SPICE

STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS

ACTUARIAL VALUATION COMPLETED AS OF JUNE 30, 1987

Chicago, Illinois
October, 1987

STATE UNIVERSITIES RETIREMENT SYSTEM
OF ILLINOIS

ACTUARIAL VALUATION COMPLETED AS OF JUNE 30, 1987

INTRODUCTION

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

> ...an annual determination... of the liabilities and reserves of this System and an annual determination of the amount and distribution of required employer contributions. (Chapter 108 1/2, Par. 15-173).

The Wyatt Company, as Actuary, has completed a valuation as of June 30, 1987, 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 fiscal year end was changed from August 31 to June 30 effective with the 1987 valuation. Reported salaries this year and in future years will be actual earnings for the period September 1 - June 30 and will be annualized for purposes of the valuation and the annual experience study. In addition, service credit earned and interest credited on employee contributions since the August 31 preceding the valuation date will be estimated each year. Except for these changes the valuation was completed using the same actuarial assumptions and methods as used in our prior valuation. The assumptions, which were based on our experience review for the five years ending August 31, 1986, are described in detail beginning on page 18.

Changes Since Last Valuation

Since the last valuation, costs and liabilities for the System have been affected by legislation (HB2630). Ad Hoc benefit increases were granted for annuitants and survivors who began receiving benefits on or before January 1, 1977 and three tiers were added to the minimum annuity benefit. For all employees, except academic employees who are paid on other than a 12 month basis, the computation of Final Rate of Earnings may now be based on their average earnings during the 48 consecutive calendar months ending with the last day of employment. A lump sum payment for up to 56 days of accrued vacation may also be included in this computation.

In addition, changes in membership data and fund assets have affected the results of the valuation. The effect of the change in the fiscal year end was not material.

Summarized below are certain important results for both years.

		August 31, 1986	June 30, 1987
1.	Number of Active Members	51,235	52,057
2.	Annualized Reported Earnings (Average)	$1,275,917,532 ($24,903)	$1,370,248,626 ($26,322)
3.	Number of Members Receiving Payments	14,468	15,316
4.	Annual Benefit Payments (Average)	$ 113,482,139 ($7,844)	$ 128,079,350 ($8,362)
5.	Assets:		
	(a) Book Value	$2,257,974,785	$2,470,490,495
	(b) Market Value	$2,527,687,306	$2,912,938,471
6.	State Normal Cost (% Payroll)	$ 97,177,699 (7.616%)	$ 105,175,736 (7.676%)
7.	Accrued Actuarial Liability (Funded Percentage)	$4,182,178,347 (54.0%)	$4,561,043,635 (54.2%)
8.	Unfunded Accrued Actuarial Liability	$1,924,203,562	$2,090,553,140

The increase in the unfunded accrued actuarial liability (UAAL) of $166,349,578 was due to the following:

1.	Contribution being less than the amount necessary to fund normal cost and interest on the unfunded.			
	(a)	UAAL at 8/31/86		$ 1,924,203,562
	(b)	Contributions Due		
		(i)	Interest on the UAAL to 6/30/87	$ 127,449,931
		(ii)	Total Normal Cost	164,905,188
		(iii)	Early Retirement Option (ERO) payments	2,577,101
		(iv)	Interest on Normal Cost and ERO payments to 6/30/87	5,457,684
		(v)	Total Due	$ 300,389,904
	(c)	Contributions Paid		
		(i)	Participants (including ERO payments)	$ 95,779,518
		(ii)	State Appropriations	67,702,523
		(iii)	Employer ERO Payments	1,911,922
		(iv)	Reciprocity	266,711
		(v)	Federal, Trust Funds and Other	8,031,991
		(vi)	Interest on contributions to 6/30/87	5,660,060
		(vii)	Total Paid	$ 179,352,725
	(d)	Increase in the UAAL (b) minus (c)		$ 121,037,179
2.	Actuarial (Gains) Losses			
	(a)	(Gain) from investment return greater than 8%		($ 14,340,609)
	(b)	Loss from salary increases greater than 7%		$ 6,598,861
	(c)	Loss from other sources		$ 6,666,740
3.	Increase in the UAAL due to plan amendments (HB2630)			$ 46,387,407
4.	Total Increase			$ 166,349,578

APPROPRIATION REQUIREMENTS FOR
FISCAL YEAR JULY 1, 1987 - JUNE 30, 1988

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 employer contributions from State appropriations for any fiscal year be less than an amount which, when added to contributions from other sources, is sufficient to meet (1) the total accruing normal costs plus interest at the prescribed rate on the unfunded accrued liabilities or (2) the accruing requirements necessary to retain qualified status under Section 401(a) of the United States Internal Revenue Code[1], 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 (1) above, and this amount is shown as the required contribution. The cited Section does require a different minimum contribution for private plans. The "40 year amortization" amount shown for comparison purposes 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 June 30, 1987 are ignored.

Basis	% of Payroll(1)	Required Appropriation(1)
Normal Cost and Interest	19.455%	\$266,584,006
Normal Cost and 40 Year Amortization(2)	20.024%	\$274,372,281

(1) Based upon an assumed payroll of \$1,370,248,626 for fiscal year July 1, 1987 - June 30, 1988.

(2) Assuming a starting date of July 1, 1987.

GASB: Value of Accrued Pension Benefit Obligation

Statement Number 5 of the Governmental Accounting Standards Board sets forth certain standards of financial accounting and reporting for the annual financial statements of a defined benefit pension plan.

This statement requires the disclosure of actuarial present value of credited projected benefits and the effect of any changes in actuarial assumptions or benefit provisions. The actuarial present value of credited projected benefits is a standardized measure of the accrued pension benefit obligation. It is the discounted amount of benefits estimated to be payable in the future as a result of employee service through the balance sheet date, computed by attributing an equal benefit amount (including the effects of projected salary increases and step-rate benefits) to each year of credited and expected future employee service.

This measure of the pension benefit obligation was computed for both this year's and last year's valuation, using the same assumptions as were used to process the respective valuations. Summarized below are key results for both years.

Actuarial Present Value (APV) of Credited Projected Benefits	August 31, 1986	June 30, 1987
Accumulated Contributions of current employees	$1,058,842,485	$1,151,490,747
Accumulated Contributions of inactive members	75,906,956	65,039,352
Payable to Retirees and Beneficiaries	1,145,899,388	1,289,030,707
Payable to Terminated Employees not yet receiving benefits employer-financed portion	113,996,315	88,084,033
Payable to Vested Current Employees - employer-financed portion	1,429,661,090	1,566,762,827
Payable to Nonvested Current Employees - employer-financed portion	61,694,395	74,514,485
Total APV of Credited Projected Benefits	$3,886,000,629	$4,234,922,151
Net Assets available for benefits (Market value at June 30, 1987 is $2,912,938,471)	$2,257,974,785	$2,470,490,495
Unfunded APV of Credited Projected Benefits	$1,628,025,844	$1,764,431,656

Compared to the assets valued on the same basis as for funding purposes, the credited projected benefits are 58.3% funded compared with 58.1% last year. Changes in benefit provisions since the last valuation resulted in an increase of $39,758,523 in the actuarial present value of credited projected benefits.

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. Two projections were made. Actual State contributions were used for fiscal year 1987. In recent years State contributions have been a fixed percentage of the estimated annual benefit payments (excluding refunds) and administrative expenses. The announced contribution rate for fiscal year 1988 is 47% and the first projection was based on this rate for all future years. The second projection illustrates what the funded position of the System would be if the future contribution rate were 100% of benefits and expenses.

The results of the projections are shown in Tables 4a and 4b. Certain key results are summarized below. ($ amounts are in millions.)

	Fiscal Year Ending			
	6/30/87	6/30/92	6/30/97	6/30/02
Number of Active Members	52,057	52,057	52,057	52,057
Payroll	$1,196	$1,717	$2,191	$2,793
Normal Cost	$ 91	$ 140	$ 190	$ 258
(% Payroll)	(7.6%)	(8.2%)	(8.7%)	(9.2%)
Actuarial Liability	$4,561	$7,201	$10,540	$14,938
Based on 47% State Contribution				
Assets (Book Value)	$2,470	$3,821	$5,921	$9,167
(Funded %)	(54.2%)	(53.1%)	(56.2%)	(61.4%)
Based on 100% State Contribution				
Assets (Book Value)	$2,470	$4,327	$7,247	$11,793
(Funded %)	(54.2%)	(60.1%)	(68.8%)	(78.9%)

15 Year Projection

(Continued)

	Fiscal Year Ending			
	6/30/87	6/30/92	6/30/97	6/30/02
FASB #35				
Value of Accrued Benefits	$4,031	$6,297	$9,468	$13,706
Based on 47% State Contribution				
(Funded %)	(61.3%)	(60.7%)	(62.5%)	(66.9%)
Based on 100% State Contribution				
(Funded %)	(61.3%)	(68.7%)	(76.5%)	(86.0%)

The remainder of this report is comprised of the following:

Table 1	-	Results of Actuarial Valuation
Table 2	-	Value of Accumulated Plan Benefits
Table 3	-	Value of Credited Projected Benefits (GASB)
Table 4	-	15 Year Projection
Table 5	-	Analysis of Financial Experience

Description of Actuarial Cost 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 principles and practice.

Respectfully submitted,

THE WYATT COMPANY

By S. Lynn Hill
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
October, 1987

Table 1

STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS

RESULTS OF ACTUARIAL VALUATION AS OF JUNE 30, 1987

MEMBER DATA

1. Number of Members:	
(a) Members Receiving Annuities	
(i) Retirement	11,524
(ii) Survivor (includes Prospective Widows and Widowers)	2,936
(iii) Disability	856
(b) Other Inactive Members	5,072
(c) Active	52,057
(d) Total	72,445
2. Annual Reported Earnings of Active Members	$1,370,248,626
3. Annual Annuity Payments Currently Being Made:	
(a) Retirement	$109,223,125
(b) Survivor	11,029,079
(c) Disability	7,827,146
(d) Total	$128,079,350

VALUATION RESULTS

4. Actuarial Liability for Members Receiving Annuities:	
(a) Retirement	$1,143,231,473
(b) Survivors	88,456,080
(c) Disability	57,343,154
(d) Total	$1,289,030,707
5. Actuarial Liability for Inactive Members	$153,123,385

	Normal Cost *	Actuarial Liability
6. Active Members:		
(a) Pension Benefits	$102,833,584	$2,185,121,674
(b) Cost-of-Living Adjustments	22,690,847	475,144,475
(c) Death Benefits: (Excludes Refunds)	12,953,212	198,824,020
(d) Disability:		
(i) Accidental	550,224	2,602,013
(ii) Ordinary	7,476,103	67,454,957
(iii) Total	$8,026,327	$70,056,970
(e) Withdrawals and Refunds	56,448,096	189,742,404
(f) Expenses	10,000,000	---
(g) Total Actives	$212,952,066	$3,118,889,543

	Normal Cost *	Actuarial Liability
7. TOTAL	$212,952,066	$4,561,043,635
8. Assets		$2,470,490,495
9. Unfunded Actuarial Liability		$2,090,553,140
10. Expected Employee Contributions	$107,776,330	
11. Annual Normal Cost to be Provided by the State (Percent of Pay)	$105,175,736 (7.676%)	

ANNUAL EXPENSE *

	Percent Of Payroll	Amount
12. "Interest Only Funding":		
(a) Normal Cost	7.676%	$105,175,736
(b) Interest on Unfunded	11.779%	161,408,270
(c) Total	19.455%	$266,584,006
13. "Forty Year Amortization" (from 7/1/87):		
(a) Normal Cost	7.676%	$105,175,736
(b) Contribution Towards Unfunded	12.348%	169,196,545
(c) Total	20.024%	$274,372,281

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

Table 2

STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS

ACTUARIAL PRESENT VALUE OF ACCUMULATED PLAN BENEFITS AT JUNE 30, 1987

	Vested	Non-Vested	Total
1. Participants Currently Receiving Payments	$1,289,030,707	---	$1,289,030,707
2. Inactive Members	153,123,385	---	153,123,385
3. Active Members:			
(a) Pension Benefits	1,523,315,214	58,040,223	1,581,355,437
(b) Cost-of-Living Adjustments	328,986,265	12,832,494	341,818,759
(c) Death Benefits: (Without Refunds)	162,340,925	19,310,712	181,651,637
(d) Disability:			
(i) Accidental	3,198,311	1,097,572	4,295,883
(ii) Ordinary	61,958,111	15,825,508	77,783,619
(iii) Total	$65,156,422	$16,923,080	$82,079,502
(e) Withdrawal and Refunds	342,539,818	59,039,474	401,579,292
(f) Total	$2,422,338,644	$166,145,983	$2,588,484,627
4. TOTAL	$3,864,492,736	$166,145,983	$4,030,638,719
5. Non-Retired Member Contributions with Interest:			
(a) Active			$1,151,490,747
(a) Inactive			65,039,352
(a) Total			$1,216,530,099

NOTES:

(1) Accumulated benefits were calculated in accordance with plan provisions in effect on June 30, 1987, 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.

Table 3

STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS

ACTUARIAL PRESENT VALUE OF CREDITED PROJECTED BENEFITS AT JUNE 30, 1987

	Vested	Non-Vested	Total
1. Participants Currently Receiving Payments	$1,289,030,707	---	$1,289,030,707
2. Inactive Members	153,123,385	---	153,123,385
3. Active Members:			
(a) Pension Benefits	1,690,196,560	60,119,908	1,750,316,468
(b) Cost-of-Living Adjustments	365,763,886	13,298,862	379,062,748
(c) Death Benefits: (Without Refunds)	172,584,194	9,956,875	182,541,069
(d) Disability:			
(i) Accidental	3,368,181	562,073	3,930,254
(ii) Ordinary	64,941,360	8,104,410	73,045,770
(iii) Total	$68,309,541	$8,666,483	$76,976,024
(e) Withdrawal and Refunds	345,342,562	58,529,188	403,871,750
(f) Total	$2,642,196,743	$150,571,316	$2,792,768,059
(g) Employee Contributions	1,075,433,916	76,056,831	1,151,490,747
(h) Employer Financed	1,566,762,827	74,514,485	1,641,277,312
4. TOTAL	$4,084,350,835	$150,571,316	$4,234,922,151

NOTES:

(1) Credited projected benefits were calculated in accordance with plan provisions in effect on June 30, 1987, based on the 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 4a

STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS
FIFTEEN YEAR PROJECTION OF COSTS AND LIABILITIES
(Assumes State Contributions Equal to 47% of Benefit Payments)
(All Dollar Amounts in Billions)

	Fiscal Year Ending 6/30							
	1987	1988	1989	1990	1991	1992	1997	2002
1. Number of Active Members	52,057	52,057	52,057	52,057	52,057	52,057	52,057	52,057
2. Annual compensation	$1.196	$1.426	$1.489	$1.559	$1.635	$1.717	$2.191	$2.793
3. Annual Benefit Payments & Administrative Expense	$.127	$.166	$.187	$.206	$.226	$.251	$.390	$.604
4. Actuarial Liability	$4.561	$5.177	$5.625	$6.124	$6.637	$7.201	$10.540	$14.938
(Retired Lives Reserves)	(1.289)	(1.509)	(1.683)	(1.844)	(2.067)	(2.245)	(3.558)	(5.653)
5. Assets (Book)	$2.470	$2.698	$2.944	$3.211	$3.503	$3.821	$5.921	$9.167
6. Unfunded Actuarial Liability	$2.091	$2.479	$2.682	$2.914	$3.134	$3.381	$4.619	$5.771
(Funded Percentage)	54.2%	52.1%	52.3%	52.4%	52.8%	53.1%	56.2%	61.4%
7. Employee Contributions	$.096	$.114	$.119	$.125	$.131	$.138	$.176	$.224
8. State Normal Cost	$.091	$.109	$.113	$.123	$.130	$.140	$.190	$.258
(% Payroll)	7.6%	7.7%	7.6%	7.9%	8.0%	8.2%	8.7%	9.2%
9. State Contribution	$.070	$.068	$.077	$.086	$.094	$.105	$.168	$.264
(% Payroll)	5.8%	4.8%	5.2%	5.5%	5.8%	6.1%	7.7%	9.5%
10. Other Contributions (Federal, Reciprocity, Etc.)	$.008	$.011	$.012	$.012	$.013	$.014	$.018	$.022
FASB #35								
11. Value of Accrued Benefits	$4.031	$4.413	$4.837	$5.291	$5.778	$6.297	$9.468	$13.706
(Funded Percentage)	61.3%	61.1%	60.9%	60.7%	60.6%	60.7%	62.5%	66.9%

Actual Expense used for FY87. Expenses estimated at $10 million for FY88; increasing by 10% per annum thereafter. Actual State Contributions used for FY87. State Contributions equal to 47% of Benefit Payments (excluding refunds) 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. (FY87 was a ten-month year.)

Table 4b

STATE UNIVERSITIES RETIREMENT SYSTEM OF ILLINOIS
FIFTEEN YEAR PROJECTION OF COSTS AND LIABILITIES
(Assumes State Contributions Equal to 100% of Benefit Payments)
(All Dollar Amounts in Billions)

	Fiscal Year Ending 6/30							
	1987	1988	1989	1990	1991	1992	1997	2002
1. Number of Active Members	52,057	52,057	52,057	52,057	52,057	52,057	52,057	52,057
2. Annual compensation	$1.196	$1.426	$1.489	$1.559	$1.635	$1.717	$2.191	$2.793
3. Annual Benefit Payments & Administrative Expense	$.127	$.166	$.187	$.206	$.226	$.251	$.390	$.604
4. Actuarial Liability	$4.561	$5.177	$5.625	$6.124	$6.637	$7.201	$10.540	$14.938
(Retired Lives Reserves)	(1.289)	(1.509)	(1.683)	(1.844)	(2.067)	(2.245)	(3.558)	(5.653)
5. Assets (Book)	$2.470	$2.779	$3.115	$3.483	$3.886	$4.327	$7.247	$11.793
6. Unfunded Actuarial Liability	$2.091	$2.399	$2.510	$2.641	$2.751	$2.874	$3.293	$3.145
(Funded Percentage)	54.2%	53.7%	55.4%	56.9%	58.5%	60.1%	68.8%	78.9%
7. Employee Contributions	$.096	$.114	$.119	$.125	$.131	$.138	$.176	$.224
8. State Normal Cost	$.091	$.109	$.113	$.123	$.130	$.140	$.190	$.258
(% Payroll)	7.6%	7.7%	7.6%	7.9%	8.0%	8.2%	8.7%	9.2%
9. State Contribution	$.070	$.145	$.165	$.182	$.200	$.224	$.357	$.563
(% Payroll)	5.8%	10.2%	11.1%	11.7%	12.2%	13.0%	16.3%	20.1%
10. Other Contributions (Federal, Reciprocity, Etc.)	$.008	$.011	$.012	$.012	$.013	$.014	$.018	$.022
FASB #35								
11. Value of Accrued Benefits	$4.031	$4.413	$4.837	$5.291	$5.778	$6.297	$9.468	$13.706
(Funded Percentage)	61.3%	63.0%	64.4%	65.8%	67.3%	68.7%	76.5%	86.0%

Actual Expense used for FY87. Expenses estimated at $10 million for FY88; increasing by 10% per annum thereafter. Actual State Contributions used for FY87. State Contributions equal to 100% of Benefit Payments (excluding refunds) 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. (FY87 was a ten-month year.)

Table 5

STATE UNIVERSITIES RETIREMENT SYSTEM
OF ILLINOIS

ANALYSIS OF FINANCIAL EXPERIENCE

Gains and losses in Accrued Actuarial Liability for Fiscal Year ending June 30, 1987.

Activity	Gain (Loss)
1. Actuarial Gains and Losses	
(a) Age & Service Retirements	($ 7,405,669)
(b) Incidence of Disability	1,528,204
(c) In-Service Mortality	(5,391,321)
(d) Retiree Mortality	(4,856,163)
(e) Disabled Mortality	(589,033)
(f) Termination of Employment	3,422,933
(g) Salary Increases	(6,598,861)
(h) Investment Income	14,340,609
(i) Other	6,624,309
(j) Total Actuarial Gain (Loss)	$ 1,075,008
2. Contribution Income	($121,037,179)
3. Non Recurring Items (Plan amendments)	
(a) Benefit Increases (HB2530)	($ 6,694,810)
(b) Change in definition of Final Rate of Earnings (HB2630)	(39,692,597)
4. Total Financial Gain (Loss)	($166,349,578)

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 active and inactive members, in particular for 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 three year setback for males and a two year setback for females.

Interest: 8% per annum, compounded annually.

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

Age	Males	Females
20	0.184	0.224
25	0.152	0.188
30	0.120	0.152
35	0.087	0.116
40	0.059	0.083
45	0.041	0.059
50	0.029	0.045
55	--	--

It is assumed that terminated employees will not be rehired.

Salary Increases: 7% per annum, compounded annually.

Disability Rates: Incidence of disability amongst employees.

Age	Males	Females
20	0.0002	0.0006
25	0.0002	0.0007
30	0.0004	0.0010
35	0.0007	0.0014
40	0.0011	0.0019
45	0.0019	0.0025
50	0.0032	0.0035
55	0.0055	0.0052
60	0.0094	0.0080

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:

Age	Rate of Recovery	Rate of Mortality
20	0.591	0.044
25	0.478	0.044
30	0.377	0.044
35	0.288	0.044
40	0.211	0.044
50	0.094	0.045
60	0.024	0.053
70	0.001	0.075
80	--	0.130
90	--	0.240

Retirement Rates: General employees are assumed to retire at age 62. Police and firefighters are assumed to retire upon the attainment of age 55 and completion of 20 years of service, or at age 62 if earlier.

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: Employees are assumed to be married in accordance with the following table:

Age	Males	Females
20	25%	40%
30	70%	75%
40	80%	80%
50	85%	80%
60	85%	70%

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

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

Age	Rate of Remarriage	Age	Rate of Remarriage
20	0.145	40	0.029
25	0.095	45	0.019
30	0.060	50	0.012
35	0.041	55	0.007

Children:

It is assumed that married members have 2.0 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:

Age At Death Of Employee	Age of Youngest Child
20	0
25	1
30	3
35	5
40	7
45	9
50	12
55	15
60	18

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 $25,100.

Procedure for Annualizing Earnings:

During the annual experience study a calculation was made of the percentage of active employees, hired on or before September 1, 1985, whose reported earnings for the period September 1, 1986 - June 30, 1987 exceeded their reported earnings for the period September 1, 1985 - August 31, 1986. When the valuation was processed it was assumed, for each active employee, that this calculated percentage of reported earnings represented a full year's pay and that the remaining percentage of reported earnings represented pay for 10 full calendar months. The System will provide a tape later this year with actual reported earnings for the full 12 month period September 1, 1986 - August 31, 1987. Based on the information contained on this tape we may revise our procedure for annualizing earnings for subsequent valuations.

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 (6/30/87).

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 on a temporary basis at 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":

		General	Police & Fireman
(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%

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 a participating employee* 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% for general employees, 8-1/2% for police and firefighters) 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 while a participating employee*

   (i) to a dependent beneficiary an amount equal to the employee's final annual rate of earnings, but not less than $2,000 nor more than $5,000.

   (ii) to a nondependent beneficiary a lump sum payment of $2,500.

* The recipient of a disability benefit is a participating employee. The recipient of a disability retirement allowance is not.

Death Of An Annuitant:

Upon the death of an annuitant receiving a retirement annuity or disability retirement annuity, 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 at 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, and is based on the number of completed months that have elapsed since retirement began.

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.