

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

June 30, 2004

(Revised February 15, 2005)

GABRIEL, ROEDER, SMITH & COMPANY



REPORT OF THE JUNE 30, 2004 ACTUARIAL VALUATION OUTLINE OF CONTENTS

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February 15, 2005

Board of Trustees
Arkansas Teacher Retirement System
Little Rock, Arkansas

The results of the annual actuarial valuation of non-retired members as of June 30, 2004 are presented in this report. This valuation is based upon the Arkansas Teacher Retirement System laws, as described in Section C of this report.

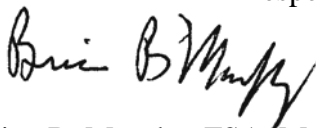
The census and financial operations data necessary for the actuarial valuation were furnished by the Retirement System. Preparation of this data requires considerable staff time. The helpful cooperation of the Executive Director and his staff in furnishing the data is acknowledged with appreciation.

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, 1997 to June 30, 2002.

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, FSA, MAAA Judith A. Kermans, EA, MAAA

BBM/TCB

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.....”

Arkansas Teacher Retirement System Status: Based upon the results of June 30, 2004 actuarial valuations, ***ATRS is satisfying the financial objective of level-contribution-percent financing.***

This valuation reflects the Employer rate increase to 14% for the 2004/2005 fiscal year.

Market investment experience for the year end June 30, 2004 was very favorable. The amortization period this year is 31 years, a decrease from last year's 36-year period. The amortization period of 31 years is the net result of favorable investment experience in the 2003/2004 year, the contribution rate change to 14%, and other miscellaneous effects. Unfortunately, there remain approximately \$300 million of unrecognized investment losses that will affect future valuations. Investment return well above the assumed rate will be required in 2004/2005 to keep the amortization period below 40 years as of June 30, 2005.

The Arkansas Teacher Retirement System is 84% funded as of June 30, 2004, indicating a solid financial position and significant progress in recovering from one of the worst investment markets since the Great Depression.

**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)%	4,850	97%
1972	75	5,150	(2.9)%	4,792	96%
1973	75	5,225	(5.9)%	4,587	92%
1974	1,015	6,240	(11.0)%	4,941	99%
1975	474	6,714	(9.3)%	4,860	97%
1976	886	7,600	(5.9)%	5,192	104%
1977	114	7,714	(6.9)%	4,931	99%
1978	114	7,828	(7.4)%	4,658	93%
1979	114	7,942	(10.9)%	4,262	85%
1980	417	8,359	(14.3)%	3,922	79%
1981	118	8,477	(9.6)%	3,630	73%
1982	323	8,800	(7.1)%	3,520	70%
1983	253	9,053	(2.6)%	3,530	71%
1984	725	9,778	(4.2)%	3,658	73%
1985	738	10,516	(3.7)%	3,792	76%
1986	857	11,373	(1.7)%	4,030	81%
1987	331	11,704	(3.7)%	4,001	80%
1988	673+	12,377	(3.9)%	4,070	81%
1989	847	13,224	(5.1)%	4,134	83%
1990	837	14,061	(4.7)%	4,200	84%
1991	388	14,449	(4.7)%	4,122	82%
1992	1,282	15,731	(3.1)%	4,354	87%
1993	1,333	17,064	(3.0)%	4,585	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)%	6,355	127%
2002	1,151	30,304	(1.1)%	6,536	131%
2003	801	31,105	(2.1)%	6,570	131%
2004	801	31,906	(3.3)%	6,526	131%
2005	801	32,707			

* 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	(1.1)%	8,132	163%
2003	468	18,157	(2.1)%	8,174	163%
2004	468	18,625	(3.3)%	8,120	162%
2005	468	19,093			

* 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).

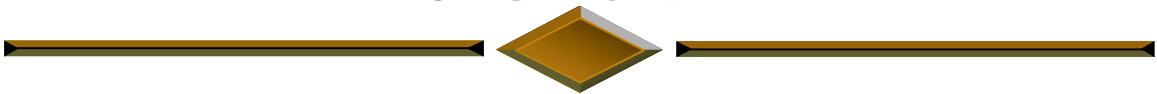
**BENEFIT CHANGES DURING RECENT YEARS OF RETIREMENT
& RELATED CHANGES IN PURCHASING POWER (1990 \$)**

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	(1.1)%	7,346	147%
2003	270	10,444	(2.1)%	7,350	147%
2004	270	10,715	(3.3)%	7,300	146%
2005	270	10,985			

* 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

FINANCIAL PRINCIPLES AND OPERATIONAL TECHNIQUES

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

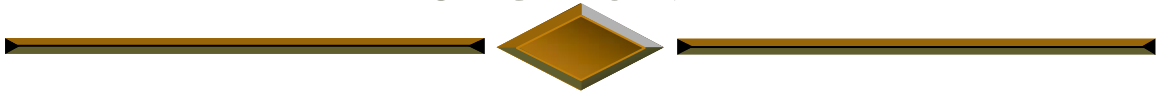
- D. + **Assumptions concerning future financial experiences in various risk areas**, which assumptions are established by the Board of Trustees after consulting with the actuary.

- 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**

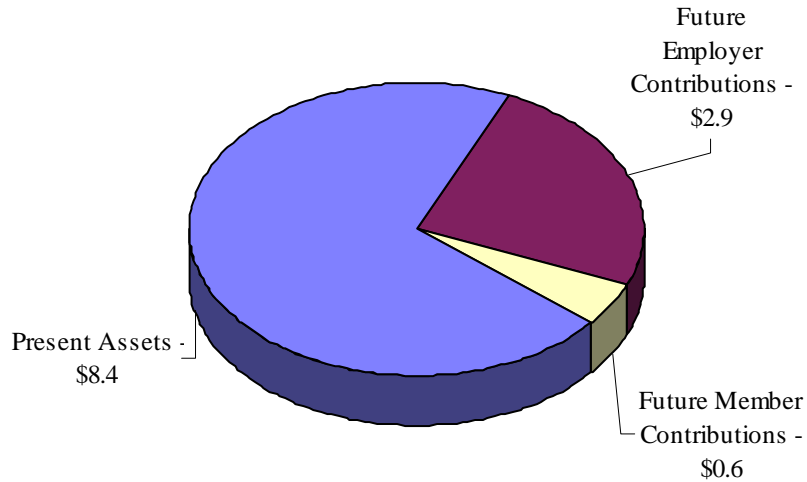
SECTION B



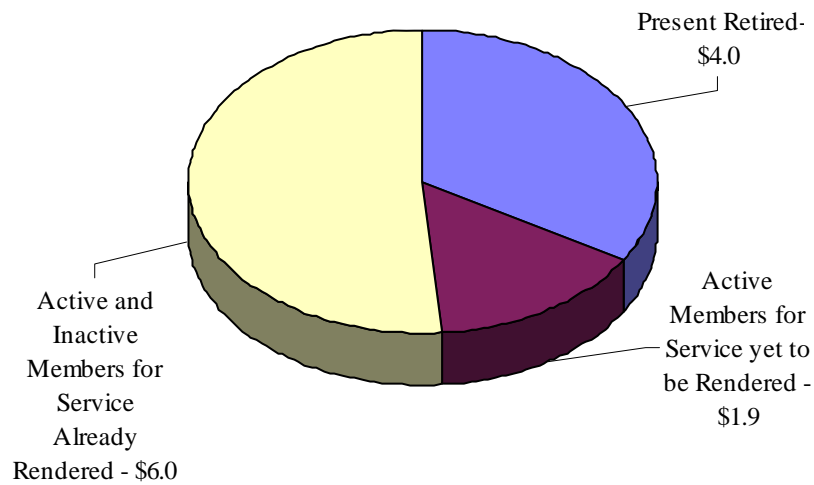
Results of Valuation

**FINANCING \$11.9 BILLION* OF BENEFIT PROMISES
FOR PRESENT ACTIVE AND RETIRED MEMBERS
JUNE 30, 2004**

Sources of Funds



Uses of Funds



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

**EMPLOYER CONTRIBUTION RATE COMPUTED AS OF JUNE 30, 2004
FOR THE FISCAL YEAR BEGINNING JULY 1, 2005**

Computed Contributions for	Percents of Active Member Full Payroll			
	Teachers	Support	Combined	Prior Year
Normal Cost				
Age & Service Annuities	10.47%	8.96%	10.05%	10.07%
Deferred Annuities	1.48%	1.98%	1.62%	1.62%
Survivor Benefits	0.24%	0.24%	0.24%	0.24%
Disability Benefits	0.66%	0.58%	0.64%	0.64%
Refunds of Member Contributions	0.33%	0.57%	0.40%	0.39%
Total	13.18%	12.33%	12.95%	12.96%
Average Member Contributions	4.30%	2.93%	3.93%	3.90%
Net Employer Normal Cost	8.88%	9.40%	9.02%	9.06%
Unfunded Actuarial Accrued Liabilities			4.98%	3.94%
Employer Contribution Rate			14.00%	13.00%
Amortization Years			31.0	36.0

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 reflects a contribution rate increase enacted to decrease the amortization period. Market investment experience was favorable this year for ATRS. However, as additional unrealized investment losses flow into the valuation over the next several years, the amortization period is likely to increase.

**COMPUTED EMPLOYER CONTRIBUTION RATES
10 -YEAR COMPARATIVE STATEMENT**

Valuation Date June 30	Active Members in Valuation		Average Annual Pay		Consumer Price (Inflation) Index		Employer Contributions	
	Number	Annual Payroll			Value	%Change	Computed Financing Period	Total Employer Rate
			Amount	% Change				
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 %
2002&	62,011	1,628	26,254	3.5 %	179.9	1.1 %	38	12.0 %
2003#	62,432	1,683	26,963	2.7 %	183.7	2.1 %	36	13.0 %
2004#	63,185	1,748	27,660	2.6 %	189.7	3.3 %	31	14.0 %

* Revised financial assumptions.

Legislated benefit or contribution rate changes.

@ 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.

LIABILITIES FOR ANNUITIES BEING PAID JULY 1, 2004
TABULATED BY TYPE OF ANNUITY BEING PAID

Type of Annuity	Liabilities July 1, 2004*		
	Men	Women	Totals
RETIREMENT RESERVE ACCOUNT			
Age & Service Annuities			
Option 1 (Straight Life)	\$ 605,908,425	\$2,070,557,739	\$2,676,466,164
Option A (100% Joint & Survivor)	246,059,849	144,551,764	390,611,613
Option B (50% Joint & Survivor)	175,014,014	145,603,351	320,617,365
Option C (10 Years Certain & Life)	34,347,983	69,880,653	104,228,636
Beneficiaries	10,920,371	50,267,742	61,188,113
Total Age & Service	1,072,250,642	2,480,861,249	3,553,111,891
Disability Annuities			
Option 1	31,676,937	149,276,402	180,953,339
Option A	14,169,581	16,211,946	30,381,527
Option B	3,804,184	5,890,355	9,694,539
Option C	1,240,591	5,324,355	6,564,946
Beneficiaries	12,396,889	16,194,768	28,591,657
Total Disability	63,288,182	192,897,826	256,186,008
Act 793			18,642,768
Total Retirement Reserve Account			3,827,940,667
SURVIVORS' BENEFIT ACCOUNT			
Beneficiaries of Deceased Members	\$ 20,017,501	\$ 34,917,336	\$ 54,934,837
OTHER LIABILITIES			
Act 808			33,934,572
RETIREMENT SYSTEM TOTALS			
Total Annuity Liabilities			\$3,916,810,076

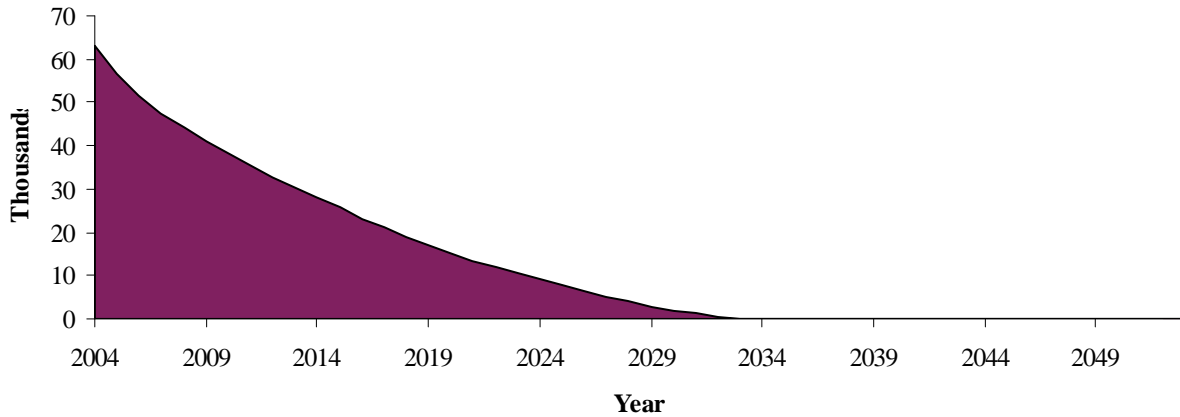
* Does not include liabilities associated with lump sum death benefit.

**COMPUTED ACTUARIAL LIABILITIES
AS OF JUNE 30, 2004**

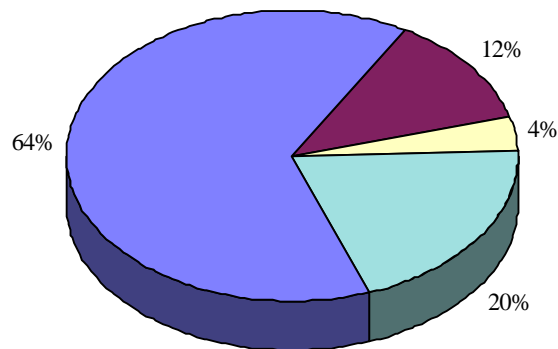
Actuarial Present Value of	(1) Total Present Value	Entry Age Actuarial Cost Method	
		(2) Portion Covered By Future Normal Cost Contributions	(3) Actuarial Accrued Liabilities (1)-(2)
Age and service retirement and T-DROP allowances based on Total service likely to be rendered by present active and T-DROP members.	\$ 7,032,876,656	\$1,437,749,960	\$ 5,595,126,696
Vested Deferred Benefits likely to be paid present active and inactive members.	626,287,082	240,838,929	385,448,153
Survivor benefits expected to be paid on behalf of present active members.	75,594,464	33,819,497	41,774,967
Disability Benefits expected to be paid on behalf of present active members.	181,760,994	93,873,404	87,887,590
Refunds of Member contributions expected to be paid on behalf of Present active members.	11,212,804	56,457,568	(45,244,764)
Benefits payable to present retirees and beneficiaries.	3,916,810,077	0	3,916,810,077
Lump Sum Death benefits payable to present retirees and beneficiaries.	67,923,506	0	67,923,506
Total	\$11,912,465,583	\$1,862,739,358	\$10,049,726,225
Applicable Assets	8,423,579,265	0	8,423,579,265
Liabilities to be Covered by Future Contributions	\$ 3,488,886,318	\$1,862,739,358	\$ 1,626,146,960

EXPECTED DEVELOPMENT OF PRESENT POPULATION JUNE 30, 2004

Closed Group Population Projection



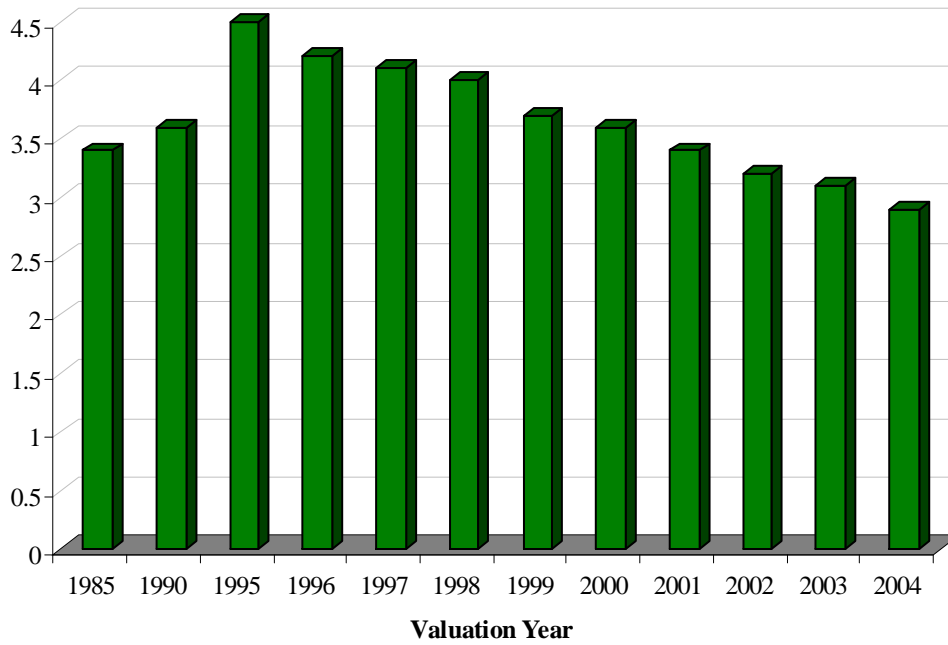
Closed Group Population Projection



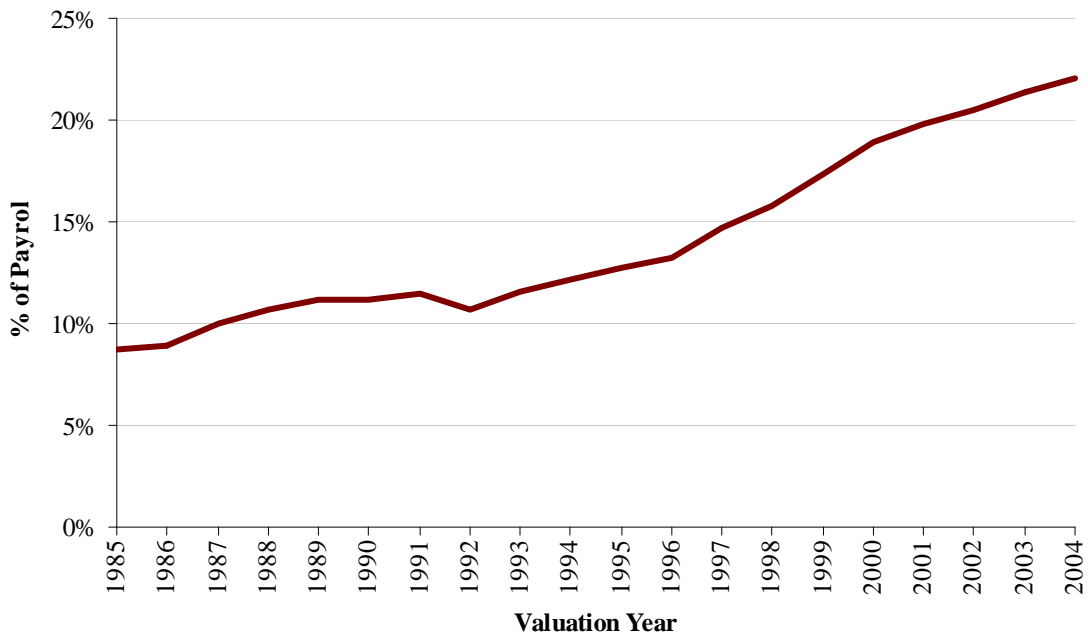
■ Retirements ■ Non-Vested Separations ■ Deaths and disabilities ■ Vested Separations

The charts show the expected future development of the present population in simplified terms. The retirement system presently covers 63,185 active members. Eventually, 12% of the population is expected to terminate covered employment prior to retirement and forfeit eligibility for an employer provided benefit. Approximately 84% 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 9 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

ATRS' 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.

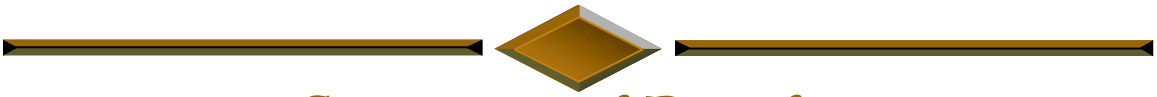
The schedule below illustrates the history of liability 3 of the System and is indicative of the TRS objective of following the discipline of level percent of payroll financing.

Val. Date June 30	(1) Member Contrib.	(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	3,200	4,891	8,166	100%	100%	92%	95%
2002*	490	3,441	5,131	8,328	100%	100%	86%	92%
2003#	521	3,706	5,218	8,113	100%	100%	74%	86%
2004	547	3,985	5,518	8,424	100%	100%	71%	84%

* Revised actuarial assumptions or methods.

Legislated benefit and contribution rate change.

SECTION C



Summary of Benefits

SUMMARY OF PROVISIONS
JUNE 30, 2004

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 all members with 5 or more years of ATRS credited service. 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

SUMMARY OF PROVISIONS
JUNE 30, 2004 (CONTINUED)

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 \$94 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 and 6/10% for each year of non-contributory service, 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 2% less than the system's rate of return (but not less than 2%, nor greater than 6% interest on the mean balance) each year. Deposits and interest to T-DROP cease at the earlier of 10 years of T-DROP participation or separation from service. T-DROP participants may continue in covered employment after 10 years of participation, but do not accumulate additional service credit or make member contributions. 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 5 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

SUMMARY OF PROVISIONS
JUNE 30, 2004 (CONTINUED)

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 active members or retirees with 5 or more years of ATRS credited 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, each dependent child of a deceased member with 5 or more years of ATRS credited service is 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

SUMMARY OF PROVISIONS
JUNE 30, 2004 (CONTINUED)

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.

15. **Retiree Health Stipend.** Each retired member with 5 or more years of ATRS credited service receives \$75 per month toward retiree health care premiums. Members in T-DROP do not receive the \$75 per month, until actual retirement.

16. **Optional Forms of Benefits:**

Option 1 (*Straight Life Annuity*)

A member will receive the maximum monthly benefit for which he/she qualifies, throughout his/her lifetime. No monthly benefits will be paid to his/her beneficiary after the member's death. Should a member die before he/she has drawn in benefits an amount equal to his/her contributions plus earned interest, the balance will be paid to a designated beneficiary. The designated beneficiary may be anyone chosen by the member.

SUMMARY OF PROVISIONS
JUNE 30, 2004 (CONCLUDED)

Optional Forms of Benefits (Continued):

Option A (100% Survivor Annuity)

Under this option a member will receive a reduced annuity throughout his/her lifetime. Upon the member's death, the designated beneficiary will receive the same annuity for the balance of his/her lifetime.

Option B (50% Survivor Annuity)

Under this option a member will receive a reduced annuity throughout his/her lifetime. Upon the member's death, the designated beneficiary will receive one-half (1/2) of this annuity for the balance of his/her lifetime.

Option C (Annuity for Ten Years Certain and Life Thereafter)

A reduced monthly benefit payable for 120 months. After that time, a member's monthly allowance will revert to the amount he/she would have received under the regular plan and continue for life. If the member dies before receiving 120 payments, the designated beneficiary will receive a monthly benefit in the same amount until monthly benefits to both the member and the beneficiary equal 120 monthly payments. No further benefits are then payable to the beneficiary.

Option Factors are based upon an 8.0% interest rate and the 1971 Group Annuity Mortality Table Projected to 1984, with a 75% unisex mix.

SAMPLE BENEFIT COMPUTATIONS FOR A MEMBER RETIRING JUNE 30, 2004

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:

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

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

<u>Year Ended June 30</u>	<u>Amount Paid</u>
2005	\$18,891
2006	19,458
2007	20,025
2008	20,592
2009	21,159

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

SAMPLE T-DROP BENEFIT COMPUTATIONS FOR A MEMBER ENTERING T-DROP JUNE 30, 2004

The data for the Example member is shown below.

A.	\$35,000	Final Average Compensation
B.	28	Total Service Credit
C.	28	Contributory Service Credit
D.	55	Age of Retiree

The computations that would be made for this case are:

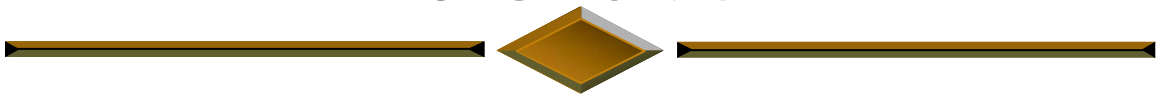
	Annual Amount
E. Non-Contributory Base: $0.0139 \times A \times B$	\$13,622
F. Extra for Contributory: $0.00760 \times A \times C$	7,448
G. Reduction for T-DROP Plan: (1% for each year of contributory service) $0.28 \times (E+F)$	5,900
H. Reduction for Entering T-DROP with less than 30 years of service (6% for each year less than 30): $0.12 \times (E + F)$	<u>2,528</u>
I. Annual Amount Payable $E + F - G - H$	\$12,642

Projected Deposits, taking into account increases after DROP, and 5 years duration would be:

Year Ended June 30	Amount Deposited
2005	\$12,642
2006	13,021
2007	13,400
2008	13,779
2009	<u>14,158</u>
Total	67,000

The total amount deposited, together with credited interest can be paid as a lump sum or as an annuity.

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 AV to MV (2) / (1)
1995	\$4,000	\$3,626	91%
1996	4,750	4,186	88%
1997	5,747	4,956	86%
1998	6,656	5,815	87%
1999	7,403	6,740	91%
2000	7,978	7,620	96%
2001	7,643	8,166	107%
2002	7,084	8,328	118%
2003	7,050	8,113	115%
2004	8,122	8,424	104%

The funding value of assets now exceeds the market value by 4%. To prevent unreasonably large differences between market value and funding value, there is a requirement that the recognized assets must always be between 80% and 120% of the market value (See page D-2).

DEVELOPMENT OF FUNDING VALUE OF ASSETS

Year Ended June 30:	2001	2002	2003	2004	2005	2006
A. Funding Value Beginning of Year	\$7,619,736,770	\$8,166,235,989	\$8,328,451,257	\$8,113,258,915		
B. Market Value End of Year	7,642,865,577	7,084,325,012	7,050,355,544	8,122,004,035		
C. Market Value Beginning of Year	7,978,068,238	7,642,865,577	7,084,325,012	7,050,355,544		
D. Non-Investment Net Cash Flow	(76,534,107)	(94,448,106)	(109,466,730)	(115,495,107)		
E. Investment Return						
E1. Market Total: B - C - D	(258,668,554)	(464,092,459)	75,497,262	1,187,143,598		
E2. Amount for Immediate Recognition (8%)	606,517,577	649,520,955	661,897,431	644,440,909		
E3. Amount for Phased-In Recognition: E1-E2	(865,186,131)	(1,113,613,414)	(586,400,169)	542,702,689		
F. Phased-In Recognition of Investment Return						
F1. Current Year: 0.25 x E3	(216,296,533)	(278,403,354)	(146,600,042)	135,675,672	Unknown	Unknown
F2. First Prior Year	23,676,886	(216,296,533)	(278,403,354)	(354,301,124)	\$135,675,672	Unknown
F3. Second Prior Year	78,165,420	23,676,886	(216,296,533)		(354,301,124)	\$135,675,672
F4. Third Prior Year	130,969,976	78,165,420	23,676,886			(354,301,124)
F5. Accelerated Market Value Recognition			(150,000,000)			
F6. Total Recognized Investment Gain	16,515,749	(392,857,581)	(767,623,043)	(218,625,452)	(218,625,452)	(218,625,452)
G. Funding Value End of Year:						
G1. Preliminary Funding Value End of Year: A+D+E2+F5	8,166,235,989	8,328,451,257	8,113,258,915	8,423,579,265		
G2. Upper Corridor Limit: 120% x B		8,501,190,014	8,460,426,653	9,746,404,842		
G3. Lower Corridor Limit: 80% x B		5,667,460,010	5,640,284,435	6,497,603,228		
G4. Funding Value End of Year		8,328,451,257	8,113,258,915	8,423,579,265		
H. Actual/Projected Difference between Market and Funding Value	(523,370,412)	(1,244,126,245)	(1,062,903,371)	(301,575,230)	(82,949,779)	135,675,673
I. Market Rate of Return	(3.26)%	(6.11)%	1.07 %	16.98 %		
J. Funding Rate of Return	8.22 %	3.16 %	(1.28)%	5.29 %		
K. Ratio of Funding Value to Market Value	107%	118%	115%	104%		

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, 2004, were reported to your actuary to be \$8,122,004,035. This amount, together with a market value adjustment of \$301,575,230, is used to finance the Retirement System liability.

Accounts	Assets at June 30	
	2004	2003
Regular Accounts		
Members' Deposit Accounts		
Contributions	\$ 520,068,364	\$ 495,769,322
Interest	4,250,423,700	3,395,910,455
Total	4,770,492,064	3,891,679,777
T-Drop Member Deposit Accounts		
Contributions	27,186,699	25,184,682
Interest	69,961,583	66,480,258
Total	97,148,282	91,664,940
Employer's Accumulation Account	(967,004,994)	(800,017,559)
Retirement Reserve Account	3,800,859,775	3,497,098,954
Act 808 Retirement Reserve Account	32,476,856	33,648,262
T-Lump Payable	309,422,855	263,673,161
Survivors Benefit Account	56,790,026	50,835,629
Total Regular Accounts	8,100,184,864	7,028,583,164
Other Accounts		
Income Expense Account	21,819,171	21,772,380
Other Special Reserves	0	0
Miscellaneous	0	0
Total Other Accounts	21,819,171	21,772,380
Total Accounting Value of Assets	8,122,004,035	7,050,355,544
Market Value Adjustment	301,575,230	1,062,903,371
Funding Value of Assets	\$8,423,579,265	\$8,113,258,915

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	\$4,770,492,064	\$ 97,148,282	\$4,867,640,346
Employer's Accumulation Account	94,606,926	(2,397,797,764)	1,336,185,844	(967,004,994)
Retirement Reserve Account	3,800,859,775	0	0	3,800,859,775
Act 808 Reserve Account	32,476,856	0	0	32,476,856
T-Lump Payable	0	0	309,422,855	309,422,855
Survivor's Benefit Account	56,790,026	0	0	56,790,026
Other Accounts	0	21,819,171	0	21,819,171
Total Reserve Assets	3,984,733,583	2,394,513,471	1,742,756,981	8,122,004,035
Market Value Adjustment	0	301,575,230	0	301,575,230
Funding Value of Assets	\$3,984,733,583	\$2,696,088,701	\$1,742,756,981	\$8,423,579,265

The net market value of assets at year end was \$8,122,004,035 and was invested as shown below.

	Market Value at June 30	
	2004	2003
Cash	\$ 37,667,099	\$ 10,900,430
Receivables		
Unsettled Trades and Accrued Return	311,049,067	187,445,230
Member Contributions	10,918,047	9,178,970
Employer Contributions	4,562,295	5,589,204
Other	57,272	27,611
Total Receivables	326,586,681	202,241,015
Investments		
Short Term	0	0
Common and Preferred	4,370,017,699	3,505,161,180
International	1,265,146,345	986,774,693
Corporate Bonds	151,942,996	509,438,403
Alternative Investments	1,001,450,932	1,103,359,264
Market Valuation	689,249,414	314,374,242
Real Estate	132,332,039	140,775,617
Mortgage Loans	149,695,207	203,724,144
Revenue Bonds	1,005,000	1,005,000
Government Securities	190,825,508	345,442,721
Other Investments	135,260,061	123,712,690
Repurchase Agreements	0	0
Total Investments	8,086,925,201	7,233,767,954
Invested Securities Lending	719,811,314	717,697,826
Net Equipment	3,640,032	3,553,270
Total Assets	9,174,630,327	8,168,160,495
Liabilities		
Escrow Payables	0	5,638
Other Payables	2,415,955	1,177,483
Securities Related Payables	330,399,023	398,924,004
Securities Lending Collateral	719,811,314	717,697,826
Total Liabilities	1,052,626,292	1,117,804,951
Net Market Value	8,122,004,035	7,050,355,544
Change from Prior Year	1,071,648,491	(33,969,468)

Assets during the year developed as follows:

MARKET VALUE RECONCILIATION OF ASSETS

	Year Ended June 30	
	2004	2003
Net Market Value July 1	\$7,050,355,544	\$7,084,325,012
Additions		
Employer Contributions	224,184,274	200,455,916
Employee Contributions	77,772,020	76,734,478
Appreciation	374,898,535	447,086,682
Interest	415,836,015	5,808,737
Dividends	435,238,395	(341,857,425)
Real Estate	7,737,709	8,251,181
Other	201,752	120,839
Securities Lending Activity	8,666,204	11,211,899
Total Additions	1,544,534,904	407,812,307
Deductions		
Age & Service Benefits	338,591,608	315,223,934
Disability Benefits	20,936,532	19,800,585
Option Benefits	9,511,558	8,841,345
Survivor Benefits	5,567,043	5,497,107
Reciprocal Service	11,543,592	10,243,884
Act 808	4,294,802	4,272,018
Refunds	4,017,884	3,585,188
Active Member Death	575,813	713,094
T-DROP Benefits	22,412,569	18,479,969
Investment Expense	47,256,789	47,162,188
Admin. Expense	8,178,223	7,962,463
Total Deductions	472,886,413	441,781,775
Miscellaneous	0	0
Net Market Value June 30	\$8,122,004,035	\$7,050,355,544

HISTORICAL PATTERNS OF INVESTMENT RETURN, PAY INCREASES & INFLATION

Calendar Year Period	Gross Market Returns			Stocks (S&P 500)	Price Inflation (CPI)	National Average Earnings	Sample Balanced Fund*	
	Bonds (Long)		Cash Equiv. (T Bills)				Total Return (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 %	4.2 %	13.2 %	8.5 %
2000-2003	10.8 %	11.2 %	3.1 %	(5.3)%	2.3 %	3.3 %	2.7 %	(1.1)%
Last 54 Years	5.9 %	6.3 %	5.0 %	12.1 %	3.9 %	5.0 %	9.4 %	3.9 % #

* Sample Balanced Fund	
Equities	50%
Bonds - Government	20%
- Corporate	20%
Cash Equivalents	10%
	100%
Fund expenses(e)	0.50% @

# Historical Spread	
# Observed spread is very sensitive to the observation period, even over long periods, as illustrated below:	
Observation Period	Spread
54 years	3.9%
44 years	3.6%
34 years	4.5%
24 years	6.9%

@ 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	8,561	395	95.4%	1,557	25.4%
2002*	8,328	9,062	734	91.9%	1,628	45.1%
2003+	8,113	9,445	1,332	85.9%	1,683	79.1%
2004	8,424	10,050	1,626	83.8%	1,748	93.0%

+ Legislated benefit or contribution rate change.

* Revised actuarial assumptions.

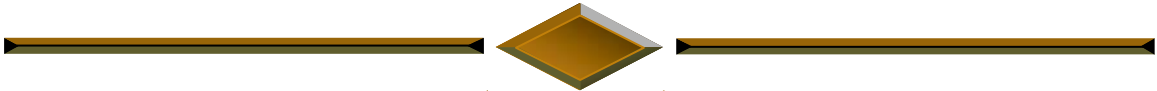
SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

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, 2004
Actuarial Cost Method	Entry age
Amortization Method	Level percent of payroll
Remaining Amortization Period	31 years
Asset Valuation Method	4-year smoothed market 80%/120% corridor
Actuarial Assumptions:	
Investment Rate of Return	8.0%
Cost-of-living adjustments	3.0% Simple
Projected Salary Increases*	4.0% to 10.1%

*Includes wage inflation at	4.0%
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SECTION E



Covered Member Data

Active members included in the valuation totaled 63,185 with annual payroll totaling \$1,747,706,248.

**TOTAL ACTIVE MEMBERS IN VALUATION JUNE 30, 2004
BY MEMBER'S CHOICE OF CONTRIBUTION RATE**

Attained Age	Members Contributing Now			Members Not Contributing			Total Members
	Men	Women	Total	Men	Women	Total	
Under 20	1	3	4	23	32	55	59
20-24	147	599	746	243	596	839	1,585
25-29	716	2,805	3,521	301	993	1,294	4,815
30-34	876	3,274	4,150	468	2,182	2,650	6,800
35-39	770	3,266	4,036	608	3,053	3,661	7,697
40-44	961	4,054	5,015	994	4,589	5,583	10,598
45-49	1,102	4,709	5,811	886	4,013	4,899	10,710
50-54	1,094	4,227	5,321	818	3,403	4,221	9,542
55-59	764	3,044	3,808	649	2,291	2,940	6,748
60-64	431	1,284	1,715	390	1,176	1,566	3,281
65-69	96	164	260	242	349	591	851
70 & Up	49	40	89	191	219	410	499
Totals	7,007	27,469	34,476	5,813	22,896	28,709	63,185

ACTIVE TEACHERS IN VALUATION JUNE 30, 2004
BY MEMBER'S CHOICE OF CONTRIBUTION RATE

Attained Age	Members Contributing Now			Members Not Contributing			Total Members
	Men	Women	Total	Men	Women	Total	
Under 20				1		1	1
20-24	71	388	459	6	26	32	491
25-29	534	2,166	2,700	43	139	182	2,882
30-34	671	2,309	2,980	161	684	845	3,825
35-39	554	2,157	2,711	269	946	1,215	3,926
40-44	650	2,562	3,212	395	1,278	1,673	4,885
45-49	767	3,289	4,056	395	1,452	1,847	5,903
50-54	758	2,951	3,709	367	1,326	1,693	5,402
55-59	447	1,889	2,336	223	739	962	3,298
60-64	197	705	902	63	251	314	1,216
65-69	22	58	80	15	29	44	124
70 & Up	2	10	12	2	3	5	17
Totals	4,673	18,484	23,157	1,940	6,873	8,813	31,970

This schedule includes Administrators.

**ACTIVE NON-TEACHERS IN VALUATION JUNE 30, 2004
BY MEMBER'S CHOICE OF CONTRIBUTION RATE**

Attained Age	Members Contributing Now			Members Not Contributing			Total Members
	Men	Women	Total	Men	Women	Total	
Under 20	1	3	4	22	32	54	58
20-24	76	211	287	237	570	807	1,094
25-29	182	639	821	258	854	1,112	1,933
30-34	205	965	1,170	307	1,498	1,805	2,975
35-39	216	1,109	1,325	339	2,107	2,446	3,771
40-44	311	1,492	1,803	599	3,311	3,910	5,713
45-49	335	1,420	1,755	491	2,561	3,052	4,807
50-54	336	1,276	1,612	451	2,077	2,528	4,140
55-59	317	1,155	1,472	426	1,552	1,978	3,450
60-64	234	579	813	327	925	1,252	2,065
65-69	74	106	180	227	320	547	727
70 & Up	47	30	77	189	216	405	482
Totals	2,334	8,985	11,319	3,873	16,023	19,896	31,215

WOMEN ACTIVE MEMBERS IN VALUATION JUNE 30, 2004
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	35							35	\$ 186,796
20-24	1,186	9						1,195	17,700,565
25-29	3,130	665	3					3,798	93,142,847
30-34	2,603	2,357	495	1				5,456	135,529,406
35-39	2,540	1,742	1,607	430				6,319	154,564,127
40-44	3,037	2,139	1,437	1,542	485	3		8,643	211,375,182
45-49	1,788	1,845	1,751	1,318	1,274	746		8,722	259,376,751
50-54	1,389	1,279	1,518	1,455	834	1,121	34	7,630	237,920,519
55-59	1,026	806	913	1,227	738	592	33	5,335	158,514,251
60	158	116	106	145	82	85	4	696	18,973,086
61	134	93	94	115	64	71	2	573	14,831,116
62	96	95	84	104	70	60	5	514	13,860,740
63	98	58	65	71	41	48	3	384	9,111,765
64	80	65	48	43	29	26	2	293	6,426,472
65	65	29	33	29	20	16	3	195	3,889,798
66	67	17	14	7	2	7	1	115	1,824,397
67	43	16	1	5	1	1	2	69	871,034
68	43	17	1			1		62	600,940
69	42	19	8	2			1	72	853,675
70 & Up	175	56	17	7	2	2		259	2,292,526
Totals	17,735	11,423	8,195	6,501	3,642	2,779	90	50,365	\$1,341,845,993

MEN ACTIVE MEMBERS IN VALUATION JUNE 30, 2004
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	24							24	\$ 108,962
20-24	381	9						390	5,102,022
25-29	829	183	5					1,017	26,903,212
30-34	572	646	126					1,344	42,389,103
35-39	453	411	431	83				1,378	45,781,668
40-44	696	375	343	434	107			1,955	63,402,736
45-49	516	392	302	255	365	158		1,988	72,962,635
50-54	508	331	292	240	174	355	12	1,912	71,552,290
55-59	473	253	269	162	115	128	13	1,413	47,187,149
60	84	47	33	22	16	8	2	212	6,131,233
61	70	43	35	26	12	8		194	5,740,198
62	62	38	28	17	17	5	1	168	4,907,114
63	63	32	16	13	1	2	1	128	3,425,251
64	57	32	16	6	4	2	2	119	2,792,936
65	52	19	10	6	5	3		95	1,961,756
66	45	19	2					66	813,698
67	53	13	4	3				73	1,038,115
68	43	10	2					55	599,500
69	32	12	4	1				49	704,345
70 & Up	148	80	10	1	1			240	2,356,332
Totals	5,161	2,945	1,928	1,269	817	669	31	12,820	\$405,860,255

TOTAL ACTIVE MEMBERS IN VALUATION JUNE 30, 2004
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	59							59	\$ 295,758
20-24	1,567	18						1,585	22,802,587
25-29	3,959	848	8					4,815	120,046,059
30-34	3,175	3,003	621	1				6,800	177,918,509
35-39	2,993	2,153	2,038	513				7,697	200,345,795
40-44	3,733	2,514	1,780	1,976	592	3		10,598	274,777,918
45-49	2,304	2,237	2,053	1,573	1,639	904		10,710	332,339,386
50-54	1,897	1,610	1,810	1,695	1,008	1,476	46	9,542	309,472,809
55-59	1,499	1,059	1,182	1,389	853	720	46	6,748	205,701,400
60	242	163	139	167	98	93	6	908	25,104,319
61	204	136	129	141	76	79	2	767	20,571,314
62	158	133	112	121	87	65	6	682	18,767,854
63	161	90	81	84	42	50	4	512	12,537,016
64	137	97	64	49	33	28	4	412	9,219,408
65	117	48	43	35	25	19	3	290	5,851,554
66	112	36	16	7	2	7	1	181	2,638,095
67	96	29	5	8	1	1	2	142	1,909,149
68	86	27	3			1		117	1,200,440
69	74	31	12	3			1	121	1,558,020
70 & Up	323	136	27	8	3	2		499	4,648,858
Totals	22,896	14,368	10,123	7,770	4,459	3,448	121	63,185	\$1,747,706,248

SUMMARY OF ACTIVE MEMBERS

	Teachers		Non-Teachers		Total Active Members	
	No.	Payroll	No.	Payroll	No.	Payroll
Women	25,357	\$ 973,981,567	25,008	\$ 367,864,426	50,365	\$ 1,341,845,993
Men	6,613	293,253,674	6,207	112,606,581	12,820	405,860,255
All	31,970	\$ 1,267,235,241	31,215	\$ 480,471,007	63,185	\$ 1,747,706,248

	Teachers	Non-Teachers	Total
Members Contributing Now	23,157	11,319	34,476
Members Not Contributing	8,813	19,896	28,709
All	31,970	31,215	63,185

	Group Averages		
	Women	Men	Total
Age:	44.0 years	45.0 years	44.2 years
Service:	9.6 years	8.8 years	9.5 years

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
2002	62,011	43.8	9.4	26,254	1,628
2003	62,432	44.0	9.5	26,963	1,683
2004	63,185	44.2	9.5	27,660	1,748

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, 2004
BY ATTAINED AGE**

Age	Number	Estimated Annual Benefits	Contribution Balance
Below 40	1,965	\$ 6,859,495	\$ 5,134,954
40	342	1,208,852	917,518
41	324	1,189,611	946,841
42	346	1,299,356	1,190,961
43	363	1,350,159	1,313,482
44	321	1,167,526	1,369,568
45	341	1,309,315	1,469,940
46	342	1,363,510	1,633,558
47	379	1,539,243	2,061,401
48	363	1,453,972	1,670,676
49	359	1,550,930	2,214,093
50	343	1,478,580	2,023,227
51	352	1,622,959	2,597,861
52	346	1,665,954	2,696,573
53	314	1,486,017	2,465,620
54	347	1,694,644	3,249,120
55	320	1,491,488	2,869,532
56	315	1,796,926	3,882,734
57	322	1,639,610	3,660,557
58	213	1,110,785	2,692,761
59	238	1,273,996	3,019,014
60 & Up	449	1,427,374	2,613,975
Totals	9,004	\$36,980,302	\$51,693,966

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

This valuation also includes 59 beneficiaries of deceased retirees who are eligible for a pension at age 62.

**MEMBERS PARTICIPATING IN T-DROP AT JUNE 30, 2004
BY ATTAINED AGE**

Age	Number	Current T-DROP Contribution	Original T-DROP Contribution	T-DROP Account Balance
47	3	\$ 47,818	\$ 46,695	\$ 62,197
48	4	53,195	53,367	48,814
49	23	363,887	358,572	421,247
50	120	1,990,887	1,944,085	2,378,507
51	224	3,642,664	3,566,246	5,171,002
52	337	5,826,988	5,659,718	11,396,648
53	373	6,624,266	6,358,874	16,920,215
54	419	7,650,960	7,218,572	23,582,837
55	468	8,626,127	7,989,628	30,429,018
56	463	8,661,531	7,924,233	33,408,295
57	492	9,509,882	8,500,002	41,388,126
58	300	5,670,267	5,013,875	26,289,581
59	253	4,972,974	4,296,932	25,978,733
60	249	5,107,813	4,429,544	25,653,612
61	214	4,171,192	3,525,912	23,528,149
62	160	2,982,955	2,504,437	17,039,524
63	102	1,951,065	1,645,241	11,084,549
64	64	1,456,681	1,066,642	7,579,415
65	55	1,700,703	944,231	8,227,083
66	29	901,864	493,425	4,938,625
67	23	833,128	465,266	4,654,323
68	17	532,450	272,861	3,393,965
69	13	452,663	254,189	2,786,165
70	7	284,736	156,414	1,717,681
71	5	190,158	107,959	1,349,318
72	4	161,935	78,955	1,015,594
73	2	83,857	64,235	387,442
75	2	50,415	24,859	358,767
Totals	4,425	\$84,503,061	\$74,964,969	\$331,189,432

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.

**ANNUITIES BEING PAID RETIREES AND BENEFICIARIES JULY 1, 2004
BY TYPE OF ANNUITY BEING PAID**

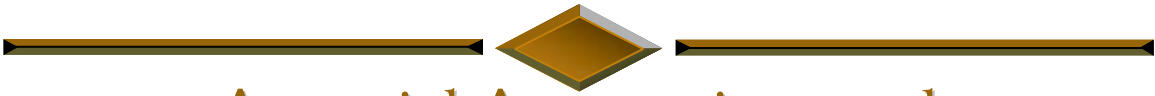
Type of Annuity	No.	Annual Amounts		
		Original Annuities	Base Annuities	Current Annuities
RETIREMENT RESERVE ACCOUNT				
Age & Service				
Option 1 (Basic single life)	15,032	\$171,252,537	\$232,489,787	\$275,630,448
Option A (Joint & 100% S.)	1,607	22,109,353	26,025,345	30,275,454
Option B (Joint & 50% S.)	1,072	19,667,673	24,052,999	28,434,473
Option C (10 year certain)	423	6,977,688	7,521,199	8,629,294
Beneficiaries	448	5,283,499	6,220,887	7,110,465
Totals	18,582	225,290,750	296,310,217	350,080,134
Disability				
Option 1	1,440	11,181,738	15,398,154	17,907,543
Option A	183	1,635,988	2,008,368	2,274,806
Option B	51	592,345	716,773	820,966
Option C	51	458,636	492,787	539,678
Beneficiaries	248	1,875,507	2,534,427	2,932,428
Totals	1,973	15,744,214	21,150,509	24,475,421
Act 793	217	1,282,064	1,944,117	1,944,126
Totals	20,772	242,317,028	319,404,843	376,499,681
SURVIVOR'S BENEFIT ACCOUNT				
Beneficiaries of Deceased Members	521	3,260,019	4,668,786	5,456,331
ACT 808				
Act 808	135	2,193,585	4,275,117	4,275,117
RETIREMENT SYSTEM TOTALS				
Total Annuities Being Paid	21,428	\$247,770,632	\$328,348,746	\$386,231,129

The Original Annuity is the annuity at the date of retirement.

The Base Annuity is the amount from which the 3.0% COLA is calculated.

The Current Annuity is the annuity payable at July 1, 2004.

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 over wage inflation in this valuation is defined to be the portion of investment return which is more than the wage inflation rate. Considering wage inflation recognition of 4.0%, the 8.0% rate translates to an assumed real rate of return over wage inflation of 4.0%. This rate was first used for the ***June 30, 2002*** valuation. The assumed real rate of return over price inflation would be higher – on the order of 4.5% to 5%.

Pay increase assumptions for individual active members are shown on pages F-8 and F-9. Part of the assumption for each age is for a merit and/or seniority increase, and the other 4.0% recognizes wage inflation. These rates were first used for the ***June 30, 2002*** valuation.

No specific ***Price Inflation*** is needed for this valuation. However, the wage inflation and interest rate assumptions would be compatible with a price inflation assumption of 3.0% or 3.5%. It is assumed that the 3% COLA will always be paid.

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

Total active member payroll is assumed to increase 4.0% 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, 2002*** 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 5 years. The set forward of 5 years was first used for the ***June 30, 2002*** valuation.

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, 2002*** valuation. The rates for reduced

retirement were first used in the *June 30, 2002* valuation.

The probabilities of withdrawal from service, *death-in-service* and *disability* are shown for sample ages on pages F-8 and F-9. The withdrawal and disability rates were first used in the *June 30, 2002* valuation. The death-in-service rates were first used in the *June 30, 2002* 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 percents 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. It was modified following the 1997-2002 Experience Study to include an 80% - 120% market value corridor.

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 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	% of Active Participants Retiring with Unreduced Benefits			
	Education		Support	
	Male	Female	Male	Female
48	50%	40%	40%	30%
49	50%	40%	40%	30%
50	10%	10%	7%	10%
51	10%	10%	7%	10%
52	10%	10%	14%	12%
53	13%	13%	16%	15%
54	14%	14%	18%	20%
55	15%	16%	20%	22%
56	15%	16%	22%	22%
57	15%	19%	25%	22%
58	15%	20%	27%	27%
59	20%	25%	35%	40%
60	15%	15%	16%	16%
61	20%	20%	25%	20%
62	30%	25%	35%	30%
63	20%	25%	25%	25%
64	20%	20%	25%	25%
65	35%	35%	35%	40%
66	30%	35%	30%	30%
67	30%	30%	30%	30%
68	30%	30%	30%	30%
69	30%	30%	30%	30%
70	30%	30%	30%	30%
71	30%	30%	30%	30%
72	30%	30%	30%	30%
73	30%	30%	30%	30%
74	30%	30%	30%	30%
75	100%	100%	100%	100%
Ref	827	828	829	830

PROBABILITIES OF REDUCED RETIREMENT FOR MEMBERS

Retirement Ages	% of Active Participants Retiring with Reduced Benefits			
	Education		Support	
	Male	Female	Male	Female
50	2%	2%	2%	2%
51	2%	2%	2%	2%
52	3%	3%	3%	3%
53	4%	4%	4%	4%
54	4%	4%	4%	4%
55	6%	6%	6%	6%
56	9%	5%	9%	5%
57	9%	5%	9%	5%
58	9%	5%	9%	5%
59	9%	5%	9%	5%
60	100%	100%	100%	100%
Ref	826	825	826	825

PROBABILITIES OF T-DROP FOR MEMBERS

Ages	Percent of Eligible Active Members Entering T-DROP within Next Year			
	Education		Support	
	Male	Female	Male	Female
50	40%	45%	30%	20%
51	35%	45%	30%	30%
52	50%	45%	55%	45%
53	50%	45%	55%	50%
54	45%	45%	55%	50%
55	45%	45%	45%	50%
56	45%	40%	45%	50%
57	45%	40%	45%	50%
58	45%	40%	50%	50%
59	45%	40%	50%	50%
60	45%	35%	50%	40%
61	45%	35%	50%	30%
62	40%	35%	50%	30%
63	30%	35%	50%	30%
64	40%	40%	50%	40%
65	50%	50%	50%	50%
66	50%	50%	50%	50%
67	50%	50%	50%	50%
68	50%	50%	50%	50%
69	50%	50%	50%	50%
70	50%	50%	50%	50%
71	50%	50%	50%	50%
72	50%	50%	50%	50%
73	50%	50%	50%	50%
74	50%	50%	50%	50%
75	50%	50%	50%	50%
76	50%	50%	50%	50%
77	50%	50%	50%	50%
78	50%	50%	50%	50%
79	50%	50%	50%	50%
Ref	270	271	272	273

Members entering T-DROP are assumed to remain in T-DROP according to the following table:

Entry 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

Sample Ages	Percent of Active Members Separating Within the Next Year						
	Service	Death		Disability		Other	
		Men	Women	Men	Women	Men	Women
	0					32.00%	25.00%
	1					15.00%	12.00%
	2					11.00%	9.00%
	3					7.50%	9.00%
	4					5.00%	7.00%
20	5 & Up	0.02%	0.01%	0.10%	0.09%	4.60%	4.60%
25		0.02%	0.01%	0.10%	0.09%	4.60%	4.84%
30		0.03%	0.02%	0.08%	0.07%	3.94%	4.40%
35		0.04%	0.02%	0.08%	0.07%	3.20%	3.10%
40		0.06%	0.03%	0.14%	0.13%	2.70%	2.20%
45		0.11%	0.05%	0.24%	0.22%	2.08%	2.00%
50		0.20%	0.08%	0.53%	0.47%	1.62%	1.70%
55		0.31%	0.13%	0.88%	0.79%	1.50%	1.50%
60		0.46%	0.21%	1.00%	0.90%	1.50%	1.50%
65		0.78%	0.35%	1.00%	0.90%	1.50%	1.50%
Ref:						136	272
		30 x 0.5	31 x 0.5	135 x 1	135 x 0.9	556	558

Age	Pay Increase Assumptions for an Individual Member		
	Merit & Seniority	Base (Economic)	Increase Next Year
20	5.4%	4.0%	9.4%
25	4.4%	4.0%	8.4%
30	3.4%	4.0%	7.4%
35	2.4%	4.0%	6.4%
40	1.7%	4.0%	5.7%
45	1.2%	4.0%	5.2%
50	0.8%	4.0%	4.8%
55	0.4%	4.0%	4.4%
60	0.3%	4.0%	4.3%
65	0.3%	4.0%	4.3%
Ref:	197		

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

Sample Ages	Percent of Active Members Separating Within the Next Year						
	Service	Death		Disability		Other	
		Men	Women	Men	Women	Men	Women
	0					40.00%	40.00%
	1					30.00%	25.00%
	2					22.00%	18.00%
	3					18.00%	14.00%
	4					13.00%	11.00%
20	5 & Up	0.02%	0.01%	0.10%	0.08%	13.00%	11.00%
25		0.02%	0.01%	0.10%	0.08%	12.00%	11.00%
30		0.03%	0.02%	0.08%	0.07%	10.80%	7.60%
35		0.04%	0.02%	0.08%	0.07%	8.20%	5.40%
40		0.06%	0.03%	0.14%	0.12%	5.80%	4.70%
45		0.11%	0.05%	0.24%	0.19%	4.10%	4.20%
50		0.20%	0.08%	0.53%	0.42%	2.90%	2.80%
55		0.31%	0.13%	0.88%	0.70%	1.90%	1.70%
60		0.46%	0.21%	1.00%	0.80%	1.50%	1.50%
65		0.78%	0.35%	1.00%	0.80%	1.50%	1.50%
Ref:						273	274
		30 x 0.5	31 x 0.5	135 x 1	135 x 0.8	560	559

Age	Pay Increase Assumptions for an Individual Member		
	Merit & Seniority	Base (Economic)	Increase Next Year
20	6.1%	4.0%	10.1%
25	5.2%	4.0%	9.2%
30	4.2%	4.0%	8.2%
35	3.6%	4.0%	7.6%
40	2.9%	4.0%	6.9%
45	1.5%	4.0%	5.5%
50	0.6%	4.0%	4.6%
55	0.2%	4.0%	4.2%
60	0.0%	4.0%	4.0%
65	0.0%	4.0%	4.0%
Ref:	198		

MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

JUNE 30, 2004

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 and 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 of the valuation.
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. Disability and turnover 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.
Approximations	Adjustments were made to liabilities for T-DROP to allow for interest accumulation at 2% below the assumed rate of return.
Loads	A 2.0% load was included to account for subsidized Options, Service Purchases, etc.

GLOSSARY

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 solve 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.

February 15, 2005

Mr. David Malone, Executive Director
Arkansas Teacher Retirement System
Education Building West
State Capitol Grounds
Little Rock, Arkansas 72201

Re: Report of June 30, 2004 Actuarial Valuation
of Active and Inactive Members

Dear Mr. Malone:

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

Sincerely,

Judith A. Kermans

JAK/TCB/lr
Enclosures