

**IOWA PUBLIC EMPLOYEES'
RETIREMENT SYSTEM**

**Actuarial Valuation Report
as of June 30, 1999**

**ACTUARIAL VALUATION OF THE IOWA PUBLIC EMPLOYEES'
RETIREMENT SYSTEM**

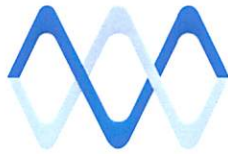
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- B. Summary of Plan Provisions
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MILLIMAN & ROBERTSON, INC.
Actuaries & Consultants

Internationally WOODROW MILLIMAN

Suite 500, 10050 Regency Circle, Omaha, Nebraska 68114-3720
Telephone: 402/393-9400
Fax: 402/393-1037

November 16, 1999

Iowa Public Employees' Retirement System
600 E. Court Avenue
Des Moines, IA 50306

Re: Iowa Public Employees' Retirement System

To: Mollie Anderson, Director of the Department of Personnel
Greg Cusack, Chief Benefits Officer
Kathy Comito, Chief Investment Officer
Jennifer Dixon, General Counsel
Leon Schwartz, Chief Operations Officer

We have performed an actuarial valuation of the Iowa Public Employees' Retirement System (System) as of June 30, 1999. An actuarial valuation is prepared annually to determine the contribution rate necessary to fund the benefits being credited for membership service and to amortize the System's unfunded actuarial accrued liability within the parameters set out in IPERS funding policy.

The member and employer contribution rates are established by law. The combined employee and employer rate for the majority of the System's members is 9.45%. Certain employees in protection occupation classifications and their employers contribute at slightly higher rates as required by law. Based on the System's funding policy and the current actuarial assumptions, the statutory 9.45% contribution rate is sufficient to fund the current benefit structure and to amortize the unfunded actuarial accrued liability over 20 years.

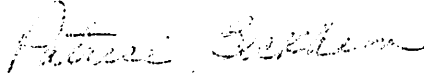
Actuarial assumptions are needed to estimate future economic and demographic experience of the System, which affect future System benefit payments and investment earnings. This valuation reflects the impact of the recommended changes in the actuarial assumptions, which resulted from the 1998 Experience Study. Any deviation between actual and expected future experience will result in corresponding changes in the on-going costs of the System. The demographic actuarial assumptions were developed both from the experience of the System and from standard actuarial sources. We believe the actuarial assumptions used in the valuation are reasonable, as related to the experience of the System.

In performing the valuation, we have relied upon membership and financial data reported to us by the System. We did not verify the accuracy of the information, but did review it for reasonableness in relation to the data submitted for previous years.

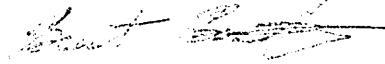
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Page 2

This report has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with principles prescribed by the Actuarial Standards Board (ASB) and the Code of the Professional Conduct and Qualifications Standards for Public Statements of Actuarial Opinion of the American Academy of Actuaries.

Respectfully Submitted,
MILLIMAN & ROBERTSON, INC.



Patrice A. Beckham, F.S.A., M.A.A.A.
Consulting Actuary



Brent A. Banister, A.S.A., M.A.A.A.
Associate Actuary

SECTION I

EXECUTIVE SUMMARY

Introduction

This report presents the results of the June 30, 1999 actuarial valuation of the Iowa Public Employees' Retirement System (IPERS). The primary purposes of performing the valuation are as follows:

- to certify that the contribution rate to be paid by the members and employers for the Fiscal Year beginning July 1, 1999 is sufficient to fund the benefits expected to be paid to members and meets the criteria set out in the funding policy established by IPERS,
- to disclose various asset and liability measures as of June 30, 1999, and
- to analyze and report on trends in System contributions, assets, and liabilities over the past several years.

An Experience Study was completed in 1999 covering the experience from 1993 through 1998. The Experience Study resulted in the recommendation and adoption of several revised assumptions, which are reflected in this valuation. The most significant changes were:

- Reflect improvements in mortality by adopting the 1994 Group Annuity Mortality Table , with adjustments to more closely reflect actual experience;
- Use of an age, service, and gender based assumption for termination of employment rates;
- Use of an age and service based assumption for salary increases; and
- Modification of current retirement rates to more closely reflect experience.

The actuarial valuation results provide a "snapshot" view of the System's financial condition on June 30, 1999. The valuation results reflect overall favorable experience for the past plan year as demonstrated by an unfunded actuarial liability, prior to the adjustment for the impact of the change in assumptions and the FED transfer, that was lower than expected based on our assumptions. Most of the favorable experience was due to a significant actuarial gain on the actuarial value of assets.

The impact of the change in actuarial assumptions was to increase the cost of the benefits provided by IPERS. The unfunded actuarial liability increased \$587 million due to the change in assumptions while the normal cost rate increased from 7.66% to 8.79%.

Section I Executive Summary

In 1998, legislation was passed to create the Favorable Experience Dividend (FED) reserve account with initial funding of \$200 million (on an actuarial value of assets basis). The law provides that a portion of the favorable experience in subsequent years may be transferred to the FED reserve. Based on the results of the June 30, 1999 valuation, \$226.5 million was transferred to the FED reserve.

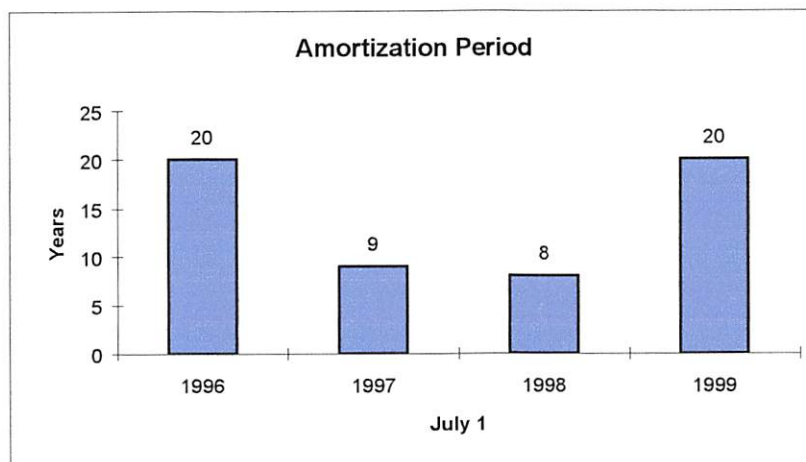
A summary of the impact of IPERS' funding due to the change in actuarial assumptions and the FED transfer is shown below:

	Before Assumption Change and FED Transfer	After Assumption Change but Before FED Transfer	After Assumption Change and FED Transfer
Actuarial Liability	\$12,467M	\$13,054M	\$13,054M
Actuarial Value of Assets	12,890M	12,890M	12,664M
Unfunded Actuarial Liability (UAL)	(423)M	164M	390M
Normal Cost Rate	7.66%	8.79%	8.79%
Years to Amortize UAL	0	7	20

Contribution Rate

The Iowa statutes provide that most IPERS members shall contribute 3.7% of pay and employers shall contribute 5.75%, for a total of 9.45%. The valuation is performed to determine whether that rate will be sufficient to fund the future benefits expected to be paid by the System within the guidelines established in IPERS' funding policy (maximum amortization period of 30 years). The statutory rate is first applied to fund the normal cost rate. The remaining contribution rate is used to amortize the unfunded actuarial accrued liability as a level percentage of payroll. As a result the remaining amortization period varies with each valuation. The current valuation results indicate the statutory rate results in an amortization period of 20 years, which is less than the funding policy's maximum of 30 years.

The following graph illustrates the remaining amortization period for the last four valuations. Prior to 1996 a different actuarial cost method was used which did not directly calculate an actuarial liability so comparable statistics are not available.



Section I Executive Summary

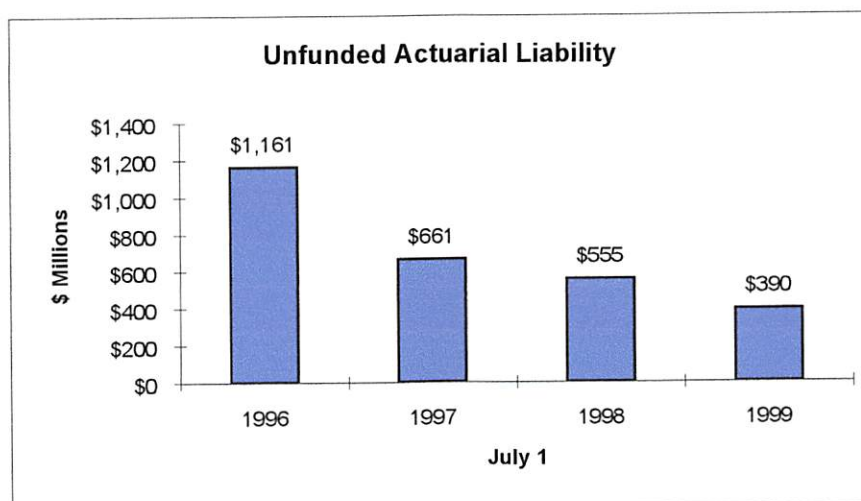
Experience

Numerous factors contributed to the change in the Systems' asset, liabilities and remaining amortization period for the unfunded actuarial liability between June 30, 1998 and June 30, 1999. The components are examined in the following discussion.

Actuarial gains/losses result from actual experience that is more/less favorable than anticipated based on the actuarial assumptions. These "experience" (or actuarial) gains/losses are reflected in the UAL and are measured as the difference between the expected unfunded actuarial liability (UAL) and the actual unfunded actuarial liability, taking into account changes due to assumption or benefit provision changes. Overall, the System experienced a net actuarial gain of \$941 million. The change in the unfunded actuarial liability between June 30, 1998 and 1999 is shown below (in millions):

Unfunded Actuarial Liability, June 30, 1998	\$555
• Expected change in UAL due to amortization payment	(37)
• Investment gain	(730)
• Liability (gain)/loss from actual experience	(211)
• Benefit enhancements (excluding FED)	0
• Change in actuarial assumptions	587
Unfunded Actuarial Liability <u>before</u> FED transfer, June 30, 1999	\$164
• FED Transfer	226
Unfunded Actuarial Liability <u>after</u> FED transfer, June 30, 1999	\$390

The following summarizes the unfunded actuarial liability for IPERS over the last four valuations. Prior to that time, a different actuarial cost method was used which did not directly calculate an actuarial liability. Therefore, comparable statistics for years prior to 1996 are not available.



Section I
Executive Summary

Assets

As of June 30, 1999, the System had total funds of \$15.1 billion, when measured on a market value basis, excluding the Favorable Experience Dividend (FED) reserve account. This was an increase of \$1.4 billion from the prior year. The components of this change are shown below:

	Market Value
Net Assets, June 30, 1998	\$ 13,693
• Employer and Member Contributions	+ 427
• Benefit Payments	- 469
• Administrative Expenses	- 5
• Investment Income (Expected)	+ 1,025
• Investment Gain/(Loss)	+ 408
Net Assets, June 30, 1999 Before FED Transfer	\$ 15,079
• FED Transfer	- 265
Net Assets, June 30, 1999 After FED Transfer	\$ 14,814

The market value of assets is not used directly in the calculation of the contribution rate and amortization period. The actuarial value of assets is equal to the expected asset value based on the assumed interest rate plus 25% of the difference between the actual market value and the expected asset value.

The change in the actuarial value of assets from June 30, 1998 to June 30, 1999 is shown below:

	Actuarial Value
Actuarial Assets, June 30, 1998	\$ 11,353
• Employer and Member Contributions	+ 427
• Benefit Payments	- 469
• Investment Income (Expected)	+ 849
• Investment Gain/(Loss)	+ 730
Actuarial Assets, June 30, 1999 Before FED Transfer	\$ 12,890
• FED Transfer	- 226
Actuarial Assets, June 30, 1999 After FED Transfer	\$ 12,664

The dollar weighted rate of return measured on the actuarial value of assets was 13.9%. A comparison of asset values on both the market and actuarial basis is shown below:

	June 30		
	1999	1998	1997
Market Value of Assets	14,814	13,464	11,534
Actuarial Value of Assets	12,664	11,546	10,113
Actuarial Value/Market Value	85.5%	85.8%	87.7%

Section I Executive Summary

Liabilities

There are four different measurements of liabilities discussed in this section.

- **Actuarial Balance Sheet Liability** is the present value of all future benefits (PVFB) expected to be paid from the System to current members (retired, active and deferred vested). This liability is calculated based on both future payroll projections and service credits to retirement or other separation from service.
- **Actuarial Accrued Liability** is the portion of the present value of future benefits (actuarial balance sheet liability) that will not be paid by future normal costs. It is also defined as the portion of the actuarial balance sheet liability allocated to service before the valuation date by the actuarial cost method.
- **Projected Benefit Obligation (PBO)** was previously used for financial reporting purposes under GASB No. 5 (since superseded by GASB 25) and is provided here for comparative purposes only. It represents the present value of benefits based on future payroll projections but only reflecting service credits as of the valuation date. This measure of the funded status of the plan does not directly impact the contribution rate or amortization period. It is not uncommon for the PBO to exceed the actuarial value of assets, since the PBO reflects future assumed salary increases.
- **Present Value of Accrued Benefits (PVAB)** is used only for informational purposes. It does not directly impact the contribution rate or amortization period for the System. This liability represents the present value of benefits earned to date, based on service and salary as of the valuation date. The PVAB can be used as a measure of the funded status of the System since it more closely represents the amount required to pay all accrued benefits if the fund were to liquidate on the measurement date. In a well-funded System, the expectation would be that the assets would be equal to or exceed the PVAB.

Each liability measurement discussed above is used for a different purpose. Therefore, the relative importance of the measurement will depend on the perspective of the person using the information. From an actuarial viewpoint, the actuarial balance sheet liability and the actuarial accrued liability are the most critical because, along with the actuarial value of assets, they ultimately determine whether the statutory contribution rate for the System is sufficient to fund the current benefit structure, within the parameters set out in IPERS' funding policy. The other liability figures are valuable because they provide useful comparisons of assets and liabilities.

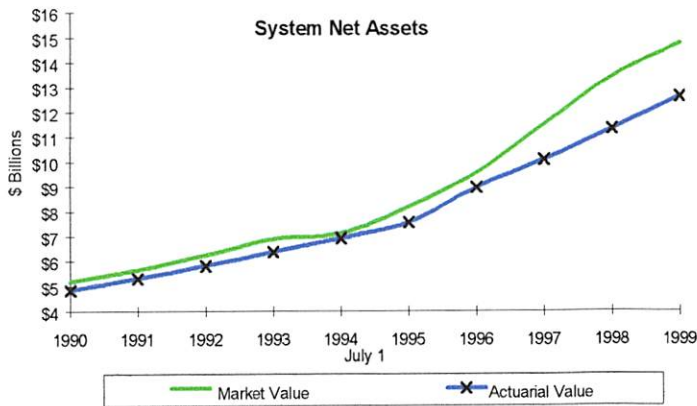
The System liabilities (in millions) as of June 30, 1999 and June 30, 1998 are summarized below. The change in the actuarial assumptions and the transfer of part of the favorable experience to the FED limits the direct comparison of these numbers.

	June 30	
	1999	1998
Actuarial Balance Sheet Liability (PVFB)	\$16,316	\$14,404
Actuarial Accrued Liability	13,054	11,907
PBO	11,733	10,635
Present Value of Accrued Benefits (PVAB)	9,935	8,866

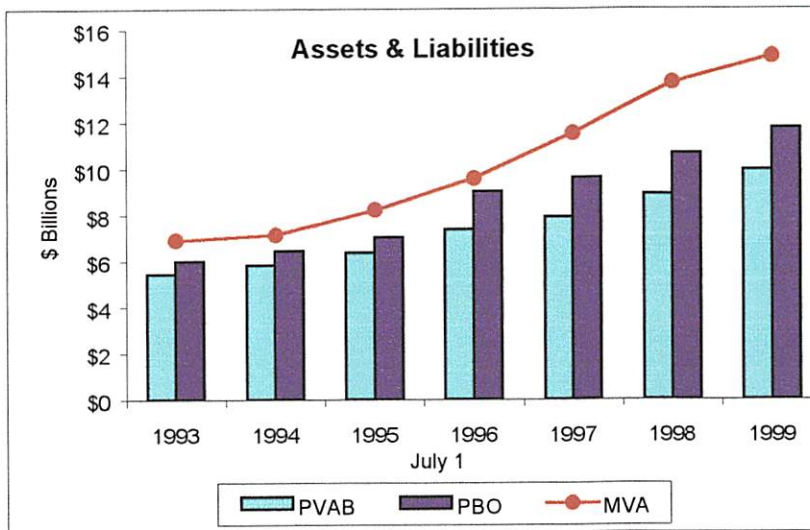
Section I Executive Summary

Comparison of Major Valuation Results

The major findings of the 1999 valuation compared with prior valuation results are summarized and compared on the following pages.



The System's assets have grown faster than expected due to investment performance in excess of the actuarial assumption.

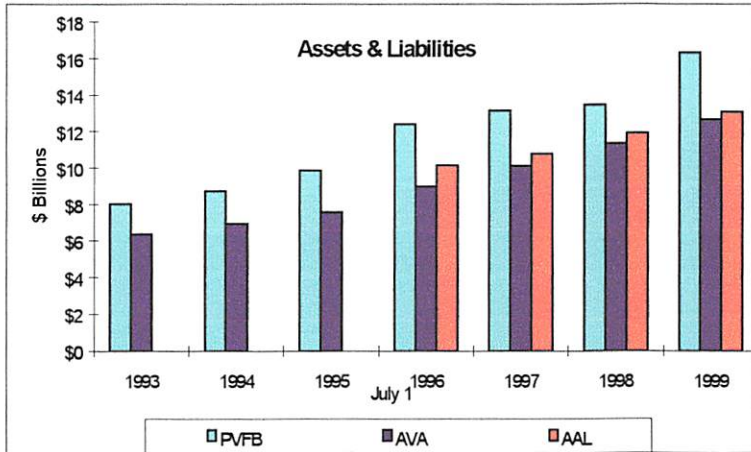


System liabilities have increased each year, which is to be expected as additional service is earned.

The difference between the market value of assets and the PVAB and PBO has grown in the past 10 years, largely due to favorable investment experience.

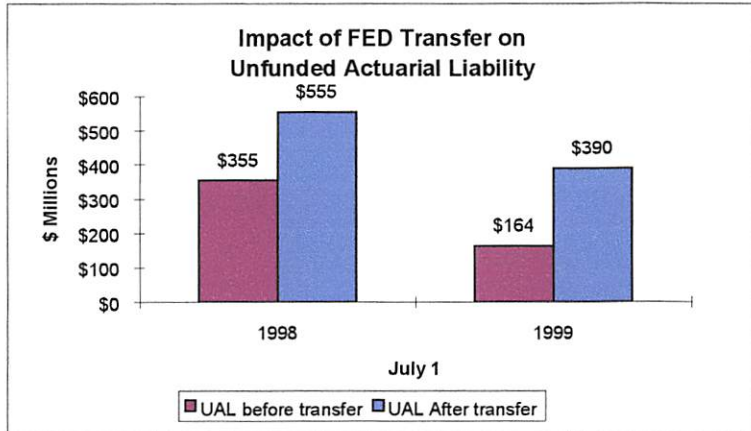
PVAB = Present Value of Accrued Benefits
PBO = Projected Benefit Obligation
MVA = Market Value of Assets

Section I Executive Summary



Historical information for the AAL before 1996 is not appropriate to disclose since the aggregate cost method (which does not develop an actuarial accrued liability) was used in those years.

PVFB = Present Value of Future Benefits (Actuarial Balance Sheet Liabilities)
 AAL = Actuarial Accrued Liability
 AVA = Actuarial Value of Assets



The law provides for a portion of the favorable experience to be used to fund the FED. The amount transferred is dependent upon the funded status of IPERS. The FED transfer results in an increase in the unfunded actuarial liability.

Section I Executive Summary

SUMMARY

IPERS continues to be funded on an actuarially sound basis. Based on the current benefit structure, the unfunded actuarial accrued liability will be amortized in 20 years, if all actuarial assumptions are met. This 20 year period is determined assuming a 7.5% return on the actuarial value of assets rather than a 7.5% return on the market value of assets.

Although the funded ratio (the actuarial value of assets divided by the actuarial liability) for the System increased from 95.3% in 1998 to 97.0% in 1999, the amortization period increased significantly from 8 years to 20. This is because the normal cost rate increased from 7.63% in 1998 to 8.79% in 1999. As a result, the contribution available to pay off the unfunded actuarial liability decreased from 1.82% (equal to 9.45%-7.63%) to 0.66% (9.45%-8.79%). Even though the System has a small unfunded actuarial liability (UAL), the amount of contributions available to pay it off is small. Therefore, small changes in the UAL will cause dramatic changes in the amortization period.

The net result of all changes was a decrease in the unfunded actuarial accrued liability (UAAL) from \$555 million to \$390 million. The funded percentage, measured as the ratio of actuarial value of assets to actuarial accrued liability, is 97.0% as of June 30, 1999, as compared to 95.3% as of June 30, 1998. This compares with an average funded percentage of 88.7% for public retirement systems.*

Based on the valuation results, IPERS is well funded, both in the present and for the long term, and compares favorably with other major public retirement systems. In concluding this executive summary, we present on the following page comparative statistics and actuarial information on both the June 30, 1999 and June 30, 1998 valuations.

*Data from "1997 Survey of State and Government Employee Retirement Systems" prepared by Paul Zorn for the Public Pension Coordinating Committee.

**Section I
Executive Summary**

**IOWA PUBLIC EMPLOYEES' RETIREMENT SYSTEM
PRINCIPAL RESULTS**

	June 30, 1999*	June 30, 1998*	% Chg
SYSTEM MEMBERSHIP			
1. Active Membership			
- Number of Participants	152,440	148,917	2.4
- Projected Payroll for Fiscal Year	4,165M	4,104M	1.5
- Average Salary	27,322	26,767	2.1
2. Inactive Membership			
- Number Not in Pay Status	94,853	88,823	6.8
- Number of Retirees/Beneficiaries	63,396	61,648	2.8
- Average Annual Benefit	7,309	6,819	7.2
ASSETS AND LIABILITIES			
1. Net Assets (after FED transfer)			
- Market Value	14,814M	13,693M	8.2
- Actuarial Value	12,664M	11,352M	11.6
2. Projected Liabilities			
- Retired Members	4,415M	3,866M	14.2
- Inactive Members	342M	308M	11.0
- Active Members	11,559M	10,230M	13.0
- Total Liability	16,316M	14,404M	13.3
3. Actuarial Accrued Liability	13,054M	11,907M	9.6
4. Unfunded Actuarial Accrued Liability	390M	555M	-29.7
5. Funded Ratio (Actuarial Value Assets/Actuarial Accrued Liability)	97.02%	95.30%	1.8
SYSTEM CONTRIBUTIONS			
Required Contribution Rate**	9.45%	9.45%	0.0
Years Required to Amortize Unfunded Actuarial Liability	20 years	8 years	150.0

M = (\$)Millions

* These membership figures are based on March 31 data.

** Contribution for certain special groups (3.3% of the membership) are not fixed at 9.45% but are actuarially determined separately each year.

SECTION II
SYSTEM ASSETS

SECTION II

SYSTEM ASSETS

In this section, the values assigned to the assets held by the System are presented. These assets are valued on two different bases: the market value and the actuarial value.

Market Value of Net Assets

For certain accounting statement purposes, System assets are valued at current market rates. These values represent the "snapshot" or "cash-out" value of System assets as of the valuation date. In addition, the market value of assets provides a reference point to compare to various liability calculations.

Actuarial Value of Net Assets

The market value of assets, representing a "cash-out" value of System assets, may not necessarily be the best measure of the System's ongoing ability to meet its obligations.

To arrive at a suitable value for the actuarial valuation, a technique for determining the actuarial value of assets is used which dampens volatility in the market value while still indirectly recognizing market value. The specific technique follows:

- Step 1:** Determine the expected value of plan assets at the current valuation date using the actuarial assumption for investment return and the actual receipts and disbursements of the fund for the previous 12 months.
- Step 2:** Subtract the expected value determined in Step 1 from the total market value of the Fund at the current valuation date.
- Step 3:** Multiply the difference between market and expected values determined in Step 2 by 25%.
- Step 4:** Add the expected value of Step 1 and the product of Step 3 to determine the actuarial value of assets.

Section II System Assets

Information regarding the actuarial and market values of System assets as of June 30, 1999 is presented on the following pages:

<u>Page</u>	<u>Contents</u>
12	Analysis of Net Assets
13	Graph of Asset Allocation
14	Summary of Fund Activity – Market Value
15	Summary of Fund Activity - FED
16	Actuarial Value of Net Assets
17	Historical Comparison (Actuarial and Market)

**Section II
System Assets**

ANALYSIS OF NET ASSETS AT MARKET VALUES

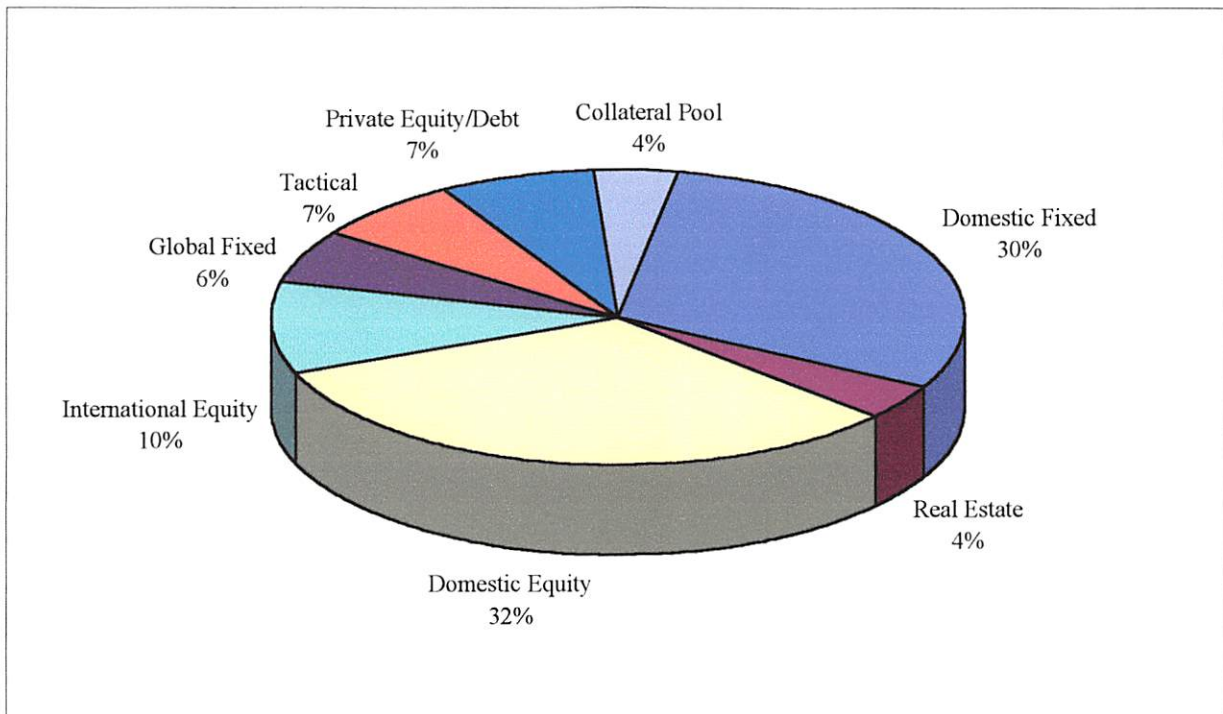
(\$ Millions)

	June 30, 1999		June 30, 1998	
	<u>Amount</u>	<u>% of Total</u>	Amount	<u>% of Total</u>
Cash & Equivalents	\$69	0.5%	\$35	0.3%
Fixed Assets, Receivables and Payables	(1,318)	(8.6)	(1,225)	(8.2)
Domestic Fixed Income	4,905	32.0	4,142	30.2
Domestic Equity	5,410	35.3	4,654	34.0
International Equity	1,654	10.8	1,209	8.8
Global Fixed Income	1,009	6.6	931	6.8
Tactical Asset Funds	1,232	8.0	1,626	11.9
Real Estate Funds	586	3.8	492	3.6
Private Equity/Debt	1,181	7.7	1,171	8.6
Collateral Pool	597	3.9	658	4.8
TOTAL ASSETS	\$15,325	100.0%	\$13,693	100.0%
FED Reserve (Before current year transfer)	246		229	
Net Retirement System Assets	\$15,079		\$13,464	

Section II
System Assets

Allocation of IPERS Investments

As of June 30, 1999
(% Of Market Value by Type)



Section II System Assets

SUMMARY OF FUND ACTIVITY
 (Market Value)

NET RETIREMENT SYSTEM ASSETS ON JUNE 30, 1998 \$13,463,899,832

REVENUE

Employer Contributions	246,229,008
Member Contributions	161,992,768
Service Purchase	19,169,871
Investment income	1,690,971,632

Total Revenue	\$2,118,363,279
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DISBURSEMENTS

Benefit payments	454,600,266
Member and employer refunds	14,442,111
Administrative expense	5,134,562
Investment expense	28,865,786

Total Expenses	\$503,042,725
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NET RETIREMENT SYSTEM ASSETS ON JUNE 30, 1999 \$15,079,220,386

DISTRIBUTION TO FAVORABLE EXPERIENCE DIVIDEND RESERVE \$264,908,935

ADJUSTED NET RETIREMENT SYSTEM ASSETS ON JUNE 30, 1999 \$14,814,311,451

**Section II
System Assets**

SUMMARY OF FUND ACTIVITY
(Favorable Experience Dividend Fund)

FED RESERVE ASSETS ON JUNE 30, 1998	\$0
REVENUE	
Transfer from Retirement System	229,000,000
Investment income	<u>29,523,325</u>
Total Revenue	\$258,523,325
DISBURSEMENTS	
Benefit payments	<u>12,152,683</u>
Total Expenses	\$12,152,683
FED RESERVE ASSETS ON JUNE 30, 1999	\$246,370,642

**Section II
System Assets**

ACTUARIAL VALUE OF NET ASSETS

1. Actuarial value of Assets as of June 30, 1998	\$11,352,674,142
2. Actual Receipts/Disbursements	
a. Contributions	427,391,647
b. Benefit Payments	469,042,377
c. Net Change	(41,650,730)
3. Expected Value of Assets as of June 30, 1999 [(1) x 1.075] + [(2c) x (1 + .075/2)]	12,160,912,070
4. Market Value of Assets as of June 30, 1999	15,079,220,386
5. Difference Between Market and Expected Values (4) - (3)	2,918,308,316
6. Actuarial Value of Assets as of June 30, 1999 (3) + [(5) x 25%]	12,890,489,149
7. Adjustment for Transfer to the Favorable Experience Dividend Reserve Account	(226,457,712)
8. Actuarial Value of Assets for June 30, 1999 Actuarial Valuation	\$12,664,031,437

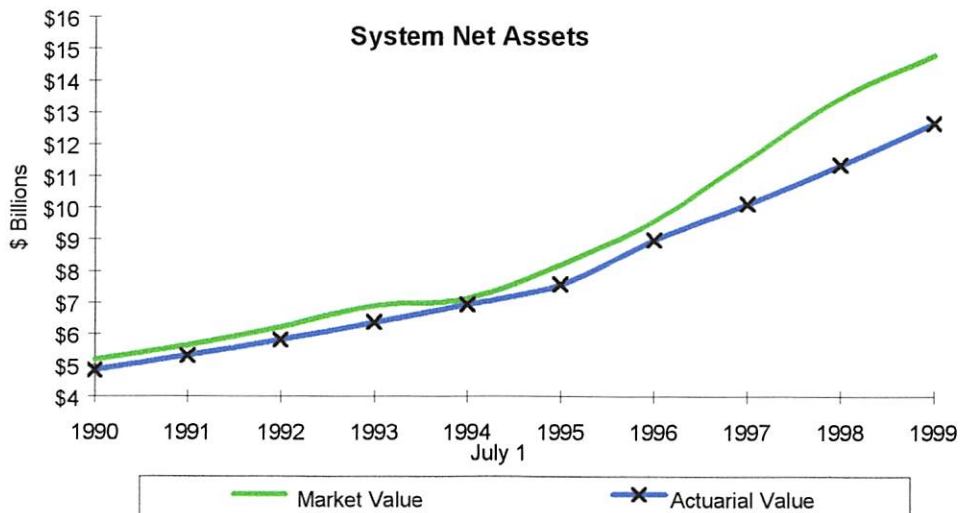
**Section II
System Assets**

HISTORICAL COMPARISON (ACTUARIAL AND MARKET)

Value As of	Actuarial Value of Net Assets	Market Value of Net Assets
June 30, 1990	4,829,933,406	5,154,615,631
June 30, 1991	5,304,320,455	5,638,657,050
June 30, 1992	5,805,210,929	6,225,257,155
June 30, 1993	6,365,169,296	6,899,590,868
June 30, 1994	6,926,678,212	7,126,124,256
June 30, 1995	7,574,159,776	8,199,217,051
June 30, 1996 *	8,975,396,251	9,587,104,982
June 30, 1997	10,112,976,077	11,533,968,923
June 30, 1998 **	11,352,674,142	13,463,899,832
June 30, 1999 **	12,664,031,437	14,814,311,451

*In order to implement the new asset valuation method, the June 30, 1995 actuarial value of assets was revised to the actual market value on that date.

**Reflects reduction for transfers to the Favorable Experience Dividend Reserve Account.



SECTION III
SYSTEM LIABILITIES

SECTION III

SYSTEM LIABILITIES

A fundamental principle in financing the liabilities of a retirement program is that the cost of its benefits should be related to the period in which benefits are earned, rather than to the period of benefit distribution. There are several methods which are used to allocate the cost of benefits to members' working lifetimes. These mathematical techniques are called actuarial cost methods.

The method used for this valuation is referred to as the "entry age normal" actuarial cost method. Under this method, a contribution which is a level percent of pay is determined for each member which, if paid from date of hire to retirement date, will finance all future benefit payments. The level percent of pay which is developed is called the "**normal cost**" rate. The sum of the individual normal cost dollar amounts is divided by covered payroll to determine the normal cost rate for the System.

The actuarial accrued liability is that portion of the total liability or present value of future benefits (PVFB) that will not be paid by future normal costs. The difference between this liability and the actuarial value of assets as of the same date is referred to as the **unfunded actuarial accrued liability (UAAL)**. If contributions exceed the normal cost for the year, after allowing for interest on the previous balance of the UAAL, this liability will be reduced. Benefit improvements, experience gains and losses, and changes in actuarial assumptions or procedures will also have an effect on the total actuarial accrued liability and on the portion of it that is unfunded.

Once the amount of the UAAL has been calculated, the period over which the current statutory contribution rate (less the normal cost rate) will amortize the UAAL is determined.

On the following pages we have summarized, as of June 30, 1999, the actuarial accrued liability. It is important to note that the actuarial accrued liability differs from the present value of accrued benefits (PVAB) and the pension benefit obligation (PBO). The actuarial accrued liability is determined for funding purposes and includes some element of future pay increases and service credits. The PVAB represents the value of the benefits accrued as of the valuation date, assuming each member terminates employment at that time. As a result, there are no projections of future salary increases and service credits in these figures. Finally, the PBO value differs from the PVAB value in that while service accruals are similarly frozen, anticipated future salary increases are reflected.

Section III System Liabilities

The tables in this section present System liabilities as follows:

<u>Page</u>	<u>Contents</u>
20	Development of FED Transfer
21	Unfunded Actuarial Accrued Liability
22	Present Value of Accrued Benefits
23	Pension Benefit Obligation

**Section III
System Liabilities**

**DEVELOPMENT OF AMOUNT TO BE TRANSFERRED TO
THE FAVORABLE EXPERIENCE DIVIDEND RESEVE
as of June 30, 1999**

1. June 30, 1998 Unfunded Accrued Liability	\$ 554,546,275
2. Normal Cost	306,871,602
3. Contributions	427,391,647
4. Expected Unfunded Accrued Liability as of June 30, 1999 $[(1)+(2)] * 1.075 - (3) * 1.0375$	482,605,384
5. Actual Unfunded Accrued Liability as of June 30, 1999	(423,225,463)
6. (Gain)/loss $(5)-(4)$	(905,830,847)
7. Portion of gain to transfer to FED	25%
8. Amount of actuarial value of assets to transfer to FED	\$ 226,457,712
9. Market value of FED transfer	\$ 264,908,935

**Section III
System Liabilities**

**UNFUNDED ACTUARIAL ACCRUED LIABILITY
as of June 30, 1999**

1. Present Value of Future Benefits	
a. Liability for Retired Members and Beneficiaries	\$4,414,919,917
b. Inactive Members Liability	341,571,178
c. Active Members Liability	11,559,034,325
d. Total System Liability	16,315,525,420
2. Present Value of Future Normal Costs	3,261,869,667
3. Actuarial Accrued Liability (1) - (2)	13,053,655,753
4. Actuarial Value of Net Assets	12,664,031,437
5. Unfunded Actuarial Accrued Liability (3) - (4)	389,624,316

**Section III
System Liabilities**

PRESENT VALUE OF ACCRUED BENEFITS

The actuarial present value of accrued benefits represents the value of benefits earned as of the valuation date, based on service and salary to date. This is equivalent to assuming each member terminates employment.

Present Value of Accrued Benefits (as of June 30, 1999)

1. Present value of vested accrued benefits for active plan members	\$ 5,145,256,738
Present value of vested benefits being paid to plan retirees and beneficiaries	4,414,919,917
Present value of vested benefits to terminated plan members not yet in pay status (deferred vested)	327,288,222
Accumulated employee account balance of nonvested inactive members	<u>14,282,956</u>
Total present value of vested accrued benefits	\$ 9,901,747,833
2. Present value of nonvested accrued benefits	33,124,262
3. Total present value of all accrued benefits	\$ 9,934,872,095

**Section III
System Liabilities**

PENSION BENEFIT OBLIGATION

One measurement commonly used and, in fact required before GASB No. 25, for evaluating the funded status of retirement systems is the "pension benefit obligation" as set forth in GASB Statement No. 5. This value is that portion of the actuarial present value of all projected pension benefits, adjusted for the effects of projected salary increases, estimated to be payable in the future as a result of employee service to date under the projected unit credit actuarial cost method. This measurement is independent of the actuarial funding method used to determine contributions to the System.

The pension benefit obligation as determined for both this year and last year is summarized below:

	June 30, 1999	June 30, 1998
Pension Benefit Obligation		
Retired Members and Beneficiaries	\$ 4,414,919,917	\$ 3,866,369,340
Deferred Vested Members	327,288,222	294,936,523
Nonvested Members	14,282,956	12,676,620
Active Members		
-Accumulated employee contributions with interest	2,155,591,553	2,012,398,849
-Employer-financed vested portion	4,741,358,945	4,382,433,941
-Employer-financed non-vested portion	79,454,133	66,465,754
-Total	6,976,404,631	6,461,298,544
Total System Obligation	11,732,895,726	10,635,281,027
Net Assets Available for Benefits	\$14,814,311,451	\$13,463,899,832
Unfunded Pension Benefit Obligation	(3,081,415,725)	(2,828,618,805)
Funded Percentage	126.26%	126.60%

SECTION IV
SYSTEM CONTRIBUTIONS

SECTION IV

SYSTEM CONTRIBUTIONS

Under the funding method described in Appendix C, the contribution rate consists of two elements: the normal cost rate and the contribution rate to amortize the unfunded actuarial accrued liability as a level percent of payroll. The unfunded actuarial accrued liability represents the difference between the portion of the present value of future benefits allocated to service credited prior to the valuation date by the actuarial cost method and the actuarial value of assets as of that date.

In the following pages we present information on System contributions as follows:

<u>Page</u>	<u>Contents</u>
25	Actuarial Balance Sheet
26	Analysis of Contribution Rate

**Section IV
System Contributions**

**ACTUARIAL BALANCE SHEET
June 30, 1999**

ASSETS

Actuarial value of assets	\$12,664,031,437
Present value of future normal costs	3,261,869,667
Present value of future contributions to amortize unfunded actuarial accrued liability	<u>389,624,316</u>
<u>Total Net Assets</u>	\$16,315,525,420

LIABILITIES

<u>Present Value of Future IPERS Benefits</u>	
<u>Retired Members and Beneficiaries</u>	
Annuity benefits being paid and contingent payments upon death	\$4,414,919,917
<u>Active Members</u>	
Retirement benefits	10,210,371,700
Death benefits	166,669,753
Termination benefits	823,568,374
Disability benefits	358,424,498
<u>Inactive Members</u>	
Retirement allowances & death benefits for vested members	327,288,222
Accumulated employee account balances for nonvested members	<u>14,282,956</u>
Total Liabilities	\$16,315,525,420

Section IV
System Contributions

ANALYSIS OF CONTRIBUTION RATE

The actuarial cost method used to determine the required level of annual contributions by the members and the employers to support the benefits for all service to retirement is the Entry Age Normal Cost Method. Under this method, the total cost is comprised of the normal cost rate and the unfunded actuarial liability payment. The statutory contribution rate is first applied to the normal cost rate. The remaining contribution is used to amortize the unfunded actuarial accrued liability as a level percentage of payroll, which determines the period necessary to amortize the unfunded actuarial liability. According to IPERS funding policy, the amortization period shall never exceed 30 years.

1. Statutory Total Contribution Rate	9.45%
2. Normal Cost Rate	8.79%
3. Contribution Toward Unfunded Actuarial Accrued Liability (UAAL)	0.66%
4. Unfunded Actuarial Accrued Liability at Valuation Date	\$ 389,624,316
5. Amortization period necessary to finance UAAL as a level percent of payroll at contribution rate shown in (3)	20 years *

* This assumes all actuarial assumptions are met in the future.

SECTION V
ACCOUNTING INFORMATION

SECTION V

PLAN ACCOUNTING INFORMATION

Historically, Government Accounting Standards Board (GASB) Statement No. 5, "Disclosure of Pension Information by Public Employee Retirement Systems and State and Local Government Employers", required the disclosure of the funded status of the Plan on an annual basis using the pension benefit obligation (PBO).

In an effort to enhance the understandability and usefulness of the pension information that is included in the financial reports of pension plans for state and local governments, the Governmental Accounting Standards Board (GASB) issued Statement No. 25 - Financial Reporting for Defined Benefit Pension Plans. This Statement, along with GASB Statement No. 27 supersede GASB Statement No. 5.

GASB Statement No. 25, effective for fiscal years beginning after June 15, 1996, establishes financial reporting standards for defined benefit pension plans. In addition to two required statements regarding plan assets, the statement requires two schedules and accompanying notes disclosing information relative to the funded status of the plan and historical contribution patterns.

- The Schedule of Funding Progress provides information about whether the financial strength of the Plan is improving or deteriorating over time.
- The Schedule of Employer Contributions provides historical information about the annual required contribution (ARC) and the percentage of the ARC that was actually contributed.

<u>Page</u>	<u>Contents</u>
28	Summary of Membership
29	Schedule of Funding Progress
30	Schedule of Employer Contributions

Section V
Plan Accounting Information

SUMMARY OF MEMBERSHIP

	<u>June 30, 1999</u>	<u>June 30, 1998</u>
Active Employees:		
Vested	112,504	111,284
Not yet vested	<u>39,936</u>	<u>37,633</u>
Total active employees *	152,440	148,917
Retirees and beneficiaries currently receiving benefits:	63,396	61,648
Terminated employees entitled to benefits but not yet receiving them:	34,332	31,202

*Excludes retired/reemployed members

Section V
Plan Accounting Information

IOWA PUBLIC EMPLOYEES' RETIREMENT SYSTEM
SCHEDULE OF FUNDING PROGRESS

In accordance with Statement No. 25 of the Governmental Accounting Standards Board

Actuarial Valuation Date	Net Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL)* (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (P/R) (c)	UAAL as a Percentage of Covered P/R [(b-a)/c]
6/30/94	\$ 6,926,678,212	-	-	0.00%	\$ 3,175,877,083	0.00%
6/30/95	7,574,159,776	-	-	0.00%	3,352,992,969	0.00%
6/30/96	8,975,396,251	10,136,356,814	1,160,960,563	88.55%	3,463,455,913	33.52%
6/30/97	10,112,976,077	10,774,216,472	661,240,395	94.12%	3,640,257,177	18.16%
6/30/98	11,352,674,142	11,907,220,417	554,546,275	95.34%	3,908,471,056	14.19%
6/30/99	12,664,031,437	13,053,655,753	389,624,316	97.02%	4,086,572,426	9.53%

*Prior to 6/30/96 the aggregate cost method was used which does not generate an actuarial accrued liability.

Actuarial Assumptions:

Actuarial cost method: Entry age normal cost method

Amortization method: Open period, level percent of pay

Asset valuation method: Expected value +25% of difference between market and expected value

Investment Rate of Return: 7.5%

Section V
Plan Accounting Information

IOWA PUBLIC EMPLOYEES' RETIREMENT SYSTEM
SCHEDULE OF EMPLOYER CONTRIBUTIONS

(All dollar amounts in millions)

Fiscal Year Ending	Covered Employee Payroll	Actual Employer Contributions	Actual Employer Contribution %	Required Contribution (ARC) %	Percentage of ARC Contribution
6/30/92	\$2,857.10	\$169.10	5.92 %	5.13 %	115.40 %
6/30/93	3,019.40	176.40	5.84	5.27	110.75
6/30/94	3,175.90	183.50	5.78	4.97	116.37
6/30/95	3,353.00	196.70	5.87	4.75	123.50
6/30/96	3,463.50	204.90	5.92	5.11	115.85
6/30/97	3,640.30	215.00	5.91	5.91	100.00
6/30/98	3,908.50	227.80	5.83	5.83	100.00
6/30/99	4,086.57	246.23	6.03	6.03	100.00

In general, employer contribution as a percentage of covered payroll will exceed the normal statutory rate of 5.75% because of higher contribution rates for employees of certain law enforcement, fire safety, and protection occupations.

APPENDIX A

**SUMMARY STATISTICS ON
SYSTEM MEMBERSHIP**

APPENDIX A

SUMMARY STATISTICS ON SYSTEM MEMBERSHIP

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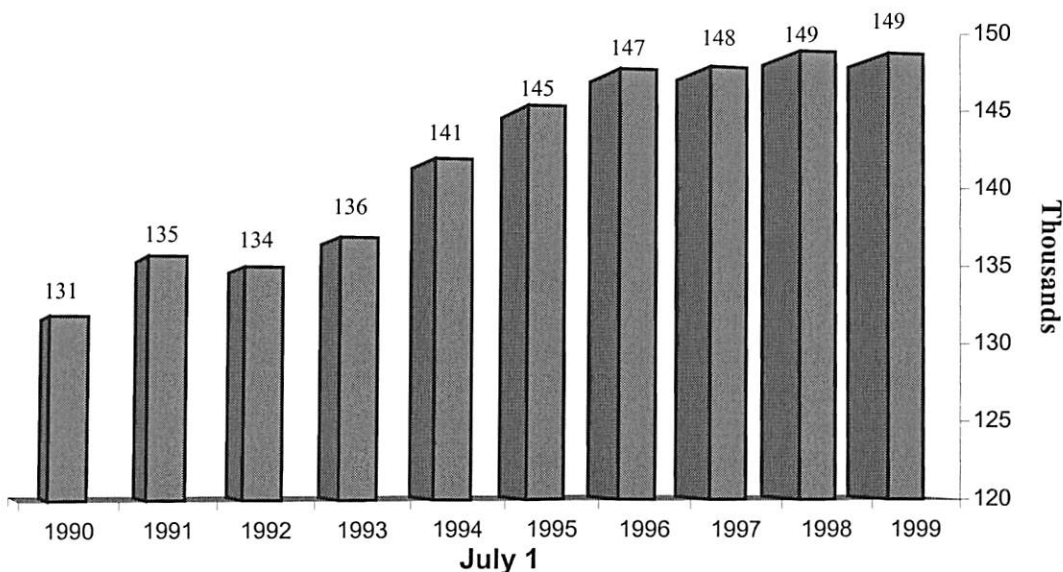
Appendix A
Summary Statistics on System Membership

SUMMARY OF ACTIVE MEMBERSHIP DATA

We received data on a total of 152,440 active members, excluding those retired and reemployed members. Some of the active records submitted in the data were missing data or had invalid dates of birth and/or hire. Assumptions were made in these situations so all membership data was used. The following analysis compares this data with the June 30, 1998 data.

	7/1/1999	7/1/1998	Change	Percent Change
Total Employees	152,440	148,917	3,523	2.4
Projected Covered Payroll* (millions)	\$4,165	\$4,104	\$61	1.5
Average Age	44.8	44.7	0.1	0.2
Average Entry Age	33.4	33.2	0.2	0.6
Average Earnings*	\$27,322	\$26,767	\$555	2.1

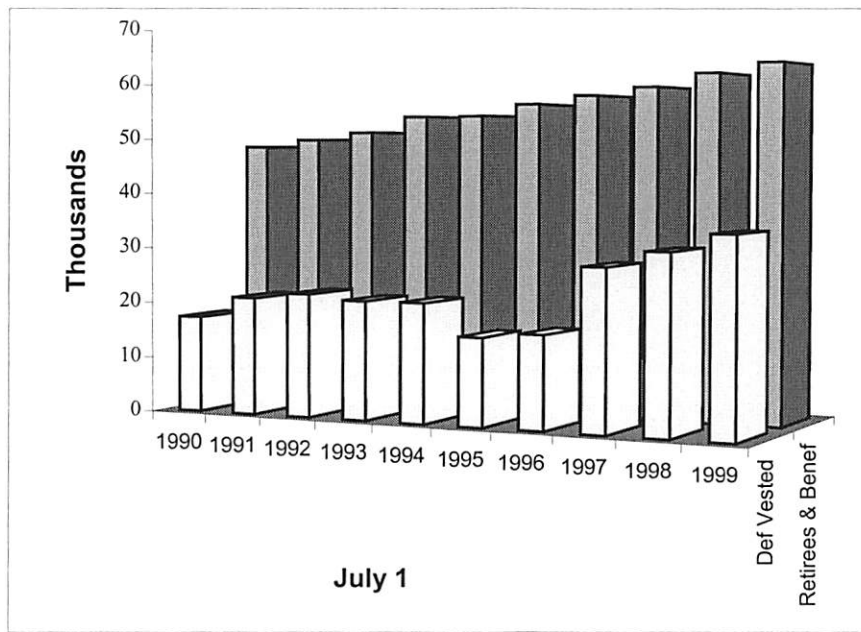
*Payroll figures as of July 1 are actual amounts paid during the first quarter of the calendar year, increased by an assumed salary increase factor for a quarter of a year, annualized and projected for the fiscal year.



Appendix A
Summary Statistics on System Membership

SUMMARY OF INACTIVE MEMBERSHIP DATA

	7/1/99	7/1/98	Change	% Change
Retirees and Beneficiaries	63,396	61,648	1,748	2.8%
Deferred Vested Members	34,332	31,202	3,130	10.0%



Appendix A
Summary Statistics on System Membership

AGE AND SERVICE DISTRIBUTION AS OF JULY 1, 1999 FOR ACTIVE PARTICIPANTS

Males and Females

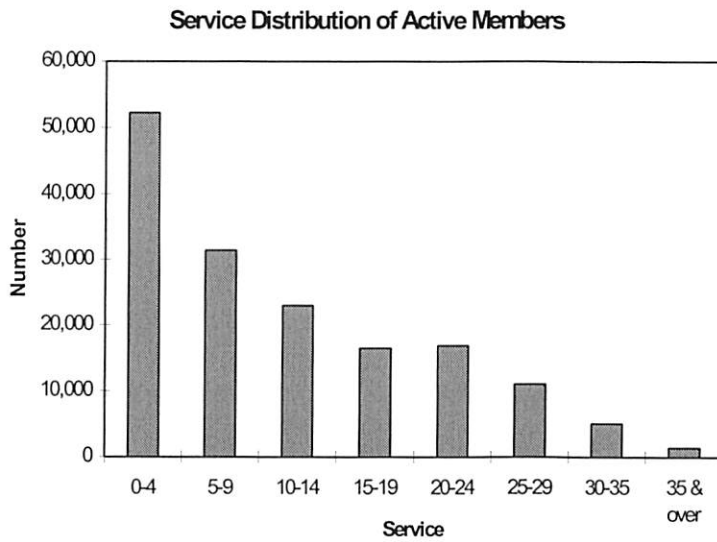
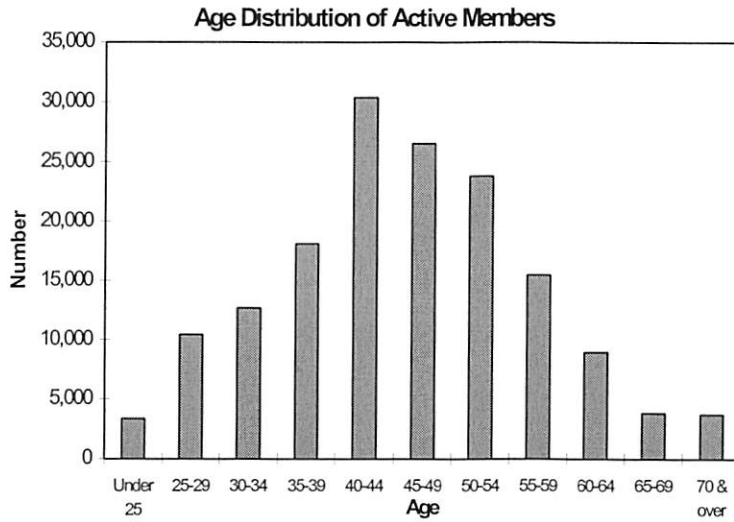
Age	<i>Years of Service</i>																				<i>Total</i>			
	<u>Under 1</u>		<u>1 to 4</u>		<u>5 to 9</u>		<u>10 to 14</u>		<u>15 to 19</u>		<u>20 to 24</u>		<u>25 to 29</u>		<u>30 to 34</u>		<u>35 to 39</u>		<u>40 and over</u>		<u>No.</u>	<u>Avg. Salary</u>		
	<u>No.</u>	<u>Avg. Salary</u>	<u>No.</u>	<u>Avg. Salary</u>	<u>No.</u>	<u>Avg. Salary</u>	<u>No.</u>	<u>Avg. Salary</u>	<u>No.</u>	<u>Avg. Salary</u>	<u>No.</u>	<u>Avg. Salary</u>	<u>No.</u>	<u>Avg. Salary</u>	<u>No.</u>	<u>Avg. Salary</u>	<u>No.</u>	<u>Avg. Salary</u>	<u>No.</u>	<u>Avg. Salary</u>				
Under 25	0	NA	3,301	15,163	72	17,530	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	3,373	15,214
25-29	0	NA	8,050	21,854	2,333	26,185	47	24,354	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	10,430	22,834
30-34	0	NA	5,723	20,248	5,164	28,090	1,760	31,491	51	26,697	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	12,698	25,021
35-39	0	NA	6,353	17,943	4,707	24,988	4,496	32,233	2,254	33,294	272	30,386	0	NA	0	NA	0	NA	0	NA	0	NA	18,082	25,431
40-44	0	NA	12,762	13,700	5,758	22,037	4,230	29,705	4,119	35,687	3,355	35,082	161	32,365	0	NA	0	NA	0	NA	0	NA	30,385	22,949
45-49	0	NA	4,555	18,428	4,992	22,725	4,701	28,194	3,648	33,330	5,572	38,700	2,987	39,438	95	33,387	0	NA	0	NA	0	NA	26,550	29,684
50-54	0	NA	3,019	18,160	3,516	22,671	3,839	27,722	3,142	31,393	3,612	35,242	4,630	42,314	2,013	42,141	44	33,080	0	NA	0	NA	23,815	31,454
55-59	4	40,519	2,088	17,170	1,965	19,738	2,166	25,876	1,942	28,868	2,518	30,294	2,031	37,883	2,156	44,168	564	44,559	29	39,545	15,463	29,854	15,463	29,854
60-64	14	10,604	1,880	17,173	1,230	16,391	1,189	22,367	1,028	26,073	1,268	27,166	1,024	31,348	689	39,757	438	46,132	180	43,340	8,940	25,497	8,940	25,497
65-69	74	8,515	1,699	12,609	798	10,716	409	16,902	243	20,222	243	22,240	165	26,171	89	34,648	52	41,594	51	44,308	3,823	15,605	3,823	15,605
70 & over	598	3,797	2,083	9,098	838	9,335	110	13,134	34	16,953	24	15,401	17	22,873	14	20,926	7	19,584	9	52,531	3,734	8,765	3,734	8,765
Totals	690	4,654	51,513	17,044	31,373	22,962	22,947	28,636	16,461	32,318	16,864	34,713	11,015	39,280	5,056	42,325	1,105	44,428	269	43,422	157,293	25,961	157,293	25,961

Appendix A
Summary Statistics on System Membership

AGE AND SERVICE DISTRIBUTION AS OF JULY 1, 1999 FOR ACTIVE PARTICIPANTS
Males and Females

Age	<i>Years of Service</i>																						<u>Total</u>	
	<u>Under 1</u>		<u>1 to 4</u>		<u>5 to 9</u>		<u>10 to 14</u>		<u>15 to 19</u>		<u>20 to 24</u>		<u>25 to 29</u>		<u>30 to 34</u>		<u>35 to 39</u>		<u>40 and over</u>					
	No.	Avg. EE Bal.	No.	Avg. EE Bal.	No.	Avg. EE Bal.	No.	Avg. EE Bal.	No.	Avg. EE Bal.	No.	Avg. EE Bal.	No.	Avg. EE Bal.	No.	Avg. EE Bal.	No.	Avg. EE Bal.	No.	Avg. EE Bal.	No.	Avg. EE Bal.		
Under 25	0	NA	3,301	645	72	2,874	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	3,373	692
25-29	0	NA	8,050	1,546	2,333	5,126	47	8,674	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	10,430	2,379
30-34	0	NA	5,723	1,451	5,164	6,780	1,760	12,742	51	16,014	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	12,698	5,242
35-39	0	NA	6,353	1,287	4,707	5,973	4,496	14,095	2,254	20,582	272	24,914	0	NA	0	NA	0	NA	0	NA	0	NA	18,082	8,452
40-44	0	NA	12,762	834	5,758	5,095	4,230	12,841	4,119	22,754	3,355	29,476	161	34,660	0	NA	0	NA	0	NA	0	NA	30,385	9,626
45-49	0	NA	4,555	1,327	4,992	5,318	4,701	11,784	3,648	21,247	5,572	33,279	2,987	40,757	95	41,788	0	NA	0	NA	0	NA	26,550	17,953
50-54	0	NA	3,019	1,310	3,516	5,403	3,839	11,686	3,142	19,803	3,612	30,350	4,630	45,145	2,013	52,153	44	48,878	0	NA	0	NA	23,815	23,339
55-59	4	126	2,088	1,023	1,965	4,718	2,166	11,130	1,942	18,425	2,518	25,950	2,031	40,643	2,156	55,435	564	61,509	29	66,043	15,463	24,271		
60-64	14	43	1,880	607	1,230	3,917	1,189	9,859	1,028	16,698	1,268	24,210	1,024	33,650	689	49,948	438	63,786	180	68,473	8,940	19,539		
65-69	74	91	1,699	440	798	2,502	409	7,649	243	12,977	243	19,267	165	27,500	89	39,360	52	54,423	51	66,646	3,823	7,320		
70 & over	598	634	2,083	499	838	2,165	110	5,490	34	11,325	24	12,820	17	21,361	14	25,677	7	29,249	9	74,740	3,734	1,641		
Totals	690	561	51,513	1,102	31,373	5,357	22,947	12,217	16,461	20,482	16,864	29,753	11,015	41,602	5,056	52,759	1,105	61,371	269	68,074	157,293	13,705		

Appendix A Summary Statistics on System Membership



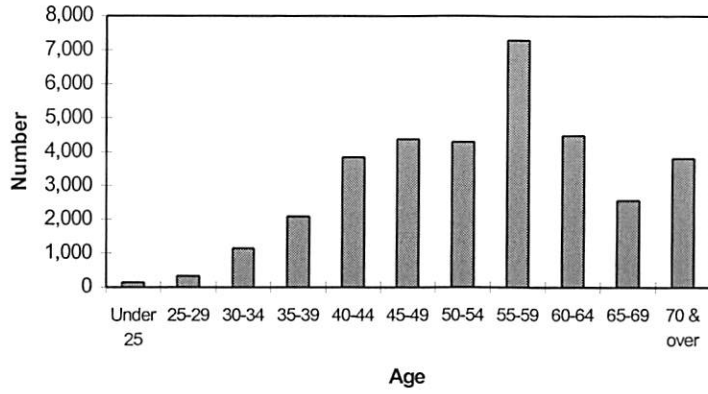
Appendix A
Summary Statistics on System Membership

AGE AND SERVICE DISTRIBUTION AS OF JULY 1, 1999 FOR DEFERRED VESTED PARTICIPANTS
Males and Females

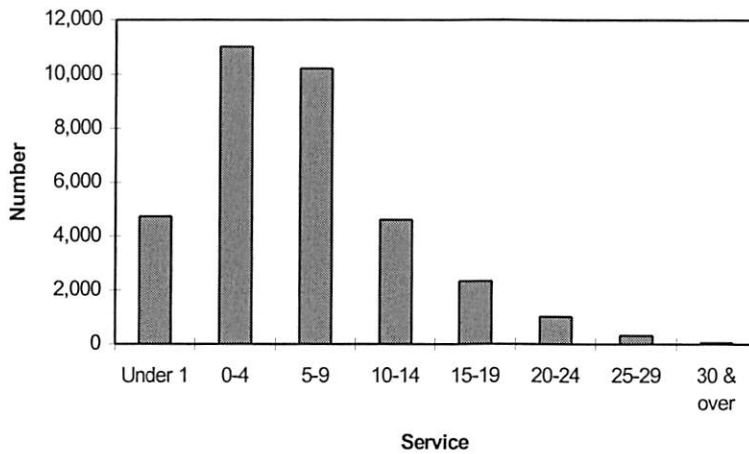
Age	<i>Years of Service</i>																				Total			
	<u>Under 1</u>		<u>1 to 4</u>		<u>5 to 9</u>		<u>10 to 14</u>		<u>15 to 19</u>		<u>20 to 24</u>		<u>25 to 29</u>		<u>30 to 34</u>		<u>35 to 39</u>		<u>40 and over</u>					
	No.	Avg. EE Bal.	No.	Avg. EE Bal.	No.	Avg. EE Bal.	No.	Avg. EE Bal.	No.	Avg. EE Bal.	No.	Avg. EE Bal.	No.	Avg. EE Bal.	No.	Avg. EE Bal.	No.	Avg. EE Bal.	No.	Avg. EE Bal.	No.	Avg. EE Bal.		
Under 25	34	775	93	1,018	13	2,638	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	140	1,110
25-29	0	NA	107	2,928	211	4,026	2	6,129	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	320	3,672
30-34	0	NA	206	3,248	852	5,783	85	10,740	3	5,319	0	NA	0	NA	0	NA	0	NA	0	NA	0	NA	1,146	5,694
35-39	0	NA	229	3,231	1,321	6,064	443	12,675	94	17,893	2	23,387	0	NA	0	NA	0	NA	0	NA	0	NA	2,089	7,704
40-44	103	187	902	1,330	1,638	6,371	785	13,279	339	21,502	74	26,182	0	NA	0	NA	0	NA	0	NA	0	NA	3,841	8,150
45-49	0	NA	350	3,290	2,054	6,341	1,055	14,169	599	21,744	265	30,969	52	37,919	2	6,742	0	NA	0	NA	0	NA	4,377	11,958
50-54	0	NA	274	3,254	1,757	6,835	1,063	14,307	657	23,772	359	32,698	161	44,819	12	46,923	0	NA	0	NA	0	NA	4,283	14,766
55-59	1,537	33	3,328	456	1,131	6,262	652	13,624	363	21,822	175	33,123	72	44,674	31	50,780	1	47,908	0	NA	0	NA	7,290	4,951
60-64	1,031	41	2,189	431	627	5,427	321	11,998	170	21,431	101	30,240	28	38,681	11	36,994	2	62,363	2	58,236	2	58,236	4,482	3,719
65-69	738	46	1,453	372	231	4,249	79	11,092	32	18,451	18	30,086	6	37,067	1	49,007	0	NA	1	71,037	1	71,037	2,559	1,527
70 & over	1,285	119	1,896	401	382	2,109	136	4,240	72	6,657	26	12,067	1	43,702	4	50,773	0	NA	3	23,716	3	23,716	3,805	895
Totals	4,728	69	11,027	800	10,217	6,025	4,621	13,267	2,329	21,582	1,020	31,015	320	42,979	61	46,062	3	57,545	6	43,110	34,332	6,727		

Appendix A Summary Statistics on System Membership

Age Distribution of Deferred Vested Members



Service Distribution of Deferred Vested Members



Appendix A
Summary Statistics on System Membership

ANALYSIS OF RETIREES AND BENEFICIARIES

Males and Females

Number of Participants

<u>Age</u>	<u>Chapt 97</u>	<u>Option 1</u>	<u>Option 2</u>	<u>Option 3</u>	<u>Option 4</u>	<u>Contingent Beneficiary</u>	<u>Option 5</u>	<u>Per Cert Beneficiary</u>	<u>Total</u>
Under 40	0	10	0	1	5	8	1	1	26
40 to 44	0	25	5	4	9	11	5	0	59
45 to 49	1	52	10	9	26	12	11	3	124
50 to 54	0	87	23	22	64	35	9	4	244
55 to 59	1	790	385	308	504	43	363	15	2,409
60 to 64	0	2,401	1,469	848	1,674	144	1,248	31	7,815
65 to 69	4	4,179	2,673	1,207	2,579	244	1,551	72	12,509
70 to 74	3	4,668	3,289	1,198	2,095	390	1,455	49	13,147
75 to 79	9	4,647	2,301	1,032	1,384	390	1,575	32	11,370
80 to 84	8	4,055	869	656	583	254	1,586	10	8,021
85 to 89	12	2,711	350	442	149	144	965	0	4,773
90 to 94	15	1,392	108	259	39	66	323	0	2,202
95 to 99	12	337	61	122	14	17	34	0	597
100 & over	10	21	39	16	0	13	1	0	100
Totals	75	25,375	11,582	6,124	9,125	1,771	9,127	217	63,396

Appendix A
Summary Statistics on System Membership

ANALYSIS OF RETIREES AND BENEFICIARIES

Males and Females

Average Annual Benefits of Participants *

<u>Age</u>	<u>Chapt 97</u>	<u>Option 1</u>	<u>Option 2</u>	<u>Option 3</u>	<u>Option 4</u>	<u>Contingent Beneficiary</u>	<u>Option 5</u>	<u>Per Cert Beneficiary</u>
Under 40	0	5,899	0	2,111	5,307	5,385	979	5,728
40 to 44	0	5,275	2,079	5,921	6,092	5,896	6,646	0
45 to 49	2,174	7,045	8,586	7,232	7,551	5,156	5,710	5,178
50 to 54	0	6,863	9,647	7,128	8,324	8,856	10,470	3,834
55 to 59	1,047	9,500	11,376	12,961	14,719	9,572	12,201	8,246
60 to 64	0	10,327	11,359	11,593	15,491	8,482	13,388	8,682
65 to 69	2,529	7,925	9,207	8,002	12,221	7,053	8,979	6,322
70 to 74	1,369	5,777	6,681	5,578	8,253	5,746	5,720	5,590
75 to 79	2,016	4,733	5,614	4,453	6,352	4,620	4,439	3,674
80 to 84	1,471	4,024	4,717	4,040	5,123	3,731	4,005	1,951
85 to 89	1,221	3,414	3,861	3,293	3,978	2,843	3,351	0
90 to 94	1,331	3,440	3,781	3,874	3,660	2,619	3,438	0
95 to 99	1,662	3,547	3,966	4,373	4,574	2,771	3,813	0
100 & over	1,386	3,277	4,164	3,986	0	2,865	499	0
Totals	1,544	5,800	7,524	6,648	10,471	5,359	6,727	5,970

* Averages based on data reported by the System as of June 30, 1999 and exclude dividend payments.

Appendix A
Summary Statistics on System Membership

Age Distribution of Retirees & Beneficiaries



APPENDIX B
SUMMARY OF PLAN PROVISIONS

Appendix B
Summary of Plan Provisions

**IOWA PUBLIC EMPLOYEES'
RETIREMENT SYSTEM**

Chapter 97B of the Iowa code sets out the IPERS provisions, which are briefly summarized as follows:

Participation: In general, the System covers people in non-federal public employment within the State of Iowa. Exceptions to this are set out in the law. A notable exception are those covered by another public system in Iowa (such as judges, state patrol, and policemen and firemen in cities having civil service), employees of the Regents' institutions, and employees of the community colleges who elect alternative coverage under TIAA. Membership is mandatory if a person is in covered employment.

Final Average Salary: The average of covered salaries for the highest paid three years of the member's service.

Provided however, for retirements between 1997 and 2002 (for certain retirees), the following provisions apply:

If 3 Year Average Wage <u>Exceeds</u>	<u>Date of Retirement</u>	<u>Final Average Salary</u>
\$48,000	1997	Average of four highest years, or \$48,000 if greater
\$52,000	1998	Average of five highest years, or \$52,000 if greater
\$55,000	1999	Average of six highest years, or \$55,000 if greater
\$55,000	2000 - 2002	Average of seven highest years, or \$55,000 if greater

Effective January 1, 1997, the covered wage ceiling is lifted. It continues to apply to salary for all years prior to 1997.

Appendix B Summary of Plan Provisions

Age and Service Requirements for Benefits:

Normal Retirement	Earliest of the first day of the month of the member's 65th birthday, age 62 with 20 years of service or Rule of 88 (age plus service equals/exceeds 88), with a minimum age 55. Age 55 for sheriffs, deputies and protection occupation members.
Early Retirement	First day of any month starting with the month of the member's 55th birthday but preceding the normal retirement date.
Late Retirement	After normal retirement date.
Deferred Vested Benefit	Before age 55 with at least four years of service.
Death Benefit	Upon death of a member before benefits have started.

Retirement Benefits:

Normal Retirement	<p>An annual annuity equal to 2% of Final Average Salary (FAS) for each year of service up to 30 years plus 1% of FAS for each of the next 5 years of service. Maximum years of service recognized for benefit accrual purposes is 35.</p> <p>Members who are sheriffs or deputies receive 60% of FAS after completion of 22 years of service, plus an additional 1% of FAS for years of service greater than 22 but not more than 27. Members of the protection occupation groups receive 60% of FAS after completion of 25 years of service plus an additional 1% of FAS for each year of service greater than 25, but not more than 30.</p>
Early Retirement	An annuity, payable at the normal retirement date, determined in the same manner as for normal retirement. A reduction of .25% per month is applied for each month the benefit commences prior to normal retirement age.

Appendix B Summary of Plan Provisions

Late Retirement	An annuity, payable after covered employment ends, determined as for normal retirement.
Form of Annuity:	The base form, or normal form, is a life annuity with a guaranteed return of employee contributions. Optional forms include a straight life annuity, a ten year certain and life thereafter annuity, and joint and survivor annuities (with 25%, 50% or 100% to the surviving joint annuitant).
Termination Benefits:	
Before age 55, with less than four years of service	A refund of the members contributions under the plan with interest.
Before age 55 with four or more years of service	At the member's election either (1) a refund of the employee's contributions under the plan with interest plus a portion (years of service divided by 30) of the employer's contributions with interest, or (2) a deferred retirement income determined as for normal retirement. Payments can begin with normal or early retirement.

NOTE: A person eligible for, and receiving, federal social security disability may begin IPERS benefits, unreduced, at any age.

Post-retirement Benefit Increases:	Annual dividends are paid to those retired prior to July, 1990. Effective with the November 1997 dividend payment, the dividend will be adjusted by the least of the following percentages: (1) 80% of the change in the CPI, (2) percentage certified to by the actuary as affordable by the System, and (3) 3%.
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Appendix B Summary of Plan Provisions

Death Benefits: A lump sum equal to the member's contributions with interest, plus 1/30 of the member's salary times years of membership service.

Source of Funds:

General Membership:

Member Contributions	3.7% of covered pay.
Employer Contributions	5.75% of covered pay.

Sheriffs and Deputies:

Member Contributions*	Not yet determined.
Employer Contributions*	Not yet determined.

Protection Occupation:

Member Contributions*	Not yet determined.
Employer Contributions*	Not yet determined.

*Actuarial contribution rates which are determined every year.

APPENDIX C
ACTUARIAL METHOD AND ASSUMPTIONS

Appendix C Actuarial Method and Assumptions

Sound financing of any retirement system requires that benefits accruing to its members shall be paid for during their active working lifetime so that when a member (or his beneficiary) becomes entitled to a benefit, the monies necessary to provide such benefit shall be on hand. In this way, the cost of benefits for present active members will not become a liability to future taxpayers.

The principal purpose of an actuarial valuation is to calculate, on the basis of certain assumptions, the present value of benefits that are payable in the future from the system to present members (and their beneficiaries) and the present value of future contributions to be made by the members and their employers. Having calculated such present values, the level of annual contribution to the system required to fund (or pay for) the benefits, in accordance with the above stated principle of sound financing, may be determined.

The assumptions and methods used in the actuarial valuation and the resulting liabilities are presented in this Section II.

PART A - VALUATION ASSUMPTIONS

Retirement System contribution requirements and actuarial present values are calculated by applying experience assumptions to the benefit provisions and census (member) information of the Retirement System, using the actuarial cost method.

The principal areas of risk which require experience assumptions about future activities of the Retirement System are:

- long-term rates of investment return to be generated by the assets of the system
- patterns of pay increases to members
- rates of mortality among members, retirants and beneficiaries
- rates of withdrawal of active members
- rates of disability among active members
- the age patterns of actual retirements

In making a valuation, the monetary effect of each assumption is calculated for as long as a present member survives -- a period of time which can be as long as a century.

Actual experience of the Retirement System will not coincide exactly with assumed experience. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experiences. The result is a continual series of adjustments (usually small) to the computed contribution rate, or alternatively to the amortization period for the unfunded actuarial accrued liability.

Appendix C Actuarial Method and Assumptions

From time to time one or more of the assumptions are modified to reflect experience trends (but not random or temporary year to year fluctuations). A complete review of the actuarial assumptions was completed in 1999, based on experience from 1993-98.

Rate of Investment Return

7.50% per annum, compounded annually, net of expenses.

Rates of Mortality

Active and Inactive Members

Males:	GAM 94 Male, set forward one year
Females:	95% of GAM 94 Female, set back 1 year
Disabled Members:	Annual rates are the greater of 3% and 2.5% plus the corresponding non-disabled rate (no set forward or set back applied)
Beneficiaries:	Same as members

Rates of Disablement

<u>Age</u>	<u>Annual Rate Per 1,000 Members</u>	
	<u>Males</u>	<u>Females</u>
27	0.2%	0.2%
32	0.2%	0.2%
37	0.4%	0.3%
42	0.7%	0.5%
47	1.4%	0.9%
52	3.3%	2.2%
57	6.3%	3.9%
62	9.0%	6.2%

Appendix C
Actuarial Method and Assumptions

Rates of Termination of Employment

		Annual Rate of Withdrawals Per 1,000 Members					
Males:							
<u>Age</u>		<u>Years 0-1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Years 4-6</u>	<u>Years 7-8</u>	<u>Years 9+</u>
22		330.0	275.0	220.0	99.0	88.0	66.0
27		231.0	165.0	121.0	99.0	88.0	66.0
32		198.0	165.0	110.0	74.8	55.0	39.0
37		195.8	159.5	110.0	74.8	49.5	33.0
42		195.8	143.0	110.0	74.8	49.5	25.3
47		195.8	143.0	99.0	74.8	49.5	19.8
52		176.0	110.0	77.0	74.8	49.5	19.8
55+		165.0	110.0	55.0	74.8	49.5	19.8
Females:							
<u>Age</u>		<u>Years 0-1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Years 4-6</u>	<u>Years 7-8</u>	<u>Years 9+</u>
22		330.0	308.0	220.0	110.0	99.0	55.0
27		275.0	220.0	169.4	110.0	99.0	55.0
32		247.5	220.0	154.0	105.5	72.0	49.5
37		198.0	158.4	143.0	105.5	66.0	36.3
42		198.0	157.3	121.0	88.0	61.0	30.8
47		198.0	143.0	121.0	82.5	49.5	25.3
52		198.0	143.0	121.0	82.5	49.5	25.3
55+		198.0	143.0	121.0	82.5	49.5	25.3

Rate of Election of Return of Contributions by Vested Members:

<u>Age</u>	Annual Rate Per 1,000 Members	
	<u>Males</u>	<u>Females</u>
25	1,000	1,000
30	900	800
35	800	700
40	600	500
45	300	150
50	150	150
55	0	0

Appendix C
Actuarial Method and Assumptions

Rates of Salary Increase

Annual Rate of Increase Per 1,000 Members (%)

<u>Age</u>	<u>Years 0-1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Years 4-5</u>	<u>Years 6-7</u>	<u>Years 8-10</u>	<u>Years 11-15</u>	<u>Years 16-20</u>	<u>Years 21+</u>
22	18.5	12.5	8.5	8.0	7.5	6.0	5.5	5.0	4.9
27	15.5	10.0	8.3	7.0	6.5	6.0	5.5	5.0	4.9
32	14.8	9.8	8.0	7.0	6.5	6.0	5.5	5.0	4.9
37	14.7	9.8	8.0	7.0	6.3	6.0	5.5	5.0	4.9
42	14.7	9.2	8.0	7.0	6.2	6.0	5.5	4.9	4.9
47	14.2	9.0	8.0	7.0	6.2	5.5	5.2	4.8	4.2
52	13.3	8.3	6.9	7.0	6.2	5.5	5.0	4.5	4.2
57	12.5	7.7	6.9	7.0	5.7	5.5	4.6	4.5	4.2
57	10.9	7.1	6.7	6.0	4.5	4.5	4.5	4.5	4.0

Payroll Growth: 4.0% per year

Retirement Rates

Upon meeting the requirements for early retirement (but not for unreduced benefits), the following rates apply:

<u>Age</u>	<u>Assumed Retirement Rate</u>
55	5%
58	5
60	10
61	15
62	25
63-64	20

Upon reaching the requirements for unreduced retirement, the following rates apply:

<u>Age</u>	<u>Assumed Retirement Rates</u>	
	<u>1st Year Eligible</u>	<u>After 1st Year</u>
55-56	20%	10%
59	20	20
60	25	25
61	35	35
62	50	50
63	35	40
64	35	40
65	30	50
66	20	25
67-68	15	20
70+	100	100

Terminated vested members are assumed to retire at age 62.

Appendix C
Actuarial Method and Assumptions

Age of Spouses For Joint and Survivor Retirees

The male spouse is assumed to be three years older than the female.

Rate of Crediting Interest on Contribution Balances

5.5% per annum, compounded annually

Rate of Inflation

3.5% per annum

Payroll Growth Assumption

4.0% per annum

Appendix C Actuarial Method and Assumptions

ACTUARIAL COST METHOD

The actuarial cost method is a procedure for allocating the actuarial present value of pension plan benefits and expenses to time periods. The method used for the valuation is known as the entry age normal actuarial cost method. Under this method, a total contribution rate is determined which consists of two parts: (i) the normal cost rate and (ii) the unfunded actuarial accrued liability (UAAL) rate. The entry age normal cost method has the following characteristics:

- (i) The annual normal costs for each individual active member are sufficient to accumulate the value of the member's pension at time of retirement.
- (ii) Each annual normal cost is a constant percentage of the member's year by year projected compensation.

The entry age normal actuarial cost method allocates the actuarial present value of each member's projected benefits on a level basis over the member's compensation between the entry age of the member and the assumed exit ages.

The portion of the actuarial present value allocated to the valuation year is called the normal cost. The portion of the actuarial present value not provided for by the actuarial present value of future normal costs is called the actuarial accrued liability. Deducting the actuarial value of assets from the actuarial accrued liability determines the unfunded actuarial accrued liability (UAAL). The difference between the statutory contribution rate (9.45%) and the normal cost rate is used to finance the UAAL and the number of years necessary to finance the unfunded actuarial accrued liability as a level percent of member payroll is determined.

Appendix C Actuarial Method and Assumptions

DEFINITION OF TERMS

Actuarial Accrued Liability	The difference between the actuarial present value of system benefits and the actuarial value of future normal costs. Also referred to as “accrued liability” or “actuarial liability.”
Actuarial Assumptions	Estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.
Accrued Service	Service credited under the system which was rendered before the date of the actuarial valuation.
Actuarial Equivalent	A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.
Actuarial Cost Method	A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of retirement system benefit between future normal cost and actuarial accrued liability. Sometimes referred to as the “actuarial funding method.”
Experience Gain(Loss)	The difference between actual experience and actuarial assumptions anticipated experience during the period between two actuarial valuation dates.
Actuarial Present Value	The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest and by probabilities of payment.

Appendix C Actuarial Method and Assumptions

Amortization	Paying off an interest-discounted amount with periodic payments of interest and principal, as opposed to paying off with lump sum payment.
Normal Cost	The actuarial present value of retirement system benefits allocated to the current year by the actuarial cost method.
Unfunded Actuarial Accrued Liability	<p>The difference between actuarial accrued liability and the valuation assets. Sometimes referred to as “unfunded accrued liability” or “unfunded liability”.</p> <p>Most retirement systems have unfunded actuarial accrued liability. They arise anytime new benefits are added and anytime an actuarial loss is realized.</p> <p>The existence of unfunded actuarial accrued liability is not in itself bad, any more than a mortgage on a house is bad. Unfunded actuarial accrued liability does not represent a debt that is payable today. What is important is the ability to amortize the unfunded actuarial accrued liability and make payments to finance it. Also of importance are trends in the amount or duration of payment.</p>