

State of Alaska

Teachers' Retirement System

**Actuarial Valuation Report
as of June 30, 1991**

Prepared by:

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Highlights

This report has been prepared by William M. Mercer, Incorporated to:

- (1) present the results of a valuation of the Alaska Teachers' Retirement System as of June 30, 1991;
- (2) review experience under the plan for the year ended June 30, 1991;
- (3) determine the appropriate contribution rate for the State and each school district in the System;
- (4) provide reporting and disclosure information for financial statements, governmental agencies, and other interested parties.

The report is divided into two sections. Section 1 contains the results of the valuation. It includes the experience of the plan during the 1990-91 plan year, the current annual costs, and reporting and disclosure information.

Section 2 describes the basis of the valuation. It summarizes the plan provisions, provides information relating to the plan participants, and describes the funding methods and actuarial assumptions used in determining liabilities and costs.

The principle results are as follows:

	<u>1990</u>	<u>1991</u>
Funding Status as of June 30:		
(a) Valuation Assets*	\$ 1,662,242	\$ 1,779,579
(b) Accrued Liability*	1,895,030	2,075,405
(c) Funding Ratio, (a) / (b)	87.7%	85.7%

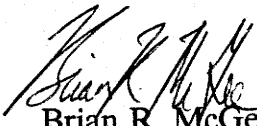
* In thousands.

Employer Contribution Rates
for Fiscal Year:

	<u>1993</u>	<u>1994</u>
(a) Normal Cost Rate	14.07%	9.05%
(b) Past Service Rate	5.58%	6.54%
(c) Total Contribution Rate	19.65%	15.59%
(d) Three-year Average Rate	15.69%	16.80%
(e) Actuarial Projection Rate	N/A	12.00%

In preparing this valuation, we have employed generally accepted actuarial methods and assumptions, in conjunction with employee data provided to us by the plan sponsor and financial information provided by the audited report from Coopers & Lybrand, to determine a sound value for the plan liabilities. We believe that this value, and the method suggested for funding it, are in full compliance with the Governmental Accounting Standards Board, the Internal Revenue Code, and all applicable regulations.

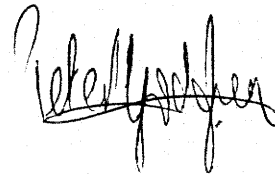
Respectfully submitted,



Brian R. McGee, FSA
Principal

BRM/PLG/jls

April 3, 1992



Peter L. Godfrey, FIA
Associate

Analysis of the Valuation

As shown in the Highlights section of the report, the funding ratio as of June 30, 1991 has decreased from 87.7% to 85.7%, a reduction of 2.0%. The total employer contribution rate has reduced from 19.65% of payroll for FY93 to 15.59% for FY94, a reduction of 4.06% of payroll. The three-year average rate has increased from 15.69% of payroll for FY93 to 16.80% for FY94, a 1.11% increase. The increase in the three-year average rate reflects the increase in the total rate for FY93 to 19.65% of payroll. The reasons for the change in the funded status and contribution rate are explained below.

1. Retiree Medical Insurance

As you are aware, retiree medical premium experience has, in recent years, caused large fluctuations in the employer contribution rate. The following table summarizes the monthly premium per benefit recipient since retiree medical benefits have been provided under PERS and TRS.

<u>Fiscal Year</u>	<u>Monthly Premium Per Retiree For Health Coverage</u>	<u>Annual Percentage Increase</u>	<u>Average Annual Increase Since 1978</u>
1977	\$ 34.75	--	--
1978	57.64	66%	--
1979	69.10	20%	20%
1980	64.70	- 6%	6%
1981	96.34	49%	19%
1982	96.34	0%	14%
1983	115.61	20%	15%
1984	156.07	35%	18%
1985	191.85	24%	19%
1986	168.25	-12%	14%
1987	165.00	- 2%	12%
1988	140.25	-15%	9%
1989	211.22	51%	13%
1990	252.83	20%	13%
1991	243.98	- 4%	12%
1992	243.98	--	11%
1993	226.90	- 7%	10%

As you can see from the above table, the monthly retiree medical premium remained unchanged during the year, at \$243.98. The premium for the 1993 fiscal year has reduced to \$226.90, a decrease of 7%.

In years prior to FY92, the post-65 premium rates were increasing faster than pre-65 rates. The FY92 rates remained unchanged and the trend reversed in FY93. The post-65 FY93 rate reduced by 10.8% while the pre-65 FY93 rate reduced by 2.6%. The combined effects of a reduction in the FY93 rate and the FY92 rate remaining unchanged resulted in an actuarial gain to the System from retiree medical premiums.

Fluctuations in the health premium affect not only the past service contribution rate (due to actuarial gains and losses) but also the normal cost rate. Last year's medical premium experience resulted in a reduction in the normal cost rate of 1.76% and a reduction in the past service rate of 1.25%.

2. Investment Performance

Investment return was less than expected during the year resulting in an actuarial loss to the System. The approximate rate of return based on market values was 6.97%. The effect of the five-year smoothing technique was a rate of return based on valuation assets of 7.09%. As this rate was lower than the assumed rate of return of 9%, the System experienced an actuarial loss from investment performance equal to \$31,706,000 which had the effect of increasing the total employer contribution rate by 0.70%.

3. Salary Increases

In recent years salary increases have been less than anticipated in the valuation assumptions. This was again true last year but to a much less extent than in prior years. Salary experience resulted in a small actuarial gain which generated a reduction in the total employer contribution rate equal to 0.20%.

4. Employee Data

Section 2.2 provides statistics on active and inactive participants. The number of active participants increased 3.7% from 8,586 at June 30, 1990 to 8,903 at June 30, 1991. The average age of active participants increased from 42.21 to 42.28 and average credited service reduced from 10.62 to 10.48 years.

The number of retirees and beneficiaries increased 11.3% from 3,184 to 3,544, and their average age decreased from 62.45 to 61.64. There was a 21.0% reduction in the number of vested terminated participants from 816 to 645. Their average age fell from 46.75 to 45.57.

The overall effect of these participant data changes was an actuarial loss to the System, resulting in an increase in the past service rate equal to 0.72%. These demographic changes also had the effect of increasing the normal cost rate by 0.24%.

5. Retirement Incentive Program

The second Retirement Incentive Program has been available to participants since June 30, 1989. State employees had until November 1, 1990 to retire and other TRS participants had to retire by August 1, 1990 to qualify for the RIP. The effects of the RIP can be seen in the increase in the number of new service retirees between June 30, 1989 and June 30, 1991. There were 199 new retirees during the year ending June 30, 1990 and 507 new retirees during the year ending June 30, 1991. Furthermore, the average age of all retirees decreased from 62.45 to 61.64 during the year ending June 30, 1991 reflecting the younger average age of members retiring under the RIP.

As with the first RIP, the cost is being borne by employers based on the actuarial value of the extra benefits, calculated individually for each employee electing to retire under the program. This cost is being paid over a three-year period. If the assumptions underlying the calculated cost of the RIP are met, the total cost to the System will be equal to the employers' payments.

6. Change in Actuarial Assumptions

The report on the Study of Actuarial Assumptions in October 1991 proposed a revised set of valuation assumptions using the actual experience of the System during the five-year period 1986-90. The analysis resulted in revisions to the assumptions for the future health premium trend, mortality, turnover, disability, retirement and the percentage of benefit recipients expected to remain in Alaska. The investment return assumption remained the same at 9% per year. All assumptions are described in detail in Section 2.3 of the report.

The Study of Actuarial Assumptions disclosed that the overall effect on the financial status of the System due to the revised assumptions is a 2.7% increase in the funding ratio and a 2.51% of payroll reduction in the contribution rate.

7. Actuarial Projections

At the Fall 1991 Board Meetings, the TRS Board approved the use of an enhanced actuarial projection system in the valuation report this year. The same actuarial cost method is used, but the enhanced system projects population growth patterns and their associated liabilities 25 years into the future. By also projecting plan assets, this report in effect produces an actuarial valuation for each of the next 25 years. Section 1.6, Actuarial Projections, contains the results of this analysis.

This type of information can be especially useful to two-tiered systems, such as TRS. All of the projected new entrants will be covered under the cost savings provisions of the second tier, so that the ultimate effect of the second tier on plan liabilities can be anticipated. As you can see in Section 1.6, based on the actuarial assumptions and cost method, future contribution rates are expected to decline, and then level out in 15 to 20 years.

We are proposing to the Board that sound actuarial principles would support leveling out this contribution pattern to anticipate the second tier provisions coming into effect. In this way, a more stable contribution pattern could be adopted to help the State and school districts better budget retirement expenses. This enhanced projection technique would be used annually so that a continuous tracking of the contribution rate to the requirements could be made. Appropriate adjustments to the rate would still be proposed annually, but they should be much smaller than some seen in the past.

This enhanced projection and smoothing would replace the three-year smoothing of the contribution rates currently employed by TRS. We recommend that the employer contribution rate adopted for FY94 be 12.00% under this approach.

This rate includes a degree of conservatism for the following reasons:

1. Actuarial valuations are based on several assumptions, and the projection technique adds more. Actual system experience will vary from that assumed, so a degree of margin is appropriate when adopting a longer term rate.
2. Sound actuarial principles also suggest that retirement systems should fund employees' benefits while they are working. By leveling out the two-tier phenomenon, intergenerational inequities could occur. Since current contribution requirements are higher, the level rate is set higher than it theoretically needs to be, to allocate proportionately more of the cost to current generations and thus reduce the inequities.

Summary

The following table summarizes the sources of change in the total employer contribution rate:

(1) Last year's total employer contribution rate (before smoothing)	19.65%
(2) Decrease in past service rate due to retiree medical insurance	(1.25%)
(3) Decrease in normal cost rate due to retiree medical insurance	(1.76%)
(4) Increase due to investment performance	0.70%
(5) Decrease due to salary increases	(0.20%)
(6) Increase in past service rate due to demographic experience	0.72%
(7) Increase in normal cost rate due to demographic experience	0.24%
(8) Decrease in total employer contribution rate due to change in actuarial assumptions	(2.51%)
(9) Total employer contribution rate this year (before smoothing)	15.59%
(10) Effect of three-year smoothing	1.21%
(11) Smoothed rate	16.80%
(12) Effect of enhanced Actuarial Projection system	(4.80%)
(13) Proposed employer contribution rate	12.00%

Section 1

Valuation Results

This section sets forth the results of the actuarial valuation.

Section 1.1(a) shows the distribution of the assets as of June 30, 1991.

Section 1.1(b) shows the transactions of the plan's fund during the Fiscal Year 1991.

Section 1.1(c) develops the valuation assets.

Section 1.2 shows the actuarial present values as of June 30, 1991.

Section 1.3(a) calculates the total contribution rate for Fiscal Year 1994.

Section 1.3(b) develops the three-year smoothed contribution rates for each year since June 30, 1985.

Section 1.4(a) calculates the actuarial gain or loss for FY91.

Section 1.4(b) shows the individual sources of gain and loss.

Section 1.5 provides disclosure information required by G.A.S.B. Statement No. 5.

Section 1.6 contains the financial projections.

1.1(a) Statement of Net Assets as of June 30, 1991 (in thousands)

	<u>Book Value</u>	<u>Actuarial Value*</u>
Cash and Cash Equivalents	\$ 16,905	\$ 16,905
United States Government Bonds	381,487	381,487
Corporate Bonds	366,760	366,760
United States Common Stocks	631,146	715,287
Foreign Stocks	115,049	109,947
Real Estate Equities	86,603	80,828
Mortgages (net of reserves)	74,471	74,471
Accrued Receivables	<u>33,894</u>	<u>33,894</u>
Total Assets	\$ 1,706,315	\$ 1,779,579

* The actuarial value of assets is the fair market value of equities and the book value of fixed income investments, as provided in the audited financial statements.

1.1(b) Changes in Net Assets During Fiscal Year 1991 (in thousands)

Net Assets, June 30, 1990, (market value) \$ 1,706,346

Additions:

Employee Contributions	\$ 38,687	
Employer Contributions	46,056	
Contributions for Retirement Incentive Program -		
Employee Contributions	1,372	
Employer Contributions	11,926	
Interest Income and Realized Gain/(Loss)	96,701	
Dividend Income	30,226	
Unrealized Gain (Loss) on Investments	<u>(4,078)</u>	220,890

Deductions:

Medical Benefits	\$ 10,654	
Retirement Benefits	84,443	
Refunds of Contributions	3,510	
Administrative Expenses	<u>3,966</u>	<u>102,573</u>

Net Assets, June 30, 1991, (market value) \$ 1,824,663

Approximate Investment Return
Rate During the Year, Net of Administrative Expenses:

Based on Market Values	6.97%
Based on Valuation Assets	7.09%

**1.1(c) Development of Valuation Assets as of June 30, 1991
(in thousands)**

	A	B	C
	<u>Actuarial Values</u>	<u>Book Values</u>	<u>Ratio (A/B)</u>
(1) June 30, 1991	\$ 1,779,579	\$ 1,706,315	1.0429
(2) June 30, 1990	1,662,242	1,583,324	1.0498
(3) June 30, 1989	1,480,389	1,434,984	1.0316
(4) June 30, 1988	1,331,905	1,273,971	1.0455
(5) June 30, 1987	1,267,159	1,146,583	1.1052
(6) Average Ratio			1.0550
(7) Book Value at June 30, 1991			\$1,706,315
(8) Valuation Assets at June 30, 1991 (6) x (7) but not outside the range of book and actuarial values			\$1,779,579

1.2 Actuarial Present Values as of June 30, 1991 (in thousands)

	<u>Normal Cost</u>	<u>Accrued Liabilities</u>
<u>Active Members</u>		
Retirement Benefits	\$ 49,857	\$ 772,272
Termination Benefits	3,812	44,143
Disability Benefits	1,324	27,940
Death Benefits	1,151	18,141
Return of Contributions	2,792	13,883
Medical Benefits	16,516	181,081
Indebtedness	0	(29,640)
Retiree Incentive Program Receivables	<u>0</u>	<u>(8,868)</u>
Subtotal	\$ 75,452	\$ 1,018,952
<u>Inactive Members</u>		
Not Vested		\$ 10,301
Vested Terminations	- Retirement Benefits	40,179
	- Medical Benefits	24,897
Retirees & Beneficiaries	- Retirement	861,374
	- Medical Benefits	<u>119,702</u>
Subtotal		\$ 1,056,453
<u>Totals</u>		\$ 2,075,405

1.3(a) Development of Total Employer Contribution Rate - FY94 (in thousands)

Normal Cost Rate

(1) Total Normal Cost	\$ 75,452
(2) Total Salaries	422,655
(3) Normal Cost Rate, (1) / (2)	17.85%
(4) Average Member Contribution Rate	8.80%
(5) Employer Normal Cost Rate, (3) - (4)	9.05%

Past Service Rate

(1) Accrued Liability	\$ 2,075,405
(2) Valuation Assets	1,779,579
(3) Total Unfunded Liability, (1) - (2)	295,826
(4) Amortization Factor (25 year)	10.706612
(5) Past Service Cost, (3) / (4)	27,630
(6) Total Salaries	422,655
(7) Past Service Rate, (5) / (6)	6.54%

Total Employer Contribution Rate

15.59%

1.3(b) Three-Year Smoothing of Total Employer Contribution Rate

<u>Valuation Date</u>	<u>For Fiscal Year</u>	<u>Employer Contribution Rate</u>	<u>Three-Year Average</u>
6-30-83	FY86	17.36%	
6-30-84	FY87	17.36%	
6-30-85	FY88	13.28%*	16.00%
6-30-86	FY89	11.16%	13.93%
6-30-87	FY90	8.19%	10.87%
6-30-88	FY91	12.27%	10.54%
6-30-89	FY92	15.16%	11.87%
6-30-90	FY93	19.65%**	15.69%
6-30-91	FY94	15.59%***	16.80%

* A change in actuarial assumptions on June 30, 1985 lowered the contribution rate from 16.68% to 13.28%

** A change in Plan provisions on June 30, 1990 increased the contribution rate from 12.89% to 19.65%.

*** A change in actuarial assumptions on June 30, 1991 reduced the contribution rate from 18.10% to 15.59%.

1.4 Development of Actuarial Gain/(Loss) for FY91 (in thousands)

(1) Unfunded Liability, June 30, 1990	\$ 232,788
(2) Normal Cost for FY91	89,171
(3) Interest on (1) and (2) at 9%	28,976
(4) Employee Contributions for FY91	40,059
(5) Employer Contributions for FY91	57,982
(6) Interest on (4) and (5) at 9% for one-half year	4,412
(7) Expected Unfunded Liability, June 30, 1991, (1) + (2) + (3) - (4) - (5) - (6)	248,482
(8) Reduction in Unfunded Liability due to Change in Valuation Assumptions	68,666
(9) Expected Unfunded Liability after Change in Assumptions, (7) - (8)	179,816
(10) Actual Unfunded Liability, June 30, 1991	295,826
(11) Actuarial Gain/(Loss) for the Year, (9) - (10)	\$(116,010)

Unlike in recent years, the System suffered an investment loss in FY91 as the return on valuation assets of 7.09% was 1.91% less than the assumed rate of 9%. Another significant source of loss was generated by the change in the demographic characteristics of the retirees, whose average benefit increased by 4% and whose average age reduced by 0.81 years. As retiree liabilities represent nearly half the accrued liabilities of the System, any adverse demographic experience in this group will have a significant impact on the overall actuarial gain or loss.

Offsetting this adverse experience was favorable experience from retiree medical premiums, resulting in a net actuarial loss for the year of \$116,010,000.

1.5 Disclosure for G.A.S.B. Statement No. 5

State of Alaska - T.R.S.

Disclosure for G.A.S.B. Statement 5 ('000 Omitted)

Totals For All Employers

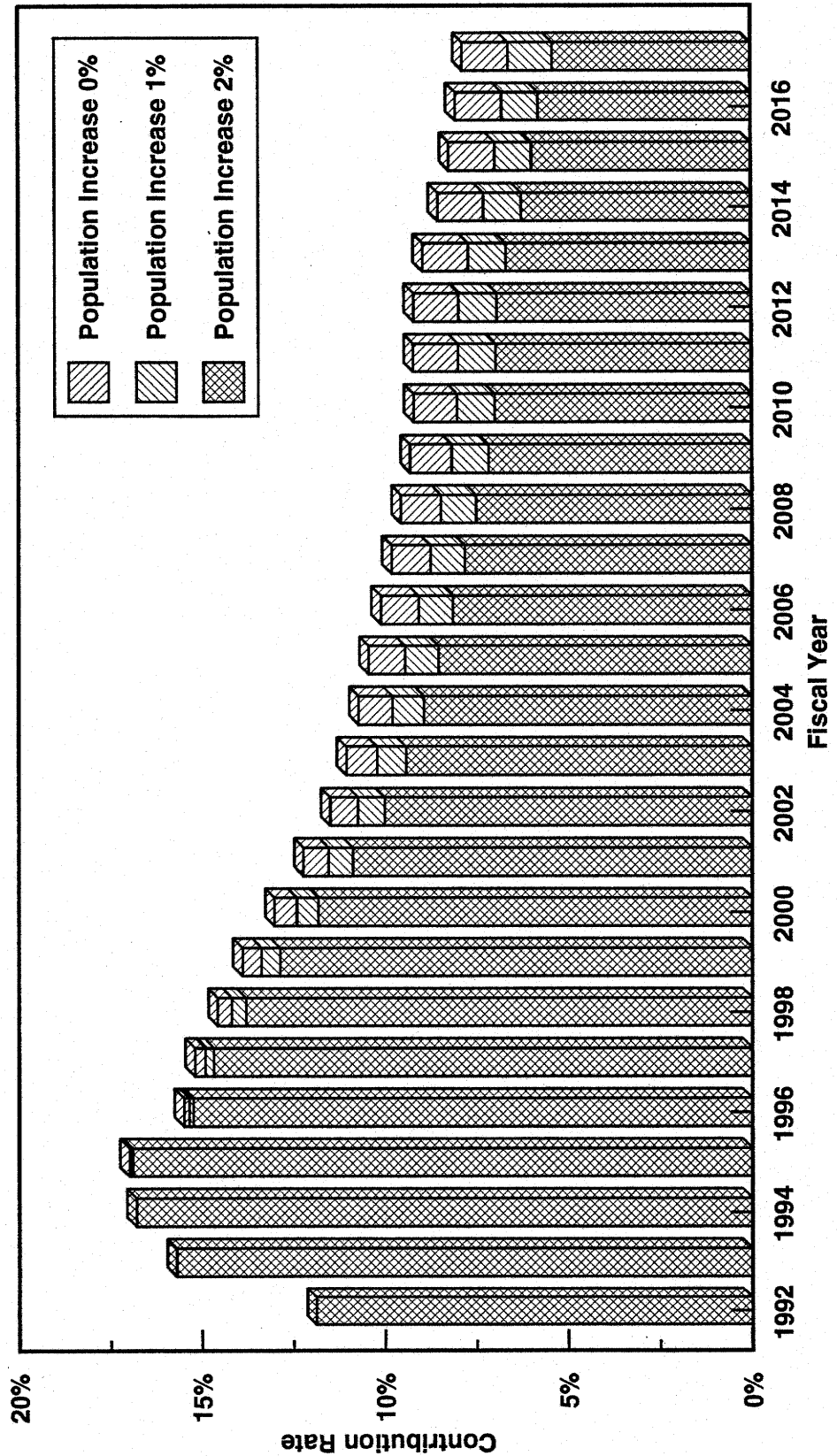
***** Projected Benefit Obligation *****

Valuation Date	Current Retirees & Terminated	***** Current Employees *****			Total
		Contribs With Int	**** Employer Financed **** Vested	Non-Vested	
June 30, 1987	\$ 578,468	\$ 210,493	\$ 353,326	\$ 68,622	\$ 1,210,909
June 30, 1988	688,090	228,217	381,726	49,826	1,347,859
June 30, 1989	779,296	253,436	436,431	88,480	1,557,643
June 30, 1990	940,475	269,491	587,835	97,229	1,895,030
June 30, 1991	1,056,453	293,136	598,527	127,289	2,075,405

Valuation Date	***** Valuation Assets *****			***** Market Value Assets *****		
	Net Assets Available For Benefits	Unfunded PBO	Assets as Percent of PBO	Net Assets Available For Benefits	Unfunded PBO	Assets as Percent of PBO
June 30, 1987	\$ 1,225,009	\$ (14,100)	101%	\$ 1,303,464	\$ (92,555)	108%
June 30, 1988	1,331,905	15,954	99%	1,356,575	(8,716)	101%
June 30, 1989	1,480,389	77,254	95%	1,545,877	11,766	99%
June 30, 1990	1,662,242	232,788	88%	1,706,346	188,684	90%
June 30, 1991	1,779,579	295,826	86%	1,824,663	250,742	88%

1.6 Actuarial Projections

State of Alaska TRS Three Year Average Projected Contribution Rate



State of Alaska TRS Projected Funding Ratios

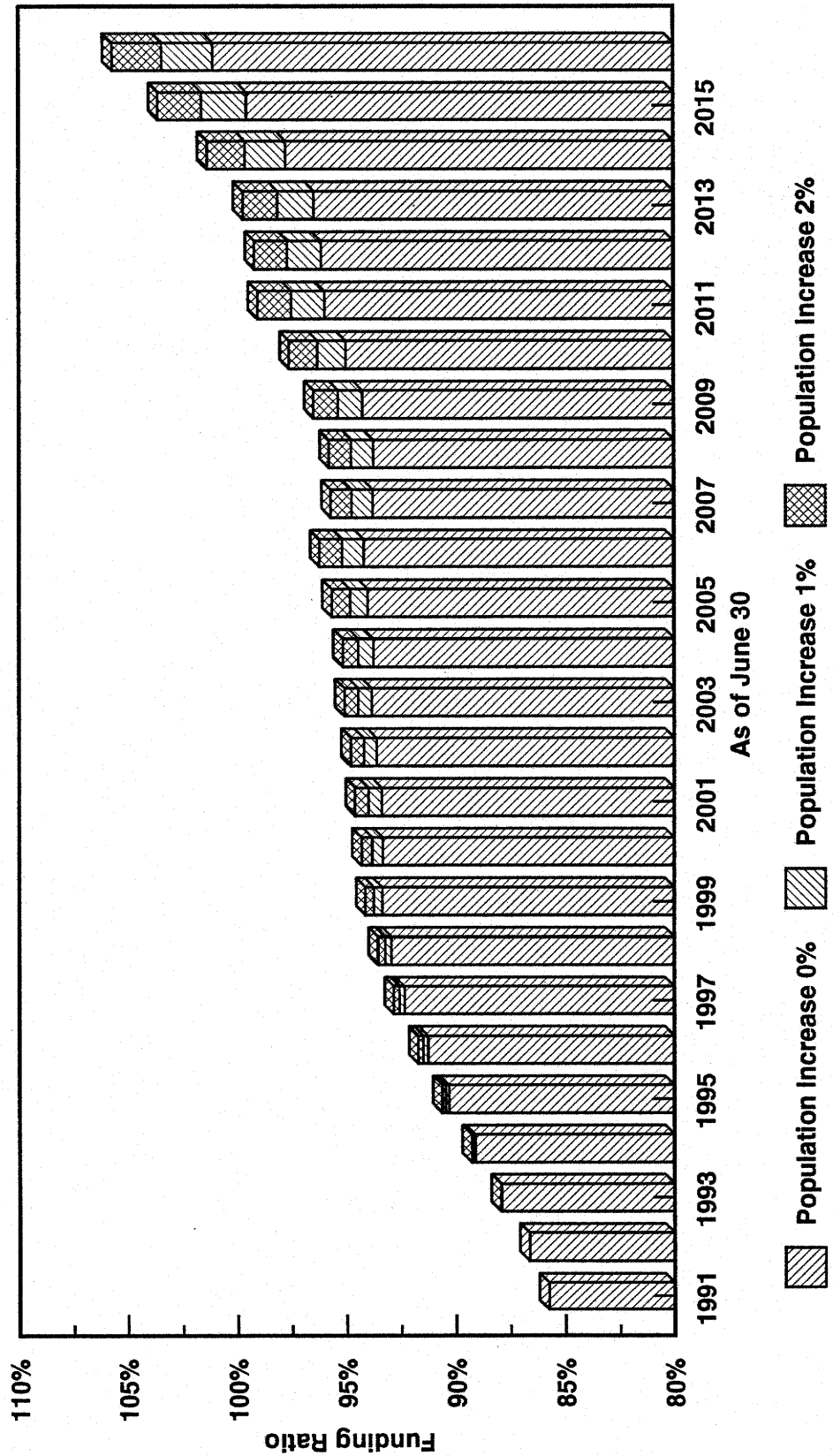


Table 1

State of Alaska TRS
Financial Projections ('000 omitted)

As of June 30	Investment Return		Valuation Amounts on July 1		Flow Amounts During Following 12 Months		Annual Population Increase		Ending Asset Value			
	Total Assets	Accrued Liability	Funding Ratio	Surplus* (Deficit)	Total Salaries	Employer Ctb Rate	Employee Contribs	Total Benefit Payments		Net Contribs	Investment Earnings	
1991	1,779,579	2,075,405	85.7%	(295,826)	422,655	11.87%	50,169	87,363	108,448	(21,085)	159,213	1,917,707
1992	1,917,707	2,213,411	86.6%	(295,704)	434,862	15.69%	68,230	106,454	117,780	(11,326)	172,084	2,078,465
1993	2,078,465	2,364,536	87.9%	(286,071)	446,086	16.80%	74,942	114,109	126,592	(12,483)	186,500	2,252,482
1994	2,252,482	2,527,828	89.1%	(275,346)	462,111	16.97%	78,442	118,969	138,811	(19,842)	201,830	2,434,471
1995	2,434,471	2,695,651	90.3%	(261,180)	482,041	15.50%	74,720	116,947	150,830	(33,883)	217,578	2,618,165
1996	2,618,165	2,869,225	91.2%	(251,060)	501,137	15.19%	76,126	119,976	165,828	(45,853)	233,571	2,805,884
1997	2,805,884	3,039,098	92.3%	(233,214)	528,670	14.56%	76,993	123,199	180,240	(57,041)	249,963	2,998,805
1998	2,998,805	3,226,822	92.9%	(228,017)	551,531	13.88%	76,545	124,693	198,100	(73,406)	266,589	3,191,988
1999	3,191,988	3,418,946	93.4%	(226,958)	574,392	13.01%	74,744	124,831	217,620	(92,789)	283,103	3,382,302
2000	3,382,302	3,624,354	93.3%	(242,052)	597,253	12.23%	73,017	125,037	237,835	(112,797)	299,331	3,568,836
2001	3,568,836	3,822,250	93.4%	(253,414)	620,113	11.48%	71,190	125,140	256,700	(131,560)	315,275	3,752,551
2002	3,752,551	4,009,140	93.6%	(256,589)	653,284	11.04%	72,094	128,865	277,698	(148,834)	331,032	3,934,749
2003	3,934,749	4,194,155	93.8%	(259,405)	684,808	10.71%	73,372	132,814	298,144	(165,331)	346,688	4,116,106
2004	4,116,106	4,391,098	93.7%	(274,991)	716,332	10.42%	74,664	136,770	319,477	(182,707)	362,228	4,295,627
2005	4,295,627	4,570,486	94.0%	(274,860)	747,856	10.09%	75,469	140,233	339,212	(198,979)	377,652	4,474,300
2006	4,474,300	4,750,388	94.2%	(276,088)	779,380	9.80%	76,365	143,781	360,941	(217,160)	392,915	4,650,055
2007	4,650,055	4,959,594	93.8%	(309,539)	821,151	9.54%	78,303	149,333	379,363	(230,030)	408,154	4,828,178
2008	4,828,178	5,150,813	93.7%	(322,635)	864,922	9.29%	80,368	155,183	398,262	(243,078)	423,598	5,008,697
2009	5,008,697	5,315,458	94.2%	(306,760)	908,692	9.19%	83,500	162,102	414,065	(251,963)	439,444	5,196,179
2010	5,196,179	5,470,033	95.0%	(273,854)	952,463	9.19%	87,550	169,938	431,975	(262,037)	455,864	5,390,007
2011	5,390,007	5,617,066	96.0%	(227,060)	996,234	9.19%	91,526	177,700	445,679	(267,979)	473,042	5,595,069
2012	5,595,069	5,820,776	96.1%	(225,706)	1,049,526	8.94%	93,829	184,613	461,935	(277,322)	491,077	5,808,824
2013	5,808,824	6,022,376	96.5%	(213,553)	1,108,296	8.52%	94,392	190,260	471,858	(281,598)	510,122	6,037,348
2014	6,037,348	6,176,615	97.7%	(139,268)	1,167,066	8.22%	95,958	196,909	483,008	(286,099)	530,487	6,281,736
2015	6,281,736	6,311,407	99.5%	(29,671)	1,225,837	8.04%	98,575	204,610	493,428	(288,818)	552,359	6,545,277
2016	6,545,277	6,475,091	101.1%	70,186	1,284,607	7.84%	100,752	211,870	502,379	(290,508)	576,002	6,830,771

* Surpluses reduce employer contributions over 5 years
* Deficits increase employer contributions over 25 years

Table 2

State of Alaska TRS
Financial Projections ('000 omitted)

As of June 30	Investment Return 9.00%		Valuation Amounts on July 1		Total Salaries		Flow Amounts During Following 12 Months		Annual Population Increase 1.00%		Ending Asset Value		
	Total Assets	Accrued Liability	Funding Ratio	Surplus* (Deficit)	Total Salaries	Employer Ctb Rate	Employer Ctb Rate	Employer Ctb Rate	Employer Ctb Rate	Total Contribs	Total Benefit Payments	Net Contribs	Investment Earnings
1991	1,779,579	2,075,405	85.7%	(295,826)	422,655	11.87%	50,169	37,194	87,363	108,448	(21,085)	159,213	1,917,707
1992	1,917,707	2,213,457	86.6%	(295,750)	438,308	15.69%	68,770	38,527	107,298	117,780	(10,483)	172,122	2,079,346
1993	2,079,346	2,364,949	87.9%	(285,603)	453,418	16.80%	76,174	39,810	115,984	126,592	(10,608)	186,664	2,255,402
1994	2,255,402	2,528,951	89.2%	(273,549)	473,804	16.92%	80,162	41,553	121,715	138,871	(17,156)	202,214	2,440,460
1995	2,440,460	2,697,911	90.5%	(257,451)	498,617	15.36%	76,571	43,679	120,250	150,894	(30,644)	218,262	2,628,078
1996	2,628,078	2,873,147	91.5%	(245,069)	523,163	14.91%	78,021	45,777	123,797	165,974	(42,177)	234,629	2,820,531
1997	2,820,531	3,047,044	92.6%	(226,513)	558,199	14.17%	79,089	48,787	127,875	180,400	(52,525)	251,484	3,019,490
1998	3,019,490	3,238,792	93.2%	(219,302)	588,563	13.36%	78,629	51,382	130,011	198,368	(68,358)	268,678	3,219,811
1999	3,219,811	3,434,953	93.7%	(215,142)	618,926	12.40%	76,734	53,970	130,705	217,911	(87,206)	285,859	3,418,463
2000	3,418,463	3,644,397	93.8%	(225,934)	649,290	11.53%	74,867	56,553	131,421	238,268	(106,847)	302,854	3,614,469
2001	3,614,469	3,846,347	94.0%	(231,878)	679,654	10.72%	72,850	59,130	131,980	257,098	(125,118)	319,672	3,809,023
2002	3,809,023	4,044,087	94.2%	(235,065)	724,916	10.19%	73,882	62,995	136,877	278,280	(141,403)	336,449	4,004,069
2003	4,004,069	4,239,988	94.4%	(235,919)	768,532	9.78%	75,167	66,709	141,876	298,682	(156,806)	353,310	4,200,573
2004	4,200,573	4,447,986	94.4%	(247,413)	812,148	9.43%	76,562	70,413	146,975	320,246	(173,271)	370,254	4,397,556
2005	4,397,556	4,638,464	94.8%	(240,908)	855,764	9.06%	77,535	74,109	151,644	339,937	(188,292)	387,307	4,596,571
2006	4,596,571	4,829,648	95.2%	(233,077)	899,380	8.75%	78,667	77,796	156,463	361,968	(205,505)	404,444	4,795,510
2007	4,795,510	5,062,863	94.7%	(267,353)	960,069	8.43%	81,100	83,046	164,146	380,365	(216,219)	421,866	5,001,156
2008	5,001,156	5,278,289	94.7%	(277,132)	1,022,758	8.15%	83,356	88,469	171,825	399,641	(227,816)	439,852	5,213,192
2009	5,213,192	5,667,384	95.4%	(254,191)	1,085,447	8.00%	86,878	93,891	180,769	415,437	(234,668)	458,627	5,437,151
2010	5,437,151	5,646,607	96.3%	(209,456)	1,148,135	7.97%	91,520	99,314	190,834	433,797	(242,964)	478,410	5,672,598
2011	5,672,598	5,818,552	97.5%	(145,954)	1,210,824	7.93%	96,280	104,736	201,016	447,554	(246,538)	499,440	5,925,499
2012	5,925,499	6,066,822	97.7%	(141,322)	1,293,104	7.69%	99,501	111,854	211,355	464,385	(253,030)	521,909	6,194,378
2013	6,194,378	6,313,236	98.1%	(118,858)	1,380,863	7.26%	100,306	119,445	219,751	474,431	(254,680)	546,033	6,485,732
2014	6,485,732	6,512,885	99.6%	(27,154)	1,468,622	6.96%	102,254	127,036	229,290	486,281	(256,991)	572,151	6,800,892
2015	6,800,892	6,693,303	101.6%	107,589	1,556,381	6.77%	105,434	134,627	240,061	497,228	(237,167)	600,508	7,144,232
2016	7,144,232	6,907,233	103.4%	237,000	1,644,140	6.59%	108,341	142,218	250,560	507,081	(256,522)	631,437	7,519,148

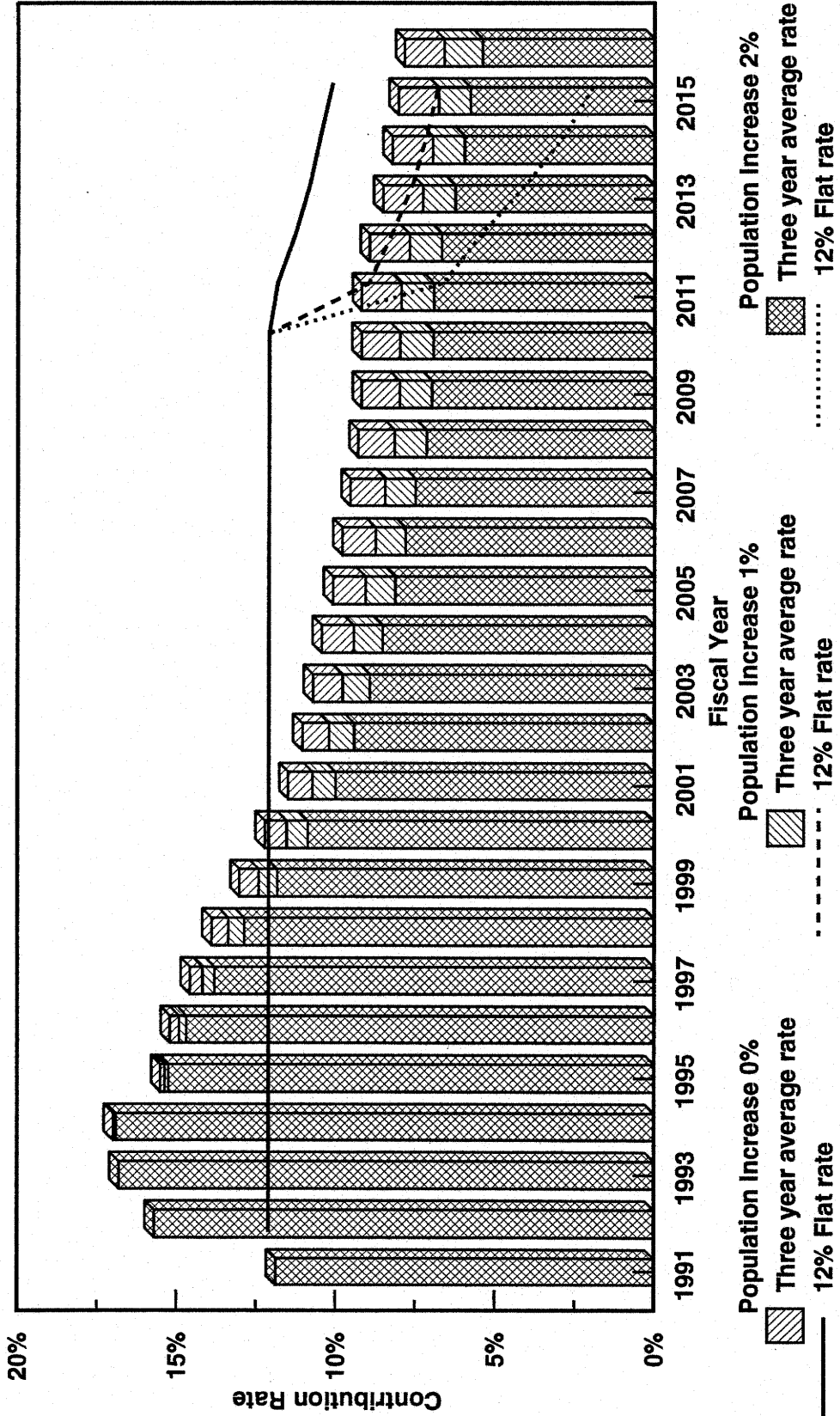
* Surpluses reduce employer contributions over 5 years
* Deficits increase employer contributions over 25 years

Table 3
State of Alaska TRS
Financial Projections ('000 omitted)

As of June 30	Investment Return 9.00%			Annual Population Increase 2.00%										
	Total Assets	Accrued Liability	Funding Ratio	Valuation Amounts on July 1- Total	Surplus* (Deficit)	Total Salaries	Employer Ctb Rate	Flow Amounts During Employer Contribs	Employee Contribs	Total Contribs	Total Benefit Payments	Net Contribs	Investment Earnings	Ending Asset Value
1991	1,779,579	2,075,405	85.7%	2,075,405	(295,826)	422,655	11.87%	50,169	37,194	87,363	108,448	(21,085)	159,213	1,917,707
1992	1,917,707	2,213,503	86.6%	2,213,503	(295,796)	441,753	15.69%	69,311	38,830	108,141	117,780	(9,639)	172,160	2,080,228
1993	2,080,228	2,365,364	87.9%	2,365,364	(285,136)	460,821	16.80%	77,418	40,460	117,878	126,592	(8,714)	186,828	2,258,342
1994	2,258,342	2,530,084	89.3%	2,530,084	(271,742)	485,730	16.89%	82,040	42,598	124,639	138,931	(14,293)	202,608	2,446,657
1995	2,446,657	2,700,205	90.6%	2,700,205	(253,548)	515,689	15.24%	78,602	45,174	123,776	150,959	(27,183)	218,976	2,638,450
1996	2,638,450	2,877,154	91.7%	2,877,154	(238,704)	546,074	14.67%	80,104	47,781	127,886	166,120	(38,234)	235,740	2,835,956
1997	2,835,956	3,055,319	92.8%	3,055,319	(219,364)	589,539	13.79%	81,271	51,526	132,797	180,561	(47,764)	253,087	3,041,278
1998	3,041,278	3,251,336	93.5%	3,251,336	(210,058)	628,331	12.86%	80,797	54,853	135,650	198,641	(62,991)	270,880	3,249,167
1999	3,249,167	3,451,779	94.1%	3,451,779	(202,612)	667,122	11.81%	78,774	58,173	136,947	218,207	(81,260)	288,768	3,456,675
2000	3,456,675	3,665,505	94.3%	3,665,505	(208,829)	705,914	10.87%	76,724	61,485	138,210	238,711	(100,502)	306,578	3,662,752
2001	3,662,752	3,871,754	94.6%	3,871,754	(209,002)	744,706	10.00%	74,473	64,789	139,263	257,507	(118,245)	324,327	3,868,834
2002	3,868,834	4,081,462	94.8%	4,081,462	(212,629)	804,688	9.41%	75,685	69,927	145,612	278,883	(133,271)	342,198	4,077,761
2003	4,077,761	4,289,365	95.1%	4,289,365	(205,234)	863,023	8.92%	76,996	74,910	151,906	299,240	(147,334)	360,368	4,290,795
2004	4,290,795	4,509,539	95.1%	4,509,539	(218,744)	921,358	8.52%	78,515	79,882	158,397	321,049	(162,652)	378,852	4,506,996
2005	4,506,996	4,712,230	95.6%	4,712,230	(187,295)	979,692	8.13%	79,685	84,841	164,526	340,694	(176,168)	397,702	4,728,530
2006	4,728,530	4,915,826	96.2%	4,915,826	(229,802)	1,038,027	7.81%	81,090	89,789	170,879	363,047	(192,168)	416,920	4,953,282
2007	4,953,282	5,176,529	95.7%	5,176,529	(223,247)	1,122,761	7.49%	84,082	97,119	181,201	381,418	(200,217)	436,786	5,189,851
2008	5,189,851	5,419,653	95.8%	5,419,653	(229,802)	1,209,495	7.15%	86,529	104,621	191,151	401,097	(209,947)	457,639	5,437,544
2009	5,437,544	5,636,697	96.5%	5,636,697	(199,153)	1,296,228	6.98%	90,518	112,124	202,642	416,883	(214,241)	479,738	5,703,041
2010	5,703,041	5,844,083	97.6%	5,844,083	(141,043)	1,382,962	6.94%	95,914	119,626	215,540	435,728	(220,188)	503,365	5,986,218
2011	5,986,218	6,044,467	99.0%	6,044,467	(98,249)	1,469,695	6.92%	101,712	127,129	228,841	449,535	(220,694)	528,828	6,294,352
2012	6,294,352	6,346,213	99.2%	6,346,213	(51,861)	1,591,361	6.67%	106,157	137,653	243,810	466,987	(223,178)	556,449	6,627,623
2013	6,627,623	6,646,376	99.7%	6,646,376	(18,753)	1,718,507	6.25%	107,370	148,651	256,021	477,153	(221,132)	586,535	6,993,025
2014	6,993,025	6,900,406	101.3%	6,900,406	92,610	1,845,652	5.96%	109,974	159,649	269,623	489,768	(220,145)	619,466	7,392,346
2015	7,392,346	7,135,445	103.6%	7,135,445	256,901	1,972,797	5.78%	114,095	170,647	284,741	501,240	(216,499)	655,569	7,831,416
2016	7,831,416	7,408,666	105.7%	7,408,666	422,750	2,099,942	5.39%	113,218	181,645	294,863	512,080	(217,217)	695,053	8,309,252

* Surpluses reduce employer contributions over 5 years
* Deficits increase employer contributions over 25 years

State of Alaska TRS Projected Contribution Rate



State of Alaska TRS Projected Funding Ratios

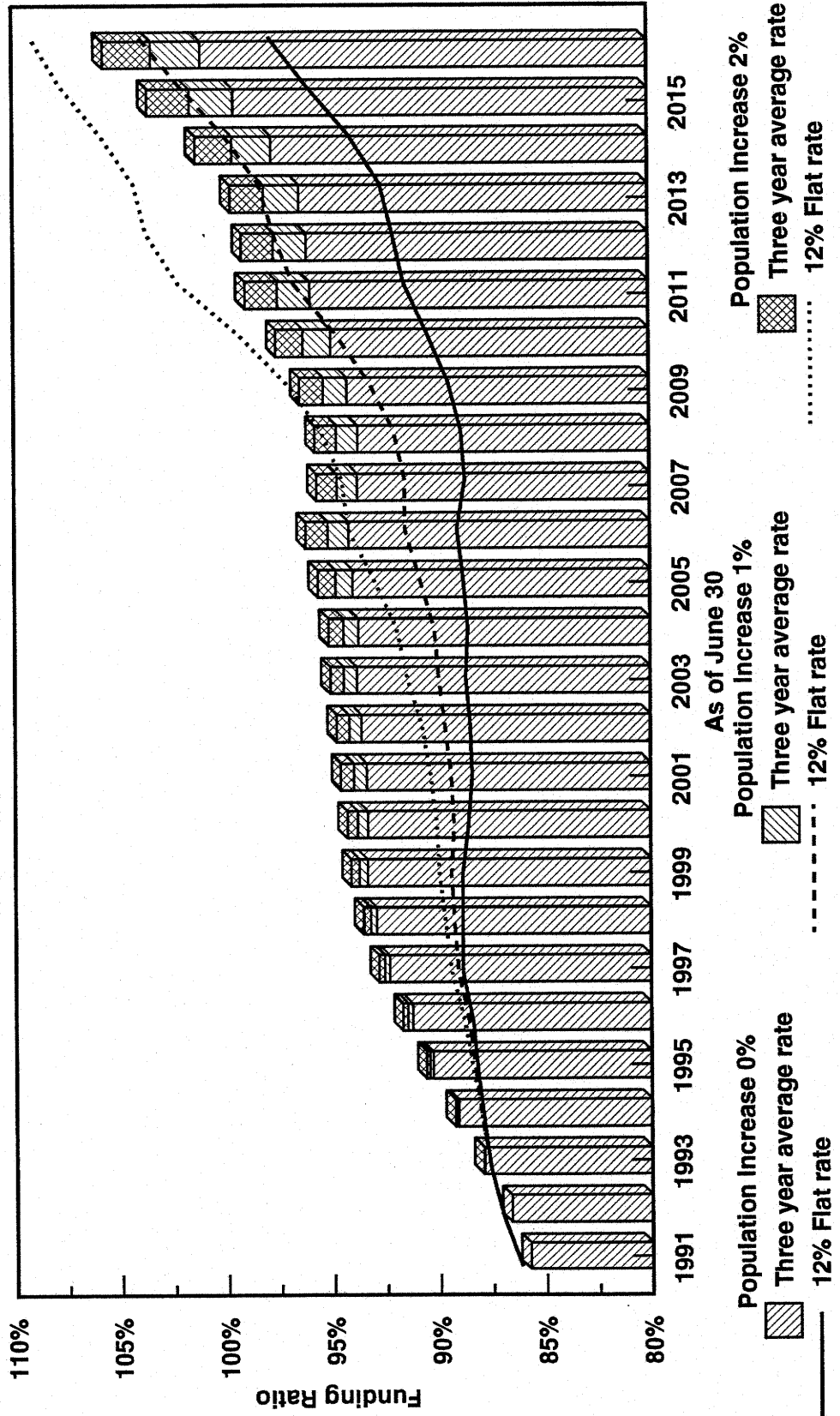


Table 4
State of Alaska TRS
Financial Projections ('000 omitted)

As of June 30	Investment Return 9.00%		Valuation Amounts on July 1		Total Salaries	Employer Ctb Rate	Flow Amounts During Following 12 Months			Annual Population Increase 0.00%			Ending Asset Value
	Total Assets	Accrued Liability	Funding Ratio	Surplus* (Deficit)			Total Employee Contribs	Total Benefit Payments	Net Contribs	Investment Earnings	Employee Contribs	Total Benefit Payments	
1991	1,779,579	2,075,405	85.7%	(295,826)	422,655	11.87%	50,169	37,194	87,363	108,448	(21,085)	159,213	1,917,707
1992	1,917,707	2,213,411	86.6%	(295,704)	434,862	12.00%	52,183	38,224	90,408	117,780	(27,373)	171,362	2,061,696
1993	2,061,696	2,364,536	87.2%	(302,839)	446,086	12.00%	53,530	39,166	92,697	126,592	(33,895)	184,027	2,211,828
1994	2,211,828	2,527,828	87.5%	(316,000)	462,111	12.00%	55,453	40,527	95,980	138,811	(42,830)	197,137	2,366,135
1995	2,366,135	2,695,651	87.8%	(329,516)	482,041	12.00%	57,845	42,227	100,072	150,830	(50,758)	210,668	2,526,045
1996	2,526,045	2,869,225	88.0%	(343,180)	501,137	12.00%	60,136	43,849	103,986	165,828	(61,842)	224,561	2,688,764
1997	2,688,764	3,039,098	88.5%	(350,334)	528,670	12.00%	63,440	46,206	109,646	180,240	(70,594)	238,812	2,856,982
1998	2,856,982	3,226,822	88.5%	(369,840)	551,531	12.00%	66,184	48,149	114,332	198,100	(83,767)	253,559	3,026,574
1999	3,026,574	3,418,946	88.5%	(392,372)	574,392	12.00%	68,927	50,087	119,014	217,620	(98,606)	267,954	3,195,922
2000	3,195,922	3,624,354	88.2%	(428,432)	597,253	12.00%	71,670	52,021	123,691	237,835	(114,144)	282,497	3,364,275
2001	3,364,275	3,822,250	88.0%	(457,976)	620,113	12.00%	74,414	53,950	128,363	256,700	(128,337)	297,010	3,532,947
2002	3,532,947	4,009,140	88.1%	(476,192)	653,284	12.00%	78,394	56,770	135,164	277,698	(142,534)	311,551	3,701,965
2003	3,701,965	4,194,155	88.3%	(492,189)	684,808	12.00%	82,177	59,441	141,618	298,144	(156,526)	326,133	3,871,572
2004	3,871,572	4,391,098	88.2%	(519,525)	716,332	12.00%	85,960	62,106	148,066	319,477	(171,411)	340,728	4,040,889
2005	4,040,889	4,570,486	88.4%	(529,597)	747,856	12.00%	89,743	64,764	154,507	339,212	(184,705)	355,368	4,211,553
2006	4,211,553	4,750,388	88.7%	(538,836)	779,380	12.00%	93,526	67,416	160,942	360,941	(199,999)	370,040	4,381,593
2007	4,381,593	4,959,594	88.3%	(578,001)	821,151	12.00%	98,538	71,030	169,568	379,363	(209,795)	384,903	4,556,700
2008	4,556,700	5,150,813	88.5%	(594,112)	864,922	12.00%	103,791	74,816	178,606	398,262	(219,655)	400,219	4,737,264
2009	4,737,264	5,315,458	89.1%	(543,024)	908,692	12.00%	109,043	78,602	187,645	414,065	(226,420)	416,165	4,927,009
2010	4,927,009	5,470,033	90.1%	(485,760)	952,463	12.00%	114,296	82,388	196,684	431,975	(239,957)	432,843	5,124,560
2011	5,124,560	5,617,066	91.2%	(492,507)	996,234	12.00%	119,548	86,174	205,722	445,679	(248,073)	450,412	5,335,015
2012	5,335,015	5,820,776	91.7%	(485,760)	1,049,526	11.73%	123,078	90,784	213,862	461,935	(252,347)	468,988	5,555,931
2013	5,555,931	6,022,376	92.3%	(466,446)	1,108,296	11.16%	123,643	95,868	219,511	471,858	(252,347)	488,678	5,792,261
2014	5,792,261	6,176,615	93.8%	(384,354)	1,167,066	10.70%	124,909	100,951	225,861	483,008	(257,147)	509,732	6,044,846
2015	6,044,846	6,311,407	95.8%	(266,560)	1,225,837	10.35%	126,908	106,035	232,943	493,428	(260,485)	532,314	6,316,676
2016	6,316,676	6,475,091	97.6%	(158,415)	1,284,607	9.98%	128,186	111,119	239,304	502,379	(263,074)	556,662	6,610,264

* Surpluses reduce employer contributions over 5 years
* Deficits increase employer contributions over 25 years

Table 5

State of Alaska TRS
Financial Projections ('000 omitted)

As of June 30	Investment Return 9.00%		Valuation Amounts on July 1			Flow Amounts During Following 12 Months			Annual Population Increase 1.00%			Ending Asset Value	
	Total Assets	Accrued Liability	Funding Ratio	Surplus* (Deficit)	Total Salaries	Employer Ctb Rate	Employee Contribs	Total Contribs	Total Benefit Payments	Net Contribs	Investment Earnings		
1991	1,779,579	2,075,405	85.7%	(295,826)	422,655	11.87%	50,169	37,194	87,363	108,448	(21,085)	159,213	1,917,707
1992	1,917,707	2,213,457	86.6%	(295,750)	438,308	12.00%	52,597	38,527	91,124	117,780	(26,656)	171,394	2,062,445
1993	2,062,445	2,364,949	87.2%	(302,504)	453,418	12.00%	54,410	39,810	94,220	126,592	(32,372)	184,163	2,214,237
1994	2,214,237	2,528,951	87.6%	(314,715)	473,804	12.00%	56,856	41,553	98,409	138,871	(40,462)	197,460	2,371,235
1995	2,371,235	2,697,911	87.9%	(326,676)	498,617	12.00%	59,834	43,679	103,513	150,894	(47,382)	211,279	2,535,132
1996	2,535,132	2,873,147	88.2%	(338,015)	523,163	12.00%	62,780	45,777	108,556	165,974	(57,418)	225,578	2,703,293
1997	2,703,293	3,047,044	88.7%	(343,751)	558,199	12.00%	66,984	48,787	115,770	180,400	(64,629)	240,388	2,879,052
1998	2,879,052	3,238,792	88.9%	(359,741)	588,563	12.00%	70,628	51,382	122,009	198,368	(76,359)	255,678	3,058,371
1999	3,058,371	3,434,953	89.0%	(376,582)	618,926	12.00%	74,271	53,970	128,242	217,911	(89,670)	271,218	3,239,919
2000	3,239,919	3,644,397	88.9%	(404,478)	649,290	12.00%	77,915	56,553	134,468	238,268	(116,410)	302,835	3,423,041
2001	3,423,041	3,846,347	89.3%	(423,306)	679,654	12.00%	81,558	59,130	140,688	257,098	(128,295)	319,079	3,609,467
2002	3,609,467	4,044,087	89.5%	(434,621)	724,916	12.00%	86,990	62,995	149,985	278,280	(139,749)	335,734	3,800,251
2003	3,800,251	4,239,988	89.6%	(439,737)	768,532	12.00%	92,224	66,709	158,932	298,682	(152,375)	352,804	4,000,055
2004	3,996,235	4,447,986	89.8%	(451,751)	812,148	12.00%	97,458	70,413	167,871	320,246	(163,136)	370,359	4,203,888
2005	4,196,665	4,658,464	90.5%	(441,799)	855,764	12.00%	102,692	74,109	176,801	339,937	(176,246)	388,419	4,416,060
2006	4,403,888	4,829,648	91.2%	(425,760)	899,380	12.00%	107,926	77,796	185,722	361,968	(182,111)	407,250	4,634,200
2007	4,616,060	5,062,863	91.2%	(446,802)	960,069	12.00%	115,208	83,046	198,254	380,365	(188,441)	427,228	4,861,428
2008	4,841,200	5,278,289	91.7%	(437,089)	1,022,758	12.00%	122,731	88,469	211,199	399,641	(191,293)	448,591	5,100,019
2009	5,079,986	5,467,384	92.9%	(387,398)	1,085,447	12.00%	130,254	93,891	224,145	415,437	(196,707)	471,504	5,337,284
2010	5,337,284	5,646,607	94.5%	(309,323)	1,148,135	12.00%	137,776	99,314	237,090	433,797	(197,519)	496,199	5,612,081
2011	5,612,081	5,818,552	96.5%	(206,471)	1,210,824	12.00%	145,299	104,736	250,035	447,554	(238,291)	521,245	5,910,761
2012	5,910,761	6,066,822	97.4%	(156,061)	1,293,104	8.83%	114,240	111,854	226,093	464,385	(243,516)	546,476	6,193,715
2013	6,193,715	6,313,236	98.1%	(119,521)	1,380,863	8.07%	111,470	119,445	230,914	474,431	(250,208)	573,441	6,496,675
2014	6,496,675	6,512,885	99.8%	(16,211)	1,468,622	7.42%	109,037	127,036	236,073	486,281	(254,170)	602,354	7,168,092
2015	6,819,908	6,693,303	101.9%	126,605	1,556,381	6.97%	108,431	134,627	243,058	497,228	(256,295)	633,595	7,545,392
2016	7,168,092	6,907,233	103.8%	260,859	1,644,140	6.60%	108,568	142,218	250,786	507,081			

* Surpluses reduce employer contributions over 5 years

* Deficits increase employer contributions over 25 years

Table 6

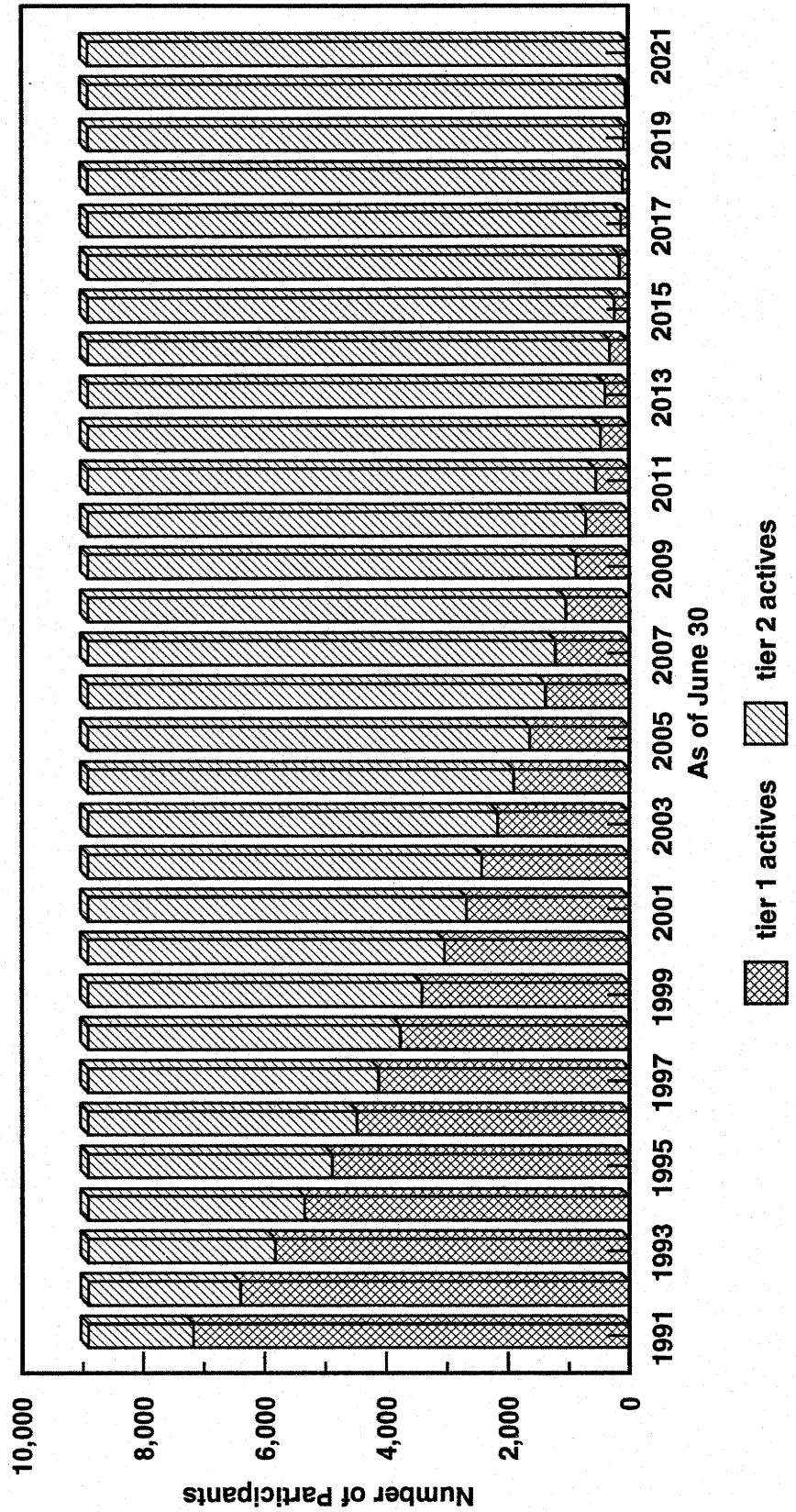
State of Alaska TRS
Financial Projections ('000 omitted)

As of June 30	Investment Return 9.00%			Valuation Amounts on July 1			Flow Amounts During Following 12 Months			Annual Population Increase 2.00%			Ending Asset Value
	Total Assets	Accrued Liability	Funding Ratio	Surplus* (Deficit)	Total Salaries	Employer Contribs	Employee Contribs	Total Contribs	Total Benefit Payments	Net Contribs	Investment Earnings		
1991	1,779,579	2,075,405	85.7%	(295,826)	422,655	11.87%	50,169	37,194	87,363	108,448	(21,085)	159,213	1,917,707
1992	1,917,707	2,213,503	86.6%	(295,796)	441,753	12.00%	53,010	38,830	91,840	117,780	(25,940)	171,426	2,063,193
1993	2,063,193	2,365,364	87.2%	(302,170)	460,821	12.00%	55,299	40,460	95,759	126,592	(30,833)	184,300	2,216,660
1994	2,216,660	2,530,084	87.6%	(313,424)	485,730	12.00%	58,288	42,598	100,886	138,931	(38,045)	197,787	2,376,402
1995	2,376,402	2,700,205	88.0%	(323,803)	515,689	12.00%	61,883	45,174	107,057	150,959	(43,902)	211,901	2,544,401
1996	2,544,401	2,877,154	88.4%	(332,753)	546,074	12.00%	65,529	47,781	113,510	166,120	(52,810)	226,620	2,718,211
1997	2,718,211	3,055,319	89.0%	(337,109)	589,539	12.00%	70,745	51,526	122,270	180,561	(58,291)	242,016	2,901,936
1998	2,901,936	3,251,336	89.3%	(349,401)	628,331	12.00%	75,400	54,853	130,253	198,641	(68,388)	258,097	3,091,644
1999	3,091,644	3,451,779	89.6%	(360,135)	667,122	12.00%	80,055	58,173	138,228	218,207	(79,979)	274,649	3,286,314
2000	3,286,314	3,665,505	89.7%	(379,191)	705,914	12.00%	84,710	61,485	146,195	238,711	(92,516)	291,605	3,485,402
2001	3,485,402	3,871,754	90.0%	(386,352)	744,706	12.00%	89,365	64,789	154,154	257,507	(103,353)	309,035	3,691,084
2002	3,691,084	4,081,462	90.4%	(390,378)	804,688	12.00%	96,563	69,927	166,490	278,883	(112,393)	327,140	3,905,831
2003	3,905,831	4,289,365	91.1%	(383,534)	863,023	12.00%	103,563	74,910	178,473	299,240	(120,767)	346,090	4,131,155
2004	4,131,155	4,509,539	91.6%	(378,385)	921,358	12.00%	110,563	79,882	190,445	321,049	(130,604)	365,927	4,366,478
2005	4,366,478	4,712,230	92.7%	(345,753)	979,692	12.00%	117,563	84,841	202,404	340,694	(138,290)	386,760	4,614,948
2006	4,614,948	4,915,826	93.9%	(300,878)	1,038,027	12.00%	124,563	89,789	214,353	363,047	(148,695)	408,654	4,874,907
2007	4,874,907	5,176,529	94.2%	(301,622)	1,122,761	12.00%	134,731	97,119	231,850	381,418	(149,568)	432,011	5,157,350
2008	5,157,350	5,419,653	95.2%	(262,303)	1,209,495	12.00%	145,139	104,621	249,761	401,097	(151,336)	457,351	5,463,365
2009	5,463,365	5,636,697	96.9%	(173,331)	1,296,228	12.00%	155,547	112,124	267,671	416,883	(149,212)	484,988	5,799,141
2010	5,799,141	5,844,083	99.2%	(44,942)	1,382,962	12.00%	165,955	119,626	285,582	435,728	(150,147)	515,166	6,164,161
2011	6,164,161	6,044,467	102.0%	119,694	1,469,695	12.00%	176,363	127,129	303,492	449,535	(146,043)	548,203	6,566,320
2012	6,566,320	6,346,213	103.5%	220,107	1,591,361	6.48%	103,059	137,653	240,711	466,987	(226,276)	580,786	6,920,830
2013	6,920,830	6,646,376	104.1%	274,454	1,718,507	5.21%	89,463	148,651	238,113	477,153	(239,040)	612,118	7,293,908
2014	7,293,908	6,900,406	105.7%	393,502	1,845,652	3.79%	69,943	159,649	229,592	489,768	(260,176)	644,744	7,678,476
2015	7,678,476	7,135,445	107.6%	543,032	1,972,797	2.54%	50,133	170,647	220,780	501,240	(280,461)	678,442	8,076,458
2016	8,076,458	7,408,666	109.0%	667,792	2,099,942	1.63%	34,256	181,645	215,901	512,080	(296,179)	713,553	8,493,832

* Surpluses reduce employer contributions over 5 years
* Deficits increase employer contributions over 25 years

State of Alaska TRS

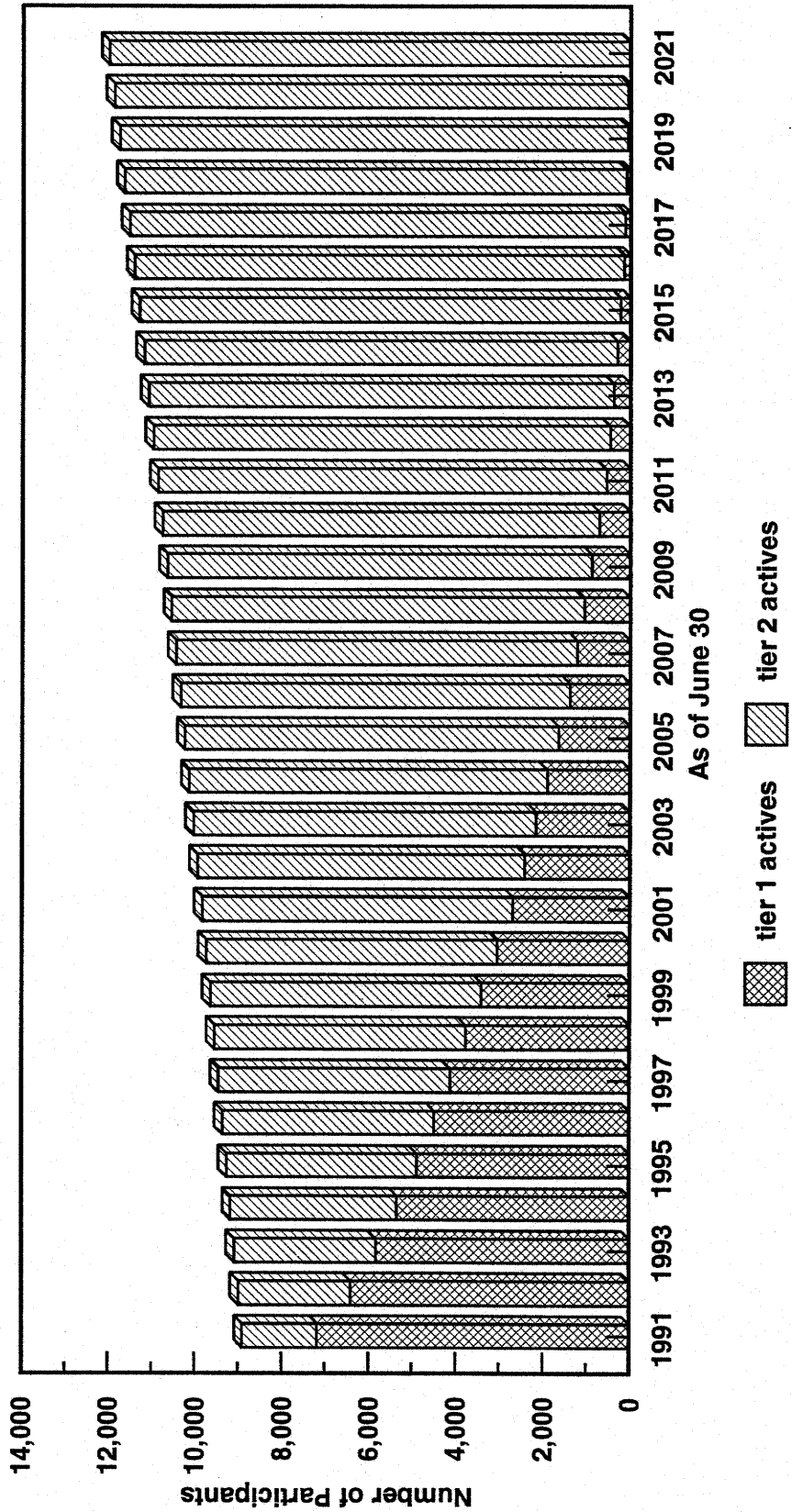
Projected Active Participant Count
Annual Population Increase of 0%



State of Alaska TRS

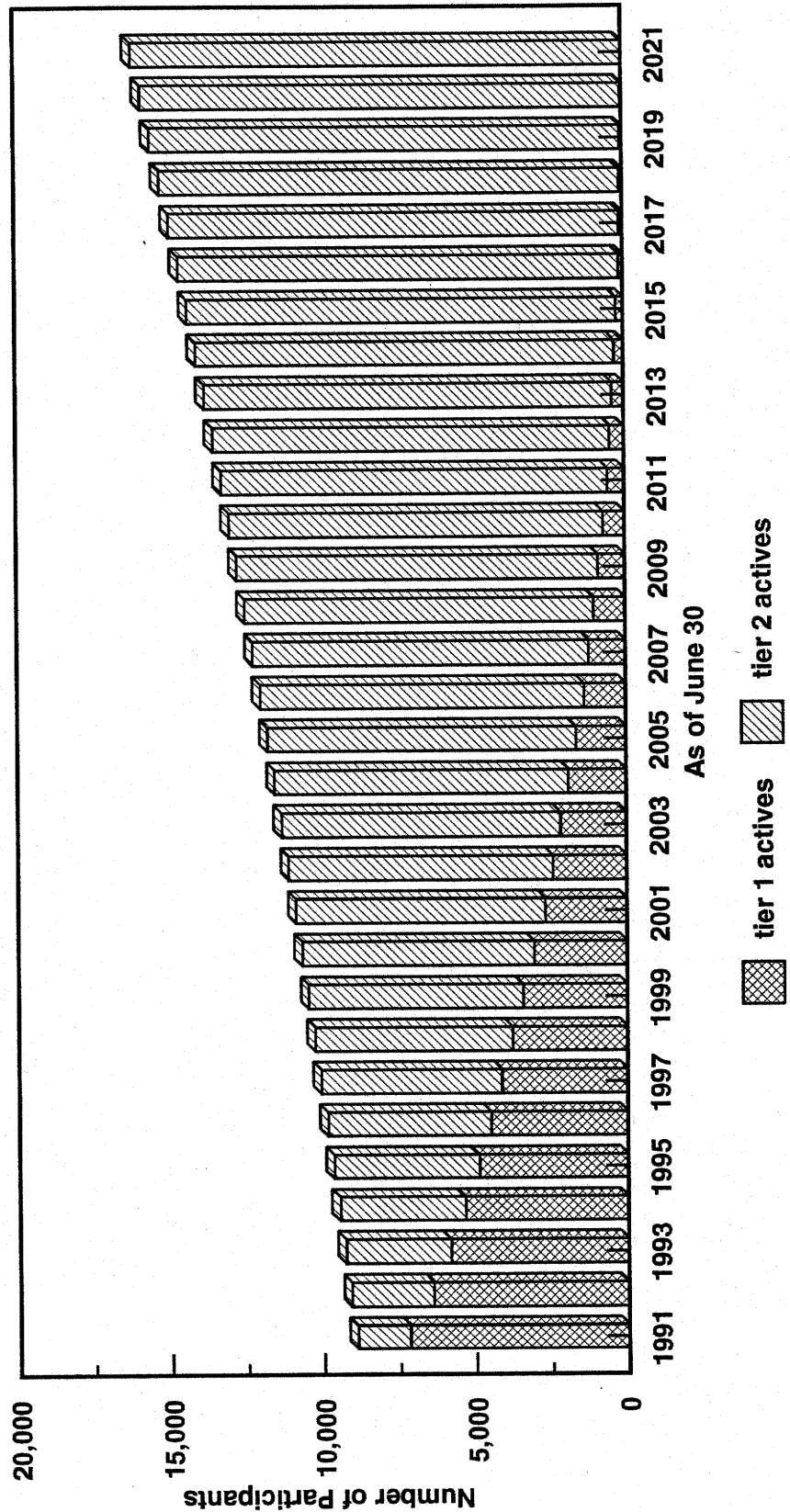
Projected Active Participant Count

Annual Population Increase of 1%



State of Alaska TRS

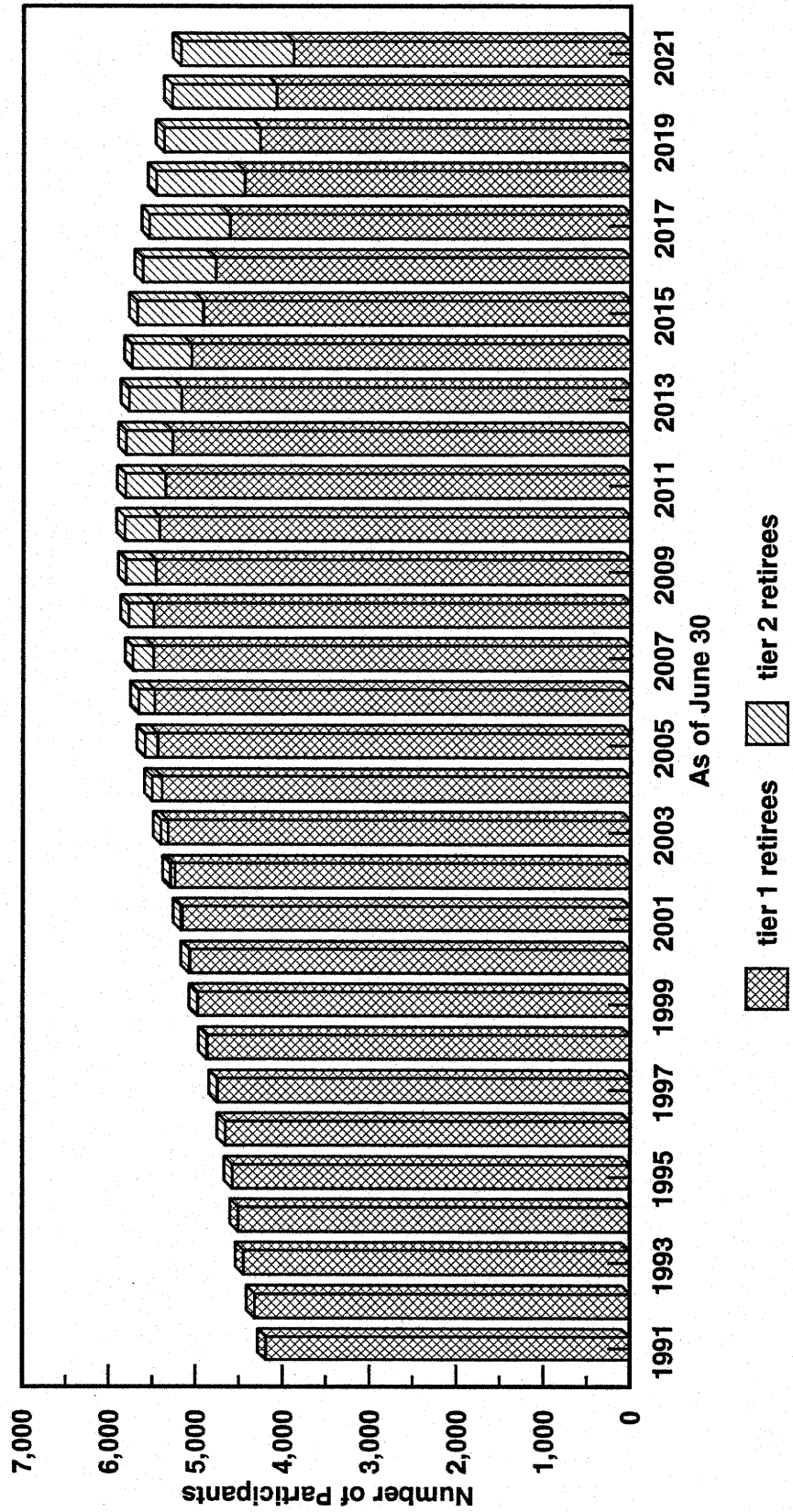
Projected Active Participant Count
Annual Population Increase of 2%



State of Alaska TRS

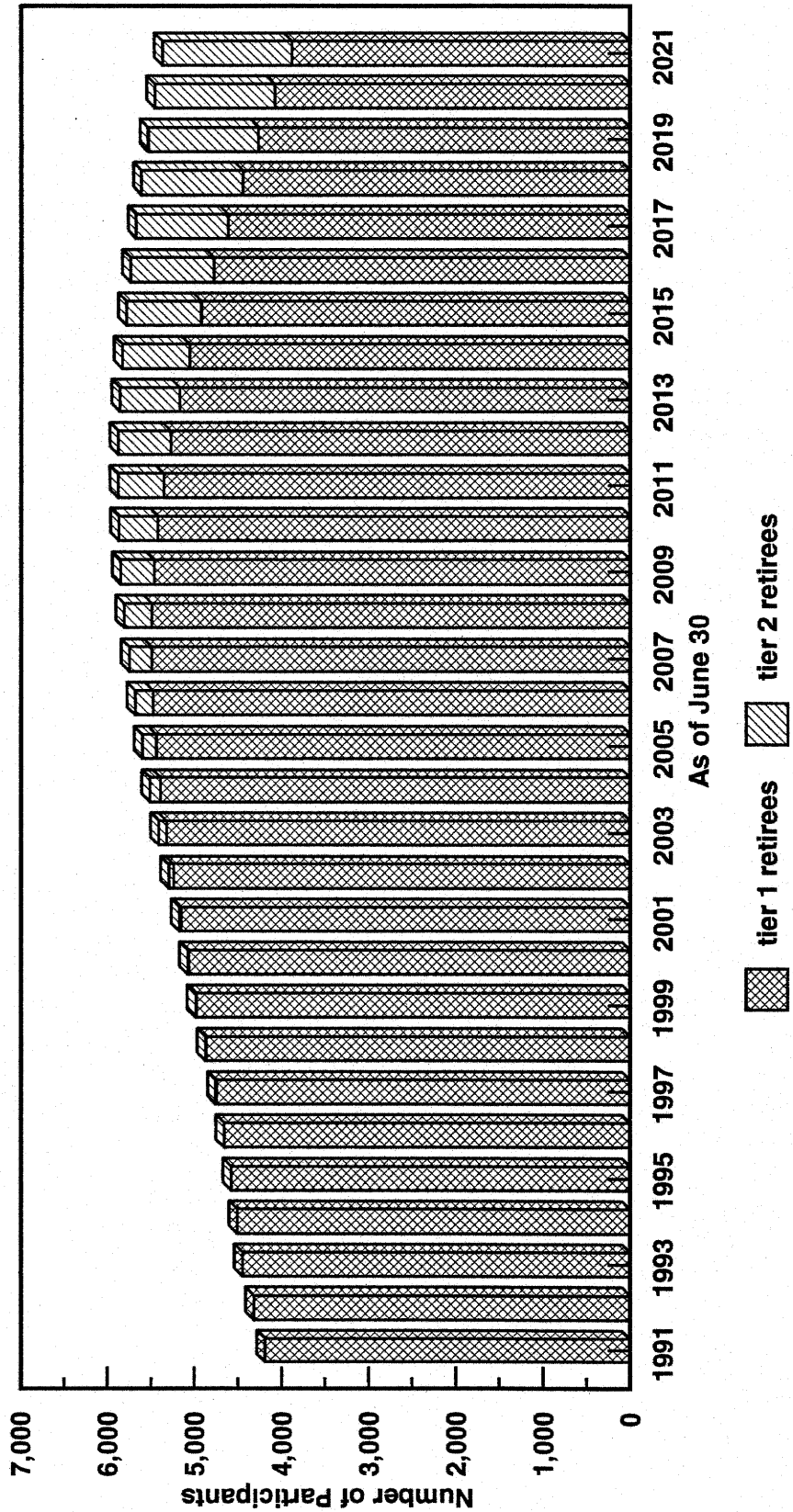
Projected Retiree Participant Count

Annual Population Increase of 0%



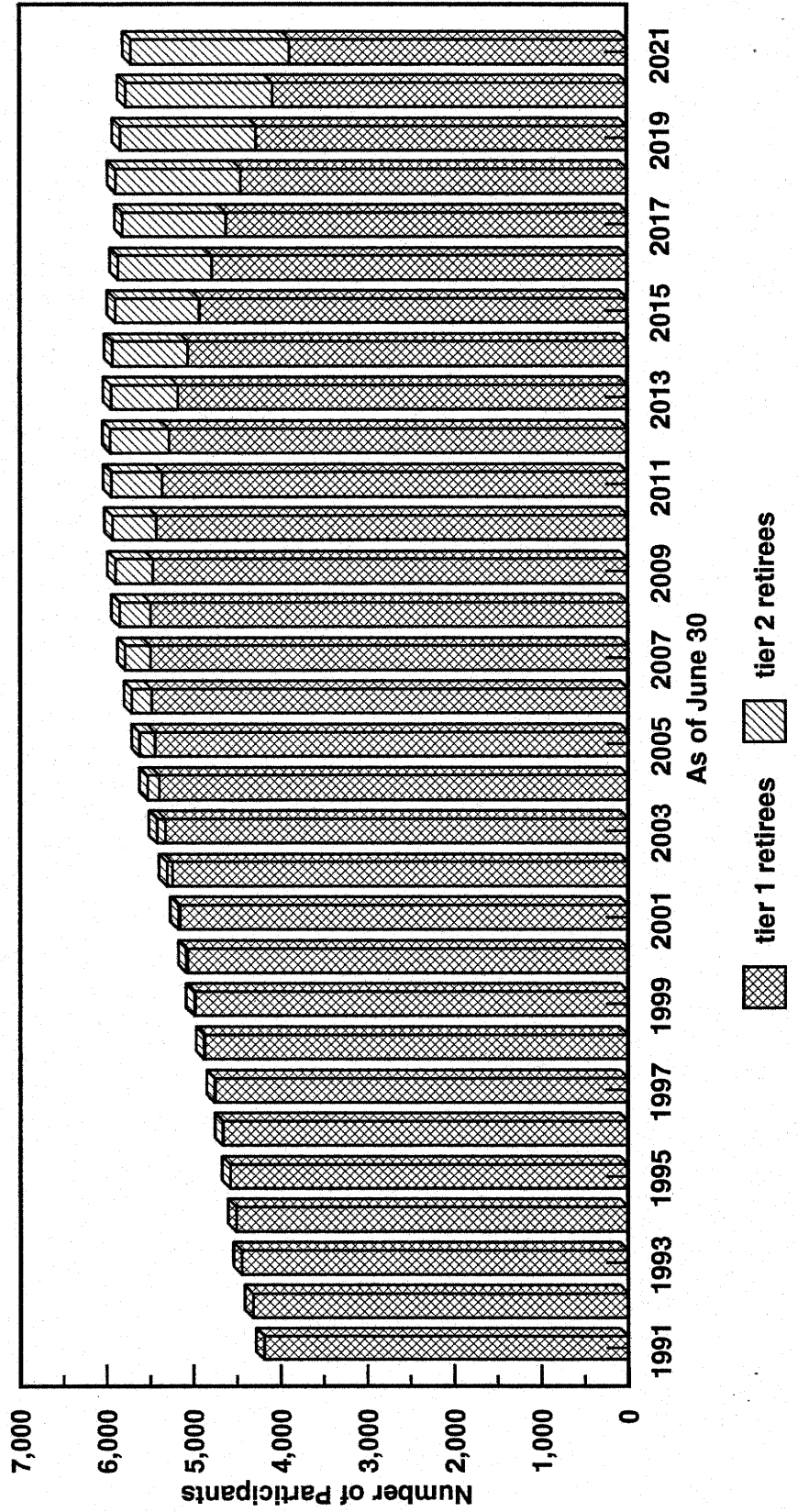
State of Alaska TRS

Projected Retiree Participant Count
Annual Population Increase of 1%



State of Alaska TRS

Projected Retiree Participant Count
Annual Population Increase of 2%



Section 2

Basis of the Valuation

In this section, the basis of the valuation is presented and described. This information--the provisions of the plan and the census of participants--is the foundation of the valuation, since these are the present facts upon which benefit payments will depend.

A summary of plan provisions is provided in Section 2.1 and participant census information is shown in Section 2.2.

The valuation is based upon the premise that the plan will continue in existence, so that future events must also be considered. These future events are assumed to occur in accordance with the actuarial assumptions and concern such events as the earnings of the fund, the number of participants who will retire, die, terminate their services, their ages at such termination and their expected benefits.

The actuarial assumptions and the actuarial cost method, or funding method, which have been adopted to guide the sponsor in funding the plan in a reasonable and acceptable manner, are described in Section 2.3.

2.1 Summary of the Alaska Teachers' Retirement System

(1) Effective Date

June 30, 1955, with amendments through June 30, 1991. Chapter 97, 1990 Session Laws of Alaska, created a two-tier retirement system. New members who are first hired under the TRS after June 30, 1990 are entitled to different benefits than those members who were hired before July 1, 1990.

(2) Administration of Plan

The Commissioner of Administration is responsible for administration of the system; the Alaska Teachers' Retirement Board prescribes policies and adopts regulations to carry out provisions of the system; and the Commissioner of Revenue invests the funds. The Attorney General represents the system in legal proceedings.

(3) Membership

Membership in the Alaska TRS is compulsory for the following employees:

- certificated full-time and part-time elementary and secondary teachers, certificated school nurses, and certificated employees in positions requiring teaching certificates;
- the Commissioner of the Alaska Department of Education and certificated supervisors employed by the Department of Education in permanent positions requiring teaching certificates;
- 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 (employees who elect to participate in the University of Alaska's optional retirement plan are excluded);
- 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; and
- certain State legislators who have elected to be covered under the TRS.

TRS members who receive TRS disability benefits are also covered under the TRS and earn membership service while they are on disability.

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

(4) Credited Service

A year of membership service is defined to be the same as a school term which is currently a minimum of 172 days, and fractional service credit is on a daily rate basis. Credit is granted for all Alaskan public school service.

TRS members may claim TRS credit for the following service:

- Outside teaching service. Members may claim up to ten years of outside service for their employment in out-of-state schools or Alaska private schools. Outside service includes employment as:
 - (a) certificated full-time elementary and secondary teachers and certificated full-time employees in positions which require teaching certificates as a condition of employment with out-of-state public schools and approved or accredited nonpublic schools either inside or outside of the United States supported by U.S. funds;
 - (b) full-time employees in out-of-state institutions of higher learning requiring academic standing and accreditation; or
 - (c) full-time teachers in approved or accredited nonpublic institutions of higher learning in Alaska.

Contributions are required for service which is claimed. For members first hired after June 30, 1978, the full actuarial cost of providing benefits for the service will be borne by the member. Credit for fractional years of outside service is not allowed.

- Part-time teaching service. Members receive one-half year of membership service for each year as a part-time teacher.
- Military service. Members may claim up to five years of military service; however, the combined total of outside and military service may not exceed ten years, unless entry into the military is immediately preceded by TRS service and following discharge is continued by TRS service within one year. Contributions are required for service which is claimed. Credit for fractional years of military service is allowed.

- Bureau of Indian Affairs (BIA) service in Alaska. Members may claim their Alaska BIA service as professional educators and certificated full-time teachers in positions requiring teaching certificates. Contributions are required for service which is claimed. Credit for fractional years of BIA service is allowed.
- Retroactive service. Members may claim their earlier Alaskan service that was not creditable at the time it occurred, but later became creditable because of legislative change. Retroactive contributions are required for earlier service that occurred after June 30, 1955. Contributions are not required for service before July 1, 1955.
- Unused sick leave. Members may claim their unused sick leave after they retire. Contributions are not required.
- Leave of absence without pay. Members may receive credit for their employer-approved leave of absence without pay. Contributions are required.

(5) Computation of Average Base Salary

A member's average base salary is determined by averaging the highest base salaries that the member received for any three years of membership service during which the member received compensation for at least two-thirds of each school year.

(6) Employer Contributions

The employer contributes an amount required, in addition to member contributions, to finance the benefits of the system.

(7) Employee Contributions

Mandatory Employee Contributions: 8.65% of base salary. Employee contributions are deducted from the gross salary before federal income tax is withheld.

Note: Prior to January 1, 1991, the rate was 7%. Employee contributions were deducted from the gross salary after federal income tax was withheld.

Interest Credited: 4.5% compounded annually on June 30.

Refund of Contributions: If a member terminates TRS employment, the balance of the member's account (mandatory contributions, indebtedness payments and interest earned) may be withdrawn by the member.

Note: The contribution accounts of terminated members may be attached to satisfy claims made under Alaska Statute 09.38.065, federal income tax levies and valid Qualified Domestic Relations Orders.

Reinstatement of Contributions: If mandatory contributions are withdrawn, the member must return to TRS employment in order to reinstate the refunded service. Upon reemployment, an indebtedness will be established for the amount of the refund. Contributions that are attached to satisfy claims under Alaska Statute 09.38.065 or a federal tax levy may be reinstated at any time; the member is not required to return to TRS employment. The indebtedness will accrue interest until it is paid in full or the member retires, whichever occurs first.

Refund at Death: If monthly survivor's benefits are not payable upon the member's death, the member's contribution account balance, including mandatory and supplemental contributions, indebtedness payments, and interest earned, will be paid to the designated beneficiary. When the member has more than one year of TRS service, the beneficiary will also receive \$1,000 plus \$100 for each year of membership service (not to exceed \$3,000). An additional \$500 may be payable if the member is survived by dependent children.

(8) 1% Supplemental Contributions

If a member first joined the system before July 1, 1982 and elected to participate in the supplemental contributions provision, a spouse's pension and/or survivor's allowance may be payable to his or her spouse and dependent children. To participate, the member must contribute an additional 1% of his or her base salary. An election to participate must be made no later than 90 days after marriage, the birth or adoption of a child, or reemployment in the system if there was at least a twelve (12) month break in service.

(9) Normal Retirement Eligibility

The first of the month following the earlier of (a) or (b) below:

- (a) Upon attaining age 60 (age 55 for members who participated before July 1, 1990) and meeting one of the following service requirements:
 - (i) Eight years of fully-paid membership service; or
 - (ii) 15 years of fully-paid creditable service, the last five of which have been membership service; (if hired after June 30, 1975 a member needs eight years of fully-paid membership service); or
 - (iii) Five years of fully-paid membership service and three years of fully-paid Alaska B.I.A. service; or

- (iv) 12 years of combined part-time and full-time fully-paid membership service (at least one-half year each); or
- (v) two years of fully-paid membership service if the member is vested in the Public Employees' Retirement System;

or;

- (b) At any age after meeting one of the following service requirements:
 - (i) 25 years of fully-paid creditable service, the last five of which are membership service; or
 - (ii) 20 years of fully-paid membership service; or
 - (iii) 20 years of fully-paid combined membership service and Alaska B.I.A. service, the last five of which are membership service.
 - (iv) 20 years of combined part-time and full-time fully-paid membership service (at least one-half year each).

A member who has been receiving TRS disability benefits is eligible for a service retirement benefit upon satisfying normal retirement eligibility.

(10) Normal Retirement Benefit

Two percent of average base salary for the first twenty years of service, and 2.5% for all remaining years. Service before July 1, 1990 is credited at 2%.

Minimum Benefit: \$25 per month for each year of credited service.

(11) Early Retirement Eligibility

Upon attaining age 55 (age 50 for members who participated before July 1, 1990) and meeting one of the following service requirements:

- (a) Eight years of fully-paid membership service; or
- (b) 15 years of fully-paid creditable service, the last five of which have been membership service; (if hired after June 30, 1975 a member needs eight years of fully-paid membership service); or
- (c) Five years of fully-paid membership service and three years of fully-paid Alaska B.I.A. service; or
- (d) 12 years of combined part-time and full-time membership service (at least one-half year each); or

- (e) two years of fully-paid membership service if the member is vested in the Public Employees' Retirement System.

(12) Early Retirement Benefit

Actuarial equivalent of the normal retirement benefit based on service and salary to early retirement date.

(13) Deferred Benefit

Eligibility:

Refer to (9) *Normal Retirement Eligibility* and (11) *Early Retirement Eligibility* (page 25 - 26).

Withdrawal of employee contributions voids rights to benefits.

Amount: Refer to (10) *Normal Retirement Benefit* and (12) *Early Retirement Benefit*, above.

(14) Indebtedness Owing At Retirement

If on the date of appointment to retirement, a member has not paid the full indebtedness amount including interest to the retirement fund, the member's retirement benefit will be reduced for life by an amount equal to the actuarial equivalent of the outstanding indebtedness at the time of retirement.

(15) Re-employment of a Retired Teacher

If a retired member is reemployed in a position covered under the system, the retirement benefit will be suspended during the period of reemployment. During such period of reemployment, retirement contributions are mandatory.

A member who returns to TRS employment after retiring under the Retirement Incentive Program (RIP) will:

- (a) forfeit the three years of incentive credits that were granted; and
- (b) be indebted to the system in an amount equal to 110% of the benefits that were paid because of the member's participation in the RIP, including health insurance costs. The indebtedness is reduced by the amount that the member paid to participate.

(16) Disability Retirement Benefits

A disability retirement benefit may be paid if a member becomes permanently disabled before the normal retirement date and has at least five years of fully-paid membership service.

The benefit is equal to 50% of the disabled member's base salary immediately prior to becoming disabled. This benefit will be increased by 10% of the member's base salary for each minor child up to a maximum of 40%.

When the disabled member becomes eligible for normal retirement, the disability benefit will terminate and the member will be appointed to normal retirement. The normal retirement benefit will be computed as if the member had been in membership service during the period of disability.

(17) Death Benefit Before Retirement

Nonoccupational Death

Upon a nonoccupational death of a member who has made no supplemental contributions or who made supplemental contributions for less than one year and has completed less than one year of membership service, a lump-sum benefit shall be paid to the designated beneficiary.

The lump-sum benefit is the member's contribution account balance, including mandatory and supplemental contributions, indebtedness payments and interest earned.

If the member is in active service at the time of death and has completed at least one year of membership service, but is not vested, the beneficiary will also receive \$1,000 plus \$100 for each year of membership service (not to exceed \$3,000). An additional \$500 may be payable if the member is survived by dependent children.

Upon a nonoccupational death of a vested member or deferred vested member who has not made the required supplemental contributions, the surviving spouse may elect to receive the benefits described in the previous paragraph or a 50% joint and survivor option based on the member's average base salary and credited service at the time of death.

Occupational Death

Upon an occupational death of a member who has not made the required supplemental contributions, a monthly survivor's pension equal to 40% of the base salary at the time of death or disability, if earlier, may be paid to the spouse. 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 based on the member's average base salary on the date of disability or death and credited service, including the period from the date of disability or death to the normal retirement date.

(18) Death Benefits After Retirement

If a member had received retirement benefits prior to his or her death, the designated beneficiary will receive the member's contribution account balance, minus any benefits already paid. However, if the member elected one of the joint and survivor options (50%, 66-2/3% or 75%) at retirement, an eligible spouse would receive a continuing monthly benefit for the rest of his or her life.

(19) Survivor's Allowance - Supplemental Contributions

If a member has made supplemental contributions for at least one year and dies while in membership service, or while receiving TRS disability benefits, or if the member has made supplemental contributions for at least five years and dies while on retirement or in deferred vested status, and is survived by dependent children, the surviving spouse and/or 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 survivor's allowance commences the month following the member's death. When there is no longer an eligible dependent child, the survivor's allowance ceases and a spouse's pension becomes payable.

(20) Spouse's Pension - Supplemental Contributions

If a member has made supplemental contributions for at least one year and dies while in membership service, or while receiving TRS disability benefits, or if the member has made supplemental contributions for at least five years and dies while on retirement or in deferred vested status, the surviving spouse is entitled to receive a spouse's pension.

The pension is equal to 50% of the retirement benefit that the deceased member was receiving or would have received if the member had been retired at the time of death. The spouse's pension commences the month following the member's death or cessation of the survivor's allowance. The pension ceases when the spouse dies.

(21) Post-Retirement Pension Adjustment

A post-retirement pension adjustment will be issued to an eligible benefit recipient each year if the consumer price index (CPI) increases during the prior calendar year. The adjustment to the benefit, excluding the cost-of-living allowance, will be:

- (a) 75% of the CPI increase (not to exceed 9%) for recipients who are at least age 65 or on TRS disability; or
- (b) 50% of the CPI increase (not to exceed 6%) for recipients who are at least age 60 but under 65, and for recipients who have been receiving benefits for at least eight years who are under age 60.

(Ad hoc PRPA's of up to 4% may be issued to retirees who were first hired before July 1, 1990 if the CPI has increased and the financial condition of the fund will permit an adjustment).

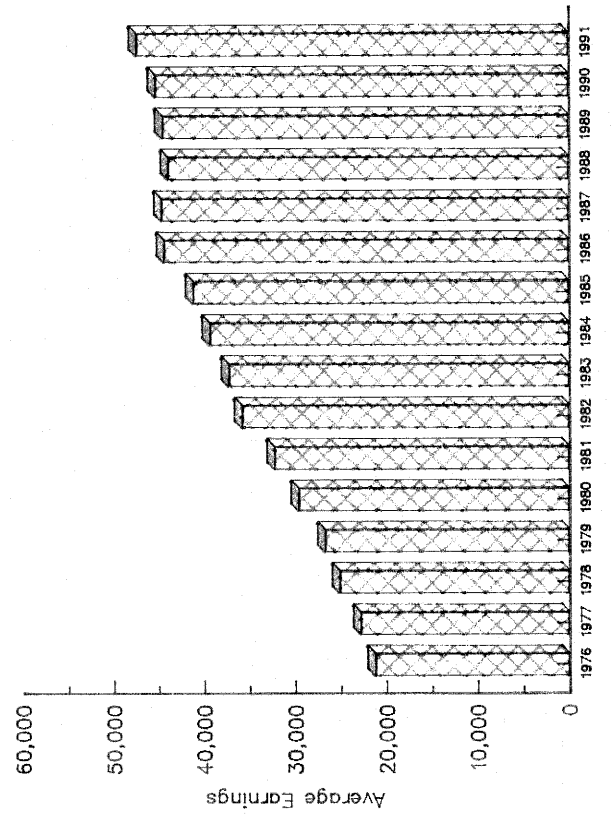
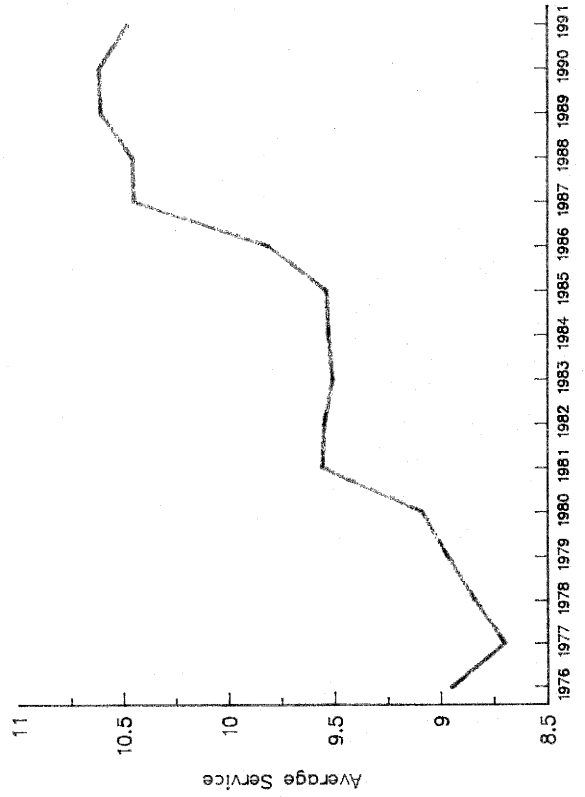
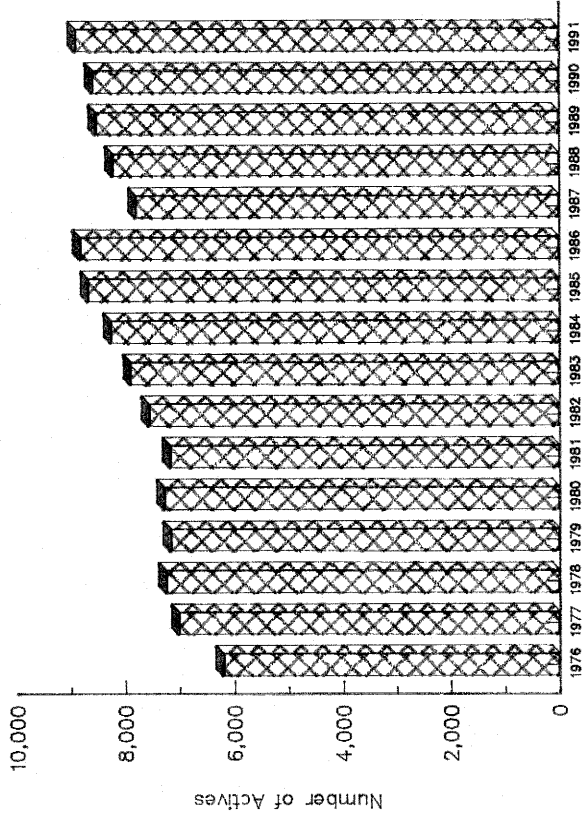
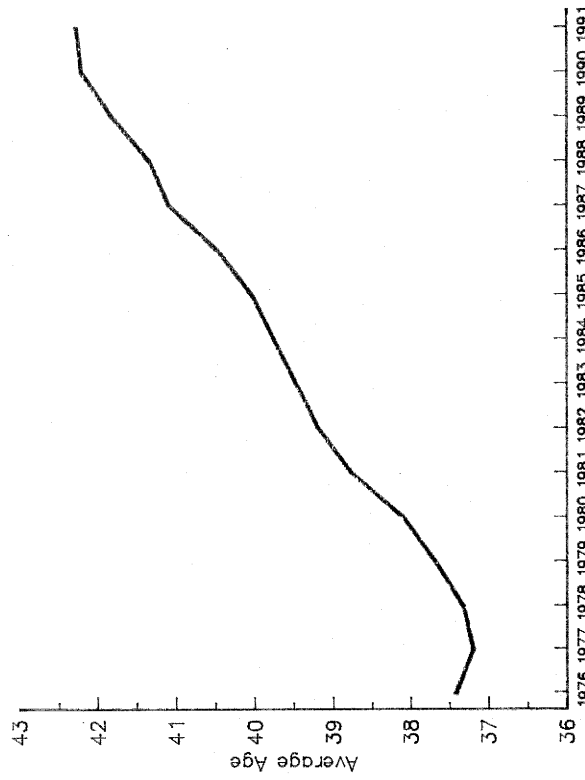
(22) Cost-of-Living Allowance

Starting at age 65, a retired member who remains in Alaska is eligible for a cost-of-living allowance (COLA) equal to 10% of the base retirement benefit. Members who were first hired before July 1, 1990 or who are receiving disability benefits are eligible for COLA, regardless of age.

2.2(a) Participant Census Information as of June 30

	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>
Active Members					
(1) Number	7,797	8,218	8,527	8,586	8,903
(2) Number Vested	4,196	4,053	4,787	4,890	5,069
(3) Average Age	41.09	41.34	41.82	42.21	42.28
(4) Average Credited Service	10.45	10.46	10.61	10.62	10.48
(5) Average Annual Salary	\$ 44,710	\$ 43,966	\$ 44,596	\$ 45,388	\$ 47,473
Retirees and Beneficiaries					
(1) Number	2,376	2,972	3,098	3,184	3,544
(2) Average Age	62.83	61.41	61.85	62.45	61.64
(3) Average Monthly Benefit:					
Base	\$ 1,304	\$ 1,460	\$ 1,476	\$ 1,491	\$ 1,587
C.O.L.A.	\$ 87	\$ 102	\$ 102	\$ 100	\$ 105
P.R.P.A.	\$ 268	\$ 208	\$ 234	\$ 262	\$ 238
Total	\$ 1,659	\$ 1,770	\$ 1,812	\$ 1,853	\$ 1,930
Vested Terminations					
(1) Number	777	408	508	816	645
(2) Average Age	47.92	44.26	45.11	46.75	45.57
(3) Average Monthly Benefit	\$ 1,391	\$ 847	\$ 957	\$ 1,244	\$ 897
Non-Vested Terminations With Account Balances					
(1) Number	1,529	938	943	985	1,003
(2) Average Account Balance	\$ 9,421	\$ 9,773	\$ 9,765	\$ 10,244	\$ 10,270

State of Alaska - TRS Actives



2.2(b) Distribution of Active Participants

----- Annual Earnings By Age -----				----- Annual Earnings By Service -----			
Age Groups	Number of People	Total Annual Earnings	Average Annual Earnings	Years of Service	Number of People	Total Annual Earnings	Average Annual Earnings
0-19	0	\$ 0	\$ 0	0	1,729	\$ 68,096,568	\$ 39,385
20-24	70	2,153,688	30,767	1	984	41,342,472	42,015
25-29	503	17,102,130	34,000	2	783	34,036,512	43,469
30-34	1,042	40,229,420	38,608	3	805	36,197,488	44,966
35-39	1,733	76,297,952	44,027	4	221	11,301,585	51,138
40-44	2,415	118,374,931	49,017	0- 4	4,522	190,974,625	42,232
45-49	1,803	94,727,192	52,539	5- 9	2,186	111,116,706	50,831
50-54	852	46,675,772	54,784	10-14	1,254	67,416,216	53,761
55-59	354	19,693,522	55,631	15-19	667	37,098,744	55,620
60-64	103	5,831,236	56,614	20-24	235	13,489,974	57,404
65-69	23	1,303,028	56,653	25-29	37	2,457,293	66,413
70-74	4	228,870	57,218	30-34	2	101,444	50,722
75-79	1	37,261	37,261	35-39	0	0	0
80+	0	0	0	40+	0	0	0
Total	8,903	\$ 422,655,002	\$ 47,473	Total	8,903	\$ 422,655,002	\$ 47,473

Years of 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	70	0	0	0	0	0	0	0	0	70
25-29	483	20	0	0	0	0	0	0	0	503
30-34	782	235	25	0	0	0	0	0	0	1,042
35-39	1,046	452	209	26	0	0	0	0	0	1,733
40-44	1,059	683	411	222	40	0	0	0	0	2,415
45-49	636	461	353	252	93	8	0	0	0	1,803
50-54	278	216	170	108	60	20	0	0	0	852
55-59	124	89	57	42	35	6	1	0	0	354
60-64	37	22	22	12	7	2	1	0	0	103
65-69	5	7	6	4	0	1	0	0	0	23
70-74	1	1	1	1	0	0	0	0	0	4
75-79	1	0	0	0	0	0	0	0	0	1
80+	0	0	0	0	0	0	0	0	0	0
Total	4,522	2,186	1,254	667	235	37	2	0	0	8,903

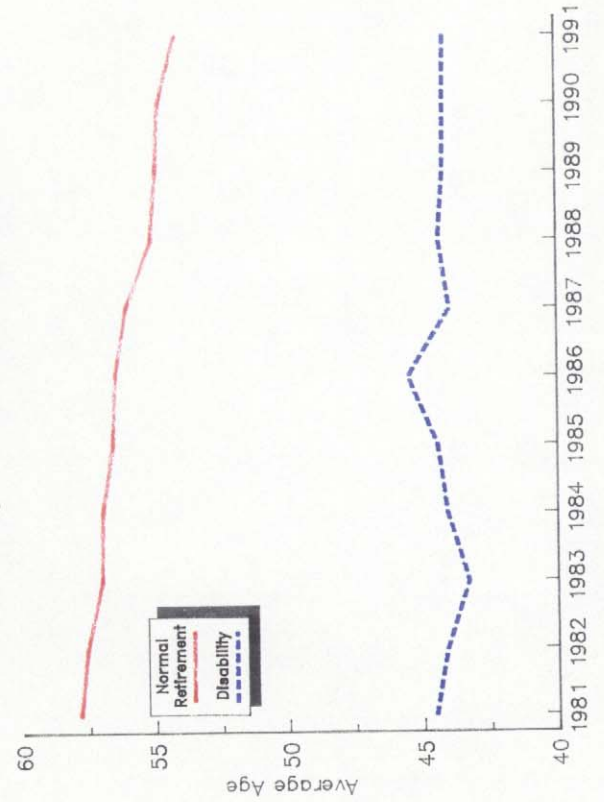
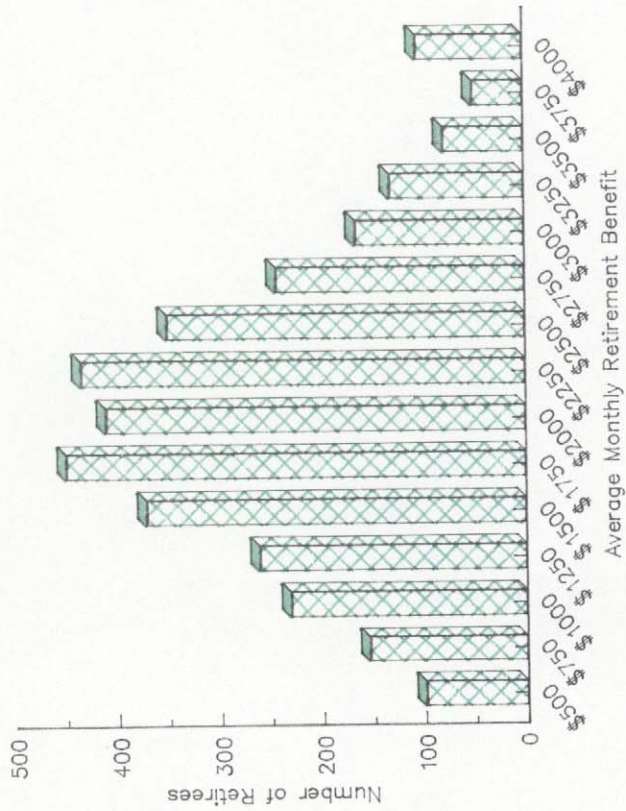
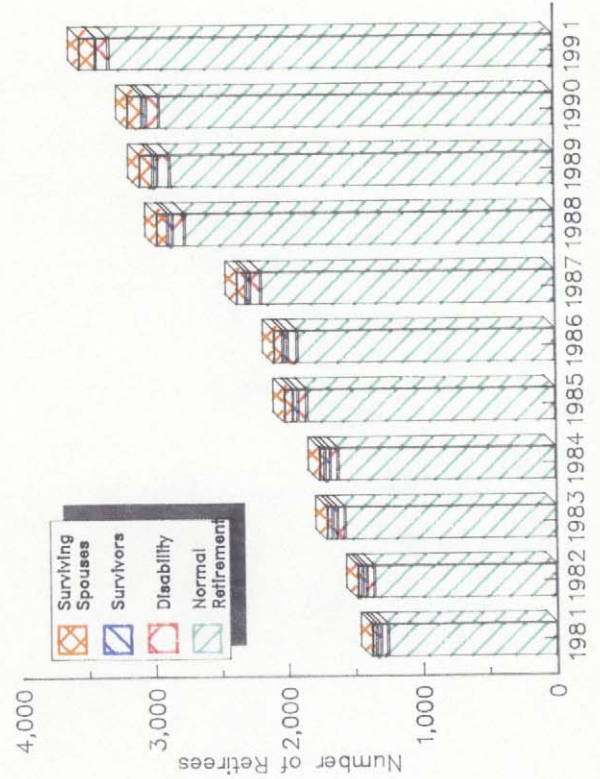
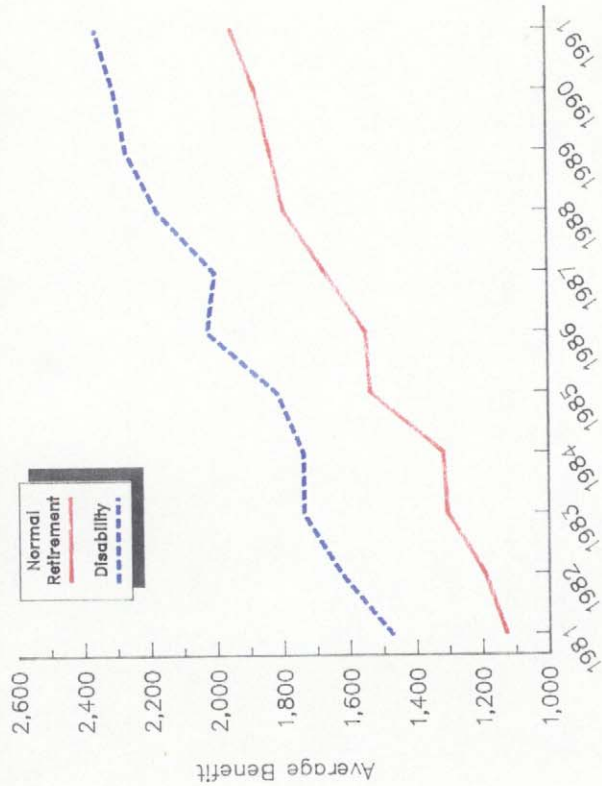
2.2(c) Statistics on New Retirees During the Year Ending June 30

	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>
Service					
(1) Number	285	621	187	199	507
(2) Average Age At Retirement	53.83	52.07	51.82	52.44	51.56
(3) Average Monthly Benefit	\$ 2,124	\$ 2,224	\$ 1,943	\$ 2,037	\$ 2,133
Disability					
(1) Number	13	15	12	8	8
(2) Average Age At Retirement	45.14	46.28	46.24	46.48	45.46
(3) Average Monthly Benefit	\$ 2,321	\$ 2,743	\$ 2,618	\$ 2,485	\$ 2,448
Survivor					
(1) Number	3	3	2	1	4
(2) Average Age At Retirement	46.43	47.39	43.81	63.96	45.40
(3) Average Monthly Benefit	\$ 1,208	\$ 1,143	\$ 2,318	\$ 1,203	\$ 435
Total					
(1) Number	301	639	201	208	519
(2) Average Age At Retirement	53.38	51.91	51.41	52.27	51.42
(3) Average Monthly Benefit	\$ 2,123	\$ 2,231	\$ 1,987	\$ 2,050	\$ 2,124
Total Number of Retirees	2,376	2,972	3,098	3,184	3,544

2.2(d) Statistics on All Retirees as of June 30

	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>
Service Retirements					
(1) Number, Prior Year	1,922	2,194	2,760	2,870	2,948
(2) Net Change During Year	272	566	110	78	374
(3) Number, This Year	2,194	2,760	2,870	2,948	3,322
(4) Average Age At Retirement	56.06	55.11	54.91	54.80	54.14
(5) Average Age Now	63.52	61.84	62.25	62.84	61.82
(6) Average Monthly Benefit	\$ 1,672	\$ 1,793	\$ 1,834	\$ 1,879	\$ 1,950
Surviving Spouse's Benefits					
(1) Number, Prior Year	69	70	85	103	108
(2) Net Change During Year	1	15	18	5	17
(3) Number, This Year	70	85	103	108	125
(4) Average Age At Retirement	53.93	55.83	55.56	55.76	54.44
(5) Average Age Now	63.49	66.74	67.26	67.79	65.95
(6) Average Monthly Benefit	\$ 750	\$ 708	\$ 738	\$ 794	\$ 1,093
Survivor's Benefits (other than spouses)					
(1) Number, Prior Year	34	32	36	31	31
(2) Net Change During Year	(2)	4	(5)	0	(30)
(3) Number, This Year	32	36	31	31	1
(4) Average Age At Retirement	39.04	36.15	35.42	35.42	23.81
(5) Average Age Now	46.77	44.66	43.73	44.73	41.68
(6) Average Monthly Benefit	\$ 1,746	\$ 1,513	\$ 1,652	\$ 1,661	\$ 544
Disabilities					
(1) Number, Prior Year	73	80	91	94	97
(2) Net Change During Year	7	11	3	3	(1)
(3) Number, This Year	80	91	94	97	96
(4) Average Age At Retirement	44.00	44.39	44.22	44.18	44.15
(5) Average Age Now	49.93	49.87	49.71	50.14	50.33
(6) Average Monthly Benefit	\$ 2,075	\$ 2,125	\$ 2,267	\$ 2,304	\$ 2,358
Total Number of Retirees	2,376	2,972	3,098	3,184	3,544

State of Alaska - TRS Retirees



2.2(e) Distributions of Annual Benefits for Benefit Recipients

----- Annual Benefit By Age -----				-- Annual Benefit By Years Since Retirement* -			
Age Groups	Number of People	Total Annual Benefit	Average Annual Benefit	Years of Service	Number of People	Total Annual Benefit	Average Annual Benefit
0-19	2	\$ 8,655	\$ 4,327	0	519	\$13,233,187	\$ 25,497
20-24	0	0	0	1	217	5,231,383	24,108
25-29	0	0	0	2	101	2,379,968	23,564
30-34	0	0	0	3	569	15,791,933	27,754
35-39	5	145,639	29,128	4	263	6,862,660	26,094
40-44	81	1,941,613	23,971	0- 4	1,669	43,499,131	26,063
45-49	342	8,666,595	25,341	5- 9	780	17,896,450	22,944
50-54	628	16,060,583	25,574	10-14	636	12,637,273	19,870
55-59	688	16,859,173	24,505	15-19	347	6,016,033	17,337
60-64	598	14,247,378	23,825	20-24	79	1,369,061	17,330
65-69	436	9,535,478	21,870	25-29	27	540,146	20,005
70-74	349	7,005,879	20,074	30-34	4	88,036	22,009
75-79	214	3,946,616	18,442	35-39	2	43,585	21,792
80+	201	3,672,106	18,269	40+	0	0	0
Total	3,544	\$82,089,715	\$23,163	Total	3,544	\$82,089,715	\$ 23,163

Years Since Retirement By Age*

Age	----- Years Since Retirement -----									Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
0-19	1	0	1	0	0	0	0	0	0	2
20-24	0	0	0	0	0	0	0	0	0	0
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	3	2	0	0	0	0	0	0	0	5
40-44	76	3	0	2	0	0	0	0	0	81
45-49	318	13	9	2	0	0	0	0	0	342
50-54	521	97	8	2	0	0	0	0	0	628
55-59	411	229	44	3	1	0	0	0	0	688
60-64	236	200	140	19	2	1	0	0	0	598
65-69	78	144	184	28	2	0	0	0	0	436
70-74	21	73	171	81	3	0	0	0	0	349
75-79	1	15	70	122	6	0	0	0	0	214
80+	3	4	9	88	65	26	4	2	0	201
Total	1,669	780	636	347	79	27	4	2	0	3,544

* In previous years, this exhibit presented years since last hire date.

2.3 Actuarial Basis

Valuation of Liabilities

- A. **Actuarial Method - Projected Unit Credit (no change).** Liabilities and contributions shown in the report are computed using the Projected Unit Credit method of funding. The unfunded accrued liability is amortized over 25 years. Any funded surpluses are amortized over five years.

The objective under this method is to fund each participant's benefits under the plan as they accrue. Thus, each participant's total pension projected to retirement with salary scale is broken down into units, each associated with a year of past or future service. The principle underlying the method is that each unit is funded in the year for which it is credited. Typically, when the method is introduced there will be an initial liability for benefits credited for service prior to that date, and to the extent that this liability is not covered by Assets of the Plan there is an Unfunded Liability to be funded over a chosen period in accordance with an amortization schedule.

An Accrued Liability is calculated at the valuation date as the present value of benefits credited with respect to service to that date.

The Unfunded Liability at the valuation date is the excess of the Accrued Liability over the Assets of the Plan. The level annual payment to be made over a stipulated number of years to amortize the Unfunded Liability is the Past Service Cost.

The Normal Cost is the present value of those benefits which are expected to be credited with respect to service during the year beginning on the valuation date.

Under this method, differences between the actual experience and that assumed in the determination of costs and liabilities will emerge as adjustments in the Unfunded Liability, subject to amortization.

B. Actuarial Assumptions -

1. Interest 9% per year, compounded annually, net of expenses.
2. Salary Scale 6.5% per year for the first five years of employment and 5.5% per year thereafter.

3. **Total Inflation** Total inflation as measured by the Consumer Price Index for urban and clerical workers for Anchorage is assumed to increase 5% annually.
4. **Health Cost Trend**
- | | |
|------------------|-------|
| 1992 - | 12.5% |
| 1993 - | 11.5% |
| 1994 - | 10.5% |
| 1995 - | 9.5% |
| 1996 - | 8.5% |
| 1997 and later - | 7.5% |
5. **Mortality** 1984 Unisex Pension Mortality Table, set forward one year for male members and set backward four years for female members. All deaths are assumed to result from nonoccupational causes.
6. **Turnover** Based upon the 1986-90 actual total turnover experience. (See Table 1).
7. **Disability** Incidence rates based upon the 1986-90 actual experience, in accordance with Table 2. Post-disability mortality in accordance with rates published by the Pension Benefit Guaranty Corporation to reflect mortality of those receiving disability benefits under Social Security.
8. **Retirement Age** Retirement rates based upon the 1986-90 actual experience in accordance with Table 3.
9. **Spouse's Age** Wives are assumed to be four years younger than husbands.
10. **Dependent Children** Benefits to dependent children have been valued assuming members who are not single have one dependent child.
11. **Contribution Refunds** 100% of those terminating after age 35 who are vested will leave their contributions in the fund and thereby retain their deferred vested benefit. All others who terminate are assumed to have their contributions refunded.

- | | | |
|-----|--------------|---|
| 12. | C.O.L.A. | Of those benefit recipients who are eligible for the C.O.L.A., 66% are assumed to remain in Alaska and receive the C.O.L.A. |
| 13. | New Entrants | Growth projections were made for the active TRS population under three scenarios:

Pessimistic: 0% per year
Median: 1% per year
Optimistic: 2% per year |
| 14. | Sick Leave | 4.7 days of unused sick leave for each year of service will be available to be credited once the member is retired. |
| 15. | Expenses | Expenses are covered in the interest assumption. |

Valuation of Assets

Based upon the five-year average ratio between actuarial and book values of the System's assets. The actuarial value of assets equals the market value, except that fixed income investments are carried at book value. Assets are accounted for on an accrued basis and are taken directly from audited financial statements provided by Coopers & Lybrand. Valuation assets cannot be outside the range of book and actuarial values.

Valuation of Medical Benefits

Medical benefits for retirees are provided by the payment of premiums from the fund. A pre-65 cost and lower post-65 cost (due to Medicare) were assumed such that the total rate for all retirees equals the present premium rate. These medical premiums are then increased with the health inflation assumption. The actuarial cost method used for funding retirement benefits is also used to fund health benefits.

For FY92, the pre-65 monthly premium is \$318.94 and the post-65 premium is \$121.50, based on a total blended premium of \$243.98. For FY93, the pre-65 monthly premium is \$310.80 and the post-65 premium is \$108.37, based on a total blended premium of \$226.90. These rates and the pre-65/post-65 split were provided by Deloitte & Touche.

Table 1

Alaska TRS

Total Turnover Assumptions

<u>Select Rates of Turnover During the First 10 Years of Employment</u>		<u>Ultimate Rates of Turnover After the First 10 Years of Employment</u>	
<u>Year of Employment</u>	<u>Rate</u>	<u>Ages</u>	<u>Rate</u>
1	.26	20-39	.03
2	.24	40+	.02
3	.16		
4	.12		
5	.11		
6	.10		
7	.09		
8	.09		
9	.09		
10	.09		

Table 2
Alaska TRS
Disability Rates
Annual Rates Per 1,000 Employees

<u>Age</u>	<u>Rate</u>
20	.14
21	.14
22	.14
23	.15
24	.15
25	.15
26	.15
27	.15
28	.16
29	.16
30	.16
31	.17
32	.17
33	.25
34	.34
35	.44
36	.53
37	.64
38	.75
39	.87
40	.99
41	1.12
42	1.25
43	1.39
44	1.53
45	1.68
46	1.84
47	2.00
48	2.17
49	2.34
50	2.52
51	2.70
52	2.89
53	3.08
54	3.29
55	3.49
56	3.70
57	3.92
58	4.14
59	4.37
60	4.61
61	4.84
62	5.09
63	5.34
64	5.60

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Table 3
Alaska TRS
Retirement Rates

<u>Age at Retirement</u>	<u>Retirement Rate</u>
50	.10
51	.07
52	.07
53	.07
54	.07
55	.16
56	.16
57	.16
58	.16
59	.13
60	.13
61	.13
62	.13
63	.13
64	.10
65	.47
66	.82
67	1.00

For ages less than 50, teachers are assumed to retire two years after the earliest age they are eligible to retire.