



State of Alaska

Public Employees' Retirement System

**Review of Inflation Component
of Economic Assumptions**

October 1994

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Section 1

Introduction



Role of Inflation Assumption in Funding the System

The ultimate cost of a pension plan cannot be determined in advance as it depends upon three factors, the precise effects of which can only be known once the last member has left the plan. These factors are:

- the investment returns generated by the fund's assets;
- the costs of administration, actuarial and advisory services, and
- the actual experience over the duration of the plan with respect to retirement, termination from service, mortality, disability, salary increases and health inflation.

One of the primary functions of an actuarial valuation is to determine an annual contribution amount that is expected to adequately provide for future benefits and that is expected to remain relatively stable from year to year. To determine the annual contribution amount, assumptions must first be made that estimate the amount and incidence of future benefit payouts and the economic value of those payouts as of the valuation date.

The assumptions chosen for the actuarial valuation are central to funding the plan in an orderly way and with assurance that the funds accumulated through annual contributions and investment returns will provide participants with promised benefits. Since economic and demographic factors change over time, periodic studies of the assumptions and their relation to past and expected future experience are undertaken to determine whether they continue to be valid or if changes should be made. These studies are usually done every four or five years. The most recent study, which encompassed all actuarial assumptions used in funding the System, was prepared and presented to the PERS Board in October 1991.

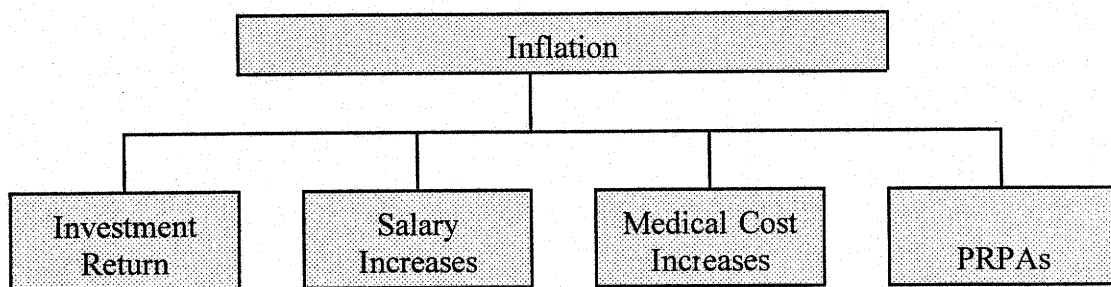
There are two general categories of assumptions, demographic and economic. Demographic assumptions relate to the System's population and how it is expected to change over time. Examples of demographic assumptions include rates of retirement, disability, termination, and death. These assumptions tend to be fairly stable over time, and are not included in this review.

Section 1 Introduction (continued)



Economic assumptions refer to the expected long-term financial experience of the System, and include:

- investment return on the System's assets
- salary increases
- retiree health premium inflation
- future Post-Retirement Pension Adjustments (PRPAs)



As depicted in the diagram above, each of these assumptions directly depends upon the assumed rate of future inflation. The inflation assumption adopted for the System is therefore crucial to its proper funding.

While each of the economic assumptions has an inflation component, changes in the assumptions as a result of a change in assumed inflation will affect plan liabilities in different ways. Changes in the assumed rate of investment return rate will affect System liabilities in the opposite direction. In other words, decreasing the investment return rate will increase System liabilities and contribution requirements, since System assets would be expected to grow at a slower rate. In contrast to this, changes in each of the other economic assumptions will affect liabilities in the same direction. For example, decreases in the salary increase assumption, the medical cost assumption or PRPA will lower System liabilities and contribution requirements. This would have the effect of offsetting the increases resulting from a lower investment return rate.

Section 1

Introduction (continued)



The following table indicates the direction in which liabilities would move for given changes in the assumed inflation rate.

Effect on Plan Liabilities		
	Inflation	
	↑	↓
Investment Return	↓	↑
Salary Increases	↑	↓
Medical Cost Increases	↑	↓
PRPAs	↑	↓

The inflation assumption currently being used by the PERS is 5% per year. Inflation is typically measured by the Consumer Price Index (CPI) for urban wage earners and clerical workers. This statistic is published by the U.S. Department of Labor, Bureau of Labor Statistics.

Based on CPI data over the last 20 years and on reasonable expectations of future levels, we recommend that the inflation assumption for the System be reduced from 5% to 4% per year. The reasoning behind this recommendation is discussed in Section 2 of the Report. Section 7 of this Report summarizes the effects of this change on the FY96 contribution rate and the funding ratio as of June 30, 1993. We have also investigated the sensitivity of changes in this assumption on the contribution rate and funding ratio. In particular, the effects of assuming 3½% and 4½% inflation have been summarized in Section 8.

Sections 3 – 6 examine in more detail how inflation impacts the assumptions on investment return, salaries, retiree health premiums and the PRPA.

Section 1 Introduction (continued)



This analysis is based on employee census information provided annually by the State of Alaska to perform the actuarial valuation of the System. Generally acceptable actuarial methods and techniques were used to evaluate the financial effect on the System of the proposed changes. The current actuarial assumptions used by the System are summarized in the Appendix. The undersigned are available to answer any questions with respect to this report.

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Section 2

Analysis of the Consumer Price Index



The Consumer Price Index is a measure of the average change in prices over time of a defined basket of goods and services. It is based on prices of food, clothing, shelter, fuels, transportation, medical fees and other day-to-day living expenses. The index is created by calculating price changes for the various items. A weighted average of these price changes is then used to create the index. The index is calculated for selected individual cities and then averaged to create the national index.

The following schedule summarizes annualized CPI data since 1964. The data are shown separately for Anchorage and for the U.S. and were obtained from the Bureau of Labor Statistics.

	<u>Anchorage</u>	<u>National</u>
1964 - 93	4.5%	5.3%
1979 - 93	4.3%	5.2%
1984 - 93	2.9%	3.7%
1989 - 93	4.0%	3.9%
4 quarters ending 06/30/94	2.1%	2.5%
2 quarters ending 06/30/94	3.2%	3.0%

These data confirm that inflation, as measured by the CPI, has been trending lower since the latter half of the 1970s and the early 1980s. Inflation for the most recent four quarters was just 2.1% per year in Anchorage and 2.5% for the country as a whole. Although inflation in Anchorage during the last 15 years was lower than the country as a whole, it was roughly the same on average for the last 5 years, indicating significantly lower inflation in Anchorage during the 1980s.

There may be some justification for adopting two inflation assumptions for the System, one for Anchorage (as a proxy for the State) and the other for the country as a whole. The rationale behind this approach is that the inflation component of investment return should reflect inflationary expectations for the U.S. in general, whereas the inflation component of the salary scale and the PRPA should reflect inflation expectations for Alaska. As discussed above, recent history shows some differences between the inflation rates of Anchorage and the U.S. and this could be attributed primarily to the recession in Alaska caused by the oil price decline. As we

Section 2

Analysis of the Consumer Price Index



cannot reasonably anticipate that a similar divergence could occur in the future, we recommend that one inflation assumption be adopted.

Overall declining inflationary trends over the last 15 years can be attributed to three main factors:

- increasing use of monetary policy to control inflationary pressures
- global recession
- general reduction in energy prices

The energy crisis of the early 1970s is generally believed to be the major factor which caused the historically high inflation rates of the late 1970s. During that period inflation nationally averaged in excess of 9% per year reaching a high of 13.3% in 1979.

On a shorter-term basis, there have been several indications that the downward trend in inflation may be reversing as the current economic growth cycle matures. Such indications include rising commodity prices, including the gold price, and strong rising trends in the producer price index and in capacity utilization. Also, stronger inflationary trends could result as some countries in Europe and the Far East emerge from recession. Some of these factors have caused the Federal Reserve to move to slow economic growth by increasing short-term interest rates this year.

As with the other elements of the actuarial basis, historical inflation statistics can only be used as a guide in determining appropriate assumptions which reflect reasonable expectations of future inflation levels.

In summary, we do not believe that a long-term 5% inflation assumption continues to be appropriate. Inflation rates will vary from time to time as the U.S. moves through the natural expanding and contracting economic cycles but, in deciding on a stable long-term rate, we recommend a 4% inflation assumption be adopted for the System. This is consistent with the average inflation rate during the past 5 – 10 years, as well as with the outlook for the future. The effects on the FY96 contribution rate and the funding level at June 30, 1993, are shown in Section 7 of this report. We have also illustrated the sensitivity of the inflation assumption by comparing results using 3½% and 4½% inflation rates with the proposed 4% rate. These comparisons are shown in Section 8.



Section 3

Elements of the Actuarial Basis Which Depend on Inflation – Investment Return

The investment return assumption is one of the most important elements of the actuarial basis in that it covers the entire lifetime of System participants, making the results of the valuation extremely sensitive to this assumption. The investment return assumption represents the average long-term rate of return expected to be realized on the investment portfolio of the System over the System's future lifetime. Current System liabilities and recommended contribution rates are determined by discounting all future benefits payable to current and future retirees and their beneficiaries at this rate of interest. It is important not to overestimate the expected future investment returns, otherwise actuarial losses could occur resulting in unanticipated contribution rate increases. However, it should be remembered that short-term expectations of interest rate levels should have little influence on the determination of a valuation assumption which should rather represent best estimates of the long-term average return which can be anticipated for the System assets.

The annual investment return is comprised of three major components:

- The increase in overall productivity
- The risk premium associated with each investment class
- Inflation

The first two of these represent the "real" rate of return. Since 1991, the real rate of return implicit in the investment rate has been $3\frac{3}{4}\%$ for PERS and 4% for TRS. Last Spring, the Alaska State Pension Investment Board commissioned a study of expected investment return and used a 4% real return assumption. We believe this remains reasonable and propose to use 4% for both PERS and TRS.

In the last section we recommended reducing the inflation assumption from 5% to 4% per year. When added to a real rate of return assumption of 4%, the investment return assumption becomes 8%, a reduction of $\frac{3}{4}\%$ from the current $8\frac{3}{4}\%$ rate. We have commented in recent years that the State's assumption of $8\frac{3}{4}\%$ is, in general, at the high end of the range of assumptions adopted by other State systems. A reduction in the rate to 8% would bring the assumption closer to the median of the range.

The effect of a lower investment return assumption would, when considered in isolation, increase the liabilities of the System as the Fund's assets would be expected to accrue at a slower rate.



Section 4

Elements of the Actuarial Basis Which Depend on Inflation – Salary Scale

As System benefits are based on participants' salaries, an assumption needs to be made of future salary increases while an employee is a participant of the System. Anticipated salary increases should not be underestimated as this could generate unanticipated additional liabilities which would result in increasing contribution levels. In recent years, the System has consistently experienced actuarial gains from salary increases as they have tended to be less than anticipated by the assumption.

The salary scale can be separated into three major components:

- merit
- productivity
- inflation

The merit and productivity increase components represent that portion of future salary increases relating to an employee's increasing responsibility and efficiency but, in terms of impact on funding the System, the inflation component is far more important. The System currently assumes a 5% inflation component, a ½% productivity component, and a 1% merit component during the first 5 years of service. Reducing the inflation component to 4% while holding the other components constant would result in a salary scale assumption of 5½% for the first 5 years of employment and 4½% thereafter.

Taken on its own, the effect of reducing the inflation component of the salary scale would be to reduce liabilities as expected benefit levels at retirement are lower. However, as discussed in the preceding section, this effect is offset by a similar reduction in the investment return assumption which increases System liabilities by discounting future benefits at a lower rate of interest.

When assessing the impact on the funding of the System of changes in the salary scale and investment return assumptions, the relationship between the two is of far greater importance than their absolute amounts. As we are proposing a reduction of 1% in both assumptions, the combined effect on the liabilities and funding of the System is somewhat offset.



Section 5

Elements of the Actuarial Basis Which Depend on Inflation – Health Cost Trend

A unique feature of the PERS is the fact that it provides major medical insurance coverage to certain participants receiving benefits from the System and to their spouses and dependent children. Assumptions, therefore, need to be made for the rate of increase of future medical premiums. In recent years, the System has experienced actuarial losses as health premiums have increased faster than the PERS assumption.

It is well known that, during the 1980s and early 1990s, medical inflation has significantly exceeded the general CPI, due in part to improving medical technology and increased utilization of services. This fact is recognized in the funding of the System as the assumed increase in retiree medical premiums is significantly greater than the assumed inflation rate of 5%. However, it is not reasonable to assume that medical inflation can exceed general price inflation by a significant margin indefinitely and the PERS assumptions recognize this by trending the excess down over time. Currently, the health cost trend assumption, which comprises inflation and other factors such as utilization, is:

FY95:	9½% per year
FY96:	8½% per year
FY97 and later:	7½% per year

The System therefore currently assumes that the excess of health inflation over general price inflation will remain consistent at 2½% per year after FY96. Whether this excess is reasonable in the longer term will depend to a large extent on how health reform emerges in Alaska or the nation. Because the outcome is still uncertain, in Section 8 we have shown the effects on the funding ratio and contribution rates of two changes in the health cost trend for each inflation assumption. One change reduces the trend from 9.5% in FY95 by steps of 1% each year until it reaches the assumed inflation rate. The other reduces the trend by steps of 1% each year until it reaches the inflation rate + 1½%. As the population ages, we expect that the health cost trend will continue to increase faster than general price inflation due to increased utilization of services. We therefore propose the latter approach, i.e., a health trend assumption reducing ultimately to inflation + 1½%.

It is important not to underestimate future medical inflation as this would generate actuarial losses which would result in unanticipated additional liabilities. Nevertheless, taken on its own, a reduction in the ultimate assumed rate of increase of retiree medical premiums will result in lower System liabilities and contribution levels.



Section 6

Elements of the Actuarial Basis Which Depend on Inflation – The PRPA

Post-retirement pension adjustments (PRPAs) are granted annually to eligible benefit recipients when the Anchorage CPI increases during the preceding calendar year. If the recipient is at least 65 or on disability, the increase is 75% of the increase in the CPI or 9%, whichever is less. An increase of the lesser of 50% of the CPI or 6% is granted to recipients who are at least 60 or, if not age 60, have been receiving benefits for at least five years.

It is important not to underestimate future inflation levels as this would result in unanticipated liability increases and increases in cost. A reduction in the inflation assumption would result in smaller anticipated PRPAs for current and future benefit recipients which would reduce System liabilities. This impact would be mitigated by the fact that these future benefits would be discounted at a lower rate of interest which increases the current value of those benefits.

Section 7 Summary of Results



	Current Basis	Proposed Basis
Inflation Assumption	5%	4%
Investment Return Assumption	8¾%	8%
Salary Scale	6½%/5½%	5½%/4½%
Health Trend Assumption	9½%→7½%	9½%→5½%

Information as of 06/30/93 (\$,000s)

Accrued Liability	\$4,125,761	\$4,116,400
Valuation Assets	3,936,776	3,936,776
Funding Ratio	95.4%	95.6%
FY96 Consolidated Rate	11.29%	10.74%
FY96 Past Service Rate	<u>1.53%</u>	<u>1.37%</u>
Total Calculated FY96 Employer Rate	12.82%	12.11%

The results under the proposed basis are shown assuming the health trend assumption declines ultimately to the inflation rate + 1½%.

The results show that the combined effect of reducing the inflation rate from 5% to 4% and of modifying the health trend assumption from the current basis results in an increase in the funding ratio and a reduction in the calculated FY96 contribution rate.

The graph on the next page shows the effect of these changes on the Actuarial Projections shown in your June 30, 1993 valuation report.

State of Alaska PERS

Projected Contribution Rates

4% CPI Assumption Change

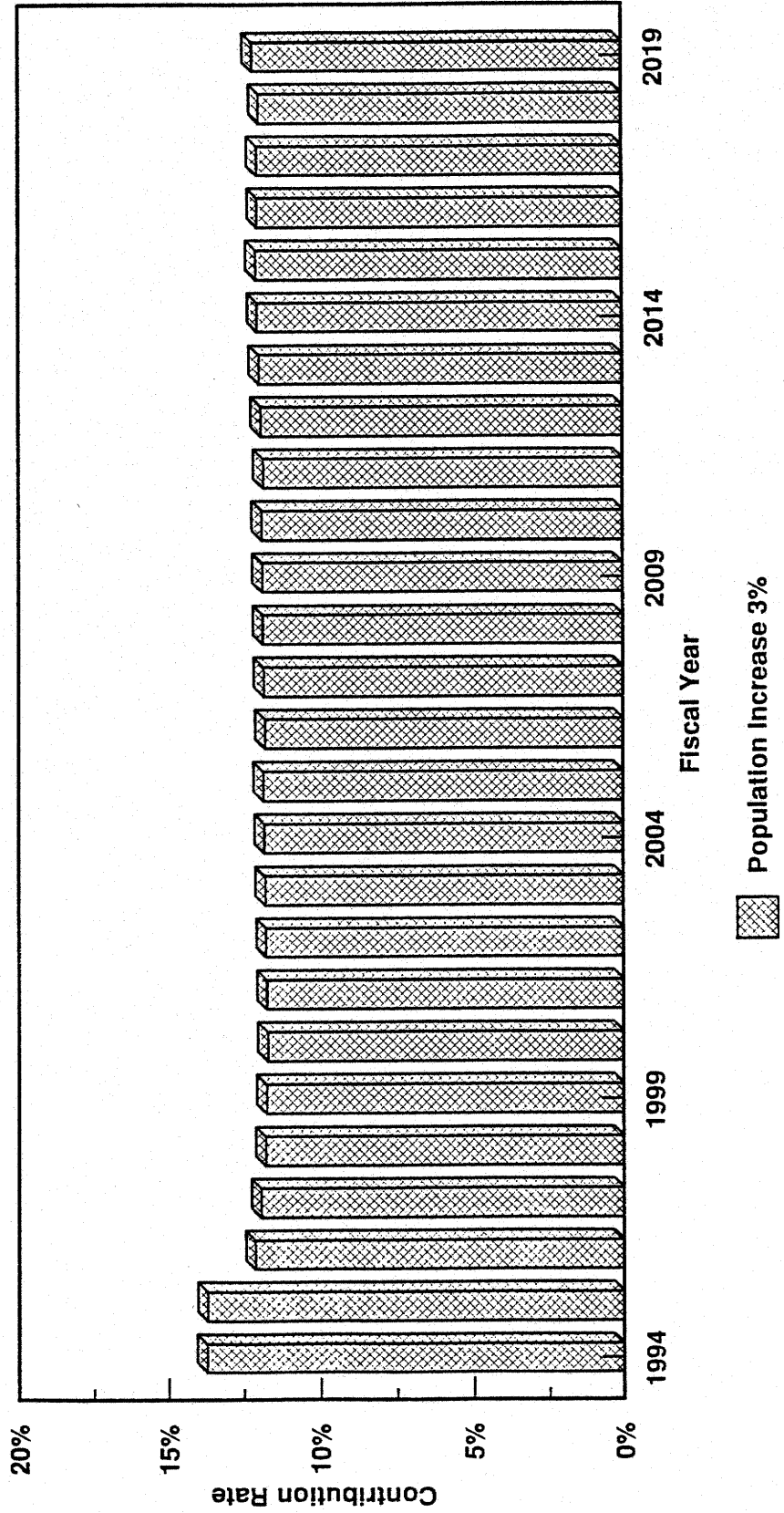


Table 2

State of Alaska PERS
Financial Projections ('000 omitted)

As of June 30	Investment Return 8.00%		Valuation Amounts on July 1		Surplus* (Deficit)	Total Salaries	Flow Amounts During Following 12 Months		Annual Population Increase 3.00%		Ending Asset Value		
	Total Assets	Accrued Liability	Funding Ratio	Employer Ctb Rate			Employer Contribs	Employee Contribs	Total Contribs	Benefit Payments		Net Contribs	Investment Earnings
1993	3,936,776	4,116,400	95.6%	13.72%	(179,624)	1,135,889	158,559	78,933	237,492	178,179	59,313	317,315	4,313,404
1994	4,313,404	4,490,467	96.1%	13.70%	(177,064)	1,175,467	163,830	81,676	245,506	197,332	48,174	346,999	4,708,577
1995	4,708,577	4,879,445	96.5%	12.11%	(170,868)	1,216,212	150,182	84,702	234,884	216,231	18,654	377,432	5,104,663
1996	5,104,663	5,288,810	96.5%	11.92%	(184,147)	1,264,086	153,902	88,173	242,075	239,216	2,859	408,487	5,516,009
1997	5,516,009	5,714,726	96.5%	11.78%	(198,717)	1,317,844	158,844	92,086	250,930	265,723	(14,793)	440,689	5,941,905
1998	5,941,905	6,157,161	96.5%	11.73%	(215,255)	1,378,669	166,634	97,062	263,696	296,509	(32,813)	474,040	6,383,132
1999	6,383,132	6,617,324	96.5%	11.69%	(234,192)	1,463,549	175,992	102,859	278,852	325,927	(47,075)	508,768	6,844,824
2000	6,844,824	7,097,209	96.4%	11.72%	(252,384)	1,548,429	186,425	108,656	295,081	360,043	(64,962)	544,987	7,324,850
2001	7,324,850	7,595,392	96.4%	11.75%	(270,542)	1,633,309	196,950	114,454	311,404	397,015	(85,611)	582,564	7,821,803
2002	7,821,803	8,111,173	96.4%	11.78%	(289,370)	1,718,189	207,394	120,251	327,645	437,594	(109,949)	621,346	8,333,201
2003	8,333,201	8,644,569	96.4%	11.80%	(311,369)	1,803,069	220,708	127,714	348,422	480,230	(131,808)	661,584	8,862,777
2004	8,862,777	9,196,321	96.4%	11.77%	(333,544)	1,936,733	236,979	136,844	373,823	524,229	(150,407)	703,006	9,415,376
2005	9,415,376	9,767,886	96.4%	11.83%	(352,510)	2,070,398	251,618	145,973	397,591	568,744	(171,152)	746,584	9,990,608
2006	9,990,608	10,361,446	96.4%	11.81%	(370,839)	2,204,063	268,282	155,102	423,384	616,141	(192,757)	791,538	10,589,388
2007	10,589,388	10,979,900	96.4%	11.84%	(390,512)	2,337,727	284,605	164,231	448,836	665,764	(216,928)	838,474	11,210,935
2008	11,210,935	11,626,868	96.4%	11.85%	(415,934)	2,471,392	305,275	175,908	481,182	715,090	(233,907)	887,519	11,864,546
2009	11,864,546	12,306,692	96.4%	11.87%	(442,146)	2,679,637	330,514	190,131	520,645	764,670	(244,025)	939,403	12,559,924
2010	12,559,924	13,024,432	96.4%	11.81%	(464,508)	2,887,882	353,292	206,354	557,646	814,765	(257,119)	994,509	13,297,314
2011	13,297,314	13,785,869	96.5%	11.89%	(488,556)	3,096,127	380,480	218,577	599,057	864,988	(265,932)	1,053,148	14,084,530
2012	14,084,530	14,597,506	96.5%	11.95%	(512,976)	3,304,372	407,212	232,800	640,012	918,111	(278,099)	1,115,638	14,922,069
2013	14,922,069	15,466,565	96.5%	12.00%	(544,495)	3,512,616	440,685	250,785	691,470	972,194	(280,725)	1,182,537	15,823,881
2014	15,823,881	16,400,987	96.5%	12.05%	(577,106)	3,831,011	483,354	273,950	757,304	1,023,978	(266,674)	1,255,244	16,812,451
2015	16,812,451	17,409,436	96.6%	12.00%	(596,986)	4,190,964	519,724	295,704	815,428	1,081,213	(265,785)	1,334,365	17,881,030
2016	17,881,030	18,501,296	96.6%	12.01%	(620,265)	4,668,002	555,654	316,041	871,695	1,143,106	(271,411)	1,419,626	19,029,245
2017	19,029,245	19,686,668	96.7%	11.94%	(657,423)	4,786,497	590,691	337,794	928,486	1,210,065	(281,580)	1,511,076	20,258,742
2018	20,258,742	20,976,378	96.6%	12.15%	(717,636)	5,104,993	620,141	348,671	968,812	1,280,918	(312,106)	1,608,215	21,554,851

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



Section 8 Sensitivity Analysis

Information as of 06/30/93 (\$,000s)

Inflation Assumption	Proposed Basis		-----4½%-----	
	-----4%-----	-----3½%-----	-----4%-----	-----4½%-----
Health Trend Assumption	9½%→4%	9½%→5½%	9½%→3½%	9½%→4½%
Accrued Liability	\$3,992,021	\$4,116,400	\$4,103,931	\$3,887,693
Valuation Assets	3,936,776	3,936,776	3,936,776	3,936,776
Funding Ratio FY96	98.6%	95.6%	95.9%	98.1%
Consolidated Rate	9.76%	10.74%	10.27%	10.27%
FY96 Past Service Rate	<u>0.43%</u>	<u>1.37%</u>	<u>1.23%</u>	<u>(1.01)%</u>
Total FY 96 Employer Rate	10.19%	12.11%	11.50%	8.27%
				\$4,014,484
				3,936,776
				98.1%
				10.27%
				<u>0.62%</u>
				10.89%

Appendix

Summary of the Current Valuation Assumptions



1. Investment Return 8.75% 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 FY92 - 12.5%
 FY93 - 11.5%
 FY94 - 10.5%
 FY95 - 9.5%
 FY96 - 8.5%
 FY97 and later - 7.5%

5. Mortality 1984 Unisex Pension Mortality Table, set forward one year for male and police/fire members, and set backward four years for female members. Deaths are assumed to be occupational 85% of the time for Police/Fire, 35% for "Others".

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. Disabilities are assumed to be occupational 85% of the time for Police/Fire, 35% for "Others".

Appendix Summary of the Current Valuation Assumptions (continued)



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 with five or more years of service 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., 71% are assumed to remain in Alaska and receive the C.O.L.A.
13. New Entrants Growth projections are made for the active PERS population under three scenarios:
- | | |
|--------------|-------------|
| Pessimistic: | 1% per year |
| Median: | 3% per year |
| Optimistic: | 5% per year |
14. Expenses Expenses are covered in the investment return assumption.

Appendix

Summary of the Current Valuation Assumptions (continued)



Valuation of Assets

Based upon the five-year average ratio between actuarial and book values of the System's assets. Prior to June 30, 1992, the actuarial value of assets equalled the market value, except that fixed income investments were carried at amortized cost value. Effective June 30, 1992, the actuarial value of assets equals the full market value. Assets are accounted for on an accrued basis and are taken directly from audited financial statements provided by KPMG Peat Marwick. 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) are 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 FY95, the pre-65 monthly premium is \$382.93 and the post-65 premium is \$133.52, based on an assumed total blended premium of \$279.55. For FY95 the actual blended premium is \$336.05. The FY95 blended premium was provided by the State of Alaska Division of Retirement and Benefits.

Appendix

Summary of the Current Valuation Assumptions (continued)



Table 1
Alaska PERS
Total Turnover Assumptions

Select Rates of Turnover
During the First 10 Years
of Employment

Ultimate Rates of Turnover
After the First 10 Years
of Employment

Police and Fire:

Year of Employment	----- Age at Hire -----			Age	Rate
	20-29	30-39	40+		
1	.22	.18	.10	20-39	.03
2	.19	.13	.10	40+	.01
3	.13	.12	.10		
4	.12	.12	.10		
5	.10	.10	.10		
6	.08	.08	.08		
7	.07	.07	.07		
8	.06	.06	.06		
9	.05	.05	.05		
10	.04	.04	.04		

Others:

Year of Employment	----- Age at Hire -----			Age	Rate
	20-29		30+		
1	.30		.23	20-29	.065
2	.23		.18	30-34	.060
3	.20		.14	35-44	.055
4	.16		.13	45+	.050
5	.16		.13		
6	.14		.13		
7	.12		.12		
8	.11		.11		
9	.09		.09		
10	.08		.08		

Appendix

Summary of the Current Valuation Assumptions (continued)



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

<u>Age</u>	<u>Police & Fire</u> <u>Rate</u>	<u>"Other" Member</u> <u>Rate</u>
20	.85	.14
21	.87	.14
22	.90	.14
23	.94	.15
24	.98	.15
25	1.03	.15
26	1.08	.15
27	1.13	.15
28	1.19	.16
29	1.25	.16
30	1.31	.16
31	1.37	.17
32	1.43	.17
33	1.44	.25
34	1.48	.34
35	1.55	.44
36	1.65	.53
37	1.78	.64
38	1.94	.75
39	2.13	.87
40	2.35	.99
41	2.60	1.12
42	2.88	1.25
43	3.19	1.39
44	3.53	1.53
45	3.90	1.68
46	4.30	1.84
47	4.73	2.00
48	5.19	2.17
49	5.68	2.34
50	6.20	2.52

Appendix
Summary of the Current Valuation Assumptions
(continued)



Table 2
Alaska PERS
Disability Rates
Annual Rates Per 1,000 Employees (continued)

<u>Age</u>	<u>Police & Fire</u> <u>Rate</u>	<u>"Other" Member</u> <u>Rate</u>
51	6.75	2.70
52	7.33	2.89
53	7.94	3.08
54	8.58	3.29
55	9.25	3.49
56	9.95	3.70
57	10.68	3.92
58	11.44	4.14
59	12.23	4.37
60	13.05	4.61
61	13.90	4.84
62	14.78	5.09
63	15.69	5.34
64	16.63	5.60

Appendix Summary of the Current Valuation Assumptions (continued)



Table 3

Alaska PERS Retirement Rates

<u>Age</u>	<u>Police & Fire Rate</u>	<u>"Other" Member Rate</u>
50	.25	.11
51	.14	.08
52	.14	.08
53	.15	.08
54	.15	.08
55	.30	.19
56	.25	.16
57	.21	.13
58	.21	.12
59	.20	.11
60	.20	.17
61	.40	.14
62	1.00	.21
63	1.00	.22
64	1.00	.22
65	1.00	.31
66	1.00	.61
67 & Up	1.00	1.00

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