ARKANSAS TEACHER RETIREMENT SYSTEM
Annual Actuarial Valuation of Active and Inactive Members

June 30, 2001

GABRIEL, ROEDER, SMITH & COMPANY

REPORT OF THE JUNE 30, 2001 ACTUARIAL VALUATION
OUTLINE OF CONTENTS

December 31, 2001

Board of Trustees
Arkansas Teacher Retirement System
Little Rock, Arkansas

The results of the annual actuarial valuation of nonretired members as of June 30, 2001 are presented in this report. This valuation is based upon the Arkansas Teacher Retirement System laws, as described in Section C of this report.

The census and financial operations data necessary for the actuarial valuation were furnished by the Retirement System. Preparation of this data requires considerable staff time. The helpful cooperation of the Executive Director and his staff in furnishing the data is acknowledged with appreciation.

Liabilities Covering Retirees and Beneficiaries. The June 30 annual valuation of retired lives receiving monthly benefits indicates the liabilities for future benefit payments to these people. These liabilities are covered in a separate report.

The actuarial assumptions used in the actuarial valuation are summarized in the Appendix of this report. These assumptions reflect experience during the period July 1, 1992 to June 30, 1997.

The valuation was completed using generally accepted actuarial principles and in accordance with standards of practice prescribed by the Actuarial Standards Board. To the best of our knowledge, this report is complete and accurate and the methods and assumptions produced results which are reasonable.

Respectfully submitted,

Brian B. Murphy, MAAA, FSA Judith A. Kermans, MAAA, EA

BBM/RGS/lr

COMMENTS

General Financial Objective. Section 24-3-103 of the Arkansas Code provides as follows (emphasis added):

> "6.01. (1) The general financial objective of each Arkansas public employee retirement plan shall be to ***establish and receive contributions which, expressed as percents of active member payroll, will remain approximately level from generation to generation of Arkansas citizens***. More specifically, contributions received each year shall be sufficient both to (i) fully cover the costs of benefit commitments being made to members for their service being rendered in such year and (ii) make a level payment which if paid annually over a reasonable period of future years will fully cover the unfunded costs of benefit commitments for service previously rendered....."

Teacher Retirement System Status. Based upon the results of June 30, 2001 actuarial valuations, ***TRS is satisfying the financial objective of level-contribution-percent financing.***

This valuation reflects benefit changes adopted under the following Acts which were made operational this year:

Act 396 of 1999

Increase in benefit multiplier to 2.15% for contributory service and 1.39% for non-contributory service plus an equivalent ad-hoc for retirees.

Act 312 of 1999

Provides an additional $10,000 lump sum benefit to surviving dependent children upon the death of an active or retired member who has 5 years of service.

These benefit changes increased the amortization period by 8 years, and increased accrued liabilities by $141 Million. Please see pages B-3 and B-7.

The amortization period this year is 125 years, an increase from last year's 22-year period. While Acts 396 and 312 did affect the amortization period, the largest single effect was investment experience. Investment experience for ATRS, (and for most retirement systems in the United States) was unfavorable during this experience period. The market value of assets actually dropped during the year. The asset valuation method phases in gains and losses over the current year and three future years (Please see page D-2). This means that ATRS must earn well above the assumed rate during each of the next three years in order to bring the amortization period back into the 30 year range based upon the present assumptions. The alternative is an increase in the contribution rates.

The Arkansas Teacher Retirement System is 95% funded as of this valuation date, indicating a solid financial position even in the face of weak investment markets.

BENEFIT CHANGES DURING RECENT YEARS OF RETIREMENT & RELATED CHANGES IN PURCHASING POWER (1970 $)

Year Ended June 30	Increase Beginning of Year	Benefit Dollars in Year*	Inflation (Loss) in Year#	Purchasing Power at Year End	
				1970 $	% of 1970
1970	- - - -	$ 5,000	- - - -	$5,000	100%
1971	$ 75	5,075	(4.5)%	4,858	97%
1972	75	5,150	(2.9)%	4,792	96%
1973	75	5,225	(5.9)%	4,590	92%
1974	1,015	6,240	(11.0)%	4,940	99%
1975	474	6,714	(9.3)%	4,862	97%
1976	886	7,600	(5.9)%	5,196	104%
1977	114	7,714	(6.9)%	4,935	99%
1978	114	7,828	(7.4)%	4,662	93%
1979	114	7,942	(10.9)%	4,264	85%
1980	417	8,359	(14.3)%	3,926	79%
1981	118	8,477	(9.6)%	3,634	73%
1982	323	8,800	(7.1)%	3,522	70%
1983	253	9,053	(2.6)%	3,532	71%
1984	725	9,778	(4.2)%	3,660	73%
1985	738	10,516	(3.7)%	3,795	76%
1986	857	11,373	(1.7)%	4,034	81%
1987	331	11,704	(3.7)%	4,002	80%
1988	673+	12,377	(3.9)%	4,072	81%
1989	847	13,224	(5.1)%	4,138	83%
1990	837	14,061	(4.7)%	4,203	84%
1991	388	14,449	(4.7)%	4,125	82%
1992	1,282	15,731	(3.1)%	4,356	87%
1993	1,333	17,064	(3.0)%	4,587	92%
1994	1,380	18,444	(2.5)%	4,835	97%
1995	510	18,954	(3.0)%	4,822	96%
1996	510	19,464	(2.8)%	4,819	96%
1997	3,591	23,055	(2.3)%	5,580	112%
1998	857	23,912	(1.7)%	5,692	114%
1999	2,002	25,914	(2.0)%	6,050	121%
2000	1,358	27,272	(3.7)%	6,141	123%
2001	1,881	29,153	(3.2)%	6,606	132%
2002	1,151	30,304			

* *The $5,000 benefit used to begin this schedule is an arbitrary amount. A smaller beginning amount (the 1970 average was less) would show a smaller purchasing power loss, in percent loss.*

\# *Based on Consumer Price Index, All Urban Consumers, United States City Average (June values).*

\+ *For members retired in 1972 & later (members retired in 1970 received a larger percentage increase).*

BENEFIT CHANGES DURING RECENT YEARS OF RETIREMENT & RELATED CHANGES IN PURCHASING POWER (1980 $)

Year Ended June 30	Increase Beginning of Year	Benefit Dollars in Year*	Inflation (Loss) in Year#	Purchasing Power at Year End	
				1980 $	% of 1980
1980	- - - -	$ 5,000	- - - -	$5,000	100%
1981	$ 75	5,075	(9.6)%	4,632	93%
1982	152	5,227	(7.1)%	4,456	89%
1983	152	5,379	(2.6)%	4,471	89%
1984	431	5,810	(4.2)%	4,633	93%
1985	438	6,248	(3.7)%	4,802	96%
1986	509	6,757	(1.7)%	5,103	102%
1987	197	6,954	(3.7)%	5,067	101%
1988	400	7,354	(3.9)%	5,154	103%
1989	503	7,857	(5.1)%	5,236	105%
1990	497	8,354	(4.7)%	5,319	106%
1991	230	8,584	(4.7)%	5,220	104%
1992	762	9,346	(3.1)%	5,513	110%
1993	792	10,138	(3.0)%	5,806	116%
1994	820	10,958	(2.5)%	6,123	122%
1995	303	11,261	(3.0)%	6,107	122%
1996	303	11,564	(2.8)%	6,103	122%
1997	1,657	13,221	(2.3)%	6,821	136%
1998	1,214	14,435	(1.7)%	7,324	146%
1999	323	14,758	(2.0)%	7,344	147%
2000	1,039	15,797	(3.7)%	7,583	152%
2001	1,220	17,017	(3.2)%	7,907	158%
2002	672	17,689			

* *The $5,000 benefit used to begin this schedule is an arbitrary amount. A smaller beginning amount would show a smaller purchasing power loss, in percent loss.*

\# *Based on Consumer Price Index, All Urban Consumers, United States City Average (June values).*

BENEFIT CHANGES DURING RECENT YEARS OF RETIREMENT & RELATED CHANGES IN PURCHASING POWER (1990 $)

Year Ended June 30	Increase Beginning of Year	Benefit Dollars in Year*	Inflation (Loss) in Year#	Purchasing Power at Year End	
				1990 $	% of 1990
1990	- - - -	$ 5,000	- - - -	$ 5,000	100%
1991	$150	5,150	(4.7)%	4,919	98%
1992	457	5,607	(3.1)%	5,195	104%
1993	475	6,082	(3.0)%	5,471	109%
1994	492	6,574	(2.5)%	5,770	115%
1995	182	6,756	(3.0)%	5,755	115%
1996	182	6,938	(2.8)%	5,751	115%
1997	330	7,268	(2.3)%	5,889	118%
1998	667	7,935	(1.7)%	6,324	126%
1999	177	8,112	(2.0)%	6,340	127%
2000	849	8,961	(3.7)%	6,756	135%
2001	826	9,787	(3.2)%	7,143	143%
2002	387	10,174			

* *The $5,000 benefit used to begin this schedule is an arbitrary amount. A smaller beginning amount would show a smaller purchasing power loss, in percent loss.*

\# *Based on Consumer Price Index, All Urban Consumers, United States City Average (June values)*

Section A

Financial Principles

Promises Made and To Be Paid For. As each year is completed, the System, in effect, hands an "IOU" to each member then acquiring a year of service credit. The "IOU" says: "The Arkansas Teacher Retirement System owes you one year's worth of retirement benefits, payments in cash commencing when you qualify for retirement."

The related ***key financial questions*** are:

Which generation of taxpayers contributes the money to cover the IOU?

The present taxpayers, who receive the benefit of the member's present year of service?

Or the future taxpayers, who happen to be in Arkansas at the time the IOU becomes a cash demand?

The financial objective of the ATRS is that this year's taxpayers contribute the money to cover the IOUs being handed out this year so that ***the employer contribution rate will remain approximately level from generation to generation*** -- our children and our grandchildren will not have to contribute greater percents of pay than we contribute now. This objective was set forth in Act 793 of 1977.

(There are systems which have ***a design for deferring contributions to future taxpayers***, lured by a lower contribution rate now and putting aside the fact that the contribution rate must then relentlessly grow much greater over decades of time -- consume now, and let your children face higher contribution rates after you retire.)

An inevitable byproduct of the level-cost design is the accumulation of reserve assets for decades and the income produced when the assets are invested. ***Investment income*** becomes the ***3rd and largest contributor*** for benefits to employees, and is interlocked with the contribution amounts required from employees and employers.

Translated to actuarial terminology, this level-cost objective means that the contribution rates must total at least the following:

> Normal Cost (the cost of members' service being rendered this year)
> ... plus ...
> Interest on Unfunded Actuarial Accrued Liabilities (unfunded accrued liabilities are the difference between (i) liabilities for service already rendered and (ii) the accrued assets of the plan).

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

An actuarial valuation has a number of ingredients such as: the rate of investment income which plan assets will earn; the rates of withdrawal of active members who leave covered employment before qualifying for any monthly benefit; the rates of mortality; the rates of disability; the rates of pay increases; and the assumed age or ages at actual retirement.

In an actuarial valuation, assumptions must be made as to what the above rates will be, for the next year and for decades in the future. Only the subsequent actual experience of the System can indicate the degree of accuracy of the assumptions.

Reconciling Differences Between Assumed Experience and Actual Experience. Once actual experience has occurred and been observed, it will not coincide exactly with assumed experience, regardless of the accuracy of the various financial assumptions or the skill of the actuary and the precision of the calculations made. The System copes with these continually changing differences by having annual actuarial valuations. Each actuarial valuation is a complete recalculation of assumed future experience, taking into account all past differences between assumed and actual experience. The result is continual adjustments in financial position.

THE ACTUARIAL VALUATION PROCESS

The financing diagram on the next page shows the relationship between the two fundamentally different philosophies of paying for retirement benefits: the method where contributions match cash benefit payments (or barely exceed cash benefit payments, as in the Federal Social Security program), and is thus an ***increasing contribution method***; and the ***level contribution method*** which equalizes contributions between the generations.

The actuarial valuation is the mathematical process by which the level contribution rate is determined, and the flow of activity constituting the valuation may be summarized as follows:

A. ***Census Data***, furnished by plan administrator
   Retired lives now receiving benefits
   Former employees with vested benefits not yet payable
   Active employees

B. + ***Asset data*** (cash & investments), furnished by plan administrator

C. + **Benefit provisions** that establish eligibility and amounts of payments to members

D. + ***Assumptions concerning future financial experiences in various risk areas***, which assumptions are established by the Board of Trustees after consulting with the actuary.

E. + ***The funding method*** for employer contributions (the long-term planned pattern for employer contributions)

F. + ***Mathematically combining the assumptions, the funding method, and the data***

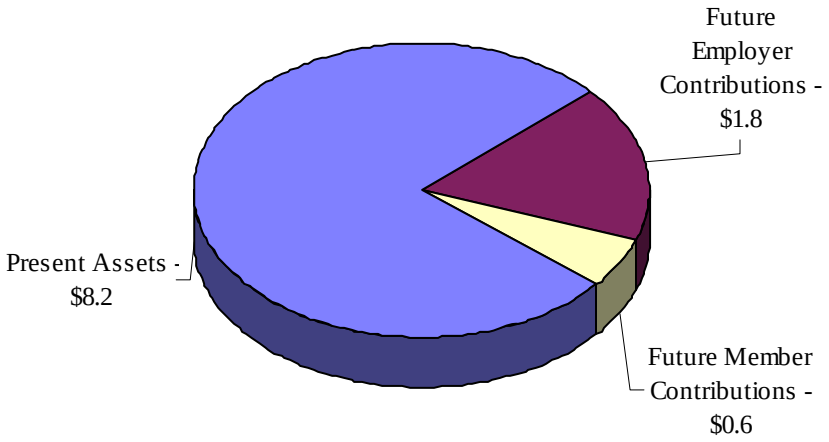
G. = Determination of:
   Plan financial position, and/or
   New Employer Contribution Rate

Section B

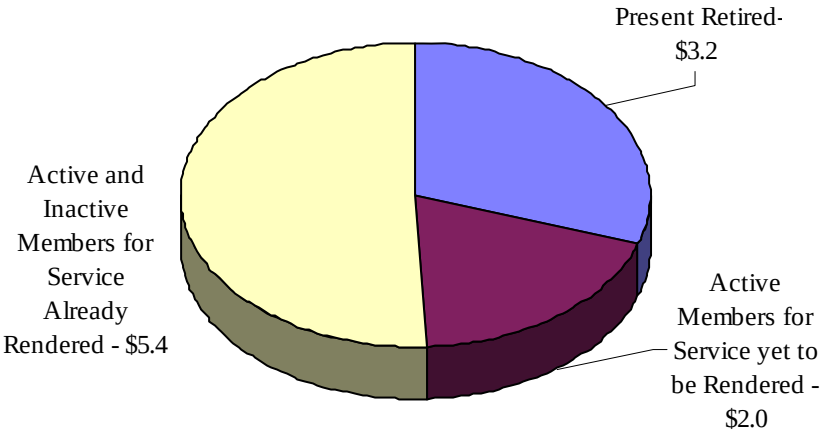
Results of Valuation

FINANCING $10.6 BILLION* OF BENEFIT PROMISES FOR PRESENT ACTIVE AND RETIRED MEMBERS JUNE 30, 2001

Sources of Funds



Uses of Funds



* *Present value of future benefits. All amounts are in billions.*

EMPLOYER CONTRIBUTION RATE COMPUTED AS OF JUNE 30, 2001
FOR THE FISCAL YEAR BEGINNING JULY 1, 2002

Computed Contributions for	Percents of Active Member Full Payroll			
	Teachers	Support	Combined	Prior Year
Normal Cost				
Age & Service Annuities	13.05%	10.35%	**12.42%**	12.18%
Deferred Annuities	1.42%	1.82%	**1.51%**	1.45%
Survivor Benefits	0.53%	0.48%	**0.52%**	0.49%
Disability Benefits	0.37%	0.36%	**0.37%**	0.37%
Refunds of Member Contributions	0.27%	0.53%	**0.33%**	0.31%
Total	15.64%	13.54%	**15.15%**	14.80%
Average Member Contributions	4.34%	2.80%	**3.98%**	3.90%
Net Employer Normal Cost	11.30%	10.74%	**11.17%**	10.90%
Unfunded Actuarial Accrued Liabilities			**0.83%**	1.10%
Employer Contribution Rate			**12.00%**	12.00%
Amortization Years			**125.0**	22.0

The length of an amortization period is a matter of judgment, not a matter of solving an algebraic equation. No one amortization period is "correct" --- there is a range of reasonable judgment. In its pursuit of level-percent contributions, the Teacher Retirement System has used a variety of amortization periods from time to time, extending to 40 years on occasions. This year's result is unusual. It was caused primarily by poor investment return, a phenomenon that has affected not only ATRS, but many retirement systems across the country. A return to more satisfactory investment results in the fairly near future is important. Continued weak investment markets could cause a need for a contribution rate increase. In any case, an amortization period outside the GASB Standard can affect the employer's financial statement.

COMPUTED EMPLOYER CONTRIBUTION RATES
10 YEAR COMPARATIVE STATEMENT

Valuation Date June 30	Active Members in Valuation Number	Annual Payroll	Average Annual Pay Amount	% Change	Consumer Price (Inflation) Index Value	%Change	Employer Contributions Computed Financing Period	Total Employer Rate
1991#*	45,902	$ 909	$ 19,796	0.1 %	136.0	4.7 %	11	12.0 %
1992#	55,688	1,077	19,338	(2.3)%	140.2	3.1 %	30	12.0 %
1993#	58,519	1,120	19,145	(1.0)%	144.4	3.0 %	30	12.0 %
1994*	57,403	1,167	20,337	6.2 %	148.0	2.5 %	29	12.0 %
1995@	58,876	1,234	20,952	3.0 %	152.5	3.0 %	24	12.0 %
1996	56,100	1,260	22,463	7.2 %	156.7	2.8 %	16	12.0 %
1997#	56,997	1,302	22,847	1.7 %	160.3	2.3 %	13	12.0 %
1998#*&	58,528	1,368	23,380	2.3 %	163.0	1.7 %	12	12.0 %
1999#	59,499	1,429	24,019	2.7 %	166.2	2.0 %	4	12.0 %
2000#	60,147	1,485	24,696	2.8 %	172.4	3.7 %	22	12.0 %
2000#!	60,147	1,485	24,696	2.8 %	172.4	3.7 %	30	12.0 %
2001	61,389	1,557	25,365	2.7 %	178.0	3.2 %	125	12.0 %

* *Revised financial assumptions.*
\# *Legislated benefit increases.*
@ *Revised asset valuation method.*
& *Revised decrement assumptions.*
! *Benefit increases proposed for 2001 and assuming 8% investment return for Fiscal Year Ended 6/30/2001.*

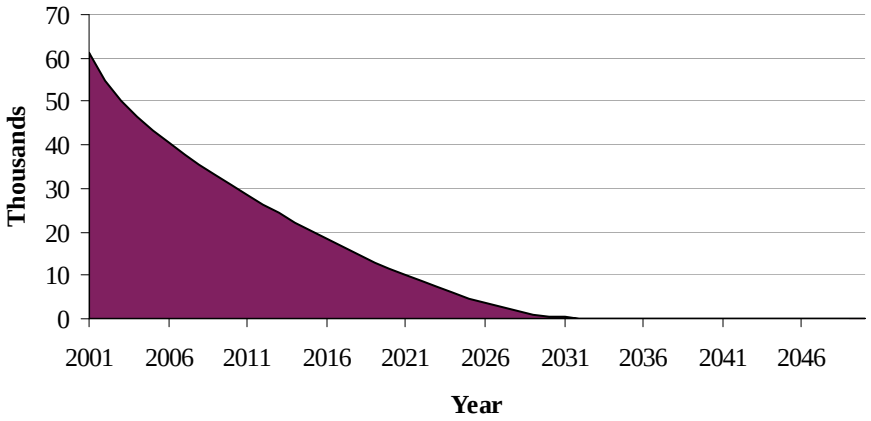
In the Arkansas Teacher Retirement System, the Change in Average pay statistic has been affected by the influx of new non-teaching support employees. This influx has been a contributing factor to the growth of the active member population in recent years.

COMPUTED ACTUARIAL LIABILITIES
AS OF JUNE 30, 2001

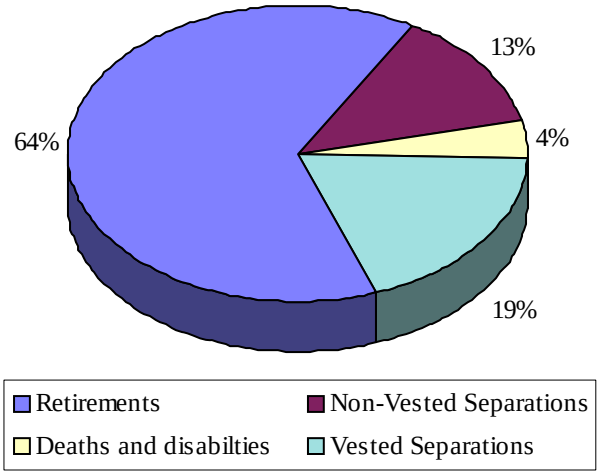
		Entry Age Actuarial Cost Method	
		(2)	(3)
	(1)	Portion	Actuarial
	Total	Covered By	Accrued
	Present	Future Normal	Liabilities
Actuarial Present Value of	Value	Cost Contributions	(1)-(2)
Age and service retirement and T-Drop allowances based on Total service likely to be rendered by present active and T-Drop members	$6,681,659,448	$1,690,279,655	$4,991,379,793
Vested Deferred Benefits likely to be paid present active and inactive members	505,936,149	217,390,764	288,545,385
Survivor benefits expected to be paid on behalf of present active members.	149,001,422	72,554,447	76,446,975
Disability Benefits expected to be paid on behalf of present active members	93,518,405	53,011,610	40,506,795
Refunds of Member contributions expected to be paid on behalf of Present active members	8,409,204	44,426,456	(36,017,252)
Benefits payable to present retirees and beneficiaries	3,200,056,095	0	3,200,056,095
Total	$10,638,580,723	$2,077,662,932	$8,560,917,791
Applicable Assets	8,166,235,989	0	8,166,235,989
Liabilities to be Covered by Future Contributions	$2,472,344,734	$2,077,662,932	$394,681,802

EXPECTED DEVELOPMENT OF PRESENT POPULATION
JUNE 30, 2001

Closed Group Population Projection

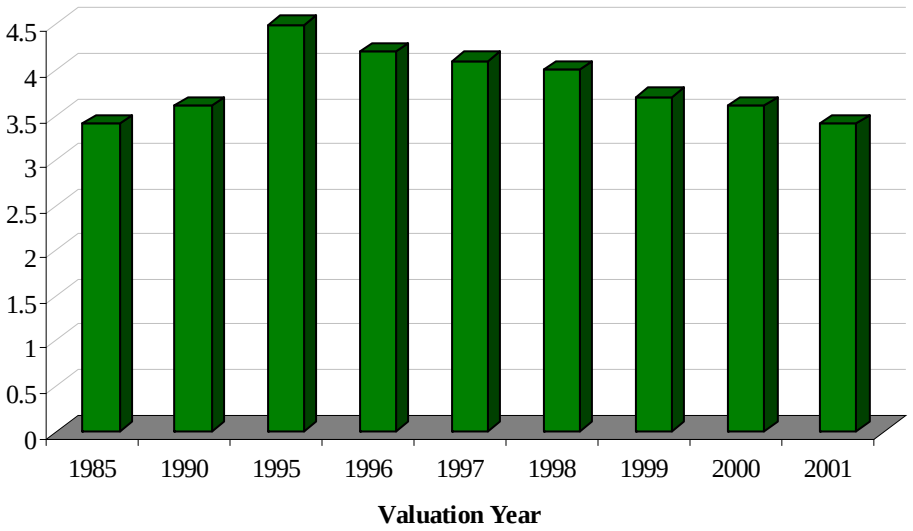


Closed Group Population Projection

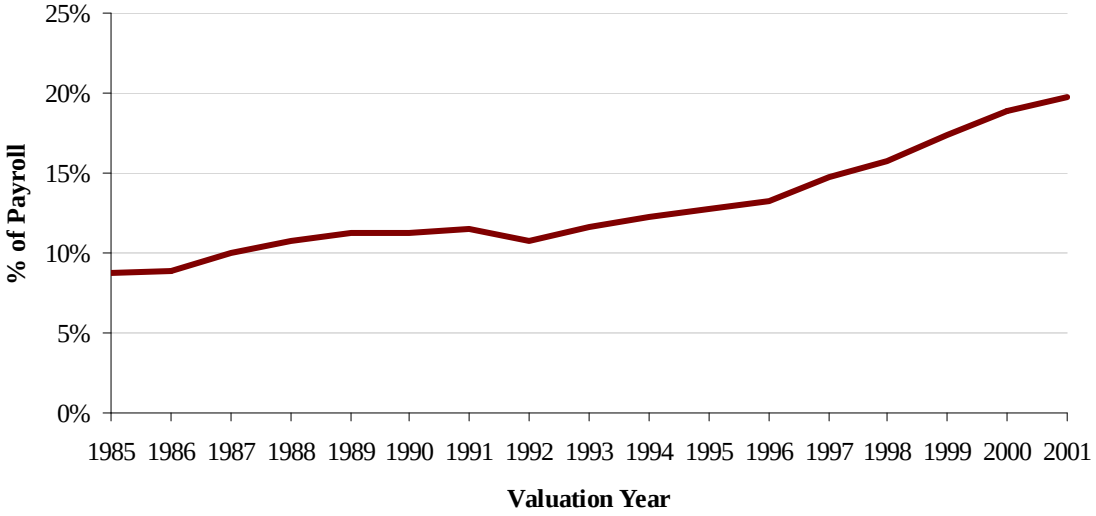


The charts show the expected future development of the present population in simplified terms. The retirement system presently covers 61,389 active members. Eventually, 13% of the population is expected to terminate covered employment prior to retirement and forfeit eligibility for an employer provided benefit. Approximately 83% of the present population is expected to receive monthly retirement benefits either by retiring directly from active service, retiring from T-Drop, or retiring from vested deferred status. 4% of the present population is expected to become eligible for death-in-service or disability benefits. Within 10 years, over half of the covered membership is expected to consist of new hires.

Active Members Per Retired Life



Retirement Benefits Being Paid as a Percent of Member Payroll



SHORT CONDITION TEST

The TRS funding objective is to meet long term benefit promises through contributions that remain approximately level from year to year as a percent of member payroll. If the contributions to the System are level in concept and soundly executed, the System will ***pay all promised benefits when due -- the ultimate test of financial soundness***. Testing for level contribution rates is ***the*** long term test.

A short condition test is one means of checking a system's progress under its funding program. In a short condition test, the plan's present assets (cash and investments) are compared with: 1) Member contributions on deposit; 2) The liabilities for future benefits to present retired lives; 3) The liabilities for service already rendered by members. In a system that has been following the discipline of level percent of payroll financing, the liabilities for member contributions on deposit (liability 1) and the liabilities for future benefits to present retired lives (liability 2) will be fully covered by present assets (except in rare circumstances). In addition, the liabilities for service already rendered by members (liability 3) will be partially covered by the remainder of present assets. The larger the funded portion of liability 3, the stronger the condition of the system. Liability 3 being fully funded is unusual.

The schedule below illustrates the history of liability 3 of the System and is indicative of the TRS objective of following the discipline of level percent of payroll financing.

Val. Date June 30	(1) Member Contrb.	(2) Retirees and Benef.	(3) Active and Inactive Members (Employer Financed Portion)	Present Valuation Assets	Portion of Present Values Covered by Present Assets (1)	(2)	(3)	Total
		----------$ Millions----------						
1991#*	$ 344	$ 985	$1,433	$ 2,434	100%	100%	77%	88%
1992#	367	1,077	1,885	2,729	100%	100%	68%	82%
1993#	388	1,207	2,117	3,051	100%	100%	69%	82%
1994	403	1,334	2,223	3,307	100%	100%	71%	84%
1995*	415	1,488	2,354	3,626	100%	100%	73%	85%
1996	424	1,634	2,577	4,186	100%	100%	83%	90%
1997#	426	1,918	3,059	4,956	100%	100%	85%	92%
1998#	435	2,173	3,553	5,815	100%	100%	90%	94%
1999#	447	2,566	3,821	6,740	100%	100%	98%	99%
2000	454	2,804	4,322	7,620	100%	100%	101%	101%
2000#	454	2,888	4,537	7,620	100%	100%	94%	97%
2001	470	3,163	4,787	8,166	100%	100%	95%	97%
2001#	470	3,200	4,891	8,166	100%	100%	92%	95%

* *Revised actuarial assumptions or methods.*

\# *Legislated benefit increase.*

Section C

Summary of Benefits

1. **Voluntary Retirement.** A member may retire at age 60 with 5 or more years of credited service, or after 28 years of credited service regardless of age.

2. **Early Retirement.** A member who has more than 25 but less than 28 years of credited service and has not attained age 60 years may retire and receive an immediate early retirement annuity. The early annuity is an age & service annuity reduced by the lesser of (i) and (ii) below:

   (i) 5/12 of 1% multiplied by the number of months by which early retirement precedes completion of 28 years of service or

   (ii) 5/12 of 1% multiplied by the number of months by which early retirement precedes the attainment of age 60 years.

3. **Deferred Retirement.** An inactive member who has 5 or more years of credited service will be entitled to an age & service annuity beginning at age 60, provided accumulated contributions are left on deposit with the retirement system.

4. **Disability Retirement.** An active member, with 5 or more years of credited service, who becomes totally and permanently disabled may be retired and receive a disability annuity computed in the same manner as an age & service annuity.

5. **Final Average Salary (FAS).** A member's final average salary is the average of the annual salaries paid during the period of 3 years of credited service producing the highest annual average.

6. **Age & Service Annuity and Disability Annuity.** The annuity payable will not be less than the total of: years of contributory service times 2.15% of FAS; plus years of non-contributory service times 1.39% of FAS; plus $900. For a member who elected to contribute on only the first $7,800 of each annual salary after June 30, 1969, each annual salary used in computing FAS is limited to a maximum of $7,800.

7. **Minimum Straight Life Annuity.** If a contributory member has 5 or more years of credited service, the straight life annuity will not be less than $100 per month. The minimum benefit for a non-contributory member is $64 per month. If a contributory member has 10 or more

years of credited service, the straight life annuity will not be less than $150 per month. The minimum benefit for a non-contributory member is $44 per month.

8. **T-Drop.** A member with 28 or more years of service may participate in the Teacher Deferred Retirement Option Plan (T-Drop, Act 1096 of 1995). An amount equal to the amount that would have been paid had the member retired, reduced by 1% for each year of contributory service (1/2% for service over 30 years - effective 1997) and 6/10% for each year of non-contributory service (3/10% for service over 30 years - effective 1997), is deposited into a T-Drop account. Members who enter T-Drop with less than 30 years of service are subject to an additional 6% reduction for each year less than 30 years. The annual addition to the T-Drop account is increased each year by 3% of the member's annuity at the initial participation date and the account is credited with 6% interest (on the median balance) each year. T-Drop participants may continue in covered employment, but do not accumulate additional service credit or make member contributions. The maximum period of participation is 10 years. Upon actual retirement the member may receive the T-Drop account balance in the form of a lump sum or as an additional annuity.

9. **Post-Retirement Increases.** Each July 1, every member's annuity is adjusted to be equal to the base annuity times 100% plus 3% for each full year in the period from the effective date of the base annuity to the current July 1. The base annuity is the amount of the member's annuity on the later of April 1, 1997 or the effective date of retirement, as redetermined by Acts 396 and 992.

10. **Survivor Benefits.** Upon the death of an active member, who has 5 or more years of credited service (which includes the year immediately preceding his death), the following annuities are payable:

    (a) The surviving spouse receives an annuity computed in the same manner as if the member had (i) retired the date of his death with entitlement to an annuity, (ii) elected Option A - 100% Survivor Annuity, and (iii) nominated the spouse as joint beneficiary. If the member has attained age 60 and has acquired 10 years of credited service or has acquired 20 years of credited service regardless of age, the annuity begins immediately; or, if the member has acquired 15 years of credited service but has not attained age 60, the annuity begins when the spouse is 50; otherwise the annuity begins at age 62. The spouse's annuity cannot be less than

the greater of (i) 10% of the deceased member's covered salary at time of death or (ii) $50 monthly. Under certain circumstances, a lump sum distribution may be made to the beneficiary(ies) of the deceased member.

(b) Each dependent child receives an annuity of the greater of (i) 10% of covered salary at the time of death or (ii) $50 monthly; provided, that if there are 3 or more dependent children, each receives an annuity of an equal share of the greater of (i) 25% of covered salary at time of death or (ii) $125 monthly. A child is dependent until the child's death, marriage, or attainment of age 18 (age 23 if the child is a full-time student).

(c) If there is neither a spouse nor a dependent child at the time of the member's death, each dependent parent receives an allowance of the greater of (i) 10% of covered salary or (ii) $50 monthly.

(d) Survivor benefits based on both contributory and non-contributory service will be prorated between contributory benefits and non-contributory benefits.

11. **Lump Sum Death Benefit.** Beneficiaries of deceased members with 5 or more years of service are eligible to receive a lump sum death benefit of up to $10,000 ($6,667 for non-contributory service -benefit is prorated). In addition, dependent children of deceased members with 5 or more years of service are eligible to receive a lump sum death benefit of $10,000.

12. **Members' Contributions.** Members contribute 6% of their salaries (by individual election, members who became members before July 1, 1971 could contribute on only the first $7,800 of their annual salaries). If a member leaves service prior to becoming eligible to retire, the accumulated contributions are returned upon request. No interest is credited to a member's contributions for the first year of membership; after 1 year, interest credits are 6% annually. Effective July 1, 1993, a non-contributory plan was created and all new members including any former active members were automatically non-contributory members. By individual election, members could choose to contribute. The benefit accrual rate for non-contributory members is reduced. Effective 7/1/1999 the default choice for new members is contributory. All current members had until 7/1/2000 to make a final election. Effective July 1, 1997 all future member contributions are tax-deferred in accordance with §414(h) of the Internal Revenue Code of the United States.

13. **Act 808 Retirement.** Any employee of a state agency who was an active member of the Arkansas Teacher Retirement System on April 8, 1987, and who qualified for retirement before January 1, 1988, could become a member of the Arkansas Public Employees Retirement System and retire from that system. All credited service was transferred to that system but the member's contributions were retained by the Arkansas Teacher Retirement System and the benefit amount is transferred monthly to the Arkansas Public Employees Retirement System.

14. **Act 793 Retirement.** Any employee who was a member of the rehabilitation services in 1977 was permitted to become a member of the Arkansas Public Employees Retirement System. Liabilities associated with prior service earned through 6/30/1978 remain in the Arkansas Teacher Retirement System. Future service is allocated to the Arkansas Public Employees Retirement System.

SAMPLE BENEFIT COMPUTATIONS FOR A MEMBER RETIRING JUNE 30, 2001

The data for the Example member is shown below.

A.	$35,000	Final Average Compensation
B.	32	Total Service Credit
C.	27	Contributory Service Credit
D.	60	Age of Retiree
E.	55	Age of Spouse
F.	100%	Percentage of Retirement Allowance to Continue to Spouse after Retiree's Death (Retiree Chooses this Percentage)

The computations that would be made for this case are:

			Annual Amount
G.	Non-Contributory Base:	0.0139 x A x B	$15,568
H.	Extra for Contributory:	0.00760 x A x C	7,182
I.	Total Benefit: G + H		22,750
J.	Adjustment for Line F election: (1 - 0.83037) x I		3,859
K.	Annual Amount Payable		$18,891

Projected Benefits, taking into account increases after retirement would be:

Year Ended June 30	**Amount Paid**
2002	$18,891
2003	19,458
2004	20,041
2005	20,643
2006	21,262

Thereafter, the amount would increase by $567 annually for life.

Section D

Financial Information and GASB Reporting

ARKANSAS TEACHER RETIREMENT SYSTEM
ASSET VALUATION METHOD

An essential step in the valuation process is comparing valuation assets with computed liabilities. Valuation assets are those assets that are recognized for funding purposes.

Asset valuation methods are distinguished by the timing of the recognition of investment income. Total investment income is the sum of ordinary income and capital value changes. Under a pure market value approach, ordinary investment income and all capital value changes would be recognized immediately. Because of market volatility, use of pure market values in retirement funding can result in volatile contribution rates and unstable financial ratios, contrary to ATRS objectives.

Under the ATRS asset valuation method (see page D-2), assumed investment return is recognized fully each year. Differences between actual and assumed investment return are phased in over a closed 4-year period. During periods when investment performance exceeds the assumed rate, the funding value will tend to be less than the market value. Conversely, during periods when investment performance is less than the assumed rate, funding value will tend to be greater than market value. If assumed rates are exactly realized for 3 consecutive years, funding value will become equal to market value.

A multi-year comparison of market value to funding (actuarial) value is shown below:

Valuation Date June 30	Market Value of (1)	Actuarial Value of Assets (2)	Ratio of MV to AV (1) / (2)
1995	4,000	3,626	110.3%
1996	4,750	4,186	113.5%
1997	5,747	4,956	116.0%
1998	6,656	5,815	114.5%
1999	7,403	6,740	109.8%
2000	7,978	7,620	104.7%
2001	7,643	8,166	93.6%

DEVELOPMENT OF FUNDING VALUE OF ASSETS

Year Ended June 30:	1998	1999	2000	2001	2002	2003	2004
A. Funding Value Beginning of Year	$4,955,717,510	$5,815,102,130	$6,740,084,341	$7,619,736,770			
B. Market Value End of Year	6,655,558,987	7,402,762,051	7,978,068,238	7,642,865,577			
C. Market Value Beginning of Year	5,747,487,075	6,655,558,987	7,402,762,051	7,978,068,238			
D. Non-Investment Net Cash Flow	(11,793,645)	(29,487,295)	(56,353,945)	(76,534,107)			
E. Investment Return							
E1. Market Total: B - C - D	919,865,557	776,690,359	631,660,132	(258,668,554)			
E2. Amount for Immediate Recognition (8%)	395,985,655	464,028,679	536,952,589	606,517,577			
E3. Amount for Phased-In Recognition: E1-E2	523,879,902	312,661,680	94,707,543	(865,186,131)			
F. Phased-In Recognition of Investment Return							
F1. Current Year: 0.25 x E3	130,969,976	78,165,420	23,676,886	(216,296,533)	Unknown	Unknown	Unknown
F2. First Prior Year	166,241,503	130,969,976	78,165,420	23,676,886	$ (216,296,533)	Unknown	Unknown
F3. Second Prior Year	115,063,928	166,241,503	130,969,976	78,165,420	23,676,886	$ (216,296,533)	Unknown
F4. Third Prior Year	62,917,203	115,063,928	166,241,503	130,969,976	78,165,420	23,676,886	$ (216,296,538)
F5. Total Recognized Investment Gain	**475,192,610**	**490,440,827**	**399,053,785**	**16,515,749**	**(114,454,227)**	**(192,619,647)**	**(216,296,538)**
G. Funding Value End of Year: A + D + E2 + F5	5,815,102,130	6,740,084,341	7,619,736,770	8,166,235,989			
H. Actual/Projected Difference between Market and Funding Value	840,456,857	662,677,710	358,331,468	(523,370,412)	(408,916,185)	(216,296,538)	-
I. Market Rate of Return	16.02%	11.70%	8.57 %	(3.26)%			
J. Funding Rate of Return	17.60%	16.46%	13.95%	8.22%			

The Funding Value of Assets recognizes assumed investment return (line E2) fully each year. Differences between actual and assumed investment income (line E3) are phased in over a closed 4 year period. During periods when investment performance exceeds the assumed rate, Funding Value of Assets will tend to be less than Market Value. During periods when investment performance is less than the assumed rate, Funding Value of Assets will tend to be greater than Market Value. *The Funding Value of Assets is unbiased with respect to Market Value.* At any time it may be either greater or less than Market Value. If assumed rates are exactly realized for 3 consecutive years, it will become equal to Market Value.

The assets of the Retirement System, as of June 30, 2001, were reported to your actuary to be $7,642,865,577. This amount, together with a market value adjustment of $523,370,412, is used to finance the Retirement System liability.

Accounts	Assets at June 30	
	2001	2000
Regular Accounts		
Members' Deposit Accounts		
Contributions	$ 449,813,190	$ 431,027,001
Interest	3,866,557,674	3,968,377,391
Total	4,316,370,864	4,399,404,392
T-Drop Member Deposit Accounts		
Contributions	20,145,718	22,633,802
Interest	65,353,902	57,374,966
Total	85,499,620	80,008,768
Employer's Accumulation Account	174,823,939	953,724,703
Retirement Reserve Account	2,806,913,107	2,351,688,480
Act 808 Retirement Reserve Account	35,325,540	32,065,928
T-Lump Payable	153,510,100	110,259,375
Survivors Benefit Account	49,265,415	35,170,258
Total Regular Accounts	7,621,708,585	7,962,321,904
Other Accounts		
Income Expense Account	21,156,992	15,746,333
Other Special Reserves	0	0
Miscellaneous		
Total Other Accounts	21,156,992	15,746,333
Total Accounting Value of Assets	7,642,865,577	7,978,068,237
Market Value Adjustment	523,370,412	(358,331,467)
Funding Value of Assets	$8,166,235,989	$7,619,736,770

In financing the Retirement System Accrued Liabilities, the applicable assets have been applied as follows.

	Assets Applied to Accrued Liabilities for			
	Retirees and Beneficiaries	**Active and Inactive Members**	**T-Drop Members**	**Totals**
Reserve Assets				
Member's Deposit Account	$ 0	$4,316,370,864	$ 85,499,620	$4,401,870,484
Employer's Accumulation Account	308,552,033	(1,095,428,755)	961,700,661	174,823,939
Retirement Reserve Account	2,806,913,107	0	0	2,806,913,107
Act 808 Reserve Account	35,325,540	0	0	35,325,540
T-Lump Payable	0	0	153,510,100	153,510,100
Survivor's Benefit Account	49,265,415	0	0	49,265,415
Other Accounts	0	21,156,992	0	21,156,992
Total Reserve Assets	3,200,056,095	3,242,099,101	1,200,710,381	7,642,865,577
Market Value Adjustment	0	523,370,412	0	523,370,412
Funding Value of Assets	$3,200,056,095	$3,765,469,513	$1,200,710,381	$8,166,235,989

The net market value of assets at year end was $7,642,865,577 and was invested as shown below.

	Market Value at June 30	
	2001	2000
Cash	$ 6,913,608	$ 211,224,743
Receivables		
Unsettled Trades and Accrued Return	261,417,068	253,723,983
Member Contributions	7,094,333	6,120,781
Employer Contributions	4,566,327	4,864,737
Other	151,037	37,043
Total Receivables	273,228,765	264,746,544
Investments		
Short Term	0	5,875
Common and Preferred	5,036,619,062	3,898,709,802
International	964,098,594	1,214,158,186
Corporate Bonds	0	625,062,427
Alternative Investments	969,605,925	843,971,684
Market Valuation	288,422,790	
Real Estate	96,612,475	42,109,767
Mortgage Loans	0	288,889,551
Revenue Bonds	3,155,000	2,403,166
Government Securities	0	924,959,996
Other Investments	305,003,396	27,856,840
Repurchase Agreements	0	68,000,000
Total Investments	7,663,517,242	7,936,127,294
Invested Securities Lending	744,690,799	696,315,667
Net Equipment	1,288,388	1,489,373
Total Assets	8,689,638,802	9,109,903,621
Liabilities		
Escrow Payables	121,285	1,841
Other Payables	301,961,141	427,443,228
Securities Related Payables	0	8,074,647
Securities Lending Collateral	744,690,799	696,315,667
Total Liabilities	1,046,773,225	1,131,835,383
Net Market Value	7,642,865,577	7,978,068,238
Change from Prior Year	(335,202,661)	575,306,187

Assets during the year developed as follows:

MARKET VALUE RECONCILIATION OF ASSETS

	Year Ended June 30	
	2001	**2000**
Net Market Value July 1	$7,978,068,238	$7,402,762,051
Additions		
Employer Contributions	181,115,569	175,686,958
Employee Contribs	68,717,889	55,633,069
Appreciation	(435,733,125)	449,347,779
Interest	163,305,403	187,085,160
Dividends	55,759,102	20,040,246
Real Estate	5,115,764	2,092,908
Other	701,624	645,291
Securities Lending Activity	3,792,771	2,855,371
Total Additions	42,774,997	893,386,782
Deductions		
Age& Service Benfits	265,279,450	236,862,714
Disability Benefits	18,097,625	16,265,033
Option Benefits	6,877,850	6,002,425
Survivor benefits	4,837,322	4,343,510
Reciprocal Service	7,524,324	5,974,673
Act 808	4,152,737	4,544,286
Refunds	2,975,138	3,544,575
Active Member Death	688,447	669,373
TDROP Benefits	15,934,672	9,467,383
Investment Expense	43,355,364	20,676,624
Admin. Expenses	8,254,729	9,729,999
Total Deductions	377,977,658	318,080,595
Miscellaneous	0	0
Net Market Value June 30	$7,642,865,577	$7,978,068,238

HISTORICAL PATTERNS OF INVESTMENT RETURN, PAY INCREASES & INFLATION

Calendar Year Period	Gross Market Returns				Price Inflation (CPI)	National Average Earnings (NAE)	Sample Balanced Fund*	
	Bonds (Long)		Cash Equiv. (T Bills)	Stocks (S&P 500)			Total (I)	Spread: I - NAE - e
	U.S. Treasury	Corp. (S&P AA)						
1950-59	(0.1)%	1.0%	1.9%	19.4%	2.2%	4.5%	10.5%	5.5%
1960-69	1.4	1.7	3.9	7.8	2.5	4.3	5.2	0.4
1970-79	5.5	6.2	6.3	5.9	7.4	6.9	6.3	(1.1)
1980-89	12.6	13.0	8.9	17.5	5.1	5.8	15.1	8.8
1990-99	8.8	8.4	4.9	18.2	2.9	4.0	13.2	8.7
2000	21.5	12.9	5.9	(9.1)	3.4	4.0	3.3	(1.2)
Last 51 Years	5.8%	6.1%	5.2%	13.1%	4.0%	5.1%	9.9%	**4.3%#**

* Sample Balanced Fund	
Equities	50%
Bonds - Government	20
- Corporate	20
Cash Equivalents	10
	100%
Fund Expenses (e) @	0.5%

 # Historical Spread

Observed spread is very sensitive to the observation period, even over long periods, as illustrated below:

Observation Period	*Spread*
61 years	3.2%
51 years	4.3
41 years	3.9
31 years	5.2

@ Generally includes administration manager fees and transaction costs.
May vary anywhere from less than 0.3% to over 1.0% from system to system.

SCHEDULE OF FUNDING PROGRESS
(DOLLAR AMOUNTS IN MILLIONS)

Valuation Date June 30	(1) Actuarial Value of Assets	(2) Entry Age AAL	(3) UAAL (2)-(1)	(4) Funding Ratio (1)/(2)	(5) Annual Covered Payroll	(6) UAAL as % of Covered Payroll (3)/(5)
1991+*	$2,434	$2,762	$ 328	88.1%	$909	36.1%
1992+	2,729	3,329	600	82.0%	1,077	55.7%
1993+	3,051	3,712	661	82.2%	1,120	59.0%
1994	3,307	3,960	653	83.5%	1,167	56.0%
1995*	3,626	4,257	631	85.2%	1,234	51.1%
1996	4,186	4,635	449	90.3%	1,260	35.6%
1997+	4,956	5,403	447	91.7%	1,302	34.3%
1998+*	5,815	6,188	373	94.0%	1,368	27.3%
1999+	6,740	6,834	94	98.6%	1,429	6.6%
2000+	7,620	7,879	259	96.7%	1,485	17.4%
2001	8,166	8,469	303	96.4%	1,557	19.5%
2001+	8,166	8,561	395	95.4%	1,557	25.4%

+ Legislated benefit increase.
** Revised actuarial assumptions.*

SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

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

Valuation Date	June 30, 2001
Actuarial Cost Method	Entry age
Amortization Method	Level percent of payroll
Remaining Amortization Period	125 years
Asset Valuation Method	4-year smoothed market
Actuarial Assumptions:	
Investment Rate of Return	8.0%%
Cost-of-living adjustments	3.0% Simple
Projected Salary Increases	4.5% to 9.0%

*Includes wage inflation at 4.5%

Section E

Covered Member Data

Active members included in the valuation totaled 61,389 with annual payroll totaling $1,557,116,639.

TOTAL ACTIVE MEMBERS IN VALUATION JUNE 30, 2001 BY MEMBER'S CHOICE OF CONTRIBUTION RATE

Attained	Members Contributing Now			Members Not Contributing			Total
Age	Men	Women	Total	Men	Women	Total	Members
Under 20	5	4	9	20	41	61	70
20-24	143	538	681	200	530	730	1,411
25-29	698	2,556	3,254	359	1,318	1,677	4,931
30-34	685	2,738	3,423	563	2,462	3,025	6,448
35-39	714	3,117	3,831	749	3,468	4,217	8,048
40-44	922	4,144	5,066	1,116	4,966	6,082	11,148
45-49	1,137	4,880	6,017	878	3,809	4,687	10,704
50-54	1,049	4,482	5,531	804	2,994	3,798	9,329
55-59	595	2,455	3,050	501	1,748	2,249	5,299
60-64	305	1,003	1,308	351	905	1,256	2,564
65-69	77	205	282	246	398	644	926
70 & Up	38	39	77	210	224	434	511
	6,368	**26,161**	**32,529**	**5,997**	**22,863**	**28,860**	**61,389**

ACTIVE TEACHERS IN VALUATION JUNE 30, 2001
BY MEMBER'S CHOICE OF CONTRIBUTION RATE

Attained	Members Contributing Now			Members Not Contributing			Total
Age	Men	Women	Total	Men	Women	Total	Members
Under 20	1		1	1		1	2
20-24	76	397	473	8	47	55	528
25-29	558	1,940	2,498	107	441	548	3,046
30-34	542	2,006	2,548	252	946	1,198	3,746
35-39	531	2,102	2,633	362	1,113	1,475	4,108
40-44	654	2,833	3,487	426	1,421	1,847	5,334
45-49	900	3,655	4,555	443	1,580	2,023	6,578
50-54	799	3,374	4,173	402	1,227	1,629	5,802
55-59	367	1,601	1,968	166	550	716	2,684
60-64	170	550	720	70	179	249	969
65-69	19	86	105	15	23	38	143
70 & Up	5	14	19	6	6	12	31
Totals	**4,622**	**18,558**	**23,180**	**2,258**	**7,533**	**9,791**	**32,971**

This schedule includes Administrators.

ACTIVE NON-TEACHERS IN VALUATION JUNE 30, 2001
BY MEMBER'S CHOICE OF CONTRIBUTION RATE

Attained	Members Contributing Now			Members Not Contributing			Total
Age	Men	Women	Total	Men	Women	Total	Members
Under 20	4	4	8	19	41	60	68
20-24	67	141	208	192	483	675	883
25-29	140	616	756	252	877	1,129	1,885
30-34	143	732	875	311	1,516	1,827	2,702
35-39	183	1,015	1,198	387	2,355	2,742	3,940
40-44	268	1,311	1,579	690	3,545	4,235	5,814
45-49	237	1,225	1,462	435	2,229	2,664	4,126
50-54	250	1,108	1,358	402	1,767	2,169	3,527
55-59	228	854	1,082	335	1,198	1,533	2,615
60-64	135	453	588	281	726	1,007	1,595
65-69	58	119	177	231	375	606	783
70 & Up	33	25	58	204	218	422	480
Totals	**1,746**	**7,603**	**9,349**	**3,739**	**15,330**	**19,069**	**28,418**

WOMEN ACTIVE MEMBERS IN VALUATION JUNE 30, 2001
BY ATTAINED AGE AND YEARS OF SERVICE

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20	45							45	$ 182,164
20-24	1,062	6						1,068	14,229,578
25-29	3,235	639						3,874	85,416,047
30-34	2,612	2,088	496	4				5,200	113,616,049
35-39	2,826	1,660	1,609	489	1			6,585	140,669,036
40-44	3,469	2,021	1,548	1,413	657	2		9,110	204,123,574
45-49	1,820	1,774	1,797	1,021	1,503	774		8,689	243,137,559
50-54	1,219	1,212	1,702	1,115	957	1,185	86	7,476	220,395,564
55-59	788	649	895	670	640	505	56	4,203	113,712,534
60	107	101	124	76	102	71	14	595	14,925,480
61	97	85	93	67	73	59	5	479	11,559,699
62	68	69	85	57	54	40	7	380	8,813,349
63	63	60	48	27	38	20	3	259	5,189,260
64	60	37	38	24	17	15	4	195	3,888,560
65	67	34	39	13	19	15	2	189	3,525,561
66	62	35	22	8	13	9	2	151	2,344,077
67	43	33	18	10	4	4	1	113	1,343,930
68	36	20	14	4	4	1		79	932,185
69	27	15	17	6	1	3	2	71	836,045
70 & Up	124	61	57	11	7	2	1	263	2,657,412
Totals	**17,830**	**10,599**	**8,602**	**5,015**	**4,090**	**2,705**	**183**	**49,024**	**$1,191,497,663**

MEN ACTIVE MEMBERS IN VALUATION JUNE 30, 2001
BY ATTAINED AGE AND YEARS OF SERVICE

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20	25							25	$ 148,502
20-24	335	8						343	4,506,507
25-29	905	148	4					1,057	25,800,250
30-34	588	557	102	1				1,248	34,227,801
35-39	506	384	462	111				1,463	43,755,783
40-44	802	388	339	361	147	1		2,038	59,503,234
45-49	496	369	298	231	414	207		2,015	71,198,343
50-54	426	326	269	194	220	380	38	1,853	67,911,282
55-59	345	246	198	119	79	82	27	1,096	34,756,322
60	71	29	32	20	18	8	5	183	5,522,600
61	59	28	26	11	9	7	3	143	3,801,436
62	48	29	24	13	9	4	1	128	3,263,967
63	37	27	19	4	4	1	2	94	2,169,231
64	48	25	17	7	6	5		108	2,253,673
65	37	17	7	1		3		65	866,129
66	37	20	10	6	1		2	76	1,244,784
67	42	22	4	3	1			72	880,196
68	41	9	7					57	646,557
69	32	14	4	2	1			53	599,471
70 & Up	111	99	30	5	1		2	248	2,562,908
Totals	**4,991**	**2,745**	**1,852**	**1,089**	**910**	**698**	**80**	**12,365**	**$365,618,976**

TOTAL ACTIVE MEMBERS IN VALUATION JUNE 30, 2001
BY ATTAINED AGE AND YEARS OF SERVICE

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20	70							70	$ 330,666
20-24	1,397	14						1,411	18,736,085
25-29	4,140	787	4					4,931	111,216,297
30-34	3,200	2,645	598	5				6,448	147,843,850
35-39	3,332	2,044	2,071	600	1			8,048	184,424,819
40-44	4,271	2,409	1,887	1,774	804	3		11,148	263,626,808
45-49	2,316	2,143	2,095	1,252	1,917	981		10,704	314,335,902
50-54	1,645	1,538	1,971	1,309	1,177	1,565	124	9,329	288,306,846
55-59	1,133	895	1,093	789	719	587	83	5,299	148,468,856
60	178	130	156	96	120	79	19	778	20,448,080
61	156	113	119	78	82	66	8	622	15,361,135
62	116	98	109	70	63	44	8	508	12,077,316
63	100	87	67	31	42	21	5	353	7,358,491
64	108	62	55	31	23	20	4	303	6,142,233
65	104	51	46	14	19	18	2	254	4,391,690
66	99	55	32	14	14	9	4	227	3,588,861
67	85	55	22	13	5	4	1	185	2,224,126
68	77	29	21	4	4	1		136	1,578,742
69	59	29	21	8	2	3	2	124	1,435,516
70 & Up	235	160	87	16	8	2	3	511	5,220,320
Totals	**22,821**	**13,344**	**10,454**	**6,104**	**5,000**	**3,403**	**263**	**61,389**	**$1,557,116,639**

SUMMARY OF ACTIVE MEMBERS

	Teachers		Non-Teachers		Total Active Members	
	No.	Payroll	No.	Payroll	No.	Payroll
Women	26,091	$ 901,501,799	22,933	$ 289,995,864	49,024	$1,191,497,663
Men	6,880	279,898,207	5,485	85,720,769	12,365	365,618,976
All	32,971	$1,181,400,006	28,418	$ 375,716,633	61,389	$1,557,116,639

	Teachers	Non-Teachers	Total
Members Contributing Now	23,180	9,349	32,529
Members Not Contributing	9,791	19,069	28,860
All	32,971	28,418	61,389

	Group Averages		
	Women	Men	Total
Age:	43.5 years	44.5 years	43.7 years
Service:	9.6 years	9.0 years	9.5 years
Annual Pay:	$24,304	$29,569	$25,365

ACTIVE MEMBERS IN VALUATION

June 30	Number	Group Averages			Active Member Payroll ($ Millions)
		Age	Service	Annual Earnings	
1986	34,274	40.5	10.6	$19,180	$ 657
1987	34,210	40.9	10.5	19,392	663
1988	38,024	40.8	10.0	19,274	733
1989	38,978	41.1	10.2	19,879	775
1990	41,800	41.3	9.9	19,776	827
1991	45,902	41.5	9.6	19,796	909
1992	55,688	41.3	8.5	19,338	1,077
1993	58,519	41.4	8.6	19,145	1,120
1994	57,402	42.1	9.1	20,337	1,167
1995	58,876	42.4	9.2	20,952	1,234
1996	56,100	43.0	9.8	22,463	1,260
1997	56,997	43.2	9.8	22,847	1,302
1998	58,528	43.4	9.7	23,380	1,368
1999	59,499	43.5	9.8	24,019	1,429
2000	60,147	43.6	9.6	24,696	1,485
2001	61,389	43.7	9.5	25,365	1,557

The figures on this historical schedule are affected by the inclusion of new non-teaching employees beginning July 1, 1989.

DEFERRED VESTED MEMBERS AT JUNE 30, 2001
BY ATTAINED AGE

Age	Number	Estimated Annual Benefits	Contribution Balance
Below 40	2,011	$ 6,593,930	$ 3,773,473
40	282	1,034,873	964,259
41	259	944,661	1,075,381
42	233	850,713	944,945
43	264	1,077,877	1,267,438
44	287	1,073,494	1,326,012
45	281	1,099,932	1,258,971
46	274	1,217,848	1,722,520
47	273	1,113,984	1,534,304
48	274	1,181,215	1,845,667
49	276	1,219,689	1,901,362
50	269	1,210,187	2,018,323
51	270	1,272,668	2,339,108
52	264	1,194,964	2,229,325
53	259	1,406,406	2,706,308
54	275	1,379,216	2,883,868
55	166	845,001	1,866,452
56	197	1,042,100	2,321,339
57	210	997,738	2,644,168
58	178	954,806	2,321,281
59	173	992,353	2,510,150
60 & Up	306	922,349	1,725,485
Totals	**7,281**	**$29,626,004**	**$43,180,139**

An inactive member is no longer actively working, and has sufficient service credit to qualify for a monthly benefit at retirement age.

MEMBERS PARTICIPATING IN T-DROP AT JUNE 30, 2001
BY ATTAINED AGE

Age	Number	Current T-Drop Contribution	Original T-Drop Contribution
47	1	$ 12,021	$ 10,149
48	3	31,074	28,098
49	12	205,770	178,430
50	93	1,755,077	1,499,676
51	193	3,544,361	3,001,660
52	279	5,296,681	4,535,390
53	365	6,913,174	6,043,053
54	407	8,156,679	7,076,050
55	267	5,123,625	4,361,994
56	258	5,097,984	4,278,121
57	242	4,979,873	4,170,142
58	225	4,465,320	3,664,586
59	186	3,747,904	3,034,992
60	157	3,088,877	2,530,154
61	119	2,397,888	1,953,556
62	82	1,730,742	1,401,951
63	63	1,282,575	1,027,492
64	49	1,040,459	843,586
65	37	731,570	587,678
66	17	374,245	295,009
67	19	419,807	348,528
68	6	154,242	122,056
69	7	181,703	154,582
70	2	57,407	43,023
71	2	45,657	34,859
72	4	71,918	57,135
73	2	65,867	52,521
76	1	2,886	2,474
Totals	**3,098**	**$60,975,386**	**$51,336,945**

A T-Drop member continues to work, but does not accrue service credit towards retirement. The member's FAS is frozen (see page C-2) at time of T-Drop election.

Section F

Actuarial Assumptions and Miscellaneous

SUMMARY OF ASSUMPTIONS USED IN ACTUARIAL VALUATIONS FOR THE ARKANSAS TEACHER RETIREMENT SYSTEM ASSUMPTIONS ADOPTED BY BOARD OF TRUSTEES AFTER CONSULTING WITH ACTUARY

Economic Assumptions

The investment return rate used in making the valuation was 8.0% per year, compounded annually (net after administrative expenses). This rate of return is not the assumed real rate of return. The real rate of return is the portion of investment return which is more than the inflation rate. Considering inflation recognition of 4.5%, the 8.0% rate translates to an assumed real rate of return of 3.5%. This rate was first used for the ***June 30, 1998*** valuation.

Pay increase assumptions for individual active members are shown on pages F-6 and F-7. Part of the assumption for each age is for a merit and/or seniority increase, and the other 4.5% recognizes wage inflation. These rates were first used for the ***June 30, 1998*** valuation. Price inflation is assumed to persist at a level sufficient to produce a 3.0% COLA.

The Active Member Group size is assumed to remain constant at its present level.

Total active member payroll is assumed to increase 4.5% a year, which is the portion of the individual pay increase assumptions attributable to wage inflation. This rate was first used for the ***June 30, 1998*** valuation.

Non-Economic Assumptions

The mortality table used to measure retired life mortality was the 1983 Group Annuity Mortality Table. Related values are shown on page F-4. This table was first used for the ***June 30, 1998*** valuation. For disabled lives, the mortality table is set forward 10 years.

The probabilities of retirement for members eligible to retire are shown on page F-5 and F-6. The rates for full retirement were first used in the ***June 30, 1998*** valuation. The rates for reduced retirement were first used in the ***June 30, 1999*** valuation.

The probabilities of withdrawal from service, ***death-in-service*** and ***disability*** are shown for sample ages on pages F-6 and F-7. The withdrawal and disability rates were first used in the **June 30, 1998** valuation. The death-in-service rates were first used in the **June 30, 1998** valuation.

The entry age actuarial cost method of valuation was used in determining accrued liabilities and normal cost.

Differences in the past between assumed experience and actual experience ("actuarial gains and losses") become part of actuarial accrued liabilities.

Unfunded actuarial accrued liabilities are amortized to produce contribution amounts (the total of principal & interest) which are level percent of payroll contributions.

These cost methods were first used in the June 30, 1986 valuation.

Asset Valuation Method. A market value related asset method is used as described on page D-4. This method was first used in the June 30, 1995 valuation.

The data about persons now covered and about present assets was furnished by the System's administrative staff. Although examined for general reasonableness, the data was not audited by the Actuary. Members whose dates of birth were not supplied were assumed to be 40 years old on the valuation date.

The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (M.A.A.A.).

Non-teacher members were evaluated using non-economic assumptions shown on the following pages. Effective July 1, 1989 non-teacher employees who are newly hired by public schools become members of TRS.

SINGLE LIFE RETIREMENT VALUES

Sample Attained Ages	Present Value of $1.00 Monthly for Life		Present Value of $1 Monthly for Life Increasing 3.0% Annually		Future Life Expectancy (years)		Percent of Active Members Dying within Next Year	
	Men	Women	Men	Women	Men	Women	Men	Women
40	$142.98	$147.82	$184.74	$193.70	38.46	44.52	0.12 %	0.07 %
45	138.18	144.67	176.24	187.61	33.74	39.69	0.22 %	0.10 %
50	132.10	140.42	165.94	179.79	29.18	34.92	0.39 %	0.16 %
55	124.57	134.74	153.75	169.90	24.82	30.24	0.61 %	0.25 %
60	115.04	127.24	139.16	157.58	20.64	25.67	0.92 %	0.42 %
65	103.26	117.61	122.19	142.67	16.69	21.29	1.56 %	0.71 %
70	90.18	105.53	104.27	125.11	13.18	17.13	2.75 %	1.24 %
75	76.40	91.57	86.27	105.96	10.15	13.37	4.46 %	2.40 %
80	62.65	77.16	69.17	87.10	7.64	10.20	7.41 %	4.29 %
85	50.59	62.99	54.72	69.36	5.73	7.58	11.48 %	6.99 %
Ref:	30 x 1.00	31 x 1.00	30 x 1.00	31 x 1.00				

Sample Attained Ages	Benefit Increasing 3.0% Yearly	Portion of Age 60 Lives Still Alive	
		Men	Women
60	$100.00	100%	100%
65	115.00	94%	97%
70	130.00	85%	93%
75	145.00	72%	86%
80	160.00	54%	73%
Ref		30	31

PROBABILITIES OF RETIREMENT FOR MEMBERS

Retirement Ages	Percent of Eligible Active Members Retiring within Next Year			
	Teachers		Non-Teachers	
	Full	Reduced	Full	Reduced
48	10%		30%	
49	10%		30%	
50	6%	4%	10%	4%
51	7%	5%	12%	5%
52	9%	6%	14%	6%
53	11%	7%	16%	7%
54	13%	8%	18%	8%
55	15%	9%	20%	9%
56	17%	9%	22%	9%
57	19%	9%	24%	9%
58	20%	9%	27%	9%
59	20%	7%	30%	7%
60	15%		16%	
61	20%		25%	
62	30%		35%	
63	30%		35%	
64	25%		35%	
65	35%		50%	
66	30%		40%	
67	30%		40%	
68	30%		40%	
69	30%		40%	
70	100%		100%	
Ref	471	201	473	201

PROBABILITIES OF T-DROP FOR MEMBERS

	Percent of Eligible Active Members Entering T-Drop within Next Year			
	Education		Support	
Ages	Male	Female	Male	Female
50	45%	40%	40%	40%
51	45%	40%	40%	40%
52	45%	40%	40%	40%
53	45%	40%	40%	40%
54	45%	40%	40%	40%
55	45%	40%	40%	40%
56	45%	40%	40%	40%
57	45%	40%	40%	40%
58	45%	40%	40%	40%
59	45%	40%	40%	40%
60	45%	40%	40%	40%
61	45%	40%	40%	40%
62	45%	40%	40%	40%
63	45%	40%	40%	40%
64	45%	40%	40%	40%
65	25%	20%	20%	20%
66	25%	20%	20%	20%
67	25%	20%	20%	20%
68	25%	20%	20%	20%
69	25%	20%	20%	20%
70	25%	20%	20%	20%
Ref	243	244	244	244

For people with less than 30 years of service, the probabilities are half the values shown above. Members entering T-Drop are assumed to remain in T-Drop according to the following table:

Age	Assumed Duration Years
50-56	6
57	5
58	4
59+	3

TEACHERS
SEPARATIONS FROM ACTIVE EMPLOYMENT BEFORE AGE AND SERVICE RETIREMENT & INDIVIDUAL PAY INCREASES

	Percent of Active Members Separating Within the Next Year						
Sample		Death		Disability		Other	
Ages	Service	Men	Women	Men	Women	Men	Women
	0					32.00%	30.00%
	1					15.00%	12.00%
	2					11.00%	9.00%
	3					7.50%	7.00%
	4					5.00%	5.00%
20	5 & Up	0.04%	0.02%	0.06%	0.05%	4.60%	4.60%
25		0.05%	0.03%	0.06%	0.05%	4.60%	4.60%
30		0.06%	0.03%	0.05%	0.04%	3.76%	3.76%
35		0.09%	0.05%	0.05%	0.04%	2.66%	2.66%
40		0.12%	0.07%	0.09%	0.07%	2.00%	2.00%
45		0.22%	0.10%	0.14%	0.12%	1.62%	1.62%
50		0.39%	0.16%	0.32%	0.26%	1.50%	1.50%
55		0.61%	0.25%	0.53%	0.44%	1.50%	1.50%
60		0.92%	0.42%	0.60%	0.50%	1.50%	1.50%
65		1.56%	0.71%	0.60%	0.50%	1.50%	1.50%
Ref:						136	212
		30	31	135 x 0.6	135 x 0.5	370	370

	Pay Increase Assumptions for an Individual Member		
Age	Merit & Seniority	Base (Economic)	Increase Next Year
20	4.5%	4.5%	9.0%
25	4.9%	4.5%	9.4%
30	4.1%	4.5%	8.6%
35	3.0%	4.5%	7.5%
40	2.2%	4.5%	6.7%
45	1.5%	4.5%	6.0%
50	0.9%	4.5%	5.4%
55	0.5%	4.5%	5.0%
60	0.2%	4.5%	4.7%
65	0.0%	4.5%	4.5%
Ref:	171		

NON-TEACHERS
SEPARATIONS FROM ACTIVE EMPLOYMENT BEFORE AGE AND SERVICE RETIREMENT & INDIVIDUAL PAY INCREASES

	Percent of Active Members Separating within the Next Year						
Sample		Death		Disability		Other	
Ages	Service	Men	Women	Men	Women	Men	Women
	0					40.00%	40.00%
	1					30.00%	25.00%
	2					24.00%	20.00%
	3					18.00%	15.00%
	4					14.00%	12.00%
20	5 & Up	0.04%	0.02%	0.06%	0.05%	14.00%	12.00%
25		0.05%	0.03%	0.06%	0.05%	14.00%	11.00%
30		0.06%	0.03%	0.05%	0.04%	11.60%	7.00%
35		0.09%	0.05%	0.05%	0.04%	7.60%	4.90%
40		0.12%	0.07%	0.09%	0.07%	4.80%	4.20%
45		0.22%	0.10%	0.14%	0.12%	3.40%	3.70%
50		0.39%	0.16%	0.32%	0.26%	2.40%	2.00%
55		0.61%	0.25%	0.53%	0.44%	1.50%	1.50%
60		0.92%	0.42%	0.60%	0.50%	1.50%	1.50%
65		1.56%	0.71%	0.60%	0.50%	1.50%	1.50%
Ref:						211	213
		30	31	135 x 0.6	135 x 0.5	371	137

	Pay Increase Assumptions for an Individual Member		
Age	Merit & Seniority	Base (Economic)	Increase Next Year
20	4.5%	4.5%	9.0%
25	4.9%	4.5%	9.4%
30	4.1%	4.5%	8.6%
35	3.0%	4.5%	7.5%
40	2.2%	4.5%	6.7%
45	1.5%	4.5%	6.0%
50	0.9%	4.5%	5.4%
55	0.5%	4.5%	5.0%
60	0.2%	4.5%	4.7%
65	0.0%	4.5%	4.5%
Ref:	171		

MISCELLANEOUS AND TECHNICAL ASSUMPTIONS
JUNE 30, 2001

Marriage Assumption:	100% of males and 100% of females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses.
Pay Increase Timing:	Beginning of (Fiscal) year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.
Decrement Timing:	Decrements are assumed to occur mid-year, with the exception of normal, early retirement and T-DROP, which are assumed to occur at the beginning of the year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and exact fractional service on the date the decrement is assumed to occur.
Decrement Relativity:	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Decrement Operation:	Disability and mortality decrements do not operate during the first 5 years of service. They also do not operate during retirement eligibility.
Normal Form of Benefit:	The assumed normal form of benefit is the straight life form.
Incidence of Contributions:	Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
Approximation	Adjustments were made to liabilities for T-DROP to allow for a 6% interest accumulation vs. an 8% assumed rate of return.

Accrued Service. The service credited under the plan which was rendered before the date of the actuarial valuation.

Accumulated Benefit Obligation. The actuarial present value of vested and non-vested benefits based on service to date and past and current salary levels.

Actuarial Accrued Liability. The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability."

Actuarial Assumptions. Estimates of future plan 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.

Actuarial Cost Method. A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method."

Actuarial Equivalent. A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.

Actuarial Present Value. The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Actuarial Present Value of Credited Projected Benefits or Pension Benefit Obligation. The present value of future benefits based on service to date and the effect projected salary increases.

Actuary. A person who is trained in the applications of probability and compound interest to problems in business and finance that involve payment of money in the future, contingent upon the occurrence of future events. Most actuaries in the United States are Members of the American Academy of Actuaries. The Society of Actuaries is an international research, education and membership organization for actuaries in the life and health insurance, employee benefits, and pension fields. It administers a series of examinations leading initially to Associateship and the designation A.S.A. and ultimately to Fellowship with the designation F.S.A. The federal government certifies actuaries to practice under ERISA with the designation of E.A.

Amortization. Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

Experience Gain (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

Normal Cost. The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost." Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

Plan Termination Liability. The actuarial present value of future plan benefits based on the assumption that there will be no further accruals for future service and salary. The termination liability will generally be less than the liabilities computed on a "going concern" basis and is not normally determined in a routine actuarial valuation.

Reserve Account. An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

Unfunded Actuarial Accrued Liability. The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability."

Valuation Assets. The value of current plan assets recognized for valuation purposes. Generally based on book value plus a portion of unrealized appreciation or depreciation.

December 31, 2001

Mr. Bill A. Shirron, Executive Director
Arkansas Teacher Retirement System
Education Building West
State Capitol Grounds
Little Rock, Arkansas 72201

Re: Report of June 30, 2001 Actuarial Valuation
of Active and Inactive Members

Dear Bill:

Enclosed are 35 copies of the report. If you need anything else, please call.

Sincerely,

Judith A Kermans

JAK/RGS/lr
Enclosure