Other Investments Pool	182,428	99,343	281,771	6.1%
- Absolute Return Pool	127,549	69,427	196,976	4.2%
- Other Assets	0	1,179	1,179	nil
- Subtotal	\$ 585,282	\$ 319,833	\$ 905,115	19.5%
Total Cash and Investments	\$ 3,005,557	\$ 1,645,537	\$ 4,651,094	100.0%
Net Accrued Receivables	1,090	(12,496)	(11,406)	
Net Assets	\$ 3,006,647	\$ 1,633,041	\$ 4,639,688	

State of Alaska Teachers' Retirement System

Section 2.2

Changes in Fair Value of Assets (\$'s in 000's)

Fiscal Year 2012	Pension	Healthcare	Total Fair Value
(1) Net Assets, June 30, 2011 (fair value)	\$ 3,123,530	\$ 1,609,330	\$ 4,732,860
(2) Additions:			
(a) Plan Member Contributions	\$ 52,020	\$ 183	\$ 52,203
(b) Employer Contributions	38,189	36,281	74,470
(c) Employer Legislative Relief	157,387	77,130	234,517
(d) Interest and Dividend Income	76,940	40,350	117,290
(e) Net Appreciation/(Depreciation) in Fair Value of Investments	(64,832)	(28,879)	(93,711)
(f) Medicare Part D Subsidy	0	12,533	12,533
(g) Other	<u>17</u>	<u>2</u>	<u>19</u>
(h) Total Additions	\$ 259,721	\$ 137,600	\$ 397,321
(3) Deductions:			
(a) Medical Benefits	\$ 0	\$ 110,632	\$ 110,632
(b) Retirement Benefits	361,202	0	361,202
(c) Refunds of Contributions	2,637	0	2,637
(d) Investment Expenses	9,918	6	9,924
(e) Administrative Expenses	<u>2,847</u>	<u>3,251</u>	<u>6,098</u>
(f) Total Deductions	\$ 376,604	\$ 113,889	\$ 490,493
(4) Net Assets, June 30, 2012 (fair value)	\$ 3,006,647	\$ 1,633,041	\$ 4,639,688
Approximate Fair Value Investment Return Rate During FY12 Net of All Expenses	0.0%	0.5%	0.2%
Liquidity Factor	8.4	14.7	9.9

State of Alaska Teachers' Retirement System

Section 2.3

Actuarial Value of Assets (\$'s in 000's)

The actuarial value of assets was set equal to the fair value at June 30, 2002. Future investment gains and losses will be recognized 20% per year over 5 years. In no event may valuation assets be less than 80% or more than 120% of fair value as of the current valuation date.

	Pension	Healthcare	Total
(1) Deferral of Investment Return/(Loss) for FY12			
(a) Fair Value, June 30, 2011	\$3,123,530	\$ 1,609,330	\$ 4,732,860
(b) Contributions for FY12	247,596	113,594	361,190
(c) Medicare Part D Subsidy	0	12,533	12,533
(d) Benefit Payments for FY12	363,839	110,632	474,471
(e) Actual Investment Return (<i>net of expenses</i>)	(640)	8,216	7,576
(f) Expected Return Rate (<i>net of expenses</i>)	8.00%	8.00%	8.00%
(g) Expected Return - Weighted for Timing	245,322	129,354	374,676
(h) Investment Gain/(Loss) for the Year (<i>e. - g.</i>)	(245,962)	(121,138)	(367,100)
(i) Deferred Investment Return/(Loss)	\$ (188,347)	\$ (41,119)	\$ (229,466)
(2) Actuarial Value, June 30, 2012			
(a) Fair Value, June 30, 2012	\$3,006,647	\$ 1,633,041	\$ 4,639,688
(b) 2012 Deferred Investment Return/(Loss)	(188,347)	(41,119)	(229,466)
(c) Preliminary Actuarial Value, June 30, 2012 (<i>a. - b.</i>)	3,194,994	1,674,160	4,869,154
(d) Upper Limit: 120% of Fair Value, June 30, 2012	3,607,976	1,959,649	N/A
(e) Lower Limit: 80% of Fair Value, June 30, 2012	2,405,318	1,306,433	N/A
(f) Actuarial Value, June 30, 2012 (<i>c. limited by d. and e.</i>)	\$3,194,994	\$ 1,674,160	\$ 4,869,154
(g) Ratio of Actuarial Value of Assets to Fair Value of Assets	106.3%	102.5%	105.0%
(h) Approximate Actuarial Value Investment Return Rate During FY12 Net of All Expenses	(1.1)%	4.2%	0.7%

State of Alaska Teachers' Retirement System

Section 2.3 (cont'd)

Actuarial Value of Assets (\$'s in 000's)

The tables below show the development of gain/(loss) to be recognized in the current year (in thousands).

Pension				
Plan Year Ended	Asset Gain/(Loss)	Gain/(Loss) Recognized in Prior Years	Gain/(Loss) Recognized This Year	Gain/(Loss) Deferred to Future Years
6/30/2008	\$ (451,260)	\$ (361,008)	\$ (90,252)	\$ 0
6/30/2009	(1,104,046)	(662,427)	(220,809)	(220,810)
6/30/2010	57,127	22,850	11,425	22,852
6/30/2011	343,969	68,794	68,794	206,381
6/30/2012	(245,962)	0	(49,192)	(196,770)
Total	\$ (1,400,172)	\$ (931,791)	\$ (280,034)	\$ (188,347)

Healthcare				
Plan Year Ended	Asset Gain/(Loss)	Gain/(Loss) Recognized in Prior Years	Gain/(Loss) Recognized This Year	Gain/(Loss) Deferred to Future Years
6/30/2008	\$ (102,901)	\$ (82,320)	\$ (20,581)	\$ 0
6/30/2009	(287,965)	(172,779)	(57,593)	(57,593)
6/30/2010	28,965	11,586	5,793	11,586
6/30/2011	169,662	33,932	33,932	101,798
6/30/2012	(121,138)	0	(24,228)	(96,910)
Total	\$ (313,377)	\$ (209,581)	\$ (62,677)	\$ (41,119)

Total				
Plan Year Ended	Asset Gain/(Loss)	Gain/(Loss) Recognized in Prior Years	Gain/(Loss) Recognized This Year	Gain/(Loss) Deferred to Future Years
6/30/2008	\$ (554,161)	\$ (443,328)	\$ (110,833)	\$ 0
6/30/2009	(1,392,011)	(835,206)	(278,402)	(278,403)
6/30/2010	86,092	34,436	17,218	34,438
6/30/2011	513,631	102,726	102,726	308,179
6/30/2012	(367,100)	0	(73,420)	(293,680)
Total	\$ (1,713,549)	\$ (1,141,372)	\$ (342,711)	\$ (229,466)

State of Alaska Teachers' Retirement System

Section 2.4

Historical Asset Rate of Return

Year Ending	Actuarial Value		Fair Value	
	Annual	Cumulative	Annual	Cumulative
June 30, 2005	9.1%	9.1%	8.5%	8.5%
June 30, 2006	9.6%	9.3%	11.4%	9.9%
June 30, 2007	11.9%	10.2%	18.5%	12.7%
June 30, 2008	10.2%	10.2%	(3.0)%	8.6%
June 30, 2009	(7.9)%	6.3%	(21.0)%	1.9%
June 30, 2010	8.1%	6.6%	10.6%	3.3%
June 30, 2011	6.9%	6.6%	20.5%	5.6%
June 30, 2012	0.7%	5.9%	0.2%	4.9%

Section 3

Accounting Information

State of Alaska Teachers' Retirement System

Section 3.1

Schedule of Funding Progress (\$'s in 000's)

The exhibit below shows the pension disclosure under GASB No. 25.

Valuation Date	Aggregate Accrued Liability	Valuation Assets	Assets as a Percent of Accrued Liability	Unfunded Accrued Liabilities (UAL)	Annual Active Member Payroll	UAL as a Percent of Annual Active Member Payroll
June 30, 2012 – 8.00%	\$ 6,399,777	\$ 3,194,994	49.9%	\$ 3,204,783	\$ 561,971	570.3%
June 30, 2011 – 8.00%	\$ 6,196,104	\$ 3,345,949	54.0%	\$ 2,850,155	\$ 584,068	488.0%
June 30, 2010 ¹ – 8.00%	\$ 6,006,981	\$ 3,259,868	54.3%	\$ 2,747,113	\$ 564,887	486.3%
June 30, 2009 – 8.25%	\$ 5,463,987	\$ 3,115,719	57.0%	\$ 2,348,268	\$ 557,026	421.6%
June 30, 2008 – 8.25%	\$ 5,231,654	\$ 3,670,086	70.2%	\$ 1,561,568	\$ 549,148	284.4%
June 30, 2007 – 8.25%	\$ 5,043,448	\$ 3,441,867	68.2%	\$ 1,601,581	\$ 554,245	289.0%
June 30, 2006 ¹ – 8.25%	\$ 4,859,336	\$ 3,296,934	67.8%	\$ 1,562,402	\$ 574,409	272.0%

The exhibit below shows the postemployment healthcare disclosure without regard to the Medicare Part D subsidy under GASB No. 43.

Valuation Date	Aggregate Accrued Liability	Valuation Assets	Assets as a Percent of Accrued Liability	Unfunded Accrued Liabilities (UAL)	Annual Active Member Payroll	UAL as a Percent of Annual Active Member Payroll
June 30, 2012 ¹ – 5.01%	\$ 5,046,942	\$ 1,674,160	33.2%	\$ 3,372,782	\$ 561,971	600.2%
June 30, 2011 – 7.08%	\$ 3,635,492	\$ 1,591,988	43.8%	\$ 2,043,504	\$ 584,068	349.9%
June 30, 2010 ¹ – 8.00%	\$ 3,076,388	\$ 1,479,260	48.1%	\$ 1,597,128	\$ 564,887	282.7%
June 30, 2009 – 4.50%	\$ 4,604,820	\$ 1,357,239	29.5%	\$ 3,247,581	\$ 557,026	583.0%
June 30, 2008 ¹ – 4.50%	\$ 4,648,055	\$ 1,266,890	27.3%	\$ 3,381,165	\$ 549,148	615.7%
June 30, 2007 – 4.50%	\$ 4,059,573	\$ 982,532	24.2%	\$ 3,077,041	\$ 554,245	552.2%
June 30, 2006 ¹ – 4.50%	\$ 4,288,707	\$ 844,766	19.7%	\$ 3,443,941	\$ 574,409	599.6%

¹ Change in assumptions

State of Alaska Teachers' Retirement System

Section 3.1 (cont'd)

Schedule of Funding Progress

For illustration, the exhibit below shows the postemployment healthcare disclosure without regard to the Medicare Part D subsidy discounted at 8.00% and at 4.25% per annum under GASB No. 43 for the current year. These values show the minimum and maximum accrued liability amounts depending on the portion of ARC actually contributed.

Valuation Date	Aggregate Accrued Liability	Valuation Assets	Assets as a Percent of Accrued Liability	Unfunded Accrued Liabilities (UAL)	Annual Active Member Payroll	UAL as a Percent of Annual Active Member Payroll
June 30, 2012 – 8.00%	\$ 3,185,415	\$ 1,674,160	52.6%	\$ 1,511,255	\$ 561,971	268.9%
June 30, 2012 – 4.25%	\$ 5,779,383	\$ 1,674,160	29.0%	\$ 4,105,223	\$ 561,971	730.5%

State of Alaska Teachers' Retirement System

Section 3.1 (cont'd)

Schedule of Funding Progress (\$'s in 000's)

The exhibit below shows the combined pension and postemployment healthcare disclosure under GASB No. 25, prior to 2006.

Valuation Date	Aggregate Accrued Liability	Valuation Assets	Assets as a Percent of Accrued Liability	Unfunded Accrued Liabilities (UAL)	Annual Active Member Payroll	UAL as a Percent of Annual Active Member Payroll
June 30, 2005	\$ 6,498,556	\$ 3,958,939	60.9%	\$ 2,539,617	\$ 535,837	474.0%
June 30, 2004 ²	\$ 6,123,600	\$ 3,845,370	62.8%	\$ 2,278,230	\$ 522,421	436.1%
June 30, 2003	\$ 5,835,609	\$ 3,752,285	64.3%	\$ 2,083,324	\$ 532,630	391.1%
June 30, 2002 ^{1 2 3}	\$ 5,411,642	\$ 3,689,036	68.2%	\$ 1,722,606	\$ 509,437	338.1%
June 30, 2001	\$ 4,603,147	\$ 4,372,229	95.0%	\$ 230,918	\$ 496,188	46.5%
June 30, 2000 ^{1 2 3}	\$ 4,198,868	\$ 4,184,015	99.6%	\$ 14,853	\$ 482,571	3.1%
June 30, 1999	\$ 3,720,954	\$ 3,815,633	102.5%	\$ N/A	\$ 466,414	N/A
June 30, 1998	\$ 3,528,757	\$ 3,446,070	97.7%	\$ 82,687	\$ 469,433	17.6%
June 30, 1997	\$ 3,320,069	\$ 3,120,044	94.0%	\$ 200,025	\$ 466,455	42.9%

¹ Change in Asset Valuation Method

² Change of Assumptions

³ Change in Methods

State of Alaska Teachers' Retirement System

Section 3.2

Schedule of Employer Contributions (\$'s in 000's)

The exhibit below shows the combined pension and postemployment healthcare disclosure under GASB No. 25 and 26 for fiscal years ending in 2006 and before.

Fiscal Year Ended June 30	Total Annual Required Contribution	Total Percentage Contributed
2006	\$ 236,738	54.0%
2005	207,951	45.0%
2004	82,660	83.0%
2003	47,370	133.0%
2002	39,576	155.0%
2001	56,391	114.0%
2000	67,874	92.0%
1999	53,901	114.0%
1998	76,504	80.0%

The following shows pension disclosure under GASB No. 25 for fiscal year ending 2007 and later.

Fiscal Year Ended June 30	Total Annual Required Contribution	Percentage Contributed		
		By Employer	By State	Total
2012	\$ 229,509	16.6%	68.6%	85.2%
2011	\$ 167,978	19.5%	65.1%	84.6%
2010*	\$ 170,788	19.8%	58.8%	78.6%
2009	\$ 94,388	28.7%	110.6%	139.3%
2008	\$ 134,544	23.3%	82.7%	106.0%
2007	\$ 169,974	62.2%	0.00%	62.2%

The following shows postemployment healthcare disclosure without regard to the Medicare Part D subsidy under GASB No. 43 for fiscal year ending 2007 and later.

Fiscal Year Ended June 30	Total Annual Required Contribution	Percentage Contributed		
		By Employer	By State	Total
2012	\$ 192,700	18.8%	46.6%	65.4%
2011	\$ 167,686	25.8%	51.5%	77.3%
2010*	\$ 312,922	13.6%	38.8%	52.4%
2009	\$ 164,171	28.7%	62.1%	90.8%
2008	\$ 185,271	23.6%	85.7%	109.3%
2007	\$ 76,879	62.2%	0.00%	62.2%

*The ARC and percentage contributed is based on Buck's calculation and does not match the CAFR. The percentage contributed in includes the legal settlement in FY10, net of fees, as well as the Medicare Part D subsidy contributed by the State to the Healthcare Fund.

State of Alaska Teachers' Retirement System

Section 3.2 (cont'd)

Schedule of Employer Contributions

The exhibit below shows the annual required contribution (ARC) as a percentage of pay for pension and healthcare.

Valuation Date	Fiscal Year	ARC (% of Pay)			Pension Discount Rate	Healthcare Discount Rate
		Pension	Healthcare	Total		
June 30, 2005	FY08	22.73%	54.45%	77.18%	8.25%	4.50%
June 30, 2006	FY09	26.89%	52.20%	79.09%	8.25%	4.50%
June 30, 2007	FY10	28.61%	52.42%	81.03%	8.25%	4.50%
June 30, 2008	FY11	28.76%	28.71%	57.47%	8.25%	8.25%
June 30, 2009	FY12	40.84%	34.29%	75.13%	8.25%	7.08%
June 30, 2010*	FY13	47.23%	60.07%	107.30%	8.00%	5.01%
June 30, 2011	FY14	50.91%	61.27%	112.18%	8.00%	5.08%
June 30, 2012	FY15	59.21%	70.04%	129.25%	8.00%	4.25%

*Change in discount rate assumptions effective June 30, 2010

ARC is based on DB salary only and a level dollar amortization of the unfunded liability.

State of Alaska Teachers' Retirement System

Section 3.3

Notes to Trend Data

Actuarial Assumptions, Methods and Additional Information Under GASB

Valuation Date	June 30, 2012
Actuarial Cost Method	Entry Age Normal Level Percentage of Pay Normal Cost Basis for Pension Level Dollar Normal Cost Basis for Healthcare
Amortization Method	Level dollar, closed
Equivalent Single Amortization Period	18 years
Asset Valuation Method	5-year smoothed market, 80% / 120% of fair value corridor
Actuarial Assumptions:	
Investment rate of return*	8.00% for pension, 5.01% for healthcare
Projected salary increases	6.11% for first 5 years of service grading down to 3.62% after 20 years
*Includes price inflation at	3.12%
Cost-of-living adjustment	Postretirement Pension Adjustment as described in Section 6.1, item (14)

GASB 43 requires that the discount rate used in the valuation be the estimated long-term yield on investments that are expected to finance postemployment benefits. Depending on the method by which a plan is financed, the relevant investments could be plan assets, employer assets or a combination of plan and employer assets. The investment return should reflect the nature and the mix of both current and expected investments and the basis used to determine the actuarial value of assets.

The State of Alaska Teachers' Retirement System's retiree healthcare benefits are partially funded. GASB outlines two reasonable methods of developing a blended discount rate when a plan is partially funded. These methods base the proportion of assumed plan and employer asset returns on 1) the funded ratio and 2) the percentage of the annual required contribution (ARC) actually being contributed to the plan. The State of Alaska has utilized the second methodology to develop a discount rate of 5.01% as of June 30, 2010, to be used for fiscal 2013 disclosure.

The development of the discount rate used for the FY13 healthcare liabilities valuation disclosure purposes is summarized below:

Investment Returns

Plan Assets (Long-Term Return)	=	8.00%
Employer Assets (Estimated Short-Term Return)	=	4.25%

Based on Percentage of ARC Contributed during FY10*

1. Contribution Allocated to Healthcare	=	28.16%
2. Annual Required Contribution, Funding Assumptions	=	52.42%
3. Pay-as-you-go Contribution	=	22.02%
4. Portion of ARC Contributed: [(1-3) / (2-3), not less than 0%, not more than 100%]	=	20.20%
5. Multiplied by long-term investment return	=	1.62%
6. Portion of ARC not Contributed: [100% - (4)]	=	79.80%
7. Multiplied by short-term investment return	=	3.39%
8. Total: (5) + (7)	=	5.01%

*It is assumed that fiscal 2008 contributions allocated to healthcare ARC for funding purposes and pay-as-you-go contributions are used to derive the GASB 43 discount rate applied to the June 30, 2010 valuation (fiscal 2011), which in turn drives the fiscal 2013 GASB 43 ARC.

Using the GASB 43 discount rate determined above and disregarding future Medicare Part D payments, the fiscal 2013 employer ARC rate for accounting purposes is 60.07% of pay for healthcare benefits and 107.30% of pay for healthcare and pension benefits combined.

State of Alaska Teachers' Retirement System

Section 3.4

Solvency Test (\$'s in 000's)

The exhibit below shows the combined pension and postemployment healthcare Solvency Test for valuation dates June 30, 2010 and before.

Valuation Date	Aggregate Accrued Liability For:			Valuation Assets	Portion of Accrued Liabilities Covered by Assets:		
	(1) Active Member Contributions	(2) Inactive Members	(3) Active Members (Employer-Financed Portion)		(1)	(2)	(3)
June 30, 2010 ¹	\$ 716,875	\$ 5,909,080	\$ 2,222,033	\$ 4,739,128	100.0%	68.1%	0.0%
June 30, 2009	692,105	5,292,808	1,862,601	4,472,958	100.0%	71.4%	0.0%
June 30, 2008 ¹	654,662	5,181,676	1,782,840	4,936,976	100.0%	82.6%	0.0%
June 30, 2007	638,420	4,912,025	1,638,958	4,424,399	100.0%	77.1%	0.0%
June 30, 2006 ^{1 2}	615,207	4,925,922	1,688,722	4,141,700	100.0%	71.6%	0.0%
June 30, 2005	589,169	4,694,176	1,215,211	3,958,939	100.0%	71.8%	0.0%
June 30, 2004 ¹	569,435	4,423,036	1,131,129	3,845,370	100.0%	74.1%	0.0%
June 30, 2003	548,947	4,105,445	1,181,217	3,752,285	100.0%	78.0%	0.0%
June 30, 2002 ^{1 2 3}	523,142	3,755,882	1,132,618	3,689,036	100.0%	84.3%	0.0%
June 30, 2001	533,752	3,213,431	855,964	4,372,229	100.0%	100.0%	73.0%

Healthcare liabilities are calculated using the funding assumptions (i.e., funding investment return and net of Medicare Part D subsidy).

¹ Change in Assumptions

² Change in Methods

³ Change in Asset Valuation Method

State of Alaska Teachers' Retirement System

Section 3.4 (cont'd)

Solvency Test (\$'s in 000's)

The exhibit below shows the pension Solvency Test for valuation dates June 30, 2005 and later.

Valuation Date	Pension Aggregate Accrued Liability For:			Pension Valuation Assets	Portion of Accrued Liabilities Covered by Assets:		
	(1) Active Member Contributions	(2) Inactive Members	(3) Active Members (Employer-Financed Portion)		(1)	(2)	(3)
June 30, 2012	\$ 727,435	\$ 4,532,982	\$ 1,139,360	\$ 3,194,994	100.0%	54.4%	0.0%
June 30, 2011	717,819	4,352,035	1,126,250	3,345,949	100.0%	60.4%	0.0%
June 30, 2010 ¹	716,675	4,153,119	1,137,187	3,259,868	100.0%	61.2%	0.0%
June 30, 2009	692,105	3,815,020	956,862	3,115,719	100.0%	63.5%	0.0%
June 30, 2008	654,662	3,700,812	876,180	3,670,086	100.0%	81.5%	0.0%
June 30, 2007	638,420	3,567,894	837,134	3,441,867	100.0%	78.6%	0.0%
June 30, 2006 ^{1 2}	615,207	3,432,703	811,426	3,296,934	100.0%	78.1%	0.0%
June 30, 2005	589,169	3,200,339	545,077	3,184,976 ³	100.0%	81.1%	0.0%

¹ Change in Assumptions

² Change in Methods

³ The pension and postemployment healthcare valuation assets were allocated using a ratio of fair value of assets as of June 30, 2005

State of Alaska Teachers' Retirement System

Section 3.4 (cont'd)

Solvency Test (\$'s in 000's)

The exhibit below shows the postemployment healthcare Solvency Test for valuation dates June 30, 2005 and later.

Valuation Date	Postemployment Healthcare Aggregate Accrued Liability For:			Postemployment Healthcare Valuation Assets	Portion of Accrued Liabilities Covered by Assets:		
	(1) Active Member Contributions	(2) Inactive Members	(3) Active Members (Employer-Financed Portion)		(1)	(2)	(3)
June 30, 2012	\$ 0	\$ 1,933,288	\$ 1,013,379	\$ 1,674,160	100.0%	86.6%	0.0%
June 30, 2011	0	1,879,564	1,053,127	1,591,988	100.0%	84.7%	0.0%
June 30, 2010 ¹	0	1,755,961	1,084,846	1,479,260	100.0%	84.2%	0.0%
June 30, 2009	0	1,477,788	905,739	1,357,239	100.0%	91.8%	0.0%
June 30, 2008 ¹	0	1,480,864	906,660	1,266,890	100.0%	85.6%	0.0%
June 30, 2007	0	1,344,131	801,824	982,532	100.0%	73.1%	0.0%
June 30, 2006 ^{1 2}	0	1,493,219	877,296	844,766	100.0%	56.6%	0.0%
June 30, 2005	0	1,493,837	670,134	773,963 ³	100.0%	51.8%	0.0%

Healthcare liabilities are calculated using the funding assumptions (i.e., funding investment return and net of Medicare Part D subsidy).

¹ Change in Assumptions

² Change in Methods

³ The pension and postemployment healthcare valuation assets were allocated using a ratio of fair value of assets as of June 30, 2005

Section 4

Projections

Projection Assumptions and Methods

Key Assumptions

- 8.00% investment return on the Fair Value of Assets in all future years.
- The Actuarial Value of Assets reflects the deferred gains and losses generated by the smoothing method. The current deferred amounts are recognized in the first four years of the projections.
- Actuarial assumptions and methods as described in Section 6. All future demographic experience is assumed to be exactly realized.
- The actuarially calculated contribution rate with a two-year lag is adopted each year.
- No new DB Plan members enter Tiers 1 and 2.
- Projections assume a 1% increase in the total active member population. All new members are expected to enter the DCR plan and contribution rates are determined as a percent of total DB and DCR payroll, combined.
- For the Sensitivity Analysis, all assumptions and methods are the same except investment returns on the Fair Value of Assets are assumed as follows:

Base Case:	8.00% for all future years
Optimistic:	8.75% for all future years
Pessimistic:	7.25% for all future years

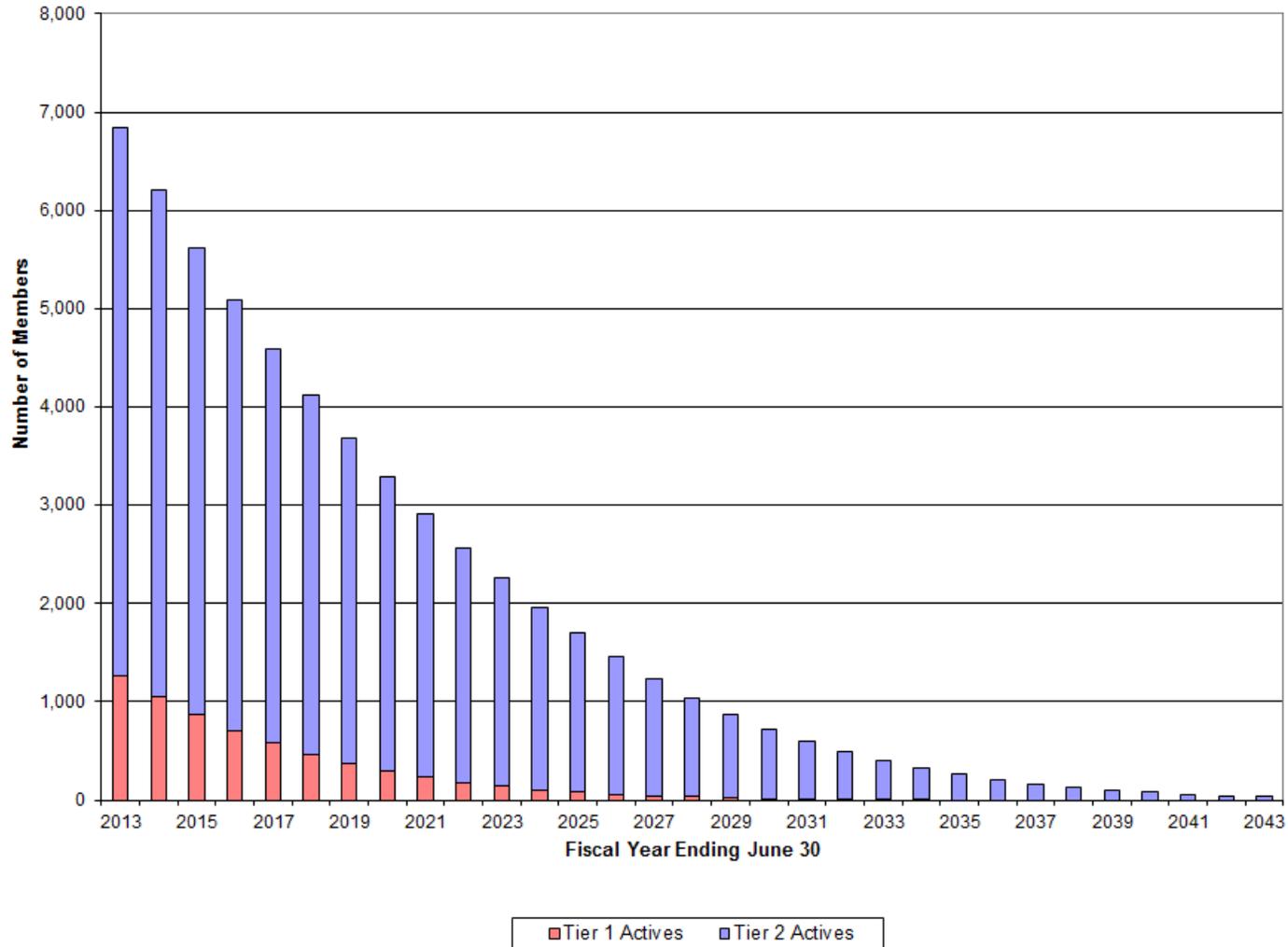
In each case, liabilities have been projected using 8.00% as the discount rate for future benefit payments. These scenarios are intended to illustrate the impact if investment rates are different than the 8.00% assumed investment return. They do not illustrate the effect of changing the assumed discount rate for determining liabilities.

- Impact of the change to the level dollar method for amortizing unfunded liabilities on the employer/state contribution amounts and rates can be seen beginning in FY15. This change has the impact of increasing these contribution amounts and rates initially, with a decline over time as total payroll increases and DB plan payroll declines.

State of Alaska Teachers' Retirement System

Section 4.2

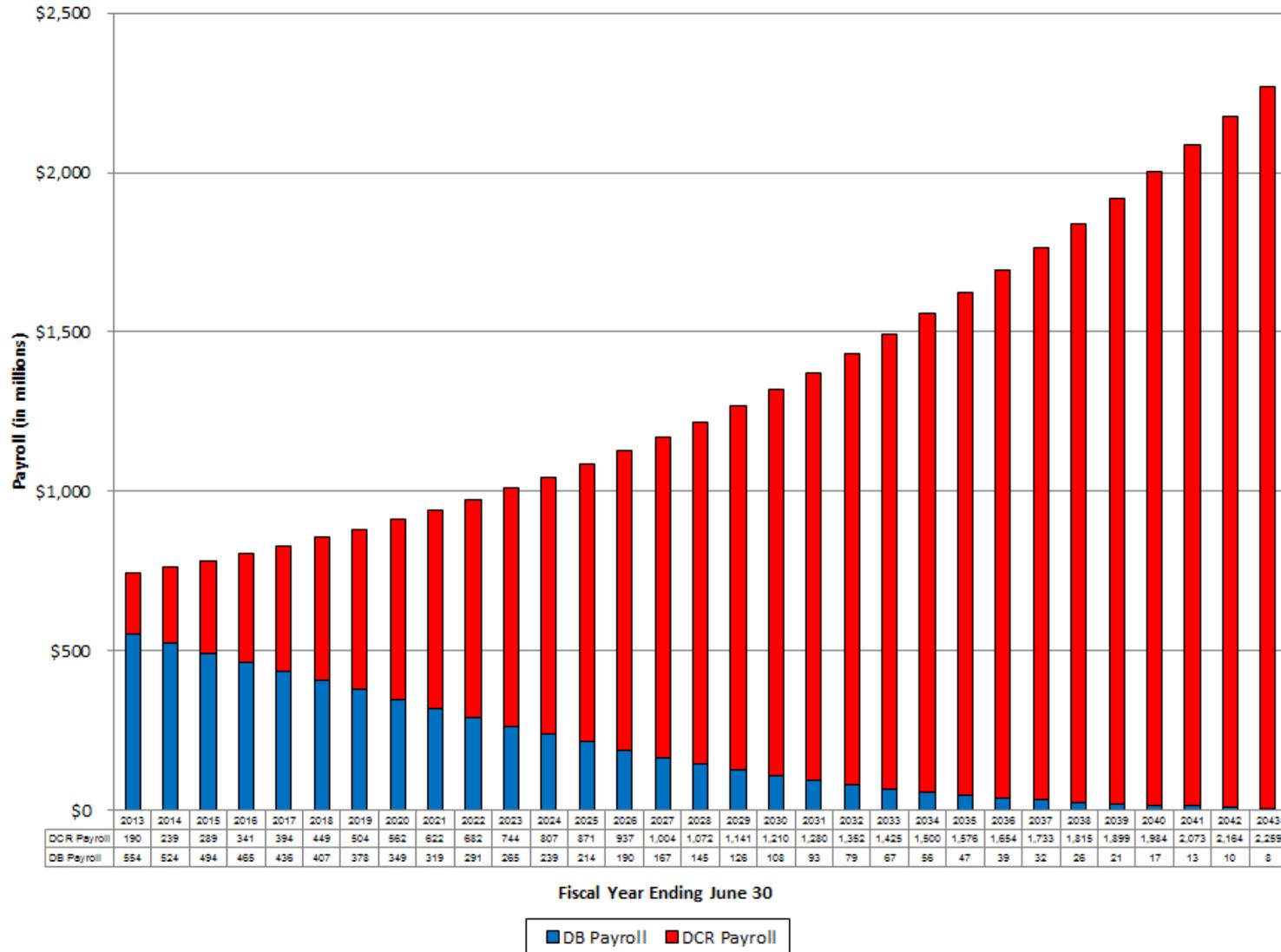
Membership Projection Projected Active Member Count



State of Alaska Teachers' Retirement System

Section 4.2 (cont'd)

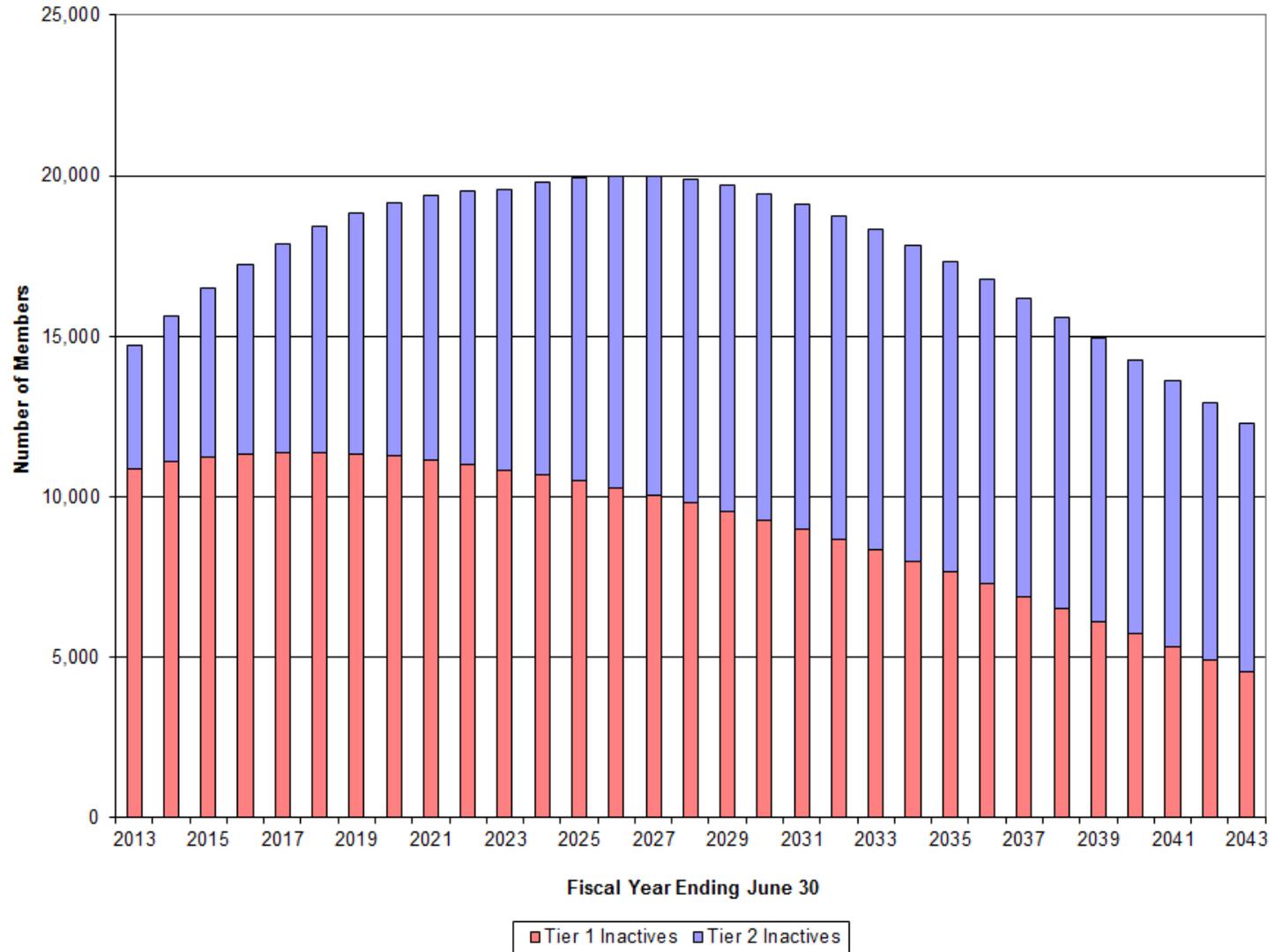
Membership Projection Projected DB and DCR Payroll



State of Alaska Teachers' Retirement System

Section 4.2 (cont'd)

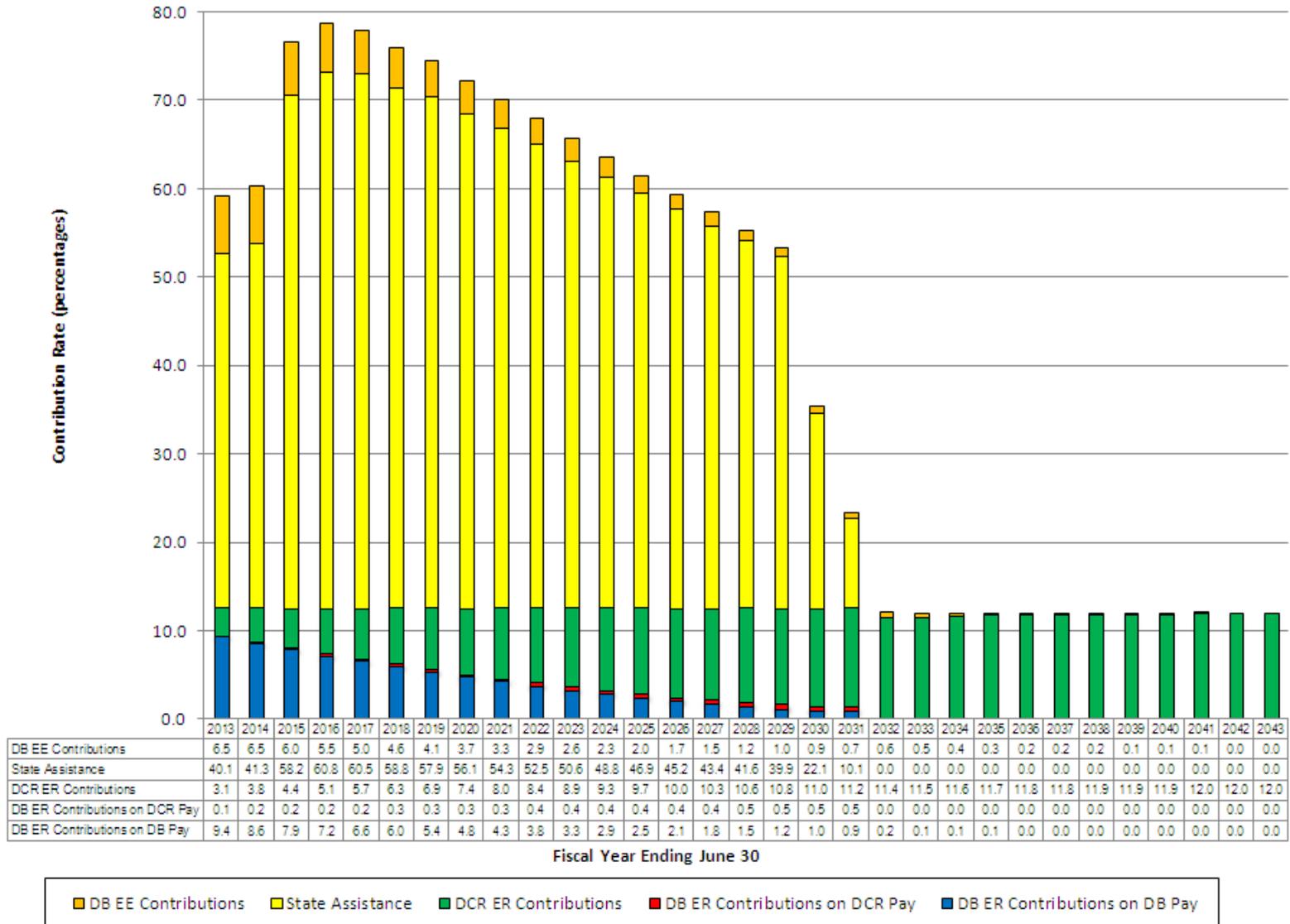
Membership Projection Projected Inactive Member Count



State of Alaska Teachers' Retirement System

Section 4.3

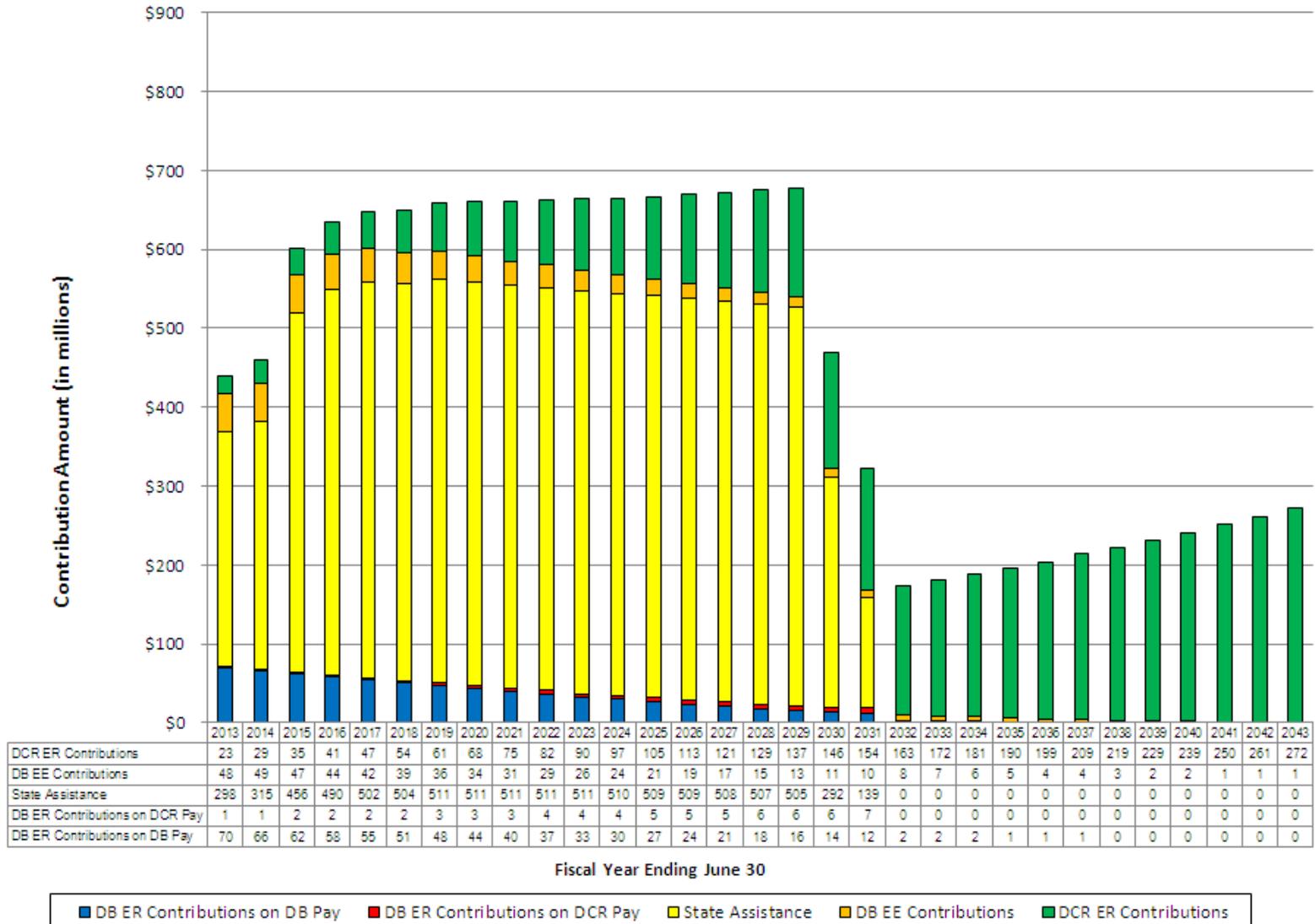
Projection of Employer/State Contribution Rates (Based on Total DB and DCR Payroll)



State of Alaska Teachers' Retirement System

Section 4.4

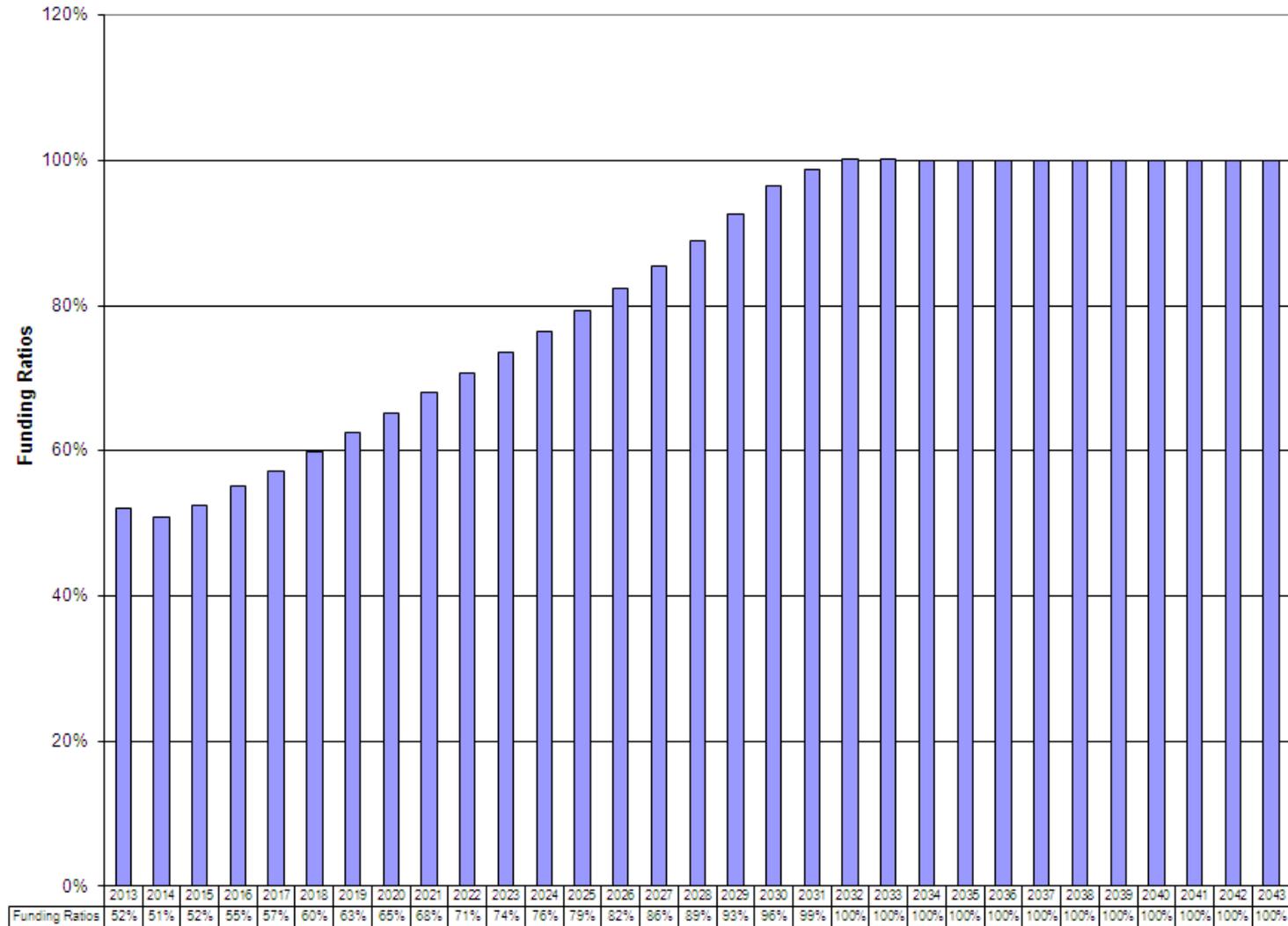
Projection of Employer/State Contribution Amounts



State of Alaska Teachers' Retirement System

Section 4.5

Projection of Funding Ratios



Fiscal Year Ending June 30

State of Alaska Teachers' Retirement System

Section 4.6

Table of Projected Actuarial Results

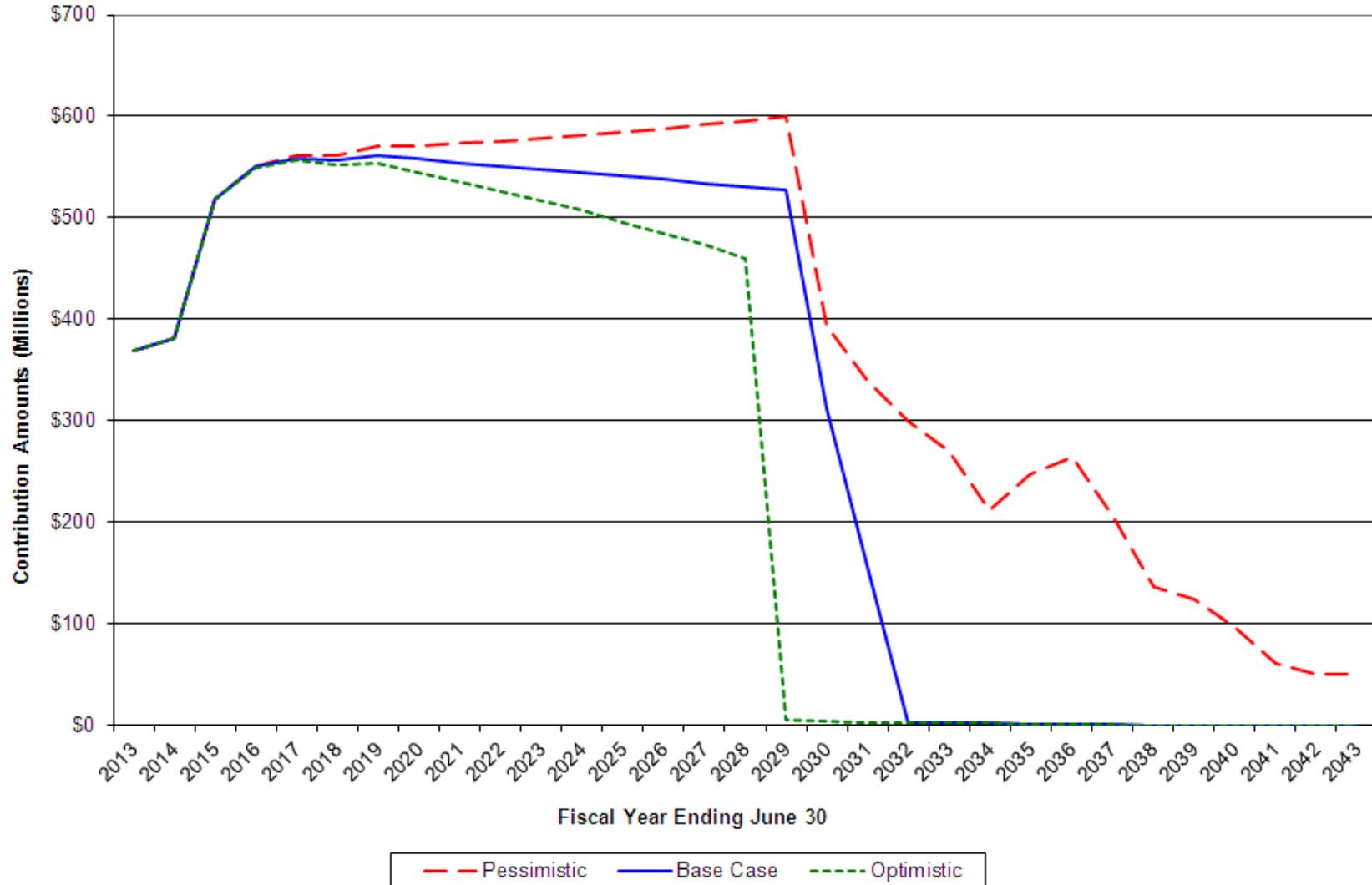
State of Alaska TRS
Financial Projections (in Thousands)

Fiscal Year End	Investment Return 8.00% Valuation Amounts on July 1 (Beginning of Fiscal Year)				Flow Amounts During Following 12 Months								Recognized Asset Gain/(Loss)	Ending Actuarial Assets	
	Actuarial Assets	Accrued Liability	Funding Ratio	Surplus (Deficit)	Total Salaries	Employer/State Ctb Rate	Employer Contribs	State Contribs	Employee Contribs	Total Contribs	Benefit Payments	Net Contribs			Investment Earnings
2013	\$4,869,154	\$9,346,444	52%	(\$4,477,290)	\$743,957	49.56%	\$70,604	\$298,101	\$53,161	\$421,866	\$525,672	(\$103,806)	\$365,348	(\$231,878)	\$4,898,818
2014	4,898,818	9,651,582	51%	(4,752,764)	762,692	50.10%	67,056	315,053	54,446	436,555	556,844	(120,289)	385,521	46,525	5,210,575
2015	5,210,575	9,944,626	52%	(4,734,051)	783,438	66.31%	63,594	455,904	52,102	571,600	586,966	(15,366)	410,755	29,306	5,635,270
2016	5,635,270	10,223,597	55%	(4,588,327)	805,914	68.26%	60,182	489,935	49,736	599,853	618,454	(18,601)	442,154	(73,420)	5,985,403
2017	5,985,403	10,485,997	57%	(4,500,594)	830,268	67.34%	56,857	502,245	47,420	606,522	648,576	(42,054)	475,018	0	6,418,367
2018	6,418,367	10,731,508	60%	(4,313,141)	855,825	65.10%	53,492	503,650	45,199	602,341	675,904	(73,563)	508,327	0	6,853,131
2019	6,853,131	10,963,107	63%	(4,109,976)	882,669	63.58%	50,127	511,074	42,905	604,106	705,092	(100,986)	541,935	0	7,294,080
2020	7,294,080	11,177,357	65%	(3,883,277)	911,010	61.22%	46,741	510,979	40,631	598,351	739,563	(141,212)	575,518	0	7,728,386
2021	7,728,386	11,367,833	68%	(3,639,447)	940,957	58.92%	43,341	511,071	38,284	592,696	771,294	(178,598)	608,690	0	8,158,478
2022	8,158,478	11,533,410	71%	(3,374,932)	973,382	56.61%	40,113	510,919	35,978	587,010	799,992	(212,982)	641,653	0	8,587,149
2023	8,587,149	11,678,589	74%	(3,091,440)	1,008,495	54.33%	37,146	510,769	26,120	574,035	825,117	(251,082)	674,368	0	9,010,435
2024	9,010,435	11,804,774	76%	(2,794,339)	1,045,905	52.06%	34,243	510,255	23,847	568,345	847,540	(279,195)	707,053	0	9,438,293
2025	9,438,293	11,906,243	79%	(2,467,950)	1,085,268	49.84%	31,420	509,478	21,488	562,386	877,945	(315,559)	739,754	0	9,862,488
2026	9,862,488	11,978,919	82%	(2,116,431)	1,126,840	47.72%	28,735	508,993	19,269	556,997	915,165	(358,168)	771,893	0	10,276,213
2027	10,276,213	12,014,999	86%	(1,738,786)	1,170,697	45.63%	26,156	508,033	17,092	551,281	942,377	(391,096)	803,609	0	10,688,726
2028	10,688,726	12,019,893	89%	(1,331,167)	1,217,232	43.59%	23,808	506,783	14,972	545,563	965,075	(419,512)	835,419	0	11,104,633
2029	11,104,633	11,999,271	93%	(894,638)	1,266,672	41.62%	21,748	505,441	13,047	540,236	988,765	(448,529)	867,474	0	11,523,578
2030	11,523,578	11,947,250	96%	(423,672)	1,318,359	23.65%	19,918	291,874	11,338	323,130	1,015,267	(692,137)	891,345	0	11,722,786
2031	11,722,786	11,862,365	99%	(139,579)	1,373,136	11.44%	18,342	138,745	9,749	166,836	1,052,765	(885,929)	899,554	0	11,736,411
2032	11,736,411	11,727,157	100%	9,254	1,430,917	0.17%	2,433	0	8,442	10,875	1,071,218	(1,060,343)	893,740	0	11,569,808
2033	11,569,808	11,561,467	100%	8,341	1,491,916	0.13%	1,939	0	7,161	9,100	1,076,092	(1,066,992)	880,134	0	11,382,950
2034	11,382,950	11,375,441	100%	7,509	1,556,143	0.10%	1,556	0	6,069	7,625	1,087,071	(1,079,446)	864,660	0	11,168,164
2035	11,168,164	11,161,401	100%	6,763	1,622,872	0.07%	1,136	0	5,031	6,167	1,110,566	(1,104,399)	846,420	0	10,910,185
2036	10,910,185	10,904,315	100%	5,870	1,692,489	0.05%	846	0	4,231	5,077	1,108,805	(1,103,728)	825,814	0	10,632,271
2037	10,632,271	10,627,228	100%	5,043	1,764,921	0.03%	529	0	3,530	4,059	1,104,345	(1,100,286)	803,731	0	10,335,716
2038	10,335,716	10,331,515	100%	4,201	1,840,538	0.02%	368	0	2,945	3,313	1,098,370	(1,095,057)	780,232	0	10,020,891
2039	10,020,891	10,017,472	100%	3,419	1,919,401	0.02%	384	0	2,303	2,687	1,092,046	(1,089,359)	755,290	0	9,686,822
2040	9,686,822	9,684,161	100%	2,661	2,000,850	0.02%	400	0	1,801	2,201	1,079,552	(1,077,351)	729,077	0	9,338,548
2041	9,338,548	9,336,574	100%	1,974	2,085,904	0.01%	209	0	1,460	1,669	1,066,437	(1,064,768)	701,753	0	8,975,533
2042	8,975,533	8,974,342	100%	1,191	2,174,467	0.01%	217	0	1,087	1,304	1,048,163	(1,046,859)	673,475	0	8,602,149
2043	8,602,149	8,601,721	100%	428	2,266,698	0.00%	0	0	907	907	1,020,993	(1,020,086)	644,746	0	8,226,809
							\$803,640	\$8,599,302	\$661,751	\$10,064,693					

State of Alaska Teachers' Retirement System

Section 4.7

Sensitivity Analysis Impact Various Investment Rates of Return Have on the Employer/State Contribution Amount



Section 5

Member Data

State of Alaska Teachers' Retirement System

Section 5.1

Summary of Members Included

As of June 30	2008	2009	2010	2011	2012
Active Members					
(1) Number	8,531	8,226	7,832	7,303	6,845
(2) Average Age	46.64	47.42	48.10	48.50	49.03
(3) Average Credited Service	12.44	13.19	13.97	14.52	15.16
(4) Average Entry Age	34.20	34.23	34.13	33.98	33.87
(5) Average Annual Earnings	\$ 64,371	\$ 67,715	\$ 72,125	\$ 74,648	\$ 77,351
(6) Number Vested	5,612	5,799	5,959	5,911	5,918
(7) Percent Who Are Vested	65.8%	70.5%	76.1%	80.9%	86.5%
Retirees, Disableds and Beneficiaries					
(1) Number	10,026	10,255	10,598	11,016	11,301
(2) Average Age	65.82	66.42	66.91	67.40	67.88
(3) Average Monthly Pension Benefit					
Base	\$ 1,994	\$ 1,994	\$ 2,017	\$ 2,051	\$ 2,085
C.O.L.A.	123	124	124	125	127
P.R.P.A.	485	526	505	504	527
Adjustment	0	0	0	0	0
Sick	45	47	48	49	52
Total	\$ 2,647	\$ 2,691	\$ 2,694	\$ 2,729	\$ 2,791
Vested Terminations (vested at time of termination, not refunded contributions or commenced benefit)					
(1) Number	873	884	840	852	868
(2) Average Age	49.14	49.52	49.34	49.75	49.70
(3) Average Monthly Pension Benefit	\$ 1,099	\$ 1,204	\$ 1,109	\$ 1,184	\$ 1,188
Non-Vested Terminations (not vested at termination, not refunded contributions)					
(1) Number	2,971	2,830	2,789	2,675	2,559
(2) Average Account Balance	\$ 13,692	\$ 14,408	\$ 15,460	\$ 16,274	\$ 17,266
Total Number of Members	22,401	22,195	22,059	21,846	21,573

State of Alaska Teachers' Retirement System

Section 5.1 (cont'd)

Summary of Members Included

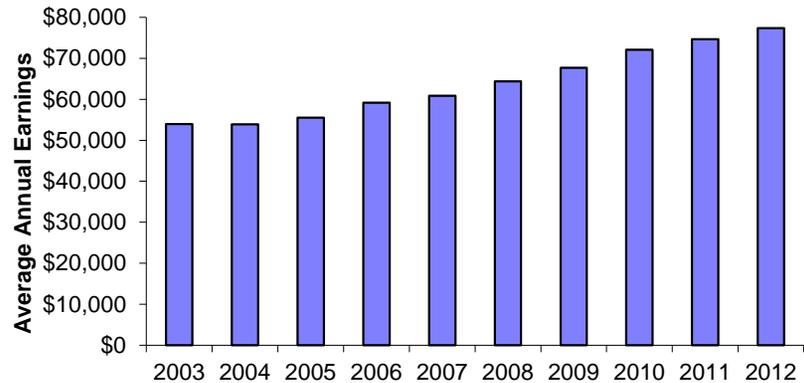
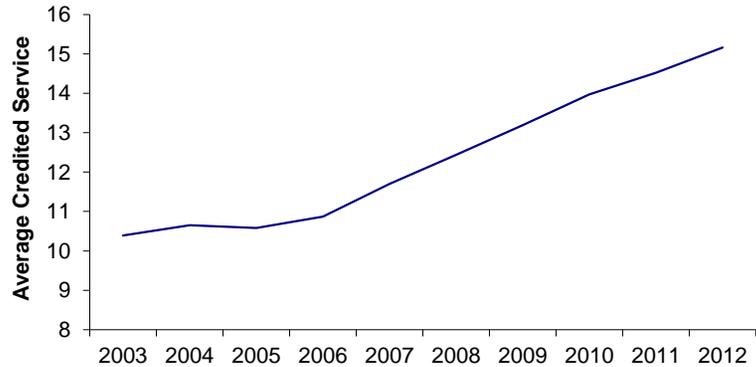
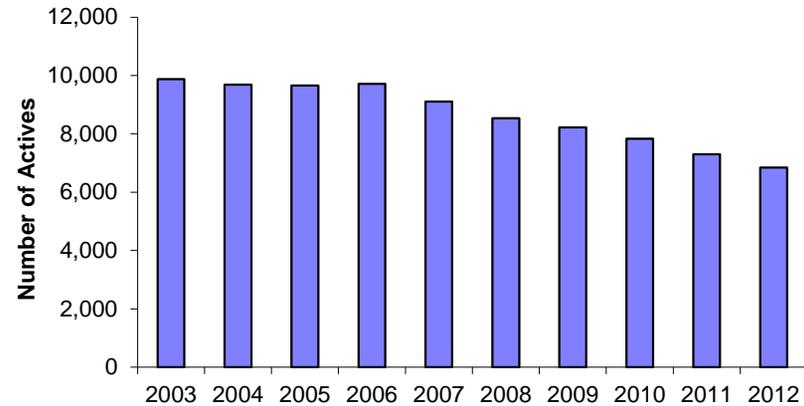
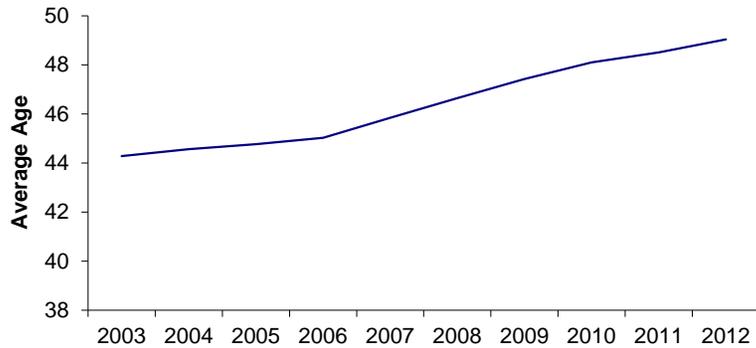
As of June 30, 2012	Tier 1	Tier 2	Total
Retirees, Disableds and Beneficiaries			
(1) Number	10,290	1,011	11,301
(2) Average Age	68.27	63.94	67.88
(3) Average Monthly Pension Benefit			
Base	\$ 2,142	\$ 1,502	\$ 2,085
C.O.L.A.	137	31	127
P.R.P.A.	572	64	527
Adjustment	0	-1	0
Sick	53	36	52
Total	\$ 2,904	\$ 1,632	\$ 2,791

State of Alaska Teachers' Retirement System

Section 5.1 (cont'd)

Summary of Members Included

Active Members at June 30



State of Alaska Teachers' Retirement System

Section 5.2

Age and Service Distribution of Active Members

Annual Earnings by Age				Annual Earnings by Credited Service			
Age	Number	Total Annual Earnings	Average Annual Earnings	Years of Service	Number	Total Annual Earnings	Average Annual Earnings
0 – 19	0	\$ 0	\$ 0	0	5	\$ 363,104	\$ 72,621
20 – 24	0	0	0	1	7	386,079	55,154
25 – 29	10	560,003	56,000	2	7	388,654	55,522
30 – 34	465	29,848,848	64,191	3	29	1,749,407	60,324
35 – 39	815	57,016,973	69,959	4	51	3,272,589	64,168
40 – 44	1,181	87,740,791	74,294	0 – 4	99	6,159,833	62,221
45 – 49	1,149	89,450,865	77,851	5 – 9	1,576	106,785,511	67,757
50 – 54	1,236	99,027,049	80,119	10 – 14	2,096	154,547,466	73,734
55 – 59	1,116	91,001,859	81,543	15 – 19	1,385	111,604,628	80,581
60 – 64	670	56,505,212	84,336	20 – 24	995	85,730,759	86,162
65 – 69	161	14,117,844	87,688	25 – 29	454	40,882,562	90,050
70 – 74	38	3,753,995	98,789	30 – 34	174	16,765,390	96,353
75+	4	444,831	111,208	35 – 39	48	5,068,305	105,590
				40+	18	1,923,816	106,879
Total	6,845	\$529,468,270	\$ 77,351	Total	6,845	\$529,468,270	\$ 77,351

Years of Credited Service by Age

Age	Years of Service									
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
0 – 19	0	0	0	0	0	0	0	0	0	0
20 – 24	0	0	0	0	0	0	0	0	0	0
25 – 29	0	10	0	0	0	0	0	0	0	10
30 – 34	14	364	87	0	0	0	0	0	0	465
35 – 39	19	316	430	50	0	0	0	0	0	815
40 – 44	24	260	528	320	49	0	0	0	0	1,181
45 – 49	12	180	324	328	278	27	0	0	0	1,149
50 – 54	10	158	304	313	275	152	24	0	0	1,236
55 – 59	9	164	258	218	229	149	80	9	0	1,116
60 – 64	10	102	129	122	135	94	49	24	5	670
65 – 69	1	21	30	29	23	20	16	13	8	161
70 – 74	0	1	4	5	6	10	5	2	5	38
75+	0	0	2	0	0	2	0	0	0	4
Total	99	1,576	2,096	1,385	995	454	174	48	18	6,845

Total annual earnings are the annualized earnings for the fiscal year ending on the valuation date.

State of Alaska Teachers' Retirement System

Section 5.3

Member Data Reconciliation

	Active Members	Inactive Members					Total
		Due a Refund	With Deferred Benefits	Retired Members	Disabled Members	Bene-ficiaries	
As of June 30, 2011	7,303	2,675	852	10,094	34	888	21,846
Vested Terminations	(172)	(3)	175	0	0	0	0
Non-vested Terminations	(70)	74	(4)	0	0	0	0
Cash-outs	(8)	(103)	(7)	0	0	0	(118)
Disability Retirements	(6)	0	(2)	0	8	0	0
Age Retirements	(329)	(16)	(82)	434	(7)	N/A	0
Deaths With Beneficiary	(3)	0	0	(26)	(1)	30	0
Deaths Without Beneficiary	(6)	(7)	(1)	(117)	0	(28)	(159)
Data Corrections	(1)	0	0	(2)	0	(2) ¹	(5)
Transfers Out	0	0	0	0	0	0	(1)
Rehires	137	(61)	(63)	(12)	(1)	0	0
Pick Ups	0	0	0	0	0	9	9
Net Change	(458)	(116)	16	277	(1)	9	(273)
New Entrants During the Year	0	0	N/A	N/A	N/A	N/A	0
As of June 30, 2012	6,845	2,559	868	10,371	33	897	21,573

¹ Expiration of certain period benefit.

State of Alaska Teachers' Retirement System

Section 5.4

Schedule of Active Member Data

Valuation Date	Number	Annual Earnings (000's) ¹	Annual Average Earnings	Percent Increase/ (Decrease) in Average Earnings	Number of Participating Employers
June 30, 2012	6,845	\$ 529,468	\$ 77,351	3.6%	58
June 30, 2011	7,303	545,155	74,648	3.5%	58
June 30, 2010	7,832	564,887	72,125	6.5%	58
June 30, 2009	8,226	557,026	67,715	5.2%	58
June 30, 2008	8,531	549,148	64,371	5.8%	58
June 30, 2007	9,107	554,245	60,859	2.9%	58
June 30, 2006	9,710	574,409	59,156	6.6%	58
June 30, 2005	9,656	535,837	55,493	2.9%	58
June 30, 2004	9,688	522,421	53,925	0.0%	58
June 30, 2003	9,873	532,630	53,948	2.7%	57

¹ Prior to June 30, 2006, unannualized earnings were used. Starting June 30, 2006, annualized earnings are used.

State of Alaska Teachers' Retirement System

Section 5.5

Summary of New Pension Benefit Recipients

During the Year Ending June 30	2008	2009	2010	2011	2012
Service					
(1) Number	419	299	442	496	426
(2) Average Age at Commencement	57.16	57.30	58.24	59.28	59.41
(3) Average Monthly Pension Benefit	\$ 2,600	\$ 2,374	\$ 2,881	\$ 3,015	\$ 3,100
Survivor (including surviving spouse and QDROs)					
(1) Number	55	65	84	62	39
(2) Average Age at Commencement	64.54	68.52	66.32	68.37	66.09
(3) Average Monthly Pension Benefit	\$ 1,460	\$ 1,419	\$ 1,451	\$ 1,842	\$ 1,945
Disability					
(1) Number	7	4	7	6	8
(2) Average Age at Commencement	53.60	49.85	53.45	45.50	52.95
(3) Average Monthly Pension Benefit	\$ 2,693	\$ 3,426	\$ 2,857	\$ 3,184	\$ 3,615
Total					
(1) Number	481	368	533	564	473
(2) Average Age at Commencement	57.95	59.20	59.45	60.13	59.85
(3) Average Monthly Pension Benefit	\$ 2,471	\$ 2,217	\$ 2,655	\$ 2,888	\$ 3,013

State of Alaska Teachers' Retirement System

Section 5.5 (cont'd)

Summary of New Pension Benefit Recipients

Average Pension Benefit Payments

	Years of Credited Service						
	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30+
Period 7/1/11 – 6/30/12: ¹							
Average Monthly Pension Benefit	\$ 353	\$ 1,064	\$ 1,512	\$ 2,241	\$ 3,276	\$ 4,320	\$ 5,739
Number of Recipients	11	43	62	61	118	81	58
Period 7/1/10- 6/30/11: ¹							
Average Monthly Pension Benefit	\$ 146	\$ 902	\$ 1,432	\$ 2,328	\$ 3,131	\$ 4,283	\$ 5,496
Number of Recipients	5	68	63	77	118	104	67
Period 7/1/09- 6/30/10: ¹							
Average Monthly Pension Benefit	\$ 482	\$ 1,020	\$ 1,343	\$ 2,263	\$ 2,992	\$ 4,120	\$ 6,263
Number of Recipients	14	50	63	85	109	79	49
Period 7/1/08- 6/30/09: ¹							
Average Monthly Pension Benefit	\$ 230	\$ 950	\$ 1,168	\$ 2,239	\$ 2,957	\$ 3,897	\$ 4,860
Number of Recipients	13	35	64	52	67	54	18
Period 7/1/07- 6/30/08: ¹							
Average Monthly Pension Benefit	\$ 209	\$ 945	\$ 1,248	\$ 2,226	\$ 2,966	\$ 3,832	\$ 5,057
Number of Recipients	13	44	62	92	95	87	33
Period 7/1/06- 6/30/07: ¹							
Average Monthly Pension Benefit	\$ 214	\$ 798	\$ 1,249	\$ 2,250	\$ 2,909	\$ 3,709	\$ 5,109
Number of Recipients	9	41	54	69	102	68	28
Period 7/1/05- 6/30/06: ¹							
Average Monthly Pension Benefit	\$ 1,078	\$ 960	\$ 1,110	\$ 1,982	\$ 2,695	\$ 3,388	\$ 4,563
Number of Recipients	9	50	63	90	124	68	26
Period 7/1/04- 6/30/05: ¹							
Average Monthly Pension Benefit	\$ 1,287	\$ 1,106	\$ 1,575	\$ 2,255	\$ 2,932	\$ 3,534	\$ 4,018
Number of Recipients	119	24	33	69	105	31	16
Period 7/1/03- 6/30/04:							
Average Monthly Pension Benefit	\$ 251	\$ 896	\$ 1,243	\$ 2,044	\$ 2,782	\$ 3,640	\$ 4,860
Number of Recipients	21	51	75	85	178	64	17

“Average Monthly Benefit” includes postretirement pension adjustments and cost-of-living increases.

¹ Does not include beneficiaries.

State of Alaska Teachers' Retirement System

Section 5.6

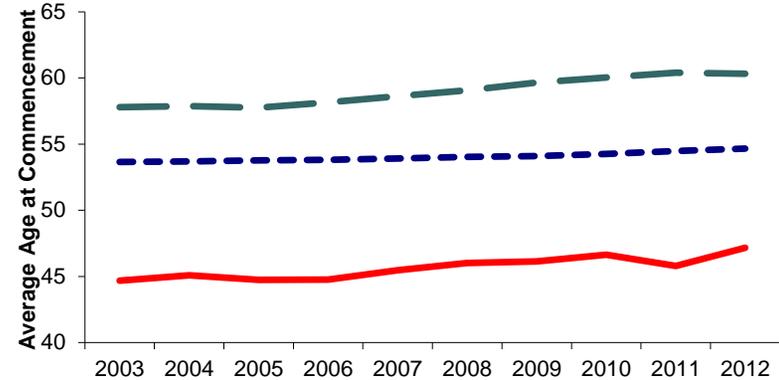
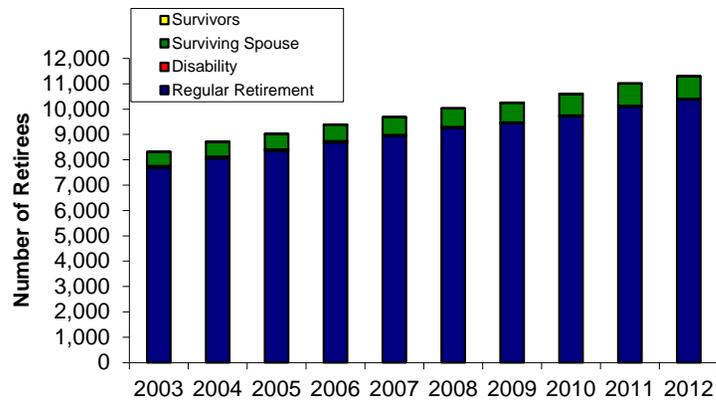
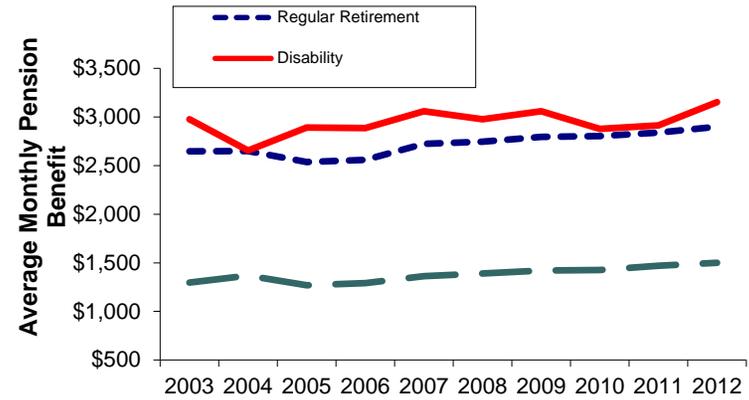
Summary of All Pension Benefit Recipients

As of June 30	2008	2009	2010	2011	2012
Service					
(1) Number, Fiscal Year Start	8,926	9,250	9,432	9,707	10,094
(2) Net Change	324	182	275	387	277
(3) Number, Fiscal Year End	9,250	9,432	9,707	10,094	10,371
(4) Average Age at Commencement	54.03	54.10	54.26	54.48	54.65
(5) Average Current Age	65.66	66.25	66.72	67.19	67.67
(6) Average Monthly Pension Benefit	\$ 2,745	\$ 2,794	\$ 2,804	\$ 2,839	\$ 2,901
Surviving Spouse's Benefits (includes QDROs)					
(1) Number, Fiscal Year Start	696	726	774	841	882
(2) Net Change	30	48	67	41	11
(3) Number, Fiscal Year End	726	774	841	882	893
(4) Average Age at Commencement	59.06	59.64	60.23	60.58	60.45
(5) Average Current Age	68.77	69.50	70.11	70.64	71.04
(6) Average Monthly Pension Benefit	\$ 1,390	\$ 1,421	\$ 1,431	\$ 1,475	\$ 1,504
Survivor's Benefits (other than spouses)					
(1) Number, Fiscal Year Start	1	3	3	6	6
(2) Net Change	2	0	3	0	(2)
(3) Number, Fiscal Year End	3	3	6	6	4
(4) Average Age at Commencement	33.44	33.44	31.90	31.90	31.90
(5) Average Current Age	35.19	36.19	34.11	35.11	35.71
(6) Average Monthly Pension Benefit	\$ 536	\$ 545	\$ 648	\$ 656	\$ 711
Disabilities					
(1) Number, Fiscal Year Start	55	47	46	44	34
(2) Net Change	(8)	(1)	(2)	(10)	(1)
(3) Number, Fiscal Year End	47	46	44	34	33
(4) Average Age at Commencement	46.02	46.13	46.64	45.79	47.16
(5) Average Current Age	51.79	52.13	52.66	51.06	51.61
(6) Average Monthly Pension Benefit	\$ 2,977	\$ 3,058	\$ 2,879	\$ 2,913	\$ 3,154
Total					
(1) Number, Fiscal Year Start	9,678	10,026	10,255	10,598	11,016
(2) Net Change	348	229	343	418	285
(3) Number, Fiscal Year End	10,026	10,255	10,598	11,016	11,301
(4) Average Age at Commencement	54.35	54.48	54.69	54.93	55.08
(5) Average Current Age	65.82	66.42	66.91	67.40	67.88
(6) Average Monthly Pension Benefit	\$ 2,647	\$ 2,691	\$ 2,694	\$ 2,729	\$ 2,791

State of Alaska Teachers' Retirement System

Section 5.6 (cont'd)

Summary of All Pension Benefit Recipients



State of Alaska Teachers' Retirement System

Section 5.6 (cont'd)

Summary of All Pension Benefit Recipients

Distribution of Annual Pension Benefits for Benefit Recipients

Annual Pension Benefit by Age

Age	Number	Total Annual Pension Benefit	Average Annual Pension Benefit
0 – 19	1	\$ 9,316	\$ 9,316
20 – 24	1	9,316	9,316
25 – 29	0	0	0
30 – 34	0	0	0
35 – 39	1	47,831	47,831
40 – 44	11	245,265	22,297
45 – 49	79	2,517,141	31,863
50 – 54	405	13,456,429	33,226
55 – 59	1,341	43,428,025	32,385
60 – 64	2,716	83,526,515	30,754
65 – 69	2,751	92,188,732	33,511
70 – 74	1,845	65,932,105	35,736
75+	2,150	77,064,061	35,844
Total	11,301	\$ 378,424,736	\$ 33,486

Annual Pension Benefit by Years Since Commencement

Years Since Commencement	Number	Total Annual Pension Benefit	Average Annual Pension Benefit
0	444	\$ 15,903,688	\$ 35,819
1	569	20,037,263	35,215
2	453	14,323,189	31,619
3	405	11,717,799	28,933
4	452	13,974,720	30,918
0 – 4	2,323	75,956,659	32,698
5 – 9	2,222	64,660,083	29,100
10 – 14	2,373	75,336,010	31,747
15 – 19	2,034	73,590,300	36,180
20 – 24	987	36,289,108	36,767
25 – 29	935	38,828,873	41,528
30 – 34	299	9,936,729	33,233
35 – 39	120	3,634,965	30,291
40+	8	192,009	24,001
Total	11,301	\$ 378,424,736	\$ 33,486

Years Since Benefit Commencement by Age

Age	Years Since Commencement									Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
0 – 19	1	0	0	0	0	0	0	0	0	1
20 – 24	1	0	0	0	0	0	0	0	0	1
25 – 29	0	0	0	0	0	0	0	0	0	0
30 – 34	0	0	0	0	0	0	0	0	0	0
35 – 39	1	0	0	0	0	0	0	0	0	1
40 – 44	7	2	2	0	0	0	0	0	0	11
45 – 49	63	14	1	1	0	0	0	0	0	79
50 – 54	247	129	25	3	1	0	0	0	0	405
55 – 59	682	394	213	50	1	0	0	1	1	1,341
60 – 64	758	910	678	321	44	2	2	1	0	2,716
65 – 69	362	497	920	677	214	75	5	0	1	2,751
70 – 74	106	187	367	608	354	212	8	2	1	1,845
75+	95	89	167	374	373	646	284	117	5	2,150
Total	2,323	2,222	2,373	2,034	987	935	299	120	8	11,301

State of Alaska Teachers' Retirement System

Section 5.7

Schedule of Pension Benefit Recipients by Type of Pension Benefit and Option Elected

Amount of Monthly Pension Benefit		Number of Recipients	Type of Pension Benefit			Option Selected			
			1	2	3	1	2	3	4
\$ 1	\$ 300	199	150	49	0	114	44	33	8
301	– 600	342	254	88	0	178	73	71	20
601	– 900	635	524	111	0	322	142	137	34
901	– 1,200	700	580	120	0	396	156	117	31
1,201	– 1,500	644	520	124	0	328	149	139	28
1,501	– 1,800	601	498	102	1	333	129	121	18
1,801	– 2,100	681	570	110	1	353	153	151	24
2,101	– 2,400	849	785	61	3	404	183	230	32
2,401	– 2,700	991	937	50	4	475	239	251	26
2,701	– 3,000	964	927	31	6	467	201	270	26
3,001	– 3,300	863	836	21	6	419	162	263	19
3,301	– 3,600	829	813	13	3	415	155	238	21
3,601	– 3,900	673	665	6	2	347	119	191	16
3,901	– 4,200	582	575	3	4	304	83	187	8
Over \$4,200		1,748	1,737	8	3	840	246	613	49
Totals		11,301	10,371	897	33	5,695	2,234	3,012	360

Type of Pension Benefit

1. Regular retirement
2. Survivor payment
3. Disability

Option Selected

1. Whole Life Annuity
2. 75% Joint and Contingent Annuity
3. 50% Joint and Contingent Annuity
4. 66 2/3% Joint and Survivor Annuity

State of Alaska Teachers' Retirement System

Section 5.8

Pension Benefit Recipients Added to and Removed from Rolls

Year Ended	Added to Rolls		Removed from Rolls		Rolls – End of Year		Percent Increase in Annual Pension Allowances	Average Annual Pension Allowance
	No. ¹	Annual Pension Allowances ¹	No. ¹	Annual Pension Allowances ¹	No.	Annual Pension Allowances		
June 30, 2012	473	\$17,104,564	188	\$(617,561)	11,301	\$378,424,736	4.91%	\$33,486
June 30, 2011	564	19,546,369	146	1,464,766	11,016	360,702,611	5.28%	32,744
June 30, 2010	533	16,980,817	190	5,495,399	10,598	342,621,008	3.47%	32,329
June 30, 2009	368	9,788,639	139	(2,857,118)	10,255	331,135,590	3.97%	32,290
June 30, 2008	481	14,265,236	133	806,945	10,026	318,489,833	4.41%	31,766
June 30, 2007	432	12,388,703	140	(14,114,559)	9,678	305,031,542	9.52%	31,518
June 30, 2006	487	12,731,292	121	(50,838)	9,386	278,528,280	4.81%	29,675
June 30, 2005	446	11,243,448	121	13,053,612	9,020	265,746,150	(0.68)%	29,462
June 30, 2004	491	17,867,366	96	5,503,666	8,707	267,556,314	4.84%	30,729
June 30, 2003	599	21,475,421	91	3,377,352	8,312	255,192,614	7.63%	30,702

¹ Numbers are estimated, and include other internal transfers.

Section 6

Basis of the Actuarial Valuation

Summary of Plan Provisions and Changes in Plan Provisions

(1) **Effective Date**

July 1, 1955, with amendments through June 30, 2012. Chapter 97, 1990 Session Laws of Alaska, created a two-tier retirement system. Members who were first hired under the TRS before July 1, 1990 (Tier 1) are eligible for different benefits than members hired after June 30, 1990 (Tier 2). Chapter 9, 2005 Session Laws of Alaska, closed the plan to new members hired after June 30, 2006.

(2) **Administration of Plan**

The Commissioner of Administration or the Commissioner's designee is the administrator of the system. The Attorney General of the state is the legal counsel for the system and shall advise the administrator and represent the system in legal proceedings.

Prior to June 30, 2005, the Teachers' Retirement Board prescribed policies and adopted regulations and performed other activities necessary to carry out the provisions of the system. The Alaska State Pension Investment Board, Department of Revenue, Treasury Division was responsible for investing TRS funds.

On July 27, 2005, Senate Bill 141, enacted as Chapter 9, 2005 Session laws of Alaska, replaced the Teachers' Retirement Board and the Alaska State Pension Investment Board with the Alaska Retirement Management Board.

(3) **Employers Included**

Currently, there are 58 employers participating in the TRS, including the State of Alaska, 53 school districts, and four other eligible organizations.

(4) **Membership**

Membership in the Alaska TRS is mandatory for the following employees hired before July 1, 2006:

- certificated full-time and part-time elementary and secondary teachers, certificated school nurses, and certificated employees in positions requiring teaching certificates;
- positions requiring a teaching certificate as a condition of employment in the Department of Education and Early Development and the Department of Labor and Workforce Development;
- University of Alaska full-time and part-time teachers, and full-time administrative employees in positions requiring academic standing if approved by the TRS administrator;
- certain full-time or part-time teachers of Alaska Native language or culture who have elected to be covered under the TRS;
- members on approved sabbatical leave under AS 14.20.310;
- certain State legislators who have elected to be covered under the TRS; and
- a teacher who has filed for worker's compensation benefits due to an on-the-job assault and who, as a result of the physical injury, is placed on leave without pay.

Summary of Plan Provisions and Changes in Plan Provisions

Employees participating in the University of Alaska's Optional Retirement Plan or other retirement plans funded by the State are not covered by the TRS.

Employees who work half-time in the TRS and Public Employees' Retirement System (PERS) simultaneously are eligible for half-time TRS and PERS credit.

Senate Bill 141, signed into law on July 27, 2005, closes the plan effective July 1, 2006 to new members first hired on or after July 1, 2006.

(5) Credited Service

TRS members receive a year of membership credit if they work a minimum of 172 days during the school year (July 1 through June 30 of the following year). Fractional credit is determined based on the number of days worked. Part-time members who work at least 50% of full-time receive membership credit for each day in proportion to full-time service. Credit is granted for all Alaskan public school service.

Members may claim other types of service, including:

- Outside teaching service in out-of-state schools or Alaska private schools (not more than ten years may be claimed);
- Military service (not more than five years of military service or ten years of combined outside and military service may be claimed);
- Alaska Bureau of Indian Affairs (BIA) service;
- Retroactive Alaskan service that was not creditable at the time it occurred, but later became creditable because of legislative change;
- Unused sick leave credit after members retire; and
- Leave of absence without pay.

Except for retroactive Alaska service that occurred before July 1, 1955, and unused sick leave, contributions are required for all claimed service.

Members receiving TRS disability benefits continue to earn TRS credit while disabled.

Survivors who are receiving occupational death benefits continue to earn TRS service credit while occupational survivor benefits are being paid.

(6) Employer Contributions

TRS employers contribute the amounts required, in addition to employees' contributions, to fund the benefits of the system.

Summary of Plan Provisions and Changes in Plan Provisions

The normal cost rate is a uniform rate for all participating employers (less the value of members' contributions).

The past service rate is a uniform rate for all participating employers to amortize the unfunded past service liability with payments that are a level dollar amount over fixed 25-year periods.

Employer rates cannot be less than the normal cost rate.

(7) **Additional State Contribution**

Pursuant to AS14.25.070 effective July 1, 2008, the State shall contribute an amount (in addition to the State contribution as an employer) that when combined with the employer contribution (12.56%) will be sufficient to pay the total contribution rate adopted by The State of Alaska Retirement Management Board.

(8) **Member Contributions**

Mandatory Contributions: Members are required to contribute 8.65% of their base salaries. Members' contributions are deducted from gross salaries before federal income taxes are withheld.

Contributions for Claimed Service: Member contributions are also required for most of the claimed service described in (5) above.

1% Supplemental Contributions: Members who joined the system before July 1, 1982 and elected to participate in the supplemental contributions provision are required to contribute an additional 1% of their salaries. Supplemental contributions are deducted from gross salaries after federal income taxes are withheld. Under the supplemental provision, an eligible spouse or dependent child will receive a survivor's allowance or spouse's pension if the member dies (see (13) below). Supplemental contributions are only refundable upon death (see (13) below).

Interest: Members' contributions earn 4.5% interest, compounded annually on June 30.

Refund of Contributions: Terminated members may receive refunds of their member contribution accounts which includes their mandatory contributions, indebtedness payments, and interest earned. Terminated members' accounts may be attached to satisfy claims under Alaska Statute 09.38.065, federal income tax levies, and valid Qualified Domestic Relations Orders.

Reinstatement of Contributions: Refunded accounts and the corresponding TRS service may be reinstated upon reemployment in the TRS prior to July 1, 2010. Interest accrues on refunds until paid in full or members retire.

Summary of Plan Provisions and Changes in Plan Provisions

(9) Retirement Benefits

Eligibility:

- (a) Members, including deferred vested members, are eligible for normal retirement at age 55 or early retirement at age 50 if they were hired before July 1, 1990 (Tier 1) and age 60 or early retirement at age 55 if they were hired on or after July 1, 1990 (Tier 2). Additionally, they must have at least:
 - (i) eight years of paid-up membership service;
 - (ii) 15 years of paid-up creditable service, the last five years of which are membership service, and they were first hired under the TRS before July 1, 1975;
 - (iii) five years of paid-up membership service and three years of paid-up Alaska Bureau of Indian Affairs service;
 - (iv) 12 years of combined part-time and full-time paid-up membership service;
 - (v) two years of paid-up membership service if they are vested in the Public Employees' Retirement System (PERS); or
 - (vi) one year of paid-up membership service if they are retired from the PERS.
- (b) Members may retire at any age when they have:
 - (i) 25 years of paid-up creditable service, the last five years of which are membership service;
 - (ii) 20 years of paid-up membership service;
 - (iii) 20 years of combined paid-up membership and Alaska Bureau of Indian Affairs service, the last five years of which are membership service; or
 - (iv) 20 years of combined paid-up part-time and full-time membership service.

Benefit Type: Lifetime benefits are paid to members. Eligible members may receive normal, unreduced benefits when they (1) reach normal retirement age and complete the service required; or (2) satisfy the minimum service requirements to retire at any age under (b) above. Members may receive early, actuarially reduced benefits when they reach early retirement age and complete the service required.

Summary of Plan Provisions and Changes in Plan Provisions

Members may select joint and survivor options and a last survivor option. Under those options and early retirement, benefits are actuarially adjusted so that members receive the actuarial equivalents of their normal benefit amounts.

Benefit Calculation: Retirement benefits are calculated by multiplying the average base salary (ABS) times the total TRS service times the percentage multiplier. The ABS is determined by averaging the salaries earned during the three highest school years. Members must earn at least 115 days of credit in a school year to include it in the ABS calculation. The TRS pays a minimum benefit of \$25.00 per month for each year of service when the calculated benefit is less.

The percentage multipliers are 2% for the first 20 years and 2.5% for all remaining service. Service before July 1, 1990 is calculated at 2%.

Indebtedness: Members who terminate and refund their TRS contributions are not eligible to retire unless they return to TRS employment and pay back their refunds plus interest or accrue additional service which qualifies them for retirement. TRS refunds must be paid in full if the corresponding service is to count toward the minimum service requirements for retirement. Refunded TRS service is included in total service for the purpose of calculating retirement benefits. However, when refunds are not completely paid before retirement, benefits are actuarially reduced for life. Indebtedness balances may also be created when a member purchases qualified claimed service.

(10) Reemployment of Retired Members

Retirees who return to work in a permanent full-time or part-time TRS position after a Normal Retirement are eligible to return under the Standard Option.

Under the Standard Option, retirement and retiree healthcare benefits are suspended while retired members are reemployed under the TRS. During reemployment, members earn additional TRS service and contributions are withheld from their wages.

Summary of Plan Provisions and Changes in Plan Provisions

Members retired under the RIP who return to employment under the TRS, Public Employees' Retirement System (PERS), Judicial Retirement System (JRS) or the University of Alaska's Optional Retirement Plan will:

- (a) forfeit the three years of incentive credits that they received;
- (b) owe the TRS 110% of the benefits that they received under the RIP, which may include costs for health insurance, excluding amounts that they paid to participate; and
- (c) be charged 7% interest from the date that they are reemployed until their indebtedness is paid in full or they retire again. If the indebtedness is not completely paid, future benefits will be actuarially reduced for life.

Employers make contributions to the unfunded liability of the plan on behalf of rehired retired members at the rate the employer is making contributions to the unfunded liability of the plan for other members.

(11) Postemployment Healthcare Benefits

When pension benefits begin, major medical benefits are provided by the TRS to (1) all employees first hired before July 1, 1990 (Tier 1) and their surviving spouses and (2) members and their surviving spouses who have twenty-five years of membership service, are disabled or age sixty or older, regardless of their initial hire dates. Employees first hired after June 30, 1990 (Tier 2) and their surviving spouses may receive major medical benefits prior to age sixty by paying premiums.

(12) Disability Benefits

Monthly disability benefits are paid to permanently disabled members until they die, recover or become eligible for normal retirement. To be eligible, members must have at least five years of paid-up membership service.

Disability benefits are equal to 50% of the member's base salary at the time of disability. The benefit is increased by 10% of the base salary for each minor child, up to a maximum of 40%. Members continue to earn TRS service until eligible for normal retirement.

Members are appointed to normal retirement on the first of the month after they become eligible.

(13) Death Benefits

Monthly death benefits may be paid to a spouse or dependent children upon the death of a member. If monthly benefits are not payable under the supplemental contributions provision or occupational and nonoccupational death provisions, the designated beneficiary receives the lump sum benefit described below.

Summary of Plan Provisions and Changes in Plan Provisions

Occupational Death: When an active member dies from occupational causes, a monthly survivor's pension may be paid to the spouse, unless benefits are payable under the supplemental contributions provision (below). The pension equals 40% of the member's base salary on the date of death or disability, if earlier. If there is no spouse, the pension may be paid to the member's dependent children. On the member's normal retirement date, the benefit converts to a normal retirement benefit. The normal benefit is based on the member's average base salary on the date of death and service, including service accumulated from the date of the member's death to the normal retirement date.

Nonoccupational Death: When a vested member dies from nonoccupational causes, the surviving spouse may elect to receive a monthly 50% joint and survivor benefit or a lump sum benefit, unless benefits are payable under the supplemental contributions provision (below). The monthly benefit is calculated on the member's average base salary and TRS service accrued at the time of death.

Lump Sum Benefit: Upon the death of an active member who has less than one year of service or an inactive member who is not vested, the designated beneficiary receives the member's contribution account, which includes mandatory contributions, indebtedness payments, and interest earned. Any supplemental contributions will also be refunded. If the member has more than one year of TRS service or is vested, the beneficiary also receives \$1,000 and \$100 for each year of TRS service, up to a maximum of \$3,000. An additional \$500 may be payable if the member is survived by dependent children.

Supplemental Contributions Provision: Members are eligible for supplemental coverage if they joined the TRS before July 1, 1982, elected to participate in the supplemental provision, and made the required contributions. A survivor's allowance or spouse's pension (below) may be payable if the member made supplemental contributions for at least one year and dies while in membership service or while disabled under the TRS. In addition, the allowance and pension may be payable if the member dies while retired or in deferred vested status if supplemental contributions were made for at least five years.

- (a) Survivor's Allowance: If the member is survived by dependent children, the surviving spouse and dependent children are entitled to a survivor's allowance. The allowance for the spouse is equal to 35% of the member's base salary at the time of death or disability, plus 10% for each dependent child up to a maximum of 40%. The allowance terminates and a spouse's pension becomes payable when there is no longer an eligible dependent child.
- (b) Spouse's Pension: The spouse's pension is equal to 50% of the retirement benefit that the deceased member was receiving or the unreduced retirement benefit that the deceased member would have received if retired at the time of death. The spouse's pension begins on the first of the month after the member's death or termination of the survivor's allowance.

Summary of Plan Provisions and Changes in Plan Provisions

Death After Retirement: If a joint and survivor option was selected at retirement, the eligible spouse receives continuing, lifetime monthly benefits after the member dies. A survivor's allowance or spouse's pension may be payable if the member participated in the supplemental contributions provision. If a joint and survivor option was not selected and benefits are not payable under the supplemental contributions provision, the designated beneficiary receives the member's contribution account, less any benefits already paid and the member's last benefit check.

(14) Postretirement Pension Adjustments

Postretirement pension adjustments (PRPAs) are granted annually to eligible benefit recipients when the consumer price index (CPI) for urban wage earners and clerical workers for Anchorage increases during the preceding calendar year. PRPAs are calculated by multiplying the recipient's base benefit, including past PRPAs, excluding the Alaska COLA, times:

- (a) 75% of the CPI increase in the preceding calendar year or 9%, whichever is less, if the recipient is at least age 65 or on TRS disability; or
- (b) 50% of the CPI increase in the preceding calendar year or 6%, whichever is less, if the recipient is at least age 60, or under age 60 if the recipient has been receiving benefits for at least eight years.

Ad hoc PRPAs, up to a maximum of 4%, may be granted to eligible recipients who were first hired before July 1, 1990 (Tier 1) if the CPI increases and the funding ratio is at least 105%.

In a year where an Ad Hoc PRPA is granted, eligible recipients will receive the higher of the two calculations.

(15) Alaska Cost of Living Allowance

Eligible benefit recipients who reside in Alaska receive an Alaska cost of living allowance (COLA) equal to 10% of their base benefits. The following benefit recipients are eligible:

- (a) members who were first hired under the TRS before July 1, 1990 (Tier 1) and their survivors;
- (b) members who were first hired under the TRS after June 30, 1990 (Tier 2) and their survivors if they are at least age 65; and
- (c) all disabled members.

Changes in Benefit Provisions Since the Prior Valuation

There have been no changes in benefit provisions since the prior valuation.

Description of Actuarial Methods and Valuation Procedures

The funding method used in this valuation was adopted by the Board in October 2006. The asset smoothing method used to determine valuation assets was changed effective June 30, 2002.

Benefits valued are those delineated in Alaska State statutes as of the valuation date. Changes in State statutes effective after the valuation date are not taken into consideration in setting the assumptions and methods.

(A) Actuarial Method – Entry Age Actuarial Cost.

Liabilities and contributions shown in the report are computed using the Entry Age Actuarial Cost method of funding. Any funding surpluses or unfunded accrued liability is amortized over 25 years as a level dollar amount and represents a change from the level percentage of payroll amortization method effective June 30, 2012. State statutes allow the contribution rate to be determined on payroll for all members, defined benefit and defined contribution member payroll combined. However, for GASB disclosure requirements, the net amortization period will not exceed 30 years and the level dollar amortization method is used since the defined benefit plan membership was closed effective July 1, 2006.

Projected pension and postemployment healthcare benefits were determined for all active members. Cost factors designed to produce annual costs as a constant percentage of each member's expected compensation in each year for pension benefits (constant dollar amount for healthcare benefits) from the assumed entry age to the assumed retirement age were applied to the projected benefits to determine the normal cost (the portion of the total cost of the plan allocated to the current year under the method). The normal cost is determined by summing intermediate results for active members and determining an average normal cost rate which is then related to the total payroll of active members. The actuarial accrued liability for active members (the portion of the total cost of the plan allocated to prior years under the method) was determined as the excess of the actuarial present value of projected benefits over the actuarial present value of future normal costs.

The actuarial accrued liability for retired members and their beneficiaries currently receiving benefits, terminated vested members and disabled members not yet receiving benefits was determined as the actuarial present value of the benefits expected to be paid. No future normal costs are payable for these members.

The actuarial accrued liability under this method at any point in time is the theoretical amount of the fund that would have been accumulated had annual contributions equal to the normal cost been made in prior years (it does not represent the liability for benefits accrued to the valuation date). The unfunded actuarial accrued liability is the excess of the actuarial accrued liability over the actuarial value of plan assets measured on the valuation date.

Under this method, experience gains or losses, i.e., decreases or increases in accrued liabilities attributable to deviations in experience from the actuarial assumptions, adjust the unfunded actuarial accrued liability.

Description of Actuarial Methods and Valuation Procedures

(B) Valuation of Assets

Effective June 30, 2002, the asset valuation method recognizes 20% of the difference between actual and expected investment return in each of the current and preceding four years. This method was phased in over the next five years. All assets are valued at fair value. Assets are accounted for on an accrued basis and are taken directly from financial statements audited by KPMG LLP. Valuation assets are constrained to a range of 80% to 120% of the fair value of assets.

Changes in Methods from the Prior Valuation

There was one change in valuation methods as well as any changes described in the healthcare sections below. Amortization of any funding surpluses or unfunded accrued liability was changed from a level percent of pay amount to a level dollar amount.

(C) Valuation of Medical Benefits

This section outlines the detailed methodology used to develop the initial per capita claims cost rates for the State of Alaska Teachers' Retirement System postemployment healthcare plan. Note that methodology reflects the results of our annual experience rate update for the period July 1, 2012 to June 30, 2013.

Base claims cost rates are incurred healthcare costs expressed as a rate per member per year. Ideally, claims cost rates should be derived for each significant component of cost that can be expected to require differing projection assumptions or methods, i.e., medical claims, prescription drug claims, administrative costs, etc. Separate analysis is limited by the availability and credibility of cost and enrollment data for each component of cost. This valuation reflects non-prescription claims separated by Medicare status, including eligibility for free Part A coverage. Prescription costs are analyzed separately as in prior valuations. Administrative costs are assumed in the final per capita claims cost rates used for valuation purposes, as described below. Analysis to date on Medicare Part A coverage is limited since Part A claim data is not available by individual, nor is this status incorporated into historical claim data.

We analyzed HealthSmart and Premera management level reporting for fiscal 2009 through April 2012, as well as HealthSmart and Premera claim level data for the same period and derived recommended base claims cost rates as described in the following steps:

1. Based on analysis described in our Experience Study, dental, vision and audio claims (DVA) are excluded from data analyzed for this valuation.
2. Available management level reporting does not show claims or enrollment separately for Medicare and non-Medicare plan participants, but does include overall statistics as to the percentage of claims and enrollment attributable to both groups. Claim level reporting was used to augment cost data by Medicare status.

Description of Actuarial Methods and Valuation Procedures

3. Alaska retirees who do not have 40 quarters of Medicare-covered compensation do not qualify for Medicare Part A coverage free of charge. This is a relatively small and closed group. Medicare was applied to State employment for all employees hired after March 31, 1986. For these "no-Part A" individuals, the State is the primary payer for hospital bills and other Part A services. Thus, claims costs are higher for the no-Part A group. To date, claim experience is not available separately for participants with both Medicare Parts A and B and those with Part B only. Therefore, higher no-Part A claims are spread across the entire retired population and have been applied to future claims of current active employees projected to retire in the future. To the extent that no-Part A claims can be isolated and applied strictly to the appropriate closed group, actuarial accrued liability will be more accurate and will be lower. The smaller the no-Part A population, the more accrued liabilities will decrease.

Based on census data received from HealthSmart, 0.5% of the current retiree population was identified as having coverage only under Medicare Part B. For future retirees, we assume their Part A eligible status based on a combination of date of hire and/or re-hire, date of birth, tier, etc.

All claims cost rates developed from management level reporting have been compared to similar rates developed from claim level data.

4. The steps above result in separate paid claims cost rates for medical and prescription benefits for non-Medicare, Medicare Part B only and Medicare Part A&B members for the past four fiscal years. Medical claims cost rates reflect differing average ages and levels of Medicare coordination for each group. Prescription claims cost rates reflect differing average ages. We utilized incurred claim data projected from each historical data period to the valuation year using a weighted average of national and Alaska-specific trend factors and developed weighted average incurred claims cost rates. We used estimated June 2012 reserve data to complete fiscal year 2012 claim costs.
5. Healthcare Reform legislation passed on March 23, 2010 included several provisions with potential implications for the State of Alaska Retiree Health Plan liability. Buck evaluated the impact of the following provisions; however, none of the impacts have been included in the valuation results.

Because the State plan is retiree-only, and was in effect at the time the legislation was enacted, not all provisions are required. Unlimited lifetime benefits and dependent coverage to age 26 are two of these provisions. We reviewed the impact of including these provisions, but there was no decision made to adopt them, and no requirement to do so.

The Plan will be subject to the high cost plan excise tax (Cadillac tax). Based upon guidance available at the time of disclosure, Buck estimated the year in which the tax would potentially affect Alaska to be sufficiently far into the future to produce a minimal impact. Buck determined the impact to be immaterial based on a blend of pre-Medicare and Medicare retirees.

We have not identified any other specific provisions of healthcare reform that would be expected to have a significant impact on the measured obligation. As additional guidance on the legislation is issued, we will continue to monitor any potential impacts.

State of Alaska Teachers' Retirement System

Section 6.2 (cont'd)

Description of Actuarial Methods and Valuation Procedures

June 30, 2012 Valuation – FY 2013 Claims Cost Rates

	Medical			Prescription Drugs			Total
	Pre-Medicare	Medicare A&B	Medicare B Only	Pre-Medicare	Medicare A&B	Medicare B Only	
Fiscal 2009 Incurred Claims	\$ 207,452,753	\$ 43,988,895	\$ 4,422,726	\$ 65,158,106	\$ 64,232,955	\$ 1,507,666	\$ 386,763,101
Membership	32,943	24,624	539	32,943	24,624	539	58,106
Paid Claims Cost Rate	\$ 6,297	\$ 1,786	\$ 8,204	\$ 1,978	\$ 2,609	\$ 2,797	\$ 6,656
Trend to FY2013	1.317	1.317	1.317	1.235	1.235	1.235	
FY 2013 Paid Cost Rate	\$ 8,295	\$ 2,353	\$ 10,806	\$ 2,442	\$ 3,221	\$ 3,453	\$ 8,581
Paid to Incurred Factor	1.000	1.000	1.000	1.000	1.000	1.000	
FY 2013 Incurred Cost Rate	\$ 8,295	\$ 2,353	\$ 10,806	\$ 2,442	\$ 3,221	\$ 3,454	\$ 8,582
Fiscal 2010 Incurred Claims	\$ 233,601,103	\$ 60,082,942	\$ 1,421,948	\$ 59,287,225	\$ 69,463,204	\$ 394,011	\$ 424,250,433
Membership	32,026	27,915	156	32,026	27,915	156	60,097
Paid Claims Cost Rate	\$ 7,294	\$ 2,152	\$ 9,115	\$ 1,851	\$ 2,488	\$ 2,526	\$ 7,059
Trend to FY2013	1.220	1.220	1.220	1.143	1.143	1.143	
FY 2013 Paid Cost Rate	\$ 8,896	\$ 2,625	\$ 11,117	\$ 2,116	\$ 2,845	\$ 2,887	\$ 8,446
Paid to Incurred Factor	1.000	1.000	1.000	1.000	1.000	1.000	
FY 2013 Incurred Cost Rate	\$ 8,896	\$ 2,625	\$ 11,117	\$ 2,117	\$ 2,845	\$ 2,888	\$ 8,446
Fiscal 2011 Incurred Claims	\$ 232,542,851	\$ 55,569,969	\$ 848,494	\$ 48,384,466	\$ 85,599,757	\$ 393,794	\$ 423,339,331
Membership	31,362	29,997	138	31,362	29,997	138	61,497
Paid Claims Cost Rate	\$ 7,415	\$ 1,852	\$ 6,149	\$ 1,543	\$ 2,854	\$ 2,854	\$ 6,884
Trend to FY2013	1.079	1.079	1.079	1.043	1.043	1.043	
FY 2013 Paid Cost Rate	\$ 8,001	\$ 1,999	\$ 6,634	\$ 1,609	\$ 2,977	\$ 2,977	\$ 7,349
Paid to Incurred Factor	1.000	1.000	1.000	1.000	1.000	1.000	
FY 2013 Incurred Cost Rate	\$ 8,001	\$ 1,999	\$ 6,634	\$ 1,610	\$ 2,977	\$ 2,977	\$ 7,350

State of Alaska Teachers' Retirement System

Section 6.2 (cont'd)

Description of Actuarial Methods and Valuation Procedures

June 30, 2012 Valuation – FY 2013 Claims Cost Rates

	Medical			Prescription Drugs			Total
	Pre-Medicare	Medicare A&B	Medicare B Only	Pre-Medicare	Medicare A&B	Medicare B Only	
Fiscal 2012 Incurred Claims	\$ 240,584,988	\$ 73,566,159	\$ 1,636,834	\$ 50,683,151	\$ 95,740,056	\$ 593,392	\$ 462,804,580
Membership	29,438	33,560	208	29,438	33,560	208	63,206
Paid Claims Cost Rate	\$ 8,173	\$ 2,192	\$ 7,869	\$ 1,722	\$ 2,853	\$ 2,853	\$ 7,322
Trend to FY2013	1.004	1.004	1.004	1.002	1.002	1.002	
FY 2013 Paid Cost Rate	\$ 8,209	\$ 2,202	\$ 7,905	\$ 1,725	\$ 2,858	\$ 2,858	\$ 7,559
Paid to Incurred Factor	1.000	1.000	1.000	1.000	1.000	1.000	
FY 2013 Incurred Cost Rate	\$ 8,209	\$ 2,202	\$ 7,905	\$ 1,725	\$ 2,859	\$ 2,859	\$ 7,559
Weighted Average 7/1/2012-6/30/2013 Incurred Claims Cost Rates:							
At average age	\$ 8,298	\$ 2,228	\$ 8,511	\$ 1,874	\$ 2,974	\$ 3,020	\$ 7,839
At age 65	\$ 9,856	\$ 1,628	\$ 6,219	\$ 2,736	\$ 2,736	\$ 2,736	\$ 8,214

State of Alaska Teachers' Retirement System

Section 6.2 (cont'd)

Description of Actuarial Methods and Valuation Procedures

Following the development of total projected costs, a distribution of per capita claims cost was developed. This was accomplished by allocating total projected costs to the population census used in the valuation. The allocation was done separately for each of prescription drugs and medical costs for the Medicare eligible and pre-Medicare populations. The allocation weights were developed using participant counts by age and assumed morbidity and aging factors. Results were tested for reasonableness based on historical trend and external benchmarks for costs paid by Medicare.

Below are the results of this analysis:

**Distribution of Per Capita Claims Cost by Age
for the Period July 1, 2012 through June 30, 2013**

Age	Medical and Medicare Parts A & B	Medical and Medicare Part B Only	Prescription Drug	Medicare Retiree Drug Subsidy
45	\$ 5,458	\$ 5,458	\$ 1,443	\$ 0
50	6,176	6,176	1,714	0
55	6,987	6,987	2,036	0
60	8,298	8,298	2,360	0
65	1,628	6,219	2,736	535
70	1,981	7,566	2,947	576
75	2,352	8,984	3,144	615
80	2,534	9,679	3,223	630

State of Alaska Teachers' Retirement System

Section 6.3

Summary of Actuarial Assumptions and Changes in Assumptions

The demographic and economic assumptions used in the June 30, 2012 valuation are described below. Unless noted otherwise, these assumptions were adopted by the Board in December 2010. These assumptions were the result of an experience study performed as of June 30, 2009.

Investment Return / Discount Rate	8.00% per year (geometric), compounded annually, net of expenses.
Salary Scale	Inflation – 3.12% per year. Productivity – 0.50% per year. See Table 1 for salary scale rates.
Payroll Growth	3.62% per year. (Inflation + Productivity).
Total Inflation	Total inflation as measured by the Consumer Price Index for urban and clerical workers for Anchorage is assumed to increase 3.12% annually.
Mortality (Pre-termination)*	Based upon the 2005-2009 actual experience. (See Table 2). 1994 Group Annuity Mortality (GAM) Sex-distinct Table 1994 Base Year without margin projected to 2013 using Projection Scale AA, adjusted 55% for females and 45% for males. Deaths are assumed to result from non-occupational causes 85% of the time.
Mortality (Post-termination)*	Based upon the 2005-2009 actual experience. (See Table 3). The 1994 GAM Sex-distinct Table 1994 Base Year without margin projected to 2013 using Projection Scale AA, with a 3-year setback for females and 4-year setback for males.
Turnover	Select and ultimate rates based upon the 2005-2009 actual withdrawal experience. (See Table 4).
Disability	Incidence rates based upon the 2005-2009 actual experience, in accordance with Table 5. Post-disability mortality in accordance with the RP-2000 Disabled Retiree Mortality Table.
Retirement	Retirement rates based upon the 2005-2009 actual experience in accordance with Table 6. Deferred vested members are assumed to retire at their earliest unreduced retirement date.
Marriage and Age Difference	Wives are assumed to be three years younger than husbands. 85% of male members and 75% of female members are assumed to be married.
Dependent Children	Benefits to dependent children have been valued assuming members who are married and between the ages of 25 and 45 have two dependent children.
Contribution Refunds	10% of terminating members with vested benefits are assumed to have their contributions refunded. 100% of those with non-vested benefits are assumed to have their contributions refunded.

*The mortality assumptions include an allowance for future mortality improvement. The mortality table used was set in 2010 with an Actual Deaths to Expected Deaths ratio of 117%.

State of Alaska Teachers' Retirement System

Section 6.3 (cont'd)

Summary of Actuarial Assumptions and Changes in Assumptions

COLA	Of those benefit recipients who are eligible for the COLA, 60% are assumed to remain in Alaska and receive the COLA.															
Sick Leave	4.7 days of unused sick leave for each year of service are assumed to be available to be credited once the member is retired, terminates or dies.															
Postretirement Pension Adjustment	50% and 75% of assumed inflation, or 1.56% and 2.34% respectively, is valued for the annual automatic Postretirement Pension Adjustment (PRPA) as specified in the statute.															
Expenses	All expenses are net of the investment return assumption.															
Part-time Status	Part-time employees are assumed to earn 0.60 years of credited service per year.															
Re-employment Option	We assume all re-employed retirees return to work under the Standard Option.															
Service	Total credited service is provided by the State. We assume that this service is the only service that should be used to calculate benefits. Additionally, the State provides claimed service (including Bureau of Indian Affairs Service). Claimed service is used for vesting and eligibility purposes as described in Section 2.1.															
Final Average Earnings	Final Average Earnings is provided on the data for active members. This amount is used as a minimum in the calculation of the average earnings in the future.															
Modified Cash Refund	Benefits for active members are valued using a 3-year certain and life form of payment to account for modified cash refund. For deferred vested and retired members, the certain period equals their account balance divided by their pension benefit amount.															
Per Capita Claims Cost	<p>Sample claims cost rates adjusted to age 65 for FY13 medical benefits are shown below:</p> <table border="1"> <thead> <tr> <th></th> <th>Medical</th> <th>Prescription Drugs</th> </tr> </thead> <tbody> <tr> <td>Pre-Medicare</td> <td>\$ 9,856</td> <td>\$ 2,736</td> </tr> <tr> <td>Medicare Parts A & B</td> <td>\$ 1,628</td> <td>\$ 2,736</td> </tr> <tr> <td>Medicare Part B Only</td> <td>\$ 6,219</td> <td>\$ 2,736</td> </tr> <tr> <td>Medicare Part D</td> <td>N/A</td> <td>\$ 535</td> </tr> </tbody> </table>		Medical	Prescription Drugs	Pre-Medicare	\$ 9,856	\$ 2,736	Medicare Parts A & B	\$ 1,628	\$ 2,736	Medicare Part B Only	\$ 6,219	\$ 2,736	Medicare Part D	N/A	\$ 535
	Medical	Prescription Drugs														
Pre-Medicare	\$ 9,856	\$ 2,736														
Medicare Parts A & B	\$ 1,628	\$ 2,736														
Medicare Part B Only	\$ 6,219	\$ 2,736														
Medicare Part D	N/A	\$ 535														
Third Party Administrator Fees	\$163.52 per person per year; assumed trend rate of 5% per year.															
Medicare Part B Only	For actives and retirees not yet Medicare-eligible, participation is set based on whether the employee/retiree will have 40 quarters of employment after March 31, 1986, depending upon date of hire and/or re-hire.															

State of Alaska Teachers' Retirement System

Section 6.3 (cont'd)

Summary of Actuarial Assumptions and Changes in Assumptions

Health Cost Trend

The table below shows the rate used to project the cost from the shown fiscal year to the next fiscal year. For example, 9.0% is applied to the FY13 pre-Medicare medical claims cost to get the FY14 medical claims cost.

	Medical Pre-65	Medical Post-65	Prescription Drugs
FY13	9.0%	6.5%	6.4%
FY14	8.7%	6.4%	6.3%
FY15	8.5%	6.3%	6.2%
FY16	8.0%	6.3%	6.2%
FY17	7.5%	6.2%	6.1%
FY18	7.0%	6.1%	6.0%
FY19	6.6%	6.1%	5.8%
FY25	6.0%	6.0%	5.8%
FY50	5.0%	5.0%	5.0%
FY100	4.5%	4.5%	4.5%

For the June 30, 2012 valuations and later, the updated Society of Actuaries' Healthcare Cost Trend Model is used to project medical and prescription drug costs. This model effectively begins estimating trend amounts beginning in 2012 and projects out to 2100. The model has been populated with assumptions that are specific to the State of Alaska. The model asks the user to input estimated baseline costs for year 2015. Using this value as the base cost, the model projects per-person expenditures and growth rates through 2100 using a set of equations and assumptions developed by the author with the assistance of an SOA working group. The user can then use the model input cells to specify alternative assumptions regarding responsiveness to external trends, income growth, and other factors to arrive at alternative projections. The model provisionally uses default short term annual projected by CMS for years 2011-2015 (4% to 6%), but users may input their own estimates for these model years. In this model, cost controls can be simulated in two ways: by specifying a Share Restriction Point, a percentage of GDP represented by healthcare and above which the current trends will be reduced; or by specifying a limit year after which the rate of growth in health care costs will be reduced to match the rate of growth

State of Alaska Teachers' Retirement System

Section 6.3 (cont'd)

Summary of Actuarial Assumptions and Changes in Assumptions

in per capita income (as both CMS and CBO assume). While this model is not directly applicable, it was used for a reference point in the ultimate pharmacy trend. We set pharmacy trend based upon recent plan and industry experience and grade down slowly in the select period (similar to post-65 medical trend) to an ultimate trend rate based upon what we are seeing for medical trend and consistent within the industry.

The following table compares plan-specific inputs and the model's baseline assumptions for key assumptions as of June 30, 2012:

Key Assumption	Base Line Value	Alaska-Specific Values	
		Pre-Medicare Medical	Medicare Medical
HCCTR 2012-2013	4.6%	9.0%	6.1%
HCCTR 2013-2014	7.4%	8.0%	5.8%
HCCTR 2014-2015	5.0%	7.0%	5.5%
2015 GDP % of healthcare	18.3%	17.9%	17.9%
2015 PCCC	\$10,000	\$10,295	\$2,596
CPI	2.5%	2.5%	2.5%
Real GDP	1.7%	1.5%	1.5%
Income Multiplier	1.40	1.30	1.30
Taste/Technology	1.1%	1.1%	1.1%
Max GDP as % of healthcare	25.0%	25.0%	25.0%
Year reached	2075	2075	2075

Future (2026+) assumptions for inflation (2.4% for 2026-3025 and 2.3% thereafter), real GDP (1.5%), income multiplier (1.05 for 2026-3025 and 1.00 thereafter) and technology (0.9% for 2026-3025 and 0.8% thereafter) were not changed from the baseline inputs.

Aging Factors

Age	Prescription	
	Medical	Drugs
0-44	2.0%	4.5%
45-54	2.5%	3.5%
55-64	3.5%	3.0%
65-73	4.0%	1.5%
74-83	1.5%	0.5%
84-93	0.5%	0.0%
94+	0.0%	0.0%

State of Alaska Teachers' Retirement System

Section 6.3 (cont'd)

Summary of Actuarial Assumptions and Changes in Assumptions

Retired Member Contributions
for Medical Benefits

Currently contributions are required for TRS members who are under age 60 and have less than 25 years of service. Eligible Tier 1 members are exempt from contribution requirements. Annual FY13 contributions based on monthly rates shown below for calendar 2012 and 2013 are assumed based on the coverage category for current retirees. The retiree only rate shown is used for current active and inactive members in Tier 2 who are assumed to retire prior to age 60 with less than 25 years of service and who are not disabled and are projected to have single coverage. The retiree and spouse rate shown below is used for those projected to have a covered spouse:

Coverage Category	Calendar 2013 Annual Contribution	Calendar 2013 Monthly Contribution	Calendar 2012 Monthly Contribution
Retiree Only	\$ 9,876	\$ 823	\$ 807
Retiree and Spouse	\$ 19,764	\$ 1,647	\$ 1,615
Retiree and Child(ren)	\$ 13,956	\$ 1,163	\$ 1,140
Retiree and Family	\$ 23,844	\$ 1,987	\$ 1,948
Composite	\$ 14,676	\$ 1,223	\$ 1,200

Contribution rates for all coverage tiers and weighted average are provided for reference purposes.

State of Alaska Teachers' Retirement System

Section 6.3 (cont'd)

Summary of Actuarial Assumptions and Changes in Assumptions

Trend Rate for Retired Member Medical Contribution

The table below shows the rate used to project the retired member medical contributions from the shown fiscal year to the next fiscal year. For example, 8.4% is applied to the FY13 retired member medical contributions to get the FY14 retired member medical contributions.

FY13	8.4%
FY14	8.2%
FY15	8.0%
FY16	7.6%
FY17	7.2%
FY18	6.7%
FY19	6.4%
FY25	5.9%
FY50	5.0%
FY100	4.5%

Graded trend rates for retired member medical contributions were reinitialized for the June 30, 2012 valuation. Note that actual FY13 retired member medical contributions are reflected in the valuation so trend on such contribution during FY13 is not applicable.

Healthcare Participation

100% of system paid members and their spouses are assumed to elect healthcare benefits as soon as they are eligible. 10% of non-system paid members and their spouses are assumed to elect healthcare benefits as soon as they are eligible. 100% of those who retired prior to age 60 and actually declined coverage, or who are assumed to decline non-system-paid coverage, are assumed to re-enroll at age 60 (when all coverage is system-paid for retirees included in this report).

State of Alaska Teachers' Retirement System

Section 6.3 (cont'd)

Summary of Actuarial Assumptions and Changes in Assumptions

Table 1
Alaska TRS
Salary Scale

Year of Employment	Unisex Rate
1-6	6.11%
7	5.94
8	5.78
9	5.61
10	5.44
11	5.28
12	5.11
13	4.94
14	4.78
15	4.61
16	4.45
17	4.28
18	4.11
19	3.95
20	3.78
21+	3.62

State of Alaska Teachers' Retirement System

Section 6.3 (cont'd)

Summary of Actuarial Assumptions and Changes in Assumptions

Table 2
Alaska TRS
Mortality Table (Pre-termination)

<u>Age</u>	<u>Male</u>	<u>Female</u>
20	.017%	.012%
21	.018	.012
22	.019	.012
23	.021	.013
24	.024	.013
25	.026	.013
26	.030	.014
27	.032	.014
28	.033	.015
29	.034	.016
30	.035	.017
31	.036	.019
32	.037	.020
33	.037	.021
34	.037	.022
35	.037	.023
36	.038	.024
37	.039	.025
38	.041	.027
39	.042	.029
40	.045	.032
41	.047	.034
42	.050	.037
43	.053	.039
44	.056	.041
45	.060	.042
46	.064	.044
47	.069	.047
48	.075	.051
49	.081	.055
50	.088	.061
51	.097	.068
52	.106	.078
53	.118	.090
54	.131	.102
55	.149	.116
56	.170	.135
57	.195	.157
58	.224	.181
59	.253	.208
60	.284	.239
61	.326	.274
62	.368	.314
63	.425	.359
64	.479	.410

State of Alaska Teachers' Retirement System

Section 6.3 (cont'd)

Summary of Actuarial Assumptions and Changes in Assumptions

Table 3
Alaska TRS
Mortality Table (Post-termination)

<u>Age</u>	<u>Male</u>	<u>Female</u>
50	.142%	.085%
51	.153	.092
52	.166	.100
53	.181	.111
54	.196	.124
55	.215	.143
56	.235	.163
57	.263	.185
58	.291	.212
59	.331	.246
60	.377	.285
61	.433	.328
62	.499	.378
63	.561	.434
64	.631	.498
65	.725	.570
66	.819	.653
67	.944	.745
68	1.064	.844
69	1.196	.948
70	1.362	1.052
71	1.512	1.150
72	1.634	1.242
73	1.787	1.342
74	1.915	1.434
75	2.094	1.583
76	2.298	1.726
77	2.518	1.918
78	2.748	2.094
79	3.061	2.338
80	3.361	2.669
81	3.788	2.985
82	4.292	3.327
83	4.868	3.707
84	5.510	4.136
85	6.214	4.625

State of Alaska Teachers' Retirement System

Section 6.3 (cont'd)

Summary of Actuarial Assumptions and Changes in Assumptions

Table 4
Alaska TRS
Turnover Assumptions

Select Rates of Turnover During the First 8 Years of Employment

Year of Employment	Unisex Rate
1	17.00%
2	17.00
3	14.00
4	12.00
5	10.00
6	9.00
7	7.50
8	6.00

Ultimate Rates of Turnover After the First 8 Years of Employment

Age	Male	Female	Age	Male	Female
15	4.4584%	4.3747%	40	4.3189%	4.2658%
16	4.4528	4.3714	41	4.3065	4.2559
17	4.4483	4.3692	42	4.2908	4.2460
18	4.4438	4.3681	43	4.2762	4.2372
19	4.4415	4.3670	44	4.2570	4.2262
20	4.4067	4.3351	45	4.2357	4.2130
21	4.4044	4.3351	46	4.2132	4.2009
22	4.3999	4.3340	47	4.1850	4.1844
23	4.3965	4.3340	48	4.1524	4.1657
24	4.3909	4.3329	49	4.1187	4.1470
25	4.3864	4.3329	50	4.0804	4.1250
26	4.3819	4.3318	51	4.0354	4.0997
27	4.3774	4.3307	52	3.9825	4.0700
28	4.3729	4.3274	53	3.9240	4.0348
29	4.3684	4.3241	54	3.8588	3.9974
30	4.3650	4.3208	55	3.7845	3.9523
31	4.3628	4.3186	56	3.6945	3.8940
32	4.3594	4.3142	57	3.5843	3.8192
33	4.3572	4.3109	58	3.4639	3.7345
34	4.3560	4.3065	59	3.3188	3.6267
35	4.3538	4.3021	60	3.1557	3.5046
36	4.3504	4.2955	61	2.9745	3.3682
37	4.3459	4.2900	62	2.7642	3.2131
38	4.3380	4.2823	63	2.5245	3.0360
39	4.3290	4.2746	64	2.2647	2.8435
			65+	4.5000	4.4000

State of Alaska Teachers' Retirement System

Section 6.3 (cont'd)

Summary of Actuarial Assumptions and Changes in Assumptions

Table 5
Alaska TRS
Disability Table

<u>Age</u>	<u>Male</u>	<u>Female</u>
20	.0224%	.0202%
21	.0224	.0202
22	.0232	.0209
23	.0232	.0209
24	.0240	.0216
25	.0240	.0216
26	.0240	.0216
27	.0248	.0223
28	.0256	.0230
29	.0264	.0238
30	.0272	.0245
31	.0272	.0245
32	.0280	.0252
33	.0288	.0259
34	.0296	.0266
35	.0304	.0274
36	.0320	.0288
37	.0328	.0295
38	.0344	.0310
39	.0352	.0317
40	.0368	.0331
41	.0384	.0346
42	.0408	.0367
43	.0432	.0389
44	.0472	.0425
45	.0520	.0468
46	.0560	.0504
47	.0608	.0547
48	.0664	.0598
49	.0712	.0641
50	.0768	.0691
51	.0832	.0749
52	.0912	.0821
53	.1016	.0914
54	.1136	.1022
55	.1280	.1152
56	.1472	.1325
57	.1712	.1541
58	.1952	.1757
59	.2304	.2074
60	.2696	.2426
61	.3120	.2808
62	.3616	.3254
63	.4176	.3758
64	.4768	.4291

State of Alaska Teachers' Retirement System

Section 6.3 (cont'd)

Summary of Actuarial Assumptions and Changes in Assumptions

Table 6
Alaska TRS
Retirement Table

Age at Retirement	Retirement Rate		
	Reduced	Unreduced	
	Unisex		
	Rates		
		Male	Female
<50	N/A	10.00%	10.00%
50	8.00%	13.00	13.00
51	8.00	12.00	12.00
52	8.00	12.00	12.00
53	6.00	13.00	13.00
54	12.00	16.00	16.00
55	8.00	18.00	20.00
56	8.00	17.00	15.00
57	8.00	13.00	17.50
58	8.00	17.50	18.00
59	12.00	15.00	17.50
60	N/A	17.50	20.00
61	N/A	17.50	20.00
62	N/A	11.00	25.00
63	N/A	20.00	25.00
64	N/A	25.00	20.00
65	N/A	30.00	20.00
66	N/A	25.00	20.00
67	N/A	25.00	20.00
68	N/A	25.00	20.00
69	N/A	25.00	20.00
70-84	N/A	50.00	50.00
85		100.00	100.00

Summary of Actuarial Assumptions and Changes in Assumptions

Changes in Actuarial Assumptions Since the Prior Valuation

There have been no changes in actuarial assumptions since the prior valuation, except for the assumption regarding healthcare cost trend rates. The updated healthcare cost trend assumption reflects differences in Medicare eligible and non-Medicare eligible medical costs, maintains a distinct prescription drug cost trend and utilizes the Society of Actuaries long-term cost trend model to estimate ultimate trend. We also updated participant contributions to reflect the new non-Medicare and pharmacy benefit cost trend on a weighted average basis.

State of Alaska Teachers' Retirement System

Glossary of Terms

Actuarial Accrued Liability	Total accumulated cost to fund pension benefits arising from service in all prior years.
Actuarial Cost Method	Technique used to assign or allocate, in a systematic and consistent manner, the expected cost of a pension plan for a group of plan members to the years of service that give rise to that cost.
Actuarial Present Value of Projected Benefits	Amount which, together with future interest, is expected to be sufficient to pay all future benefits.
Actuarial Valuation	Study of probable amounts of future pension benefits and the necessary amount of contributions to fund those benefits.
Actuary	Person who performs mathematical calculations pertaining to pension and insurance benefits based on specific procedures and assumptions.
Annual Required Contribution	Disclosure measure of annual pension cost.
GASB 25 and 27	Governmental Accounting Standards Board Statement Number 25 which specifies how the Annual Required Contribution (ARC) is to be calculated, and Number 27 which specifies Employer reporting of Pension Cost.
GASB 43 and 45	Governmental Accounting Standards Board Statement Number 43 which specifies how the Annual Required Contribution (ARC) is to be calculated, and Number 45 which specifies Employer reporting of OPEB Cost.
Liquidity Factor	Is calculated as the average annual Fair Value of Assets divided by the total annual benefit payments. This measures the approximate number of years that assets will cover benefit payments without contributions or investment return. Trend shows solvency risk.
Maturity Ratio	The ratio of the actuarial accrued liability for members who are no longer active to the total actuarial accrued liability. A ratio of over 50% indicates a mature plan. The higher the maturity ratio, the more volatile the contribution rate will be from year to year given actuarial gains and losses.
Normal Cost	That portion of the actuarial present value of benefits assigned to a particular year in respect to an individual participant or the plan as a whole.
Unfunded Actuarial Accrued Liability (UAAL)	The portion of the actuarial accrued liability not offset by plan assets.
Vested Benefits	Benefits which are unconditionally guaranteed regardless of employment status.