Duluth
Firemen's Relief Association

Annual Actuarial Valuation

December 31, 1990

Gabriel, Roeder, Smith & Company
Actuaries and Consultants

TABLE OF CONTENTS

Page	Item
1	Signature Page
A-1	Comments
A-2	Contribution Rate
A-3	Present Actuarial Condition
A-5	Comparative Contribution Schedule
A-6	Contribution Work Sheet
B-1	Retirant and Beneficiary Data
B-5	Active Member Data
B-7	Brief Summary of Benefits
C-1	Valuation Method and Assumptions
D-1	Pension Benefit Obligation Schedule (for GASB 5 compliance)

Appendix I Financial Principles and Operational Techniques

Appendix II Meaning of Unfunded Accrued Liabilities

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March 28, 1991

Board of Trustees
Duluth Firemen's Relief Association
Duluth, Minnesota

Submitted in this report are the results of the December 31, 1990 actuarial valuation of the assets, actuarial values and contribution requirements associated with the benefits provided by the Duluth Firemen's Relief Association.

The valuation results contained in Section A provide the actuarial information needed to determine the employer's "minimum obligation" effective January 1, 1992. Section A also contains comments regarding the valuation results.

The valuation was based upon information furnished by the Association concerning benefits, financial transactions, active members, terminated members, retirants and beneficiaries. Data was checked for year to year consistency but was not otherwise audited by us. This information is summarized in Section B.

A description of the actuarial funding method and the risk experience assumptions used is contained in Section C. The economic risk experience assumptions, as well as the actuarial funding method to be used, are established by state law.

Information needed to comply with Statement No. 5 of the Governmental Accounting Standards Board is contained in Section D.

The actuarial valuation was prepared using generally accepted actuarial principles and practices based upon the methods, assumptions, summary of plan provisions and the member and financial data described in this report.

Respectfully submitted,

J. Daniel Petersen　　Gary W. Findlay

Section A

Valuation Results

COMMENTS

Economic Assumptions and Financing Method

The economic assumptions of 5% annual investment return and 3-1/2% annual salary increases are established by state law. State law also specifies that the annual minimum obligation of the municipality shall be determined by adding (i) the employer normal cost percent times covered payroll to (ii) the level dollar amount required to amortize the unfunded actuarial accrued liability by December 31, 2010. It is worth noting that when the same assumptions and methods are applied to plans which differ in nature, the valuation results may not be comparable. Caution should be exercised when attempting to assess the financial condition of one Association relative to another on the basis of valuation results produced using the assumptions and methods mandated by state law.

Duluth Firemen's Relief Association

CONTRIBUTION RATE TO PROVIDE BENEFITS

Member portion & Employer portion
Effective January 1, 1992

Contributions for	If Paid Equally Throughout Year: Normal Cost % of Active Payroll for 1992	+	UAAL Dollars
Normal cost of annuities:			
Age & service: to members	16.42%		
Age & service: to survivors	2.62		
Disability	2.99		
Death before retirement	1.78		
Refunds of member contributions	0.00		
Total Normal Cost	23.81%		
Amortization of unfunded actuarial accrued liabilities (UAAL) (20 year level dollar payment)			
Retired lives			$1,100,657
Active members			1,315,057
Total			2,415,714
Total Cost of Benefits	23.81%	+	$2,415,714
Member contributions	8.00%		
COMPUTED EMPLOYER RATE:			
(a) If Paid Equally Throughout Year	15.81%	+	$2,415,714
(b) IF PAID AT CALENDAR YEAR END	16.20%	+	$2,475,370

Duluth Firemen's Relief Association

Present Actuarial Condition

The Association's accrued actuarial assets were in excess of $18.1 million on December 31, 1990 -- a considerable sum of money if unencumbered and allocated among a small group of persons. This is not the case with the Association's assets.

The following schedule puts the $18.1 million into perspective by showing the relationship between accrued actuarial assets, actuarial accrued liabilities, and the number of persons with actual and potential claims on the Association's assets.

	Accrued Actuarial Assets	Actuarial Accrued Liabilities	Unfunded Actuarial Accrued Liabilities	Percent Funded
Retirants and Beneficiaries				
Retired Members (110)		$ 26,317,584		
Surviving Spouses (59)		4,781,580		
Surviving Children (2)		27,552		
Total (171)	$17,759,139	$ 31,126,716	$13,367,577	57.1%
Deferred Members (3)	350,809	614,868	264,059	57.1
Active Members (93)	0	16,286,973	16,286,973	0.0
Total	$18,109,948	$ 48,028,557	$29,918,609	37.7%

Actuarial accrued liabilities represent the value, computed as of December 31, 1990 of:

(i) retirement allowances likely to be paid the 171 retirants and beneficiaries; and

(ii) the contributions assumed to have been made for the 93 active members from entry into the plan until December 31, 1990.

The value of retirement allowances likely to be paid the 171 retirants and beneficiaries, discounted for investment earnings and mortality, was computed to be $31,126,716 as of December 31, 1990. To put this amount in perspective, the $31,126,716, together with investment earnings, will just be sufficient to pay the 171 retirants and beneficiaries their allowances for their remaining lifetimes. This assumes the 171 retirants and beneficiaries live and die according to the assumed mortality and the $31,126,716 is invested to yield an average annual return of 5.0% over the remaining lifetimes of the retirants and beneficiaries.

With respect to the active members, the actuarial accrued liability of $16,286,973 represents the amount that would have been accumulated by December 31, 1990. This assumes the normal cost (which is expressed as a level percentage of pay) had been contributed from the date of hire until December 31, 1990 for the 93 actives, and that these amounts had earned 5.0% interest. It also assumes that the members in the past have lived, died, withdrawn, retired and received salary increases according to the actuarial assumptions shown in this report.

Historical Funding Ratio Schedule
($ in thousands)

Valuation Date December 31	Actuarial Accrued Liabilities	Accrued Actuarial Assets	Percent Funded
1981	$31,162	$ 3,179	10.2%
1982	33,105	4,844	14.6
1983*	36,360	6,886	18.9
1984	37,908	8,388	22.1
1985	40,116	9,982	24.9
1986	41,645	10,509	25.2
1987	42,418	11,943	28.2
1988#	44,354	13,475	30.4
1989	46,469	16,093	34.6
1990	48,029	18,110	37.7

* After change in assumptions.
\# After change in benefit provisions.

Duluth Firemen's Relief Association

Computed Contributions - Comparative Schedule

Year Ended December 31 Valuation	Year Ended December 31 Fiscal	Total Normal Cost as a Percent of Valuation Payroll*	Contribution For Unfunded Actuarial Accrued Liabilities
1981	1983	23.50%	$1,832,851
1982	1984	23.41	1,883,287
1983	1985**	25.65	2,000,666
1984	1986	24.49	2,043,837
1985	1987	23.07	2,131,035
1986	1988	23.00	2,252,482
1987	1989	22.99	2,259,189
1988	1990#	23.75	2,350,183
1989	1991	23.76	2,378,456
1990	1992	23.81	2,415,714

* Includes employee contributions.

** After change in assumptions.

After change in benefit provisions.

Duluth Firemen's Relief Association

CONTRIBUTION FOR CALENDAR YEAR EFFECTIVE JANUARY 1, 1992

For any period of time the percent-of-payroll contribution rate is converted to dollars. The amount of dollars for any calendar year depends upon the results of the last actuarial valuation, and the timing of contributions within the year. The later the contribution date, the greater the dollar amount will be.

The municipality's dollar contribution for the year may be determined as follows:

(1)	Estimated covered payroll for 1992		$______	
(2)	Total normal cost % from page A-2		23.81%	
(3)	Total normal cost (Line 1 times line 2)			$________
(4)	______________________ x 1.035 1990 Administrative expenses paid from the Special Fund			________
(5)	Amortization payment on UAAL from page A-2			2,415,714
(6)	Total contributions required (Line 3 plus line 4 plus line 5)			________
(7)	Employee contributions (Line 1 times 8%)		$______	
(8)	(a) State amortization aid based on 12/31/78 UAAL of $21,020,885	$316,364		
	(b) State amortization aid based on 1984 legislation	47,392		
	(c) Total State amortization aid		363,756	
(9)	Estimated insurance premium aid		______	
(10)	Estimated total contributions from other sources (Line 7 plus line 8 plus line 9)			________
(11)	Employer's Minimum Obligation if payment is made in equal installments throughout the year (Line 6 minus line 10)			$________
(12)	EMPLOYER'S MINIMUM OBLIGATION IF PAYMENT IS MADE IN TWO EQUAL INSTALLMENTS, JULY 30 & DECEMBER 30 (Line 11 times 1.0247)			$________

Section B

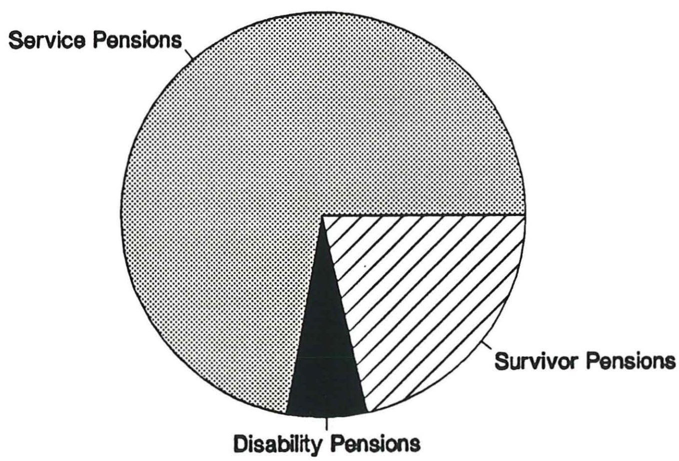
Valuation Data
and
Summary of Benefit Provisions

Duluth Firemen's Relief Association

Retirants and Beneficiaries December 31, 1990

By Type of Annuity Being Paid

Type of Annuity Being Paid	No.	Monthly Amounts	Computed Actuarial Accrued Liabilities
Retirants receiving:			
Age & Service	101	$147,096.53	$22,501,728
Disability	9	13,144.52	3,815,856
Totals	110	160,241.05	26,317,584
Beneficiaries receiving:			
Spouse	59	43,247.00	4,781,580
Child	2	586.40	27,552
Totals	61	43,833.40	4,809,132
Totals	171	$204,074.45	$31,126,716



Monthly Amount Paid by Benefit

Duluth Firemen's Relief Association

Inactive Members Eligible for Deferred Benefits

December 31, 1990

No.	Monthly Amount	Computed Actuarial Accrued Liabilities
3	$2,859.80	$614,868

Duluth Firemen's Relief Association

Retirants and Beneficiaries December 31, 1990

By Attained Ages

	Number		
Attained Ages	Age & Service	Disability	Death Before Retirement
Under 20			2
35-39			
40-44		2	1
45-49		6	
50-54	9	1	
55-59	15		1
60-64	16		2
65-69	19		
70-74	25		1
75-79	32		2
80-84	10		2
85-89	10		
90-94	9		1
95-99	3		1
100 +	1	—	—
Totals	149	9	13

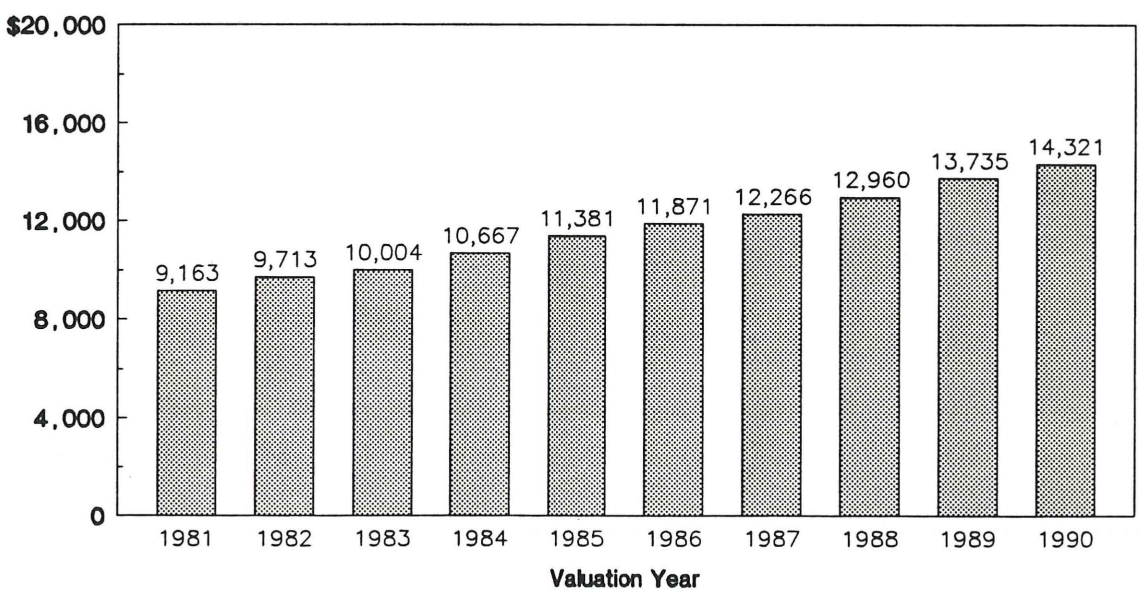
Duluth Firemen's Relief Association

Retirants and Beneficiaries Added to and Removed from Rolls

Comparative Statement

Valuation Date December 31	No. Added to Rolls	No. Removed from Rolls	Rolls End of Year No.	Rolls End of Year Annual Allowances	Discounted Value of Total Allowances
1981	10	10	162	$1,484,365	$16,748,063
1982	4	4	162	1,573,451	17,422,695
1983	8	6	164	1,640,724	19,929,685
1984	8	5	167	1,781,351	21,198,961
1985	16	5	178	2,025,764	25,715,364
1986	9	14	173	2,053,628	26,708,316
1987	12	15	170	2,085,170	27,052,296
1988	4	4	170	2,203,229	27,910,092
1989	9	9	170	2,335,022	29,973,168
1990	8	7	171	2,448,893	31,126,716

Average Annual Allowances



Duluth Firemen's Relief Association

Active Members December 31, 1990

By Attained Age and Years of Service

Attained Age	Years of Service to Valuation Date 0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Totals No.	Valuation Payroll
30-34			3					3	$ 105,552
35-39			11					11	387,024
40-44			15	12	6			33	1,161,072
45-49			2	7	14	1		24	844,416
50-54				1	5	8		14	492,576
55-59						4	3	7	246,288
63							1	1	35,184
Totals			31	20	25	13	4	93	$3,272,112

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 45.3 years.

Service: 19.4 years.

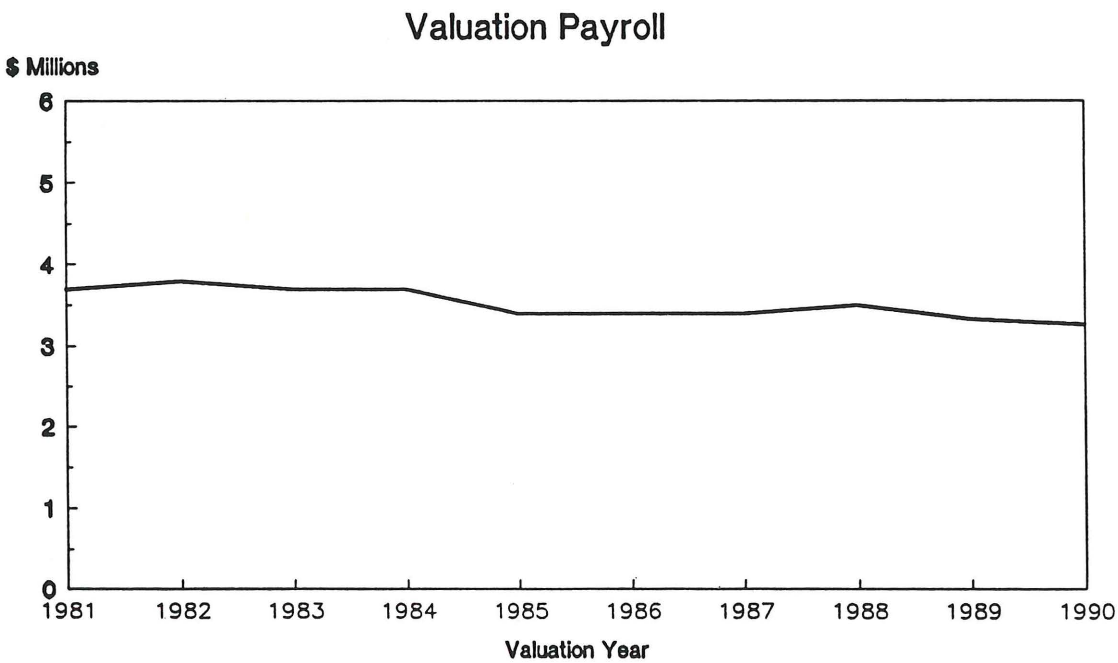
Annual Pay: $35,184.

Duluth Firemen's Relief Association

Comparative Schedule

Of Active Members

Valuation Date December 31	Active Members	Valuation Payroll	Average Age	Average Service	Average Pay	Average % Incr.
1981	150	$3,670,200	40.9 yrs.	14.5 yrs.	$24,468	9.3%
1982	147	3,812,004	41.5	15.2	25,932	6.0
1983	140	3,687,600	42.0	15.7	26,340	1.6
1984	133	3,683,568	42.4	16.3	27,696	5.1
1985	118	3,405,480	42.3	16.3	28,860	4.2
1986	112	3,353,280	42.9	16.9	29,940	3.7
1987	109	3,361,342	43.7	17.7	30,838	3.0
1988	107	3,465,516	44.4	18.4	32,388	5.0
1989	99	3,334,023	44.9	19.0	33,677	4.0
1990	93	3,272,112	45.3	19.4	35,184	4.5



Duluth Firemen's Relief Association

Brief Summary (12/31/90) of Benefit Provisions Evaluated and/or Considered

<u>Age & Service Retirement</u>

<u>Eligibility</u>. 20 years of service and 50 years of age.

<u>Amount</u>. For first 20 years of service, 31.85/80 of base pay. For the 21st year, 1/80 is added. For years in excess of 21, an additional 2/80 is added up to a maximum of 40.85/80 of base pay for 25 or more years of service.

<u>Pay Used for Plan Purposes</u>. "Base pay" means the maximum pay of a firefighter on which benefits are based.

<u>Disability Retirement</u>

<u>Eligibility</u>. Disabled to the extent that unable to perform the duties of a firefighter.

<u>Amount</u>.

<u>Duty Disability</u>. 40.85/80 of base pay.

<u>Non-Duty Disability</u>. From 31.85/80 to 40.85/80 of base pay. (Determined by Board.)

<u>Member's Death While Active, Or In Deferred Status, Or Retired</u>

<u>Eligibility</u>.

<u>Spouse</u>. Legally married to member at least one year at time of separation and residing with member at time of death. Benefits terminate upon remarriage but may be reinstated if marriage terminates.

<u>Child</u>. Younger than 18, or if full-time student, younger than age 22.

<u>Amount</u>.

<u>Spouse</u>. 20/80 of base pay.

<u>Child</u>. 8/80 of base pay per child.

<u>Maximum Family Benefit</u>. 40/80 of base pay.

Vested Deferred. 5 years of service. Payment beginning is deferred to attainment of age 50.

Post-Retirement Adjustments ("Escalator"). Each time base pay is changed, payments to all benefit recipients are simultaneously changed by the same percent that base pay changed.

Member Contributions. 8% of base pay. Non-refundable.

Section C

Valuation Methods and Assumptions

Duluth Firemen's Relief Association

Valuation Methods and Assumptions

The Entry Age Normal Cost method was used to determine the normal cost of all benefits. The rate of investment return (interest) as required by state law used in making the valuation was 5.0 percent per annum compounded annually. Age & service retirement was assumed to occur at age 58, attained age if older.

Mortality Table*

Sample Ages	Single Life Values: Present Value of $1 Monthly — Level For Life — Men	Level For Life — Women	Increasing 3.5% Yearly — Men	Increasing 3.5% Yearly — Women	Future Life Expectancy (Years) — Men	Future Life Expectancy (Years) — Women
45	$177.21	$189.58	$280.82	$314.75	29.50	34.00
50	163.12	177.21	246.55	280.82	25.20	29.50
55	147.50	163.12	212.60	246.55	21.16	25.20
60	130.52	147.50	179.49	212.60	17.42	21.16
65	112.87	130.52	148.28	179.49	14.05	17.42
70	95.20	112.87	119.70	148.28	11.09	14.05
75	77.77	95.20	93.83	119.70	8.52	11.09
80	61.71	77.77	71.69	93.83	6.39	8.52

* UP-1984 Table set forward 2 years for males and set back 3 years for females.

Sample Rates of Separation from Active Employment Before Retirement, Death or Disability

Sample Ages	% of Active Members Separating within Next Year
20	1.50%
25	1.25
30	1.00
35	0.75
40	0.50
45	0.25
50+	0.00

Pay Adjustment Factor Used To Project Current Pays

Sample Ages	Present Pay Resulting in Pay of $1,000 at Age 60	Present Increase in Pay During Next Year
20	$ 253	3.5%
25	300	3.5
30	356	3.5
35	423	3.5
40	503	3.5
45	597	3.5
50	709	3.5
55	842	3.5
60	1,000	3.5

Use of the pay adjustment factor illustrated above is required by state law.

Anticipated Disability Retirements

Sample Ages	% of Active Members Becoming Disabled within Next Year
20	0.08%
25	0.08
30	0.08
35	0.08
40	0.20
45	0.26
50	0.49
55	0.89

Section D

The Pension Benefit Obligation and Certain Other Disclosures Required by Statement No. 5 of the Governmental Accounting Standards Board

PENSION BENEFIT OBLIGATION

The amount shown below as the "pension benefit obligation" is a standardized disclosure measure of the present value of pension benefits, adjusted for the effects of projected salary increases, estimated to be payable in the future as a result of employee service to date. The measure is the actuarial present value of credited projected benefits and is intended to (i) help users assess the plan's funding status on a going-concern basis, (ii) assess progress being made in accumulating sufficient assets to pay benefits when due, and (iii) allow for comparisons among public employee retirement plans. The measure is independent of the actuarial funding method used to determine contributions to the plan.

The pension benefit obligation was determined as part of an actuarial valuation of the plan as of December 31, 1990. Significant actuarial assumptions used in determining the pension benefit obligation include (a) a rate of return on the investment of present and future assets of 5.0% per year compounded annually, (b) projected salary increases of 3.5% per year compounded annually, attributable to inflation, and (c) the assumption that benefits will increase 3.5% per year after retirement.

At December 31, 1990, the unfunded pension benefit obligation was $29,343,568, determined as follows:

Pension Benefit Obligation:	
Retirants and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	$31,741,584
Current employees --	
Accumulated employee contributions including allocated investment income	0
Employer financed	15,524,194
Total Pension Benefit Obligation	$47,265,778
Net assets available for benefits, at cost (market value was $18,485,425)	17,922,210
Unfunded Pension Benefit Obligation	$29,343,568

The total pension benefit obligation as of January 1, 1990 was $45,701,554. During the year, the plan experienced a net change of $1,564,224 in the pension benefit obligation.

CONTRIBUTIONS REQUIRED AND CONTRIBUTIONS MADE

The Association's funding policy provides for periodic employer contributions at actuarially determined rates that, expressed as percentages of annual covered payroll, are designed to accumulate sufficient assets to pay benefits when due. The normal cost and actuarial accrued liability are determined using an entry age actuarial funding method. Unfunded actuarial accrued liabilities are being amortized as a level dollar amount over a period of 19 years.

During the year ended December 31, 1990, contributions totaling $3,659,760 -- $3,399,139 employer and $260,621 employee -- were made in accordance with contribution requirements determined by an actuarial valuation of the plan as of December 31, 1988. The employer contributions consisted of $545,819 for normal cost and $2,853,320 for amortization of the unfunded actuarial accrued liability. Employer contributions represented 98.08% of covered payroll.

Significant actuarial assumptions used to compute contribution requirements were the same as those used to compute the standardized measure of the pension benefit obligation.

Computed Contribution Comparative Schedule

Fiscal Year December 31	Valuation Date December 31	Contribution Rates: Normal Cost % of Valuation Payroll	Contribution Rates: UAAL Dollars	Valuation Payroll	Dollar Contribution For Fiscal Year: Computed	Dollar Contribution For Fiscal Year: Actual
1987	1985	15.07%	$2,131,035	$3,405,480	$2,644,241	$2,678,944
1988	1986	15.00	2,252,482	3,353,280	2,755,474	2,763,339
1989	1987	14.99	2,259,189	3,361,342	2,763,054	2,911,386
1990	1988*	15.75	2,350,183	3,465,516	2,896,002	3,399,139
1991	1989	15.76	2,378,456	3,334,023	2,903,898	
1992	1990	15.81	2,415,714	3,272,112	2,933,035	

* After changes in benefit provisions.

REQUIRED SUPPLEMENTARY INFORMATION

ANALYSIS OF FUNDING PROGRESS

Valuation Date December 31	(1) Net Assets Available for Benefits	(2) Pension Benefit Obligation (PBO)	(3) Percent Funded (1)/(2)	(4) Unfunded PBO (2)-(1)	(5) Annual Covered Payroll	(6) Unfunded PBO as a Percentage of Covered Payroll (4)/(5)
1987	$12,002,096	$41,407,274	29.0%	$29,405,178	$3,361,342	874.8%
1988	13,472,392	43,569,701	30.9	30,097,309	3,465,516	868.5
1989	15,774,038	45,701,554	34.5	29,927,516	3,334,023	897.6
1990	17,922,210	47,265,778	37.9	29,343,568	3,272,112	896.8

Analysis of the dollar amounts of net assets available for benefits, pension benefit obligation, and unfunded pension benefit obligation in isolation can be misleading. Expressing the net assets available for benefits as a percentage of the pension benefit obligation provides one indication of the plan's funded status on a going-concern basis. Analysis of this percentage over time indicates whether the system is becoming financially stronger or weaker. Generally, the greater this percentage, the stronger the plan. The unfunded pension benefit obligation and annual covered payroll are both affected by inflation. Expressing the unfunded pension benefit obligation as a percentage of annual covered payroll approximately adjusts for the effects of inflation and aids analysis of the progress being made in accumulating sufficient assets to pay benefits when due. Generally, the smaller this percentage, the stronger the plan.

Appendices

APPENDIX I

FINANCIAL PRINCIPLES AND OPERATIONAL TECHNIQUES

Promises Made, and Eventually Paid. As each year is completed, the plan in effect hands an "IOU" to each member then acquiring a year of service credit -- the "IOU" says: "The Pension Plan owes you a portion of your retirement benefits, payments to be made in cash, commencing when you qualify for retirement."

The related key financial questions are: Which generation of taxpayers contributes the money to cover the IOU? The present taxpayers, who receive the benefit of the member's present year of service? Or the future taxpayers, who happen to be in town paying taxes at the later time when the IOU becomes a cash demand?

A sound principle of sound retirement plan financing is to have this year's taxpayers contribute the money to cover the IOUs being handed out this year. By following this principle, THE CONTRIBUTION RATE WILL REMAIN APPROXIMATELY LEVEL FROM GENERATION TO GENERATION -- our children and grandchildren will contribute the same percents of active payroll we contribute now.

A PENSION PLAN BECOMES CLOSED

The diagram in this appendix shows two important activities which occur after a plan has been closed to employees hired in the future.

Cash benefits paid continue to increase for decades, while active member payroll begins to decrease to zero.

Funding Method. A funding method is the long-term, planned pattern for employer contributions.

For an open plan (a plan covering future employees), the level-percent-of-active-member payroll funding method is the basic funding method.

The level-percent funding method can also be applied to a closed plan. However, the resulting contribution percent usually jumps to a high rate, because the number of covered active members is decreasing.

A preferred funding method for a closed plan consists of: level-percent funding for normal cost (the cost of members' service now being rendered); plus a level dollar contribution for unfunded actuarial accrued liabilities over a limited period of years. The period of years must be limited so that plan assets don't become zero while benefits are still payable.

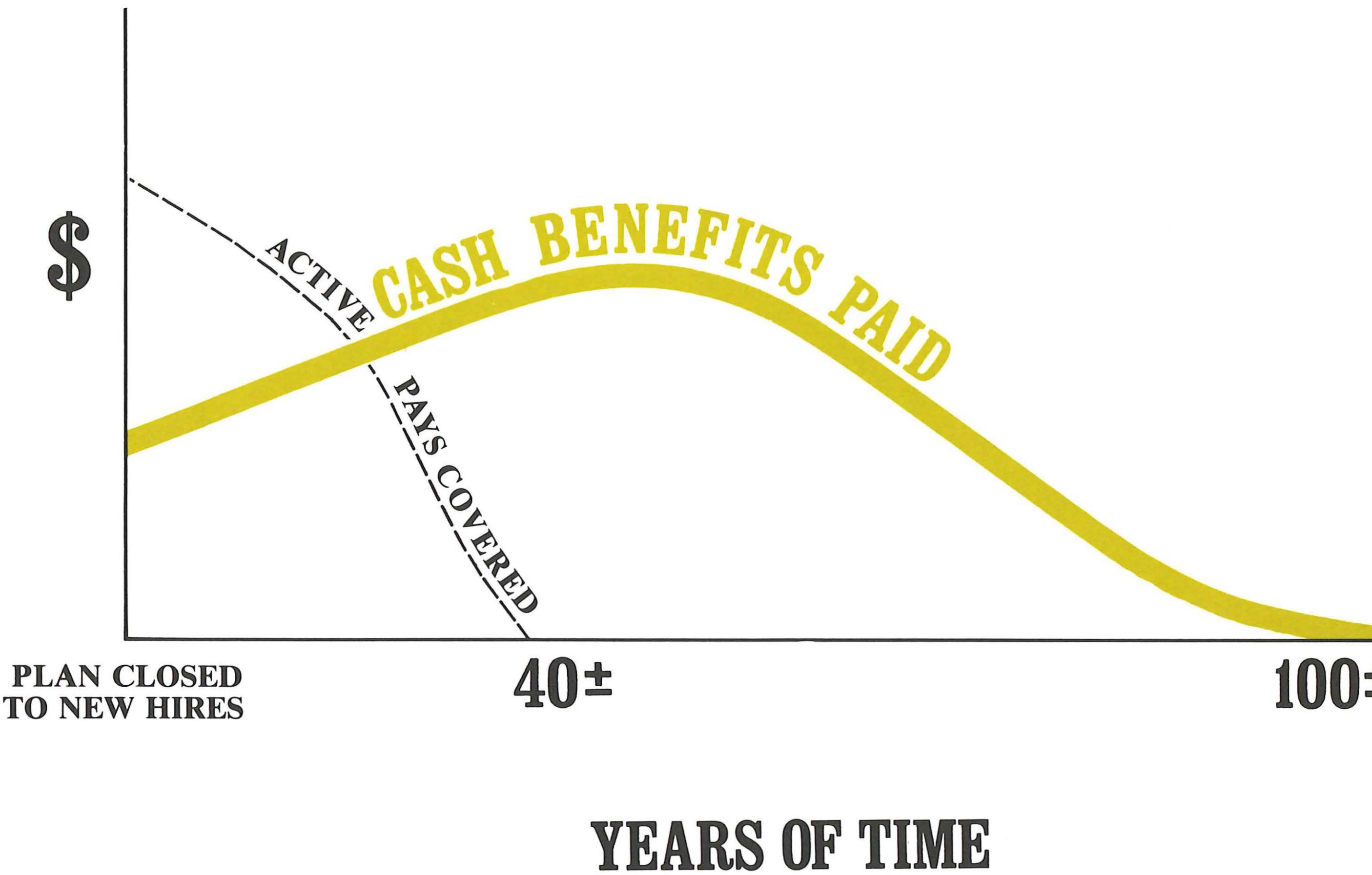
Computing Contributions To Support Plan Benefits. From a given schedule of benefits and from the employee data and asset data furnished him, the actuary determines the contribution rates to support the benefits by means of an actuarial valuation and a funding method.

In making an actuarial valuation, assumptions must be made regarding anticipated financial experiences for the next year and for decades in the future. Only the subsequent actual experience of the plan can indicate the degree of accuracy of the assumptions.

Reconciling Differences Between Assumed Experience and Actual Experience. Once actual experience has occurred and been observed, it will not coincide exactly with assumed experience, regardless of the wisdom of the assumptions or the skill of the actuary and the millions of calculations he made. The future can be predicted with considerable but not 100% precision, except for inflation which seems to defy reliable prediction.

A well-managed plan copes with these continually changing differences by having periodic actuarial valuations. Each actuarial valuation is a complete recalculation of assumed future experience, taking into account all past differences between assumed and actual experience. The result is continuing adjustment in financial position.

A CLOSED PENSION PLAN



A plan becomes closed when no new hires are admitted to active membership. The persons covered by the plan at the time of closing continue their normal activities and continue to be covered by the plan, until the last survivor dies.

CASH BENEFITS LINE. After a pension plan becomes closed, the usual pattern is for cash benefits to continue to increase for decades of time. Eventually the cash benefits will peak, and then gradually decrease over more decades of time, ultimately to zero. The last cash benefit is likely to occur a century after the time the plan is closed.

The precise amounts of cash benefits cannot be known now, and must be estimated by assumptions of future experiences in a variety of financial risk areas.

APPENDIX II

MEANING OF UNFUNDED ACCRUED LIABILITIES

Almost every pension plan (public or private) has "unfunded accrued liabilities", so whatever they are, they aren't rare. Since the term is not part of everyday conversation, it needs some definition.

"Accrued liabilities" are the present value $ of plan promises to pay benefits in the future based upon service already rendered - - - a liability has been established ("accrued") because the service has been rendered, but the resulting monthly cash benefit may not be payable until years in the future. Accrued liabilities $ are the result of complex mathematical calculations, which are made by the plan's actuary (which is the name given to the specialist who makes such calculations).

If "accrued liabilities" at any time exceed the plan's accrued assets (cash & investments), the difference is "unfunded accrued liabilities". This is the common condition. If the plan's assets equalled the plan's "accrued liabilities", the plan would be termed "fully funded". This is a rare condition.

Each time a plan adds a new benefit which applies to service already rendered, an "accrued liability" is created, which is also an "unfunded accrued liability" because the plan can't print instant cash to cover the accrued liability. Payment for such unfunded accrued liabilities is spread over a period of years, commonly in the 20-40 year range.

Unfunded accrued liabilities can occur in another way: If actual financial experience is less favorable than assumed financial experience, the difference is added to unfunded accrued liabilities. In plans where plan benefits are directly related to an employee's pay near time of retirement (a common plan provision) rather than his average pay throughout his working career, unfunded accrued liabilities have been increasing in recent years because unexpected rates of pay increase have created additional accrued liabilities which could not be matched by reasonable investment results. Some of these unexpected pay increases are the direct result of inflation, which is a very destructive force on financial stability.

The existence of unfunded accrued liabilities is not bad, then (any more than a mortgage on your house is "bad"), but the changes from year to year in amount of unfunded accrued liabilities are important - - - "bad" or "good" or somewhere in between.

Nor are unfunded accrued liabilities a bill payable immediately (your food costs are payable immediately), but it is important that policy-makers prevent the amount from becoming unreasonably high and it is vital that your plan have a sound method for making payments toward them so that they are controlled.

The existence of large amounts of unfunded accrued liabilities indicates that total contributions in past years were less than level - - - an almost certain history if retired life liabilities are not fully funded now.