Brainerd
Policemen's Benefit Association

Annual Actuarial Valuation

December 31, 1994

Gabriel, Roeder, Smith & Company
Actuaries and Consultants

Table of Contents

GABRIEL, ROEDER, SMITH & COMPANY
Actuaries & Consultants

1000 Town Center • Suite 1000 • Southfield, Michigan 48075 • 810-799-9000

June 14, 1995

Board of Trustees
Brainerd Policemen's Benefit Association
Brainerd, Minnesota

Submitted in this report are the results of the December 31, 1994 actuarial valuation of the assets, actuarial values and contribution requirements associated with the benefits provided by the Brainerd Policemen's Benefit Association.

The valuation results contained in Section A provide the actuarial information needed to determine the employer's "minimum obligation" effective January 1, 1996. 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   Mary Ann Vitale

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.

Contribution Rate To Provide Benefits
Member portion & Employer portion
Effective January 1, 1996

Contributions for	If Paid Equally Throughout Year Normal Cost % of Active Payroll for 1996	+	UAAL Dollars
Normal cost of annuities:			
Age & service: to members	18.86%		
Age & service: to survivors	4.03		
Disability	2.10		
Death before retirement	2.24		
Refunds of member contributions	0.24		
Total Normal Cost	27.47%		
Amortization of unfunded actuarial accrued liabilities (UAAL) (15 year level dollar payment)			
Retired lives			$ 19,709
Active members			120,606
Total			140,315
Total Cost of Benefits	27.47%	+	$140,315
Member contributions	8.00%		
Computed Employer Rate:			
(a) If Paid Equally Throughout Year	19.47%	+	$140,315
(b) If Paid At Calendar Year End	19.95%	+	$143,780

Present Actuarial Condition

The Association's accrued actuarial assets were in excess of $2.8 million on December 31, 1994 -- 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 $2.8 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 (9)		$1,846,056		
Surviving Spouses (8)		907,200		
Surviving Children (0)		0		
Total (17)	$2,543,607	$2,753,256	$ 209,649	92.4%
Deferred Members (0)	0	0	0	0.0
Active Members (8)	266,289	1,549,176	1,282,887	17.2
Total	$2,809,896	$4,302,432	$1,492,536	65.3%

Actuarial accrued liabilities represent the value, computed as of December 31, 1994 of:

(i) retirement allowances likely to be paid the 17 retirants and beneficiaries; and

(ii) the contributions assumed to have been made for the 8 active members from entry into the plan until December 31, 1994.

The value of retirement allowances likely to be paid the 17 retirants and beneficiaries, discounted for investment earnings and mortality, was computed to be $2,753,256 as of December 31, 1994. To put this amount in perspective, the $2,753,256, together with investment earnings, will just be sufficient to pay the 17 retirants and beneficiaries their allowances for their remaining lifetimes. This assumes the 17 retirants and beneficiaries live and die according to the assumed mortality and the $2,753,256 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 $1,549,176 represents the amount that would have been accumulated by December 31, 1994. 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, 1994 for the 8 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
1985	$2,937	$1,446	49.2%
1986	3,205	1,630	50.9
1987	3,342	1,648	49.3
1988*	3,530	1,740	49.3
1989	3,672	1,907	51.9
1990	3,755	2,094	55.8
1991	3,877	2,295	59.2
1992	4,038	2,492	61.7
1993	4,162	2,690	64.6
1994	4,302	2,810	65.3

 # After change in assumptions.

Computed Contributions - Comparative Schedule

Year Ended December 31 Valuation	Fiscal	Total Normal Cost as a Percent of Valuation Payroll*	Contribution For Unfunded Actuarial Accrued Liabilities
1985	1987	23.89%	$105,432
1986	1988	25.05	113,936
1987	1989	24.40	125,563
1988**	1990	27.79	136,210
1989	1991	27.87	138,247
1990	1992	27.84	134,418
1991	1993	27.84	132,056
1992	1994	27.87	133,777
1993	1995	27.85	132,536
1994	1996	27.47	140,315

* *Includes employee contributions.*

\# *After change in assumptions.*

Contribution for Calendar Year Effective January 1, 1996

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 1996		$______	
(2)	Total normal cost % from page A-2		27.47%	
(3)	Total normal cost (Line 1 times line 2)			$______
(4)	______________ x 1.035 1994 Administrative expenses paid from the Special Fund			______
(5)	Amortization payment on UAAL from page A-2			140,315
(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 $1,325,291	$19,947		
	(b) State amortization aid based on 1984 legislation	2,769		
	(c) Total State amortization aid		22,716	
(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)			$______

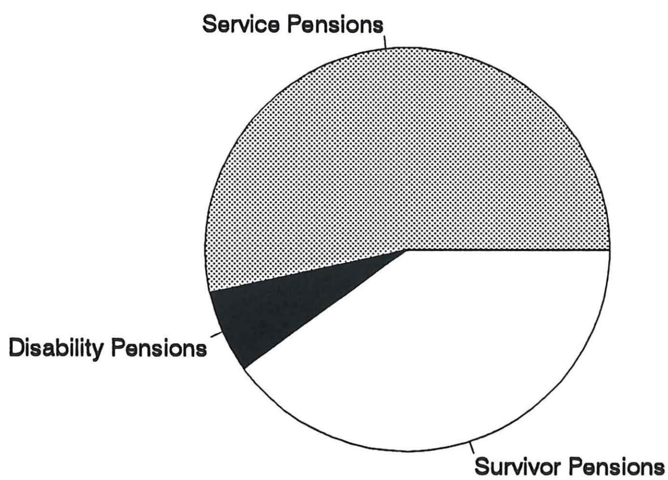
SECTION B

Valuation Data and
Summary of Benefit Provisions

Retirants and Beneficiaries December 31, 1994

By Type of Annuity Being Paid

Type of Annuity Being Paid	No.	Monthly Amounts	Computed Actuarial Accrued Liabilities
Retirants receiving:			
Age & service	8	$ 9,072.00	$1,549,644
Disability	1	1,134.00	296,412
		10,206.00	1,846,056
Totals	9		
Beneficiaries receiving:			
Spouse	8	6,800.00	907,200
Child	0	0.00	0
Totals	8	6,800.00	907,200
Totals	17	$17,006.00	$2,753,256



Monthly Amount Paid by Benefit

Retirants and Beneficiaries December 31, 1994
By Attained Ages

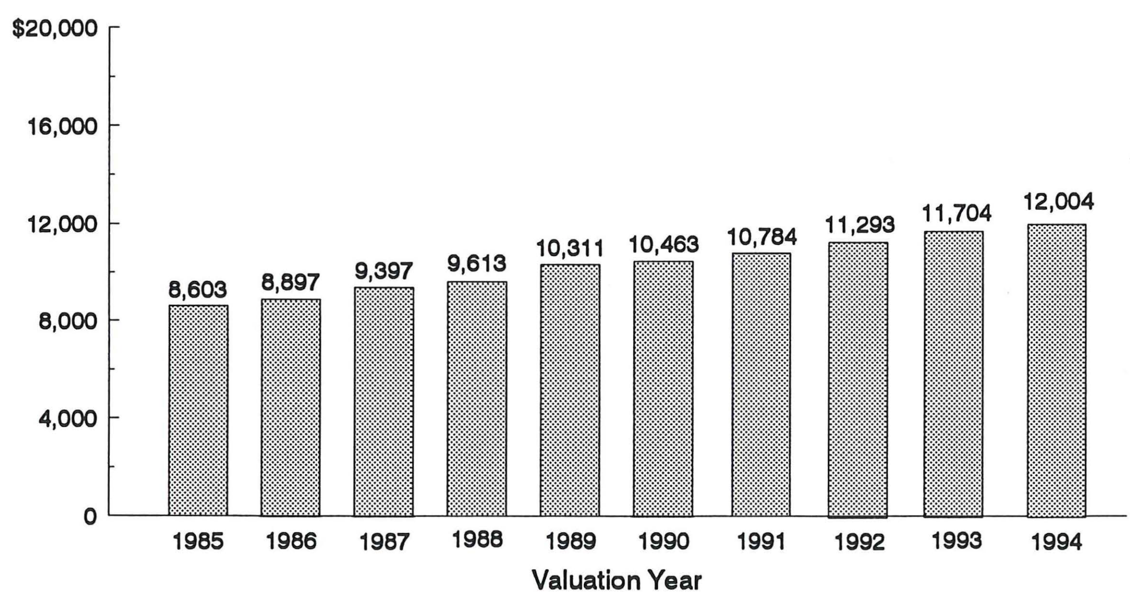
Attained Ages	Number		
	Age & Service	Disability	Death Before Retirement
55-59	2	1	
60-64	1		
65-69	1		1
70-74	4		1
75-79	5		
80-84	1	–	–
Totals	14	1	2

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
1985		2	16	$137,641	$2,201,460
1986	1		17	151,248	2,465,856
1987	1		18	169,152	2,784,828
1988			18	173,040	2,769,600
1989		1	17	175,282	2,789,064
1990	1	1	17	177,864	2,751,756
1991			17	183,324	2,734,704
1992			17	191,983	2,769,168
1993			17	198,972	2,767,560
1994			17	204,072	2,753,256

Average Annual Allowances



Active Members December 31, 1994
By Attained Age and Years of Service

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
40-44				2				2	$72,776
45-49			1	3				4	144,598
50-54				1				1	33,852
55-59						1		1	34,008
Totals			1	6		1		8	$285,234

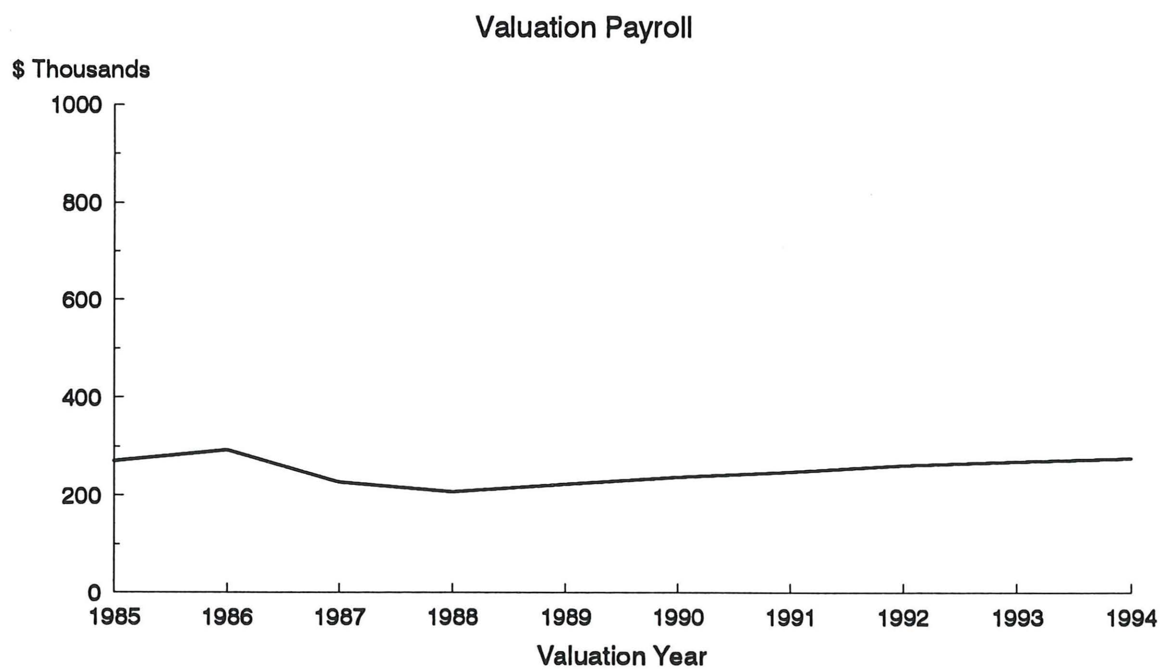
While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Group Averages:

Age: 47.1 years
Service: 18.3 years
Annual Pay: $35,654

Comparative Schedule
Of Active Members

Valuation Date December 31	Active Members	Valuation Payroll	Average Age	Average Service	Average Pay	Average % Incr.
1985	12	$293,852	39.3 yrs.	10.4 yrs.	$24,488	8.4%
1986	9	228,577	39.2	9.5	25,397	3.7
1987	8	209,079	40.1	10.9	26,135	2.9
1988	8	224,581	41.1	11.9	28,073	7.4
1989	8	238,240	42.1	12.9	29,780	6.1
1990	8	248,998	43.1	13.9	31,125	4.5
1991	8	261,707	44.1	14.9	32,713	5.1
1992	8	269,957	45.1	15.9	33,745	3.2
1993	8	276,017	46.1	16.9	34,502	2.2
1994	8	285,234	47.1	18.3	35,654	3.3



Brief Summary (12/31/94) of Benefit Provisions Evaluated and/or Considered

Age & Service Retirement

Eligibility. 20 years of service and 50 years of age.

Amount. Greater of (1) 50% of salary at time of retirement or (2) 40% of top wage for a patrolman. (Item (2) is applicable only if retired after 5/1/66.)

Disability Retirement

Eligibility. Disabled to the extent that unable to perform duties in police department before being eligible for age & service retirement.

Amount.

Duty. 40% of top wage for a patrolman.

Non-duty. (1) Less than 10 years of service - 30% of top patrolman's wage.
(2) More than 10 years of service - 40% of top patrolman's wage.

Member's Death While Active, Or In Deferred Status, Or Retired

Eligibility.

Spouse. Legally married to member at separation from service and residing with member at time of death. Benefits terminate upon remarriage.

Child. Younger than age 18.

Amount.

Spouse. 30% of top wage for a patrolman.

Child. 4% of top wage for a patrolman per child. Children's maximum is 20% of top wage for a patrolman.

Vested Deferred. 20 years of service and separated before age 50. Payment beginning is deferred to attainment of age 50.

Post-Retirement Adjustments ("Escalator"). Each time the top wage for a patrolman changes, payments based on such wage are simultaneously changed by the same percent that the top wage for a patrolman is changed.

Member Contributions. 8% of current compensation. Total member contributions are refundable, without interest, if no monthly benefit is payable upon separation from service.

SECTION C

Valuation Methods and Assumptions

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 56, attained age if older.

Mortality Table*

Sample Ages	Single Life Values: Present Value of $1 Monthly — Level For Life: Men	Women	Increasing 3.5% Yearly: Men	Women	Future Life Expectancy (Years): Men	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 Separating 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, 1994. 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, 1994, the unfunded pension benefit obligation was $1,394,318 determined as follows:

Pension Benefit Obligation:	
Retirants and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	$2,753,256
Current employees --	
Accumulated employee contributions including allocated investment income	266,289
Employer financed	1,210,182
Total Pension Benefit Obligation	$4,229,727
Net assets available for benefits, at cost (market value was $2,758,870)	2,835,409
Unfunded Pension Benefit Obligation	$1,394,318

The total pension benefit obligation as of January 1, 1994 was $4,085,779. During the year, the plan experienced a net change of $143,948 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 15 years.

During the year ended December 31, 1994, contributions totaling $244,465 -- $222,377 employer and $22,088 employee -- were made in accordance with contribution requirements determined by an actuarial valuation of the plan as of December 31, 1992. The employer contributions consisted of $53,640 for normal cost and $168,737 for amortization of the unfunded actuarial accrued liability. Employer contributions represented 82.37% 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

		Contribution Rates			Dollar Contribution For Fiscal Year	
Fiscal Year December 31	Valuation Date December 31	Normal Cost % of Valuation Payroll	UAAL Dollars	Valuation Payroll	Computed	Actual
1987	1985	15.89%	$105,432	$293,852	$152,125	$150,360
1988	1986	17.05	113,936	228,577	152,908	167,570
1989	1987	16.40	125,563	209,079	159,852	200,915
1990	1988	19.79	136,210	224,581	180,655	216,541
1991	1989	19.87	138,247	238,240	185,585	219,071
1992	1990	19.84	134,148	248,998	183,549	213,346
1993	1991	19.84	132,056	261,707	183,979	214,182
1994	1992	19.87	133,777	269,957	187,417	222,377
1995	1993	19.85	132,536	276,017	187,325	
1996	1994	19.47	140,315	285,234	195,850	

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	(5) Unfunded PBO as a Percentage of Covered Payroll (4)/(5)
1987	$1,652,577	$3,297,200	50.1%	$1,644,623	$209,079	786.6%
1988	1,740,335	3,470,032	50.2	1,729,697	224,581	770.2
1989	1,899,393	3,606,866	52.7	1,707,473	238,240	716.7
1990	2,087,376	3,685,279	56.6	1,597,903	248,998	641.7
1991	2,275,591	3,802,877	59.8	1,527,286	261,707	583.6
1992	2,478,285	3,962,125	62.5	1,483,840	269,957	549.6
1993	2,661,417	4,085,779	65.1	1,424,362	276,017	516.0
1994	2,835,409	4,229,727	67.0	1,394,318	285,234	488.8

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.

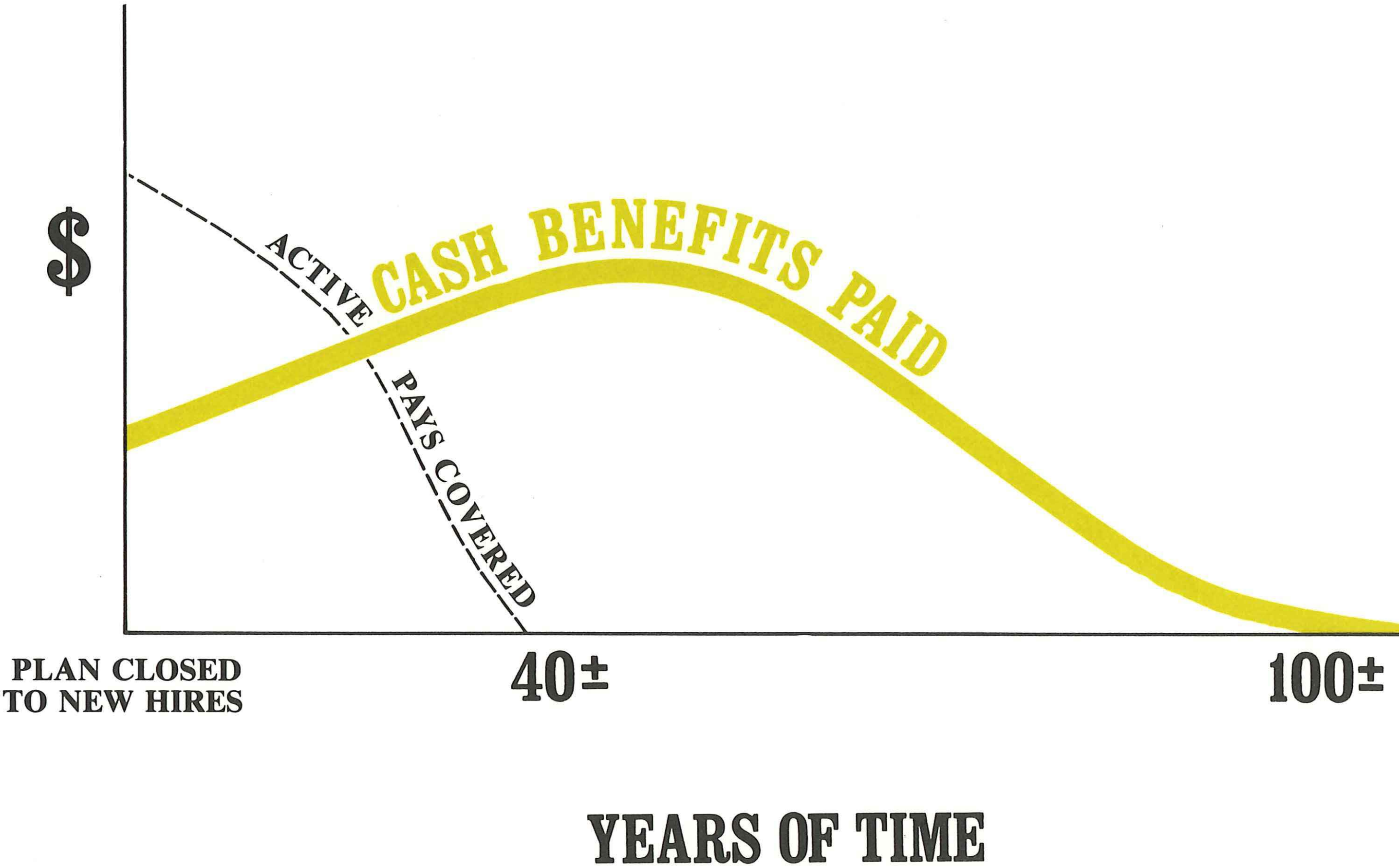
Computing Contributions To Support Plan Benefits. From a given schedule of benefits and from the employee data and asset data furnished him, the actuary determines the contribution rates to support the benefits by means of an actuarial valuation and a funding method.

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.