

#### ARKANSAS JUDICIAL RETIREMENT SYSTEM

ANNUAL ACTUARIAL VALUATION AND EXPERIENCE GAIN/(LOSS) ANALYSIS YEAR ENDING JUNE 30, 2013



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October 25, 2013

The Board of Trustees Arkansas Judicial Retirement System Little Rock, Arkansas

Ladies and Gentlemen:

The results of the 31st Annual Actuarial Valuation of the Arkansas Judicial Retirement System as of June 30, 2013, and the Gain/(Loss) Analysis of Financial Experience Among Active Members from July 1, 2012 to June 30, 2013 are presented in this report. The purpose of the valuation and gain/loss analysis is to measure funding progress in relation to the actuarial cost method, to determine the employer contribution rate and to determine actuarial information for Governmental Accounting Standards Board (GASB) Statement Nos. 25 and 27. The results of the valuation may not be applicable for other purposes.

This report should not be relied on for any purpose other than those described above. It was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This report may be provided to parties other than the System only in its entirety and only with the permission of the Board.

The signing actuaries are independent of the plan sponsor.

The valuation was based upon Retirement System provisions in effect on the valuation date (summarized in Section B) along with census data and financial information. Data was tested for year-to-year consistency, but was not otherwise audited by the actuary.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as: plan experience differing from that anticipated by the economic and demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of the actuary's assignment, the actuary did not perform an analysis of the potential range of such future measurements.

*The actuarial assumptions* used in the actuarial valuation are summarized in Section D. The assumptions are established by the Retirement Board after consulting with the actuary. The actuarial assumptions used for the valuation produce results which, individually and in the aggregate, are reasonable.

*The cooperation of the administrative staff* in furnishing the materials required for this valuation is hereby acknowledged with appreciation.

The Board of Trustees October 25, 2013 Page 2

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge, this report is complete and accurate and was made in accordance with standards of practice promulgated by the Actuarial Standards Board.

Mita Drazilov is a Member of the American Academy of Actuaries (MAAA) and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,

Mita D. Drazilov, ASA, MAAA

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## **SECTION A**

**VALUATION RESULTS** 

## COMPUTED ACTUARIAL ACCRUED LIABILITIES AS OF JUNE 30, 2013

Actuarial Present Value of	(1) Total Present Value	(2) Portion Covered By Future Normal Cost Contributions	(3) Actuarial Accrued Liabilities (1) - (2)
Benefits to be paid to current			
retirees, beneficiaries, and future beneficiaries of current retirees	\$ 114,770,112	\$ 0	\$ 114,770,112
Age and service allowances based on total service likely to be rendered by present active members	115,743,567	29,996,968	85,746,599
Separation benefits (refunds of contributions and deferred allowances) likely to be paid to present active and inactive members	2,587,490	991,347	1,596,143
Disability benefits likely to be paid to present active members	985,274	1,003,009	(17,735)
Death-in-service benefits likely to be paid on behalf of present active members	1,680,058	641,459	1,038,599
Total	\$235,766,501	\$32,632,783	\$ 203,133,718
Applicable assets (Funding Value)	182,596,403	0	182,596,403
Liabilities to be covered by future contributions	\$ 53,170,098	\$32,632,783	\$ 20,537,315

### EMPLOYER CONTRIBUTION RATES COMPUTED JUNE 30, 2013 FOR FISCAL YEAR ENDING JUNE 30, 2015 EXPRESSED AS PERCENTS OF ACTIVE MEMBER PAYROLL

Contributions for	Contributions Expressed as Percents of Active Payroll
Contributions for	Tereents of Active Layron
Normal Cost	
Age and service annuities	25.72 %
Separation benefits	0.85 %
Disability annuities	0.86 %
Death-in-service annuities	0.55 %
Total	27.98 %
Member Contributions (average)	4.65 %
Employer Normal Cost	23.33 %
Unfunded Actuarial Accrued Liabilities (30-year amortization)	5.79 %
TOTAL COMPUTED EMPLOYER CONTRIBUTION RATE	29.12 %

## COMPUTED EMPLOYER CONTRIBUTION RATES HISTORICAL SCHEDULE

Valuation	A	ctive Member		UAAL	Computed	
Date		Average _	Averages		Financing	Employer
June 30	Number	Pay	Age	Service <sup>®</sup>	Period	Contribution Rate
1992	112	\$ 70,679	52.4 yrs.	9.8 yrs.	21 yrs.	28.29%
1993	117	85,286	52.5	9.6	20	29.56%
1994	117	89,783	53.0	10.0	19	29.39%
1995 (a)	119	92,287	53.4	10.0	18	37.37%
1996 (a) #	121	96,810	53.8	10.4	17	29.62%
1997	125	99,376	53.5	10.1	16	24.22%
1998	125	104,673	54.5	11.2	*	22.47%
1999 (a)	129	107,679	54.1	10.4	*	21.92%
2000	130	110,545	54.4	10.7	*	21.87%
2001 (a)	131	113,502	55.0	11.1	*	26.00%
2002 #	133	116,441	55.9	11.9	30	25.77%
2003	134	118,915	54.9	10.0	30	29.34%
2004	134	121,505	55.6	10.5	30	29.46%
2005	134	124,161	55.9	10.9	30	30.44%
2006	134	126,933	56.7	11.6	30	29.36%
2007 #	134	129,358	56.9	11.8	*	24.20%
2008	137	131,929	57.8	12.6	*	24.59%
2009 (a)	138	136,775	56.2	15.0	30	27.43%
2010	136	136,984	57.1	15.4	30	29.08%
2011	141	137,149	57.6	15.3	30	29.93%
2012 #	140	137,155	58.5	15.8	30	31.46%
2013	140	139,898	58.7	15.9	30	29.12%

<sup>(</sup>a) After changes in benefit provisions.

*Employer contributions are the total* of all types of revenue to the System except member contributions by payroll deduction and investment return. Employer contributions include court fees and Act 922 transfers.

<sup>#</sup> Revised actuarial assumptions.

<sup>\*</sup> Retirement System was fully funded.

<sup>@</sup> Includes reciprocal service for Tier One members on and after June 30, 2006 and Tier Two members on and after June 30, 2009.

## ACTIVE MEMBERS AND RETIRED LIVES HISTORICAL COMPARATIVE SCHEDULE

					Retired Lives			
		Active	Members		_	Active	Annual	Benefits
Valuation Date		Va	luation Payro	1		per	\$ in	As a %
June 30	No.	\$ Millions	Average	% Incr.	No.	Retired	Millions	of Pay
1992	112	\$ 7.9	\$ 70,679	4.0%				
1993	117	10.0	85,286	20.7%				
1994	117	10.5	89,783	5.3%				
1995	119	11.0	92,287	2.8%				
1996	121	11.7	96,810	4.9%				
1997	125	12.4	99,376	2.7%				
1998	125	13.1	104,673	5.3%				
1999	129	13.9	107,679	2.9%	79	1.6	\$3.6	25.6%
2000	130	14.4	110,545	2.7%	80	1.6	3.7	26.1%
2001	131	14.9	113,502	2.7%	82	1.6	5.0	33.8%
2002	133	15.5	116,441	2.6%	81	1.6	5.0	32.3%
2003	134	15.9	118,915	2.1%	98	1.4	6.4	40.5%
2004	134	16.3	121,505	2.2%	100	1.3	6.6	40.6%
2005	134	16.6	124,161	2.2%	105	1.3	7.1	42.9%
2006	134	17.0	126,933	2.2%	101	1.3	7.1	41.5%
2007	134	17.3	129,358	1.9%	103	1.3	7.3	42.4%
2008	137	18.1	131,929	2.0%	105	1.3	7.5	41.5%
2009	138	18.9	136,775	3.7%	123	1.1	9.2	48.8%
2010	136	18.6	136,984	0.2%	121	1.1	9.2	49.1%
2011	141	19.3	137,149	0.1%	120	1.2	9.1	46.9%
2012	140	19.2	137,155	0.0%	123	1.1	9.3	48.6%
2013	140	19.6	139,898	2.0%	125	1.1	10.0	50.8%

## PAYROLL AND ASSET HISTORICAL COMPARATIVE STATEMENT

Valuation			
Date	Valuation		Ratio of
June 30	Payroll	Assets	Assets/Payroll
	( <b>\$ i</b> n	Millions)	
1985	\$ 4.7	\$ 4.5	1.0
1990	7.1	21.4	3.0
1991	7.6	26.4	3.5
1992	7.9	30.4	3.8
1993	10.0	33.7	3.4
1994	10.5	37.3	3.6
1995	11.0	41.1	3.7
1996	11.7	51.5	4.4
1997	12.4	63.3	5.1
1998	13.1	77.2	5.9
1999	13.9	91.8	6.6
2000	14.4	107.1	7.4
2001	14.9	119.2	8.0
2002	15.5	124.2	8.0
2003	15.9	126.5	7.9
2004	16.3	129.1	7.9
2005	16.6	135.1	8.1
2006	17.0	145.1	8.5
2007	17.3	159.6	9.2
2008	18.1	169.1	9.3
2009	18.9	167.4	8.9
2010	18.6	165.2	8.9
2011	19.3	165.4	8.6
2012	19.2	167.8	8.7
2013	19.6	182.6	9.3

As AJRS has matured, the asset base relative to covered payroll has increased dramatically. This is a normal and planned occurrence in a soundly financed plan. However, as the ratio grows, market gains and losses have a progressively larger effect on contribution rates, making the objective of contribution rate stability increasingly more difficult to achieve.

#### **COMMENTS**

*General Financial Objective*. Section 24-2-701 of the Arkansas Code provides as follows (emphasis added):

"(a) 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....."

*Judicial Retirement System Status*. Financing the Retirement System under a level contribution pattern means:

- The normal costs of judicial service will be paid by the generation of taxpayers who receive the value of the judicial service, and not passed on to a future generation;
- The ultimate contributions required will be substantially less than future benefit payouts, because investment return will pay the largest portion of benefits (see Financing Diagram on page E-3); and
- The benefit promises the Retirement System makes to individual judges will be more secure, because Retirement System assets will support the benefits, rather than grants from future legislatures.

Experience of the Retirement System was favorable for the year ended June 30, 2013 due to higher than assumed investment returns and lower than expected salary increases (see pages B-5 and C-6). AJRS is 90% funded based on the Funding (smoothed) Value of Assets. There is a \$8.1 million cumulative investment gain to be recognized over the next three years. If actual experience matches assumed experience during this coming period, the employer contribution would decrease by approximately 2.3% of payroll from the current level.

Based upon the results of the June 30, 2013 actuarial valuation, *the Judicial Retirement System is satisfying the general financial objective* of level-percent-of-payroll financing.

#### RECOMMENDATIONS

**Reserve Transfers.** Each year reserve transfers are recommended so that there will be a balance between assets and actuarial accrued liabilities in the Retirement Reserve Account and the Deferred Annuity Account.

- The Retirement Reserve Account is responsible for future annuity payments to present retired lives.
- The Deferred Annuity Account is responsible for future annuity payments to present inactive members.

This year's recommended transfer amounts are as follows:

Employer Accum.	Transfers as of Ju	Employer Accum.	
Account Before Transfers	Deferred Annuity Account	Retirement Reserve Account	Account After Transfers
\$63,078,004	\$(550,980)	\$1,806,166	\$61,822,818

For the purposes of this valuation it was assumed that these transfers would be made.

*GASB Statement No. 67 and No. 68.* In light of the new accounting statements that will soon be effective for AJRS, the Board may wish to consider changes to the actuarial valuation process for future valuations.

- 1) Adopt a closed amortization period. This will enable the same discount rate (i.e., 7.25%) to be used for accounting purposes as for funding purposes. This would mean that a 29-year amortization period would be used for the June 30, 2014 actuarial valuation.
- 2) Base the normal cost for Tier I participants on Tier I benefits. This will allow the GASB Total Pension Liability (TPL) to be the same as the Actuarial Accrued Liability (AAL).

Both changes would not be expected to have a significant effect on June 30, 2014 actuarial valuation results.

#### **SHORT CONDITION TEST**

The AJRS 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 accumulated contributions;
- 2) The liabilities for future benefits to present retired lives;
- 3) The employer financed portion of liabilities for service already rendered by non-retired members.

In a system that has been following the discipline of level percent-of-payroll financing, active member contributions (liability 1) and the liabilities for future benefits to present retired lives (liability 2) will be fully covered by present assets. In addition, the liabilities for service already rendered by active 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.

### SHORT CONDITION TEST - COMPARATIVE STATEMENT

	Ent	ry Age Accı	ued Liability	_				
	<b>(1)</b>	<b>(2)</b>	(3)		P	ortion of	f Preser	nt
Valuation	Active	Retirees	<b>Active Member</b>		Va	alues Co	vered <b>E</b>	Ву
Date	Members	and	(Employer	<b>Present</b>		Present	Assets	
June 30	Contr.	Benef.	<b>Financed Portion</b> )	Assets	<b>(1)</b>	<b>(2)</b>	(3)	Total
		(\$ iı	n Thousands)					
1994	\$ 3,720	\$25,161	\$25,263	\$ 37,310	100%	100%	33%	69%
1995(a)	4,261	28,845	26,627	41,095	100%	100%	30%	69%
1996(a)	4,828	32,063	26,561	51,478	100%	100%	55%	81%
1997	5,418	33,295	26,944	63,284	100%	100%	91%	96%
1998	6,067	33,218	31,989	77,175	100%	100%	118%	108%
1999	6,817	38,040	32,486	91,783	100%	100%	144%	119%
1999(a)	6,817	38,040	37,919	91,783	100%	100%	124%	111%
2000(a)	7,740	39,255	36,217	107,059	100%	100%	166%	129%
2001(a)	8,522	54,712	52,839	119,191	100%	100%	106%	103%
2002(a)	9,316	54,216	61,202	124,212	100%	100%	99%	99%
2003	10,147	74,060	53,718	126,520	100%	100%	79%	92%
2004	10,948	74,227	56,600	129,065	100%	100%	78%	91%
2005	10,254	79,560	60,766	135,062	100%	100%	74%	90%
2006	11,078	79,739	65,692	145,050	100%	100%	83%	93%
2007(a)	11,906	82,165	63,302	159,587	100%	100%	103%	101%
2008	11,825	81,712	72,211	169,061	100%	100%	105%	102%
2009(a)	12,689	103,249	64,227	167,433	100%	100%	80%	93% (t
2010	11,474	102,200	69,238	165,244	100%	100%	74%	90% (0
2011	11,822	102,379	72,434	165,377	100%	100%	71%	89% (0
2012(a)	12,356	107,413	75,685	167,796	100%	100%	63%	86% (6
2013	12,397	114,770	75,967	182,596	100%	100%	73%	90% (f

<sup>(</sup>a) After changes in benefit provisions and/or actuarial assumptions and methods.

<sup>(</sup>b) 73% on a market value basis.

<sup>(</sup>c) 78% on a market value basis.

<sup>(</sup>d) 92% on a market value basis.

<sup>(</sup>e) 87% on a market value basis.

<sup>(</sup>f) 94% on a market value basis.

## **SECTION B**

VALUATION DATA

## SUMMARY OF PROVISIONS CONSIDERED (JULY 1, 2013)

Tier One Tier Two

#### Description

Elected or appointed prior to the effective date of Act 399 of 1999 and who do not elect to participate in Tier Two.

Elected or appointed after the effective date of Act 399 of 1999 or elected to participate in Tier Two.

#### Regular Retirement

An active member may retire at age 65 with 10 or more years of credited service, or after 20 years of credited service regardless of age. Persons who become members after June 30, 1983 must also have at least 8 years of actual service as a justice of the Supreme Court, or as a judge of the Circuit or Chancery Courts or the Court of Appeals.

An active member or former member may retire at age 65 with 8 or more years of credited service, or after 20 years of credited service regardless of age.

#### Compulsory Retirement

Any judge or justice who attains 70 years of age during a term of office to which he has been elected may complete the term without forfeiting rights to retirement benefits. Any judge or justice who is not eligible to retire at age 70 may continue to serve as judge until completion of the term in which there has accrued sufficient credited service to retire. Otherwise, judges or justices must retire by their 70th birthday or lose their retirement benefits.

Any judge or justice who attains 70 years of age during a term of office to which he has been elected may complete the term without forfeiting rights to retirement benefits. Any judge or justice who is not eligible to retire at age 70 may continue to serve as judge until completion of the term in which there has accrued sufficient credited service to retire. Otherwise, judges or justices must retire by their 70th birthday or lose their retirement benefits.

#### Final Salary

The annual salary for the last judicial office held.

The annual salary for the last judicial office held.

#### Age & Service Annuity

60% of the judge's final salary, for life.

Each year of additional service after twenty (20) years of judicial service, the benefit shall be increased by two and one-half percent (2.5%) with a maximum benefit payable of seventy-five percent (75%) of the judge's final salary.

3.2% of the salary of the last judicial office held multiplied by the number of years of service not to exceed 80% of the salary of the last judicial office held.

## SUMMARY OF PROVISIONS CONSIDERED

#### -- CONTINUED --

#### **Deferred Retirement**

An inactive member who has 14 or more years of credited service and left judicial service before attaining age 65 will be entitled to an age and service annuity beginning at age 65. Persons who become members after June 30, 1983 must also have at least 8 years of actual service as a justice of the Supreme Court, or as a judge of the Circuit or Chancery Courts or the Court of Appeals.

An inactive member who has 8 or more years of credited service and left judicial service before attaining age 65 will be entitled to an age and service annuity beginning at age 65.

#### Disability Retirement

An active member with 3 or more consecutive 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 and service annuity. The 3 years of service is not required for persons who were members before July 1, 1983.

An active member with 3 or more consecutive 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 and service annuity, except that the benefit shall not be less than 25.6% of final salary.

#### Early Retirement

A member who became a member before July 1, 1983 and who has 18 but less than 20 years credited service may retire, regardless of age, and receive an immediate annuity. The amount is the full age and service amount reduced proportionately for service less than 20 years.

A member with 14 years of credited service may retire between ages 62 and 65 and receive an immediate annuity. The amount is the full age and service amount reduced 1/2 of 1% for each month that retirement age is younger than age 65. Persons who become members after June 30, 1983 must also have at least 8 years of actual service as a justice of the Supreme Court, or as a judge of the Circuit Court or Chancery Courts or the Court of Appeals.

A member with 8 years of credited service may retire between ages 62 and 65 and receive an immediate annuity. The amount is the full age and service amount reduced 1/2 of 1% for each month retirement age is younger than age 65.

## SUMMARY OF PROVISIONS CONSIDERED -- CONCLUDED --

#### Survivor Benefits

Upon the death of a member with 3 or more years of service, before or after retirement, an annuity of 67% of the judge's benefit is payable to the following survivors (shared if there is more than one eligible survivor):

- A surviving spouse married to the judge more than 1 year at the time of death.
- A minor child of the judge.

The 3-year service requirement is not required of those who became members prior to July 1, 1983.

Upon the death of a member with 3 or more years of service, before or after retirement, an annuity of 67% of the judge's benefit, but not less than 17.152% of final salary, is payable to the following survivors (shared if there is more than one eligible survivor):

- A surviving spouse married to the judge more than 1 year at the time of death.
- A minor child of the judge.

The 3-year service requirement is not required of those who became members prior to July 1, 1983.

#### **Increases After Retirement**

For any person who was a member on or before June 30, 1983, the retirement benefits are increased or decreased from time to time as the salary for the particular judicial office is increased or decreased. For all judges or justices first elected after June 30, 1983, and who have received retirement benefits from the System for at least 12 full calendar months, the retirement benefits are increased each July 1st by 3%.

For all judges or justices who have received retirement benefits from the System for at least 12 full calendar months, the retirement benefits are increased each July 1st by 3%.

#### **Member Contributions**

Active members contribute 6% of their salaries. Members with 20 or more years of service and members age 65 or older with 10 or more years of service do not contribute to the Retirement System. At any time a member is accruing the additional 2.5% of final salary benefit, member contributions would be required. If a member leaves service before becoming eligible to retire, accumulated contributions may be refunded.

Active members contribute 5% of their salaries. Members with 25 or more years of service do not contribute to the Retirement System. If a member leaves service before becoming eligible to retire, accumulated contributions may be refunded.

## SUMMARY OF REPORTED ASSETS JUNE 30, 2013

### **Reserve Account Balances**

Members Deposit Account	\$ 12,396,561
Members Deposit Account Interest Reserve	698
Employer Accumulation Account	63,078,004
Retirement Reserve Account	112,963,946
Partial Purchase Service Reserve	0
Deferred Annuity Account	2,270,952
Total Applicable Assets (Market Value)	\$ 190,710,161

### **Revenues & Expenditures**

Total Assets B	\$169,936,018	
Revenues:	Member Contributions	896,195
	Employer Contributions - Statutory	2,303,319
	- Act 922	2,628,679
	- Court fees	740,293
	- Other	0
	Service Purchase	31,186
	Investment Income	24,702,558
	Total Revenues	31,302,230
Expenditures:	Retirement Benefits Paid	9,448,550
1	Refunds of Member Contributions	27,593
	Administrative Expenses	55,591
	Investment Expenses	996,353
	Other	0
	Total Expenditures	10,528,087
Total Assets En	\$190,710,161	

#### DEVELOPMENT OF FUNDING VALUE OF ASSETS

Valuation Date June 30:	2011	2012	2013	2014	2015	2016
A. Funding Value Beginning of Year	\$165,243,516	\$165,376,983	\$167,796,207			
B. Market Value End of Year	170,797,114	169,936,018	190,710,161			
C. Market Value Beginning of Year	143,314,140	170,797,114	169,936,018			
D. Non-Investment Net Cash Flow	(2,918,054)	(2,942,274)	(2,876,471)			
E. Investment Return						
E1. Market Total: B-C-D	30,401,028	2,081,178	23,650,614			
E2. Assumed Rate	7.50%	7.50%	7.25%			
E3. Amount for Immediate Recognition	12,285,156	12,294,268	12,062,169			
E4. Amount for Phased-In Recognition	18,115,872	(10,213,090)	11,588,445			
F. Phased-In Recognition of Investment Return						
F1. Current Year: 0.25xE4	4,528,968	(2,553,273)	2,897,111			
F2. First Prior Year	741,692	4,528,968	(2,553,273)	\$ 2,897,111		
F3. Second Prior Year	(9,650,158)	741,692	4,528,968	(2,553,273)	\$ 2,897,111	
F4. Third Prior Year	(4,854,137)	(9,650,157)	741,692	4,528,968	(2,553,271)	\$ 2,897,112
F5. Total Recognized Investment Gain	(9,233,635)	(6,932,770)	5,614,498	4,872,806	343,840	2,897,112
G. Funding Value End of Year						
G1. Preliminary Funding Value End of Year: A+D+E3+F5		167,796,207	182,596,403			
G2. Upper Corridor Limit: 125% x B		212,420,023	238,387,701			
G3. Lower Corridor Limit: 75% x B		127,452,014	143,032,621			
G4. Funding Value End of Year	165,376,983	167,796,207	182,596,403			
H. Difference Between Market & Funding Values	5,420,131	2,139,811	8,113,758			
I. Recognized Rate of Return	1.9%	3.3%	10.6%			
J. Market Value Rate of Return	21.4%	1.2%	14.0%			
K. Ratio of Funding Value to Market Value	96.8%	98.7%	95.7%			

The Funding Value of Assets recognizes assumed investment return (line E3) fully each year. Differences between actual and assumed investment return (line E4) 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. If assumed rates are exactly realized for 3 consecutive years, Funding Value will become equal to market value.

### RETIREES AND BENEFICIARIES AS OF JUNE 30, 2013 TABULATED BY ATTAINED AGE

				Survivor			
		Retirees	Ве	eneficiaries	Total		
Attained		Annual		Annual		Annual	
Age	No.	Allowances	No.	Allowances	No.	Allowances	
55			3	\$ 174,100	3	\$ 174,100	
58	1	\$ 102,102			1	102,102	
60	1	81,519			1	81,519	
61	2	151,894	1	44,508	3	196,402	
62	2	202,726	1	53,336	3	256,062	
63	3	211,591			3	211,591	
64	1	109,006	1	55,871	2	164,877	
65	6	516,698	1	84,350	7	601,048	
66	3	242,945	1	64,320	4	307,265	
67	5	458,165			5	458,165	
68	5	453,358	4	261,004	9	714,362	
69	1	86,733	1	57,706	2	144,439	
70	7	520,919	1	61,961	8	582,880	
71	3	301,806	3	185,555	6	487,361	
72	4	387,141	2	122,062	6	509,203	
73	3	116,474	1	83,314	4	199,788	
74	4	297,188			4	297,188	
75	3	269,019			3	269,019	
76	6	533,744			6	533,744	
77	3	252,309	1	62,729	4	315,038	
78	6	580,024			6	580,024	
79	3	273,528	2	111,742	5	385,270	
80	1	88,604			1	88,604	
81	4	348,440			4	348,440	
82	2	173,706	1	55,871	3	229,577	
83	2	170,883	1	67,181	3	238,064	
84	2	192,964	1	55,871	3	248,835	
85	1	83,389	2	111,742	3	195,131	
86			3	171,281	3	171,281	
87	2	217,751	1	55,871	3	273,622	
88	2	172,254			2	172,254	
89	1	134,361			1	134,361	
92	1	83,389			1	83,389	
93	1	86,128	1	55,871	2	141,999	
96			1	55,871	1	55,871	
TOTALS	91	\$ 7,900,758	34	\$ 2,052,117	125	\$ 9,952,875	

## RETIREES AND BENEFICIARIES AS OF JUNE 30, 2013 TABULATED BY ATTAINED AGE

Type of Annuity	Number	Annual Annuities	Annuity Liabilities	
Age & Service Retirees				
Life	10	\$ 778,587	\$ 7,574,328	
Life Continuing to Survivor	79	7,004,592	84,549,120	
Totals	89	7,783,179	92,123,448	
Beneficiaries of Age & Service Retirees	33	1,992,752	20,558,508	
Total Age & Service Retirees & Beneficiaries	122	9,775,931	112,681,956	
Disability Retirees				
Life	1	79,463	602,340	
Life Continuing to Survivor	1	38,116	499,656	
Totals	2	117,579	1,101,996	
Beneficiaries of Disability Retirees	0	0	0	
Total Disability Retirees & Beneficiaries	2	117,579	1,101,996	
Death-in-Service Beneficiaries	1	59,365	986,160	
Total Retirees & Beneficiaries	125	\$ 9,952,875	\$ 114,770,112	

AJRS Retirees - July 1, 2012 through June 30, 2013

	Age &	
	Service	Disability
Number	7	NA
Average Age	65.7	NA
Average Service	18.5	NA
Average Monthly Benefit	\$ 7,939.73	NA

Included in the valuation were 4 inactive vested members.

### ACTIVE MEMBERS AS OF JUNE 30, 2013 BY ATTAINED AGE AND YEARS OF SERVICE TIER ONE

		Yea	rs of Ser	vice to Va	aluation I	<b>Date</b>			Totals		
Attained									Valuation		
Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Payroll		
50-54			1		1			2	\$ 277,964		
55-59											
60				1		1		2	277,964		
61				1		1		2	277,964		
62						1	1	2	277,964		
63			1	2		1	1	5	699,475		
64					1	1	1	3	416,946		
65				1		1	1	3	416,946		
66					2		1	3	416,946		
67					1			1	138,982		
68					1	1	1	3	426,072		
69					1			1	138,982		
70				1	1			2	287,090		
71				1				1	138,982		
72			1		1			2	277,964		
Totals			3	7	9	7	6	32	\$ 4,470,241		

		Averages					
Group	oup No.		Service	Annual Pay			
Tier One	32	64.4	23.2	\$139,695			

### ACTIVE MEMBERS AS OF JUNE 30, 2013 BY ATTAINED AGE AND YEARS OF SERVICE TIER TWO

	Years of Service to Valuation Date							Totals		
Attained									Valuation	
Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Payroll	
35-39	1							1	\$ 143,547	
40-44	3	4	4					11	1,540,213	
45-49	4	2	3	2				11	1,533,367	
50-54	2	3	3	3	4			15	2,098,421	
55-59	2	3	8	3	4	5		25	3,483,680	
60	1			1		1		3	421,511	
61	3		1			1		5	694,910	
62			1	1	2			4	555,928	
63	1	1				2		4	555,928	
64	1		3				2	6	833,892	
65	1	1	1			1	1	5	694,910	
66	1		3				1	5	699,475	
67		1	1					2	277,964	
68										
69	2		3				1	6	859,476	
70	1							1	148,108	
71					1			1	138,982	
72	1							1	143,547	
73									, , , , , , , , , , , , , , , , , , ,	
74							1	1	143,547	
75							1	1	148,108	
Totals	24	15	31	10	11	10	7	108	\$ 15,115,514	

		Averages					
Group	No.	Age	Service	Annual Pay			
Tier Two	108	57.0	13.7	\$139,958			

## **SECTION C**

GAIN/(LOSS) RESULTS

#### **COMMENTS**

**Purpose of Gain/(Loss) Analysis.** Regular actuarial valuations provide information about the composite change in unfunded actuarial accrued liabilities -- whether or not they are increasing or decreasing and by how much.

But valuations do not show the portion of the change attributable to each risk area within the Retirement System financial mechanism: the rate of investment return which plan assets earn; the rates of withdrawal of active members who leave covered employment; the rates of mortality; the rates of disability; the rates of pay increases; and the ages at actual retirement. In an actuarial valuation, assumptions must be made as to what these rates will be, for the next year and for decades in the future.

The objective of a gain and (loss) analysis is to determine the portion of the change in actuarial condition (unfunded actuarial accrued liabilities) attributable to each risk area.

The fact that actual experience differs from assumed experience is to be expected -- *the future cannot be predicted with precision*. The economic risk areas (particularly investment return) are volatile.

Changes in the assumed experience for a risk area should be made when the differences between assumed and actual experience have been observed to be sizable and persistent. A gain and (loss) analysis covering a relatively short period may or may not be indicative of *long-term trends*, which are the basis of actuarial assumptions.

The Arkansas Judicial Retirement System had an experience gain during the 2012-2013 observation year. Details are reported on the following pages.

# CHANGES IN UNFUNDED ACTUARIAL ACCRUED LIABILITIES DERIVATION OF EXPERIENCE GAIN (LOSS) YEAR ENDED JUNE 30, 2013

Actual experience will not (except by coincidence) coincide exactly with assumed experience. Gains and losses often cancel each other over a period of years, but sizable year-to-year fluctuations are common. Detail on the derivation of the experience gain (loss) is shown below.

_	2013	2012
1) UAAL* at start of year	\$ 27,658,407	\$ 21,257,898
2) Normal cost from last valuation	4,513,478	4,647,948
3) Employer contributions	5,672,291	5,465,079
4) Interest accrual: (1) * .0725 + [(2)-(3)]*.03625	1,963,228	1,563,700
5) Expected UAAL before changes: (1)+(2)-(3)+(4)	28,462,822	22,004,467
6) Change in benefits/assumptions	0	5,206,866
7) Expected UAAL after changes: (5) + (6)	28,462,822	27,211,333
8) Actual UAAL at end of year	20,537,315	27,658,407
9) Gain(loss): (7) - (8)	7,925,507	\$(447,074)
10) Gain(loss) as percent of actuarial accrued liabilities at start of year: \$195,454,614	4.1%	(0.2)%
Last year's accrued liability	\$195,454,614	\$186,634,881

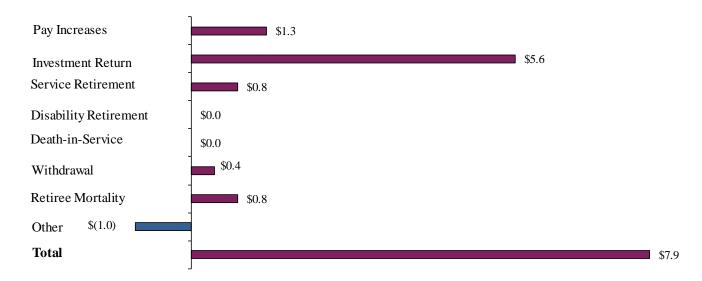
<sup>\*</sup> Unfunded actuarial accrued liability.

## GAINS & (LOSSES) BY RISK AREA DURING THE PERIOD JULY 1, 2012 TO JUNE 30, 2013

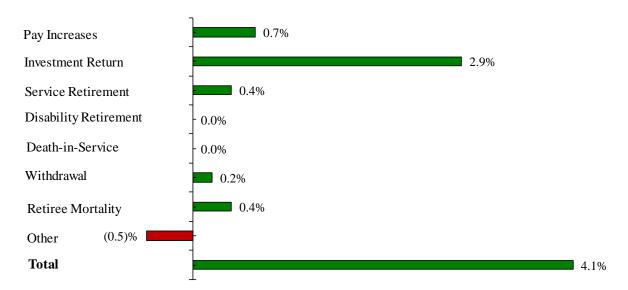
	Gain (Loss) During Year			
		Percent of		
Type of Risk Area	\$ in Millions	Liabilities		
ECONOMIC RISK AREAS				
Pay Increases. If there are smaller pay increases than				
assumed, there is a gain. If greater increases, a				
(loss).	\$1.3	0.7 %		
Investment Return. If there is greater investment				
return than assumed, there is a gain. If less return,				
a (loss).	5.6	2.9 %		
NON-ECONOMIC RISK AREAS				
Age & Service Retirements. If members retire at older	:			
ages or with lower final average pays than assumed,				
there is a gain. If younger ages or higher average				
pays, a (loss).	0.8	0.4 %		
Disability Retirements. If there are fewer disabilities				
than assumed, there is a gain. If more, a (loss).	0.0	0.0 %		
<b>Death-in-Service Benefits</b> . If there are fewer claims				
than assumed, there is a gain. If more, a (loss).	0.0	0.0 %		
Withdrawal. If more liabilities are released by				
other separations than assumed, there is a gain.				
If smaller releases, a (loss).	0.4	0.2 %		
Retiree Mortality. If there are fewer deaths than				
assumed, there is a (loss). If more, a gain.				
This includes gains and losses related to Tier I				
pre-July 1, 1983 retired member increases.	0.8	0.4 %		
Other. Gains and losses resulting from group size				
change, data adjustments, timing of financial				
transactions, additional contributions				
and miscellaneous unidentified sources.	(1.0)	(0.5)%		
Experience Gain/(Loss)	<b>\$7.9</b>	4.1 %		

## GAIN/(LOSS) EXPERIENCE 2012-2013 YEAR

#### **Amounts in \$ Millions**



#### % of Accrued Liabilities



# DEVELOPMENT OF GAIN/(LOSS) FROM RECOGNIZED INVESTMENT RETURN\* DURING THE PERIOD JULY 1, 2012 TO JUNE 30, 2013

		\$ Millions
1.	Total Assets Beginning of Year	\$167.8
2.	Total Assets End of Year	
	a. Actual	182.6
	b. If net investment return had been 7.5%	177.0
3.	Gain (Loss): 2a minus 2b	\$5.6

<sup>\*</sup> Recognized "Investment return" as used in this Gain/(Loss) Analysis means assumed investment income plus a four year phase-in of differences between actual market rate of return and the assumed rate of return.

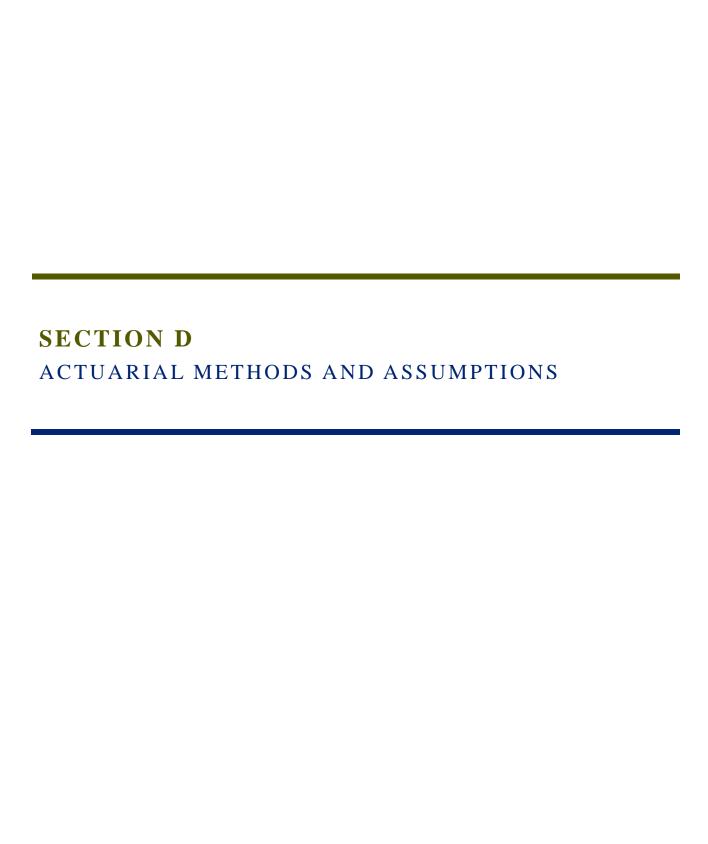
## MEMBERS WHO SEPARATED FROM ACTIVE EMPLOYMENT DURING THE PERIOD JULY 1, 2004 TO JUNE 30, 2013

	Number	Terminations During the Year									Active	
	Added	No	rmal	Disa	bility	Die	d-In	V	Vithdrav	vals		Members
	During	Retir	ement	Retir	ement	Sei	vice	Vested	Other	T	otal	End of
Year	Year	<u>A</u>	<b>E</b>	A	<u>E</u>	A	E	A	A	A	E	Year
2004	3	1	6.0	0	0.6	2	0.7	0	0	0	2.5	134
2005	6	5	6.6	0	0.6	0	0.8	0	1	1	2.3	134
2006	2	2	6.4	0	0.6	0	0.7	0	0	0	2.2	134
2007	11	6	8.3	1	0.6	0	0.8	1	3	4	1.8	134
2008	6	1	8.2	0	0.3	0	0.3	0	2	2	1.9	137
2009	28	18	12.0	0	0.3	1	0.3	1	7	8	1.6	138
2010	3	2	12.7	0	0.2	0	0.3	1	2	3	1.4	136
2011	13	3	14.4	0	0.2	1	0.3	1	3	4	1.3	141
2012	4	3	14.7	0	0.2	0	0.4	1	1	2	1.6	140
2013	13	6	14.6	0	0.2	0	0.3	0	7	7	1.3	140
10 Year Totals	89	47	103.9	1	3.8	4	4.9	5	26	31	17.9	

A = ActualE = Expected

# MEMBERS ACTIVE BOTH BEGINNING AND END OF YEAR SALARY INCREASES BY AGE GROUP DURING THE PERIOD OF JULY 1, 2012 TO JUNE 30, 2013

Age	Percent
Groups	Increase
35-39	2.00%
40-44	2.00%
45-49	2.00%
50-54	2.00%
55-59	2.00%
60-64	2.00%
65-69	2.00%
70-74	2.00%



### SUMMARY OF ASSUMPTIONS USED FOR ARKANSAS JUDICIAL ACTUARIAL VALUATIONS ASSUMPTIONS ADOPTED BY BOARD OF TRUSTEES AFTER CONSULTING WITH THE ACTUARY

#### **Economic Assumptions**

The investment return rate used in making the valuation was 7.25% per year, compounded annually (net after administrative and investment expenses).

**Pay increase assumptions** for individual active members are shown on page D-3. Part of the assumption for each age is for a merit and/or seniority increase, and the other 3.50% recognizes wage inflation. This wage inflation assumption consists of 2.75% for price inflation and 0.75% for real wage growth. The wage inflation assumption was revised for the June 30, 2012 valuation.

**Total active member payroll** is assumed to increase 3.50% a year, which is the portion of the individual pay increase assumptions recognizing inflation.

*The number of active members* is assumed to continue at the present number.

#### **Non-Economic Assumptions**

The mortality tables used to measure retired life mortality were the RP-2000 mortality tables projected to 2020 using projection scale BB. Related values are shown on page D-5. The mortality rates used in evaluating disability allowances were the RP-2000 Combined Healthy mortality tables, set forward 10 years for males and set forward 10 years for females. Related values are shown on page D-5. Based upon the experience observed in the most recent experience study for APERS, it appears that the current table provides for approximately 8 years of future mortality improvement. Adopted 2012.

(Concluded on the following page.)

### SUMMARY OF ASSUMPTIONS USED FOR ARKANSAS JUDICIAL ACTUARIAL VALUATIONS (CONCLUDED)

*The probabilities of retirement* for members eligible to retire are shown on page D-4. Adopted 2012.

The probabilities of withdrawal from service, death-in-service and disability are shown for sample ages on page D-3. Adopted 2012.

**Normal Cost.** Normal Cost and the allocation of benefit values between service rendered before and after the valuation date was determined using an individual entry-age actuarial cost method having the following characteristics.

- The annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement;
- Each annual normal cost is a constant percentage of the member's year-by-year projected covered pay.

The normal cost and the present value of future normal cost is based on the benefit levels of Tier Two members. The present value of benefits is based on the benefit levels available to each member. The accrued liability is the difference between the present value of benefits and the present value of normal cost.

Funding value of assets (cash & investments) was determined by phasing-in differences between actual market return and the assumed rate of return over a four-year period.

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.

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

### DECREMENT AND PAY INCREASE ASSUMPTIONS FOR ACTIVE MEMBERS JUNE 30, 2013

				Percent o	of				
			<b>Active</b> 3	Members S	Separating		Pay In	crease Assur	nptions
			Wit	hin the Nex	xt Year		For I	ndividual Me	mber
Sample	Years of	M	ale	Fer	nale		Merit &	Base	Increase
Ages	Service	Death	Disability	Death	Disability	Withdrawal	Seniority	(Economic)	Next Year
	0					10.00%			
	1					6.00%			
	2					4.20%			
	3					3.36%			
	4					3.02%			
30	5+	0.02%	0.04%	0.01%	0.05%	0.85%	0.00%	3.50%	3.50%
35		0.04%	0.04%	0.02%	0.05%	0.85%	0.00%	3.50%	3.50%
40		0.05%	0.10%	0.03%	0.18%	0.85%	0.00%	3.50%	3.50%
45		0.07%	0.13%	0.05%	0.20%	0.85%	0.00%	3.50%	3.50%
50		0.10%	0.25%	0.08%	0.28%	0.85%	0.00%	3.50%	3.50%
55		0.17%	0.45%	0.12%	0.38%	0.85%	0.00%	3.50%	3.50%
60		0.29%	0.71%	0.21%	0.51%	0.85%	0.00%	3.50%	3.50%
65		0.50%	0.83%	0.38%	0.62%	0.85%	0.00%	3.50%	3.50%

The pay increase assumptions are age based only, and not service based.

## PROBABILITIES OF RETIREMENT FOR MEMBERS ELIGIBLE TO RETIRE JUNE 30, 2013

Retirement Ages	Percent of Eligible Active Members Retiring Within Next Year	Percent of Eligible Active Members Electing Early Retirement Within Next Year			
50	4%				
51	4%				
52	6%				
53	6%				
54	8%				
55	10%				
56	10%				
57	12%				
58	12%				
59	12%				
60	14%				
61	14%				
62	20%	2%			
63	20%	2%			
64	20%	2%			
65-69	24%				
70-74	30%				
75 & Over	100%				

For Tier One, a member was assumed eligible to retire at age 50 with 20 years of service, or at age 65 with 10 years of service. A member was assumed eligible to retire early at age 62 with 14 years of service.

For Tier Two, a member was assumed eligible to retire at age 50 with 20 years of service, or at age 65 with 8 years of service. A member was assumed eligible to retire early at age 62 with 8 years of service.

# SINGLE LIFE RETIREMENT VALUES JUNE 30, 2013

			Present	Value of			
	Present	Value of	\$1 Month	ly for Life	Future Life		
Sample	\$1 Month	ly for Life	Increasing 3	3% Annually	Expectancy (Years)		
Ages	Men	Women	Men	Women	Men	Women	
50	\$148.24	\$151.62	\$210.65	\$218.65	32.99	35.59	
55	140.64	144.96	194.10	203.31	28.37	30.90	
60	131.19	136.37	175.47	185.59	23.94	26.34	
65	119.78	125.79	154.95	165.79	19.74	21.98	
70	106.30	113.43	132.82	144.60	15.83	17.93	
75	90.97	99.45	109.73	122.53	12.26	14.25	
80	74.57	84.09	86.87	100.14	9.13	10.95	

Sample Attained	\$100 Benefit	Portion of Age 65 Lives Still Alive			
Ages	Increasing 3% Annually	Men Women			
65	\$100.00	100%	100%		
70	115.93	94%	95%		
75	134.39	85%	88%		
80	155.80	71%	76%		
85	180.61	52%	61%		

### SUMMARY OF ASSUMPTIONS USED JUNE 30, 2013

#### MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

Marriage Assumption: 80% of males and 80% of females are assumed to be married for

purposes of death-in-service benefits. 80% of members are assumed to be married at retirement. Male spouses are assumed to be six years older than female spouses for active member valuation purposes. Actual data is used for retired valuation

purposes.

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 of all types are assumed to occur mid-year.

Eligibility Testing: Eligibility for benefits is determined based upon the age nearest

birthday and service nearest whole year on the date the

decrement is assumed to occur.

Benefit Service: Exact fractional service is used to determine the amount of

benefit payable.

**Decrement Relativity:** Decrement rates are used directly from the experience study,

without adjustment for multiple decrement table effects.

**Decrement Operation:** Disability and withdrawal do not operate during retirement

eligibility.

Normal Form of Benefit: The assumed normal form of benefit is the 67% joint and

survivor benefit.

**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.

**Tier 1 2.5% Benefit**For present value of future benefit purposes, it was assumed that Multiplier Election:

all Tier 1 members will elect to accrue the additional 2.5%

all Tier 1 members will elect to accrue the additional 2.5% benefit multiplier (if they have not already done so). Member contribution rates are based upon those members that have elected to accrue the additional 2.5% benefit multiplier as of the

valuation date.



FINANCIAL PRINCIPLES

#### FINANCIAL PRINCIPLES AND OPERATIONAL TECHNIQUES OF AJRS

**Promises Made and To Be Paid For.** As each year is completed, AJRS in effect hands an "IOU" to each member then acquiring a year of service credit -- the "IOU" says: "The Arkansas Judicial 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, years and often decades later?

The law governing AJRS financing intends that this year's taxpayers contribute the money to cover the IOUs being handed out this year. With this financial objective, funds are accumulated during the members' working years which, when combined with investment income, will be sufficient to pay benefits throughout the years of retirement.

There are systems which have a design for deferring contributions to future taxpayers. Lured by a lower contribution rate now, they put aside the consequence that the contribution rate must then relentlessly grow to a level much higher than would be required if a level contribution pattern were followed.

An inherent feature of a pre-funded program is the accumulation of reserve assets, for decades, and the income produced when the assets are invested. *Investment income* becomes *the third 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 liabilities for service already rendered and accrued assets).

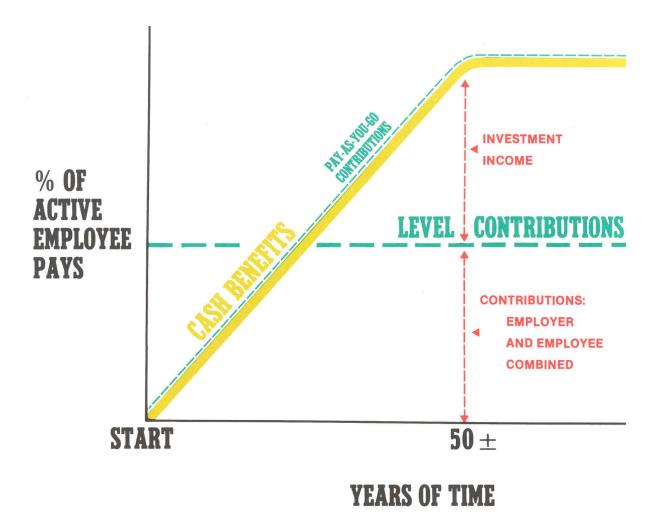
Computing Contributions to Support Fund Benefits. From a given schedule of benefits and from employee and asset data, the actuary calculates the contribution rates to support the benefits by means of an actuarial valuation and a funding method.

An actuarial valuation has a number of ingredients such as: the rate of investment return which plan assets will earn; the rates of withdrawal of active members who leave covered employment; 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. The assumptions are established by the Board of Trustees after receiving the advice of the actuary.

Reconciling Differences Between Assumed Experience and Actual Experience. Once actual experience has occurred and has been observed, it will not coincide exactly with assumed experience, regardless of the skill of the actuary and the many calculations made. The future can not be predicted with precision.

AJRS 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 *continuing* adjustments in financial position.



CASH BENEFITS LINE. This relentlessly increasing line is the fundamental reality of retirement plan financing. It happens each time a new benefit is added for future retirements (and happens regardless of the design for contributing for benefits).

LEVEL CONTRIBUTION LINE. Determining the level contribution line requires detailed assumptions concerning a variety of experiences in future decades, including:

**Economic Risk Areas** 

Rates of investment return

Rates of pay increase

Changes in active member group size

Non-Economic Risk Areas

Ages at actual retirement

Rates of mortality

Rates of withdrawal of active members (turnover)

Rates of disability

#### THE ACTUARIAL VALUATION PROCESS

The financing diagram on page E-3 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 Social Security) which is 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 the plan administrator.

Retired lives now receiving benefits

Former members with vested benefits not yet payable

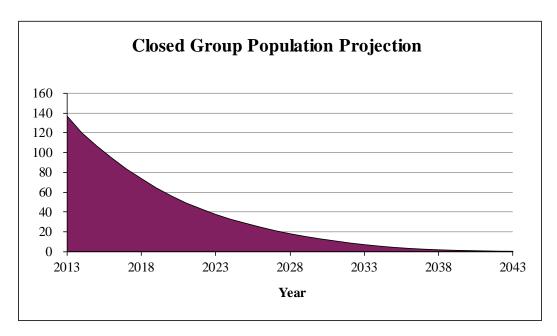
Active members

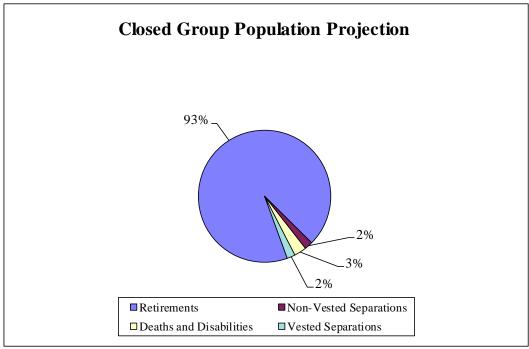
- B. + Asset data (cash & investments), furnished by the plan administrator
- C. + Benefit provisions that establish eligibility and amounts of payments to members
- D. + Assumptions concerning future experience in various risk areas
- E. + *The funding method* (the long-term, planned pattern for employer contributions)
- F. + Mathematically combining the assumptions, the funding method, and the data
- G. = Determination of:

Plan financial position; and/or

New Employer Contribution Rate

## EXPECTED DEVELOPMENT OF PRESENT POPULATION JUNE 30, 2013





The charts above show the expected future development of the present population in simplified terms. The Retirement System presently covers 140 active members. Eventually, 2% of the population is expected to terminate covered employment prior to retirement and forfeit eligibility for an employer provided benefit. Approximately 95% of the present population is expected to receive monthly retirement benefits either by retiring directly from active service, or retiring from vested deferred status. About 3% of the present population is expected to become eligible for death-in-service or disability benefits. Within 6 years, over half of the covered membership is expected to consist of new hires.

#### **GLOSSARY**

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".

**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 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.

**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.

## GLOSSARY (CONCLUDED)

**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 a phase-in of differences between actual and assumed market rates of return.

### MEANING OF "UNFUNDED ACTUARIAL ACCRUED LIABILITIES"

"Actuarial accrued liabilities" are the present value of the portions of promised benefits that are not covered by future normal cost contributions --- a liability has been established ("accrued") because the service has been rendered but the resulting monthly cash benefit may not be payable until years in the future.

If "actuarial accrued liabilities" at any time exceed the plan's accrued assets (cash & investments), the difference is "*unfunded actuarial accrued liabilities*." This is the common condition. It is less common when a plan's assets equal or exceed the plan's "actuarial accrued liabilities."

Each time a plan adds a new benefit, which applies to service already rendered, an "actuarial accrued liability" is created, which is also an "unfunded actuarial accrued liability" because the plan can't print instant cash to cover the value of the new benefit promises. Payment for such unfunded actuarial accrued liabilities is spread over a period of years, commonly in the 15-30 year range.

Unfunded actuarial accrued liabilities can occur in another way: if actual plan experience is less favorable than assumed, the difference is added to unfunded actuarial accrued liabilities. For example, in plans where benefits are directly related to an employee's pay near time of retirement, unfunded actuarial accrued liabilities increased rapidly during the 1970's because unexpected rates of pay increase created additional actuarial accrued liabilities which could not be matched by reasonable investment results. Most of the unexpected pay increases were the direct result of inflation, which is a very destructive force on financial stability.

The existence of unfunded actuarial accrued liabilities is not bad but the changes from year-to-year in amount of unfunded actuarial accrued liabilities are important --- "bad" or "good" or somewhere in between.

Nor are unfunded actuarial accrued liabilities a bill payable immediately, but it is important that policy-makers prevent the amount from becoming unreasonably high and *it is vital for plans to have a sound method for making payments toward them* so that they are controlled.

### **SECTION F**

ACTUARIAL AND REQUIRED SUPPLEMENTAL INFORMATION REQUIRED BY STATEMENTS NO. 25 AND NO. 27 OF THE GOVERNMENTAL ACCOUNTING STANDARDS BOARD

This information is presented in draft form for review by the System's auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the System's financial statements.

### GASB STATEMENTS No. 25 AND No. 27 REQUIRED ACTUARIAL INFORMATION SCHEDULE OF FUNDING PROGRESS

### (\$ Thousands)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Entry Age AAL UAAL (b) (b)-(a)		Funded Ratio (a)/(b)	Annual Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b-a)/(c)]
6/30/96	\$ 51,478	\$ 63,452	\$ 11,974	81.1 %	\$11,714	102 %
6/30/97	63,284	65,657	2,373	96.4 %	12,422	19 %
6/30/98	77,175	71,274	(5,901)	108.3 %	13,084	-
6/30/99	91,783	82,776	(9,007)	110.9 %	13,891	-
6/30/00	107,059	83,211	(23,848)	128.7 %	14,371	-
6/30/01	119,191	116,073	(3,118)	102.7 %	14,869	=
6/30/02	124,212	124,734	522	99.6 %	15,487	3 %
6/30/03	126,520	137,925	11,405	91.7 %	15,935	72 %
6/30/04	129,065	141,775	12,710	91.0 %	16,282	78 %
6/30/05	135,062	150,580	15,519	89.7 %	16,638	93 %
6/30/06	145,050	156,510	11,459	92.7 %	17,009	67 %
6/30/07	159,587	157,373	(2,215)	101.4 %	17,334	-
6/30/08	169,061	165,747	(3,314)	102.0 %	18,074	-
6/30/09	167,433	180,166	12,732	92.9 %	18,875	67 %
6/30/10	165,244	182,912	17,668	90.3 %	18,630	95 %
6/30/11	165,377	186,635	21,258	88.6 %	19,338	110 %
6/30/12	167,796	195,455	27,658	85.8 %	19,202	144 %
6/30/13	182,596	203,134	20,537	89.9 %	19,586	105 %

Year Ended	<b>Annual Required</b>	Percent				
June 30	Contribution	Contributed				
1996	\$3,291,509	100%				
1997	4,441,390	100%				
1998	3,650,957	100%				
1999	3,160,812	100%				
2000	3,183,709	100%				
2001	3,136,072	100%				
2002	3,319,233	100%				
2003	4,065,638	100%				
2004	4,126,190	100%				
2005	4,774,986	100%				
2006	4,904,699	100%				
2007	5,182,016	100%				
2008	5,144,958	100%				
2009	4,466,571	100%				
2010	4,667,612	100%				
2011	5,220,623	100%				
2012	5,465,079	100%				
2013	5,672,291	100%				

# GASB STATEMENTS No. 25 AND No. 27 REQUIRED ACTUARIAL INFORMATION

		Computed										
Valuation	Fiscal	Employer	Valuation	4.T.G	Interest	ARC	Amort.	Pension	Contri-	Change		Valuation
<b>Date</b>	Year	Rate	Payroll	ARC	on NPO A	Adjustment	Factor	Cost	bution	in NPO	Balance	Interest
6/30/1988	6/30/1990	41.71%	\$ 5,206,055	\$ 2,942,416	0	0	18.89	\$ 2,942,416	\$ 2,942,416	0	0	6.00%
6/30/1989	6/30/1991	36.44%	5,576,258	2,754,416	0	0	18.26	2,754,416	2,754,416	0	0	6.00%
6/30/1990	6/30/1992	32.85%	7,114,292	2,645,168	0	0	17.63	2,645,168	2,645,168	0	0	6.00%
6/30/1991	6/30/1993	28.07%	7,613,698	2,440,785	0	0	16.97	2,440,785	2,440,785	0	0	6.00%
6/30/1992	6/30/1994	28.29%	7,916,017	2,843,864	0	0	16.31	2,843,864	2,843,864	0	0	7.50%
6/30/1993	6/30/1995	29.56%	9,978,435	3,097,838	0	0	15.63	3,097,838	3,097,838	0	0	7.50%
6/30/1994	6/30/1996	29.39%	10,504,656	3,291,509	0	0	14.95	3,291,509	3,291,509	0	0	7.50%
6/30/1995	6/30/1997	37.37%	10,982,107	4,441,390	0	0	13.68	4,441,390	4,441,390	0	0	7.50%
6/30/1996	6/30/1998	29.62%	11,714,044	3,650,957	0	0	12.92	3,650,957	3,650,957	0	0	7.50%
6/30/1997	6/30/1999	24.22%	12,421,987	3,160,812	0	0	12.34	3,160,812	3,160,812	0	0	7.50%
6/30/1998	6/30/2000	22.47%	13,084,100	3,183,709	0	0	11.64	3,183,709	3,183,709	0	0	7.50%
6/30/1999	6/30/2001	21.92%	13,890,618	3,136,072	0	0	10.93	3,136,072	3,136,072	0	0	7.50%
6/30/2000	6/30/2002	21.87%	14,370,910	3,319,233	0	0	10.20	3,319,233	3,319,233	0	0	7.50%
6/30/2001	6/30/2003	26.00%	14,868,738	4,065,638	0	0	22.36	4,065,638	4,065,638	0	0	7.00%
6/30/2002	6/30/2004	25.77%	15,486,651	4,126,190	0	0	22.36	4,126,190	4,126,190	0	0	7.00%
6/30/2003	6/30/2005	29.34%	15,934,625	4,774,986	0	0	19.79	4,774,986	4,774,986	0	0	7.00%
6/30/2004	6/30/2006	29.46%	16,281,670	4,904,699	0	0	19.79	4,904,699	4,904,699	0	0	7.00%
6/30/2005	6/30/2007	30.44%	16,637,573	5,182,016	0	0	19.79	5,182,016	5,182,016	0	0	7.00%
6/30/2006	6/30/2008	29.39%	17,009,056	5,144,958	0	0	19.79	5,144,958	5,144,958	0	0	7.00%
6/30/2007	6/30/2009	24.20%	17,333,983	4,466,571	0	0	18.65	4,466,571	4,466,571	0	0	7.50%
6/30/2008	6/30/2010	24.59%	18,074,314	4,667,612	0	0	18.65	4,667,612	4,667,612	0	0	7.50%
6/30/2009	6/30/2011	27.43%	18,874,986	5,220,623	0	0	18.65	5,220,623	5,220,623	0	0	7.50%
6/30/2010	6/30/2012	29.08%	18,629,861	5,465,079	0	0	18.65	5,465,079	5,465,079	0	0	7.50%
6/30/2011	6/30/2013	29.93%	19,337,991	5,672,291	0	0	18.65	5,672,291	5,672,291	0	0	7.50%
6/30/2012	6/30/2014	31.46%	19,201,734				18.13					7.25%
6/30/2013	6/30/2015	29.12%	19,585,755									7.25%

Arkansas Judicial Retirement System

## GASB STATEMENTS NO. 25 AND NO. 27 REQUIRED SUPPLEMENTARY INFORMATION

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 valuation date follows:

Valuation Date June 30, 2013

Actuarial Cost Method Entry Age

Amortization Method Level Percent-of-Payroll

Remaining Amortization Period 30-Year Open

Asset Valuation Method 4-year smoothed market with 25% corridor

**Actuarial Assumptions:** 

Investment Rate of Return7.25%Projected Salary Increases3.50%Including price inflation at2.75%

Cost-of-living adjustments Pre July 1, 1983 Retirees:

Increased with increases in active Judges pay.

Post June 30, 1983 Retirees:

3.0%, Compound.

Retirees and beneficiaries receiving benefits 125

Terminated plan members entitled to but 4

not yet receiving benefits

Active plan members 140

Total 269



October 25, 2013

Ms. Gail H. Stone
Executive Director
Arkansas Judicial Retirement System
One Union National Plaza
124 West Capitol, Suite 400
Little Rock, Arkansas 72201

Re: Arkansas Judicial Retirement System - Annual Actuarial Valuation and 2012/2013 Gain/(Loss) Analysis of Financial Experience

Dear Gail:

Enclosed are 20 copies of this report.

Sincerely,

Mita Drazilov

Mita D. Drazilov

MDD:mrb Enclosures