Fairmont Policemen's Relief Association



Annual Actuarial Valuation December 31, 1997

Gabriel, Roeder, Smith & Company
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Consultants & Actuaries



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GABRIEL, ROEDER, SMITH & COMPANY

Consultants & Actuaries

1000 Town Center • Suite 1000 • Southfield, Michigan 48075 • 248-799-9000 • 800-521-0498 • fax 248-799-9020

June 5, 1998

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

Submitted in this report are the results of the December 31, 1997 actuarial valuation of the assets, actuarial values and contribution requirements associated with the benefits provided by the Fairmont 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, 1999. 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. 25 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,

Norman S. Losk

Mary Ann Vitale

Mary an 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, 1999

If Paid Equally Throughout Year

Normal Cost % of Active Payroll for 1999	+	UAAL Dollars
28.18%		
4.21		
2.22		
1.55		
0.33		
36.49%		
		\$ 0
		0
		0
36.49%	+	\$ 0
8.00%		
28 49%	+	\$ 0
29.19%	+	\$ 0
	% of Active Payroll for 1999 28.18% 4.21 2.22 1.55 0.33 36.49%	% of Active Payroll for 1999 + 28.18% 4.21 2.22 1.55 0.33 36.49% +

PRESENT ACTUARIAL CONDITION

The Association's accrued actuarial assets were in excess of \$6.5 million on December 31, 1997 -- 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 \$6.5 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) Surviving Spouses (4) Surviving Children (0)		\$3,876,852 426,036 0		
Total (13)	\$4,302,888	\$4,302,888	\$ 0	100.0%
Deferred Members (0)	0	0	0	0.0
Active Members (3)	2,212,897	1,861,281	(351,616)	118.9
Total	\$6,515,785	\$6,164,169	\$(351,616)	105.7%

Actuarial accrued liabilities represent the value, computed as of December 31, 1997 of:

- (i) retirement allowances likely to be paid the 13 retirants and beneficiaries; and
- (ii) the contributions assumed to have been made for the 3 active members from entry into the plan until December 31, 1997.

The value of retirement allowances likely to be paid the 13 retirants and beneficiaries, discounted for investment earnings and mortality, was computed to be \$4,302,888 as of December 31, 1997. To put this amount in perspective, the \$4,302,888, together with investment earnings, will just be sufficient to pay the 13 retirants and beneficiaries their allowances for their remaining lifetimes. This assumes the 13 retirants and beneficiaries live and die according to the assumed mortality and the \$4,302,888 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 \$1,861,281 represents the amount that would have been accumulated by December 31, 1997. 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, 1997 for the 3 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 (\$\sin \text{thousands})

Valuation Date December	Actuarial Accrued Liabilities	Accrued Actuarial Assets	Percent Funded
1988	\$4,055	\$2,656	65.5%
1989#	5,474	2,981	54.5
1990	5,627	3,137	55.7
1991	5,803	3,874	66.8
1992	5,952	4,179	70.2
1993	5,781	4,570	79.0
1994	5,987	4,828	80.6
1995	6,066	5,274	86.9
1996	6,179	5,808	94.0
1997	6,164	6,516	105.7

[#] After court ruling on definition of prevailing pay.

COMPUTED CONTRIBUTIONS - COMPARATIVE SCHEDULE

	Ended	Total Normal Cost	Contribution For
	ber 31	as a Percent of	Unfunded Actuarial
Valuation	Fiscal	Valuation Payroll*	Accrued Liabilities
1988	1990	36.54%	\$106,509
1989	1991#	36.55	195,178
1990	1992	36.40	201,066
1991	1993	36.26	161,011
1992	1994	35.13	153,456
1993	1995	35.13	109,085
1994	1996	35.24	108,913
1995	1997	35.51	78,140
1996	1998	35.54	38,541
1997	1999	36.49	0

^{*} Includes employee contributions.

[#] After court ruling on definition of prevailing pay.

CONTRIBUTION FOR CALENDAR YEAR EFFECTIVE JANUARY 1, 1999

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:

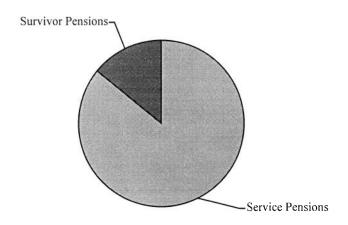
(1)	Estimated covered payroll for 1999		\$	
(2)	Total normal cost % from page A-2		36.49%	
(3)	Total normal cost (Line 1 times line 2)			\$
(4)	x 1.035 1997 Administrative expenses paid from the Special Fund			
(5)	Amortization payment on UAAL from page A-2			0
(6)	Total contributions required (Line 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 \$1,161,771 (b) State amortization aid based on 1984 legislation (c) Total State amortization aid 	\$17,485 	20,500	
(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 AT YEAR END (LINE 11 TIMES 1.0247)			\$

Section B

Valuation Data and Summary of Benefit Provisions

RETIRANTS AND BENEFICIARIES DECEMBER 31, 1997 BY TYPE OF ANNUITY BEING PAID

Type of Annuity Being Paid	No.	Monthly Amounts	Computed Actuarial Accrued Liabilities
Retirants receiving:			
Age & service	9	\$20,494.62	\$3,876,852
Disability	_0	0.00	0
Totals	9	20,494.62	3,876,852
Beneficiaries receiving:			
Spouse	4	3,391.43	426,036
Child	_0	0.00	0
Totals	4	3,391.43	426,036
	<u> </u>	Part 100 100 100 100 100 100 100 100 100 10	-
Totals	13	\$23,886.05	\$4,302,888



Monthly Amount Paid by Benefit

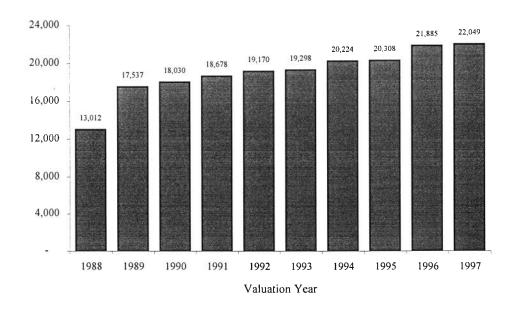
RETIRANTS AND BENEFICIARIES DECEMBER 31, 1997 BY ATTAINED AGES

	Number						
Attained Ages	Age & Service	Disability	Death Before Retirement				
50-54	2						
55-59	3						
60-64	1		1				
65-69	1						
70-74	3						
75-79	1						
85-89	<u>1</u>		_				
Totals	12		I				

RETIRANTS AND BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS COMPARATIVE STATEMENT

Valuation			Rolls End of Year		
Date December 31	No. Added to Rolls	No. Removed from Rolls	No.	Annual Allowances	Discounted Value of Total Allowances
1988	3		14	\$182,167	\$2,732,532
1989			14	245,520	3,553,860
1990			14	252,417	3,526,812
1991			14	261,491	3,521,472
1992	1		15	287,546	3,944,772
1993		2	13	250,879	3,611,904
1994		1	12	242,682	3,504,876
1995	2	1	13	264,009	3,954,504
1996		1	12	262,615	3,848,304
1997	2	1	13	286,633	4,302,888

Average Annual Allowances



ACTIVE MEMBERS DECEMBER 31, 1997 BY ATTAINED AGE AND YEARS OF SERVICE

		Years of Service to Valuation Date							Totals
Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
50-54					2	1		3	\$163,423
Totals					2	1		3	\$163,423

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

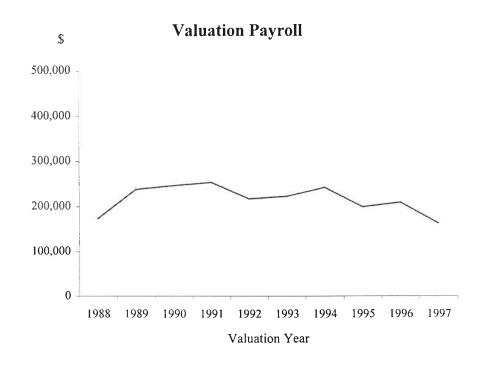
Group Averages:

Age: 51.0 years Service: 25.5 years Annual Pay: \$54,474

COMPARATIVE SCHEDULE OF ACTIVE MEMBERS

Valuation Date		Valuation		Ave	rage	
December 31	Active Members	Payroll	Age	Service	Pay	% Incr.
1988	6	\$174,608	43.5 yrs.	17.8 yrs.	\$29,101	3.1%
1989	6	238,546	44.5	18.8	39,758*	36.6
1990	6	246,839	45.5	19.8	41,140	3.5
1991	6	254,243	46.5	20.8	42,374	3.0
1992	5	217,830	46.8	21.9	43,566	2.8
1993	5	223,316	47.8	22.9	44,663	2.5
1994	5	243,049	48.8	23.9	48,610	8.8
1995	4	199,651	49.5	24.5	49,913	2.7
1996	4	209,607	50.5	25.5	52,402	5.0
1997	3	163,423	51.0	25.5	54,474	4.0

^{*} After court ruling on definition of prevailing pay.



Brief Summary (12/31/97) of Benefit Provisions Evaluated and/or Considered

AGE & SERVICE RETIREMENT

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

Amount. For first 20 years of service, 50% of base pay. For years in excess of 20, an additional 2% is added to a maximum of 60% of base pay for 25 years of service. (Service after attainment of age 55 is not considered for benefit purposes).

PAY USED FOR PLAN PURPOSES. "Base pay" means the prevailing pay of a first class patrolman.

DISABILITY RETIREMENT

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

Amount. 50% of base pay.

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.

Child. Younger than age 18.

Amount.

Spouse. 25% of base pay.

Child. 6.25% of base pay per child. Children's maximum is 25% of base pay if spouse is receiving or 50% of base pay if no spouse is receiving.

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 base pay is changed, payments to all benefit recipients are simultaneously changed by the same percent that base pay is changed.

MEMBER CONTRIBUTIONS. 8% of base pay. 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 53, attained age if older.

Mortality Table*

		Single Li				
	F	resent Value		•		
	Le	vel	Incre	easing	Futu	re Life
Sample	For	Life	3.5%	Yearly	Expectan	icy (Years)
Ages	Men	Women	Men	Women	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

Financial Reporting

STATEMENT OF PLAN NET ASSETS MARKET VALUE

AS OF DECEMBER 31, 1996 AND 1997

	1997	1996
Assets: Cash and short-term investments	\$ 181,526	\$ 121,839
Receivables:		
Additional State Aid	9 .4 9	-
Accounts Payable:	-	-
Investments, at fair value:		
Common Stocks	-	-
Mutual Funds	-	-
Mortgages	-	-
Bonds	6,328,124	5,688,340
Real Estate		
Total	\$6,328,124	\$5,688,340
Net assets held in trust for pension benefits*	\$6,509,650	\$5,810,179

^{*} A schedule of funding progress for the plan is presented on page D-4.

STATEMENT OF CHANGES IN PLAN NET ASSETS FOR THE FISCAL YEARS ENDED DECEMBER 31, 1996 AND DECEMBER 31, 1997

	December 31, 1997	December 31, 1996
Additions:	·	
Contributions		
Employer	\$ 257,828	\$ 163,177
Plan members	9,773	12,025
Total	267,601	175,202
Investment Income	727,470	531,382
Total Additions	\$ 995,071	\$ 706,584
Deductions:		
Benefits Paid	274,107	252,838
Refund of Contributions	-	5,534
Expenses	21,493	17,707
Total Deductions	\$ 295,600	\$ 276,079
Net Increase	\$ 699,471	\$ 430,505
Net assets held in Trust Fund:		
Beginning of year	\$5,810,179	\$5,379,674
End of year	\$ <u>6,509,650</u>	\$ <u>5,810,179</u>

Plan Description. The Fairmont Police Relief Association is a single-employer defined benefit pension plan that covers the police department employees of the City of Fairmont.

The plan provides retirement, disability, and death benefits to plan members and their beneficiaries.

Contributions. Plan member contributions in accordance with the schedule on page B-7.

The employer's funding policy provides for periodic employer contributions based upon a fundamental financial objective of having rates of contribution which remain relatively level from generation to generation of the City of Fairmont citizens. To determine the employer contribution rates and to assess the extent to which the fundamental financial objective is being achieved, the System has actuarial valuations prepared annually. In preparing those valuations, the entry age actuarial cost method is used to determine normal cost and actuarial accrued liabilities.

Unfunded actuarial accrued liabilities (full funding credit) are amortized by level percent-of-payroll contributions over a period of future years as outlined on page A-2.

On the basis of the December 31, 1997 actuarial valuation, the employer rates were determined to be as follows:

Contributions	for
Normal Cost as a Percent of Active Member Payroll	Unfunded Actuarial Accrued Liabilities
28.49%	\$0

REQUIRED SUPPLEMENTARY INFORMATION SCHEDULE OF FUNDING PROGRESS (DOLLAR AMOUNTS IN THOUSANDS)

Actuarial Valuation Date	(a) Actuarial Value of Assets	(b) Entry Age Actuarial Accrued Liability (AAL)	(b)-(a) Unfunded AAL (UAAL)	(a)/(b) Funded Ratio	(c) Covered Payroll	[(b-a)/c] UAAL as a Percent of Covered Payroll
12/31/92	\$4,179	\$5,952	\$1,773	70.2%	\$218	813.3%
12/31/93	4,570	5,781	1,211	79.1	223	543.0
12/31/94	4,828	5,987	1,159	80.6	243	477.0
12/31/95	5,274	6,066	792	86.9	200	396.0
12/31/96	5,808	6,179	371	94.0	210	176.7
12/31/97	6,516	6,164	352	105.7	163	216.0

SCHEDULE OF EMPLOYER CONTRIBUTIONS

Year Ended December 31	Annual Employer Contributions
1992	\$286,563
1993	243,556
1994	243,726
1995	208,626
1996	163,177
1997	257,828

SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:

Valuation date	December 31, 1997
Actuarial cost method	Entry age actuarial cost method
Amortization method	Level percent of payroll
Remaining amortization period	See page A-2
Asset valuation method	Mandated by state law
Actuarial assumptions:	
Investment rate of return (net)	5.0%
Projected salary increases	3.5%
Assumed rate of payroll growth	3.5%
Assumed rate of membership growth	0%
Cost-of-living adjustments	3.5%

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.

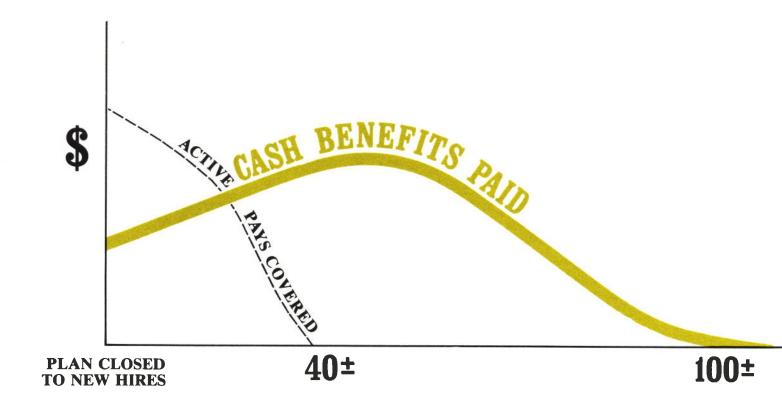
Computing Contributions To Support Plan Benefits. From a given schedule of benefits and from the employee data and asset data furnished him, the actuary determines the contribution rates to support the benefits by means of an actuarial valuation and a funding method.

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



YEARS OF TIME

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.