

VILLAGE OF GLENCOE  
POLICE PENSION FUND BOARD

Regular Meeting  
Village Hall Conference Room  
675 Village Court

July 18, 2012  
7:00 a.m.

**A G E N D A**

The Village of Glencoe is subject to the requirements of the Americans With Disabilities Act of 1990. Individuals with disabilities who plan to attend this meeting and who require certain accommodations in order to allow them to observe and/or participate in this meeting, or who have questions regarding the accessibility of the meeting or the facilities, are requested to contact the Village of Glencoe at least 72 hours in advance of the meeting at (847) 835-4114, or please contact the Illinois Relay Center at (800) 526-0844, to allow the Village of Glencoe to make reasonable accommodations for those persons.

1. CALL TO ORDER AND ROLL CALL

Michael Neimark, President  
Peter Neville, Trustee  
Joseph Walter, Trustee  
Christopher Pfaff, Trustee  
Chad Smith, Trustee

2. PUBLIC COMMENT TIME

*Individuals interested in addressing the Board on non-agenda items may do so during this time.*

3. APPROVAL OF THE APRIL 18, 2012 MINUTES (Paged 2-4)

4. REVIEW FINANCIAL ACTIVITY WITH GREAT LAKES ADVISORS AND REBALANCE PORTFOLIO OF NECESSARY

5. APPROVE QUARTERLY PAYMENTS AND DISBURSEMENTS (Page 5-7)

6. REVIEW FY 2012 ANNUAL FINANCIAL REPORT AND ACTUARIAL ASSUMPTIONS FOR 2012 TAX LEVY (Pages 8-33)

7. CONSIDER NEW OFFICER ANDREW ZARATE FOR TIER TWO ELIGIBILITY (To be available at meeting)

8. DISCUSS STATUS OF BANKING SERVICE AND FINANCIAL SERVICES RFP

9. REVIEW ANNUAL CALENDAR (Page 34)

10. TRAINING: BASIC ACCOUNTING AND ACTUARIAL TRAINING (Starting Page 35)

11. OTHER BUSINESS

12. ADJOURNMENT

VILLAGE OF GLENCOE  
POLICE PENSION FUND BOARD

REGULAR MEETING MINUTES  
April 18, 2012

1. CALL TO ORDER

A regular meeting of the Police Pension Fund Board was called to order by President Neimark at 7:07 a.m. on Wednesday, April 18, 2012 in the Village Hall Conference Room.

2. ROLL CALL

The following members were present:

Michael Neimark, President  
Peter Neville, Trustee  
Joseph Walter, Trustee  
Chad Smith, Trustee

The following were also present:

David A. Clark, Treasurer  
Bill Gregg, Director of Fixed Income, Great Lakes Advisors, LLC  
Jason Turner, Asset Allocation Manager, Great Lakes Advisors, LLC

Absent:  
Christopher Pfaff, Trustee

3. APPROVAL OF MINUTES FROM THE JANUARY 18, 2012 MEETING

Upon motion made and seconded, the minutes of the January 18, 2012 meeting were approved by unanimous vote.

4. PUBLIC COMMENT TIME

No comment from the public.

5. CERTIFY TRUSTEE ELECTION RESULTS

The Board reviewed the results of the election for a sworn representative to the Police Pension Fund Board. Following review, upon motion made and seconded and approved by unanimous vote, Peter Neville was elected for a new term as Police Pension Fund Trustee.

6. APPOINT OFFICERS

Upon motion made, seconded and approved by unanimous vote, the following Trustees were appointed as various officers of the Police Pension Fund:

Michael Neimark, President  
Chad Smith, Vice President  
Joseph Walter, Secretary  
Peter Neville, Assistant Secretary

7. REVIEW FINANCIAL ACTIVITY WITH GREAT LAKES ADVISORS

Bill Gregg and Jason Turner presented a portfolio report for the period ended March 31, 2012. Since December 31, 2011, the value of the portfolio increased from \$23.12 Million (plus \$110,145 accrued interest) to \$25.48 Million (plus \$107,237 accrued interest). Cash and equivalents represented 10.5% of the portfolio, equities represented 45.5% of the assets and taxable fixed income represented 44.0% of the assets.

Following discussion, the following recommendations were made:

Sources

\$ 100,000 – Sell NOKIA Corporate Bond (Due 5/15/2019)  
\$2,120,000 – Cash on Hand

\$2,220,000 - TOTAL SOURCES

Investments

\$1,000,000 – Mortgage backed taxable fixed income  
\$1,000,000 – CD's of 3 months or less  
\$ 120,000 – Credit Suisse Commodity Return Strategy (CRSOX)

\$2,220,000 – TOTAL INVESTMENTS

Trustee Smith moved, seconded by Trustee Neville to approve the investment instructions with investments totaling \$2,220,000. Said motion was unanimously adopted by the following vote.

AYES: Neville, Smith, Walter, Neimark (4)  
NAYES: None (0)  
ABSENT: Pfaff (1)

8. REVIEW QUARTERLY PAYMENTS AND DISBURSEMENTS

Treasurer David Clark reviewed \$14,986.28 in accounts payable disbursements since January 1, 2012 and \$395,066.82 in annuities paid since January 1, 2012. The report also included a list of bank transfers made. Upon motion made and seconded, the accounts payable and annuity disbursement report was unanimously approved as submitted.

9. CONSIDER DRAFT CUSTODIAL BANKING AND FINANCIAL ADVISORY SERVICES REQUEST FOR PROPOSAL

The Treasurer will prepare the request for proposal and review results with the President prior to the next meeting. The Board will consider the results of the process at the next meeting in July.

10. REVIEW ANNUAL CALENDAR

The Board amended the calendar to move certification of trustee elections and appointing officers from the July Meeting to the April Meeting.

11. TRAINING: OPEN MEETINGS ACT AND FREEDOM OF INFORMATION ACT

The training topic was addressed in accordance with the Police Pension Board's Training Policy. The Treasurer announced that the Illinois Attorney General's Office now requires completion of online training by the end of December 31, 2012 regarding Open Meetings Act. A link to the Attorney General's training site will be forwarded to members.

12. ADJOURNMENT

There being no further business to come before the Police Pension Fund Board, upon motion made, seconded and unanimously adopted, the meeting was adjourned at 9:35 a.m.

Glencoe Police Pension Fund					
Check Register - 4/1/2012 through 6/30/2012					
<u>Check</u>	<u>Name</u>	<u>Item Desc</u>	<u>Check Amount</u>	<u>Check Date</u>	<u>Check Status</u>
40046	GREAT LAKES ADVISORS, LLC	MANAGEMENT FEES 12-31-11 TO 03-31-12	13,753.09	05/18/2012	Cleared
40047	ILLINOIS STATE TREASURER	FY 2013 COMPLIANCE FEE	4,746.32	05/18/2012	Cleared
40048	LAUTERBACH & AMEN, LLP	FY 2012 AUDIT	3,214.00	06/29/2012	Outstanding
	<b>TOTAL</b>		<b>21,713.41</b>		

VILLAGE OF GLENCOE  
EARNINGS ANALYSIS REPORT

SELECTION CRITERIA: employee.home\_orgn="376" and checkhis.iss\_date between "04/01/2012" and "06/30/2012"

EMPLOYEE NO	NAME	PAY CODE	-----REGULAR-----		-----OVERTIME-----	
			HOURS	EARNINGS	HOURS	EARNINGS
95301	AYLWARD, NED	131	3.00	18,475.02	.00	.00
	TOTAL FOR EMPLOYEE: 95301		3.00	18,475.02	.00	.00
300256	BAK, THOMAS	131	3.00	11,728.65	.00	.00
	TOTAL FOR EMPLOYEE: 300256		3.00	11,728.65	.00	.00
20026	BATT, PAULA	131	3.00	6,584.01	.00	.00
	TOTAL FOR EMPLOYEE: 20026		3.00	6,584.01	.00	.00
20017	BONNEVILLE, ROBERT B	131	3.00	17,182.95	.00	.00
	TOTAL FOR EMPLOYEE: 20017		3.00	17,182.95	.00	.00
20018	CLARK, JAMES	132	3.00	8,159.94	.00	.00
	TOTAL FOR EMPLOYEE: 20018		3.00	8,159.94	.00	.00
300182	FAY, ANNE T.	139	3.00	7,997.82	.00	.00
	TOTAL FOR EMPLOYEE: 300182		3.00	7,997.82	.00	.00
300183	FAY, JOHN	131	3.00	11,448.87	.00	.00
	TOTAL FOR EMPLOYEE: 300183		3.00	11,448.87	.00	.00
20005	FEIL, WILLARD B	131	3.00	4,967.01	.00	.00
	TOTAL FOR EMPLOYEE: 20005		3.00	4,967.01	.00	.00
94501	GALFORD, JOHN D	131	3.00	20,963.34	.00	.00
	TOTAL FOR EMPLOYEE: 94501		3.00	20,963.34	.00	.00
300208	GARY GIBE, SHAPIRO DEVELOPMENTAL CNTR FOR	137	3.00	2,706.90	.00	.00
	TOTAL FOR EMPLOYEE: 300208		3.00	2,706.90	.00	.00
20020	GIBE JR, JERRY	137	3.00	2,706.90	.00	.00
	TOTAL FOR EMPLOYEE: 20020		3.00	2,706.90	.00	.00
20002	HALLEN, SHIRLEY	131	1.00	990.08	.00	.00
	TOTAL FOR EMPLOYEE: 20002		1.00	990.08	.00	.00
95601	HARLOW, PAUL	131	3.00	22,162.59	.00	.00
	TOTAL FOR EMPLOYEE: 95601		3.00	22,162.59	.00	.00
20027	HENDRIX, CAROL I	131	3.00	14,200.32	.00	.00
	TOTAL FOR EMPLOYEE: 20027		3.00	14,200.32	.00	.00
20021	IVINS, JOHN	131	3.00	11,002.47	.00	.00
	TOTAL FOR EMPLOYEE: 20021		3.00	11,002.47	.00	.00
95101	JESSE, DANIEL	131	3.00	16,790.58	.00	.00
	TOTAL FOR EMPLOYEE: 95101		3.00	16,790.58	.00	.00
20022	LINOWIECKI, JOHN	131	3.00	11,142.33	.00	.00
	TOTAL FOR EMPLOYEE: 20022		3.00	11,142.33	.00	.00
97203	LOPRESTI, NICHOLAS	132	3.00	14,085.51	.00	.00
	TOTAL FOR EMPLOYEE: 97203		3.00	14,085.51	.00	.00
300179	MILKS, MIKEL	131	3.00	28,872.63	.00	.00

SELECTION CRITERIA: employee.home\_orgn="376" and checkhis.iss\_date between "04/01/2012" and "06/30/2012"

EMPLOYEE NO	NAME	PAY CODE	-----REGULAR-----		-----OVERTIME-----	
			HOURS	EARNINGS	HOURS	EARNINGS
	TOTAL FOR EMPLOYEE: 300179		3.00	28,872.63	.00	.00
300101	MILLER, LYNN	131	3.00	13,237.02	.00	.00
	TOTAL FOR EMPLOYEE: 300101		3.00	13,237.02	.00	.00
20028	MOHR, FLOYD	131	3.00	15,038.40	.00	.00
	TOTAL FOR EMPLOYEE: 20028		3.00	15,038.40	.00	.00
300248	NORRIS, ANTOINETTE E.P.	131	3.00	7,242.48	.00	.00
	TOTAL FOR EMPLOYEE: 300248		3.00	7,242.48	.00	.00
20014	POSTELNICK, THOMAS J	131	3.00	13,751.82	.00	.00
	TOTAL FOR EMPLOYEE: 20014		3.00	13,751.82	.00	.00
300118	RODSTROM, JEFFREY	132	3.00	14,224.92	.00	.00
		138	.00	547.11	.00	.00
	TOTAL FOR EMPLOYEE: 300118		3.00	14,772.03	.00	.00
300092	SACHTLEBEN, MATTHEW	132	3.00	13,412.58	.00	.00
	TOTAL FOR EMPLOYEE: 300092		3.00	13,412.58	.00	.00
20023	SEBEN, PHYLLIS M	131	3.00	3,000.00	.00	.00
	TOTAL FOR EMPLOYEE: 20023		3.00	3,000.00	.00	.00
20001	SHARPE, DAVID D.	131	3.00	10,064.01	.00	.00
	TOTAL FOR EMPLOYEE: 20001		3.00	10,064.01	.00	.00
96701	SWEENEY JR, THOMAS J	132	3.00	11,115.45	.00	.00
	TOTAL FOR EMPLOYEE: 96701		3.00	11,115.45	.00	.00
300112	WADYCKI, THOMAS	131	3.00	22,549.53	.00	.00
	TOTAL FOR EMPLOYEE: 300112		3.00	22,549.53	.00	.00
300102	WALTER, JOSEPH	131	3.00	15,757.50	.00	.00
	TOTAL FOR EMPLOYEE: 300102		3.00	15,757.50	.00	.00
300221	WEPPLER, KATHRYN A.	139	3.00	8,337.18	.00	.00
	TOTAL FOR EMPLOYEE: 300221		3.00	8,337.18	.00	.00
95401	WEPPLER, TERRY	131	3.00	11,560.65	.00	.00
	TOTAL FOR EMPLOYEE: 95401		3.00	11,560.65	.00	.00
TOTAL REPORT			94.00	392,006.57	.00	.00

VILLAGE OF  
GLENCOE, ILLINOIS

COMPREHENSIVE  
ANNUAL  
FINANCIAL REPORT



FOR THE YEAR ENDED  
FEBRUARY 29, 2012



# VILLAGE OF GLENCOE, ILLINOIS

## Notes to the Financial Statements February 29, 2012

### NOTE 3 – DETAIL NOTES ON ALL FUNDS – Continued

#### DEPOSITS AND INVESTMENTS – Continued

#### Village – Interest Rate Risk, Credit Risk, Custodial Credit Risk and Concentration Risk – Continued

For an investment, this is the risk that in the event of the failure of the counterparty, the Village will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. The Village's investment policy does not mitigate custodial credit risk for investments. At year-end, the Village's investment in the Illinois Fund is noncategorizable. The IMET Convenience Fund is a depository vehicle that is 110 percent collateralized with obligations of the United States Treasury and its agencies. All collateral securities are held in the name of IMET at the Federal Reserve Bank of New York.

*Concentration Risk.* This is the risk of loss attributed to the magnitude of the Village's investment in a single issuer. The Village's investment policy requires that the investment portfolio be diversified to the extent practicable. Investments shall be diversified in order to reduce the risk of loss resulting in over-concentration in a specific maturity, issuer, institution, or class of securities. Diversification strategies shall be determined and revised periodically by the Finance Director. At year-end, the Village has over 5 percent of the total cash and investment portfolio (other than U.S. Government guaranteed obligations) invested in the Illinois Metropolitan Investment Fund.

#### Police Pension Fund – Interest Rate Risk, Credit Risk, Custodial Credit Risk and Concentration Risk

*Deposits.* At year-end, the carrying amount of the Fund's deposits totaled \$2,026,466 and the bank balances totaled \$2,014,504.

*Investments.* The Fund has the following investment fair values and maturities:

Investment Type	Fair Value	Investment Maturities (in Years)			
		Less Than 1	1 to 5	6 to 10	More Than 10
Federal Home Loan Bank	\$ 3,759,448	503,125	2,810,696	445,627	-
Federal Home Loan Mortgage Corp.	538,764	-	316,965	-	221,799
Federal Farmers Credit Bank	2,033,746	261,875	1,654,600	117,271	-
Federal National Mortgage Assoc.	1,550,227	-	1,173,899	119,446	256,882
Equities	3,548,448	507,635	1,328,545	1,712,268	-
Total	11,430,633	1,272,635	7,284,705	2,394,612	478,681

VILLAGE OF GLENCOE, ILLINOIS

Notes to the Financial Statements  
February 29, 2012

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NOTE 3 – DETAIL NOTES ON ALL FUNDS – Continued

DEPOSITS AND INVESTMENTS – Continued

**Police Pension Fund – Interest Rate Risk, Credit Risk, Custodial Credit Risk and Concentration Risk – Continued**

*Interest Rate Risk.* In accordance with its investment policy, the Fund limits its exposure to interest rate risk by structuring the portfolio to provide liquidity for operating funds and maximizing yields for funds not needed for anticipated cash flow requirements. The investment policy limits the maximum maturity length of investments in the Fund to 20 years from the date of purchase.

*Credit Risk.* The Fund's investment policy helps limit its exposure to credit risk by primarily investing in obligations guaranteed by the United States Government or securities issued by agencies of the United States Government that are explicitly or implicitly guaranteed by the United States Government. The U.S. Agency Obligations are rated AAA by Standard & Poor's.

*Custodial Credit Risk.* The Fund's investment policy does not require pledging of collateral for all bank balances in excess of federal depository insurance, since flow-through FDIC insurance is available for the Fund's deposits with financial institutions. For investments, the Fund's investment policy limits its exposure to custodial credit risk by requiring that all security transactions that are exposed to custodial credit risk be processed on a delivery versus payment (DVP) basis with the underlying investments held by a third party acting as the Fund's agent separate from where the investment was purchased in the Fund's name. Furthermore, the Fund's investment in U.S. Treasury and Agency securities as well as local government obligations are categorized as insured, registered, or held by the Fund or its agent in the Fund's name.

*Concentration Risk.* At year-end the Fund also has \$11,392,101 invested in mutual funds. Per the investment policy, the Fund's investment portfolio shall not exceed the following diversification limits:

- Not more than 10% of the Fund monies shall be invested in any one financial institution (excluding Illinois Funds and U.S. treasury securities held in safekeeping by an authorized custodian).
- Funds deposited at a financial institution shall not exceed 5% of the capital stock and surplus of that institution.
- Investments are allowed in mutual funds that have at least \$250 million in assets and have been in operations for at least 5 years.
- Equities purchased must be of domestic based corporations in existence for at least 5 years, not in arrears of dividends for the past 5 years, and listed on a national exchange.
- Total investments in separate accounts, mutual funds, and direct equity investments shall not exceed 45% of the market value of the Fund's total assets (evaluated on an annual basis).

# VILLAGE OF GLENCOE, ILLINOIS

Notes to the Financial Statements  
February 29, 2012

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## NOTE 4 – OTHER INFORMATION – Continued

### EMPLOYEE RETIREMENT SYSTEM – DEFINED BENEFIT PENSION PLANS

The Village contributes to three defined benefit pension plans, the Illinois Municipal Retirement Fund (IMRF), a defined benefit agent multiple-employer public employee retirement system; the Police Pension Plan which is a single-employer pension plan; and, the Firefighters' Pension Plan, which is also a single-employer pension plan. Separate reports are issued for the Police and Firefighters' Pension Plans and may be obtained by writing to the Village at 675 Village Court, Glencoe, Illinois 60022. IMRF issues a publicly available financial report that includes financial statements and required supplementary information for the plan as a whole, but not by individual employer. That report may be obtained online at [www.imrf.org](http://www.imrf.org). The benefits, benefit levels, employee contributions, and employer contributions are governed by Illinois Compiled Statutes and can only be amended by the Illinois General Assembly.

#### Plan Descriptions, Provisions and Funding Policies

##### Illinois Municipal Retirement System

All employees (other than those covered by the Police and Firefighters' Pension plans) hired in positions that meet or exceed the prescribed annual hourly standard must be enrolled in IMRF as participating members. Participating members hired before January 1, 2012 who retire at or after age 60 with 8 years of service are entitled to an annual retirement benefit, payable monthly for life, in an amount equal to 1-2/3 percent of their final rate (average of the highest 48 consecutive months' earnings during the last 10 years) of earnings, for each year of credited service up to 15 years, and 2 percent for each year thereafter. For participating members hired on or after January 1, 2012 who retire at or after age 67 with 10 years of service are entitled to an annual retirement benefit, payable monthly for life in an amount equal to 1-2/3 percent of their final rate (average of the highest 96 consecutive months' earnings during the last 10 years) of earnings, for each year of credited service, with a maximum salary cap of \$106,800 at January 1, 2012. The maximum salary cap increases each year thereafter. The monthly pension of a member hired on or after January 1, 2012, shall be increased annually, following the later of the first anniversary date of retirement or the month following the attainment of age 62, by the lesser of 3% or 1/2 of the consumer price index. Employees with at least 10 years of credited service may retire at or after age 62 and receive a reduced benefit. IMRF also provides death and disability benefits. These benefit provisions and all other requirements are established by state statute. Employees participating in the plan are required to contribute 4.50 percent of their annual covered salary to IMRF. The employees' contribution rate is established by state statute. The Village is required to contribute the remaining amount necessary to fund the IMRF plan as specified by statute. The employer contribution and annual required contribution rate for calendar year 2011 was 12.35 percent.

##### Police Pension Plan

The Police Pension Plan is a single-employer defined benefit pension plan that covers all sworn police personnel. Although this is a single-employer pension plan, the defined benefits and employee and employer contribution levels are governed by Illinois State Statutes and may be amended only by the Illinois legislature. The Village accounts for the plan as a pension trust fund.

VILLAGE OF GLENCOE, ILLINOIS

Notes to the Financial Statements  
February 29, 2012

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NOTE 4 – OTHER INFORMATION – Continued

EMPLOYEE RETIREMENT SYSTEM – DEFINED BENEFIT PENSION PLANS – Continued

Plan Descriptions, Provisions and Funding Policies – Continued

Police Pension Plan – Continued

At fiscal year end the Police Pension Plan membership consisted of:

Retirees and Beneficiaries Currently Receiving Benefits and Terminated Employees Entitled to Benefits but not yet Receiving Them	28
Current Employees	
Vested	23
Nonvested	<u>10</u>
Total	<u>61</u>

The following is a summary of the Police Pension Plan as provided for in Illinois State Statutes.

The Police Pension Plan provides retirement benefits as well as death and disability benefits. Covered employees hired before January 1, 2011, attaining the age of 50 or more with 20 or more years of creditable service are entitled to receive an annual retirement benefit of ½ of the salary attached to the rank held on the last day of service, or for one year prior to the last day, whichever is greater. The pension shall be increased by 2.5% of such salary for each additional year of service over 20 years up to 30 years, to a maximum of 75% of such salary. Covered employees hired on or after January 1, 2011, attaining the age of 55 with at least 10 years creditable service are entitled to receive an annual retirement benefit of 2.5% of final average salary for each year of service, with a maximum salary cap of \$106,800 as of January 1, 2011. The maximum salary cap increases each year thereafter. The monthly benefit of a police officer hired before January 1, 2011, who retired with 20 or more years of service after January 1, 1977 shall be increased annually, following the first anniversary date of retirement and be paid upon reaching the age of at least 55 years, by 3% of the original pension and 3% compounded annually thereafter. The monthly pension of a police officer hired on or after January 1, 2011, shall be increased annually, following the later of the first anniversary date of retirement or the month following the attainment of age 60, but the lesser of 3% or ½ of the consumer price index. Employees with at least 10 years but less than 20 years of creditable service may retire at or after age 60 and receive a reduced benefit.

Covered employees are required to contribute 9.91% of their base salary to the Police Pension Plan. If an employee leaves covered employment with less than 20 years of service, accumulated employee contributions may be refunded without accumulated interest. The Village is required to contribute the remaining amounts necessary to finance the plan, including administrative costs, as actuarially determined by an enrolled actuary. By the year 2040 the Village's contributions must accumulate to the point where the past service cost for the Police Pension Plan is 90% funded.

VILLAGE OF GLENCOE, ILLINOIS

Notes to the Financial Statements  
February 29, 2012

NOTE 4 – OTHER INFORMATION – Continued

EMPLOYEE RETIREMENT SYSTEM – DEFINED BENEFIT PENSION PLANS – Continued

Annual Pension Cost and Net Pension Obligation

The Village's annual required contribution for the current year and related information for each plan is as follows:

	Illinois Municipal Retirement	Police Pension	Firefighters' Pension
Contribution Rates			
Employer	12.35%	57.32%	0.00%
Employee	4.50%	9.91%	0.00%
Actuarial Valuation Date	12/31/2011	2/28/2011	2/28/2011
Actuarial Cost Method	Entry Age Normal	Entry Age Normal	Entry Age Normal
Amortization Method	Level % of Projected Payroll Open Basis	Level % of Projected Payroll Closed Basis	Level % of Projected Payroll Closed Basis
Remaining Amortization Period	30 Years	30 Years	30 Years
Asset Valuation Method	5-Year Smoothed Market	Market	Market
Actuarial Assumptions			
Investment Rate of Return	7.50% Compounded Annually	7.00% Compounded Annually	6.50% Compounded Annually
Projected Salary Increases	.4 to 10.0%	5.50%	None
Inflation Rate Included	4.00%	3.00%	3.00%
Cost-of-Living Adjustments	3.00%	3.00%	3.00%

VILLAGE OF GLENCOE, ILLINOIS

Notes to the Financial Statements  
February 29, 2012

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NOTE 4 – OTHER INFORMATION – Continued

EMPLOYEE RETIREMENT SYSTEM – DEFINED BENEFIT PENSION PLANS – Continued

Annual Pension Cost and Net Pension Obligation – Continued

There was no net pension obligation for the IMRF plan. The pension liability (asset) for the Police and Firefighters' Pension Plans are as follows:

	Police Pension	Firefighters' Pension	Total
Annual Required Contributions	\$ 1,216,128	50,149	1,266,277
Interest on Net Pension Obligation	(60,324)	9,202	(51,122)
Adjustment to Annual Required Contribution	35,487	(10,997)	24,490
Annual Pension Cost	1,191,291	48,354	1,239,645
Actual Contribution	1,632,363	77,645	1,710,008
Change in NPO/(NPA)	(441,072)	(29,291)	(470,363)
NPO/(NPA) - Beginning of Year	(861,776)	141,725	(720,051)
NPO/(NPA) - End of Year	(1,302,848)	112,434	(1,190,414)

VILLAGE OF GLENCOE, ILLINOIS

Notes to the Financial Statements  
February 29, 2012

NOTE 4 – OTHER INFORMATION – Continued

EMPLOYEE RETIREMENT SYSTEM – DEFINED BENEFIT PENSION PLANS – Continued

Trend Information

Employer annual pension cost (APC), actual contributions and the net pension obligation (NPO) are as follows. The NPO is the cumulative difference between the APC and the contributions actually made.

	Year	Illinois Municipal Retirement	Police Pension	Firefighters' Pension
Annual Pension Cost (APC)	2010	\$ 516,717	\$ 1,035,838	\$ 37,584
	2011	760,052	1,306,325	27,904
	2012	744,133	1,191,291	48,354
Actual Contributions	2010	516,717	1,407,637	18,954
	2011	760,052	1,740,339	2,375
	2012	744,133	1,632,363	77,645
Percentage of APC Contributed	2010	100.00%	135.89%	50.43%
	2011	100.00%	133.22%	8.51%
	2012	100.00%	137.02%	160.58%
Net Pension Obligation	2010	None	(455,805)	99,951
	2011	None	(861,776)	141,725
	2012	None	(1,302,848)	112,434

VILLAGE OF GLENCOE, ILLINOIS

Notes to the Financial Statements  
February 29, 2012

NOTE 4 – OTHER INFORMATION – Continued

EMPLOYEE RETIREMENT SYSTEM – DEFINED BENEFIT PENSION PLANS – Continued

Funded Status and Funding Progress

The Village’s funded status for the current year and related information for each plan is as follows:

	Illinois Municipal Retirement	Police Pension	Firefighters' Pension
Actuarial Valuation Date	12/31/11	02/28/11	02/28/11
Percent Funded	79.08%	64.50%	9.20%
Accuarial Accrued Liability for Benefits	\$22,004,841	\$36,720,564	\$712,768
Actuarial Value of Assets	\$17,400,683	\$23,700,436	\$65,479
Over (Under) Funded Actuarial Accrued Liability (UAAL)	(\$4,604,158)	(\$13,020,128)	(\$647,289)
Covered Payroll (Annual Payroll of Active Employees Covered by the Plan)	\$6,025,367	\$3,036,145	-
Ratio of UAAL to Covered Payroll	76.41%	428.80%	-

The schedule of funding progress, presented as Required Supplementary Information (RSI) following the notes to the financial statements, presents multiyear trend information about whether the actuarial value of plan assets are increasing or decreasing over time relative to the actuarial accrued liability for benefits.



VILLAGE OF GLENCOE, ILLINOIS

Police Pension Fund

Required Supplementary Information  
 Schedule of Funding Progress and Employer Contributions  
 February 29, 2012

Funding Progress

Actuarial Valuation Date Feb. 29	(1) Actuarial Value of Plan Assets	(2) Actuarial Accrued Liability (AAL) - Entry Age	(3) Funded Ratio (1) ÷ (2)	(4) Unfunded (Overfunded) Actuarial Accrued Liability (2) - (1)	(5) Annual Covered Payroll	(6) Unfunded (Overfunded) Actuarial Accrued Liability as a Percentage of Covered Payroll (4) ÷ (5)
2006	\$ 17,113,735	\$ 27,738,312	61.70%	\$ 10,624,577	\$ 2,752,155	386.05%
2007	18,943,232	29,386,240	64.46%	10,443,008	2,825,193	369.64%
2008	19,973,593	32,817,197	60.86%	12,843,604	2,890,955	444.27%
2009	16,356,899	34,321,892	47.66%	17,964,993	3,011,670	596.51%
2010	20,658,001	35,633,310	57.97%	14,975,309	2,998,929	499.36%
2011	23,700,436	36,720,564	64.54%	13,020,128	3,036,145	428.84%

Employer Contributions

Fiscal Year	Employer Contributions	Annual Required Contribution	Percent Contributed
2007	\$ 1,033,821	\$ 855,034	120.91%
2008	1,230,798	911,136	135.08%
2009	1,279,790	910,453	140.57%
2010	1,407,637	1,037,562	135.67%
2011	1,740,339	1,342,900	129.60%
2012	1,632,363	1,216,128	134.23%

VILLAGE OF GLENCOE, ILLINOIS

Pension Trust Funds

Combining Statement of Net Plan Assets  
February 29, 2012

	Police Pension	Firefighters' Pension	Totals
<b>ASSETS</b>			
Cash and cash equivalents	\$ 2,026,466	38,880	2,065,346
Investments			
U.S. government and agency obligations	7,882,185	-	7,882,185
Equities	3,548,448	-	3,548,448
Mutual funds	11,392,101	-	11,392,101
Receivables - net of allowances			
Accrued interest	132,334	-	132,334
Other	20,741	-	20,741
Total assets	<u>25,002,275</u>	<u>38,880</u>	<u>25,041,155</u>
<b>LIABILITIES</b>			
Accounts payable	21,586	400	21,986
Due to other funds	154,330	1,562	155,892
Total liabilities	<u>175,916</u>	<u>1,962</u>	<u>177,878</u>
<b>NET PLAN ASSETS HELD IN TRUST FOR PENSION BENEFITS</b>	<u><u>24,826,359</u></u>	<u><u>36,918</u></u>	<u><u>24,863,277</u></u>

VILLAGE OF GLENCOE, ILLINOIS

Pension Trust Funds

Combining Statement of Changes in Net Plan Assets  
Year Ended February 29, 2012

	Police Pension	Firefighters' Pension	Totals
<b>ADDITIONS</b>			
Contributions - employer			
Taxes	\$ 1,632,363	77,645	1,710,008
Contributions - plan members	308,710	-	308,710
Total contributions	<u>1,941,073</u>	<u>77,645</u>	<u>2,018,718</u>
Investment income			
Interest earned	725,164	231	725,395
Net change in fair value	40,587	-	40,587
	<u>765,751</u>	<u>231</u>	<u>765,982</u>
Less investment expenses	(54,227)	(35)	(54,262)
Net investment income	<u>711,524</u>	<u>196</u>	<u>711,720</u>
Total additions	<u>2,652,597</u>	<u>77,841</u>	<u>2,730,438</u>
<b>DEDUCTIONS</b>			
Pensions and refunds	1,518,583	105,489	1,624,072
Miscellaneous			
Contractual professional services	8,091	913	9,004
Total deductions	<u>1,526,674</u>	<u>106,402</u>	<u>1,633,076</u>
CHANGE IN NET ASSETS	1,125,923	(28,561)	1,097,362
<b>NET PLAN ASSETS HELD IN TRUST FOR PENSION BENEFITS</b>			
BEGINNING	<u>23,700,436</u>	<u>65,479</u>	<u>23,765,915</u>
ENDING	<u>24,826,359</u>	<u>36,918</u>	<u>24,863,277</u>

# Glencoe Police Pension Fund

## Analysis and Policy Considerations

### Glencoe Police Pension

- State of Village with Tim Sharpe, Actuary (review of valuation report)
- Policy Considerations
- Review of actuarial assumptions
- Review actuarial method
- Review of amortization period
- Source of contribution
- Comparison of area funds

### Policy Issues

- Continue to use “State of Illinois” assumptions with 100% funding target for Annual Report.
- Continue to use “Actuary” assumptions for actual funding decisions.

### Funding Policy Issues

- Use of 1994 Mortality Table.
- Funding period: Continue to use 2040.
- Rate of Return: 6% seems to accurately reflect historic rate of return.
- Salary increase: 4.5% used most recently. Actual long term average is 3.4%.
- Continue with Entry Age Normal Actuarial Method.

### Funding Policy Issues

- Fiscal Year 2013 Budget includes \$1,465,318 as the annual police pension contribution
- The budgeted contribution represents 149% of the annual required pension contribution.
- The funding from sources other than property tax is contributed to the Police Pension Fund during February of each year upon review of Village financial conditions.
- The Board can contribute more than the budget if so desired.

### Glencoe Actuarial Assumptions

- Mortality Assumptions
- Rate of Return Assumption
- Salary Increase Assumption

## Mortality Assumption

- Annual report uses 1971 Mortality Table
- Budget uses 1994 Mortality Table
- Village funding based on life expectancy of approximately 81 years of age
- Average age of death for Illinois Police Pension Members during 2011 was 72.6
- 1971 Mortality Table has life expectancy of 77.8 years.

## Life Expectancy

- Retiree Age 55
- 1971 GAM: 22.8 years, age 77.8
- UP 1984: 22.8 years, age 77.8
- RP 2000: 25.9 years, age 80.9

RP 2000 almost identical to 1994 Table.

## Dept of Insurance Statistics

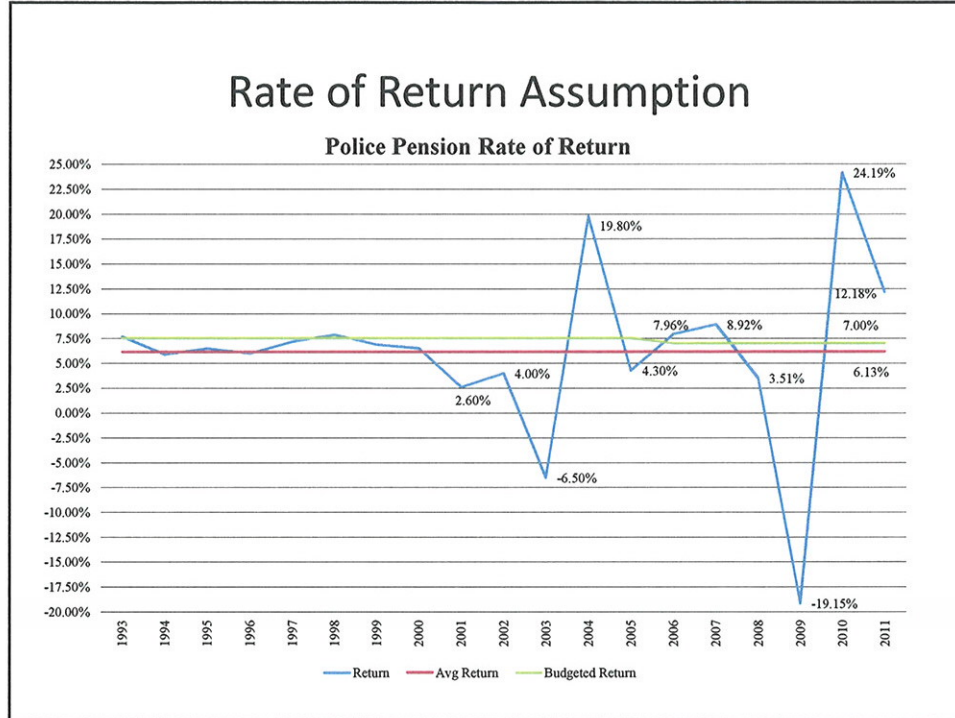
### Police Pension Funds

	Members		Surviving Spouses	
	# of Deaths	Avg Age	# of Deaths	Avg Age
1998	80	66.89	13	80.62
1999	84	66.82	19	81.77
2000	97	68.06	21	85.48
2001	113	68.81	52	81.63
2002	115	68.46	39	82.85
2003	132	70.28	49	83.86
2004	109	68.23	54	80.33
2005	113	69.37	49	82.29
2006	126	70.70	65	84.43
2007	141	69.92	45	84.91
2008	140	70.01	54	82.91
2009	148	70.61	44	82.82
2010	135	70.96	48	82.42
2011	28	72.68	13	82.38
	1561	69.43	559	82.87

## Rate of Return Assumption

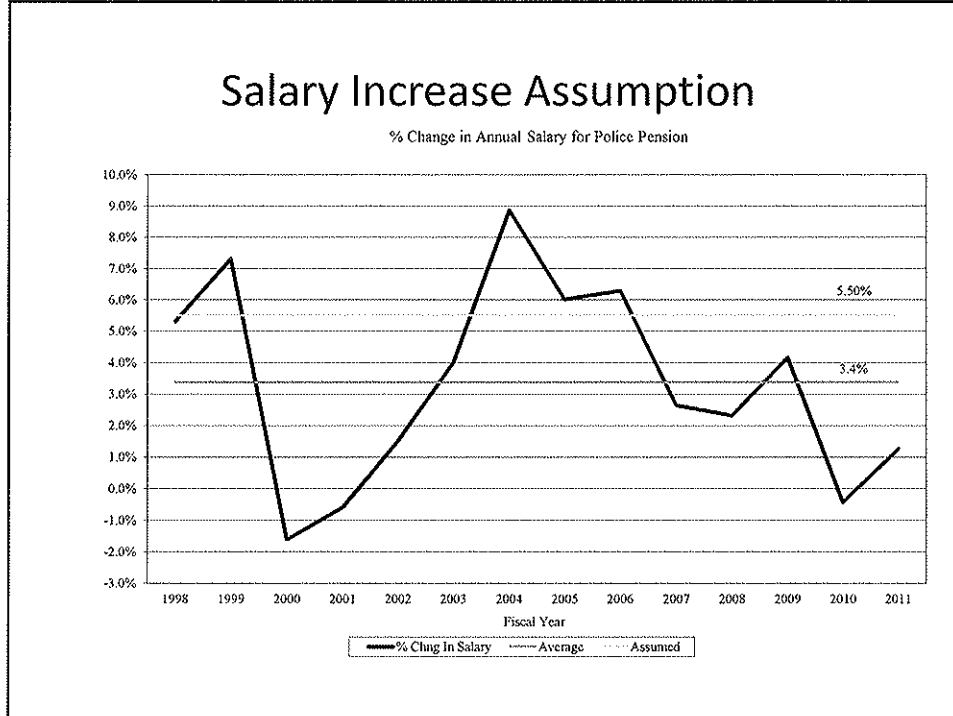
- In successive years the rate of return assumption for the annual budget has been changed from 7.00% to 6.5% to 6.0% for Fiscal Year 2013.
- Report and CAFR are still based on 7.0%
- Since 1993 the average annual rate of return has been 6.13%.
- The rate of return assumption seems to be on target with actual history of return on investment.





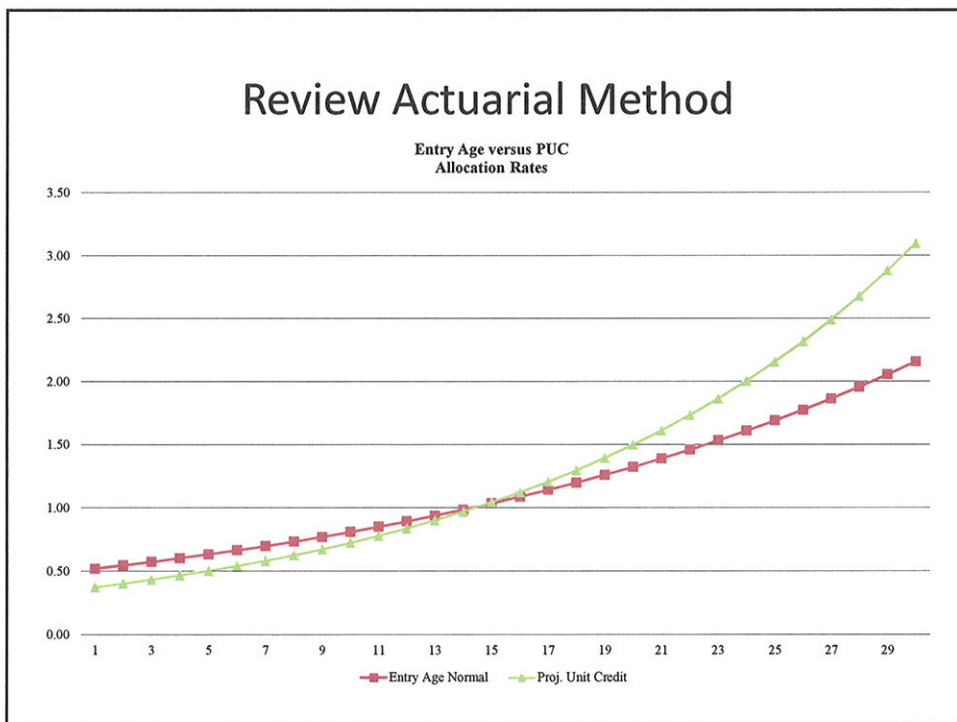
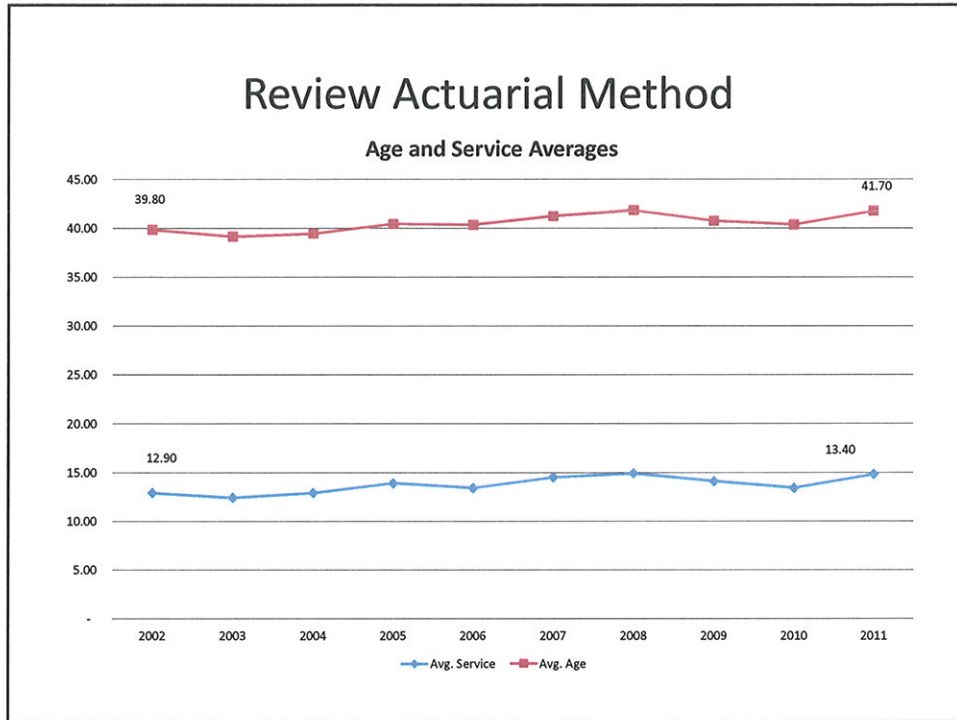
### Salary Increase Assumption

- In successive years the rate of return assumption for the annual budget has been changed from 5.5% to 4.5% for Fiscal Year 2013.
- Report and CAFR are still based on 5.5%
- Since 1997 the average annual change in payroll has been an increase of 3.4%
- Reducing from 4.5% to 3.5% would reduce the annual funding requirement by approximately \$100,000.



## Review Actuarial Method

- 2011 pension reform included a change from entry age normal (EAN) to projected unit credit (PUC).
- With a goal of uniform accrual versus determining the termination liability of a pension fund, EAN makes for sense for public pensions.
- PUC costs the fund less early on and more later than EAN.
- Age and service duration of the workforce have remained flat.
- Given service level of Village both EAN and PUC result in approximately the same costs.

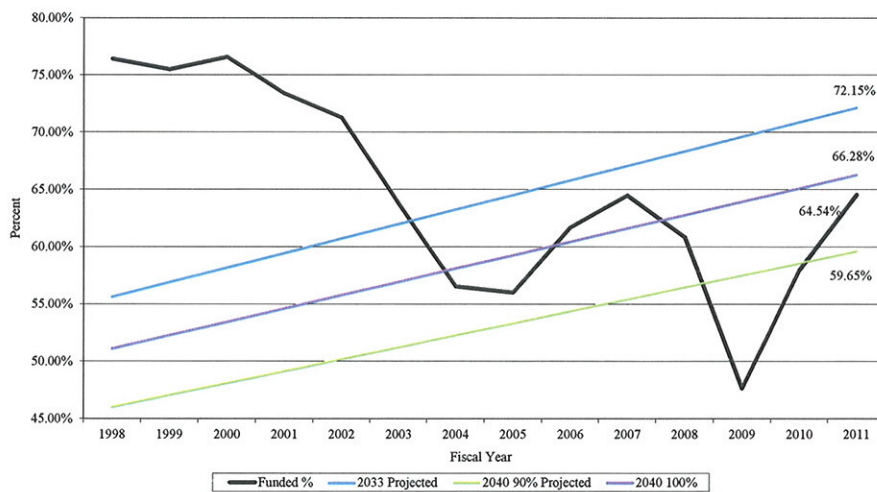


## Review Amortization Target and Period

- Prior to pension reform, the amortization target was 2033.
- Pension reform allows 90% funding by 2040.
- Less than 100% funding target not allowed by GASB
- Village used 100% funding target by 2040 for most recent actuarial report.

## Review Amortization Target and Period

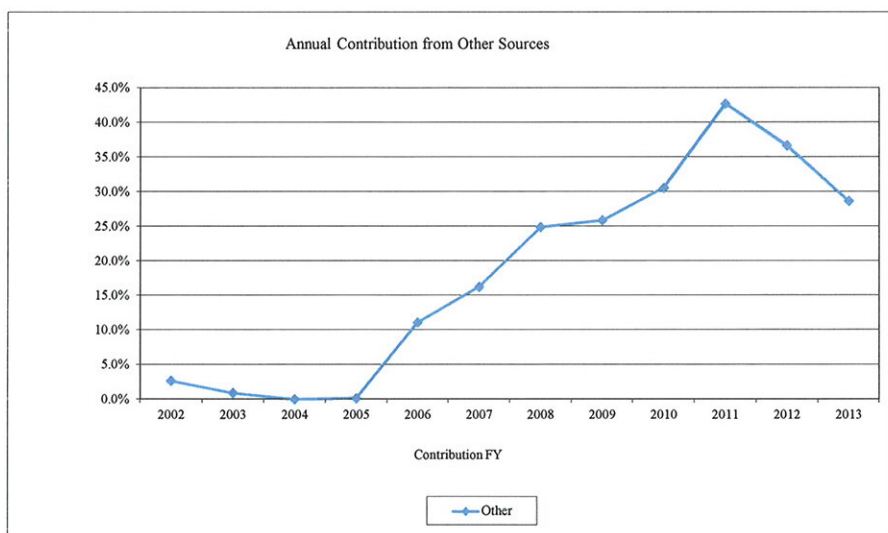
Glencoe Police Pension Funded Ratio

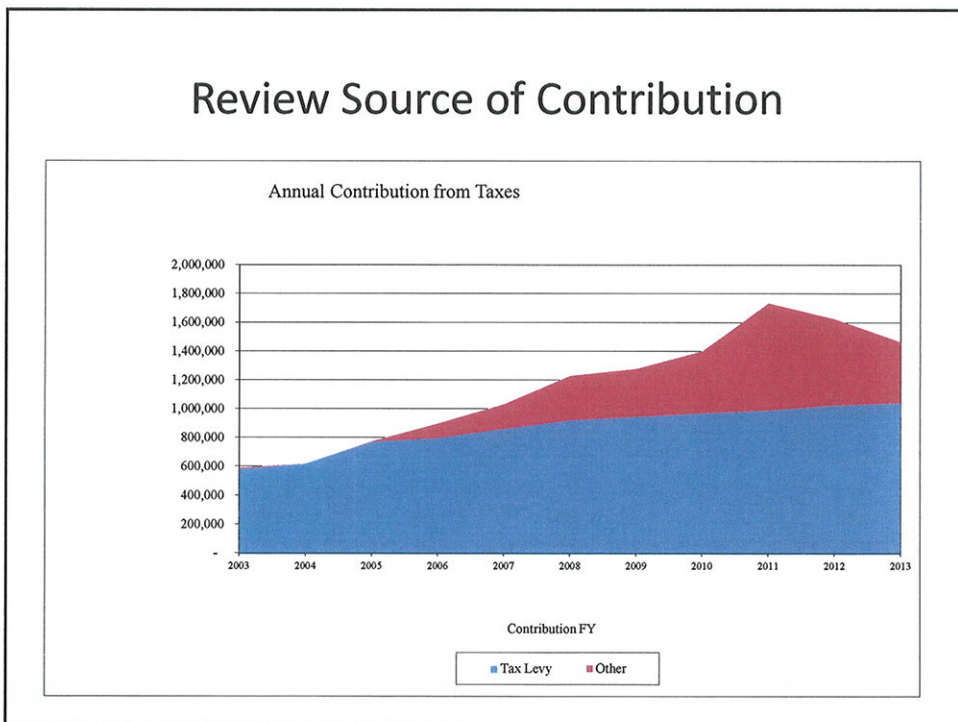
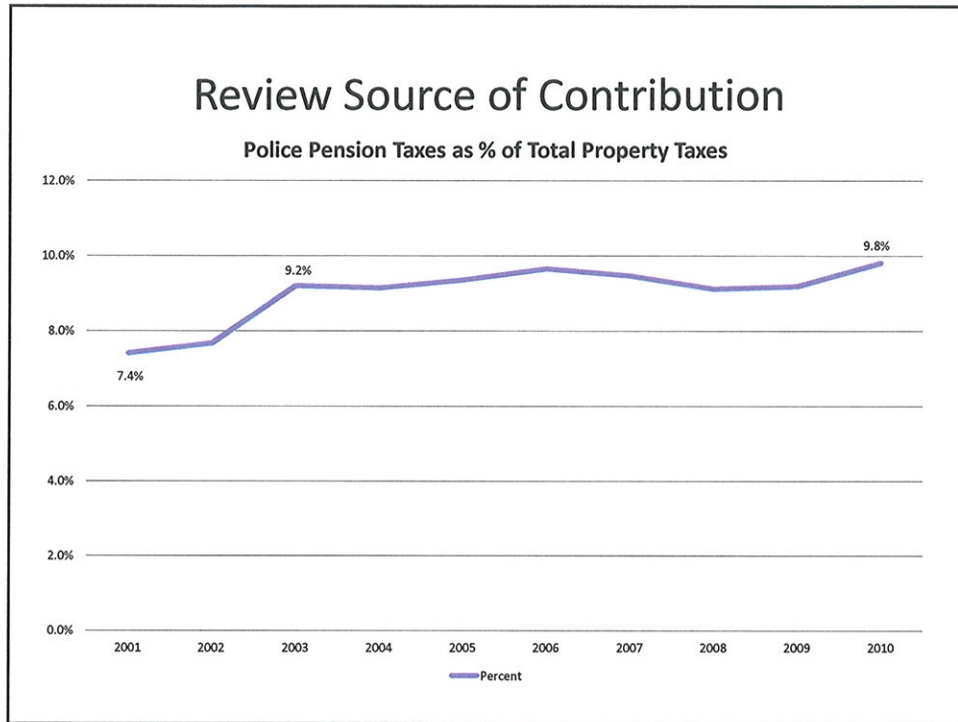


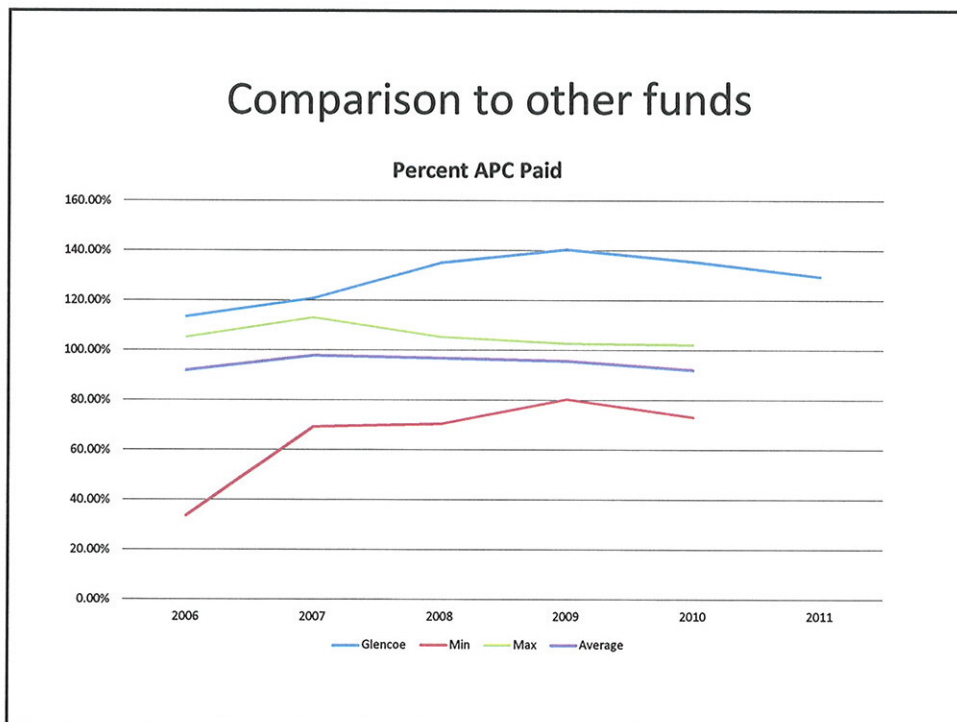
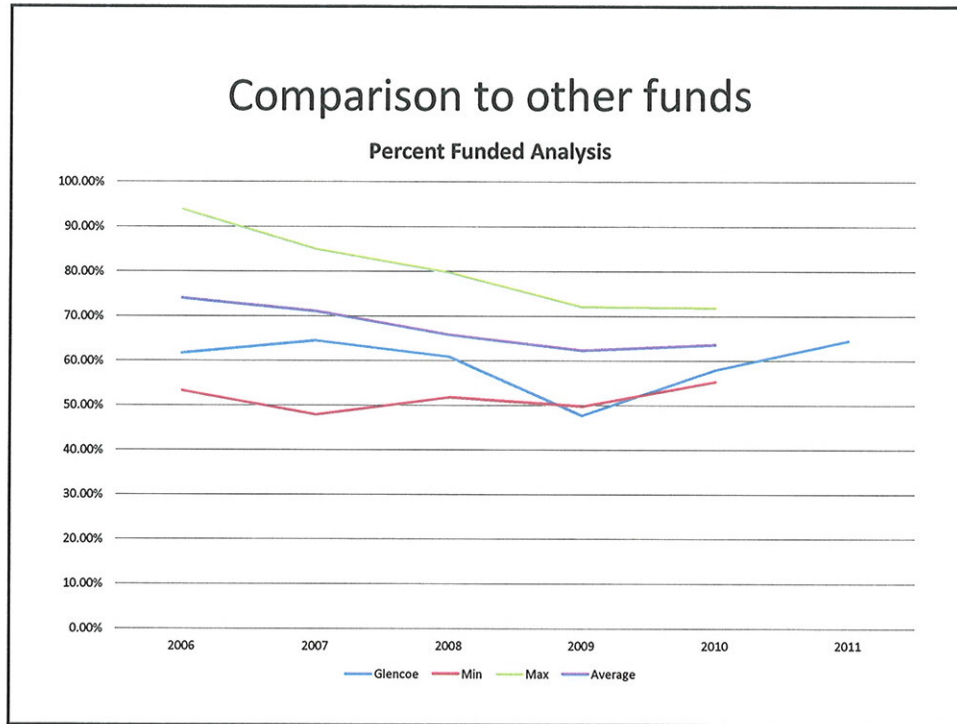
## Review Source of Contribution

- Between FY 2003 and FY 2013 Budget, 24.5% of the Village share of police pension contribution has come from sources other than property tax.
- Since FY 2011 this percentage has declined from 42.7% to 28.7% in the FY 2013 Budget.

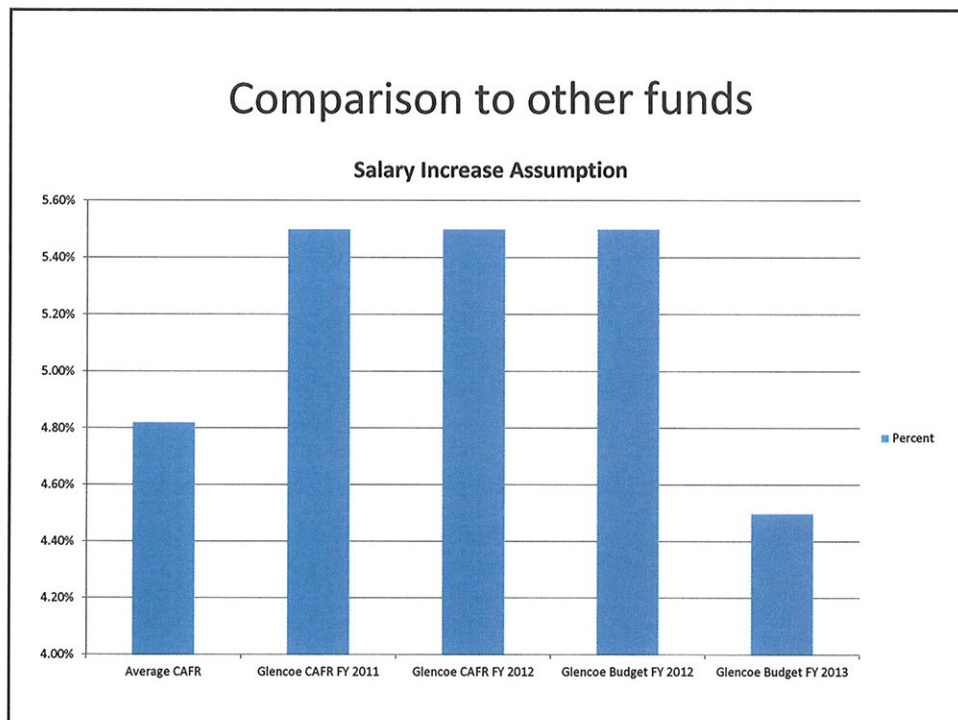
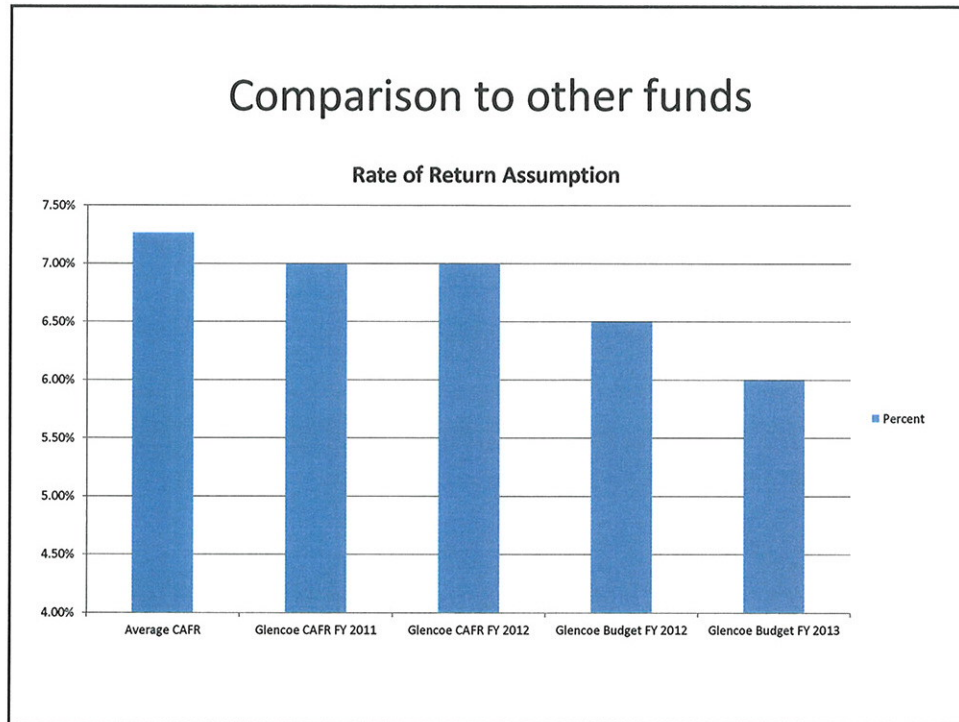
## Review Source of Contribution













Other Issues?

VILLAGE OF GLENCOE  
GLENCOE POLICE PENSION FUND

ROLLING CALENDAR

July Meeting July 18, 2012

1. Discuss Status of Banking and Financial Services RFP
2. Consider Proposal to Manage Corporate Bond Portfolio
3. Review financial activity with Great Lakes Advisors
4. Review quarterly payments and disbursements
5. Rebalance equity portfolio to State of Illinois limits.
6. Begin Review Actuarial Assumptions for 2012 Tax Levy
7. Approve quarterly payments and disbursements.
8. Training: Basic accounting and actuarial training.

October Meeting October 17, 2012

1. Review financial activity with Great Lakes Advisors.
2. Review quarterly payments and disbursements
3. Receive municipal compliance report.
4. Receive copy of Village Comprehensive Financial Report
5. Continue Review of Actuarial Assumptions for 2011 Tax Levy
6. Approve quarterly payments and disbursements.
7. Training: Trustee ethics.

January Meeting January 16, 2013

1. Review financial activity with Great Lakes Advisors.
2. Review investment policy.
3. Review quarterly payments and disbursements.
4. Approve annual budget.
5. Review Annual Calendar
6. Training: Duties and liabilities of pension fund fiduciaries.

April Meeting April 17, 2013

1. Certify Election of Retired Pension Fund Member (Biennial)
2. Select President, Vice President, Secretary and Assistant Secretary
3. Review financial activity with Great Lakes Advisors.
4. Review quarterly payments and disbursements
5. Training: Illinois Open Meetings Act and Freedom of Information Act

Basic accounting and actuarial training

Sources:

Village of Glencoe Comprehensive Financial Report  
Lauterbach & Amen  
Government Finance Officers Association  
Watson Wyatt  
Tim Sharpe, Village Actuary

## CHAPTER 7

# FIDUCIARY FUNDS, JOINT VENTURES, AND OTHER MULTIPARTY ARRANGEMENTS

A government's core activities are reported as *governmental funds* and *proprietary funds* in the fund financial statements, and as *governmental activities* and *business-type activities* in the government-wide financial statements. A government also may participate in arrangements that are *not* reported as governmental or proprietary funds, and which are either *excluded* altogether from the government-wide financial statements or *reported* there only *indirectly*. Such arrangements—which include fiduciary funds, joint ventures, and other multiparty arrangements—are the subject of this chapter.

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### FIDUCIARY FUNDS

Generally accepted accounting principles (GAAP) prescribe the use of fiduciary funds "to report assets held in a trustee or agency capacity for others and therefore cannot be used to support the government's own programs."<sup>1</sup> Those for whom assets are held in a trustee or agency capacity commonly include individuals (such as pension plan participants and beneficiaries), private organizations (such as university foundations), and other governments (such as local government investment pools). Because the resources of fiduciary funds, by definition, cannot be used to support the government's own programs, such funds are specifically *excluded* from the government-wide financial statements.<sup>2</sup>

#### Fiduciary responsibilities versus fiduciary funds

Not all fiduciary arrangements are properly reported as fiduciary funds. Rather, GAAP explicitly state that trust funds and agency funds are to be used solely to account for resources that are *held* by the government. For example, a local governmental employer participating in a statewide, multiple-employer pension plan would *not* report a pension trust fund to account for its share of assets accumulated by the statewide plan, even

<sup>1</sup> GASB Statement No. 34, *Basic Financial Statements—and Management's Discussion and Analysis—for State and Local Governments*, paragraph 69.

<sup>2</sup> GASB Statement No. 34, paragraph 12.

though that employer has fiduciary responsibilities to its employees in connection with its participation in the statewide pension plan. Instead, the state government, which actually holds the assets, would report a pension trust fund.

Two criteria may be used to determine whether a government is, in fact, holding assets in connection with its fiduciary responsibilities to individuals, private organizations, or other governments. A government is considered to be holding any assets: 1) for which it performs the investment function; or 2) with which the government has *significant* administrative involvement (for example, involvement that goes beyond the remittance of predetermined amounts<sup>3</sup> to a third party).

**Specialized guidance for pension (and other employee benefit) trust funds**

Detailed specialized guidance on accounting and financial reporting for pension plans is provided elsewhere in this book.<sup>4</sup> All the same, several aspects of pension (and other employee benefit) trust fund accounting will be addressed here as part of a general examination of fiduciary fund accounting.

*Deferred compensation plans*

Many state and local governments sponsor Internal Revenue Code (IRC) Section 457 deferred compensation plans for the benefit of their employees. In many cases, the governments that sponsor such plans remit the amounts withheld from employees directly to a third-party administrator (such as an investment firm or insurance company). In most situations involving third-party administrators, the sponsoring government's practical involvement in administering the plan is essentially limited to remitting the amounts collected from employees to the plan administrator. In that case, the use of a fiduciary fund to account for the assets of the deferred compensation plan would *not* be appropriate, because the government is not properly considered to be holding the assets.

There are instances, however, where state and local governments do, in fact, hold the assets of IRC Section 457 plans. For example, the state treasurer may directly invest the assets of the state's own IRC Section 457 plan on behalf of employees; or, a government may hire investment managers to perform the investment function while the government maintains significant oversight of the managers' activities. In that case, the sponsoring government is considered to be holding the plan's assets and would need to report its stewardship of those assets in a pension (and other employee benefit) trust fund.

Governments also may participate in other types of deferred compensation arrangements, such as 401(k) and 403(b) plans. While GAAP provide no specific guidance on the appropriate accounting and financial reporting for such plans, the approach described for IRC Section 457 plans appears equally suitable for other types of deferred compensation arrangements.<sup>5</sup>

*Recognition of pension plan contributions receivable*

GAAP require that employers participating in defined benefit pension plans report a liability on the face of their financial statements if they fail to fully fund their actuarially determined annual required contribution. The employer's act of reporting such a liability, however, is *not* sufficient basis

<sup>3</sup> For example, amounts calculated in conformity with a predetermined formula.

<sup>4</sup> See chapter 15.

<sup>5</sup> GASB Statement No. 32, *Accounting and Financial Reporting for Internal Revenue Code Section 457 Deferred Compensation Plans*, paragraphs 15 and 18.

to justify the pension trust fund reporting a corresponding receivable on the statement of plan net assets and a related addition on the statement of changes in plan net assets.

Rather, GAAP specifically indicate that a pension (and other employee benefit) trust fund may report a contribution receivable only "pursuant to formal commitments as well as statutory or contractual requirements." For example, recognition of a receivable from a contributing employer would be appropriate if the employer's governing body had appropriated the contribution. Similarly, a receivable should be recognized in situations where a contributing employer has demonstrated a consistent pattern of making required payments for the previous year subsequent to the pension plan's reporting date.<sup>6</sup>

**Exclusion of the actuarial accrued liability**

The estimated present value of the pension benefits owed to pension plan participants and beneficiaries based on services already rendered is known as the actuarial accrued liability. As its name implies, this amount is an *actuarial* obligation rather than an *accounting* liability, and so is *not* reported on the face of the statement of fiduciary net assets. GAAP mandate, however, that trend data on the actuarial accrued liability be presented as required supplementary information.<sup>7</sup>

**Reassignment of employee asset balances**

When a single pension system administers multiple individual pension plans, member account asset balances sometimes may be reassigned among plans to reflect employment changes, such as employees being reassigned to another department or agency. Such reassignments should be reported as additions and deductions for each plan involved rather than as transfers among plans.

**Specialized guidance for investment trust funds**

GAAP direct that external government investment pools be reported in investment trust funds.<sup>8</sup> Not all pooling arrangements, however, constitute an external investment pool for this purpose, so it is important to clearly identify situations that require the use of an investment trust fund.

Four key criteria that must be met for an arrangement to qualify as an external investment pool:<sup>9</sup>

- *Commingling of assets.* An investment *pool* necessarily involves the *commingling* of assets from more than one source. If individual participants can be identified with specific investments, there is an absence of commingling, and the arrangement does not constitute a *pool*.
- *External participation.* To qualify as an *external* government investment pool, a pooling arrangement must include *at least one legally separate participant from outside the financial reporting entity*. When a single arrangement pools internal and external resources, creating a mixed pool, only the portion of pool assets attributable to participants outside the financial reporting entity is treated as an *external* investment pool.

<sup>6</sup> GASB Statement No. 25, *Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans*, paragraph 22.

<sup>7</sup> This requirement does *not* apply to pension plans that use the aggregate actuarial cost allocation method because that particular method does not identify or separately amortize unfunded actuarial liabilities.

<sup>8</sup> GASB Statement No. 34, paragraph 71.

<sup>9</sup> GASB Statement No. 31, *Accounting and Financial Reporting for Certain Investments and for External Investment Pools*.

- *Investment focus.* The *primary purpose* of an investment pool is to *generate income*. When investment pooling is strictly ancillary to some other purpose—such as investment pooling during the construction phase of a joint venture—the arrangement does not qualify as an *investment pool*.
- *Participants as beneficiaries.* Sometimes all income from commingled moneys accrues to the benefit of the investing government rather than to participants from outside the financial reporting entity. An example is a situation involving a county treasurer acting as custodial agent for the investments of special-purpose governments within the county's jurisdiction. Such arrangements do not qualify as *external investment pools* because, from the perspective of the outside participants, positions in such pools are not investments.

It is important to note that pools need not be permanent arrangements. For example, moneys may be pooled and invested temporarily during the year. In such cases, an investment trust fund must be used, *even if no pooled resources are outstanding at the end of the fiscal period*. In this case, the investment trust fund would report only a statement of changes in fiduciary net assets to account for activity related to the investments of outside parties during the period.<sup>10</sup>

Property taxes often are collected by one government on behalf of other governments. Typically, there is a delay between when the taxes are collected and when they are remitted to the appropriate governments. These amounts may be invested in a pool during this period. The collecting government should *not* report an investment trust fund in connection with these assets because they do not qualify as investments; that is, the assets are not pooled primarily to generate income on behalf of participants.<sup>11</sup>

A number of other arrangements that include investing activities also do not qualify as external investment pools because their primary purpose, once again, is something other than generation of income. For example, sometimes governments establish joint ventures for constructing and operating certain facilities, such as a sewage treatment plant. Such an arrangement should *not* be considered an external investment pool even if, during the construction phase, the joint venture realizes significant investment income from idle construction funds. Investment activities, though substantial during the construction phase, ultimately remain incidental to the joint venture's basic purpose, which is the construction and operation of a plant.<sup>12</sup>

Public-entity risk pools<sup>13</sup> and venture capital limited partnerships<sup>14</sup> are other examples of arrangements that would *not* qualify as external investment pools because their primary purpose is not generation of income. The primary purpose of a public-entity risk pool is to manage liability exposure; a venture capital limited partnership is intended primarily to serve as a mechanism for raising capital.

<sup>10</sup> GASB Statement No. 31, *Implementation Guide*, question 90.

<sup>11</sup> GASB Statement No. 31, question 91.

<sup>12</sup> GASB Statement No. 31, question 95.

<sup>13</sup> GASB Statement No. 31, question 96.

<sup>14</sup> GASB Statement No. 31, question 97.

## CHAPTER 15

# REPORTING FOR SPECIALIZED ENTITIES

The jurisdiction of the Governmental Accounting Standards Board (GASB) extends to *all* state and local governments, regardless of size or purpose. A shared standard-setting body, however, does not indicate that accounting and financial reporting are identical for all types of governmental units. Rather, generally accepted accounting principles (GAAP) provide extensive guidance for specialized entities. This chapter examines this specialized guidance, as well as certain situations in which special-purpose governments can combine government-wide and fund financial statements into a single presentation.

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### PENSION PLANS

The basic GAAP requirements for pension plan reporting are provided by GASB Statement No. 25, *Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans*. In addition, the Government Finance Officers Association (GFOA) furnishes guidelines<sup>1</sup> governing the presentation of comprehensive annual financial reports (CAFRs) of public employee retirement systems (PERS).<sup>2</sup>

The CAFR of a PERS builds on the same basic structure used for CAFRs of state or local governments.<sup>3</sup> Special issues arise, however, in connection with the following features:

- financial statement presentation and note disclosure
- required supplementary information (RSI)
- supporting schedules
- investment section
- actuarial section
- statistical section
- postretirement healthcare benefits
- securities lending arrangements

<sup>1</sup> *Pension CAFRs: Guidelines for the Preparation of a Public Employee Retirement System Comprehensive Annual Financial Report* (GFOA, 1996).

<sup>2</sup> A PERS is a special-purpose government that administers one or more defined benefit pension plans and, sometimes, other types of employee benefit plans, including defined contribution, deferred compensation, and postemployment healthcare plans.

<sup>3</sup> See chapter 13.



### Financial statement presentation and note disclosure

A PERS may administer more than one pension plan. GAAP require that the PERS basic financial statements present information separately for each pension plan the PERS administers. This requirement can be met in one of two ways:

- *Separate columns.* For each pension plan, a PERS may present separate columns on the face of the statement of plan net assets and the statement of changes in plan net assets.
- *Combining statements.* A PERS may include combining statements *within the basic financial statements* to support the single column reported for pension trust funds on the face of the PERS statement of plan net assets and the statement of changes in plan net assets.<sup>4</sup>

A pension *plan* is an arrangement where all assets accumulated for the payment of benefits may be used to pay any beneficiary. If certain assets are legally restricted to the payment of certain beneficiaries, then there is more than one pension plan for financial reporting purposes.<sup>5</sup>

### Statement of plan net assets

Pension plans and other fiduciary funds use the same two basic financial statements. Still, the authoritative guidance regarding the contents of these two statements is more detailed for pension plans than it is for other types of fiduciary funds.

All assets of a pension plan (such as cash and cash equivalents, receivables, investments, assets used in plan operations) should be reported by category in the statement of plan net assets. Receivables and investment balances should be further subdivided into their principal components. The pension plan should recognize a receivable for contributions when due, but only if there is a statutory or legal requirement to make the contribution, or if the employer makes a formal commitment to contribute. Brokerage commissions and other costs typically associated with the sale of investments should be deducted from the fair value of investments, if material. Capital assets used in plan operations should be reported at their historical cost and depreciated over their estimated useful life.

The statement of plan net assets should report only accounting rather than actuarial liabilities. Examples of such accounting liabilities are obligations for benefits and refunds due and payable to plan members and beneficiaries, as well as accrued investment and administrative expenses.

Sometimes pension plans purchase *allocated insurance contracts*, annuity contracts to benefit specific beneficiaries. Such contracts and related liabilities should *not* be reported on the pension plan's statement of plan net assets.

The difference between plan assets and plan liabilities is to be reported as *net assets held in trust for pension benefits*. This caption must be accompanied by a parenthetical reference to the schedule of funding progress.

### Statement of changes in plan net assets

All changes in plan net assets that occurred during the period must be reported in one of two categories: *additions* and *deductions*. Additions to plan net assets should be reported in the following categories:

<sup>4</sup> GASB Statement No. 34, *Basic Financial Statements—and Management's Discussion and Analysis—for State and Local Governments*, paragraph 140.

<sup>5</sup> It is possible to have separate actuarial valuations, or even separate *reserves, funds, or accounts*, and still be a single pension plan, provided all assets accumulated to pay benefits may legally be used to pay any beneficiary. Conversely, resource pooling for investment purposes does not mean there is a single pension plan if certain assets may only be used to pay certain beneficiaries. Agent multiple-employer plans, however, should always be treated as a single pension plan (GASB Statement No. 25, paragraphs 15-16).

- contributions from employers
- contributions from plan members (even if transmitted by the employer)
- contributions from other sources (for instance, state contributions to a school district plan)
- net investment income:
  - net appreciation (depreciation) in investments reported at fair value
  - interest income, dividend income, and other income
  - less: total investment expense (for instance, investment management and custodial fees)<sup>6</sup>

Deductions to plan net assets should be reported in the following categories:

- benefits and refunds paid to plan members and beneficiaries
- total administrative expense (excluding investment-related expenses)

Note that realized investment income may *not* be reported separately from unrealized investment income on the face of the statement of changes in plan net assets. Pension plans may disclose realized gains and losses, however, in the notes to the financial statements. Also, note that investment-related expenses are to be treated as a reduction in the additions category of the statement of changes in plan net assets, not as a deduction.

#### Note disclosures

The following disclosures must be provided in the PERS report:

- plan description
  - type of pension plan (such as “single-employer defined benefit plan”) and the number of participating employers and other contributors
  - classes of employees covered and current membership, including the number of retirees and others currently receiving benefits, terminated employees entitled to receive benefits in the future, and current active plan members (A PERS should disclose if the plan is closed to new entrants.)
  - a brief description of benefit provisions and the authority for establishing or amending those provisions
- summary of significant accounting policies
  - basis of accounting (such as timing of contribution recognition, benefits, and refunds)
  - method used to determine the fair value of investments
- contributions and reserves
  - authority for establishing or amending the obligation to make contributions
  - how contributions are determined (by statute, for instance) and how administrative costs are financed
  - required contribution rates for active members of the plan

<sup>6</sup> Investment expense should be reported separately unless it cannot readily be distinguished from investment income or administrative expense. Other elements of net investment income may be combined.

- terms of long-term contracts for contributions and the amount outstanding as of the plan's reporting date
- balances in legally required reserves or designations as of the plan's reporting date (reserves result from the actions of outside parties, while designations result from action of the plan's own governing body); also, the purpose and funded status of each reserve or designation
- concentrations of 5 percent or more of the plan's net investments in securities of a single organization (other than the U.S. government)<sup>7</sup>

**RSI**

In addition to the two basic financial statements and various note disclosures, defined benefit pension plans also are required to provide two schedules of long-term actuarial data. Typically, these schedules are presented as RSI immediately following the notes to the financial statements.

*Schedule of funding progress*

Defined benefit pension plans are required to present the following data as of the plan's reporting date for the past six consecutive fiscal years:

- actuarial valuation date
- actuarial value of plan assets<sup>8</sup>
- actuarial accrued liability (calculated using the cost allocation method selected for funding purposes within the parameters established by GAAP)
- total unfunded actuarial liability (actuarial accrued liability less actuarial value of plan assets)
- funded ratio (actuarial value of assets as a percentage of the actuarial accrued liability)
- annual covered payroll
- ratio of the total unfunded actuarial liability to annual covered payroll

The schedule of funding progress need not be presented for pension plans that use the aggregate actuarial cost method (which does not identify or separately amortize unfunded actuarial liabilities).

*Schedule of employer contributions*

The following data must be presented as of the plan's reporting date for the past six consecutive fiscal years:

- annual required contributions (in dollars) based on the parameters set by GAAP
- percentage of annual required contributions recognized as contributions from employers in the plan's statement of changes in plan net assets

When parties other than the employer or employees contribute to the plan, their contributions should be reported as well, and the schedule should be titled accordingly: "Schedule of contributions from employers *and other contributing entities*."

<sup>7</sup> This disclosure requirement, which is aimed at highlighting potentially inadequate diversification, does not apply to positions in pools or mutual funds.

<sup>8</sup> This would be the valuation used for actuarial purposes, which usually is a smoothed average value, and thus would differ from the fair value reported on the statement of plan net assets.

**Notes to the schedules of trend information**

Notes should be attached to the schedules of RSI to address the following topics:

- actuarial cost method
- method used to value assets
- assumed inflation rate
- assumed investment return
- assumed projected salary increases
- assumed postretirement benefit increases
- amortization method (level dollar or level percentage of projected payroll)
- amortization period (equivalent single amortization period if multiple amortization periods are being used)
- selection of *open* or *closed* amortization approach
- if the aggregate method is used, a disclosure that the aggregate method does not identify or separately amortize unfunded actuarial liabilities (the method produces no measure of the unfunded actuarial liability)
- factors that affect trends (such as changes in benefits, material changes in the size or composition of the plan's population, changes in actuarial methods or assumptions)

**Supporting schedules**

Under the GFOA guidelines, the following supporting schedules should also be included within the financial section of a PERS CAFR:

**Schedule of administrative expenses**

As discussed earlier, the statement of changes in plan net assets should report *administrative expenses* as a separate item. This amount should be supported by a schedule of administrative expenses. If the pension plan reports depreciable assets, depreciation expense should be reported on this schedule.

**Schedule of investment expenses**

The statement of changes in plan net assets reports investment expense as a reduction of investment income in the *additions* section of the statement. This amount should be supported by a schedule of investment expenses.

**Schedule of payments to consultants**

The final recommended supporting schedule is the schedule of payments to consultants. This schedule is used to provide information on fees paid to outside professionals other than investment advisors (such as actuaries, auditors, legal counsel, benefits consultants). While it is desirable to itemize amounts paid by individual or firm, this level of detail is not required.

**Investment section**

Under the GFOA guidelines, every PERS CAFR should include a separate investment section in addition to the introductory, financial, and statistical sections required of all CAFRs. The recommended contents of this section, described below, are:

- a report on investment activities
- an outline of investment policies
- investment results
- asset allocation
- a list of largest assets held
- a schedule of fees and commissions
- an investment summary

*Report on investment activities*

The investment section should begin with a report prepared by the investment consultant. If the retirement system does not engage the services of an investment consultant, the report on the investment section should be prepared by an individual with responsibility for overseeing the retirement system's investments (the chief investment officer, perhaps). One purpose of the report on investment activity is to reassure readers concerning the reliability of the information presented in the investment section of the CAFR. The report also should indicate the basis of presentation for the data reported in the investment section. Pension plans are strongly encouraged to present investment information to the greatest degree possible in conformance with the presentation standards of the Association for Investment Management and Research. In addition, the report should discuss the retirement system's investment objectives and any other topics deemed relevant.

*Outline of investment policies*

The report should include a brief outline of the retirement system's investment policies. Issues of corporate governance and the use of proxies should be discussed as part of this outline, if relevant.

*Investment results*

A schedule of investment results should present the rate of return for each major category of investments and for the total portfolio for different periods. It is recommended that information on the rate of return be presented at least for the latest 12 months, along with annualized rates of return for the preceding three- and five-year periods. Additional information could be presented (for instance, rate of return each year for the past five years or annualized 10-year information). Moreover, rates of return should be matched with appropriate benchmark indices (such as Lehman Brothers, Salomon Brothers, Standard & Poors). Peer benchmarks also could be provided (for instance, other public funds, small capitalization managers, international benchmarks). Finally, the schedule of investment results should indicate, either in a narrative preface or in a footnote, the basis for the calculations (for example, time-weighted rate of return based on the market rate of return).

*Asset allocation*

The CAFR's investment section also should include information on asset allocation. The many different ways that such information could be presented include the following:

- asset allocation as of year-end presented in pie chart form
- asset allocation as of year-end presented as several pie charts (for instance, representing total asset allocation, equity manager's asset allocation, fixed-income manager's asset allocation)
- an area graph showing changes in asset allocation over a given period
- a percentage chart showing changes in asset allocation over a given period
- a comparison of target and actual allocations (when a retirement system uses target allocations)
- narrative description of asset allocation as of year-end and changes in asset allocation over a given period

Also, information on prior asset allocation should be presented in any year there is a significant change in allocation. In addition to presenting information on asset allocation, preparers of CAFRs for retirement systems are

<i>List of largest assets held</i>	advised to consider presenting other information that may be useful to readers in assessing risk.
<i>Schedule of fees and commissions</i>	It is not practical to include a list of the entire investment portfolio in the CAFR. It can be useful to readers, however, to present a list of the portfolio's largest holdings. Typically, such a presentation would include information on the 10 largest bond holdings and the 10 largest stock holdings. Holdings should be reported in the aggregate by individual issue and should be ranked according to their relative dollar value. It is recommended that the list of largest assets inform readers that a complete list of the portfolio's holdings is available.
<i>Investment summary</i>	The fees portion of the schedule of fees and commissions should report fees (and optionally, basis points) by category, along with an indication of assets under management. The commissions portion of the schedule of fees and commissions may report the name of each firm receiving a commission, the number of shares traded, the total value of commissions, and the amount of commissions per share. Alternatively, information on commissions may be reported at some other level of detail or in the aggregate. The schedule also should fully disclose any commission recapture arrangements, directed payments to third parties, or similar arrangements.
<i>Actuarial section</i>	The CAFR's investment section also should present an investment summary, reporting the fair value and percent of total fair value for each major type of investment.
<i>Actuarial section</i>	Under the GFOA guidelines, every PERS CAFR should contain an actuarial section in addition to the introductory, financial, investment, and statistical sections. The recommended contents of this section, described below, are: <ul style="list-style-type: none"> <li>• actuary's certification letter</li> <li>• summary of actuarial assumptions and methods</li> <li>• schedule of active member valuation data</li> <li>• schedule of retirants and beneficiaries added to and removed from rolls</li> <li>• solvency test</li> <li>• analysis of financial experience</li> <li>• independent actuarial review opinion (if available)</li> <li>• changes in plan provisions</li> </ul>
<i>Actuary's certification letter</i>	The actuary's certification letter should be addressed to the plan's administrative board and should be signed and dated by the actuary or actuaries having primary responsibility for the valuation. The certification letter should be on the actuary's letterhead, and the signature block should contain professional designations, as appropriate. <sup>9</sup>
<i>Summary of actuarial assumptions and methods</i>	This summary should state the assumptions and methods used in the most recent actuarial valuation.
<i>Schedule of active member valuation data</i>	This schedule should present information on the number of active members, annual payroll for active members, annual average pay for active members, and the percentage increase in average pay for active members. Six years of

<sup>9</sup> As noted later, if the actuary who prepared the certification letter is a member of the retirement system's staff, it is advisable to demonstrate independent review by having an actuary who is not a staff member periodically examine and comment on plan actuarial information.



*Pension Plan Funding*

*Understanding the  
Actuarial Process*

(How Actuaries put out Fires  
Before they Start)

**PENSION PLAN FUNDING —**  
**UNDERSTANDING THE ACTUARIAL PROCESS**  
**(How Actuaries Put Out Fires Before They Start)**

**By: Larry Lang, FSA, Consulting Actuary**

**The Wyatt Company**

The subtitle to this articles resulted from an explanation in fire fighting terms regarding the actuarial process for pension funding. Using such terms, I pointed out that "Actuaries Put Out Fires Before They Start" (Figure 1). Said less figuratively, the actuary attempts to guide decisions today based upon the best guess of the emergence of future assets and liabilities of a pension plan.

**Answering the Tough Questions**

*A critical part of the actuary's work in developing appropriate contribution levels is the certification of actuarial soundness (present and future contributions will fund present and future liabilities).*

In the private sector, a funding standard provides guidelines regarding the appropriate contribution levels.

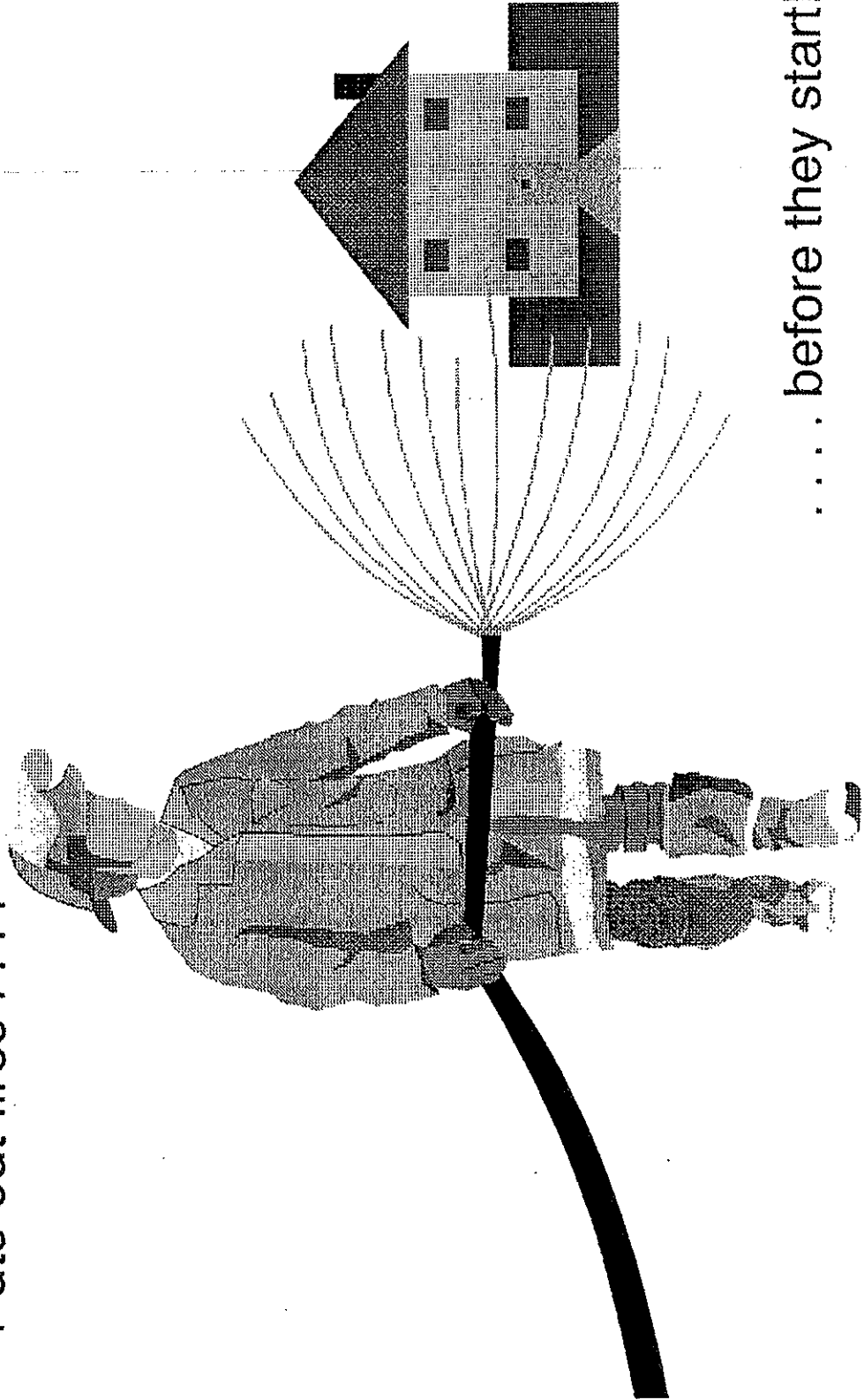
In the public sector there is no legal funding standard (although public plan practitioners follow acceptable practice standards).



FIGURE 1

# ACTUARY

Puts out fires . . . . .



. . . . . before they start!

Since contribution levels are often fixed and the dependent variable is the level of retirement benefits, it is critical that the actuary asks the right questions in order to determine actuarial soundness -- or to determine that a plan is in financial trouble.

Some of the questions which actuaries must ask include the following:

- Are plan sponsor and participant contributions sufficient for actuarial soundness?
- What is the expected benefit payout pattern over the next 20 years?
- What is the expected asset growth pattern over the next 20 years?
- Can additional benefits be supported by current contribution levels?
- How many years will it take to amortize existing liabilities?
- To what extent should actuarial assumptions be modified to reflect current experience?
- How will changes in the work force affect contribution requirements and actuarial soundness in the future?

These are only a few of the questions which must be addressed in determining actuarial soundness. The next step is to determine the appropriate actuarial model for mathematical measurement. The definition of terms used in the following pages can be found in the *Glossary of Terms* at the end of this article.

### **Pay-As-You-Go Financing**

Many years ago, before ERISA, there was no funding standard. In the private sector to some degree, but more notably in the public sector, it was very common to fund benefits on a *pay-as-you-go financing basis*.





On a *pay-as-you-go financing basis*:

$$\text{CONTRIBUTIONS} = \text{BENEFITS}$$

Under this system, as inflation and annual retirements increased benefit payout requirements, the contribution had to be increased. Therefore a pattern of increasing contributions developed, both as a dollar amount and as a percentage of covered payroll. For many sponsors, such increases caused an unacceptable strain on the budget.

*Overall this was not a desirable system.*

#### Today Most Pension Plans Are Funded

As a result of ERISA, all private pension plans have a minimum annual funding requirement. While public plans are not under the ERISA standard, most have followed with orderly funding of long term liabilities.

Over the long haul it could be said for funded plans that:

$$\text{Contributions} = \text{Benefits} + \text{Expenses} - \text{Investment Return on Assets}$$

Under this approach, asset growth cushions the cost of changes in benefit payout patterns. In other words, investment return on assets helps to pay for emerging benefits and expenses.

*The actuarial approach can be designed to anticipate a pattern of level contributions as a percentage of pay in order to provide equity among generations of active members.*

Benefit improvements are not only possible but can be effective overnight, because the increased benefits can be paid for by current assets with future funding paying back those costs to the fund.

*Thus the actuary is needed to make recommendations today based upon mathematical models of the financial future of the plan.*

### Pictorial Representation of Pension System

*Figure 2 illustrates the operation of a funded pension plan.*

As shown, (a) sponsor contributions from operating income or taxation and (b) employee contributions increase the size of the fund. The fund is also increased by its own investment earnings. Reducing the pension fund are benefits to pensioners as well as administrative expenses. Mathematically it can be described as follows:

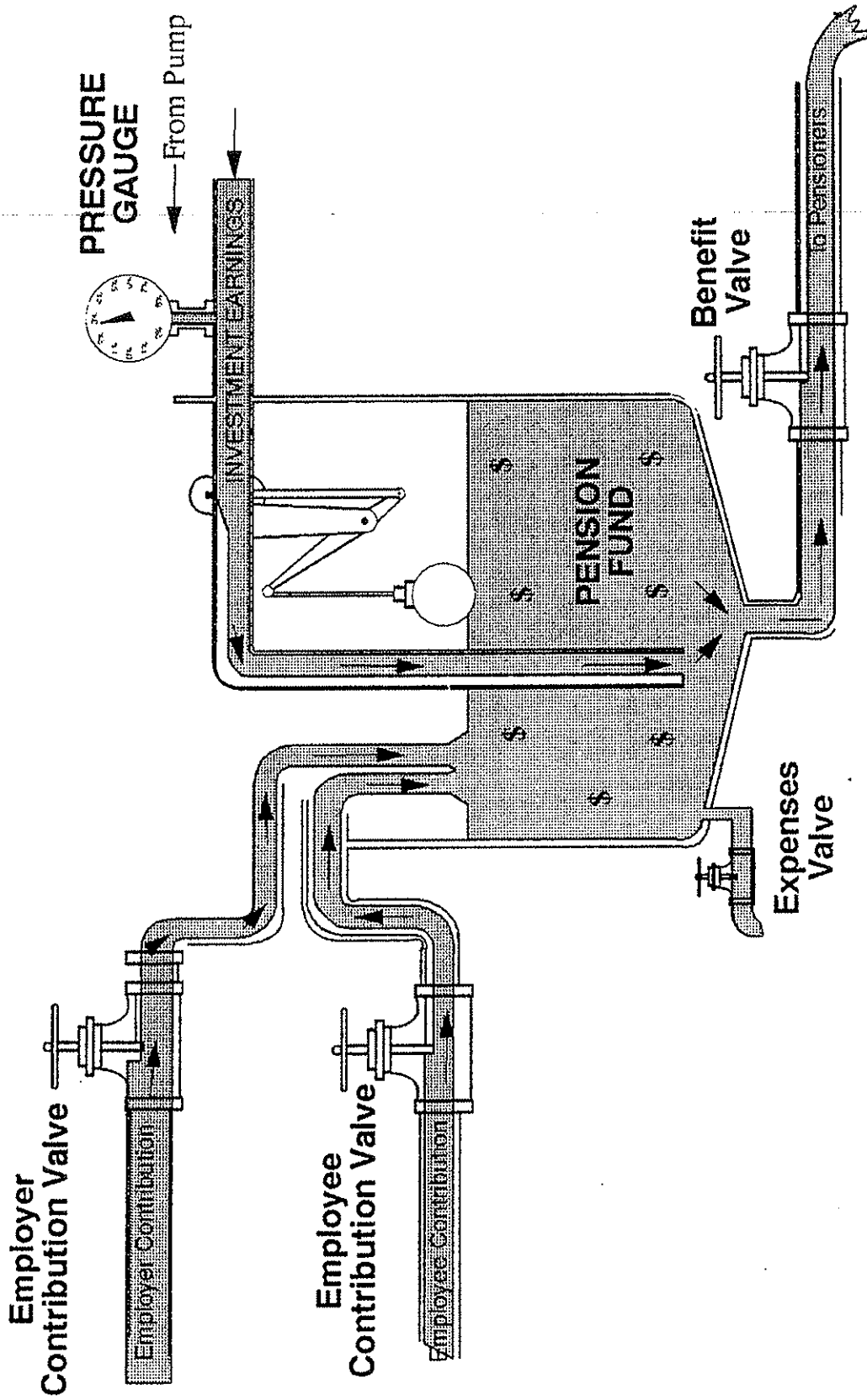
$$\text{Assets this year} = \text{Assets last year} + \text{Contributions} + \text{Investment Return on Assets} - \text{Benefits} - \text{Expenses}$$

Often, plan participants ask "why the fund cannot support higher benefits?" They point out that there are several million dollars in the trust fund and therefore they do not understand why that money cannot be used today.

*To understand why these assets often cannot be used and are, in effect, pledged for future benefits, we need to examine the actuarial model.*

FIGURE 2

# MODEL OF PENSION FUNDING SYSTEM



Adapted from: "ABC's of Pension Funding." *Harvard Business Review*.

**Actuarial Assumptions to Determine Benefit Payout**

While a pay-as-you-go system may not be used for funding, it is necessary to develop the expected payouts from the trust over the next 60 to 70 years in order to form the actuarial building blocks in the pension funding model.

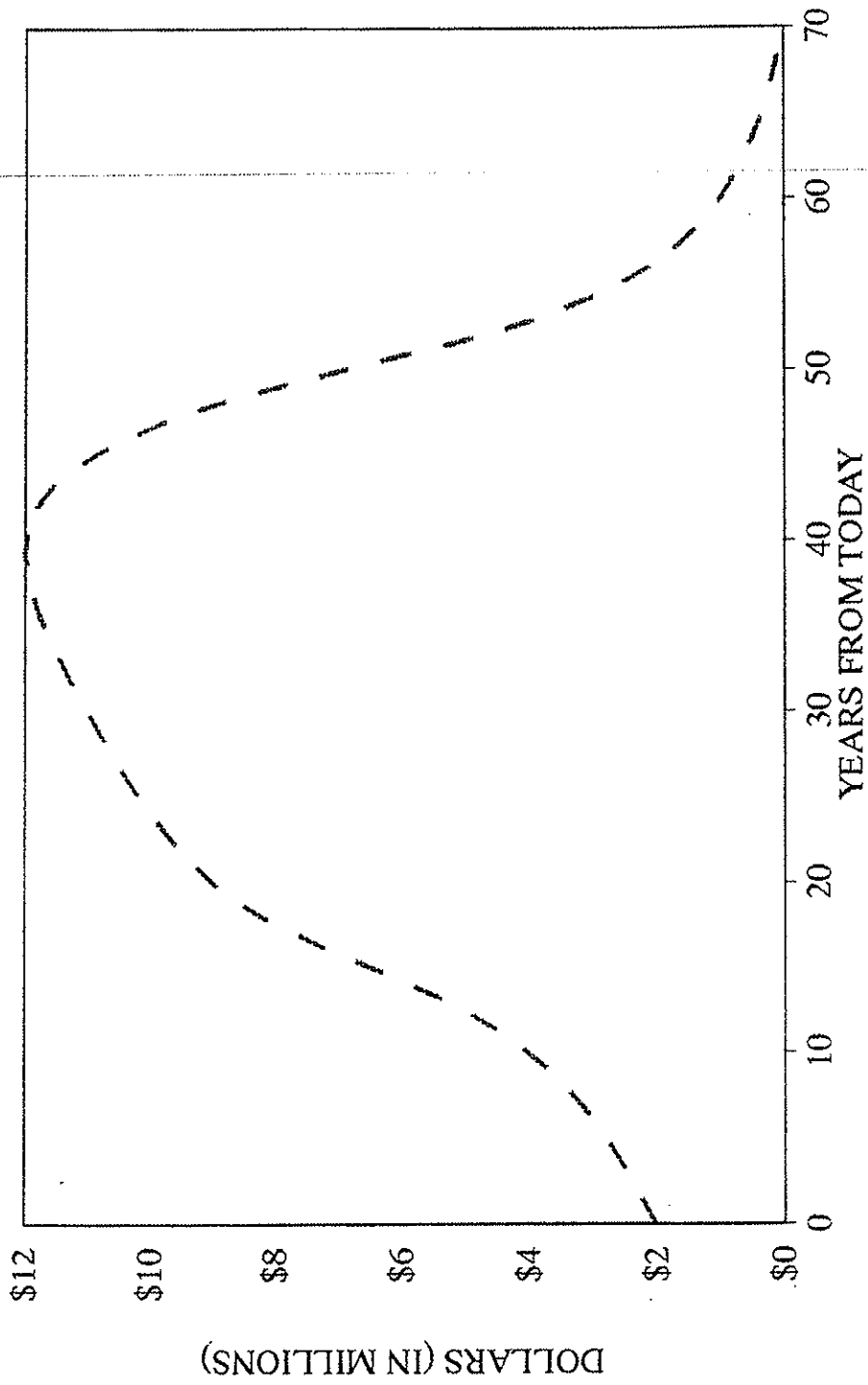
Some of the assumptions required for this purpose include the following:

- Assumed patterns of retirement
- Assumed patterns of death, on and off duty
- Assumed patterns of termination of employment
- Assumed patterns of disability, on and off duty
- Assumed growth in individual participant salary
- Current plan provisions
- Expected cost-of-living benefit adjustments

The actuary collects the various demographic data on current active participants as well as those with deferred or immediate benefits in order to develop the expected benefit payout pattern. *Figure 3 is an illustration of the type of benefit payout projection which might result.*



**FIGURE 3**  
**ASSUMED BENEFIT PAYOUT STREAM**  
**FOR CURRENT PLAN PARTICIPANTS**



Development of the Present Value of Future Benefits

The next step in the funding model is to develop the *Present Value of Future Benefits -- PVFB*.

The PVFB can be thought of as an amount of money, paid one time (today) into the trust fund which entirely pays for the future stream of benefit payouts (which were developed in the last section, shown in Figure 3). (Under this model, future new hires into the system are generally not included in the present value calculations.)

*Thus, the PVFB is said to be the actuarial equivalent of the benefit payout stream.*

Certain assumptions are involved in order to develop this present value. Assumptions on rates of retirement, death, disability and termination have already been incorporated to develop the year by year benefit payout pattern (Figure 3). Once that is developed, these amounts are discounted with interest at the assumed investment return rate to reflect the time value of money. Thus, the investment return assumption is a critical component of the actuarial model. It is selected based upon the long term expected yield of the fund, but is generally understated somewhat to build in conservatism. (Note: Selection of assumptions is beyond the scope of this article.)

Under an *initial funding* concept, the full PVFB of the plan would be paid today. However, this would represent an intolerable level of cost to bear in one period for any plan sponsor. Typically the PVFB would be much larger than the covered payroll. Even if the money were available, it would generally be unfair among generations to pay the full amount in one period.

*Thus, one charge of the actuary is to find an orderly basis for paying off the PVFB over some period of time.*

#### Funding for PVFB in Two Pieces

In basic terms, and ignoring the more intricate rules of the Funding Standard Account in the private sector, the funding requirement is generally determined as the sum of two pieces:

[1] **Normal Cost:**

The normal cost is the pattern of the annual payments required for a plan participant from entry age to retirement age. (These patterns will be discussed in more detail in a later section.)

plus

[2] **Amortization of Unfunded Actuarial Accrued Liabilities**

The development of the second component will also be discussed in more detail in a later section. *At this point it is sufficient to say that this component would not exist but for the fact that (a) the plan was started after expected payment of normal cost, (b) plan experience is different from the actuarially assumed experience and, more importantly, (c) benefits are improved from time to time.* As benefits are improved, there is a need to make up the shortfall since the original pattern of normal cost did not anticipate such improvements.

*This payoff can be thought analogous to the payoff of a home mortgage and is paid over some period of time determined by the actuary and plan sponsor, or by the statutes governing the plan.*

[1] Pattern of Normal Cost

Two actuarial funding methods are commonly used in the funding environment.

*Entry Age Normal cost method (EAN)* generally provides for a pattern of level normal cost as a percentage of pay. This produces a slightly increasing pattern as a dollar amount. This method is most commonly used today in the public and private sector.

*Projected Unit Credit cost method (PUC)* has a pattern which starts out lower than the EAN cost method, but then crosses over to eventually become a larger component than EAN. By design, this method produces results for the individual which increase as a percentage of pay. Depending upon the turnover of the employee population and the membership growth rate of the plan this method may still produce a relatively stable pattern of cost as a percentage of pay. This method is seldom used today in the public sector, though it is used for GASB measures, which we discuss later. It is also used with much frequency in the private sector.

*Present Value of Future Normal Cost (PVFNC)* is, as it says, the present value of the anticipated stream of future normal costs.

*Accumulated Value of Prior Normal Cost (AVPNC)* is another actuarial concept that can be thought of as (a) an amount of money at retirement which exactly equals the amount of money needed to fund the benefit or as (b) an accumulation of all of the prior years' normal cost from entry date in the plan to date of retirement (or some earlier date).

These concepts will be used in later discussion.

It is important to note the following relationship at entry age into the plan:

$$\text{PVFB}_{\text{ENTRY AGE}} = \text{PVFNC}_{\text{ENTRY AGE}}$$

In other words, there is a pattern of benefit payouts for an individual, the present value of which would be PVFB. There is also a pattern of normal costs that are paid in for that individual between entry age and retirement age, the value of which is PVFNC. By definition, at entry age PVFB and PVFNC are equal.

*Using these definitions, the year by year pattern of normal cost for the two funding methods can be illustrated as shown in Figure 4. Again, note that the entry age normal line, while shown to increase as a dollar amount would, in fact, be level if the information were shown on a percentage of pay basis.*

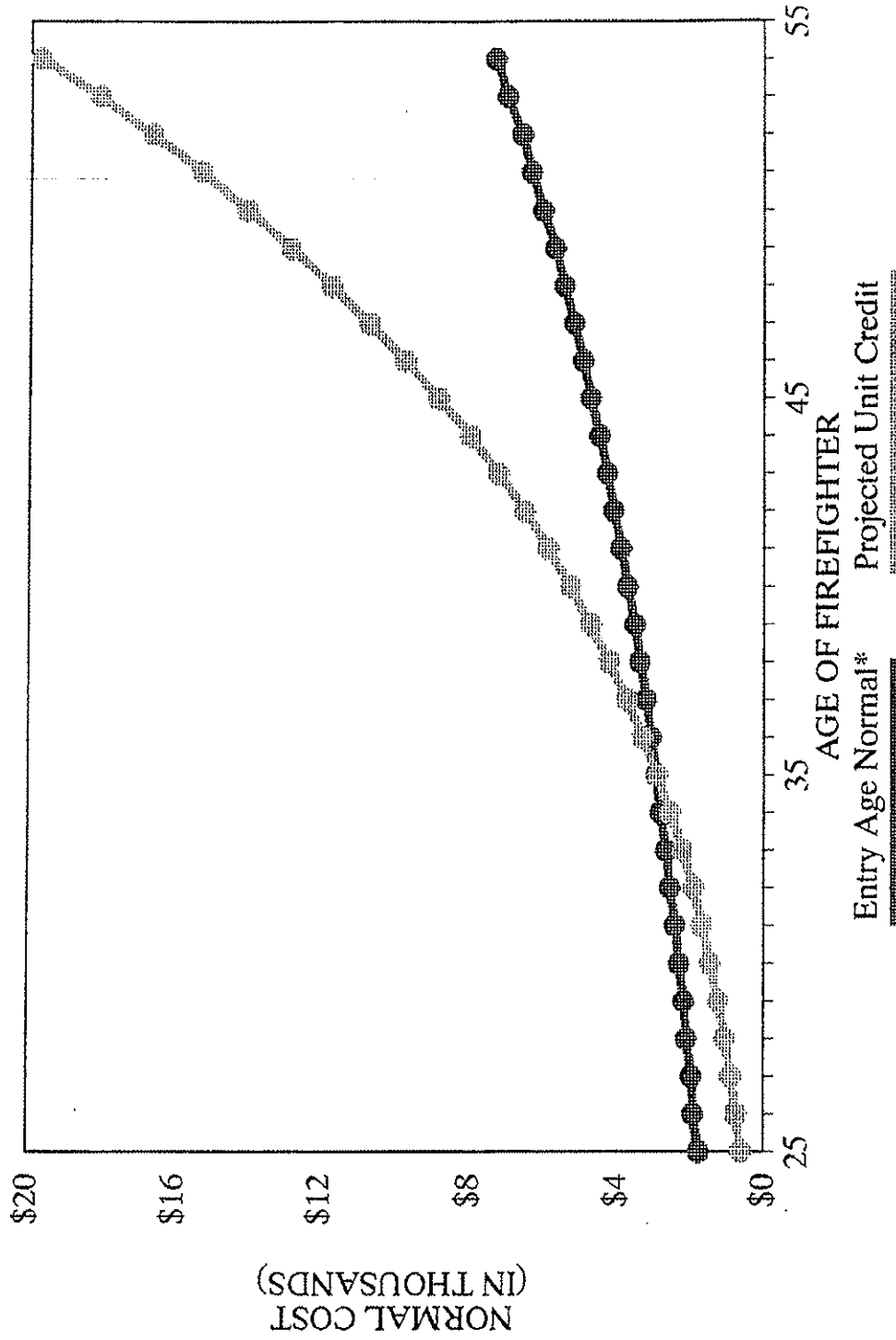
Therefore, the normal cost is a key component in the funding calculation. The second major component deals with paying for a shortfall which can develop after the plan is installed, plan experience emerges and as benefits are improved from time to time.

#### [2] Amortization of Unfunded Actuarial Accrued Liability

*Actuarial Accrued Liability (AAL)* can be thought of as the theoretical assets which have accumulated as of any age of the participant and is equal to, for an individual, the accumulated value of prior years' normal costs (AVPNC).

FIGURE 4

ILLUSTRATION OF PATTERN OF NORMAL COSTS



\* If shown as a percentage of pay, this line would be horizontal.

The AAL is equal to the present value of all future benefits (PVFB) less the present value of future normal cost (PVFNC). Looking at these relationships another way, the present value of future benefits is equal to the sum of (a) the accumulated value of prior normal cost and (b) the present value of future normal costs. *These relationships are summarized in Figure 5.*

*Figure 6 illustrates the growth of the AAL under the EAN cost method.* The top line represents the PVFB and the lower line represents the development of the AAL. The difference between the top line and the bottom line represents the PVFNC. Thus, the AAL may be represented in two ways, retrospectively, based upon (a) the accumulation of prior years normal cost (AVPNC) or prospectively, as the PVFB minus the PVFNC.

*Figure 7 illustrates the same information for the PUC cost method.* Note that the AAL under this method emerges more slowly and thus the PVFNC (which provides for a source of future funding) is relatively larger. Also, at retirement age 55 (the assumed retirement in this example, developed for a public sector plan) the PVFB and AAL become the same, which is the required result.

FIGURE 5

## AMORTIZATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (AAL)

- AAL grows from zero to amount needed at retirement

- Ages:  $E =$  entry age     $X =$  current age

- At entry:  $PVFB_E = PVFNC_E$

- Currently:  $PVFB_X = AVPNC_X + PVFNC_X$

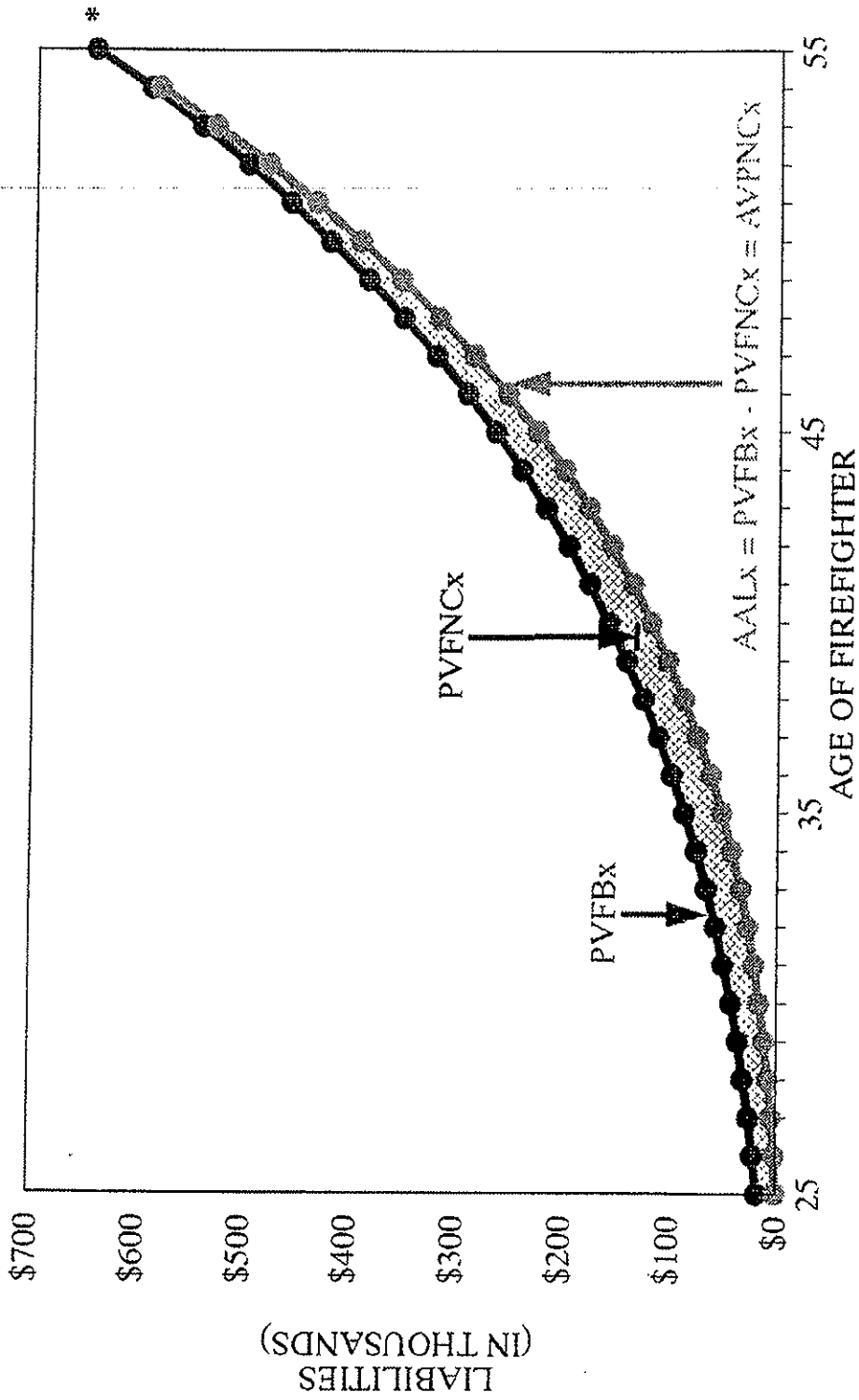
- The result:

$AVPNC_X = \text{accumulated value of prior normal cost}$ $= PVFB_X - PVFNC_X$ $= AAL_X$ <p>or</p> $AAL_X = PVFB_X - PVFNC_X$
---



FIGURE 6

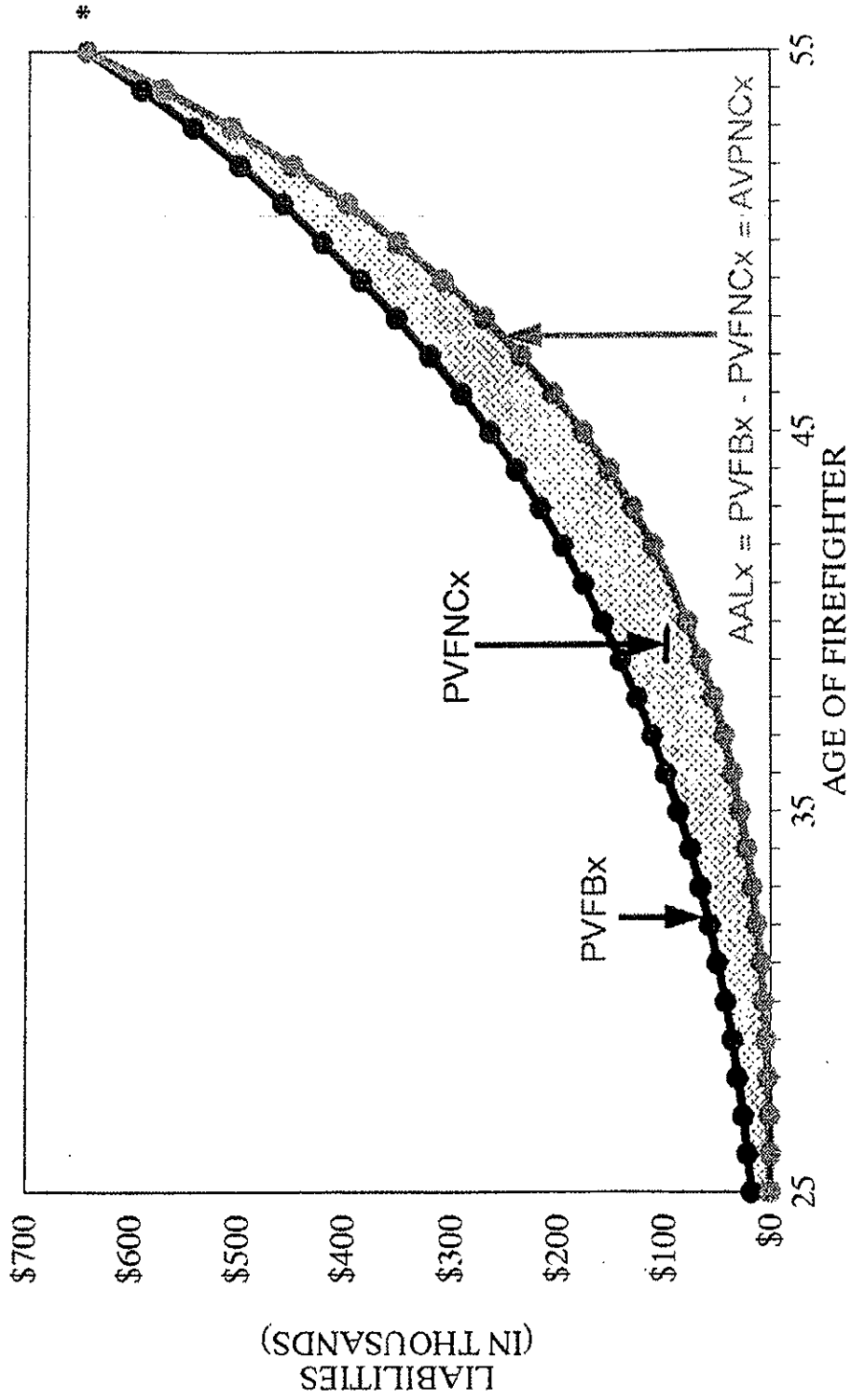
**GROWTH OF ACTUARIAL ACCRUED LIABILITIES (AAL)  
ENTRY AGE NORMAL (EAN)**



\* Amount of money needed at retirement for one firefighter.

FIGURE 7

**GROWTH OF ACTUARIAL ACCRUED LIABILITIES (AAL)  
PROJECTED UNIT CREDIT (PUC)**



\* Same amount of money needed at retirement; slower buildup pattern than EAN; larger PVFNC.

### Uses of Funding Methods

*In the corporate environment*, approximately 31% of salaried plans use the entry age normal cost method and another 12% use the PUC method. In recent years there has been a growing trend in the private sector to use the PUC method. This trend is related to financial accounting rules for corporations and to cash flow considerations. However, the EAN method is still the method predominately used for funding.

*In the public sector environment*, nearly all plans use the entry age normal cost method.

The *Government Accounting Standards Board (GASB)* has developed a universal standard (GASB Statement No. 5) for measuring the funded status of public plans. This status is determined as:

$$\text{Funded Ratio} = \frac{\text{Assets}}{\text{AAL}}$$

For the purposes of developing this funded ratio, the AAL is developed under the PUC method. Based upon very preliminary survey information, it appears that the average funded ratio among major public sector plans is about 85%. This ratio is best understood when compared with the range of results for other similar programs in the public sector.

### Components of Liability

The components of the liability include not only *active participants*, developed as discussed above, but *inactive participants* including:

- Current retirees
- Terminated participants with vested benefits
- Surviving spouses
- Surviving children
- Disabled participants

The concept of the AAL is difficult to grasp. *It may be easier to perceive the AAL as a mathematical tool needed for an orderly pattern of benefit funding.*

### Development of Unfunded Liabilities

*Figure 8 illustrates the AAL with its various components.* Comparing the AAL with the assets of the plan, we note a shortfall due again to late plan installation, experience and benefit improvements. This shortfall is labeled the *Unfunded Actuarial Accrued Liability (unfunded AAL or UAAL).*

In the private sector it is required that such unfunded amounts be amortized in 30 years or less. In the public sector, 30 year periods are common though there is more latitude to fund the liability over shorter or longer periods.

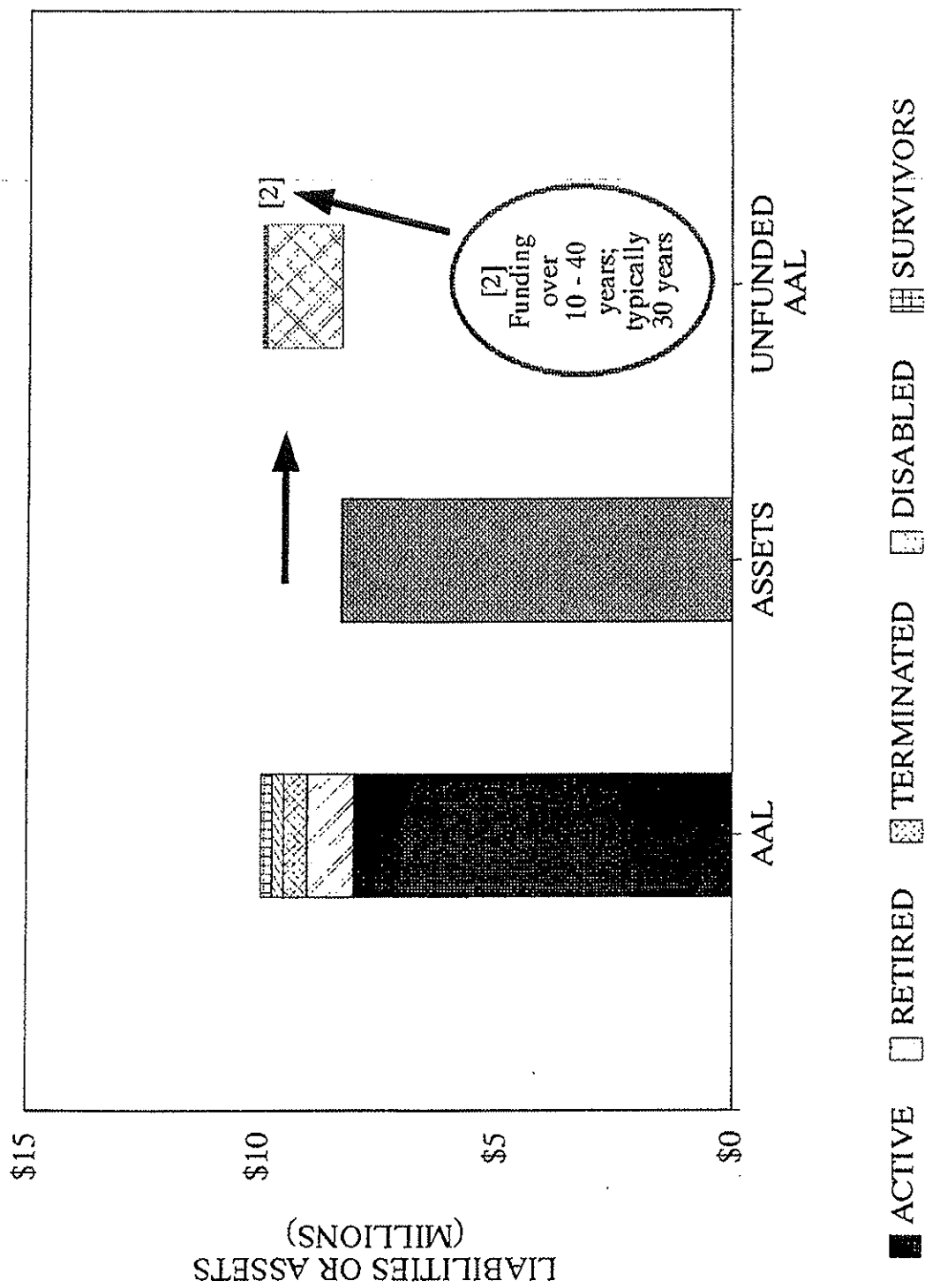
In practice this amount may never actually be paid off but rather it is simply demonstrated each year that under the current measure it could be paid off in 30 years.

*With these tools established the actuary can now attempt to measure actuarial soundness.*

### Measure of Actuarial Soundness

*Figure 9 illustrates two approaches to measuring actuarial soundness.* The model applies more to the public sector since the private sector has a minimum funding standard which makes it clear what is required.

**FIGURE 8**  
**ILLUSTRATION OF UNFUNDED AAL**



*Example 1* compares the 30 year funding requirement with the annual contributions. Case 1 is sufficient and Case 2 is not; hence, Case 1 is deemed actuarially sound and Case 2 is not.

*Example 2* approaches the problem by solving for an effective funding period of the unfunded AAL. Given the actuarial liabilities which emerge compared with the annual contributions available, this period can be calculated. Case 2 is insufficient since it would appear to take an unlimited number of years before this liability is paid off. Generally most Boards of public plans would deem this unacceptable. Again in the public sector, 30 years or so is generally required.

#### Recap of Funding Cost

*Figure 10 gives a recap of the actuarial model.*

The PVFB can be shown in its entirety or can be split into its two components, the AAL and the PVFNC. *A portion of the PVFNC represents the annual normal cost for that year and is the [1] component of the cost.*

The AAL can be thought of in terms of the sum of the existing assets plus the UAAL. *Depending upon the funding period selected, some portion of the unfunded AAL is funded as a part of the cost and is the [2] component of cost.*

*Thus the sum of these two components essentially represent the actuary's measure of the funding requirements of the plan.*

FIGURE 9

# MEASURE OF ACTUARIAL SOUNDNESS

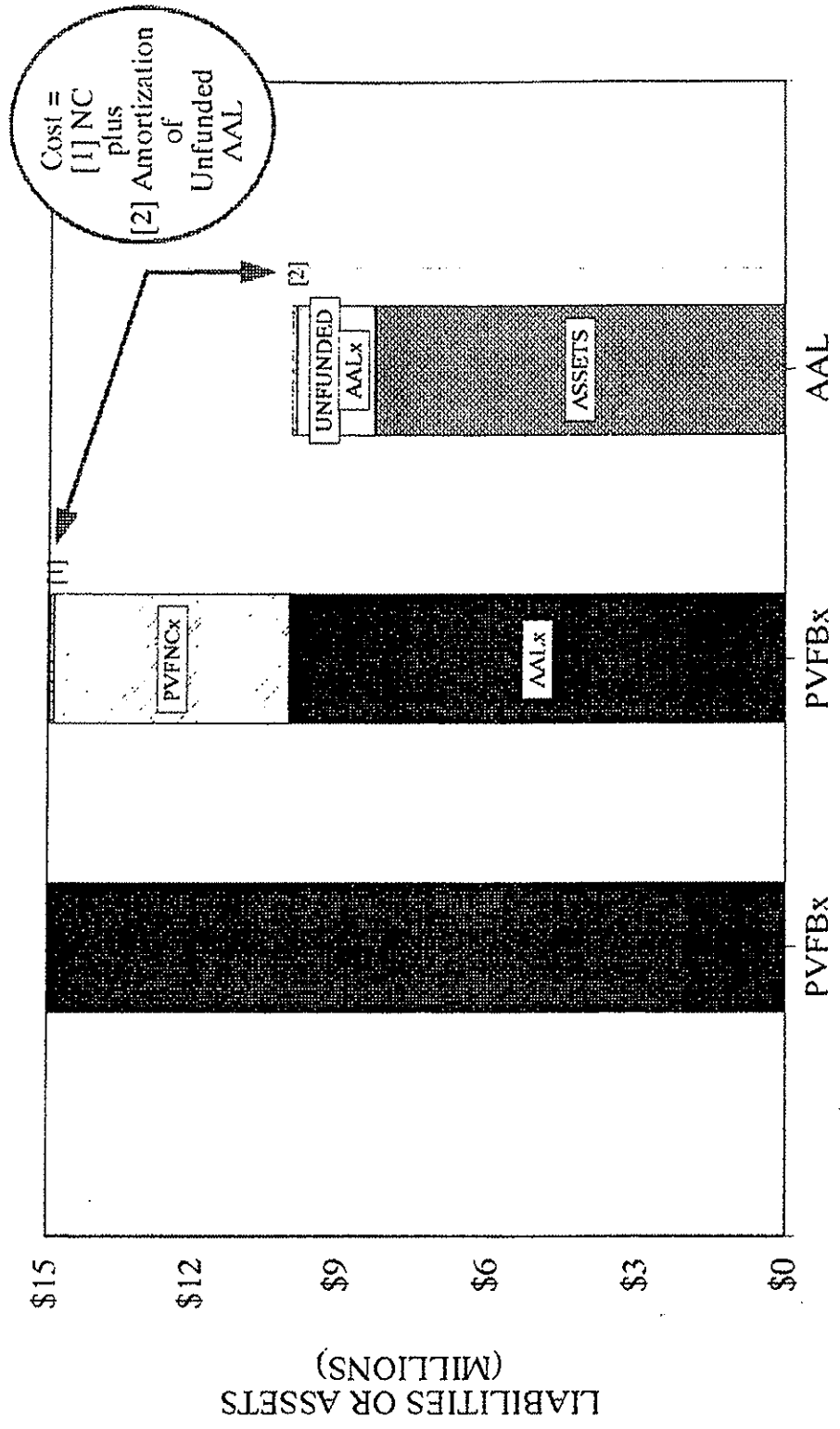
● Example 1 - Determining Surplus

<u>Item</u>	<u>Case 1</u>	<u>Case 2</u>
30 year of funding retirement	\$1.0 million	\$1.0 million
Annual city and FF contributions	\$1.1 million	\$0.5 million
Surplus	\$0.1 million	(0.5) million
Actuarial Soundness?	yes	no

● Example 2 - Determining Funding Period

<u>Item</u>	<u>Case 1</u>	<u>Case 2</u>
Annual contributions	\$1.1 million	\$0.5 million
Funding period	25 years	unlimited years
Actuarial soundness?	yes	no

**FIGURE 10**  
**RECAP OF FUNDING COST**





Summarizing the Actuary's Role

In summary, we can see that the actuary:

- **UNDERSTANDS** important questions impacting actuarial soundness
- **COLLECTS** appropriate demographic data
- **EXAMINES** appropriate changes in contribution levels, plan improvements, and assumptions and methods
- **DETERMINES** appropriate actuarial components of cost
- **MEASURES** actuarial soundness
- **PRESENTS** results annually to the Board of Trustees or Board of Directors

*Actuaries cannot always put out fires before they start. However, the actuarial methodology that has emerged over many decades of practice allows plan sponsors to fund their programs in an orderly manner over the life of a pension plan and in a manner that seems equitable from generation to generation.*

## GLOSSARY OF TERMS

### Actuarial Pension Plan Funding Terminology

- **Accumulated Value of Prior Normal Cost (AVPNC)** AVPNC is an actuarial accumulation to date of the prior years' patterns of normal cost. It is shown that this is also identically equal to the AAL. It is also shown that this is equal to the PVFB less the PVFNC at a given age.
- **Active Participants** Participants who are currently employed and covered by the plan.
- **Actuarial Accrued Liability (AAL)** AAL may be thought of as the theoretical assets which would be accumulated as of any age. This is equal to the AVPNC and is also equal to the PVFB less PVFNC at a given age.
- **Actuarial Soundness** A qualified actuary will certify the soundness of a plan after comparing the present and future contributions with the present and future liabilities and determining that this pattern is both stable and adequate.
- **Actuary** The actuary is a businessman with particular technical skills in the area of pension funding. The actuary:
  - Understands important questions impacting actuarial soundness
  - Collects appropriate demographic data
  - Examines appropriate changes in contribution levels, plan improvements, and assumptions and methods
  - Determines appropriate actuarial components of cost
  - Measures actuarial soundness
  - Presents results annually to the Board of Trustees or Board of Directors
- **Amortization** Like a mortgage payment, the unfunded actuarial accrued liability (UAAL) is amortized or paid off over a period of time.
- **Benefit Payout Projection** The year by year expected benefit payout pattern is projected by the actuary as an important step to developing long term actuarial cost.
- **Entry Age Normal Cost Method (EAN)** EAN method provides for a pattern of level normal costs as a percentage of pay. This method is most commonly used today in the public and private sector.

- **Funded Ratio** GASB Statement No. 5 defines for comparative measurement purposes a funded ratio which is equal to the assets divided by the AAL. For this purpose the AAL is calculated under the PUC funding method. Surveys show that the average funded ratio among major public sector plans is about 85%.
- **Inactive Participants** Participants who are covered by the plan but no longer employed and include current retirees, terminated participants with vested benefits, surviving spouses, surviving children, and disabled participants.
- **Normal Cost** Normal cost is the pattern of annual payments required for a plan participant from entry age to retirement age under a given funding method.
- **Pay-As-You-Go Financing** Under this system contributions equal benefits. As inflation and annual retirements increase benefit payout requirements, the contribution requirements increase accordingly. This system is rarely used today, and is illegal in the private sector.
- **Present Value** A present value is one number today that is deemed to be equivalent to a series of numbers in future years. For example, the present value of \$1.00 paid at the end of each year has a certain equivalent value today.

This equivalency is based upon the time value of money -- the investment return assumption -- as well as other actuarial assumptions for discount including retirement rates, mortality rates, termination rates, and disability rates.

Computations of present values using these assumptions define the principal mathematical domain of the actuary.
- **Present Value of Future Benefits (PVFB)** PVFB can be thought of as an amount of money paid one time into the trust fund which entirely pays for the future stream of benefit payouts.

At entry age into the plan a PVFB is equal to the present value of future normal cost (PVFNC).

Under an *initial funding concept*, the full PVFB of a plan would be paid today.

- **Present Value of Future Normal Cost (PVFNC)** PVFNC is the present value of the anticipated future stream of normal costs.
- **Projected Unit-Credit Cost Method (PUC)** PUC method has a pattern of normal cost which starts out lower than EAN but then crosses over to eventually become larger than EAN. This method is seldom used today for funding in the public sector though it is used for GASB funded ratio measure. It is also used with much frequency in the private sector.
- **Unfunded Actuarial Accrued Liability (UAAL)** UAAL is the difference between the AAL and the assets. Typically this amount is amortized or paid off over a period of years such as 30. In practice this amount may never actually be paid off but rather it is demonstrated each year that under the current measure it could be paid off in 30 years.

If there is deterioration from that position then contributions may need to be stepped up. If there is improvement from that position then benefits are in a position to be improved.