

**EDUCATIONAL EMPLOYEES' SUPPLEMENTARY  
RETIREMENT SYSTEM OF FAIRFAX COUNTY (ERFC)**  
28TH ANNUAL ACTUARIAL VALUATION  
DECEMBER 31, 2007

# REPORT OF THE DECEMBER 31, 2007 ACTUARIAL VALUATION OUTLINE OF CONTENTS

---

Section	Pages	Items
	2	Cover Letter
	3	COMMENTS
<b>A</b>	<b>A1-A4</b>	<b>FINANCIAL PRINCIPLES</b>
<b>B</b>		<b>RESULTS OF THE VALUATION</b>
	B-1	Financing Benefit Promises (Pie Chart)
	B2-B3	Computed Employer Rates
	B4-B7	Accrued Liabilities
	B-8	Change in Unfunded Accrued Liabilities (Gain/Loss)
	B-9	Gains and Losses by Risk Area
	B-10	Gains and Losses – Comparative Statement
	B-11	Financing Benefit Promises – Revisited (Pie Chart)
	B-12	Expected Development of Present Population (Pie Chart)
<b>C</b>	<b>C1-C8</b>	<b>SUMMARY OF BENEFITS</b>
<b>D</b>		<b>FINANCIAL INFORMATION</b>
	D-1	Revenues and Expenditures
	D-2	Portfolio Composition
	D3-D4	Funding Value of Assets
<b>E</b>		<b>COVERED MEMBER DATA</b>
	E1-E7	Active Members
	E8-E14	Retirees and Beneficiaries
	E15-E17	Vested Deferred Cases
<b>F</b>		<b>FINANCIAL REPORTING UNDER GOVERNMENTAL ACCOUNTING STANDARDS BOARD (GASB) REQUIREMENTS</b>
	F-1	Financial Reporting
	F-2	Statement of Plan Assets
	F-3	Statement of Changes in Plan Assets
	F-4	Notes to Financial Statements
	F-5	Schedule of Funding Progress
	F-6	Schedule of Employer Contributions
	F-7	Summary of Actuarial Methods and Assumptions
	F-8	Annual Pension Cost and Net Pension Obligation under GASB Statement No. 27
<b>G</b>	<b>G1-G14</b>	<b>ACTUARIAL ASSUMPTIONS AND MISCELLANEOUS</b>

April 16, 2008

The Board of Trustees  
Educational Employees' Supplementary  
Retirement System of Fairfax County  
Fairfax, Virginia

Dear Board Members:

***Submitted in this report are the results of our 28th annual actuarial valuation*** of the Educational Employees' Supplementary Retirement System of Fairfax County (ERFC), based on data as of ***December 31, 2007***.

***Individual member statistical data***, together with the necessary financial data on which the valuation was based, was furnished by your Executive Director and staff. Their efforts in furnishing this material are acknowledged with our appreciation.

***The actuarial assumptions*** used in making the actuarial valuation are shown in Section G of this report. The assumptions were adopted by the Trustees following a study of experience covering the five-year period ended June 30, 2004.

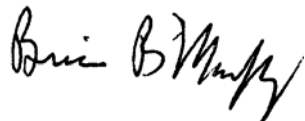
This valuation was completed in accordance with actuarial procedures proscribed by the Actuarial Standards Board. The Actuaries involved have extensive experience in performing valuations of public employee retirement systems.

The Actuaries submitting this report are Members of the American Academy of Actuaries (MAAA) as indicated, and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

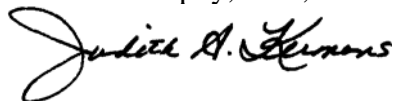
***Your attention is directed particularly to:***

COMMENTS on page 3;  
Computed Employer Contribution Rate on page B-2;  
Comparative Statement on page B-5;  
Short Condition Test on page B-7;

Respectfully submitted,



Brian B. Murphy, FSA, MAAA



Judith A. Kermans, EA, MAAA

BBM/JAK:mrb

## COMMENTS

---

**Funding Policy:** The ERFC funding policy, as stated in the ERFC Plan Document is “*to establish and receive contributions which will remain approximately level from generation to generation of citizens, and which when combined with other assets and investment return thereon, will be sufficient to pay benefits when due while providing a reasonable margin for adverse experience.*”

**Contribution Rate Policy:** Actuarial valuations as of odd numbered years (2005, 2007, etc.) are used to set the employer contribution rate for the two year period beginning 18 months after the valuation date. The December 31, 2007 valuation is used to determine the contribution rate for the period July 1, 2009 to June 30, 2011. Actuarial valuations as of even numbered years provide an interim measure of the financial condition of ERFC and are also used for financial reporting in connection with Governmental Accounting Standards Board (GASB) Statements No. 25 and No. 27, including the determination of the “Annual Required Contribution” (ARC) in accordance with parameters specified by the GASB. For funding purposes, unfunded accrued liabilities are currently being amortized over a closed 30 year period ending on June 30, 2034. Because of the operation of the contribution rate policy and the requirements of the GASB, there will be years when the figures reported for GASB accounting purposes may differ from the figures reported in the actuarial report for funding purposes, possibly resulting in a Net Pension Obligation (NPO), or a Net Pension Asset (NPA) in some years. If the Contribution Rate Policy is followed consistently, the Actuary expects that such items will, in the long run, be immaterial.

**Contribution Rate Level:** The contribution rate for the two year period beginning July 1, 2009 was calculated to be 3.20% of payroll. This rate is estimated to be the minimum amount that would avoid a NPO for the two year funding period (July 1, 2009 to June 30, 2011) based on the following assumptions: 1) investment return of 0.0% in 2008, 2) investment return of 7.5 % in all future years (after 2008) and 3) Benefit provisions remain unchanged and other plan experience is in line with expectations. If plan experience is worse than this scenario, the 3.20% rate would result in a Net Pension Obligation in the second year.

**Plan Experience:** Experience during the year ending December 31, 2007 was favorable. Although the market value rate of return as measured by the actuary was only 7.5%, the Market Value of Assets is \$75.0 million greater than the funding value (please see page D-3) and the ARC is 0.17% of payroll less than last year which provides a reserve against future unfavorable experience. The funded ratio is 88.0%, which represents an improvement over last year. If market value of assets were the basis for the measurement, the funded ratio would be 91.5%.

**Group Demographics:** As of December 31, 2007, the *ERFC 2001* plan has more active members than the *ERFC* legacy plan. Of the total ERFC active population of 19,599 members, 10,249 are in *ERFC 2001*.

**Financial Status:** We are pleased to report that, based upon the December 31, 2007 valuation; the Fairfax County ERFC is operating in accordance with its funding policy and continues to operate in accordance with actuarial principles of level percent of payroll financing.

---

**SECTION A**

**FINANCIAL PRINCIPLES**

---

## FINANCIAL PRINCIPLES AND OPERATIONAL TECHNIQUES

---

***Promises Made, and Eventually Paid.*** As each year is completed, the plan in effect hands an “IOU” to each member then acquiring a year of service credit --- The “IOU” says: “The Educational Employees’ Supplementary Retirement System of Fairfax County 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 Fairfax County at the time the IOU becomes a cash demand?

***The law governing plan financing intends that this year’s taxpayers contribute the money to cover the IOUs being handed out this year.*** By following this principle, ***the employer contribution rate will remain approximately level from generation to generation*** --- your children and grandchildren will contribute the same percents of active payroll you contribute now.

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

An inevitable by-product of the level-cost design is the accumulation of reserve assets for decades, and the income produced when the assets are invested. ***Invested assets are a by-product and not the objective.*** ***Investment return*** becomes, in effect, the third 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:

Current Cost (the cost of members' service being rendered this year)

... plus ...

Interest on Unfunded Accrued Liabilities (unfunded accrued liabilities are the difference between (i) liabilities for service already rendered and (ii) the accrued assets of the plan).

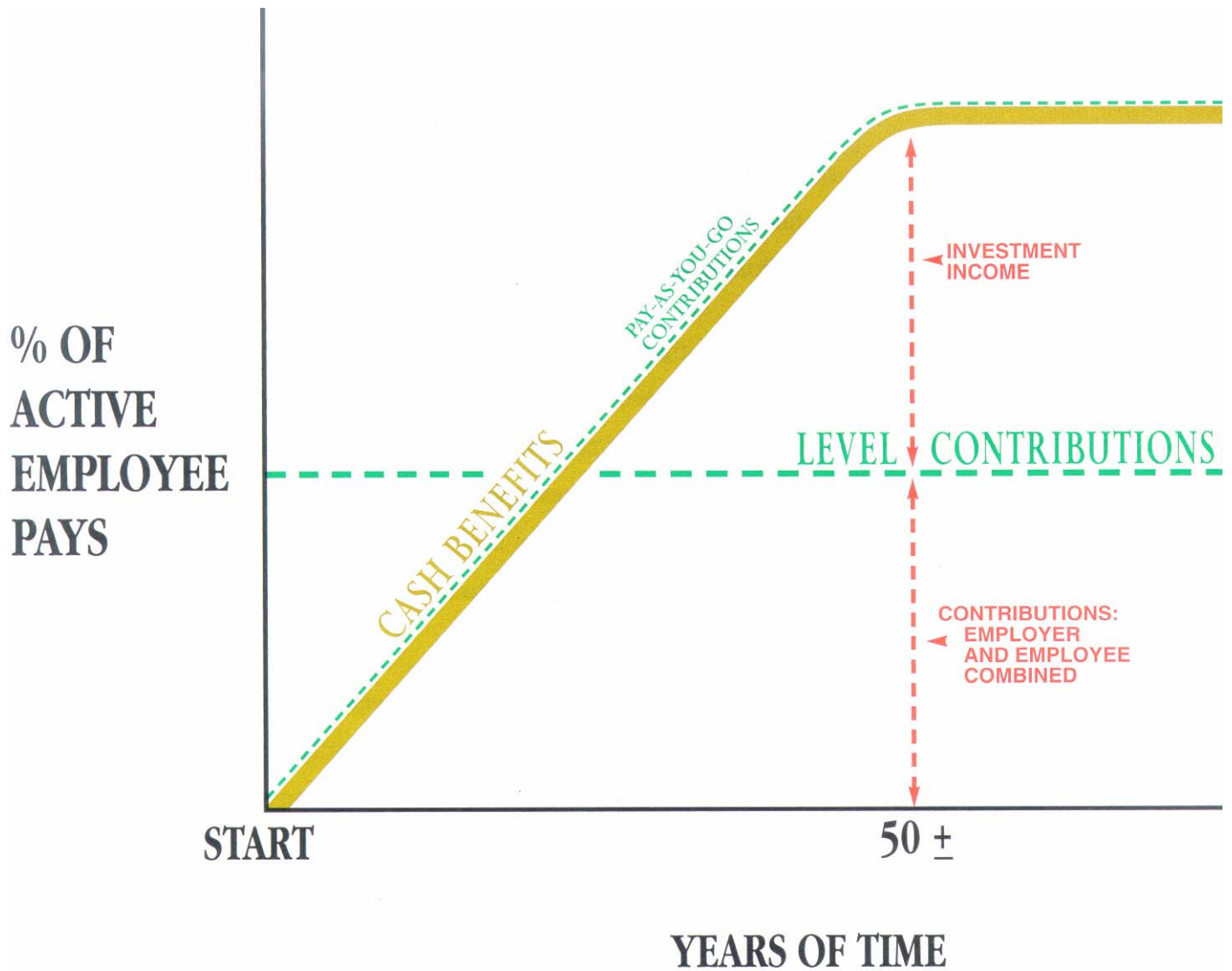
***Computing Contributions to Support Plan Benefits.*** From a given schedule of benefits and from the employee data and asset data furnished, the actuary determines the contribution rates to support the benefits, by means of *an actuarial valuation and a funding method*.

An actuarial valuation has a number of ingredients such as: the rate of investment return which plan assets are assumed to 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 preparing 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 plan 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 wisdom of the assumptions and regardless of the skill of the actuary and the millions of calculations made. The demographic future can be predicted with considerable but not 100% precision. However, *inflation rates seem to defy reliable prediction*.

The plan copes with these continually changing differences by having periodic 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 the opposite 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:

*Covered Person Data*, furnished by plan administrator

Retired lives now receiving benefits

Former employees with vested benefits not yet payable

Active employees

+ *Asset Data* (cash and investments), furnished by plan administrator

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

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

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

= Determination of:

*Plan Financial Position*

and/or *New Employer Contribution Rate*

---

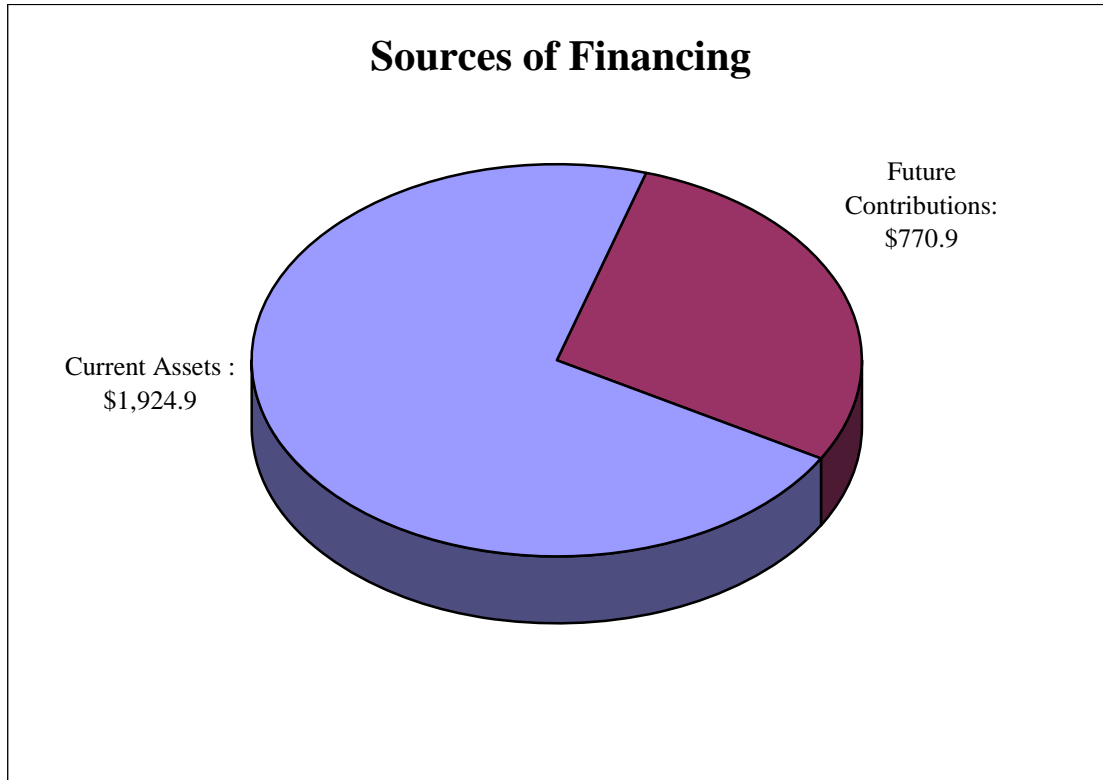
## **SECTION B**

### **RESULTS OF THE VALUATION**

---

**FINANCING \$2,695.8 MILLION OF BENEFIT PROMISES**  
**DECEMBER 31, 2007**  
**(\$ IN MILLIONS)**

---



The pie chart above shows that the total amount of benefit promises made to members in *ERFC* and *ERFC 2001* is \$2,695.8 million, based on plan assumptions as of December 31, 2007. In actuarial terms this is called the present value of future benefit payments. It represents the amount of money, shown in today's dollars, needed to pay benefits to current and future retirees based on plan assumptions. These assumptions are outlined in Section G of this report. The \$2,695.8 million would be sufficient to pay promised benefits if plan members leave active employment as expected (retire, quit, etc.), and live exactly according to plan mortality assumptions. A major assumption in calculating the \$2,695.8 million number is that investments earn 7.50% per year.

**COMPUTED EMPLOYER CONTRIBUTION RATES  
(AS PERCENTS OF ACTIVE MEMBER PAYROLL)**

---

Valuation Date	December 31, 2007	December 31, 2006
Contributions for Period Beginning July 1	2009	2008
Normal Cost (current cost):		
Service Retirement	3.39%	3.34%
Reduced Service Retirement	0.89%	0.96%
Casualty Benefits	0.16%	0.16%
Separation Benefits	1.24%	1.22%
Totals	5.68%	5.68%
Member Contributions	4.00%	4.00%
Employer Normal Cost	1.68%	1.68%
Unfunded Actuarial Accrued Liability	1.29%	1.46%
<b>Annual Required Contribution (GASB 25)</b>	<b>2.97%</b>	<b>3.14%</b>
Contingency Contribution	0.23%	0.23%
Funding Policy Contribution	3.20%	3.37%

The Funding Policy Contribution rate for the two year period beginning July 1, 2007 was determined in connection with the December 31, 2005 valuation. The funding policy contribution for the two year period beginning July 1, 2009 is determined by this December 31, 2007 valuation. **The contribution rate was calculated to be 3.20% of payroll. This rate is estimated to be the minimum amount that would be sustainable for the period July 1, 2009 to June 30, 2011 based on the following assumptions: 1) investment return of 0.0% in 2008, 2) investment return of 7.5 % in all future years (after 2008) and 3) benefit provisions remain unchanged and other plan experience is in line with expectations. If plan experience is worse than this scenario, the 3.20% rate will not be sustainable for the two year period.** The positive gap between the Funding Policy Contribution and the Annual Required Contribution increases the likelihood that the contribution rate might continue to remain stable.

Unfunded liability was amortized as a level percent of payroll over 25 years in the December 31, 2007 valuation and 26 years in the December 31, 2006 valuation. If this pattern continued indefinitely, and there were no gains or losses, unfunded liabilities would be fully amortized on June 30, 2034.

## CONTRIBUTION RATE HISTORY

Valuation Date	Active Member Payroll (\$1,000's)	Adopted Total	
		Employer Rate	U.A.A.L. Amort. Years
2/28/1975	\$ 110,571		
2/29/1980	169,924		
6/30/1983	225,592		
6/30/1985	251,691		
6/30/1986@	277,545		
6/30/1987	305,050		
6/30/1988\$!	340,946	5.49%	19 Yrs.
6/30/1989	369,575	5.49%	19
6/30/1990	411,970	5.48%	20
6/30/1991	451,873	5.48%	20
6/30/1992	447,474	5.48%	20
6/30/1993#@	450,530	5.48%	20
6/30/1994	480,995	5.48%	22
6/30/1995\$!	521,044	5.98%	20
6/30/1996	531,060	5.98%	16
6/30/1997	553,709	5.98%	13
6/30/1998#!	582,755	4.99%	11
6/30/1999*	626,015	3.69%	-
6/30/2000*	678,937	3.69%	-
6/30/2001\$&	759,906	4.00%	-
6/30/2002!	781,756	4.29%	30
6/30/2003\$	866,502	3.37%	29
12/31/2004#&	977,817	3.37%	28
12/31/2005&+	1,050,217	3.37%	27
12/31/2006	1,111,828	3.37%	26
12/31/2007	1,161,432	3.20%	25

\* Beginning with the 1999 valuation, the adopted rate was not the same as the computed rate.

@ After change in asset valuation method.

\$ After change in benefit structure.

# After changes in assumptions.

! After change in employer contribution rate.

& Includes Contingency Contribution.

+ Reflects new funding policy which establishes the employer rate for a two-year period.

## ACTUARIAL ACCRUED LIABILITIES

---

Accrued liabilities for	Amounts at December 31	
	2007	2006
Present Active Members	\$ 931,066,164	\$ 901,350,278
Present Inactive Vested Members	33,765,858	27,222,127
Present Retirees and Beneficiaries	1,221,969,395	1,176,979,385
Total Actuarial Accrued Liabilities	\$2,186,801,417	\$2,105,551,790
Funding Value of Assets	1,924,885,815	1,818,930,165
Unfunded Actuarial Accrued Liability	\$ 261,915,602	\$ 286,621,625
Funded Ratio	88.02%	86.39%

## ASSETS AND LIABILITIES COMPARATIVE STATEMENT

Valuation Date	Active Member Payroll	Computed Liabilities			Valuation Assets	Unfunded Accrued Liabilities	Funded %
		Retired	Other Members	Total			
(\$ in thousands)							
2/28/1975	\$ 110,571	\$ 4,567	\$ 55,613	\$ 60,180	\$ 7,831	\$ 52,349	13.0%
2/29/1980	169,924	38,288	138,708	176,996	74,173	102,823	41.9%
6/30/1985	251,691	96,588	240,351	336,939	221,656	115,283	65.8%
6/30/1986@	277,545	116,773	264,611	381,384	284,195	97,189	74.5%
6/30/1987	305,051	136,073	293,170	429,243	325,127	104,116	75.7%
6/30/1988\$!#	340,946	163,959	343,523	507,482	359,069	148,413	70.8%
6/30/1989	369,575	203,394	357,569	560,963	405,317	155,646	72.3%
6/30/1990	411,970	240,122	404,751	644,873	461,450	183,423	71.6%
6/30/1991	451,873	285,618	432,109	717,727	510,825	206,902	71.2%
6/30/1992	447,474	318,072	445,498	763,570	563,644	199,926	73.8%
6/30/1993#@	450,530	344,160	564,207	908,367	717,701	190,666	79.0%
6/30/1994	480,995	374,849	597,230	972,079	766,480	205,599	78.8%
6/30/1995\$!	521,044	395,249	677,287	1,072,536	839,930	232,606	78.3%
6/30/1996	531,060	436,181	694,363	1,130,544	934,571	195,973	82.7%
6/30/1997	553,709	464,345	751,022	1,215,367	1,045,412	169,955	86.0%
6/30/1998#!	582,755	490,261	788,111	1,278,372	1,194,556	83,816	93.4%
6/30/1999!	626,015	539,917	805,742	1,345,659	1,365,417	(19,758)	101.5%
6/30/2000	678,937	614,739	752,632	1,367,371	1,505,231	(137,860)	110.1%
6/30/2001\$	759,906	667,605	884,953	1,552,558	1,599,219	(46,661)	103.0%
6/30/2002!	781,756	699,251	994,705	1,693,956	1,619,889	74,067	95.6%
6/30/2003\$	866,502	903,963	868,455	1,772,418	1,597,459	174,959	90.1%
12/31/2004#	977,817	1,083,988	851,594	1,935,582	1,643,020	292,562	84.9%
12/31/2005	1,050,217	1,130,378	892,584	2,022,962	1,718,399	304,563	84.9%
12/31/2006	1,111,828	1,176,979	928,573	2,105,552	1,818,930	286,622	86.4%
12/31/2007	1,161,432	1,221,969	964,832	2,186,801	1,924,886	261,915	88.0%

@ After change in asset valuation method.

\$ After change in benefits.

# After changes in actuarial assumptions.

! After change in employer contribution rate.

**ASSETS AND LIABILITIES  
EXPRESSED AS PERCENTS OF ACTIVE MEMBER PAYROLL  
COMPARATIVE STATEMENT**

Valuation Date	Active Member Payroll (\$ thousands)	As Percents of Active Member Payroll		
		Computed Liabilities	Valuation Assets	Unfunded Liabilities
2/28/1975	\$ 110,571	54%	7%	47%
2/29/1980	169,924	104%	44%	61%
6/30/1985	251,691	134%	88%	46%
6/30/1986@	277,545	137%	102%	35%
6/30/1987	305,051	141%	107%	34%
6/30/1988\$!#	340,946	149%	105%	44%
6/30/1989	369,575	152%	110%	42%
6/30/1990	411,970	157%	112%	45%
6/30/1991	451,873	159%	113%	46%
6/30/1992	447,474	171%	126%	45%
6/30/1993#@	450,530	202%	159%	42%
6/30/1994	480,995	202%	159%	42%
6/30/1995\$!	521,044	206%	161%	45%
6/30/1996	531,060	213%	176%	37%
6/30/1997	553,709	219%	189%	30%
6/30/1998#!	582,755	219%	205%	14%
6/30/1999!	626,015	215%	218%	(3)%
6/30/2000	678,937	201%	222%	(21)%
6/30/2001\$	759,906	204%	210%	(6)%
6/30/2002!	781,756	217%	207%	10%
6/30/2003\$	866,502	205%	184%	21%
12/31/2004#	977,817	198%	168%	30%
12/31/2005	1,050,217	193%	164%	29%
12/31/2006	1,111,828	189%	164%	25%
12/31/2007	1,161,432	188%	166%	22%

- @ After change in asset valuation method.
- \$ After changes in benefits.
- # After changes in actuarial assumptions.
- ! After change in employer contribution rate.

In an inflationary economy the value of dollars is decreasing. Since observation of only the dollar amounts of key facts can be misleading, observation of relationships among key facts tells a more relevant story of the changes in financial strength. ***The smaller the ratio of unfunded liabilities to active member payroll, the stronger the system.*** Observation of this relative index over a period of years indicates changes in strength.



## SHORT CONDITION TEST

If the contributions to ERFC 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) Active member contributions on deposit;
- 2) The liabilities for future benefits to present retired lives;
- 3) The liabilities for service already rendered by active members.

In a system that has been following the discipline of level percent of payroll financing, the liabilities for active 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 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.

Valuation Date	Aggregate Actuarial Accrued Liabilities For			Valuation Assets	Portion of Accrued Liabilities Covered by Assets		
	(1)	(2)	(3)		(1)	(2)	(3)
	Member Contributions	Retirees and Beneficiaries	Members (Employer Financed Portion)				
(... \$1,000s ...)							
6/30/1985	\$ 53,395	\$ 96,588	\$186,956	\$ 221,656	100%	100%	38%
6/30/1986@	57,753	116,773	206,858	284,195	100%	100%	53%
6/30/1987	66,589	136,073	226,581	325,126	100%	100%	54%
6/30/1988\$#	68,662	163,959	274,861	359,069	100%	100%	46%
6/30/1989	75,917	203,394	281,651	405,317	100%	100%	45%
6/30/1990	83,920	240,122	320,831	461,450	100%	100%	43%
6/30/1991	89,976	285,618	342,133	510,825	100%	100%	40%
6/30/1992	97,502	318,072	347,996	563,644	100%	100%	43%
6/30/1993#@	115,312	344,160	448,895	717,701	100%	100%	58%
6/30/1994	129,428	374,849	467,802	766,480	100%	100%	56%
6/30/1995\$	143,150	395,249	534,137	839,930	100%	100%	56%
6/30/1996	146,228	436,181	548,135	934,571	100%	100%	64%
6/30/1997	144,063	464,345	606,959	1,045,412	100%	100%	72%
6/30/1998#!	149,220	490,261	638,891	1,194,556	100%	100%	87%
6/30/1999!	154,582	539,917	651,160	1,365,417	100%	100%	103%
6/30/2000	157,148	614,739	595,484	1,505,231	100%	100%	123%
6/30/2001\$	178,564	667,605	706,389	1,599,219	100%	100%	107%
6/30/2002!	170,849	699,251	823,856	1,619,889	100%	100%	91%
6/30/2003\$	176,648	903,963	691,807	1,597,459	100%	100%	75%
12/31/2004#	227,725	1,083,988	623,869	1,643,020	100%	100%	53%
12/31/2005	257,142	1,130,378	635,442	1,718,399	100%	100%	52%
12/31/2006	239,780	1,176,979	688,793	1,818,930	100%	100%	58%
12/31/2007	269,404	1,221,969	695,428	1,924,886	100%	100%	62%

- @ After change in asset valuation method.
- \$ After change in benefits.
- # After changes in actuarial assumptions.
- ! After change in employer contribution rate.

**CHANGE IN UNFUNDED ACCRUED LIABILITIES  
DURING THE YEAR ENDING DECEMBER 31, 2007  
(\$ IN MILLIONS)**

---

	As of December 31	
	2007	2006
1. Beginning unfunded liabilities (UAAL):	\$286.6	\$304.6
2. Unfunded liabilities at End:		
a. Normal Cost (5.68% of estimated 2007 payroll)	\$ 64.6	\$ 61.3
b. Member and employer contributions (including donated assets)	82.7	78.8
c. Interest accrual	20.8	22.2
d. Expected UAAL, based on Beginning valuation (1+2a-2b+2c)	289.3	309.3
e. Actual UAAL, from End valuation	261.9	286.6
3. Total Gains/(Losses) during Period:		
a. Total: 2d - 2e	\$ 27.4	\$ 22.7
b. From non-recurring activities and benefit changes	0.0	0.0
c. From differences between assumed and actual Experiences in basic risk areas: 3a - 3b	27.4	22.7

The above schedule estimates the total gain or loss on the Retirement System activities for the year. The next page shows the breakdown of the total gain or loss by Source. Risk areas related to Assumptions include Economic Risks and Demographic Risks. Economic Risks relate to Pay Increases and Investment Return. Demographic Risks relate to rates of retirement, death, disability, and other terminations. Risks not directly related to assumptions include granted additional service credit, data adjustments, timing of financial transactions, etc.

**CHANGE IN UNFUNDED ACCRUED LIABILITIES  
GAINS AND LOSSES BY RISK AREA  
DURING THE YEAR ENDING DECEMBER 31, 2007**

Type of Risk Area	Gain (Loss) in Period			
	\$ in millions			Percent of Liabilities
	<i>ERFC</i>	<i>ERFC 2001</i>	Totals	
<b>Risks Related to Assumptions</b>				
<b>Economic Risk Areas</b>				
Pay Increases	\$10.7	\$(0.7)	\$10.0	0.5%
Investment Return			25.1	1.2%
<b>Demographic Risk Areas</b>				
Full and Reduced Service Retirements	1.9	0.0	1.9	0.1%
Vested Deferred Retirements	0.9	0.3	1.2	0.1%
Ordinary Death Benefits	0.2	0.0	0.2	0.0%
Service-Connected Death Benefits	0.0	0.0	0.0	0.0%
Ordinary Disability Benefits	(0.2)	(0.1)	(0.3)	0.0%
Service-Connected Disability Benefits	(0.1)	0.0	(0.1)	0.0%
Terminated with Refund	(3.4)	0.0	(3.4)	(0.2)%
<b>Data Adjustments and Miscellaneous</b>			(7.2)	(0.3) %
<b>Total Gain (or Loss) During Period</b>			27.4	1.4%
<b>Beginning of Year Accrued Liabilities</b>			2,106.0	100.0%

**EXPERIENCE GAINS & LOSSES BY RISK AREA**  
**COMPARATIVE STATEMENT**  
**(\$ IN MILLIONS)**

Experience Period	Pay Increases	Investment Return	Retirement	Disability & Death-In Service	Other Separations	Other	Total Gain (Loss)	
							\$	Percent of Liabilities
1985-1986	\$ (6.3)	\$25.1	\$ (9.8)	\$ 1.9	\$ (1.6)	\$ (3.4)	\$ 5.9	1.8 %
1986-1987	(4.8)	7.6	(5.7)	3.6	(3.1)	(5.3)	(7.7)	(2.0)%
1987-1988	(17.3)	(2.5)	(8.4)	3.4	1.1	2.6	(21.1)	(4.9)%
1988-1989	(13.0)	12.3	(17.9)	(4.4)	3.3	12.4	(7.3)	(1.4)%
1989-1990	(14.0)	23.6	(18.7)	(4.3)	1.2	(15.9)	(28.1)	(5.0)%
1990-1991	(2.1)	14.4	(25.9)	(5.5)	0.4	(5.0)	(23.7)	(3.7)%
1991-1992	21.2	21.7	(28.4)	(6.0)	(4.0)	2.3	6.8	0.9 %
1992-1993	15.1	34.6	(16.3)	(1.0)	(6.5)	(17.3)	8.6	1.1 %
1993-1994#	(4.1)	4.7	(1.6)	(3.7)	3.5	(15.2)	(16.4)	(1.8)%
1994-1995	(9.7)	25.2	5.1	(1.4)	(4.4)	(5.5)	9.3	0.9 %
1995-1996	(7.7)	45.4	4.1	(1.8)	(5.6)	4.3	38.7	3.6 %
1996-1997	9.9	53.5	2.9	(1.7)	(4.5)	(8.7)	51.4	4.5 %
1997-1998#	(2.6)	81.1	5.9	(0.5)	6.4	(13.9)	76.4	6.3 %
1998-1999*	(8.4)	95.4	0.3	(1.0)	6.5	(3.8)	89.0	7.0 %
1999-2000	(17.6)	62.3	3.8	(1.2)	12.9	38.9	99.1	7.4 %
2000-2001	(9.1)	17.6	(0.3)	(1.0)	13.0	(19.5)	0.7	0.0 %
2001-2002	3.0	(50.4)	3.5	(1.1)	2.6	(29.9)	(72.3)	(4.7)%
2002-2003	18.5	(92.5)	11.0	(0.3)	4.0	(23.3)	(82.6)	(4.9)%
2003-2004#@								
2005	(7.1)	1.9	1.0	0.1	0.0	(3.2)	(7.3)	(0.4)%
2006	(4.7)	23.6	2.0	0.0	(0.8)	2.6	22.7	1.1 %
2007	10.0	25.1	1.9	(0.2)	(2.2)	(7.2)	27.4	1.4 %

# Experience Study.

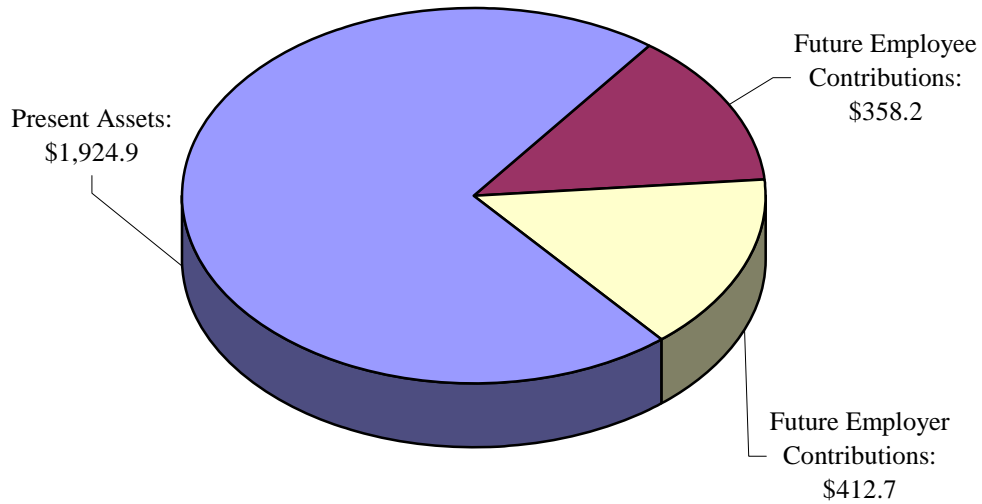
\* Updated Gain Formulas.

@ Gain Loss Analysis not performed.

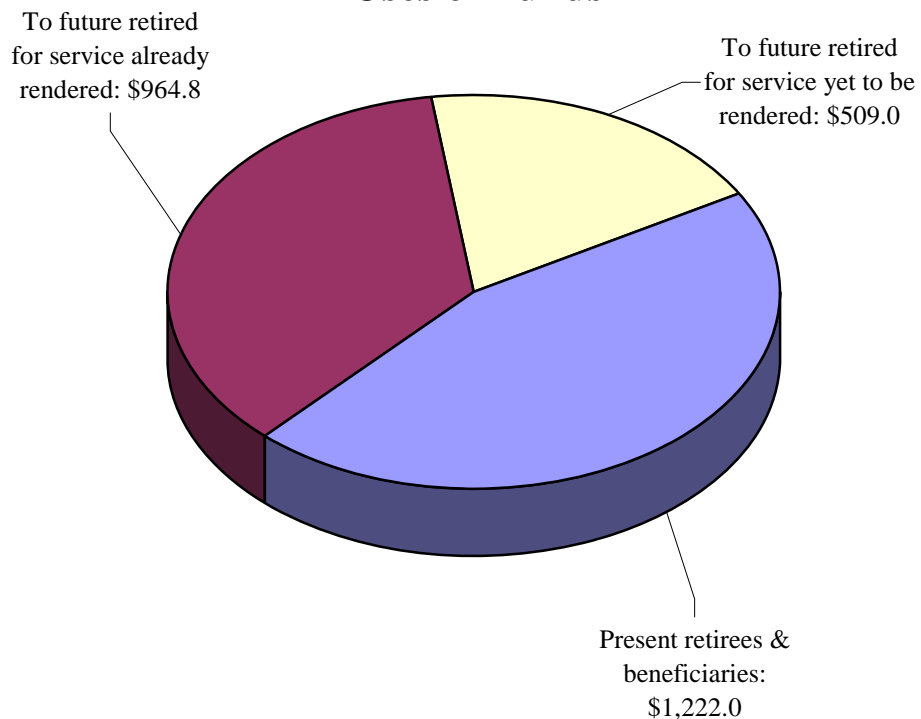
**FINANCING \$2,695.8 MILLION OF BENEFIT PROMISES  
DECEMBER 31, 2007  
(\$ IN MILLIONS)**

---

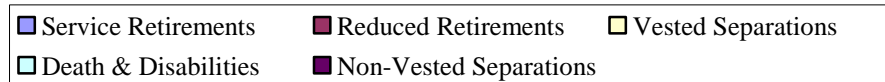
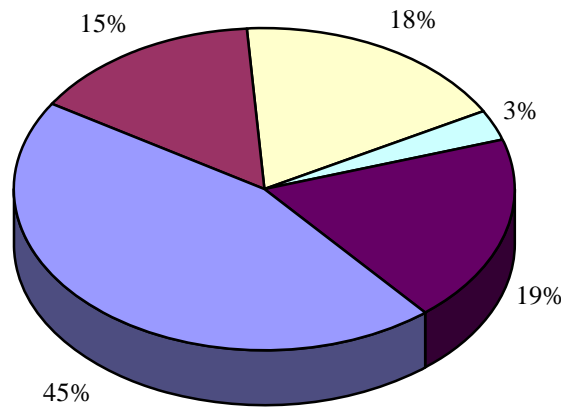
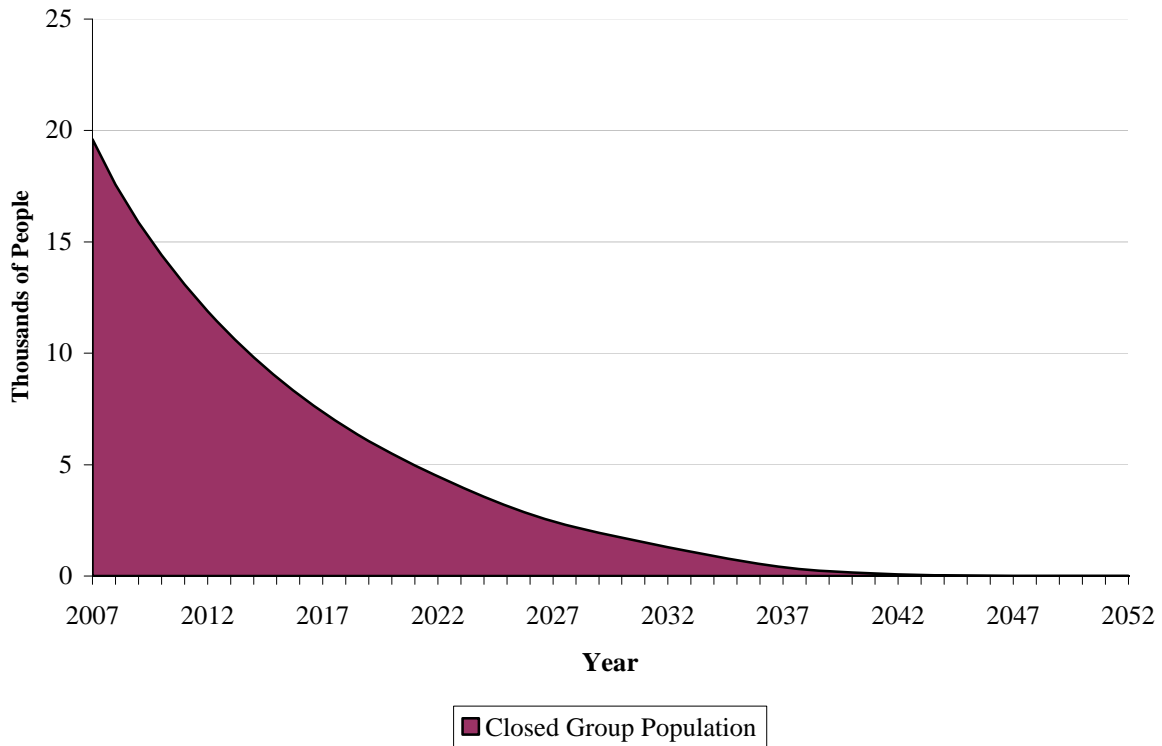
**Sources of Funds**



**Uses of Funds**



## EXPECTED DEVELOPMENT OF PRESENT POPULATION DECEMBER 31, 2007



The charts show the expected future development of the present population in simplified terms. The retirement system presently covers 19,599 active members. Eventually, 19% of the population is expected to terminate covered employment prior to retirement and forfeit eligibility for an employer provided benefit. Approximately 78% of the present population is expected to receive monthly retirement benefits either by retiring directly from active service, or by separating from service without withdrawing contributions. 3% of the present population is expected to become eligible for death-in-service or disability benefits. Within 8 years, over half of the covered membership is expected to consist of new hires. The reality, of course, is often different.

---

**SECTION C**

**SUMMARY OF BENEFITS**

---

**SUMMARY OF PROVISIONS AS OF DECEMBER 31, 2007**  
**MEMBERS HIRED AFTER JULY 1, 1988 BUT BEFORE JULY 1, 2001**  
***ERFC***

---

1. **Service Retirement Eligibility.** A member may retire any time after reaching the service retirement date, which is either (i) age 65 with 5 years service or (ii) age 55 with 25 years of service.
2. **Reduced Service Retirement Eligibility.** A member with 25 years of service but younger than age 55 may retire after age 45. A member with less than 25 years of service and younger than age 65 may retire after age 55.
3. **Deferred Retirement Eligibility.** An inactive member with 5 or more years of service will be entitled to a pension with payments beginning at age 55, provided she/he does not withdraw accumulated member contributions.
4. **Death-In-Service Benefit Eligibility.** An active member with 5 or more years of service who dies will have benefits payable to the surviving spouse or other eligible beneficiary. The 5-year service requirement is waived if the death is service-connected.
5. **Disability Retirement Eligibility.** An active member with 5 or more years of service who becomes totally and permanently disabled may be retired and receive a disability pension. The 5-year service requirement is waived if the disability is service-connected.
6. **Final Average Compensation (FAC).** A member's final average compensation is the average of the 3 highest consecutive years of salary during eligible employment.
7. **Service Retirement Amount.** For payment periods during the retired member's lifetime 103% times (i) minus (ii) where:
  - (i) means 1.85 percent of the FAC multiplied by years of credited service, and
  - (ii) means 1.65 percent of the portion of VRS FAC in excess of \$1,200, multiplied by applicable years of creditable Virginia service; provided if the member is younger than age 65 and if creditable Virginia service is less than 30 years, the result of such multiplication shall be reduced for each month before the earlier of
    - (1) attainment of age 65, and
    - (2) the date when 30 years service would have been completed.



**SUMMARY OF PROVISIONS AS OF DECEMBER 31, 2007**  
**MEMBERS HIRED AFTER JULY 1, 1988 BUT BEFORE JULY 1, 2001**  
***ERFC***

---

**Service Retirement Amount (Continued)**

The reduction shall be one-half of 1% for each of the first 60 months and four-tenths of one percent for each month beyond 60 months, if any.

For payment periods, if any, before the age the member becomes eligible for full Social Security benefits, an additional temporary benefit equal to 1.00 percent of the FAC multiplied by years of credited service.

8. **Reduced Service Retirement Amount After 25 Years Service.** Service Retirement amount reduced to reflect retirement age younger than age 55.
9. **Reduced Service Retirement Amount After 5-24 Years Service.** For payment periods during the retired member's lifetime, the Service Retirement amount payable at age 65 reduced to reflect retirement age younger than age 65. For payment periods before the age the member becomes eligible for full Social Security benefits, an additional temporary benefit equal to the Service Retirement temporary benefit reduced to reflect retirement age younger than age 65.
10. **Deferred Retirement Amount.** Calculated in the same manner as reduced service retirement.
11. **Death-In-Service Benefit Amount.** If the member is eligible for a service or reduced service retirement then an eligible named beneficiary will receive such benefits reduced based upon an Option A (in the case of a spouse or an ex spouse subject to a DRO) or Option B (in case of another eligible beneficiary) election. If not, the eligible named beneficiary will receive an amount equal to 103% times a lifetime pension equal of 0.25% of the FAC multiplied by years of credited service, and also reduced in connection with an Option A or Option B election. Credited service shall be increased by the time period from the date of death to the date when the member would have reached service retirement with a minimum of 10 years of service used, provided the death was service-connected. If a named beneficiary is not eligible for either of these types of benefits, the named beneficiary will receive a refund of the member's accumulated contributions.

**SUMMARY OF PROVISIONS AS OF DECEMBER 31, 2007**  
**MEMBERS HIRED AFTER JULY 1, 1988 BUT BEFORE JULY 1, 2001**  
***ERFC***

---

12. **Disability Retirement Amount.** The amount is 103% times a lifetime pension equal to 0.25 percent of the FAC multiplied by years of credited service. Credited service shall be increased by the time period from disability retirement to the date when the member would have reached the service retirement date. The minimum pension payable is 2.5 percent of FAC.
13. **Post-Retirement Increases.** The amount of the monthly benefit is adjusted each March 31, by 3% compounded annually, beginning with the March 31 which is more than three full months after the member's effective retirement date. Pensions of members that retire in the immediately preceding calendar year are increased by 1.489% (one-half a year's increase).
14. **Member Contributions.** Members contribute 4% of their salaries. Interest credits are 5% annually. If a member leaves covered employment before becoming eligible to retire, accumulated contributions are returned upon request.
15. **Lifetime Level Benefit (for Retirements after July 1, 2004).** Members are eligible for a lifetime level benefit (LLB) that is calculated by determining the annuitized value of the greater of their accumulated contribution balance or the present value of the currently provided benefit.
16. **Optional Forms of Payment.**
- Option A: 100% Joint and Survivor benefit. Benefit is 85% of the straight life amount adjusted for the difference in age between the retiree and beneficiary.
  - Option B: 50% Joint and Survivor benefit. Benefit is 91% of the straight life amount adjusted for the difference in age between the retiree and beneficiary.
  - Option C: 10 years Certain and Life. Benefit is 96% of the straight life amount.
  - Option D: Single sum payment not exceeding member's accumulated contribution balance, plus a single life annuity actuarially reduced from the pension amount otherwise payable. Actuarial equivalent factors are described on page G-14.

**SUMMARY OF PROVISIONS AS OF DECEMBER 31, 2007**  
**ALTERNATE BENEFITS AVAILABLE TO MEMBERS**  
**WITH SOME SERVICE BEFORE JULY 1, 1988**

---

**Service Retirement: Alternate Amount After Full Social Security Age.** A member with service before 7/1/88 may elect, at time of retirement, to receive an alternate benefit amount for payment periods after full Social Security age. The *Alternative Guarantee* amount is the amount that would have been received after the individual reached eligibility for full Social Security benefits under the Old Plan (pre – July 1, 1988) formulas. The amount is 103% of the total of:

- (i) the amount payable under June 30, 1987 benefit provisions,
- (ii) plus, if the retiring member is younger than full social security age and if creditable Virginia service is less than 30 years, 1.65 percent of VRS average final compensation in excess of \$1,200, multiplied by years of creditable Virginia service, and further multiplied by a certain percent based upon the number of months that retirement occurs before reaching the earlier of the above two conditions; such percent is one half of one percent for each of the first 60 such months and four-tenths of one percent for each of the next 60 such months, if any.

**Reduced Service Retirement: Alternate Amount with 25 Years or more Years of Service.** By election at time of retirement, such a member may elect to receive 103% of the following combination of benefits:

*To age 55*, 2.85 percent of the 3-year average annual salary multiplied by years of credited service, then actuarially reduced to reflect retirement age younger than age 55; and

*From age 55 to 65*, the amount to age 55 reduced by: 1.65 percent of the portion of VRS average final compensation in excess of \$1,200, multiplied by applicable years of creditable Virginia service; provided if creditable Virginia service is less than 30 years, the result of such multiplication shall be actuarially reduced for each month before the earlier of (1) attainment of age 65, and (2) the date when 30 years service would have been completed; and

*From age 65 for life*, the amount payable at age 65 according to June 30, 1987 provisions or the amount payable at age 65 according to July 1, 1988 provisions.

**SUMMARY OF PROVISIONS AS OF DECEMBER 31, 2007**  
**MEMBERS HIRED JULY 1, 2001 OR LATER**  
***ERFC 2001***

---

1. **Service Retirement Eligibility.** A member may retire at age 60 with 5 or more years of credited service, or after 30 years of credited service regardless of age.
2. **Deferred Retirement Eligibility.** Any member with 5 or more years of credited service that terminates employment prior to the service retirement date, will be eligible to receive a deferred vested pension commencing at age 60, provided accumulated contributions are left on deposit with the Plan.
3. **Death Benefit Eligibility.** Any member with 5 or more years of credited service that dies before beginning to receive a pension will have benefits payable to the named beneficiary.
4. **Final Average Compensation (FAC).** A member's final average compensation is the average of the 3 highest years of salary during eligible employment.
5. **Service Retirement Pension.** The amount is a lifetime pension equal to 0.8% (eight-tenths of one percent) of FAC at retirement multiplied by years of credited service. If necessary, the pension will be increased to make the reserve value of the pension equal to the member's accumulated contributions as of the retirement effective date.
6. **Deferred Retirement Pension.** The amount is a lifetime pension equal to 0.8% (eight-tenths of one percent) of FAC at termination multiplied by years of credited service. If necessary, the pension will be increased to make the reserve value of the pension equal to the member's accumulated contributions as of the termination date.

**SUMMARY OF PROVISIONS AS OF DECEMBER 31, 2007**  
**MEMBERS HIRED JULY 1, 2001 OR LATER**  
***ERFC 2001***

---

7. **Survivor Death Benefit.** The amount is a lifetime pension equal to 0.8% (eight-tenths of one percent) of FAC multiplied by years of credited service at the date of death. If necessary, the pension will be increased to make the reserve value of the pension equal to the member's accumulated contributions as of the date of death. The pension will be adjusted in accordance with an Option A (in the case of a spouse or an ex spouse subject to a DRO) or Option B (in case of another eligible beneficiary) election payable immediately unless the member did not reach the service retirement eligibility prior to death, in which case the pension is reduced for each month that the member was younger than age 60 on the date of death in the following manner:
- a. one-half of 1% for each of the first 60 months and four-tenths of one percent for each month beyond 60 months (the number of months used for reduction is not to exceed the difference between the member's credited service at death and 30 years)
8. **Cost-of-Living Adjustments.** The amount of the monthly benefit is adjusted each March 31, by 3% compounded annually, beginning with the March 31 which is more than three full months after the member's effective retirement date. Pensions of members that retire in the immediately preceding calendar year are increased by 1.489% (one-half a year's increase).
9. **Members' Contributions.** Members contribute 4% of their salaries. Interest credits are 5% annually. If a member leaves covered employment before becoming eligible to retire, accumulated contributions are returned upon request.
10. **Optional Methods of Payment.** Before the effective retirement date, a retiring member may elect one of the following options:
- a. **Option A.** 100% Joint and Survivor benefit. Benefit is 85% of the straight life amount adjusted for the difference in age between the retiree and beneficiary.
  - b. **Option B.** 50% Joint and Survivor benefit. Benefit is 91% of the straight life amount adjusted for the difference in age between the retiree and beneficiary.
  - c. **Option C.** 10 years Certain and Life. Benefit is 96% of the straight life amount.

**SAMPLE BENEFIT COMPUTATION  
FOR *ERFC* MEMBER RETIRING JUNE 30, 2007**

---

**Data:**

A.	<u>7/1/1952</u>	Date of Birth
B.	<u>7/1/2007</u>	Effective Date
C.	<u>7/1/1982</u>	Membership Date
D.	<u>25.00</u>	ERFC Credited Service
E.	<u>25.00</u>	VRS Creditable Service
F.	<u>55.00</u>	Age
G.	<u>Service</u>	Retirement Type
H.	<u>\$60,000.00</u>	3-Year Average Salary
I.	<u>\$60,000.00</u>	5-Year Average Salary

---

***ERFC* Monthly Benefit Calculation**

**Lifetime Portion of Full Service Benefit**

J. <i>ERFC</i> Formula Benefit: $1.85\% \times 25 \text{ yrs.} \times \$60,000 =$	\$ 27,750.00
K. minus VRS Adjustment of: $1.65\% \times 25 \text{ yrs.} \times (\$60,000 - \$1,200) \times 70\% =$ (70% is the VRS Early Service Retirement Reduction Factor for 5 years prior to the earlier of age 65 or 30 years of service)	<u>16,978.50</u>
L. Sub Total	10,771.50
M. plus additional 3% benefit adjustment	<u>323.15</u>
N. Total of Lifetime Portion	11,094.65

**Additional Temporary Benefit (until age 66)**

O. Temporary Benefit Formula: $1\% \times 25 \text{ yrs.} \times \$60,000 =$	15,000.00
P. plus additional 3% benefit adjustment	<u>450.00</u>
Q. Total of Additional Temporary Benefit less 54% Reduction	15,450.00
R. Monthly benefit effective 06/30/2007 at age 55 payable until age 66, $(N + Q)/12 =$	\$2,212.05
S. Monthly benefit effective 07/01/2018 at age 66 payable for life, $N/12 =$	\$ 924.55

The above computation does not reflect the alternative “guarantee” benefit which this member might elect. Members are eligible for a lifetime level benefit (LLB) that is calculated by determining the annuitized value of the greater of their accumulated contribution balance or the present value of the currently provided benefit.

**SAMPLE BENEFIT COMPUTATION  
FOR *ERFC 2001* MEMBER**

---

**Data:**

A.	<u>07/01/1970</u>	Date of Birth
B.	<u>07/01/2030</u>	Effective Date
C.	<u>07/01/2001</u>	Membership Date
D.	<u>29.00</u>	ERFC Credited Service
E.	<u>60.00</u>	Age
F.	<u>Service</u>	Retirement Type
G.	<u>\$60,000.00</u>	3 -Year Average Salary

---

***ERFC 2001* Monthly Benefit Calculation**

**Lifetime Monthly Benefit**

*ERFC 2001* Formula Benefit:  $0.80\% \times 29 \text{ yrs.} \times \$60,000 / 12 =$  \$ 1,160.00

---

**SECTION D**

**FINANCIAL INFORMATION**

---



**SUMMARY OF FINANCIAL INFORMATION**  
**DECEMBER 31, 2007**

*Revenues and Expenditures*

	December 31	
	2007	2006
<b>REVENUES:</b>		
a. Member Contributions	\$ 45,317,716	\$ 43,244,776
b. Employer Contributions	37,389,440	35,532,122
c. Donated Fixed Assets	27,632	
d. Investment Return		
1. Interest and Dividends	46,784,907	38,291,103
2. Net Appreciation	97,835,476	204,460,440
3. Investment Expense	(7,090,078)	(6,979,207)
4. Net Securities Lending	799,592	500,805
5. Real Estate	7,867,315	2,155,676
6. Miscellaneous	78,053	186,870
7. Total Investment Return	146,275,265	238,615,687
e. Total Revenues	229,010,053	317,392,585
<b>EXPENDITURES:</b>		
a. Refunds of Member Contributions	3,929,545	3,436,838
b. Retirement Benefits Paid	132,380,555	125,381,882
c. Administrative Expense	4,113,801	3,217,988
d. Total Expenditures	140,423,901	132,036,708
<b>RESERVE INCREASE:</b>		
Total Revenues Minus Total Expenditures	\$88,586,152	\$185,355,877

*Market Value of Assets*

	December 31	
	2007	2006
<b>Invested Assets</b>		
Bonds	\$ 150,332,579	\$ 135,232,620
Stocks		
a. Common	766,313,084	835,713,104
b. Preferred	3,901,431	1,501,064
Real Estate	89,543,851	75,080,705
Global Asset Allocation	297,380,654	0
Commingled Funds	669,789,339	831,265,845
Total Invested Assets	1,977,260,938	1,878,793,338
Short-term Investments and Cash	276,509,143	174,937,682
Receivables and Pre-Paid Expenses	8,893,737	8,781,996
Other Assets (furniture and equipment)	80,402	
Total Assets	2,262,744,220	2,062,513,016
Liabilities	262,838,668	151,193,616
Net Assets	\$1,999,905,552	\$1,911,319,400

## PORTFOLIO COMPOSITION AT MARKET VALUE

---

The Market Value of the Portfolio was reported to the Actuary as follows:

	Year Ended December 31			
	2007		2006	
	Value	% of Total	Value	% of Total
Bonds	\$ 150,332,579	7.5 %	\$ 135,232,620	7.1 %
Stocks				
a. Common	766,313,084	38.3 %	835,713,104	43.7 %
b. Preferred	3,901,431	0.2 %	1,501,064	0.1 %
Real Estate	89,543,851	4.5 %	75,080,705	3.9 %
Commingled Funds	669,789,339	33.5 %	831,265,846	43.4 %
Global Asset Allocation	297,380,654	14.9 %	0	0.0 %
Net Short-term Investments and Cash	13,645,683	0.7 %	23,719,273	1.3 %
Receivables, Pre-Paid and Other Expenses	8,998,931	0.4 %	8,806,788	0.5 %
<b>Total Assets</b>	<b>\$1,999,905,552</b>	<b>100.0 %</b>	<b>\$1,911,319,400</b>	<b>100.0 %</b>

In performing an actuarial valuation, values must be determined for the assets held by the system on the valuation date. This value may be:

- Cost (or amortized costs);
- Current market value; or
- A value produced by a smoothing formula which recognizes the long-term validity of market value without overreacting to the marketplace's short-term moods.

The value used in the actuarial valuation may thus differ from the value used in the system's financial statements. This does not mean that one is "right" and the other is "wrong;" each is appropriate for the purpose for which it is used.

A smoothing formula has been in use for ERFC valuations since 1986, which in its present form is illustrated on page D-4. In the December 31, 2005 valuation, a new requirement was instituted to prevent unreasonably large differences between the market value and the funding value of assets. The recognized assets must always be between 85% and 115% of the market value (see Page D-3).

## DEVELOPMENT OF FUNDING VALUE OF RETIREMENT SYSTEM ASSETS

Year Ended December 31:	2007	2008	2009	2010	2011
A. Funding Value Beginning of Year	\$1,818,930,165				
B. Market Value End of Year	1,999,905,552				
C. Market Value Beginning of Year	1,911,319,400				
D. Non-Investment Net Cash Flow	(53,575,312)				
E. Investment Return Assumed Rate	7.5%				
1. Market Total: B-C-D	142,161,464				
2. Amount for Immediate Recognition	134,410,688				
3. Amount for Phased in Recognition: (E1-E2)	7,750,776				
F. Phased in Recognition of Investment Return					
1. Current year: 0.20*E3	1,550,155				
2. First Prior Year	21,678,875	\$ 1,550,155			
3. Second Prior Year	1,891,244	21,678,875	\$ 1,550,155		
4. Third Prior Year	0	1,891,244	21,678,875	\$ 1,550,155	
5. Fourth Prior year	0	0	1,891,244	21,678,875	\$ 1,550,159
6. Total Phased-In	25,120,274	25,120,274	25,120,274	23,229,030	1,550,159
G. Funding Value End of Year					
G1. Preliminary Funding Value End of Year: A+D+E2+F6	1,924,885,815				
G2. Upper Corridor Limit: 115% x B	2,299,891,385				
G3. Lower Corridor Limit: 85% x B	1,699,919,719				
G4. Funding Value End of Year	1,924,885,815				
H. Actual/Projected Difference Between Market Value and Funding Value	75,019,737	49,899,463	24,779,189	1,550,159	0
I. Market Rate of Return	7.5%				
J. Ratio of Funding Value to Market Value	96.2%				

The Funding Value of Assets recognizes assumed investment return (line E2) fully each year. Differences between actual and assumed investment return (line E3) are phased in over a closed 5-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. If assumed rates are exactly realized for 4 consecutive years, Funding Value will become equal to Market Value.

## FUNDING VALUE HISTORY

Year Ended	June 30 2003	December 31 2004	December 31 2005	December 31 2006
A. Funding Value Beginning of Year	\$ 1,619,889,279	\$ 1,597,459,083	\$ 1,643,019,915	\$ 1,718,398,545
B. Market Value End of Year	1,349,792,227	1,643,019,915	1,725,963,523	1,911,319,400
C. Market Value Beginning of Year	1,369,372,874	1,349,792,227	1,643,019,915	1,725,963,523
D. Non-Investment Net Cash Flow	(49,571,094)	(81,766,933)	(47,941,309)	(50,041,822)
E. Investment Return Assumed Rate	7.5%	7.5%	7.5%	7.5%
E1. Market Total: B-C-D	29,990,447	374,994,621	130,884,917	235,397,699
E2. Amount for Immediate Recognition	119,632,780	127,327,765*	121,428,695	127,003,323
E3. Amount for Phased in Recognition: (E1-E2)	(89,642,333)	0*	9,456,222	108,394,376
F. Phased in Recognition of Investment Return				
F1. Current year: 0.20*E3	(17,928,467)	0	1,891,244	21,678,875
F2. First Prior Year	(38,097,609)	0	0	1,891,244
F3. Second Prior Year	(24,524,640)	0	0	0
F4. Third Prior Year	(12,610,887)	0	0	0
F5. Fourth Prior year	669,721	0	0	0
F6. Total Recognized Investment Gain or Loss	(92,491,882)	0	1,891,244	23,570,119
G. Funding Value End of Year				
G1. Preliminary Funding Value End of Year: A+D+E2+F6	1,597,459,083	1,643,019,915	1,718,398,545	1,818,930,165
G2. Upper Corridor Limit: 115% x B			1,984,858,051	2,198,017,310
G3. Lower Corridor Limit: 85% x B			1,467,068,995	1,624,621,490
G4. Funding Value End of Year			1,718,398,545	1,818,930,165
H. Actual/Projected Difference Between Market Value and Funding Value	(247,666,856)	0 *	7,564,978	92,389,235
I. Market Rate of Return	2.2%	28.6% **	8.1%	13.8%
J. Ratio of Funding Value to Market Value	118.3%	100.0%	99.6%	95.2%

\* Funding value reset to market value.

\*\* Calculated over the 18 month period of 6/30/2003 to 12/31/2004.

---

**SECTION E**

**COVERED MEMBER DATA**

---

**ERFC MEMBERS**  
**WOMEN ACTIVE MEMBERS IN VALUATION DECEMBER 31, 2007**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

Age Group	Years of Service to Valuation Date							Totals		Average
	0-4	5-9	10-14	15-19	20-24	25-29	30 & Up	No.	Salary	
20-24										
25-29	2	41						43	\$ 2,283,517	\$53,105
30-34	18	463	50					531	31,456,760	59,241
35-39	21	374	313	31	1			740	47,885,798	64,711
40-44	14	286	197	168	39	1		705	47,026,262	66,704
45-49	22	349	243	203	158	31		1,006	67,156,897	66,756
50-54	6	471	361	275	244	166	31	1,554	107,361,172	69,087
55-59	12	424	450	332	288	144	48	1,698	118,962,719	70,060
60		63	64	90	59	24	1	301	20,716,873	68,827
61	2	45	69	94	60	15	1	286	19,476,336	68,099
62	1	23	44	64	41	9	1	183	13,286,096	72,602
63		31	29	35	29	12	1	137	9,615,340	70,185
64	2	11	26	23	25	7	3	97	6,693,778	69,008
65	1	15	18	26	27	9		96	6,752,409	70,338
66		3	4	18	8	5	1	39	2,709,113	69,464
67		2	5	8	7	3		25	1,642,299	65,692
68		6	4	1	5	4		20	1,158,646	57,932
69		2	2	3	3	1		11	601,258	54,660
70			2	3	3	2	1	11	733,800	66,709
71				2	4	1	1	8	475,052	59,382
72			1			1		2	70,229	35,115
73		1	1		1		1	4	151,836	37,959
74					1			1	83,791	83,791
75 & Over			2		2	1	1	6	322,582	53,764
<b>Totals</b>	<b>101</b>	<b>2,610</b>	<b>1,885</b>	<b>1,376</b>	<b>1,005</b>	<b>436</b>	<b>91</b>	<b>7,504</b>	<b>\$506,622,563</b>	<b>\$67,514</b>

While not used in the financial computations the following group averages are computed and shown because of their general interest.

Age: 50.3 years.

Service: 14.1 years.

Annual Pay: \$67,514

**ERFC MEMBERS**  
**MEN ACTIVE MEMBERS IN VALUATION DECEMBER 31, 2007**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

Age Group	Years of Service to Valuation Date							Totals		Average
	0-4	5-9	10-14	15-19	20-24	25-29	30 & Up	No.	Salary	
15-19										
20-24										
25-29	2	5						7	\$ 288,123	\$41,160
30-34	3	130	9					142	8,854,585	62,356
35-39	4	156	156	11				327	22,617,585	69,167
40-44	1	95	126	66	5			293	20,917,207	71,390
45-49		76	84	64	66	5		295	22,947,387	77,788
50-54		70	49	37	84	95	16	351	30,051,935	85,618
55-59	2	65	48	42	47	32	16	252	20,335,796	80,698
60		12	8	7	5	1		33	2,716,408	82,315
61		13	10	4	4	2		33	2,582,359	78,253
62		11	11	4		1		27	2,113,103	78,263
63		7	7	3		2		19	1,458,042	76,739
64		8	5	1	2			16	1,141,067	71,317
65		12	2	4	3			21	1,587,683	75,604
66		3	3		2			8	691,900	86,488
67		4		2				6	393,369	65,562
68		1	2	1	1			5	383,186	76,637
69			1	1				2	180,868	90,434
70		1						1	36,402	36,402
71										
72			2					2	114,866	57,433
73			1					1	35,514	35,514
74					1			1	93,645	93,645
75 & Over		1	1	2				4	118,019	29,505
<b>Totals</b>	<b>12</b>	<b>670</b>	<b>525</b>	<b>249</b>	<b>220</b>	<b>138</b>	<b>32</b>	<b>1,846</b>	<b>\$139,659,049</b>	<b>\$75,655</b>

While not used in the financial computations the following group averages are computed and shown because of their general interest.

Age: 47.2 years.  
Service: 14.1 years.  
Annual Pay \$75,655

**ERFC 2001 MEMBERS**  
**WOMEN ACTIVE MEMBERS IN VALUATION DECEMBER 31, 2007**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

Age Group	Years of Service to Valuation Date							Totals		Average
	0-4	5-9	10-14	15-19	20-24	25-29	30 & Up	No.	Salary	
15-19	1							1	\$ 20,848	\$20,848
20-24	502							502	21,625,179	43,078
25-29	2,018	220						2,238	108,912,429	48,665
30-34	955	310						1,265	66,863,146	52,856
35-39	672	170						842	43,981,963	52,235
40-44	641	138						779	37,000,764	47,498
45-49	745	215						960	42,379,583	44,145
50-54	609	258						867	43,331,890	49,979
55-59	369	173						542	28,209,205	52,047
60	46	21						67	3,391,887	50,625
61	38	19						57	3,492,320	61,269
62	22	16						38	2,147,184	56,505
63	15	8						23	1,149,604	49,983
64	11	2						13	791,049	60,850
65	6	10						16	836,882	52,305
66	10	1						11	529,074	48,098
67	1	2						3	155,264	51,755
68	2	1						3	220,148	73,383
69	1							1	25,639	25,639
70	1							1	26,370	26,370
71	1							1	67,806	67,806
72	1							1	76,676	76,676
73	1							1	91,915	91,915
74										
75 & Over										
<b>Totals</b>	<b>6,668</b>	<b>1,564</b>						<b>8,232</b>	<b>\$405,326,825</b>	<b>\$49,238</b>

While not used in the financial computations the following group averages are computed and shown because of their general interest.

Age: 37.9 years.  
Service: 2.9 years.  
Annual Pay: \$49,238



**ERFC 2001 MEMBERS**  
**MEN ACTIVE MEMBERS IN VALUATION DECEMBER 31, 2007**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

Age Group	Years of Service to Valuation Date							Totals		Average
	0-4	5-9	10-14	15-19	20-24	25-29	30 & Up	No.	Salary	
15-19	2							2	\$ 48,005	\$24,003
20-24	85							85	\$ 3,217,357	37,851
25-29	455	41						496	23,552,462	47,485
30-34	284	102						386	20,615,006	53,407
35-39	213	78						291	16,640,901	57,185
40-44	147	49						196	12,053,734	61,499
45-49	143	39						182	10,699,248	58,787
50-54	105	42						147	8,967,674	61,005
55-59	103	24						127	7,955,478	62,642
60	15	9						24	1,392,608	58,025
61	21	6						27	1,629,079	60,336
62	5	3						8	467,373	58,422
63	7	4						11	644,684	58,608
64	5	4						9	539,414	59,935
65	5							5	275,422	55,084
66	4	1						5	257,330	51,466
67	4	1						5	297,700	59,540
68	1							1	73,134	73,134
69	1	1						2	138,969	69,485
70	1	1						2	51,452	25,726
71	1							1	69,803	69,803
72	3							3	131,835	43,945
73										
74	1							1	49,239	49,239
75 & Over	1							1	55,324	55,324
<b>Totals</b>	<b>1,612</b>	<b>405</b>						<b>2,017</b>	<b>\$109,823,231</b>	<b>\$54,449</b>

While not used in the financial computations the following group averages are computed and shown because of their general interest.

Age: 38.1 years.  
Service: 3.0 years.  
Annual Pay: \$54,449

**ALL ACTIVE MEMBERS IN VALUATION DECEMBER 31, 2007  
BY ATTAINED AGE AND YEARS OF SERVICE**

Age Group	Years of Service to Valuation Date							Totals		Average
	0-4	5-9	10-14	15-19	20-24	25-29	30 & Up	No.	Salary	
15-19	3							3	\$ 68,853	\$ 22,951
20-24	587							587	24,842,536	42,321
25-29	2,477	307						2,784	135,036,531	48,505
30-34	1,260	1,005	59					2,324	127,789,497	54,987
35-39	910	778	469	42	1			2,200	131,126,247	59,603
40-44	803	568	323	234	44	1		1,973	116,997,967	59,300
45-49	910	679	327	267	224	36		2,443	143,183,115	58,610
50-54	720	841	410	312	328	261	47	2,919	189,712,671	64,992
55-59	486	686	498	374	335	176	64	2,619	175,463,198	66,996
60	61	105	72	97	64	25	1	425	28,217,776	66,395
61	61	83	79	98	64	17	1	403	27,180,094	67,444
62	28	53	55	68	41	10	1	256	18,013,756	70,366
63	22	50	36	38	29	14	1	190	12,867,670	67,725
64	18	25	31	24	27	7	3	135	9,165,308	67,891
65	12	37	20	30	30	9		138	9,452,396	68,496
66	14	8	7	18	10	5	1	63	4,187,417	66,467
67	5	9	5	10	7	3		39	2,488,632	63,811
68	3	8	6	2	6	4		29	1,835,114	63,280
69	2	3	3	4	3	1		16	946,734	59,171
70	2	2	2	3	3	2	1	15	848,024	56,535
71	2			2	4	1	1	10	612,661	61,266
72	4		3			1		8	393,606	49,201
73	1	1	2		1		1	6	279,265	46,544
74	1				2			3	226,675	75,558
75 & Over	1	1	3	2	2	1	1	11	495,925	45,084
<b>Totals</b>	<b>8,393</b>	<b>5,249</b>	<b>2,410</b>	<b>1,625</b>	<b>1,225</b>	<b>574</b>	<b>123</b>	<b>19,599</b>	<b>\$1,161,431,668</b>	<b>\$59,260</b>

While not used in the financial computations the following group averages are computed and shown because of their general interest.

Age: 43.5 years.

Service: 8.2 years.

Annual Pay: \$59,260

**ACTIVE MEMBERS BY YEARS OF SERVICE**  
**DECEMBER 31, 2007**

Service Years	Number of Members			Annual Pays	
	Males	Females	Total	Total	Average
0	340	1,527	1,867	\$ 82,775,981	\$44,336
1	342	1,509	1,851	87,691,587	47,375
2	352	1,502	1,854	90,539,260	48,835
3	336	1,239	1,575	80,730,474	51,257
4	254	992	1,246	67,664,435	54,305
5	223	878	1,101	61,138,439	55,530
6	233	973	1,206	69,783,814	57,864
7	245	884	1,129	65,246,542	57,791
8	225	790	1,015	60,812,049	59,913
9	149	649	798	48,283,751	60,506
10	119	467	586	37,187,439	63,460
11	93	417	510	33,825,052	66,324
12	95	287	382	25,615,127	67,055
13	109	365	474	33,182,712	70,006
14	109	349	458	32,209,642	70,327
15	47	270	317	22,659,046	71,480
16	43	250	293	21,405,532	73,056
17	69	322	391	29,310,774	74,964
18	43	267	310	23,454,391	75,659
19	47	267	314	24,120,121	76,816
20	35	197	232	18,196,731	78,434
21	53	235	288	23,790,248	82,605
22	44	210	254	20,976,006	82,583
23	50	183	233	19,045,880	81,742
24	38	180	218	18,966,558	87,003
25	27	102	129	11,433,499	88,632
26	37	116	153	13,982,071	91,386
27	26	105	131	11,928,592	91,058
28	29	69	98	8,837,642	90,180
29	19	44	63	5,606,128	88,986
30 & Up	32	91	123	11,032,145	89,692
<b>Totals</b>	<b>3,863</b>	<b>15,736</b>	<b>19,599</b>	<b>\$1,161,431,668</b>	<b>\$59,260</b>

## PERSONS IN VALUATIONS - COMPARATIVE STATEMENT

### *Active Members*

Valuation Date	Number			Average Pay	Annual Increase In Average Pay		Price Inflation (CPI-U)
	ERFC	ERFC 2001	Total		Last Year	Last 5 Years	Last Year
2/28/1974	7,429		7,429	\$13,087			
2/28/1975	8,075		8,075	13,693			
2/28/1976	8,609		8,609	15,929			
2/29/1980	8,990		8,990	18,901			
6/30/1983	9,359		9,359	24,104			
6/30/1985	9,596		9,596	26,229			
6/30/1986	10,084		10,084	27,523	4.9 %		1.8 %
6/30/1987	10,560		10,560	28,887	5.0 %		3.7 %
6/30/1988	10,727		10,727	31,784	10.0 %		4.0 %
6/30/1989	11,019		11,019	33,540	5.5 %		5.2 %
6/30/1990	11,539		11,539	35,702	6.4 %	6.4 %	4.7 %
6/30/1991	12,313		12,313	36,699	2.8 %	5.9 %	4.7 %
6/30/1992	12,308		12,308	36,356	(0.9)%	4.7 %	3.1 %
6/30/1993	12,330		12,330	36,539	0.5 %	2.8 %	3.0 %
6/30/1994	12,873		12,873	37,365	2.3 %	2.2 %	2.5 %
6/30/1995	13,287		13,287	39,215	5.0 %	1.9 %	3.0 %
6/30/1996	13,110		13,110	40,508	3.3 %	2.0 %	2.8 %
6/30/1997	13,473		13,473	41,098	1.5 %	2.5 %	2.3 %
6/30/1998	13,806		13,806	42,210	2.7 %	2.9 %	1.7 %
6/30/1999	14,449		14,449	43,326	2.6 %	3.0 %	2.0 %
6/30/2000	15,050		15,050	45,112	4.1 %	2.8 %	3.7 %
6/30/2001	15,955		15,955	47,628	5.6 %	3.3 %	3.2 %
6/30/2002	15,363	711	16,074	48,635	2.1 %	3.4 %	1.1 %
6/30/2003	13,934	3,804	17,738	48,850	0.4 %	3.0 %	2.1 %
12/31/2004	11,856	6,864	18,720	52,234	6.9 %	3.8 %	3.3 %
12/31/2005	10,895	8,186	19,081	55,040	5.4 %	4.1 %	3.4 %
12/31/2006	10,065	9,306	19,371	57,396	4.3 %	3.8 %	2.5 %
12/31/2007	9,350	10,249	19,599	59,260	3.2 %	4.0 %	4.1 %

## PERSONS IN VALUATIONS - COMPARATIVE STATEMENT

---

### *Retired Lives*

Valuation Date	Number	Average Annual Benefit	Total Benefits	Active Member Payroll	Total Benefits as % of Payroll
2/28/1974	-	\$ -	\$ -	\$ 97,221,025	
2/28/1975	195	3,463	675,344	110,571,258	0.61%
2/28/1976	456	3,270	1,491,310	137,131,905	1.09%
2/29/1980	1,012	4,238	4,288,395	169,924,320	2.52%
6/30/1983	1,448	5,136	7,437,571	225,592,433	3.30%
6/30/1985	1,823	6,220	11,339,462	251,691,261	4.51%
6/30/1986	2,047	6,614	13,539,032	277,545,288	4.88%
6/30/1987	2,232	7,007	15,639,820	305,050,734	5.13%
6/30/1988	2,425	7,629	18,502,289	340,945,603	5.43%
6/30/1989	2,679	8,671	23,230,719	369,574,756	6.29%
6/30/1990	2,932	9,354	27,428,027	411,970,032	6.66%
6/30/1991	3,209	10,146	32,559,349	451,872,668	7.21%
6/30/1992	3,311	10,960	36,289,308	447,473,936	8.11%
6/30/1993	3,486	11,307	39,417,339	450,530,273	8.75%
6/30/1994	3,775	11,285	42,600,996	480,995,439	8.86%
6/30/1995	3,927	11,529	45,274,131	521,044,021	8.69%
6/30/1996	4,225	11,843	50,036,473	531,060,397	9.42%
6/30/1997	4,478	11,908	53,322,514	553,709,472	9.63%
6/30/1998	4,773	12,156	58,018,744	582,754,912	9.96%
6/30/1999	5,113	12,383	63,312,850	626,015,364	10.11%
6/30/2000	5,344	13,201	70,548,074	678,937,233	10.39%
6/30/2001	5,766	13,167	75,922,636	759,905,510	9.99%
6/30/2002	6,375	13,645	86,985,606	781,756,005	11.13%
6/30/2003	6,729	14,493	97,522,562	866,501,799	11.25%
12/31/2004	7,430	14,767	110,029,000	977,817,281	11.25%
12/31/2005	7,710	15,077	116,242,812	1,050,216,544	11.07%
12/31/2006	8,029	15,370	123,402,840	1,111,827,576	11.10%
12/31/2007	8,354	15,598	130,307,079	1,161,431,668	11.22%

Total benefits as a % of payroll are much higher than total contributions as a % of payroll. This is an expected condition in a well funded plan such as ERFC.

**ORIGINAL BENEFIT FORMULAS (BEFORE JULY 1, 1988)**  
**RETIREES AND BENEFICIARIES DECEMBER 31, 2007**  
**BY TYPE OF BENEFIT BEING PAID**

---

Type of Pension Being Paid	No.	Annual Amounts		
		Payable for Life	Temporary Supplement	Current Benefits
Age and Service - Normal:				
Straight Life	723	\$ 9,474,062		\$9,474,062
Optional Forms	28	431,125		431,125
Age and Service - Early:				
Straight Life	539	3,997,993	\$295,306	4,293,299
Optional Forms	24	232,479	32,046	264,525
Age and Service Totals	1,314	14,135,659	327,352	14,463,011
Duty Disability:				
Straight Life	11	278,745		278,745
Non-Duty Disability				
Straight Life	65	542,765		542,765
Age and Service Survivor Beneficiary, Duty Death, and Non-Duty Death	51	408,725	8,806	417,531
Other Totals	127	1,230,235	8,806	1,239,041
<b>Total Benefits</b>	<b>1,441</b>	<b>\$15,365,894</b>	<b>\$336,158</b>	<b>\$15,702,052</b>

**BENEFIT FORMULAS (EFFECTIVE JULY 1, 1988)  
 RETIREES AND BENEFICIARIES DECEMBER 31, 2007  
 BY TYPE OF BENEFIT BEING PAID**

Type of Pension Being Paid	No.	Annual Amounts		
		Payable for Life	Temporary Supplement	Current Benefits
Age and Service - Normal:				
Straight Life	3,212	\$40,922,494	\$32,947,481	\$73,869,975
Optional Forms	350	4,304,416	3,644,381	7,948,797
Age and Service - Early:				
Straight Life	2,950	13,949,169	15,729,761	29,678,930
Optional Forms	145	884,815	978,905	1,863,720
Age and Service Totals	6,657	60,060,894	53,300,528	113,361,422
Duty Disability:				
Straight Life	14	42,002		42,002
Optional Forms	1	1,570		1,570
Non-Duty Disability:				
Straight Life	134	448,180	15,816	463,996
Optional Forms	17	51,033		51,033
Age and Service Survivor Beneficiary, Duty Death, and Non-Duty Death	69	380,885	250,080	630,965
Other Totals	235	923,670	265,896	1,189,566
<b>Total Benefits</b>	<b>6,892*</b>	<b>\$60,984,564*</b>	<b>\$53,566,424</b>	<b>\$114,550,988</b>

\* Includes benefits split in 30 DROs.

**BENEFIT FORMULAS (EFFECTIVE JULY 1, 2001)  
 RETIREES AND BENEFICIARIES DECEMBER 31, 2007  
 BY TYPE OF BENEFIT BEING PAID**

---

Type of Pension Being Paid	No.	Annual Amounts
Age and Service - Normal: Straight Life	15	\$36,920
Optional Forms	6	17,119
Age and Service - Early: Straight Life		
Optional Forms		
Age and Service Totals	21	54,039
Duty Disability: Straight Life		
Optional Forms		
Non-Duty Disability: Straight Life		
Optional Forms		
Age and Service Survivor Beneficiary, Duty Death, and Non-Duty Death		
Other Totals		
<b>Total Benefits</b>	<b>21</b>	<b>\$54,039</b>



**ORIGINAL BENEFIT FORMULAS (BEFORE JULY 1, 1988)**  
**RETIREES AND BENEFICIARIES DECEMBER 31, 2007**  
**CURRENT ANNUAL BENEFITS - TABULATED BY ATTAINED AGES**

---

<b>Attained Ages</b>	<b>No.</b>	<b>Annual Amount</b>
54	1	\$ 11,870
55	1	2,330
56	3	17,407
57	3	21,067
58	2	8,148
59	2	19,976
60	9	43,964
61	11	62,504
62	15	74,062
63	12	49,738
64	12	65,028
65	4	27,370
66	5	48,443
67	3	30,542
68	14	137,209
69	25	294,257
70	39	556,544
71	45	758,750
72	71	1,190,171
73	62	1,044,078
74	64	1,130,998
75	58	899,103
76	70	1,016,928
77	65	909,902
78	73	954,703
79	79	1,024,327
80-84	364	3,317,441
85-89	232	1,535,264
90 & Up	97	449,928
<b>Total</b>	<b>1,441</b>	<b>\$15,702,052</b>

**BENEFIT FORMULAS (EFFECTIVE JULY 1, 1988)**  
**RETIREES AND BENEFICIARIES DECEMBER 31, 2007**  
**CURRENT ANNUAL BENEFITS - TABULATED BY ATTAINED AGES**

---

<b>Attained Ages</b>	<b>No.</b>	<b>Annual Amount</b>
Under 40	6	\$ 45,881
40-44	7	18,055
45	2	8,386
47	1	3,927
48	3	7,721
49	4	33,606
50	6	27,927
51	7	46,251
52	18	305,262
53	32	752,447
54	38	912,594
55	154	3,340,978
56	197	4,209,674
57	253	5,384,687
58	306	7,142,745
59	383	8,504,834
60	480	10,461,226
61	499	10,504,607
62	413	8,229,718
63	460	9,838,755
64	473	9,630,110
65	456	9,219,347
66	318	3,055,746
67	325	3,122,884
68	276	2,586,564
69	286	3,035,232
70-74	966	9,731,652
75-79	427	3,693,448
80 & Up	96	696,724
<b>Totals</b>	<b>6,892</b>	<b>\$114,550,988</b>

***ERFC 2001***  
**RETIREES AND BENEFICIARIES DECEMBER 31, 2007**  
**CURRENT ANNUAL BENEFITS - TABULATED BY ATTAINED AGES**

---

<b>Attained Ages</b>	<b>No.</b>	<b>Annual Amount</b>
60	2	\$ 4,867
61	3	9,233
62	2	5,064
63	4	9,421
64	2	5,875
65	2	4,420
66	3	7,016
67	1	2,520
68		
69	1	3,397
70-74	1	2,226
<b>Totals</b>	<b>21</b>	<b>\$54,039</b>

**ORIGINAL BENEFIT FORMULAS (BEFORE JULY 1, 1988)**  
**INACTIVE VESTED MEMBERS DECEMBER 31, 2007**  
**ANNUAL DEFERRED BENEFITS - BY ATTAINED AGES**

---

Attained Ages	No.	Annual Amount
48	1	\$ 1,204
52	1	1,915
54	5	7,938
55	7	9,262
56	3	4,794
57	2	1,976
58	2	3,858
59	3	9,277
60	4	9,603
61	4	5,111
62	2	1,995
63	4	5,572
64	1	903
<b>Totals*</b>	<b>39</b>	<b>\$63,408</b>

*\* In addition, there are 5 members whose benefits are offset to zero. Liabilities for these members were set equal to their contributions.*

**BENEFIT FORMULAS (EFFECTIVE JULY 1, 1988)  
 INACTIVE VESTED MEMBERS DECEMBER 31, 2007  
 ANNUAL DEFERRED BENEFITS - BY ATTAINED AGES**

---

<b>Attained Ages</b>	<b>No.</b>	<b>Annual Amount</b>
27	2	\$ 1,901
28	1	1,205
29	20	30,989
30	37	58,691
31	45	78,286
32	58	102,059
33	89	156,060
34	85	164,469
35	112	224,081
36	93	184,098
37	132	279,357
38	118	275,030
39	103	239,834
40	111	247,793
41	89	168,403
42	93	199,114
43	76	145,310
44	78	196,749
45	68	162,389
46	58	176,639
47	67	160,415
48	54	225,595
49	46	136,085
50	51	161,401
51	66	186,797
52	68	211,175
53	74	211,545
54	78	259,589
55	44	157,757
56	34	95,888
57	31	72,643
58	20	53,486
59	26	87,964
60	22	88,260
61	21	60,797
62	19	51,457
63	8	18,456
64	8	45,266
65 & Up	5	22,598
<b>Totals</b>	<b>2,210</b>	<b>\$5,399,631</b>

**ERFC 2001**  
**INACTIVE VESTED MEMBERS DECEMBER 31, 2007**  
**ANNUAL DEFERRED BENEFITS - BY ATTAINED AGES**

---

Attained Ages	No.	Annual Amount
24	1	\$ 840
25	1	937
27	3	6,426
28	17	47,898
29	9	25,854
30	14	38,811
31	11	26,935
32	11	25,402
33	9	21,822
34	4	10,741
35	1	2,563
36	2	5,558
37	1	1,872
38	1	2,167
39	6	12,260
40	6	11,527
41	3	5,206
42	1	854
43	2	3,318
44	2	3,157
45	3	5,246
46	2	3,452
47	5	10,641
48	5	7,965
49	3	5,100
50	3	5,761
51	3	8,001
52	5	8,317
54	2	3,861
55	5	12,153
56	2	3,257
57	5	13,342
58	4	8,017
59	4	11,744
61	1	2,535
<b>Totals</b>	<b>157</b>	<b>\$363,540</b>

---

**SECTION F**

**FINANCIAL REPORTING (GASB)**

---

## **FINANCIAL REPORTING IN COMPLIANCE WITH GOVERNMENTAL ACCOUNTING STANDARDS BOARD (GASB) REQUIREMENTS**

---

The provisions of GASB Statement No. 25 became effective for periods beginning after June 15, 1996. This Statement established financial reporting standards for defined benefit *plans*. (GASB Statement No. 27, which is effective for periods beginning after June 15, 1997 establishes standards for the financial reports of state and local governmental *employers* with regard to pension expense and related liabilities, as well as required supplementary information.)

Defined benefit plan reporting under Statement No. 25 will include two financial statements with notes and two required schedules with notes. In response, the following exhibits appear on the next several pages:

- **Statement of Plan Net Assets Available for Benefits** (page F-2) provides information about the market value of plan assets by investment category.
- **Statement of Changes in Plan Assets Available for Benefits** (page F-3) shows a reconciliation of beginning-of-year market value with the end-of-year market value.

The relevant notes to the financial statements are on page F-4.

- **The Schedule of Funding Progress** (page F-5) shows the most recent history of the actuarial value of assets, actuarial accrued liability, their relationship, and the relationship of the unfunded actuarial accrued liability to payroll.
- **The Schedule of Employer Contributions** (page F-6) provides a history of the Annual Required Contribution (ARC) and a year-by-year comparison of the ARC to the actual contributions.

A summary of actuarial methods and assumptions completes the Statement No. 25 information on page F-7.

A development of the Annual Pension Cost (APC) and the Net Pension Obligation under GASB Statement No. 27 is found on page F-8.



## STATEMENT OF REPORTED PLAN ASSETS

	December 31	
	2007	2006
<b>Assets</b>		
Cash and short-term investments		
Cash	\$ 1,428,886	\$ 1,311,782
Cash with fiscal agent	(1,342,394)	(46,549)
Cash collateral for securities on loan	258,549,938	147,205,643
Short-term investments	17,847,921	26,442,014
Prepaid assets	24,792	24,792
Total cash & short-term investments	\$ 276,509,143	\$ 174,937,682
Receivables		
Interest and dividends	3,907,145	3,698,136
Securities Sold	4,986,101	5,083,369
Miscellaneous accounts receivable	491	491
Total Receivables	\$ 8,893,737	\$ 8,781,996
Investments at fair value		
US Government obligations	\$ 32,105,051	\$ 34,579,095
Mortgage-backed securities	7,383,757	5,498,167
Domestic corporate bonds	66,891,395	53,746,309
International and Convertible bonds	43,952,376	41,409,049
Common stock	766,313,084	835,713,104
Preferred stock	3,901,431	1,501,064
Global Asset Allocation	297,380,654	0
Real Estate	89,543,851	75,080,705
Commingled Funds	669,789,339	831,265,845
Total Investments	\$1,977,260,938	\$1,878,793,338
Other Assets (Furniture and equip. net of accum. deprec.)	80,402	0
<b>Total Assets</b>	<b>\$2,262,744,220</b>	<b>\$2,062,513,016</b>
<b>Liabilities</b>		
Accounts payable	\$ 28,382	\$ 0
Securities purchased	4,260,348	3,987,973
Securities lending collateral	258,549,938	147,205,643
<b>Total Liabilities</b>	<b>\$ 262,838,668</b>	<b>\$ 151,193,616</b>
<b>Net Assets held in trust for pension benefits</b> (a schedule of funding progress is presented on page F-5)	<b>\$1,999,905,552</b>	<b>\$1,911,319,400</b>

## STATEMENT OF CHANGES IN REPORTED PLAN ASSETS

	Reconciliation as of December 31	
	2007	2006
Additions		
Contributions		
Employer	\$ 37,389,440	\$ 35,532,122
Plan members	45,317,716	43,244,776
Donated fixed assets	27,632	0
Total Contributions	82,734,788	78,776,898
Investment Income		
Net appreciation in fair value of investments	97,835,476	204,460,440
Interest and dividends	46,784,907	38,291,103
Real estate	7,867,315	2,155,676
Net securities lending	799,592	500,805
Miscellaneous	78,053	186,870
Total Investment Income	153,365,343	245,594,894
Less: Investment Expenses	7,090,078	6,979,207
Net Investment Income	146,275,265	238,615,687
Total Additions	229,010,053	317,392,585
Deductions		
Benefits	132,380,555	125,381,882
Refunds	3,929,545	3,436,838
Administrative expense	4,113,801	3,217,988
Total Deductions	140,423,901	132,036,708
Net increase/(decrease)	\$ 88,586,152	\$ 185,355,877
Net Assets held in trust for pension benefits		
Beginning of year	\$1,911,319,400	\$1,725,963,523
End of year	\$1,999,905,552	\$1,911,319,400

**NOTES TO THE FINANCIAL STATEMENTS  
FOR THE YEAR ENDED DECEMBER 31, 2007**

---

Membership information as of December 31, 2007, the date of the latest actuarial valuation, is as follows:

Retirees and beneficiaries	8,354
Inactive members	2,411
Active members	19,599
<b>Total</b>	<b>30,364</b>

***Plan Description***

The ERFC is a single employer defined benefit pension plan that provides service, reduced service, disability, and death benefits to plan members and their beneficiaries. Annual post-retirement cost-of-living increases of 3% are effective each March 31.

***Contributions***

Plan members currently contribute 4% of pay. The employer's funding policy provides for periodic employer contributions based upon a fundamental financial objective of having rates of contribution which remain relatively level from generation to generation of employees. To determine the employer contribution rates and to assess the extent to which the fundamental financial objective is being achieved, ERFC has actuarial valuations prepared annually. In preparing those valuations, the entry age actuarial cost method is used to determine normal cost and actuarial accrued liabilities (see page G-2 for further details).

Unfunded actuarial accrued liabilities are amortized by level percent-of-payroll contributions over a period of future years not in excess of 30.

On the basis of the December 31, 2007 actuarial valuation, the Annual Required Employer Contribution determined in accordance with GASB Statement No. 25 for accounting purposes was determined to be 2.97% of payroll as follows:

1) Normal Cost	5.68%
2) Accrued Liability	1.29%
3) Total	6.97%
4) Member Contribution	4.00%
5) Annual Required Contribution	2.97%

**REQUIRED SUPPLEMENTARY INFORMATION**  
**SCHEDULE OF FUNDING PROGRESS**  
**(DOLLAR AMOUNTS IN THOUSANDS)**

<b>Actuarial Valuation Date</b>	<b>Actuarial Value of Assets (a)</b>	<b>Actuarial Accrued Liability (AAL) - Entry Age (b)</b>	<b>Unfunded AAL (UAAL) (b) - (a)</b>	<b>Funded Ratio (a)/(b)</b>	<b>Covered Payroll (c)</b>	<b>UAAL as a Percent of Covered Payroll [(b) - (a)] / (c)</b>
6/30/90	\$ 461,450	\$ 644,873	\$ 183,423	71.56 %	\$ 411,970	44.52 %
6/30/91	510,825	717,727	206,902	71.17 %	451,873	45.79 %
6/30/92	563,644	763,570	199,926	73.82 %	447,474	44.68 %
6/30/93	717,701	908,367	190,666	79.01 %	450,530	42.32 %
6/30/94#	766,480	972,079	205,599	78.85 %	480,995	42.74 %
6/30/95	839,930	1,072,536	232,606	78.31 %	521,044	44.64 %
6/30/96	934,572	1,130,544	195,972	82.67 %	531,060	36.90 %
6/30/97	1,045,412	1,215,367	169,955	86.02 %	553,709	30.69 %
6/30/98	1,194,556	1,282,615	88,059	93.13 %	582,755	15.11 %
6/30/98#	1,194,556	1,278,372	83,816	93.44 %	582,755	14.38 %
6/30/99	1,510,953	1,345,659	(165,294)	112.28 %	626,015	-
6/30/00	1,505,231	1,367,371	(137,860)	110.08 %	678,937	-
6/30/01\$	1,599,219	1,552,558	(46,661)	103.01 %	759,906	-
6/30/02	1,619,889	1,693,956	74,067	95.63 %	781,756	9.47 %
6/30/03\$	1,597,459	1,772,418	174,959	90.13 %	866,502	20.19 %
12/31/04#	1,643,020	1,935,582	292,562	84.89 %	977,817	29.92 %
12/31/05	1,718,399	2,022,962	304,563	84.94 %	1,050,217	29.00 %
12/31/06	1,818,930	2,105,552	286,622	86.39 %	1,111,828	25.78 %
12/31/07	1,924,886	2,186,801	261,915	88.02 %	1,161,432	22.55 %

# Experience Study.

\$ After change in benefit structure.

## SCHEDULE OF EMPLOYER CONTRIBUTIONS

---

Valuation Year Ended	Annual Required Contribution	Percent Contributed
6/30/1991	\$24,839,920	100%
6/30/1992	24,909,099	100%
6/30/1993	25,445,123	100%
6/30/1994	26,935,383	100%
6/30/1995	29,225,043	100%
6/30/1996	30,087,963	100%
6/30/1997	35,159,514	100%
6/30/1998	36,932,114	100%
6/30/1999	38,422,667	100%
6/30/2000	35,655,898	100%
6/30/2001	29,145,883	100%
6/30/2002	30,849,067	100%
6/30/2003	34,506,630	100%
12/31/2004	34,417,581	100%
12/31/2005	33,245,249	100%
12/31/2006	35,532,122	100%
12/31/2007	37,417,072	100%

The figures on this page show the actual employer contribution required for compliance with Governmental Accounting Standards (GASB No. 27). A figure of 100% in the 'Percent Contributed' column means that the employer contribution complied with Governmental Accounting Standards. The figures are prepared in draft form for review by the auditor.

## **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	December 31, 2007
Actuarial cost method	Individual entry age actuarial cost method (see page G-2)
Amortization method	Level percent of payroll
Remaining amortization period	25 years
Asset valuation method	5-year smoothed market 85%/115% corridor
Actuarial assumptions	
Investment rate of return*	7.50%
Projected salary increase*	4.0 - 8.2%
*Includes wage inflation at	3.75%
Cost-of-living adjustments	3.00%

**DETERMINATION OF ANNUAL PENSION COST (APC)  
AND NET PENSION OBLIGATION (NPO) UNDER  
GOVERNMENTAL ACCOUNTING STANDARDS BOARD STATEMENT NO. 27**

---

<b>Fiscal Year Ended June 30</b>	<b>ARC (Annual Required ER Conts)</b>	<b>Interest on Prior Year's NPO</b>	<b>ARC Adjustment (NPO Amort)</b>	<b>Net Change to ARC</b>	<b>APC (Annual Pension Cost)</b>	<b>Actual ER Contribution</b>	<b>Change in NPO</b>	<b>New NPO Balance</b>
1995	\$29,225,043	\$0	\$0	\$0	\$29,225,043	\$29,225,043	\$0	\$0
1996	30,087,963	0	0	0	30,087,963	30,087,963	0	0
1997	35,159,514	0	0	0	35,159,514	35,159,514	0	0
1998	36,932,114	0	0	0	36,932,114	36,932,114	0	0
1999	38,422,667	0	0	0	38,422,667	38,422,667	0	0
2000	35,655,898	0	0	0	35,655,898	35,655,898	0	0
2001	29,145,883	0	0	0	29,145,883	29,145,883	0	0
2002	30,849,067	0	0	0	30,849,067	30,849,067	0	0
2003	34,506,630	0	0	0	34,506,630	34,506,630	0	0
2004	34,417,581	0	0	0	34,417,581	34,417,581	0	0
2005	33,245,249	0	0	0	33,245,249	33,245,249	0	0
2006	35,532,122	0	0	0	35,532,122	35,532,122	0	0
2007	37,417,072	0	0	0	37,417,072	37,417,072	0	0

The figures above are prepared in draft form for review and approval by the auditor. Please let us know if there are any audit adjustments.

---

**SECTION G**

**ACTUARIAL ASSUMPTIONS & MISCELLANEOUS**

---



## APPENDIX

### SUMMARY OF ASSUMPTIONS USED FOR ERFC ACTUARIAL VALUATION ASSUMPTIONS ADOPTED BY BOARD OF TRUSTEES AFTER CONSULTING WITH ACTUARY

---

*The actuarial assumptions used in making the valuation* are shown in this Appendix of the report. The assumptions were established for the December 31, 2004 actuarial valuation, based upon a study of experience during the period July 1, 1999 to June 30, 2004.

#### ***ECONOMIC ASSUMPTIONS***

*The investment return rate* used in making the valuation was 7.5% per year, compounded annually (net after administrative expenses). The real rate of return over wages or the “spread” is defined to be the portion of total investment return which is more than the wage inflation rate. Based upon an assumed wage inflation rate of 3.75%, the 7.5% investment return rate translates to an ***assumed real rate of return over wages of 3.75%***.

*Pay increase assumptions* for individual active members are shown for sample ages on page G-7. Part of the assumption for each age is for merit and/or seniority increase, and the other 3.75% recognizes wage inflation. No specific price inflation assumption is needed for this valuation.

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

*Total active member payroll* is assumed to increase 3.75% annually in the long term, which is the portion of the individual pay increase assumptions attributable to wage inflation. This assumed increase is recognized in the funding of unfunded actuarial accrued liabilities.

#### ***NON-ECONOMIC ASSUMPTIONS***

*The mortality table* used to measure active and retired life mortality was the 1994 Group Annuity Mortality Table set back 2 years for males and 1 year for females. Related values are shown on page G-5 along with the rates used for disabled mortality.

*The probabilities of retirement* for members eligible to retire are shown on page G-6.

*The probabilities of withdrawal* from service, *death-in-service* and *disability* are shown for sample ages on page G-7.

---

*The individual entry age actuarial cost method of valuation* was used for determining actuarial accrued liabilities and normal cost. The method determines separate normal costs for *ERFC* and for *ERFC 2001* and blends the results together to produce the normal costs shown on page B-2. This means that in the long run, the normal cost will become the normal cost of *ERFC 2001*, which is slightly higher than the blended figure shown on page B-2.

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

---

*Present assets (cash and investments) are valued on a market-related basis effective June 30, 1986.* Page D-3 provides specifics. A one time adjustment toward market was made in connection with the 1990-93 experience study and an additional one-time adjustment set the funding value equal to the market value as of December 31, 2004. An 85%-115% market value corridor was added in the December 31, 2005 valuation.

*The data about persons now covered and about present assets* was furnished by the System's administrative staff. Although examined for general reasonableness, the data was not audited by the Actuary.

---

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

---

## **ERFC REGULATIONS – FUNDING POLICY AND EMPLOYER CONTRIBUTION RATE**

---

(Applicable to *ERFC* and *ERFC 2001*)

Pursuant to their authority under § 15.03 of the *ERFC* Plan Document and § 10.03 of the *ERFC 2001* Plan Document, the Trustees have adopted the following regulations governing determination of the employer contribution rate and implementation of the funding policy pursuant to §§ 3.05 and 16.03 of the *ERFC* Plan Document and §§ 3.05 and 11.03 of the *ERFC 2001* Plan Document.

**16.03A Purpose of Regulations.** The funding policy of the Plan is stated in § 16.03 of the *ERFC* Plan Document and § 11.03 of the *ERFC 2001* Plan Document. That policy is “to establish and receive contributions which will remain approximately level from generation to generation of citizens and which, when combined with other assets and investment return thereon, will be sufficient to pay benefits when due while providing a reasonable margin for adverse experience.” Section 3.05 in each Plan Document provides that the employer “shall contribute a percentage of each Member’s Salary, at a rate to be determined by the actuary in accordance with the funding policy set forth in this Plan Document.” Within the broader context of the stated funding policy, the objectives of the Trustees are:

- (1) To make consistent progress toward 100% funding of the Plan and to maintain 100% funding once it has been attained;
- (2) To stabilize the employer contribution rate and avoid sharp increases or decreases due to specific events or short-term conditions; and
- (3) To maintain the Plan’s funding in accordance with principles of actuarial practice and standards issued by the Government Accounting Standards Board (GASB).

**16.03B Frequency of Actuarial Valuations.** The actuary shall prepare annual actuarial valuations based upon calendar-year data. Whenever possible, the valuation for a particular year should be presented to the Trustees within the first 120 days of the following calendar year.

**16.03C Schedule for Setting the Employer Contribution Rate.** The Trustees will determine the Employer contribution rate biennially, in consultation with the actuary, based upon the actuarial valuation for the most recently completed calendar year. The rate shall be set and communicated to the Employer at least 9 months in advance of the effective date so that it will be available for use in the Employer's budgetary process. Each rate shall remain in effect for two consecutive fiscal years. The first rate to be set in accordance with this schedule will be based on the actuarial valuation as of December 31, 2005. It will become effective July 1, 2007, and will remain in effect through June 30, 2009.

**16.03D The Employer Contribution Rate.** The Employer contribution rate will be set at a level that is expected to:

- (1) pay all normal costs accruing under the Plan during the fiscal years for which the rate is effective;
- (2) amortize any unfunded liabilities in compliance with GASB standards; and
- (3) take into consideration the difference between actuarial and market value of Plan assets and the amortization period for unfunded liabilities.

**16.03E The Amortization Period for Unfunded Liabilities.** In the biennial determination of the Employer contribution rate, the amortization period for unfunded liabilities will be set within the parameters permitted by GASB standards. If those standards and the other principles stated in §§ 16.03A and 16.03D permit, the Employer contribution rate to be effective July 1, 2007, through June 30, 2009, will use 27 years as the amortization period for unfunded liabilities. In setting the Employer contribution rate for years beginning July 1, 2009, or later, the Trustees may change the amortization period within the parameters permitted by GASB standards, with the expectation that the amortization period will be reduced over time, consistent with § 16.03A(1).

**16.03F The Valuation of Plan Assets.** The actuarial value of Plan assets shall be determined as a 5 year smoothed Market Value of Assets. The smoothing technique shall fully recognize the assumed return each year. It shall further spread the difference between the actual return and the assumed return in equal installments over the current year and four future years. In the event that the method would result in an actuarial value of assets that is less than 85% of market value or more than 115% of market value, the actuarial value of assets shall be reset to 85% of market value or 115% of market value, as the case may be, and the total difference between market and actuarial value shall be spread over 4 future years.

## SINGLE LIFE RETIREMENT VALUES

---

### STANDARD MORTALITY

Sample Attained Ages	Present Value of \$1 Monthly for Life Increasing 3.0% Annually		Future Life Expectancy (years)	
	Men	Women	Men	Women
55	\$183.72	\$195.47	27.95	31.11
60	165.91	178.85	23.52	26.49
65	146.49	160.36	19.39	22.11
70	126.51	140.71	15.66	18.08
75	106.26	119.31	12.34	14.31
80	85.94	97.25	9.40	10.93
Ref:	261 x 1.00	262 x 1.00		
	sb 2	sb 1		

### DISABLED MORTALITY

Sample Attained Ages	Present Value of \$1 Monthly for Life Increasing 3.0% Annually		Future Life Expectancy (years)	
	Men	Women	Men	Women
55	\$128.18	\$144.69	17.14	20.34
60	118.67	135.13	15.18	18.04
65	110.09	124.28	13.46	15.71
70	99.71	111.15	11.60	13.27
75	86.55	94.60	9.55	10.66
80	70.31	76.56	7.37	8.17
Ref:	309 x 0.70	310 x 0.90		
	sb 0	sb 0		

## PROBABILITIES OF RETIREMENT FOR MEMBERS ELIGIBLE TO RETIRE

Ages	Hired Before 7/1/2001		Hired on or After 7/1/2001		
	Type of Retirement		Age Based	Service	Service Based
	Service	Reduced Service			
45		5%			
46		5%			
47		5%			
48		5%			
49		5%			
50		6%			
51		7%			
52		8%			
53		9%			
54		10%			
55	50%	10%		30	35%
56	40%	5%		31	28%
57	30%	5%		32	21%
58	30%	5%		33	21%
59	30%	5%		34	21%
60	30%	10%	21%	35	21%
61	40%	10%	28%	36	28%
62	40%	20%	28%	37	28%
63	25%	20%	18%	38	35%
64	25%	20%	18%	39	50%
65	50%		50%	40 & Up	100%
66	40%		40%		
67	30%		30%		
68	40%		40%		
69	20%		20%		
70	20%		20%		
71	20%		20%		
72	30%		30%		
73	40%		40%		
74	50%		50%		
75	100%		100%		
76	100%		100%		
77	100%		100%		
78	100%		100%		
79	100%		100%		
80	100%		100%		
Ref:	542	541	666		667

The age column index does not apply to the service based retirements. In *ERFC 2001* an individual can retire at 30 years of service regardless of age.

**SAMPLE RATES OF SEPARATION  
FROM ACTIVE EMPLOYMENT BEFORE RETIREMENT**

---

Ages	Years of Service	% of Active Members Separating Within Next Year									
		Death				Disability				Other	
		Ordinary		Duty		Ordinary		Duty			
		Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
25	3 & Up	0.04%	0.02%	0.01%	0.00%	0.06%	0.03%	0.01%	0.01%	12.00%	15.80%
30		0.06%	0.02%	0.01%	0.00%	0.06%	0.05%	0.02%	0.01%	8.50%	12.00%
35		0.06%	0.03%	0.01%	0.00%	0.09%	0.09%	0.02%	0.02%	5.75%	8.20%
40		0.07%	0.05%	0.01%	0.01%	0.14%	0.12%	0.03%	0.03%	4.30%	5.00%
45		0.10%	0.07%	0.01%	0.01%	0.21%	0.18%	0.05%	0.05%	2.90%	3.70%
50		0.16%	0.10%	0.02%	0.01%	0.34%	0.29%	0.08%	0.07%	2.50%	3.20%
55		0.27%	0.16%	0.04%	0.02%	0.59%	0.49%	0.15%	0.12%	2.50%	3.00%
60		0.47%	0.29%	0.06%	0.04%	0.98%	0.71%	0.24%	0.18%	2.50%	3.00%
Ref:		0.75 x 261 sb 2	0.75 x 262 sb 1	0.1 x 261 sb 2	0.1 x 262 sb 1	0.3 x 16	0.3 x 17	0.1 x 16	0.1 x 17	214 319	214 318

Rates of separation for members with less than 3 years of service are assumed to be: 18% in the first year, 15% in the second year and 12% in the third year.

**SAMPLE PAY INCREASE ASSUMPTIONS FOR AN INDIVIDUAL MEMBER**

---

Sample Ages	Pay Increase Assumption		
	Merit & Seniority	Base (Economy)	Increase Next Year
20	4.45%	3.75%	8.20%
25	3.25%	3.75%	7.00%
30	2.75%	3.75%	6.50%
35	2.35%	3.75%	6.10%
40	2.05%	3.75%	5.80%
45	1.55%	3.75%	5.30%
50	1.15%	3.75%	4.90%
55	0.75%	3.75%	4.50%
60	0.35%	3.75%	4.10%
65	0.25%	3.75%	4.00%
Ref:	124		

## RATES OF FORFEITURE FOLLOWING VESTED SEPARATION

---

Age at Separation	Sample Entry Age				
	25	30	35	40	45
30	0.5000				
31	0.4854				
32	0.4708				
33	0.4563				
34	0.4417				
35	0.4271	0.5000			
36	0.4125	0.4816			
37	0.3979	0.4632			
38	0.3833	0.4447			
39	0.3688	0.4263			
40	0.3542	0.4079	0.5000		
41	0.3396	0.3895	0.4750		
42	0.3250	0.3711	0.4500		
43	0.3104	0.3526	0.4250		
44	0.2958	0.3342	0.4000		
45	0.2813	0.3158	0.3750	0.5000	
46	0.2667	0.2974	0.3500	0.4611	
47	0.2521	0.2789	0.3250	0.4222	
48	0.2375	0.2605	0.3000	0.3833	
49	0.2229	0.2421	0.2750	0.3444	
50	0.2083	0.2237	0.2500	0.3056	0.5000
51	0.1938	0.2053	0.2250	0.2667	0.4125
52	0.1792	0.1868	0.2000	0.2278	0.3250
53	0.1646	0.1684	0.1750	0.1889	0.2375
54	0.1500	0.1500	0.1500	0.1500	0.1500

Forfeiture occurs when a vested person separates from service and withdraws contributions thereby forfeiting future rights to an employer financed benefit. The total probability of forfeiture is obtained by multiplying the probability of “other separation” from page G-7 by the probability of forfeiture from this table. The table does not apply to individuals who are eligible for retirement at time of termination.



# Investment Return and Inflation: Past and Future

## Inflation Distortions

Inflation's impact on investment return is not uniform from year to year. A common expectation for Real Investment Return (the portion of Total Return remaining after Inflation) is in the area of 3% to 4% annually.

Over the last 30 years, Real Return exceeded that range on average. However, for parts of the period it was actually negative. It is very difficult to maintain a long-term portfolio allocation during periods of negative real return.

### Annual Investment Return (including Income) expressed as REAL RETURN (Remainder after Inflation)

No. Years Ended December	Inflation (CPI)	Cash Equiv. (T Bills)	Bonds (Long Term)		Stocks (S & P 500)	Real Return for Sample Fund		
			US Treasury	Corporate (Sol. Bro)		A	B	C
1/2003	1.9	(0.9)	(0.4)	3.3	26.3	8.6	13.6	17.5
1/2004	3.3	(2.0)	5.0	5.2	7.4	5.0	5.5	5.8
1/2005	3.4	(0.4)	4.3	2.4	1.5	2.4	2.0	1.7
1/2006	2.5	2.2	(1.3)	0.7	13.0	3.9	6.6	8.7
1/2007	4.1	0.6	5.6	(1.4)	1.3	1.7	1.5	1.2
5/1975	6.9	(1.0)	(0.7)	(0.8)	(3.5)	(1.2)	(1.7)	(2.1)
5/1980	9.2	(1.3)	(6.9)	(6.2)	4.3	(2.6)	(0.4)	1.3
5/1985	4.8	5.2	11.5	12.3	9.4	10.7	10.2	9.8
5/1990	4.1	2.6	6.4	6.1	8.6	6.7	7.2	7.6
5/1995	2.8	1.5	10.0	9.1	13.4	10.0	10.8	11.3
5/2000	2.5	2.6	4.9	3.2	15.4	7.7	10.0	11.7
5/2007	3.0	(0.1)	2.6	2.0	9.5	4.4	5.8	6.9
<b>30/2007</b>	<b>4.1</b>	<b>1.8</b>	<b>5.0</b>	<b>4.8</b>	<b>8.5</b>	<b>6.0</b>	<b>6.7</b>	<b>7.2</b>

### Sample Funds (only three of many reasonable samples)

	A	B	C
Cash: T-Bills	10 %	10 %	10 %
Bonds: US	30	20	10
Bonds: Corp	30	20	15
Stock	30	50	65

For many pension plans, Benefit Increases after Retirement have fallen short of keeping up with inflation. The retired life group has been hurt more than the active life group. The investment return necessary for the indexing of benefits after retirement probably cannot be realized during a period of high inflation.

## Changes in Economic Assumptions within an Economic Environment of Inflation

There is powerful motivation to increase the assumed Investment Return used in actuarial calculations, with or without a related increase in Employee Pay Base, because such an assumption change decreases computed contributions. A contribution rate decrease (i) offers relief for employer budget problems and/or (ii) offers a "no cost" way to provide benefit increases.

The wisdom of Investment Return assumed for the future can be determined only by future events. Will the investment record of the next 30 years be the same as the last 30 Years? Will it be like the 5-year period ended in 1980? Better? Worse? What will happen when "Baby Boomers" begin to swell the retired population?



**Basic Series**

**Year-by-Year Total Returns (1926-2007)**

**For a type of investment,  
Red means a REAL Return less than 3%  
[(Total Return - Inflation) < 3%]**

**For Inflation,  
RED means a purchasing power loss**

Year	Large Company Stocks	Small Company Stocks	Long-Term Corporate Bonds	Long-Term Government Bonds	Intermed-Term Government Bonds	U.S. Treasury Bills	Inflation *
1926	11.62	0.28	7.37	7.77	5.38	3.27	-1.49
1927	37.49	22.10	7.44	8.93	4.52	3.12	-2.08
1928	43.61	39.69	2.84	0.10	0.92	3.56	-0.97
1929	-8.42	-51.36	3.27	1.17	6.01	4.75	0.20
1930	-24.90	-38.15	7.98	4.66	6.72	2.41	-6.03
1931	-43.34	-49.75	-1.85	-5.31	-2.32	1.07	-9.52
1932	-8.19	-5.39	10.32	16.84	8.81	0.96	-10.30
1933	53.99	142.87	10.38	-0.07	1.83	0.30	0.51
1934	-1.44	24.22	13.84	10.03	9.00	0.16	2.03
1935	47.67	40.19	9.61	4.98	7.01	0.17	2.99
1936	33.92	64.80	6.74	7.52	3.06	0.18	1.21
1937	-35.03	-58.01	2.75	0.23	1.56	0.31	3.10
1938	31.12	32.80	6.13	5.53	6.23	-0.02	-2.78
1939	-0.41	0.35	3.97	5.94	4.52	0.02	-0.48
1940	-9.78	-5.16	3.39	6.09	2.96	0.00	0.96
1941	-11.59	-9.00	2.73	0.93	0.50	0.06	9.72
1942	20.34	44.51	2.60	3.22	1.94	0.27	9.29
1943	25.90	88.37	2.83	2.08	2.81	0.35	3.16
1944	19.75	53.72	4.73	2.81	1.80	0.33	2.11
1945	36.44	73.61	4.08	10.73	2.22	0.33	2.25
1946	-8.07	-11.63	1.72	-0.10	1.00	0.35	18.16
1947	5.71	0.92	-2.34	-2.62	0.91	0.50	9.01
1948	5.50	-2.11	4.14	3.40	1.85	0.81	2.71
1949	18.79	19.75	3.31	6.45	2.32	1.10	-1.80
1950	31.71	38.75	2.12	0.06	0.70	1.20	5.79
1951	24.02	7.80	-2.69	-3.93	0.36	1.49	5.87
1952	18.37	3.03	3.52	1.16	1.63	1.66	0.88
1953	-0.99	-6.49	3.41	3.64	3.23	1.82	0.62
1954	52.62	60.58	5.39	7.19	2.68	0.86	-0.50
1955	31.56	20.44	0.48	-1.29	-0.65	1.57	0.37
1956	6.56	4.28	-6.81	-5.59	-0.42	2.46	2.86
1957	-10.78	-14.57	8.71	7.46	7.84	3.14	3.02
1958	43.36	64.89	-2.22	-6.09	-1.29	1.54	1.76
1959	11.96	16.40	-0.97	-2.26	-0.39	2.95	1.50
1960	0.47	-3.29	9.07	13.76	11.76	2.66	1.48
1961	26.89	32.09	4.82	0.97	1.85	2.13	0.67
1962	-8.73	-11.90	7.95	6.89	5.56	2.73	1.22
1963	22.80	23.57	2.19	1.21	1.64	3.12	1.65
1964	16.48	23.52	4.77	3.51	4.04	3.54	1.19
1965	12.45	41.75	-0.46	0.71	1.02	3.93	1.92
1966	-10.06	-7.01	0.20	3.65	4.69	4.76	3.35
1967	23.98	83.57	-4.95	-9.18	1.01	4.21	3.04
1968	11.06	35.97	2.57	-0.26	4.54	5.21	4.72
1969	-8.50	-25.05	-8.09	-5.07	-0.74	6.58	6.11
1970	4.01	-17.43	18.37	12.11	16.86	6.52	5.49
1971	14.31	16.50	11.01	13.23	8.72	4.39	3.36
1972	18.98	4.43	7.26	5.69	5.16	3.84	3.41
1973	-14.66	-30.90	1.14	-1.11	4.61	6.93	8.80
1974	-26.47	-19.95	-3.06	4.35	5.69	8.00	12.20
1975	37.20	52.82	14.64	9.20	7.83	5.80	7.01
1976	23.84	57.38	18.65	16.75	12.87	5.08	4.81
1977	-7.18	25.38	1.71	-0.69	1.41	5.12	6.77
1978	6.56	23.46	-0.07	-1.18	3.49	7.18	9.03
1979	18.44	43.46	-4.18	-1.23	4.09	10.38	13.31
1980	32.42	39.88	-2.62	-3.95	3.91	11.24	12.40
1981	-4.91	13.88	-0.96	1.86	9.45	14.71	8.94
1982	21.41	28.01	43.79	40.36	29.10	10.54	3.87
1983	22.51	39.67	4.70	0.65	7.41	8.80	3.80
1984	6.27	-6.67	16.39	15.48	14.02	9.85	3.95
1985	32.16	24.66	30.09	30.97	20.33	7.72	3.77
1986	18.47	6.85	19.85	24.53	15.14	6.16	1.13
1987	5.23	-9.30	-0.27	-2.71	2.90	5.47	4.41
1988	16.81	22.87	10.70	9.67	6.10	6.35	4.42
1989	31.49	10.18	16.23	18.11	13.29	8.37	4.65
1990	-3.17	-21.56	6.78	6.18	9.73	7.81	6.11
1991	30.55	44.63	19.89	19.30	15.46	5.60	3.06
1992	7.67	23.35	9.39	8.05	7.19	3.51	2.90
1993	9.99	20.98	13.19	18.24	11.24	2.90	2.75
1994	1.31	3.11	-5.76	-7.77	-5.14	3.90	2.67
1995	37.43	34.46	27.20	31.67	16.80	5.60	2.54
1996	23.07	17.62	1.40	-0.93	2.10	5.21	3.32
1997	33.36	22.78	12.95	15.85	8.38	5.26	1.70
1998	28.58	-7.31	10.76	13.06	10.21	4.86	1.61
1999	21.04	29.79	-7.45	-8.96	-1.77	4.68	2.68
2000	-9.11	-3.59	12.87	21.48	12.59	5.89	3.39
2001	-11.88	22.77	10.65	3.70	7.62	3.83	1.55
2002	-22.10	-13.28	16.33	17.84	12.93	1.65	2.38
2003	28.70	60.70	5.27	1.45	2.40	1.02	1.88
2004	10.87	18.39	8.72	8.51	2.25	1.20	3.26
2005	4.91	5.69	5.87	7.81	1.36	2.98	3.42
2006	15.80	16.17	3.24	1.19	3.14	4.80	2.54
2007	5.49	-5.22	2.60	9.88	10.05	4.66	4.08

GABRIEL, ROEDER, SMITH & COMPANY from SBBI Yearbook

\* Calculated using December to December CPI-U (1982-84=100, when available), not seasonally adjusted.

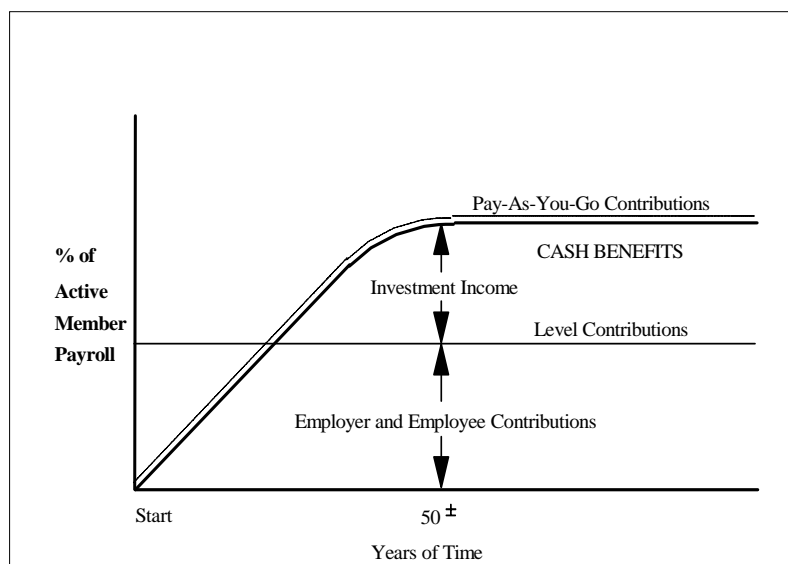
## SELECTION OF ASSUMPTIONS USED IN ACTUARIAL VALUATIONS

### Economic Assumptions

Investment return  
Pay increases to individual employees:  
the portion for economic changes  
Active member group size and  
total payroll growth

### Demographic Assumptions

Actual ages at service retirement  
Pay increases to individual members:  
the portion for merit & seniority  
Disability while actively employed  
Separations before retirement  
Mortality after retirement  
Mortality before retirement



## RELATIONSHIP BETWEEN PLAN GOVERNING BODY AND THE ACTUARY

The actuary should have the primary responsibility for choosing the *demographic* assumptions used in the actuarial valuation, making use of specialized training and experience.

The actuary and other professionals can provide guidance concerning the choice of suitable economic assumptions, but the basis of the economic assumptions is the assumed rate of *inflation*, a quantity which defies accurate prediction. Given an assumed rate of future inflation, it is very important that this rate be applied in a consistent manner in deriving the assumed rate of investment return, the economic portion of the assumption on pay increases to individual employees, and the assumed rate of growth of active member payroll. Consistent application of assumptions is an area in which the actuary has specialized training.

A sound procedure is that the actuary suggests reasonable alternatives for economic assumptions, followed by discussion involving the actuary, the Plan Governing Body, and other professionals, and the Plan Governing Body then makes a final choice from the various alternatives.

## DEFINITIONS OF TECHNICAL TERMS

---

***Accrued Service.*** Service credited under the system which was rendered before the date of the actuarial valuation.

***Actuarial Accrued Liability.*** The difference between the actuarial present value of system benefits and the actuarial present value of future normal costs. Also referred to as “past service liability.”

***Actuarial Assumptions.*** Estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment return and pay 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 (pay increases and investment return) 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 benefits” between future normal costs and actuarial accrued liability. Sometimes referred to as the “actuarial funding method.”

***Actuarial Equivalent.*** One series of payments is said to be actuarially equivalent to another series of payments if the two series have the same actuarial present value.

***Actuarial Gain (Loss).*** The difference between actual unfunded actuarial accrued liabilities and anticipated unfunded actuarial accrued liabilities -- during the period between two valuation dates. It is a measurement of the difference between actual and expected experience.

***Actuarial Present Value.*** The single sum now which is equal to a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest, and by probabilities of payment.

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

**Amortization.** Paying off an interest bearing liability with periodic payments as opposed to paying it off with a single sum payment.

**Normal Cost.** The portion of the actuarial present value of future benefits that is assigned to the current year by the actuarial cost method. Sometimes referred to as “current cost.”

**Unfunded Actuarial Accrued Liabilities.** The difference between actuarial accrued liabilities and valuation assets. Sometimes referred to as “unfunded past service liability” or, strangely, “unfunded supplemental present value” or simply as “unfunded liability.”

**Valuation Assets.** The value of plan assets recognized for valuation purposes. This may not be the same value that is used by the plan for financial reporting.

## MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

### DECEMBER 31, 2007

---

<b>Marriage Assumption:</b>	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.
<b>Pay Increase Timing:</b>	Nine months after the valuation date (October 1).
<b>Decrement Timing:</b>	Decrements of all types are assumed to occur mid-year.
<b>Eligibility Testing:</b>	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.
<b>Miscellaneous Loads:</b>	For members hired prior to July 1, 2001 computed liabilities and normal costs are increased by 3% to reflect service credit for unused sick leave that may be granted at retirement.
<b>Decrement Relativity:</b>	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
<b>Decrement Operation:</b>	Disability and turnover do not operate during retirement eligibility.
<b>Incidence of Contributions:</b>	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.
<b>Normal Form of Benefit:</b>	The assumed normal form of benefit is the straight life form.
<b>Benefit Service:</b>	Exact Fractional Service is used to determine the amount of benefit payable.
<b>Actuarial Equivalent Factors:</b>	Effective January 1, 2006. The interest rate is 7.5%, except for Small Pension payouts where the interest rate, if smaller, is the rate for 20-year Treasury Notes raised to the next highest integer from the December 1 <sup>st</sup> preceding the Calendar year of retirement. Mortality is based upon a 30% unisex blend of the 1994 Group Annuity Mortality Table set back 2 years for males and 1 year for females.

April 16, 2008

ERFC Board of Trustees  
c/o Dr. Alan Belstock, Executive Director  
8001 Forbes Place, Suite 300  
Springfield, Virginia 22151

**Re: The Report of the ERFC Annual Actuarial Valuation December 31, 2007**

Dear Alan:

Enclosed are 25 copies of the report. Please call if you need additional copies.

Sincerely,



Judith A. Kermans

JAK:mrh  
Enclosures