

STATE UNIVERSITIES RETIREMENT SYSTEM
OF ILLINOIS

ACTUARIAL VALUATION
COMPLETED AS OF AUGUST 31, 1984

Chicago, Illinois
February 12, 1985

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Introduction

The law governing the State Universities Retirement System requires the Actuary, as the technical advisor to the Board of Trustees, to

...cause an annual determination to be made by a competent actuary of the liabilities and reserves of the system and an annual determination of the amount and distribution of the required employer contributions. (Chapter 108-1/2, Par. 15-173)

The Wyatt Company, as Actuary, has completed a valuation as of August 31, 1984, based upon membership and financial data compiled by the administrative staff of the System, and the results of the valuation are presented in this report. The actuarial assumptions and methods used are the same as those used for the prior year and there were no benefit changes that had an effect on the valuation.

In total, the recommended contribution as a percentage of reported earnings decreased slightly from last year's level. The normal cost rate is slightly lower due primarily to a decrease in the average age at date of membership, and the contribution towards the unfunded liability is higher because last year's contribution did not cover the interest accruing at our assumed rate. The experience over the year was unfavorable as the investment performance was lower than expected and the average salary increases were higher than expected. These combined to produce an actuarial loss of about 2.4% of the actuarial liability.

Summarized below are certain important results for both years.

	<u>August 31, 1983</u>	<u>August 31, 1984</u>
1. Number of Active Members	40,897	44,487
2. Reported Earnings (Average)	\$ 908,284,507 (22,209)	\$1,016,162,269 (22,842)
3. Number of Members Receiving Payments	11,711	12,620
4. Annual Benefit Payments (Average)	\$ 76,962,435 (6,572)	\$ 88,067,368 (6,978)
5. Assets:		
(a) Book Value	\$1,403,406,843	\$1,524,371,250
(b) Market Value	\$1,444,559,149	\$1,563,133,335
6. State Normal Cost (% Payroll)	9.027%	8.785%
7. Actuarial Liability (Funded Percentage)	\$3,043,427,199 (46.1%)	\$3,374,047,244 (45.2%)
8. Unfunded Actuarial Liability	\$1,640,020,356	\$1,849,675,994

The increase in the unfunded actuarial liability of \$209,655,638 was due to the following:

1.	Contribution being less than the amount necessary to fund normal cost and interest on the unfunded.	
(a)	Unfunded at 8/31/83	\$1,640,020,356
(b)	Contributions Due	
(i)	Interest on the unfunded to 8/31/84	\$ 131,201,628
(ii)	Total Normal Cost	\$ 153,857,410
(iii)	Interest on Normal Cost to 8/31/84	\$ 6,154,296
(iv)	Total Due	\$ 291,213,334
(c)	Contributions Paid	
(i)	Participants	\$ 85,475,514
(ii)	Employer (Includes State Agencies and State Pension Fund)	\$ 70,205,488
(iii)	Interest on contributions to 8/31/84	\$ 6,227,240
(iv)	Total Paid	\$ 161,908,242
(d)	Increase in Unfunded (b) minus (c)	\$ 129,305,092
2.	Actuarial (Gains) Losses	
(a)	Loss from investment return less than 8%	\$ 37,797,102
(b)	Loss from salary increases greater than 8%	\$ 45,387,342
(c)	(Gains) from other sources	(\$ 2,833,898)
3.	Total	\$ 209,655,638

APPROPRIATION REQUIREMENTS FOR
FISCAL YEAR SEPTEMBER 1, 1984 - AUGUST 31, 1985

The law governing the System requires that the State shall make contributions to the System, which with employee contributions, investment income and other income of the System

...will be sufficient to meet the requirements of this Article in accordance with actuarial determinations. In no event shall the contributions of employers from State appropriations for any fiscal year be less than an amount which when added to contributions from other sources and investment income for that year is sufficient to meet (a) the total accruing normal costs plus interest at the prescribed rate on the unfunded accrued liabilities or (b) the accruing requirements necessary to retain qualified status under Section 401(a) of the United States Internal Revenue Code¹, or any similar provision as successor thereof.

(¹ 26 U.S.C.A. §401.)

The law defines normal cost as:

...the liability for pensions and other benefits which accrues to the system because of the credits earned for service rendered by the participants during the fiscal year and expenses of administering the system.

Section 401(a) of the Internal Revenue Code would require essentially the same contribution as required under (a) above. The cited Section does require a different minimum contribution for private plans. The "40 year amortization" amount shown corresponds to the minimum requirements for private plans upon passage of ERISA. It may also be deemed the minimum amount required as expense pursuant to Accounting Principles Board Opinion No. 8, although any "balance sheet accruals" prior to September 1, 1984 are ignored.

<u>Basis</u>	<u>Required Appropriation</u>
Normal Cost and Interest	\$ 232,077,587
Normal Cost and 40 Year Amortization	\$ 241,618,527

Value of Accrued Benefits - FASB #35

Financial Accounting Standards Board Statement No. 35, which is effective for plan years beginning after June 15, 1982, establishes standards of financial accounting and reporting for the financial statements of defined benefit pension plans, including those of state and local governmental units. It does not, however, require the preparation of financial statements.

This statement requires the disclosure of certain actuarial information; namely, the actuarial present value of accumulated benefits and changes thereof from the prior year. This information differs from the actuarial reserves calculated for funding purposes in that it does not consider future pay increases or service in calculating benefits. (In other words, accumulated benefits are calculated based on each member's pay history and service up to the valuation date.)

This information is summarized below as of August 31, 1984, computed on the basis described above and using the same assumptions (other than the pay increase assumption) as for funding purposes. The prior year's results are also shown:

<u>Actuarial Present Value of Accumulated Plan Benefits</u>	<u>8/31/83</u>	<u>8/31/84</u>
(a) Vested Benefits of Members Currently Receiving Payments	\$ 780,672,474	\$ 861,154,709
(b) Other Vested Benefits	\$1,486,005,974	\$1,630,362,471
(c) Non-Vested Benefits	<u>\$ 410,849,134</u>	<u>\$ 505,880,419</u>
(d) Total	\$2,677,527,582	\$2,997,397,599
Non-retired Members' Contributions and Interest (the rate credited has varied), included above	\$ 804,106,387	\$ 892,099,809

Interest rate used to discount the
above values: 8%

The increase of \$319,870,017 in the actuarial present value of accumulated plan benefits is attributable largely to the accrual of an additional year's benefits and interest. The same methods and procedures were used to compute the current and prior year's values.

Compared to the assets valued on the same basis as for funding purposes, the accumulated benefits are 50.9% funded, compared with 52.4% last year. The statement requires that market value of assets should be used in the comparison, which would produce a funded percentage of 52.1%. The statement also permits the use of a current interest rate in determining the actuarial present value of benefits (rather than the average long-term assumption used for funding).

15 Year Projection

Based on the results of our valuation and the assumptions used therefor, we have projected what the valuation results will be for the next 15 years under the Entry Age Normal Cost Method. The projection was completed on the assumption that the State makes contributions equal to 100% of the estimated annual benefit payments (including refunds), and Administrative Expenses, beginning with fiscal year 1986.

The results of this projection are shown in Table 4. Certain key results are summarized below. (\$ amounts are in millions.)

	<u>Fiscal Year Ending</u>			
	<u>8/31/84</u>	<u>8/31/89</u>	<u>8/31/94</u>	<u>8/31/99</u>
Number of Active Members	44,487	44,487	44,487	44,487
Payroll	\$1,047	\$1,468	\$2,059	\$2,888
<u>Valuation Results</u>				
Normal Cost	\$ 97	\$129	\$181	\$254
(% Payroll)	(9.0%)	(8.8%)	(8.8%)	(8.8%)
Actuarial Liability	\$3,374	\$5,347	\$8,172	\$12,218
Assets (Book Value)	\$1,524	\$2,802	\$5,008	\$8,608
(Funded %)	(45.2%)	(52.4%)	(61.3%)	(70.5%)
<u>FASB #35</u>				
Value of Accrued Benefits	\$2,997	\$4,791	\$7,358	\$10,993
(Funded %)	(50.9%)	(58.5%)	(68.1%)	(78.3%)

The remainder of the report is comprised of the following:

Table 1 - Results of Actuarial Valuation

Table 2 - Value of Accumulated Plan Benefits (FASB #35)

Table 3 - Value of Credited Projected Benefits

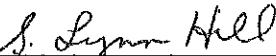
Table 4 - Fifteen Year Projection

Description of Actuarial Method and Assumptions
Summary of Plan Provisions

To the best of our knowledge this actuarial statement is complete and accurate and has been prepared in accordance with generally accepted actuarial principals and practice.

Respectfully submitted,

THE WYATT COMPANY

By 
S. Lynn Hill
Actuarial Assistant

By 
Lloyd L. Nordstrom
Fellow of The Society of Actuaries

By 
Robert L. Barnes
Fellow of The Society of Actuaries

Chicago, Illinois
February 12, 1985

Table 1

STATE UNIVERSITIES RETIREMENT SYSTEM
OF ILLINOIS

RESULTS OF ACTUARIAL VALUATION AS OF AUGUST 31, 1984

MEMBER DATA

1.	Number of Members:	
	(a) Members Receiving Annuities:	
	(i) Retirement	9,217
	(ii) Survivor (includes prospective widows and widowers)	2,578
	(iii) Disability	825
	(b) Other Inactive Members	4,931
	(c) Active	44,487
	(d) Total	<u>62,038</u>
2.	Annual Reported Earnings of Active Members	\$1,016,162,269
3.	Annual Annuity Payments Currently Being Made:	
	(a) Retirement	\$ 73,106,676
	(b) Survivor	8,358,839
	(c) Disability	6,601,853
	(d) Total	<u>\$ 88,067,368</u>

VALUATION RESULTS

4.	Actuarial Liability for Members Receiving Annuities:	
	(a) Retirement	\$ 737,663,241
	(b) Survivors	67,458,253
	(c) Disability	56,033,215
	(d) Total	<u>\$ 861,154,709</u>
5.	Actuarial Liability for Inactive Members	\$ 160,932,346

	<u>Normal Cost*</u>	<u>Actuarial Liability</u>
6.	Active Members:	
	(a) Pension Benefits	\$1,545,766,726
	(b) Cost-of-Living Adjustments	316,315,174
	(c) Death Benefits (excludes refunds)	215,477,289
	(d) Disability:	
	(i) Accidental	9,101,291
	(ii) Ordinary	22,866,802
	(iii) Total	209,316,184
	(e) Withdrawals and Refunds	65,084,816
	(f) Expenses	6,300,000
	(g) Total Actives	<u>\$2,351,960,189</u>

Table 1 Cont'd

	<u>Normal Cost*</u>	<u>Actuarial Liability</u>
7. Total	\$ 170,670,312	\$3,374,047,244
8. Assets		\$1,524,371,250
9. Unfunded Actuarial Liability		\$1,849,675,994
10. Expected Employee Contributions	\$ 81,403,255	
11. Annual Normal Cost To Be Provided by the State	\$ 89,267,057	

ANNUAL EXPENSE*

	<u>Percent Of Pay</u>	<u>Amount</u>
12. "Forty Year Amortization":		
(a) Normal Cost	8.785%	\$ 89,267,057
(b) Contribution Towards Unfunded	14.993	152,351,470
(c) Total	23.778%	\$ 241,618,527
13. "Interest Only Funding":		
(a) Normal Cost	8.785%	\$ 89,267,057
(b) Interest on Unfunded	14.054	142,810,530
(c) Total	22.839%	\$ 232,077,587

* All figures have been adjusted by the appropriate interest factor for monthly contributions.

STATE UNIVERSITIES RETIREMENT SYSTEM
OF ILLINOIS

ACTUARIAL PRESENT VALUE OF ACCUMULATED PLAN BENEFITS
AT AUGUST 31, 1984
(FASB #35)

	Vested	Non-Vested	Total
1. Participants Currently Receiving Payments	\$ 861,154,709	—	\$ 861,154,709
2. Inactive Members	\$ 160,932,346	—	\$ 160,932,346
3. Active Members:			
(a) Pension Benefits	\$1,009,652,239	\$ 31,474,661	\$1,041,126,900
(b) Cost-of-Living Adjustments	205,082,692	6,557,342	211,640,034
(c) Death Benefits (excludes refunds)	—	185,535,397	185,535,397
(d) Disability:			
(i) Accidental	—	12,148,005	12,148,005
(ii) Ordinary	—	232,069,978	232,069,978
(iii) Total	—	244,217,983	244,217,983
(e) Withdrawals and Refunds	254,695,194	38,095,036	292,790,230
(f) Total Actives	\$1,469,430,125	\$505,880,419	\$1,975,310,544
4. Grand Total	\$2,491,517,180	\$505,880,419	\$2,997,397,599
5. Non-retired Member Contributions and Interest (included in above):			
(a) Active			\$ 831,584,418
(b) Inactive			60,515,391
(c) Total			\$ 892,099,809

Notes:

- (1) Accumulated benefits were calculated in accordance with plan provisions in effect on August 31, 1984, based on the members' history of pay and service as of such date.
- (2) Projected years of service were considered only in determining members' expected eligibility for particular benefits.
- (3) Future automatic cost-of-living increases were recognized.
- (4) The actuarial assumptions utilized were the same as those adopted for funding purposes.

STATE UNIVERSITIES RETIREMENT SYSTEM
OF ILLINOIS

ACTUARIAL PRESENT VALUE OF
CREDITED PROJECTED BENEFITS AT AUGUST 31, 1984

	<u>Vested</u>	<u>Non-Vested</u>	<u>Total</u>
1. Participants Currently Receiving Payments	\$ 861,154,709	---	\$ 861,154,709
2. Inactive Members	\$ 160,932,346	---	\$ 160,932,346
3. Active Members:			
(a) Pension Benefits	\$1,145,711,158	\$ 32,274,204	\$1,177,985,362
(b) Cost-of-Living Adjustments	233,148,569	6,731,900	239,880,469
(c) Death Benefits: (excludes refunds)	---	205,154,657	205,154,657
(d) Disability:			
(i) Accidental	---	20,382,074	20,382,074
(ii) Ordinary	---	376,273,052	376,273,052
(iii) Total	---	396,655,126	396,655,126
(e) Withdrawals and Refunds	278,045,799	37,128,434	315,174,233
(f) Total Actives	<u>\$1,656,905,526</u>	<u>\$ 677,944,321</u>	<u>\$2,334,849,847</u>
4. Grand Total	\$2,678,992,581	\$ 677,944,321	\$3,356,936,902

Notes:

- (1) Credited projected benefits were calculated in accordance with plan provisions in effect on August 31, 1984, based on members' service as of such date and on the members' historical and projected pay.
- (2) Projected years of service were considered only in determining members' expected eligibility for particular benefits.
- (3) Future automatic cost-of-living increases were recognized.
- (4) The actuarial assumptions utilized were the same as those adopted for funding purposes.

Table 4

STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS
 FIFTEEN YEAR PROJECTION OF COSTS AND LIABILITIES
 (All Dollar Amounts In Billions)

	Fiscal Year Ending 8/31							
	1984	1985	1986	1987	1988	1989	1994	1999
1. Number of Active Members	44,487	44,487	44,487	44,487	44,487	44,487	44,487	44,487
2. Annual Compensation	\$1.047	\$1.120	\$1.198	\$1.282	\$1.372	\$1.468	\$2.059	\$2.888
3. Annual Benefit Payments & Administrative Expenses	.111	.120	.134	.150	.167	.186	.303	.461
4. Actuarial Liability (Retired Life Reserves)	\$3.374 (0.861)	\$3.713 (0.967)	\$4.078 (1.085)	\$4.471 (1.217)	\$4.893 (1.369)	\$5.347 (1.525)	\$8.172 (2.559)	\$12.218 (3.883)
5. Assets (Book)	1.524	1.687	1.924	2.188	2.479	2.802	5.008	8.608
6. Unfunded Actuarial Liability (Funded Percentage)	1.850 (45.2%)	2.025 (45.5%)	2.154 (47.2%)	2.283 (48.9%)	2.414 (50.7%)	2.545 (52.4%)	3.164 (61.3%)	3.610 (70.5%)
7. Employee Contributions	\$0.086	\$0.091	\$0.098	\$0.105	\$0.112	\$0.120	\$0.168	\$0.236
8. State Normal Cost (% Payroll)	0.097 (9.0%)	0.098 (8.8%)	0.105 (8.8%)	0.113 (8.8%)	0.121 (8.8%)	0.129 (8.8%)	0.181 (8.8%)	0.254 (8.8%)
9. State Contribution (% Payroll)	\$0.060 (5.7%)	\$0.068 (6.1%)	\$0.134 (11.2%)	\$0.150 (11.7%)	\$0.167 (12.2%)	\$0.186 (12.7%)	\$0.303 (14.7%)	\$0.461 (16.0%)

FASB #35

10. Value of Accrued Benefits (Funded Percentage)	\$2.997 (50.9%)	\$3.305 (51.1%)	\$3.636 (52.9%)	\$3.993 (54.8%)	\$4.378 (56.6%)	\$4.791 (58.5%)	\$7.358 (68.1%)	\$10.993 (78.3%)
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Actual Expense used for FY84. Expenses estimated at \$6.3 million for FY85; increasing by 10% per annum thereafter. Actual State Contributions used for FY84 and FY85. State Contributions equal to Benefit Payments and Administrative expenses assumed for subsequent years. Employee contributions include qualifying payments. Compensation, Benefit Payments, Contributions and Normal Cost represent cash flow for the year just ended. All other dollar amounts are values at the end of the fiscal year.

ACTUARIAL COST METHOD

An entry age normal cost method is used. Under this method, the projected pensions at retirement age are first determined and the values thereof at the individual member's entry age or hire age are determined. The values so determined are divided by the value at entry age of all future compensation payable to the member to determine the normal cost as a level percentage of covered pay. The normal cost for a particular year is that percentage of covered compensation for the year.

The actuarial liability at any point in time is the value of the projected pensions at that time, less the value of future normal costs.

For ancillary benefits for both active and inactive members, in particular disability benefits, death and survivor benefits, termination benefits and the post-retirement increments, the same procedure as outlined above is followed.

Estimated annual administrative expenses are added to the normal cost.

ACTUARIAL ASSUMPTIONS

Mortality: 1986 Projected Experience Table, a table based on experience underlying the 1971 Group Annuity Mortality Table, without margins, with a projection for mortality improvements to 1986, with a one year setback.

Interest: 8% per annum, compounded annually.

Termination: Illustrative rates of withdrawal from the plan are as follows:

<u>Age</u>	<u>Males</u>	<u>Females</u>
20	0.374	0.524
25	0.249	0.324
30	0.174	0.219
35	0.124	0.154
40	0.073	0.104
45	0.047	0.064
50	0.020	0.038
55	--	0.013

It is assumed that terminated employees will not be rehired.

Salary Increases: 8% per annum, compounded annually.

Disability Rates: Incidence of disability amongst employees.

<u>Age</u>	<u>Males</u>	<u>Females</u>
20	0.0018	0.0034
25	0.0018	0.0034
30	0.0018	0.0034
35	0.0018	0.0034
40	0.0034	0.0060
45	0.0058	0.0090
50	0.0091	0.0123
55	0.0140	0.0164
60	0.0234	0.0219

5% of disabilities amongst active employees are assumed to be caused by "on-the-job" accidents where a qualifying workers' compensation award is granted. During the first 2 years of service, one quarter of disabilities are assumed to arise as a result of an accident.

Employees receiving a disability allowance are assumed to recover or die in accordance with the following tables:

<u>Age</u>	<u>Rate of Recovery</u>	<u>Rate of Mortality</u>
20	0.256	0.044
25	0.156	0.044
30	0.096	0.044
35	0.056	0.044
40	0.016	0.044
50	--	0.045
60	--	0.053
70	--	0.075
80	--	0.130
90	--	0.240

Retirement Rates: Retirement was assumed to occur at age 62.

Assets: Assets available for benefits are used at book value.

Expenses: As estimated and advised by SURS staff, based on current expenses with an allowance for expected increases.

Marital Status: 85% of employees are assumed to be married.

Spouse's Age: The female spouse is assumed to be 3 years younger than the male spouse.

Remarriage Rates: The surviving spouse of deceased employees are assumed to remarry in accordance with the following table:

<u>Age</u>	<u>Rate of Remarriage</u>	<u>Age</u>	<u>Rate of Remarriage</u>
20	0.144	40	0.028
25	0.094	45	0.018
30	0.059	50	0.010
35	0.040	55	0.004

Children:

It is assumed that married members have 2.5 children one year apart in age.

The age of the youngest child of a deceased employee at his date of death is assumed to be as follows:

<u>Age At Death Of Employee</u>	<u>Age Of Youngest Child</u>
20	2 Years
25	3
30	4
35	5
40	6
45	8 Years
50	10
55	12
60	14

Effective Rate
of Interest:

The rate of interest credited on member contributions as in effect for the year beginning on the valuation date is assumed to remain in effect until retirement.

Earnings Data:

If earnings were not available, the annual salary was assumed to be \$21,500.

STATE UNIVERSITIES RETIREMENT SYSTEM
OF ILLINOIS

The following is a summary of the major provisions of the State Universities Retirement System as in effect on the date of the valuation (8/31/84).

Membership:

The System covers faculty and non-academic permanent employees of State Universities and Colleges, Community Colleges, State Scientific Surveys and other related agencies.

Employees hired after age 68, employed less than 50% full-time or employed less than full-time and attending classes with an employer are ineligible to participate.

Member Contributions:

8% of gross earnings. 6-1/2% of the 8% contributions are designated for retirement annuities, 1/2% for automatic annual increases and 1% for survivor benefits. Police officers and firefighters contribute 9-1/2% of earnings. The additional 1-1/2% is a normal retirement contribution.

Interest Credited on Member Contributions:

The interest rate credited is fixed by the Board and is currently 8%. For purposes of lump sum payments to former members, the interest rate is 4-1/2%.

Normal Retirement:

Members are eligible for normal retirement after 35 years of covered service, after 8 years of covered service and age 60, or after 5 years of covered service and age 62. Policemen and firemen are eligible for normal retirement at age 55 with 20 years of service, or at age 50 with 25 years of service.

The annuity payable is based on the largest of three formulas:

- (1) The following percentages of "average earnings", the highest earnings for any 4 consecutive years:

	<u>General</u>	<u>Police & Firemen</u>
(a) For each of the first 10 years of service	1.67%	2.25%
(b) For each of the next 10 years of service	1.90%	2.50%
(c) For each of the next 10 years of service	2.10%	2.75%
(d) For each year of service over 30	2.30%	2.75%

(2) The actuarial equivalent of 2.4 times the accumulated member contributions for retirement annuities (6-1/2% of earnings for ordinary members, 8% of earnings for police officers and firefighters). The actuarial equivalent assumes a constant annuity payable for life.

(3) For each year of service up to a maximum of 30 years, if employed one-half time or more, the following monthly amounts based on average earnings:

"Average Annual Earnings"

Under \$3,500	\$ 8
\$3,500 - \$4,500	9
\$4,500 - \$5,500	10
\$5,500 - \$6,500	11
Over \$6,500	12

For members first participating hired after September 14, 1977, the maximum annuity under (1) or (2) is 75% of average earnings. The maximum is 80% of average earnings for members who participated on or before September 14, 1977.

Early Retirement:

Members are eligible for early retirement after 8 years of service and age 55 but the annuity calculated under formula (1) or (3) above is reduced by 1/2% for each month such retirement precedes age 60.

Early Retirement Without Discount:

A member may retire between the ages of 55 and 60 with at least 8, but not more than 35 years service credit, without 1/2 of 1% reduction, provided:

- (1) The member does so between September 8, 1981 and June 30, 1987.
- (2) The member retires within 6 months of the last day of employment.

- (3) The member and the employer make one-time lump sum payments to the Retirement System based upon the member's highest full-time annual salary rate during the 4 year average salary period, or if not full-time, the full-time equivalent. The member pays 7% of the base salary for each year or fraction of a year prior to age 60 or for each year or fraction of a year that his service credit is less than 35 years, whichever is less. The employer payment is 20% of the base salary for each year or fraction of a year prior to age 60. These one-time payments do not increase the amount of service credit, but merely eliminates the 1/2 of 1% reduction for retiring before age 60 with less than 35 years of service.

Until June 1, 1982, the number of members using this provision was limited to any number at the option of the employer. Beginning June 1, 1982 until June 30, 1987, the number of members using this provision may be limited, at the option of the employer, to no less than 15% of those eligible during any year. The right to participate is allocated among those applying on the basis of seniority in the service of the employer.

Disability:

Members with 2 years of covered service who are unable to perform their duties because of illness or any amount of covered service if because of an accident, are eligible for disability after 60 days of disability.

The amount of the disability benefit is as follows:

- (1) 50% of basic compensation at disability or 50% of average earnings for the 24 months preceding disability, whichever is greater, payable until the total benefits paid equal 50% of the total earnings in covered service, but in no event after September 1 following the employee's 70th birthday.
- (2) After cessation of the benefit in (1), members who had 8 years of covered service will receive the normal retirement benefit commencing at or after age 55 (with no reduction for early retirement) if the member continues to be disabled.

The disability benefit will cease upon death or recovery.

Disability Retirement Allowance:

If a member's disability benefits are discontinued due to the 50% of total earnings limitation, the member is entitled to a disability retirement allowance of 35% of the basic compensation which was payable at the time the disability began, provided at least 2 licensed and practicing physicians appointed by the Board certify that the member has a medically determined physical or mental impairment which would prevent him/her from engaging in any substantial gainful activity, and which can be expected to result in death, or which has lasted or can be expected to last for a continuous period of not less than 12 months.

The disability retirement allowance is payable for life unless the member is able to accept substantial gainful employment, or elects to receive a retirement annuity.

Death Benefits Before Retirement:

Upon death of an active member with 1-1/2 years of covered service, or of a former member with 10 years of covered service, the following amounts are paid to the member's survivors:

- (1) A death benefit equal to the retirement contributions (7%) and interest, plus
- (2) A lump sum payment of \$1,000, plus
- (3) A monthly survivor's annuity equal to the greater of 50% of the member's accrued normal retirement benefit or the following amounts if greater:
 - (i) 30% of average earnings to a spouse, child or parent, up to \$400 monthly.
 - (ii) 60% of average earnings to a spouse and 1 child, up to \$600 monthly.
 - (iii) 80% of average earnings to a spouse and 2 or more children, up to \$600 monthly.

Survivor's benefits are payable until children attain age 18, to a spouse after age 50 and a dependent parent after age 55. The spouse's benefit is payable at any age while children are under 18 and living with the spouse. If death occurs after termination of employment, the monthly survivors annuity may not exceed 80 percent of the earned retirement annuity.

If there are no dependent survivors, the member did not have the necessary service or if the dependent survivors so elect in lieu of any other benefits, the following amounts will be paid.

- (1) A refund of all contributions and interest, and
- (2) If death occurred in active service, a lump sum payment of \$2,500 or, if the beneficiary is a dependent, an amount equal to the member's average annual earnings up to \$5,000.

Death Benefits After Retirement:

A lump sum benefit of \$1,000 is payable to the member's spouse, children or dependent parent. In addition, a survivor's annuity as outlined above is payable. If no survivor annuity is payable, a minimum death benefit of \$1,000 or an amount equal to the excess of the member's contributions and interest to retirement over the benefits paid is payable.

Automatic Increases:

Retirement benefits are increased annually after retirement by 3% of the original retirement annuity. Note that the increase is not compounded and does not apply to survivor's or disability benefits. The first automatic annual increase in retirement annuity is paid on the January 1st nearest the annuitant's 61st birthday or the January 1st nearest the first anniversary of retirement, whichever is later.

Termination of Service:

A lump sum refund of all member contributions and interest (at 4-1/2%) will be made. If a member has 5 years of covered service and does not apply for a refund, a normal retirement benefit will be payable at age 62.