

**EDUCATIONAL EMPLOYEES' SUPPLEMENTARY
RETIREMENT SYSTEM OF FAIRFAX COUNTY (ERFC)**

32ND ANNUAL ACTUARIAL VALUATION
DECEMBER 31, 2011

REPORT OF THE DECEMBER 31, 2011 ACTUARIAL VALUATION OUTLINE OF CONTENTS

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July 16, 2012

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 32nd annual actuarial valuation of the Educational Employees' Supplementary Retirement System of Fairfax County (ERFC), based on data as of ***December 31, 2011***.

The purpose of this valuation was to measure the system's funding progress and to determine actuarial information for Governmental Accounting Standards Board (GASB) Statement Nos. 25 and 27. The results of the valuation may not be applicable for other purposes.

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 December 31, 2009.

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

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.

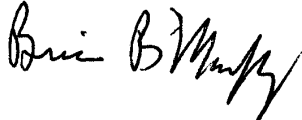
The Actuaries submitting this report are Members of the American Academy of Actuaries (MAAA) as indicated, and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

The Board of Trustees
July 16, 2012
Page 2

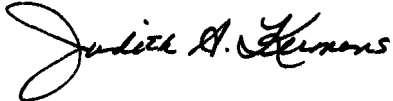
Your attention is directed particularly to:

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, EA, FCA, MAAA



Judith A. Kermans, EA, FCA, MAAA

BBM/JAK:clh

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, such as this valuation, are used to set the employer contribution rate for the two year period beginning 18 months after the valuation date. The December 31, 2011 valuation is used to determine the contribution rate for the period July 1, 2013 to June 30, 2015. Actuarial valuations of even numbered years (2010, 2012, etc.), 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. Changes in GASB reporting requirements begin in fiscal year 2014. Since the contribution rate policy references GASB requirements in several places, the current contribution rate policy will need to be reviewed. For funding purposes, unfunded accrued liabilities are currently being amortized over a closed 30 year period ending on June 30, 2040. **The amortization period in the December 31, 2011 valuation is 27 years.**

VRS Restructuring: This valuation reflects a 1.0% decrease in the employee contribution rate for ERFC to 3.0% of pay per year in response to the restructuring of the VRS employee contribution rate.

Contribution Rate: The contribution rate for the two-year period beginning July 1, 2013 is calculated to be 5.51% of payroll. However, the rate estimated to be the minimum amount that would avoid a Net Pension Obligation (NPO) (based on current GASB reporting requirements) for the two-year funding period (July 1, 2013 to June 30, 2015) is **5.60%** based on the following assumptions: 1) investment return of 7.50% in all future years, 2) benefit provisions remain unchanged and other plan experience is in line with expectations. Therefore, the funding policy contribution of 5.60% includes the calculated ARC of 5.51% for fiscal year 2014 plus a contingency contribution of 0.09%. If plan experience is worse than this scenario, the 5.60% rate could result in a Net Pension Obligation (NPO) under current GASB standards in fiscal year 2015. As already mentioned, GASB standards for this period will be changing anyway.

Plan Experience: ERFC’s market value rate of return as measured by the actuary was -1.0%, which was unfavorable. The funded percent is now 75.6%, which is lower than last year’s funded percent of 76.5%. If the market value of assets were the basis for the measurement (as opposed to the funding value with five-year smoothing of gains and losses and a 25% corridor), the funded percent would be 70.6% and the ARC for Fiscal 2014 would be 6.11% of payroll.

Financial Status: Based upon the December 31, 2011 valuation, the Fairfax County ERFC is operating in accordance with its funding policy and with actuarial principles of level percent of payroll financing. ERFC is fortunate that its long standing commitment to excellence in funding has resulted in financial strength that enabled it to weather continued market downturns.

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).

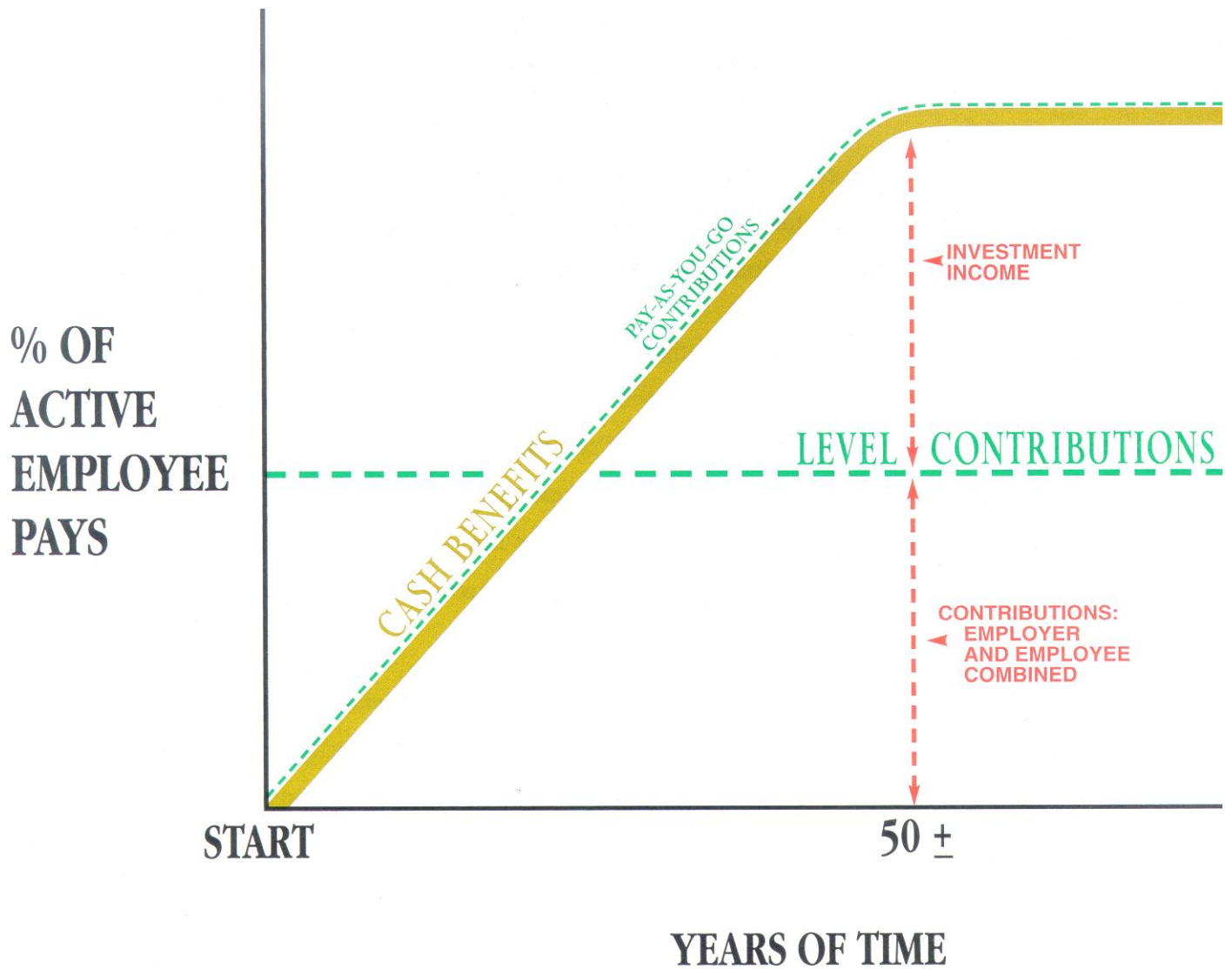
Computing Contributions to Support Plan Benefits. From a given schedule of benefits and from the employee data and asset data furnished, the actuary determines the contribution rates to support the benefits, by means of ***an actuarial valuation and a funding method.***

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:

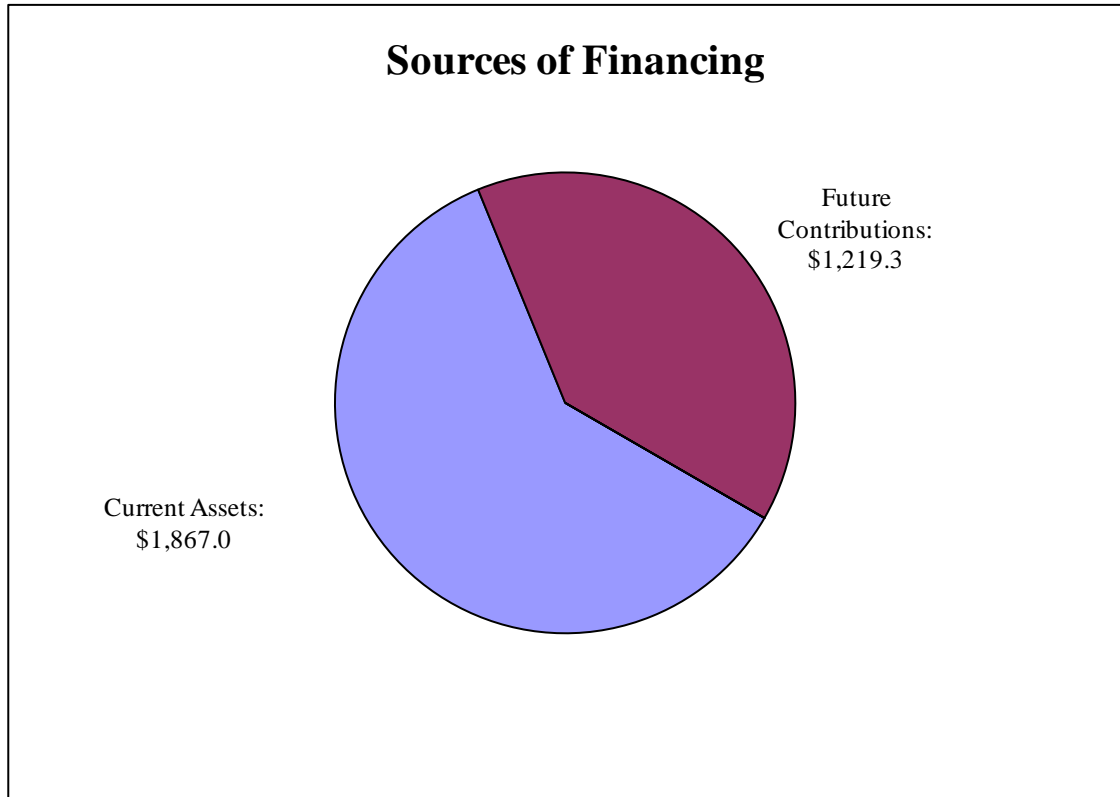
Plan Financial Position

and/or *New Employer Contribution Rate*

SECTION B

RESULTS OF THE VALUATION

FINANCING \$3,086.3 MILLION OF BENEFIT PROMISES
DECEMBER 31, 2011
(\$ IN MILLIONS)



The pie chart above shows that the total amount of benefit promises made to members in *ERFC* and *ERFC 2001* is \$3,086.3 million, based on plan assumptions as of December 31, 2011. 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 \$3,086.3 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 \$3,086.3 million number is that investments earn 7.50% per year. Investment return during 2011, as measured by the actuary, was -1.0% on a market value basis.

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

Valuation Date	December 31, 2011	December 31, 2010
Contributions for Period Ending June 30	2014	2013
Normal Cost (current cost):		
Service Retirement	3.82%	3.79%
Reduced Service Retirement	0.60%	0.67%
Casualty Benefits	0.10%	0.10%
Separation Benefits	1.24%	1.35%
Totals	5.76%	5.91%
Member Contributions	3.00%	4.00%
Employer Normal Cost	2.76%	1.91%
Unfunded Actuarial Accrued Liability	2.75%	2.62%
Annual Required Contribution (GASB 25)	5.51%	4.53%
Contingency Contribution	0.09%	0.00%
Funding Policy Contribution	5.60%	4.34%

Unfunded liability was amortized as a level percent of payroll over 27 years in the December 31, 2011 valuation and 28 years in the December 31, 2010 valuation. If this schedule is continued, unfunded liabilities will be fully amortized on June 30, 2040.

The funding policy contribution for the two year period beginning July 1, 2013 is determined by the December 31, 2011 valuation. The contribution rate is calculated to be 5.60% of payroll (5.51% ARC plus 0.09% Contingency Contribution). This rate was estimated to be the minimum amount that would be sustainable for the period July 1, 2013 to June 30, 2015 based on the following assumptions: 1) investment return of 7.5% in all future years, 2) 3.75% pay increases in all future years and 3) benefit provisions remain unchanged and other plan experience is in line with expectations. If plan experience is worse than this scenario, the 5.60% rate could result in a Net Pension Obligation (NPO) under GASB standards in the second year (Fiscal 2015). Please see comments on page 3 regarding changing GASB standards.

CONTRIBUTION RATE HISTORY

Fiscal Year	Valuation Date Used	Employee Rate	Adopted Employer Rate		ARC Rate
			Support	Educational	
1991	1989	2.00%	5.08%	5.53%	
1992	1990	2.00%	5.08%	5.53%	
1993	1991	2.00%	5.08%	5.53%	
1994	1992	2.00%	5.08%	5.53%	
1995	1993	2.00%	5.08%	5.53%	
1996	1994	2.00%	5.08%	5.53%	
1997	1995	2.00%	5.58%	6.03%	
1998	1996	2.00%	5.58%	6.03%	
1999	1997	2.00%	5.58%	6.03%	
			Combined July 1, 1999		
2000	1998	2.00%	4.99%		
2001	1999	2.00%	3.69%		
2002	2000	2.00%	3.69%		
2003	2001	2.00%	4.00%		
2004	2002	2.00% / 4.00%	4.29% / 2.53%		
2005	2003	4.00%	3.37%		
2006	2004	4.00%	3.37%		
2007	2004	4.00%	3.37%		
2008	2005	4.00%	3.37%		3.37%
2009	2005	4.00%	3.37%		3.14%
2010	2007	4.00%	3.20%		2.97%
2011	2007	4.00%	4.04%		4.04%
2012	2009	4.00%	4.34%		4.16%
2013	2009	3.00%	5.34%		5.38%
2014	2011	3.00%	5.60%		5.51%

- Notes:
1. In June of 2004, the member rate was increased to 4% and the employer rate was decreased to 2.53%.
 2. The valuation date was June until 2004 when it was changed to December.
 3. Rate for FY 2011 was increased to the ARC. The funding policy would have resulted in 3.20%.
 4. On July 1, 2012, the member rate was decreased to 3.0% in conjunction with a restructuring of the VRS employee contribution rate.

ACTUARIAL ACCRUED LIABILITIES

Accrued liabilities for	Amounts at December 31	
	2011	2010
Present Active Members	\$ 1,017,979,938	\$ 982,439,374
Present Inactive Vested Members	51,106,867	46,528,264
Present Retirees and Beneficiaries	1,401,876,706	1,355,093,284
Total Actuarial Accrued Liabilities	\$2,470,963,511	\$2,384,060,922
Funding Value of Assets	1,866,952,015	1,822,603,363
Unfunded Actuarial Accrued Liability	\$ 604,011,496	\$ 561,457,559
Actuarial Funded Percent	75.56%	76.45%
Market Value Funded Percent	70.60%	76.45%

**ASSETS AND LIABILITIES
COMPARATIVE STATEMENT**

Valuation Date	Active Member Payroll	Computed Liabilities			Valuation Assets	Unfunded Accrued Liabilities	Funded %
		Retired	Other Members	Total			
(\$ in thousands)							
2/29/1980	\$ 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%
12/31/2008@	1,211,140	1,237,613	1,017,685	2,255,298	1,733,946	521,352	76.9%
12/31/2009#	1,208,093	1,314,885	1,024,984	2,339,869	1,769,540	570,329	75.6%
12/31/2010@	1,191,290	1,355,093	1,028,968	2,384,061	1,822,603	561,458	76.5%
12/31/2011	1,246,973	1,401,877	1,059,795	2,461,672	1,866,952	594,720	75.8%
12/31/2011\$	1,246,973	1,401,877	1,069,087	2,470,964	1,866,952	604,012	75.6%

@ After change in asset valuation method.
 \$ After change in benefits or contribution rates.
 # After changes in actuarial assumptions.

**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
2/29/1980	\$ 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%
12/31/2008@	1,211,140	186%	143%	43%
12/31/2009#	1,208,093	194%	146%	48%
12/31/2010@	1,191,290	200%	153%	47%
12/31/2011	1,246,973	197%	150%	47%
12/31/2011\$	1,246,973	198%	150%	48%

@ After change in asset valuation method.

\$ After changes in benefits or contribution rates.

After changes in actuarial assumptions.

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 be able to *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 ...)						
6/30/1992	\$ 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%
12/31/2008@	302,910	1,237,613	714,775	1,733,946	100%	100%	27%
12/31/2009#	342,663	1,314,885	682,321	1,769,540	100%	100%	16%
12/31/2010@	374,086	1,355,093	654,882	1,822,603	100%	100%	14%
12/31/2011	402,847	1,401,877	656,948	1,866,952	100%	100%	9%
12/31/2011\$	402,847	1,401,877	666,240	1,866,952	100%	100%	9%

- @ After change in asset valuation method.
 \$ After change in benefits or contribution rates.
 # After changes in actuarial assumptions.

**CHANGE IN UNFUNDED ACCRUED LIABILITIES
DURING THE YEAR ENDING DECEMBER 31, 2011
(\$ IN MILLIONS)**

	As of December 31	
	2011	2010
1. Beginning unfunded liabilities (UAAL):	\$ 561.5	\$ 570.3
2. Unfunded liabilities at End:		
a. Normal Cost (5.91% of payroll for 2011)	\$ 73.7	\$ 70.4
b. Member and employer contributions	97.4	89.2
c. Interest accrual	41.2	42.1
d. Expected UAAL, based on Beginning valuation (1+2a - 2b+2c)	579.0	593.6
e. Change from non-recurring activities and benefit changes	9.3	-
f. Expected UAAL, based on Ending valuation (2d + 2e)	588.3	593.6
g. Actual UAAL, from End valuation	604.0	561.5
3. Total Gains/(Losses) during Period: (2f - 2g)	\$ (15.7)	\$ 32.1

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, 2011**

Type of Risk Area	Gain (Loss) in Period			
	\$ in millions			Percent of Liabilities
	<i>ERFC</i>	<i>ERFC</i> 2001	Totals	
Risks Related to Assumptions				
Economic Risk Areas				
Pay Increases	\$14.2	\$4.6	\$ 18.8	0.8%
Investment Return			(30.6)	(1.3)%
Demographic Risk Areas				
Full and Reduced Service Retirements	5.0	0.3	5.3	0.2%
Vested Deferred Retirements	(3.6)	1.1	(2.5)	(0.1)%
Ordinary Death Benefits	0.1	0.0	0.1	0.0%
Service-Connected Death Benefits	0.0	0.0	0.0	0.0%
Ordinary Disability Benefits	(0.1)	(0.1)	(0.2)	0.0%
Service-Connected Disability Benefits	(0.1)	0.0	(0.1)	0.0%
Terminated with Refund	(0.9)	(0.8)	(1.7)	(0.1)%
Data Adjustments and Miscellaneous			(4.8)	(0.2) %
Total Gain (or Loss) During Period			(15.7)	(0.7)%
Beginning of Year Accrued Liabilities			2,384.0	100.0%

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

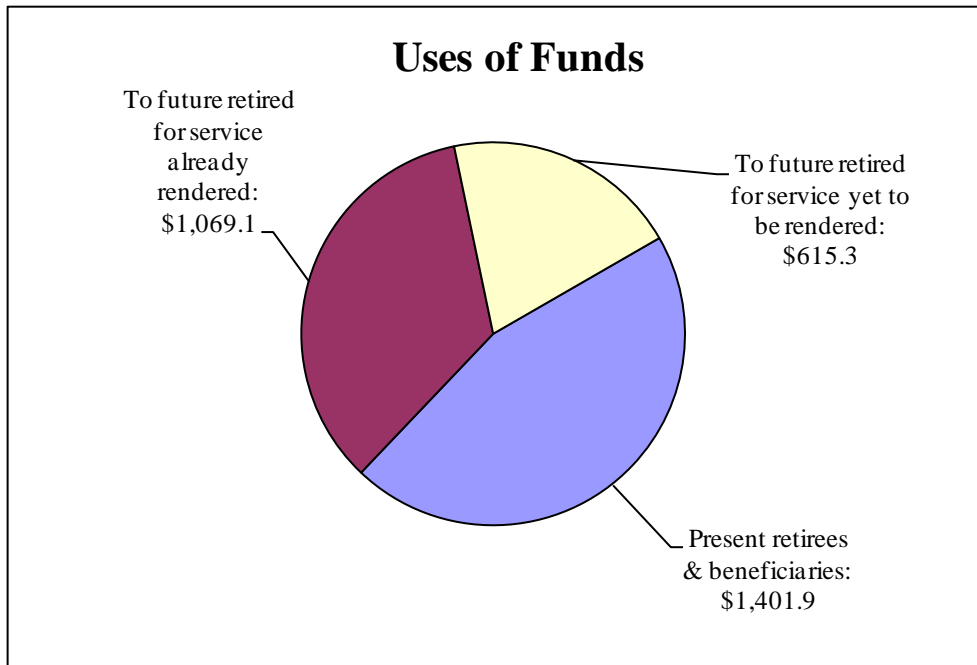
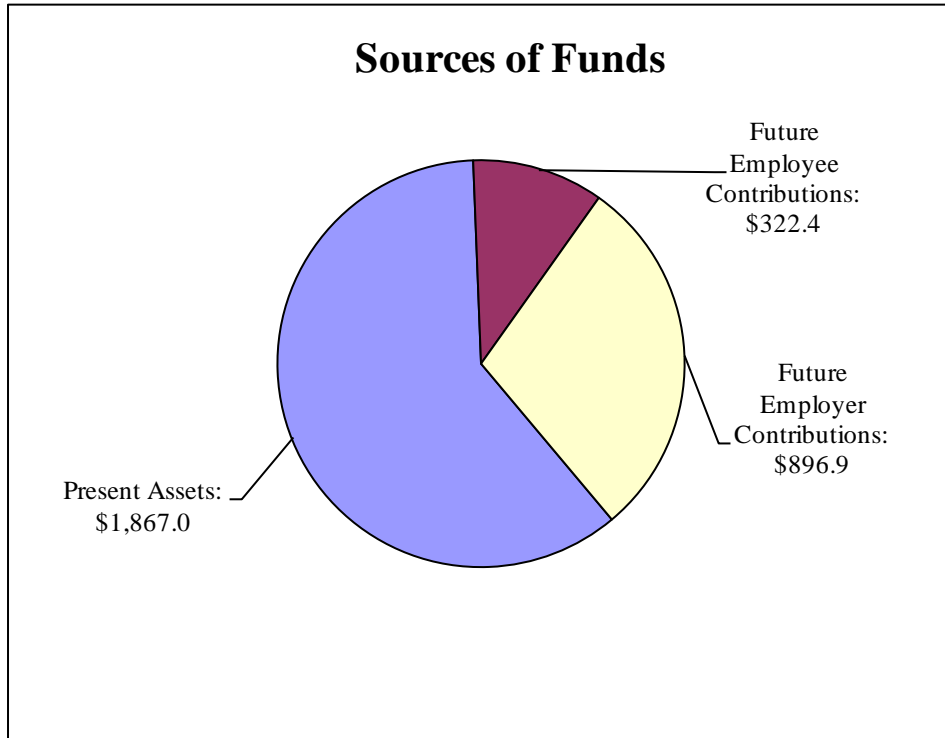
Experience Period	Pay Increases	Investment Return	Retirement	Disability & Death-In Service	Other Separations	Other	Total Gain (Loss)	
							\$	Percent of Liabilities
1990-1991	\$ (2.1)	\$14.4	\$(25.9)	\$(5.5)	\$0.4	\$ (5.0)	\$(23.7)	(3.7)%
1991-1992	21.2	21.7	(28.4)	(6.0)	(4.0)	2.3	6.8	0.9 %
1992-1993	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 %
2008	4.1	(277.5)	5.2	(0.4)	(4.0)	13.5	(259.1)	(11.8)%
2009	45.0	(34.6)	8.8	(0.8)	(10.0)	(11.6)	(3.2)	(0.1)%
2010#	53.1	(16.9)	5.2	0.2	(5.3)	(4.2)	32.1	1.4 %
2011	18.8	(30.6)	5.3	(0.2)	(4.2)	(4.8)	(15.7)	(0.7)%

Experience Study.

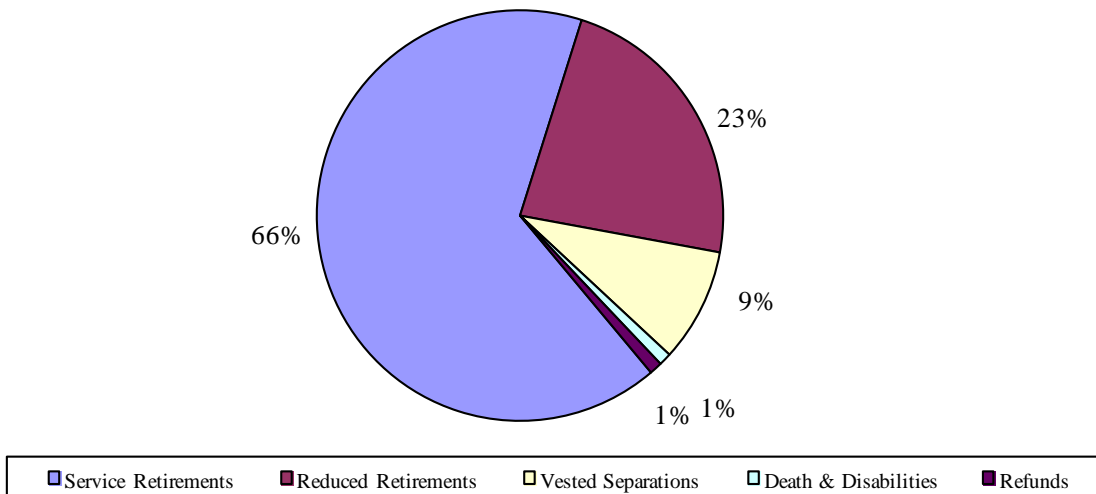
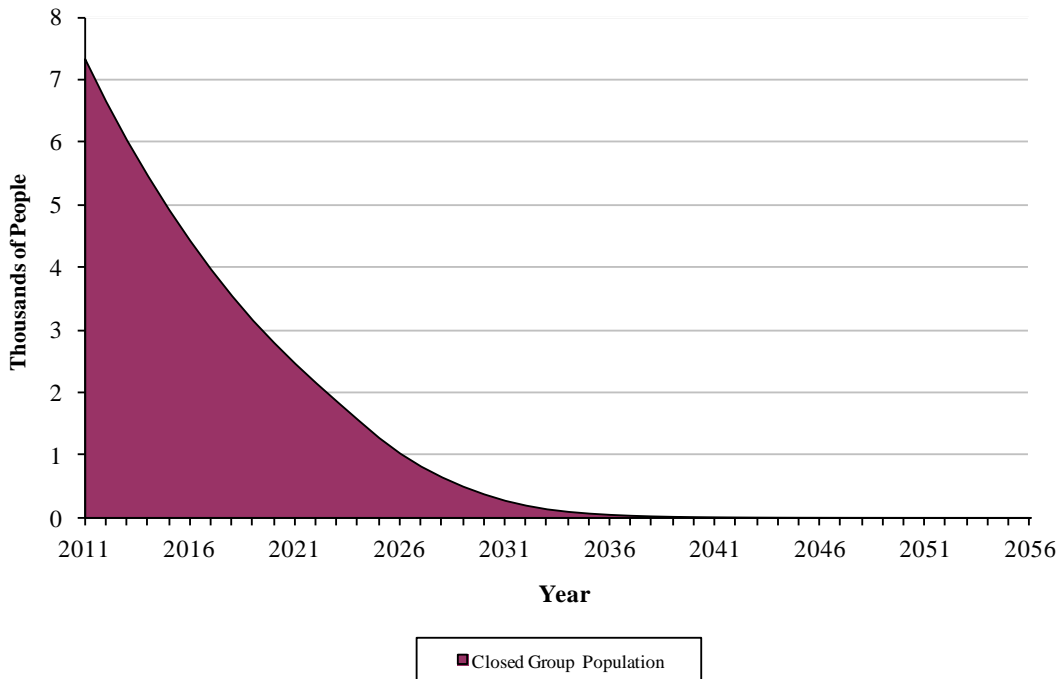
* Updated Gain Formulas.

@ Gain Loss Analysis not performed.

**FINANCING \$3,086.3 MILLION OF BENEFIT PROMISES
DECEMBER 31, 2011
(\$ IN MILLIONS)**



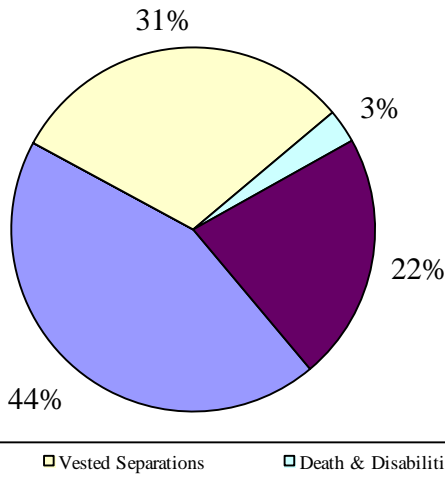
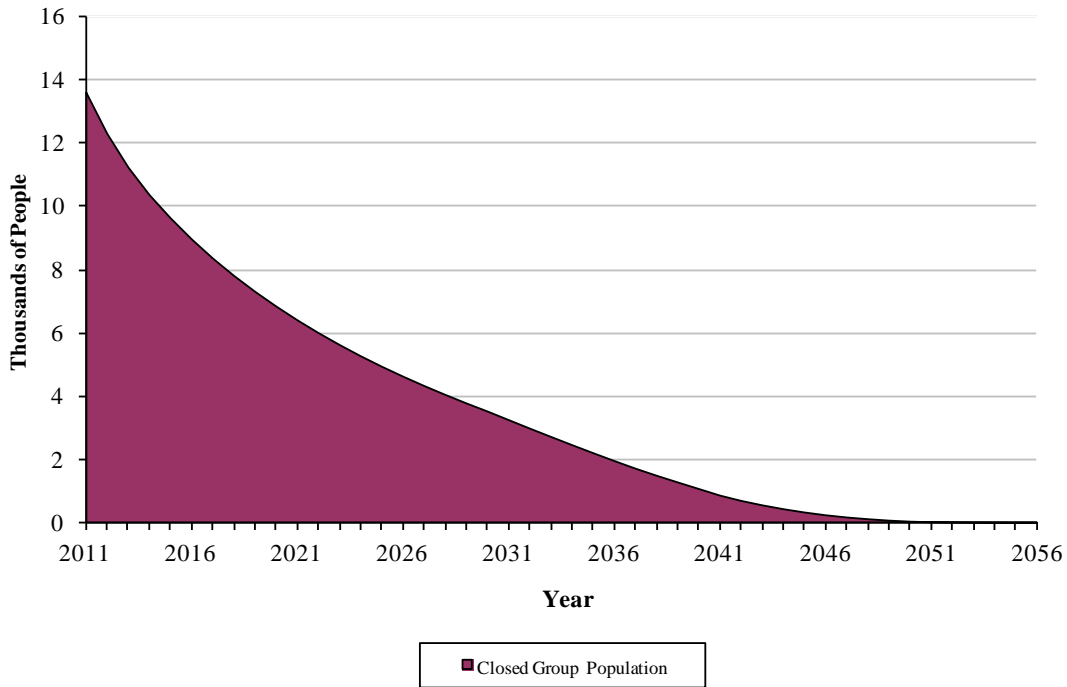
EXPECTED DEVELOPMENT OF PRESENT POPULATION – ERFC DECEMBER 31, 2011



The charts show the expected future development of the present population in simplified terms. ERFC presently covers 7,353 active members. Eventually, 1% of the population is expected to terminate covered employment prior to retirement and forfeit eligibility for an employer provided benefit. Approximately 98% 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. 1% of the present population is expected to become eligible for death-in-service or disability benefits. Within 7 years, over half of the current membership will have left the group.

EXPECTED DEVELOPMENT OF PRESENT POPULATION – ERFC 2001

DECEMBER 31, 2011



The charts show the expected future development of the present population in simplified terms. ERFC 2001 presently covers 13,623 active members. Eventually, 22% of the population is expected to terminate covered employment prior to retirement and forfeit eligibility for an employer provided benefit. Approximately 75% 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 10 years, over half of the current membership will have left the group. The proportion of new hires in this plan will increase more rapidly than normal because the ERFC legacy plan is closed to new hires.

SECTION C

SUMMARY OF BENEFITS

SUMMARY OF PROVISIONS AS OF DECEMBER 31, 2011
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 of 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, 2011
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, 2011
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.** Effective July 1, 2012, members contribute 3% 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-15.

SUMMARY OF PROVISIONS AS OF DECEMBER 31, 2011
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, 2011
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 effective retirement date.

SUMMARY OF PROVISIONS AS OF DECEMBER 31, 2011
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.** Effective July 1, 2012, members contribute 3% 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, 2011**

Data:

A.	<u>7/1/1956</u>	Date of Birth
B.	<u>7/1/2011</u>	Effective Date
C.	<u>7/1/1984</u>	Membership Date
D.	<u>27.00</u>	ERFC Credited Service
E.	<u>27.00</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: $1.85\% \times 27 \text{ yrs.} \times \$60,000 =$	\$ 29,970.00
K. minus VRS Adjustment of: $1.65\% \times 27 \text{ yrs.} \times (\$60,000 - \$1,200) \times 82\% =$ (82% is the VRS Early Service Retirement Reduction Factor for 2 years prior to the earlier of age 65 or 30 years of service)	<u>21,480.23</u>
L. Sub Total	8,489.77
M. plus additional 3% benefit adjustment	<u>254.69</u>
N. Total of Lifetime Portion	8,744.47

Additional Temporary Benefit (until age 66)

O. Temporary Benefit Formula: $1\% \times 27 \text{ yrs.} \times \$60,000 =$	16,200.00
P. plus additional 3% benefit adjustment	<u>486.00</u>
Q. Total of Additional Temporary Benefit	16,686.00
R. Monthly benefit effective 06/30/2011 at age 55 payable until age 66, $(N + Q)/12 =$	\$2,119.21
S. Monthly benefit effective 07/01/2022 at age 66 payable for life, $N/12 =$	\$ 728.71

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, 2011

Revenues and Expenditures

	December 31	
	2011	2010
REVENUES:		
a. Member Contributions	\$ 47,880,636	\$ 47,569,052
b. Employer Contributions	49,499,117	41,626,695
c. Donated Fixed Assets	0	0
d. Investment Return		
1. Interest and Dividends	41,021,778	41,373,884
2. Net Appreciation	(49,539,117)	197,040,058
3. Investment Expense	(9,115,850)	(7,099,467)
4. Net Securities Lending	250,151	222,517
5. Real Estate	2,276,848	1,518,832
6. Miscellaneous	110,061	159,513
7. Total Investment Return	(14,996,129)	233,215,337
e. Total Revenues	82,383,624	322,411,084
EXPENDITURES:		
a. Refunds of Member Contributions	4,197,966	3,743,400
b. Retirement Benefits Paid	152,703,450	145,927,465
c. Administrative Expense	3,422,200	4,637,246
d. Total Expenditures	160,323,616	154,308,111
RESERVE INCREASE:		
Total Revenues Minus Total Expenditures	\$ (77,939,992)	\$168,102,973

Market Value of Assets

	December 31	
	2011	2010
Invested Assets		
Bonds	\$ 144,630,516	\$ 139,952,275
Stocks		
a. Common	531,773,566	625,819,215
b. Preferred	6,141,627	5,663,430
Real Estate	140,212,932	133,643,189
Global Asset Allocation	271,024,679	276,625,640
Hedge Fund of Funds	132,259,441	82,638,665
Private Equity	12,990,487	981,547
Commingled Funds	468,116,753	491,535,789
Total Invested Assets	1,707,150,001	1,756,859,750
Short-term Investments and Cash	116,370,839	136,463,257
Receivables and Pre-Paid Expenses	48,692,516	73,519,367
Other Assets (furniture and equipment)	113,821	49,641
Total Assets	1,872,327,177	1,966,892,015
Liabilities	127,730,089	144,354,936
Net Assets	\$1,744,597,088	\$1,822,537,079

PORTFOLIO COMPOSITION AT MARKET VALUE

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

	Year Ended December 31			
	2011		2010	
	Value	% of Total	Value	% of Total
Bonds	\$ 144,630,516	8.3 %	\$ 139,952,275	7.7 %
Stocks				
a. Common	531,773,566	30.5 %	625,819,215	34.3 %
b. Preferred	6,141,627	0.4 %	5,663,430	0.3 %
Real Estate	140,212,932	8.0 %	133,643,189	7.3 %
Commingled Funds	468,116,753	26.8 %	491,535,789	27.0 %
Hedge Fund of Funds	132,259,441	7.6 %	82,638,665	4.5 %
Private Equity	12,990,487	0.7 %	981,547	0.1 %
Global Asset Allocation / Better Beta	271,024,679	15.5 %	276,625,640	15.2 %
Net Short-term Investments and Cash	(11,384,042)	(0.6)%	(7,916,471)	(0.4)%
Receivables, Pre-Paid Expenses and Other	48,831,129	2.8 %	73,593,800	4.0 %
Total Assets	\$1,744,597,088	100.0 %	\$1,822,537,079	100.0 %

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. Currently, the recognized assets must always be between 75% and 125% of the market value (see Page D-3).

DEVELOPMENT OF FUNDING VALUE OF RETIREMENT SYSTEM ASSETS

Year Ended December 31:	2011#	2012	2013	2014	2015
A. Funding Value Beginning of Year	\$1,822,603,363	\$1,866,952,015			
B. Market Value End of Year	1,744,597,088				
C. Market Value Beginning of Year	1,822,537,079				
D. Non-Investment Net Cash Flow	(59,521,663)				
E. Investment Return Assumed Rate	7.5%				
1. Market Total: B-C-D	(18,418,328)				
2. Amount for Immediate Recognition	134,463,190				
3. Amount for Phased in Recognition: (E1-E2)	(152,881,518)				
F. Phased in Recognition of Investment Return					
1. Current year: 0.20*E3	(30,576,304)				
2. First Prior Year	(16,571)	(30,576,304)			
3. Second Prior Year	0	(16,571)	\$(30,576,304)		
4. Third Prior Year	0	0	(16,571)	\$(30,576,304)	
5. Fourth Prior year	0	0	0	(16,571)	\$ (30,576,302)
6. Total Phased-In	(30,592,875)	(30,592,875)	(30,592,875)	(30,592,875)	(30,576,302)
G. Funding Value End of Year					
G1. Preliminary Funding Value End of Year: A+D+E2+F6	1,866,952,015				
G2. Upper Corridor Limit: 125% x B	2,180,746,360				
G3. Lower Corridor Limit: 75% x B	1,308,447,816				
G4. Funding Value End of Year	1,866,952,015				
H. Actual/Projected Difference Between Market Value and Funding Value	(122,354,927)	(91,762,052)	(61,169,177)	(30,576,302)	0
I. Market Rate of Return	(1.0)%				
J. Ratio of Funding Value to Market Value	107.0%				

Reflects collapsing of bases for future gains and losses implemented in 2010 valuation.

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 December 31:	2007	2008	2009	2010
A. Funding Value Beginning of Year	\$1,818,930,165	\$1,924,885,815	\$1,733,946,104	\$1,769,539,999
B. Market Value End of Year	1,999,905,552	1,387,156,883	1,654,434,106	1,822,537,079
C. Market Value Beginning of Year	1,911,319,400	1,999,905,552	1,387,156,883	1,654,434,106
D. Non-Investment Net Cash Flow	(53,575,312)	(55,764,873)	(57,646,288)	(60,475,118)
E. Investment Return Assumed Rate	7.5%	7.5%	7.5%	7.5%
E1. Market Total: B-C-D	142,161,464	(556,983,796)	324,923,511	228,578,091
E2. Amount for Immediate Recognition	134,410,688	142,275,253	127,884,222	130,447,683
E3. Amount for Phased in Recognition: (E1-E2)	7,750,776	(699,259,049)	197,039,289	98,130,408
F. Phased in Recognition of Investment Return				
F1. Current year: 0.20*E3	1,550,155	(139,851,810)	39,407,858	19,626,082
F2. First Prior Year	21,678,875	1,550,155	(99,172,171)	39,407,858
F3. Second Prior Year	1,891,244	21,678,875	1,550,155	(99,172,171)
F4. Third Prior Year	0	1,891,244	21,678,875	1,550,155
F5. Fourth Prior year	0	0	1,891,244	21,678,875
F6. Total Recognized Investment Gain or Loss	25,120,274	(114,731,536)	(34,644,039)	(16,909,201)
G. Funding Value End of Year				
G1. Preliminary Funding Value End of Year: A+D+E2+F6	1,924,885,815	1,896,664,659	1,769,539,999	1,822,603,363
G2. Upper Corridor Limit: 125% x B	2,299,891,385*	1,733,946,104	2,068,042,633	2,278,171,349
G3. Lower Corridor Limit: 75% x B	1,699,919,719*	1,040,367,662	1,240,825,580	1,366,902,809
G4. Funding Value End of Year	1,924,885,815*	1,733,946,104	1,769,539,999	1,822,603,363
H. Actual/Projected Difference Between Market Value and Funding Value	75,019,737	(346,789,221)	(115,105,893)	(66,284)
I. Market Rate of Return	7.5%	(28.2)%	23.9%	14.1%
J. Ratio of Funding Value to Market Value	96.2%	125.0%	107.0%	100.0%

* Based on 15% corridor.

SECTION E

COVERED MEMBER DATA

ERFC MEMBERS
WOMEN ACTIVE MEMBERS IN VALUATION DECEMBER 31, 2011
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	
30-34	2	10	91					103	\$ 6,351,736	\$61,667
35-39	8	59	365	31				463	31,355,973	67,723
40-44	6	76	381	247	42	1		753	54,321,291	72,140
45-49	8	42	306	187	163	37	3	746	54,205,618	72,662
50-54	7	37	396	214	210	140	35	1,039	75,243,080	72,419
55-59	2	27	505	289	263	135	62	1,283	91,076,628	70,987
60	2	7	111	49	45	25	11	250	17,736,489	70,946
61	1	1	80	77	44	19	12	234	17,081,878	72,999
62		1	76	63	49	29	14	232	17,222,182	74,234
63		2	65	59	46	23	4	199	13,898,316	69,841
64	1	2	56	40	49	18	5	171	11,964,084	69,965
65		2	34	42	47	15	4	144	10,074,613	69,963
66		2	9	27	24	6	2	70	5,264,343	75,205
67			18	12	10	4	2	46	3,226,814	70,148
68			10	7	8	7	2	34	2,363,790	69,523
69			7	10	13	7	4	41	2,889,284	70,470
70			1	4	6	4	2	17	1,126,304	66,253
71			2	4	1	4	1	12	730,095	60,841
72			2	3				5	229,292	45,858
73			3		1	2		6	312,096	52,016
74			1	1	2	3		7	410,415	58,631
75 & Over				1	1	1	3	6	347,230	57,872
Totals	37	268	2,519	1,367	1,024	480	166	5,861	\$417,431,551	\$71,222

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

Age: 52.6 years

Service: 16.8 years

Annual Pay: \$71,222

ERFC MEMBERS
MEN ACTIVE MEMBERS IN VALUATION DECEMBER 31, 2011
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	
30-34		3	11					14	\$ 926,278	\$66,163
35-39		5	152	18				175	12,871,459	73,551
40-44	2	5	169	134	12			322	25,489,773	79,161
45-49	1	5	99	105	66	10		286	22,927,868	80,167
50-54	1		87	58	45	59	8	258	21,609,212	83,757
55-59			76	39	42	50	21	228	19,955,713	87,525
60			13	11	4	3	3	34	2,734,346	80,422
61			6	7	5	5	3	26	2,082,326	80,089
62		2	13	7	7	5	2	36	2,995,856	83,218
63			8	7	7	2	1	25	2,114,585	84,583
64		1	8	4	4	1		18	1,526,882	84,827
65			10	4	2			16	1,196,275	74,767
66			7	5	2			14	1,183,499	84,536
67			4	3	2	1		10	879,392	87,939
68			4	3	1	1		9	691,075	76,786
69			7	1	2			10	792,418	79,242
70			2	1		1		4	346,036	86,509
71			2					2	99,009	49,505
72			2			1		3	210,438	70,146
73				1				1	84,268	84,268
75 & Over			1					1	34,514	34,514
Totals	4	21	681	408	201	139	38	1,492	\$120,751,222	\$80,932

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

Age: 49.4 years
Service: 16.9 years
Annual Pay: \$80,932

ERFC 2001 MEMBERS
WOMEN ACTIVE MEMBERS IN VALUATION DECEMBER 31, 2011
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	\$ 55,748	\$27,874
20-24	567							567	23,806,570	41,987
25-29	2,000	315						2,315	109,885,800	47,467
30-34	973	1,132	82					2,187	116,856,723	53,432
35-39	523	520	93					1,136	63,577,664	55,966
40-44	613	446	62					1,121	59,376,584	52,968
45-49	598	462	65					1,125	54,607,744	48,540
50-54	505	568	108					1,181	57,428,880	48,627
55-59	264	489	109					862	45,705,025	53,022
60	31	77	18					126	7,084,217	56,224
61	28	59	12					99	5,482,083	55,375
62	31	55	13					99	5,473,472	55,288
63	21	47	16					84	4,615,803	54,950
64	13	35	6					54	2,869,559	53,140
65	6	32	3					41	2,595,653	63,309
66	7	13	6					26	1,503,589	57,830
67	6	13	2					21	1,010,865	48,136
68	1	8	1					10	690,901	69,090
69	1	5	1					7	312,384	44,626
70	1	3						4	167,575	41,894
71		1						1	32,406	32,406
72		1						1	76,776	76,776
74	1							1	29,241	29,241
Totals	6,192	4,281	597					11,070	\$563,245,262	\$50,880

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

Age: 39.2 years
Service: 4.5 years
Annual Pay: \$50,880

ERFC 2001 MEMBERS
MEN ACTIVE MEMBERS IN VALUATION DECEMBER 31, 2011
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	73	1						74	\$ 2,919,210	\$39,449
25-29	372	58						430	19,682,157	45,772
30-34	252	301	22					575	30,917,204	53,769
35-39	122	208	50					380	22,893,152	60,245
40-44	101	166	30					297	18,655,335	62,813
45-49	95	113	16					224	14,471,717	64,606
50-54	78	130	14					222	14,148,114	63,730
55-59	58	91	12					161	10,271,669	63,799
60	9	12	1					22	1,256,542	57,116
61	11	16	3					30	1,900,608	63,354
62	12	15	1					28	1,496,983	53,464
63	7	14	3					24	1,809,001	75,375
64	4	15	4					23	1,356,580	58,982
65	4	19	1					24	1,529,304	63,721
66	1	5						6	397,921	66,320
67	3	4	1					8	416,617	52,077
68		4	2					6	362,898	60,483
69	3	2						5	337,294	67,459
70	1	3						4	222,985	55,746
71	1	2	1					4	210,475	52,619
73		1						1	82,266	82,266
74		2						2	56,826	28,413
75 & Over	2	1						3	150,347	50,116
Totals	1,209	1,183	161					2,553	\$145,545,205	\$57,009

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

Age: 39.8 years
Service: 5 years
Annual Pay: \$57,009

ALL ACTIVE MEMBERS IN VALUATION DECEMBER 31, 2011
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	\$ 55,748	\$ 27,874
20-24	640	1						641	26,725,780	41,694
25-29	2,372	373						2,745	129,567,957	47,201
30-34	1,227	1,446	206					2,879	155,051,941	53,856
35-39	653	792	660	49				2,154	130,698,248	60,677
40-44	722	693	642	381	54	1		2,493	157,842,983	63,314
45-49	702	622	486	292	229	47	3	2,381	146,212,947	61,408
50-54	591	735	605	272	255	199	43	2,700	168,429,286	62,381
55-59	324	607	702	328	305	185	83	2,534	167,009,035	65,907
60	42	96	143	60	49	28	14	432	28,811,594	66,694
61	40	76	101	84	49	24	15	389	26,546,895	68,244
62	43	73	103	70	56	34	16	395	27,188,493	68,832
63	28	63	92	66	53	25	5	332	22,437,705	67,583
64	18	53	74	44	53	19	5	266	17,717,105	66,606
65	10	53	48	46	49	15	4	225	15,395,845	68,426
66	8	20	22	32	26	6	2	116	8,349,352	71,977
67	9	17	25	15	12	5	2	85	5,533,688	65,102
68	1	12	17	10	9	8	2	59	4,108,664	69,638
69	4	7	15	11	15	7	4	63	4,331,380	68,752
70	2	6	3	5	6	5	2	29	1,862,900	64,238
71	1	3	5	4	1	4	1	19	1,071,985	56,420
72		1	4	3		1		9	516,506	57,390
73		1	3	1	1	2		8	478,630	59,829
74	1	2	1	1	2	3		10	496,482	49,648
75 & Over	2	1	1	1	1	1	3	10	532,091	53,209
Totals	7,442	5,753	3,958	1,775	1,225	619	204	20,976	\$1,246,973,240	\$59,448

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

Age: 43.7 years

Service: 8.9 years

Annual Pay: \$59,448

ACTIVE MEMBERS BY YEARS OF SERVICE
DECEMBER 31, 2011

Service Years	Number of Members			Annual Pays	
	Males	Females	Total	Total	Average
0	355	1,796	2,151	\$ 94,773,777	\$44,060
1	254	1,332	1,586	73,761,140	46,508
2	174	936	1,110	52,518,624	47,314
3	200	1,022	1,222	61,407,037	50,251
4	230	1,143	1,373	69,536,664	50,646
5	256	1,082	1,338	71,869,454	53,714
6	280	1,091	1,371	75,408,943	55,003
7	272	941	1,213	69,291,348	57,124
8	209	769	978	59,413,258	60,750
9	187	666	853	52,268,192	61,276
10	200	810	1,010	64,503,799	63,865
11	208	726	934	59,618,357	63,831
12	193	645	838	55,580,065	66,325
13	134	550	684	45,858,864	67,045
14	107	385	492	34,430,511	69,981
15	83	352	435	31,953,850	73,457
16	87	239	326	24,436,691	74,959
17	98	300	398	30,557,568	76,778
18	96	267	363	27,993,287	77,116
19	44	209	253	19,647,795	77,659
20	36	193	229	18,107,863	79,074
21	57	257	314	25,587,131	81,488
22	41	196	237	19,334,971	81,582
23	41	223	264	21,304,106	80,697
24	26	155	181	15,064,854	83,231
25	43	129	172	15,263,411	88,741
26	37	138	175	15,311,572	87,495
27	27	90	117	9,850,953	84,196
28	21	73	94	8,204,589	87,283
29	11	50	61	5,306,905	86,998
30 & Up	38	166	204	18,807,661	92,194
Totals	4,045	16,931	20,976	\$1,246,973,240	\$59,448

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 %
12/31/2008	8,791	10,940	19,731	61,383	3.6 %	4.7 %	0.1 %
12/31/2009	8,417	11,474	19,891	60,736	(1.1)%	3.1 %	2.7 %
12/31/2010	7,900	12,241	20,141	59,148	(2.6)%	1.4 %	1.5 %
12/31/2011	7,353	13,623	20,976	59,448	0.5 %	0.7 %	3.0 %

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%
12/31/2008	8,595	15,631	134,346,260	1,211,140,009	11.09%
12/31/2009	8,772	15,697	137,692,304	1,208,092,606	11.40%
12/31/2010	9,081	15,677	142,366,660	1,191,290,190	11.95%
12/31/2011	9,467	15,707	148,697,364	1,246,973,240	11.92%

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, 2011
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	568	\$ 8,770,391		\$8,770,391
Optional Forms	24	421,164		421,164
Age and Service - Early:				
Straight Life	400	3,939,030	\$113,964	4,052,994
Optional Forms	18	235,035	9,718	244,753
Age and Service Totals	1,010	13,365,620	123,682	13,489,302
Duty Disability:				
Straight Life	8	239,978		239,978
Non-Duty Disability				
Straight Life	49	454,039		454,039
Age and Service Survivor Beneficiary, Duty Death, and Non-Duty Death	50	460,521		460,521
Other Totals	107	1,154,538		1,154,538
Total Benefits	1,117	\$14,520,158	\$123,682	\$14,643,840

**BENEFIT FORMULAS (EFFECTIVE JULY 1, 1988)
RETIREES AND BENEFICIARIES DECEMBER 31, 2011
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	3,862	\$53,751,213	\$31,099,102	\$84,850,315
Optional Forms	494	6,732,463	4,085,618	10,818,081
Age and Service - Early:				
Straight Life	3,332	15,613,542	18,150,653	33,764,195
Optional Forms	223	1,235,391	1,362,269	2,597,660
Age and Service Totals	7,911	77,332,609	54,697,642	132,030,251
Duty Disability:				
Straight Life	13	45,692		45,692
Optional Forms	1	1,767		1,767
Non-Duty Disability:				
Straight Life	134	493,038	19,948	512,986
Optional Forms	17	57,391		57,391
Age and Service Survivor Beneficiary, Duty Death, and Non-Duty Death	100	533,757	279,681	813,438
Other Totals	265	1,131,645	299,629	1,431,274
Total Benefits	8,176*	\$78,464,254*	\$54,997,271	\$133,461,525

* Includes benefits split in DROs.

**BENEFIT FORMULAS (EFFECTIVE JULY 1, 2001)
 RETIREES AND BENEFICIARIES DECEMBER 31, 2011
 BY TYPE OF BENEFIT BEING PAID**

Type of Pension Being Paid	No.	Annual Amounts
Age and Service - Normal: Straight Life	149	\$518,301
Optional Forms	21	60,886
Age and Service - Early: Straight Life		
Optional Forms		
Age and Service Totals	170	579,187
Duty Disability: Straight Life		
Optional Forms		
Non-Duty Disability: Straight Life		
Optional Forms		
Age and Service Survivor Beneficiary, Duty Death, and Non-Duty Death	4	12,812
Other Totals	4	12,812
Total Benefits	174	\$591,999

ORIGINAL BENEFIT FORMULAS (BEFORE JULY 1, 1988)
RETIREES AND BENEFICIARIES DECEMBER 31, 2011
CURRENT ANNUAL BENEFITS - TABULATED BY ATTAINED AGES

Attained Ages	No.	Annual Amount
58	4	\$ 18,732
59	2	5,276
60	3	19,592
61	3	23,711
62	2	9,171
63	2	22,483
64	10	51,982
65	2	32,835
66	3	44,933
67	2	19,704
68	2	14,808
69	2	19,531
70	5	54,523
71	3	34,375
72	15	166,443
73	25	331,189
74	38	604,932
75	45	853,981
76	65	1,209,832
77	57	1,091,999
78	55	1,050,314
79	53	913,697
80-84	314	4,607,027
85-89	254	2,421,214
90 & Up	151	1,021,556
Total	1,117	\$14,643,840

BENEFIT FORMULAS (EFFECTIVE JULY 1, 1988)
RETIREES AND BENEFICIARIES DECEMBER 31, 2011
CURRENT ANNUAL BENEFITS - TABULATED BY ATTAINED AGES

Attained Ages	No.	Annual Amount
Under 40	5	\$ 28,178
40-44	4	11,794
45	1	787
46	2	6,351
47	1	787
48	7	21,375
49	4	20,079
50	2	35,696
51	4	116,241
52	11	260,670
53	16	428,948
54	28	755,112
55	90	2,004,474
56	134	2,965,088
57	180	4,211,075
58	196	4,590,855
59	263	6,162,620
60	312	7,096,165
61	371	8,229,363
62	421	10,132,151
63	524	11,920,374
64	637	14,389,121
65	641	13,850,466
66	441	4,692,638
67	442	4,810,066
68	424	4,588,696
69	416	4,489,885
70-74	1,460	16,063,060
75-79	783	8,308,583
80 & Up	356	3,270,827
Totals*	8,176	\$133,461,525

* Includes benefits split in DROs.

ERFC 2001
RETIREES AND BENEFICIARIES DECEMBER 31, 2011
CURRENT ANNUAL BENEFITS - TABULATED BY ATTAINED AGES

Attained Ages	No.	Annual Amount
40-44	1	\$ 2,853
55	1	3,284
60	15	45,952
61	17	54,318
62	20	68,812
63	18	59,013
64	18	58,166
65	23	87,525
66	14	56,189
67	13	42,209
68	8	27,066
69	10	31,748
70-74	11	40,002
75-79	5	14,862
Totals	174	\$591,999

ORIGINAL BENEFIT FORMULAS (BEFORE JULY 1, 1988)
INACTIVE VESTED MEMBERS DECEMBER 31, 2011
ANNUAL DEFERRED BENEFITS - BY ATTAINED AGES

Attained Ages	No.	Annual Amount
56	1	\$ 1,921
58	2	2,575
59	5	5,857
60	3	4,917
61	3	2,929
62	1	1,106
63	2	8,610
64	3	11,525
Totals*	20	\$39,440

** In addition, there are 9 members whose benefits are projected to be offset to zero. Liabilities for these members were set equal to their contributions.*

**BENEFIT FORMULAS (EFFECTIVE JULY 1, 1988)
 INACTIVE VESTED MEMBERS DECEMBER 31, 2011
 ANNUAL DEFERRED BENEFITS - BY ATTAINED AGES**

Attained Ages	No.	Annual Amount
31	1	\$ 1,175
32	1	1,410
33	32	69,713
34	53	107,448
35	70	147,826
36	70	131,811
37	97	183,444
38	92	163,439
39	103	182,788
40	102	229,631
41	120	271,081
42	109	251,092
43	100	248,688
44	93	218,017
45	83	163,234
46	85	204,893
47	75	162,302
48	76	197,291
49	65	152,600
50	58	197,387
51	62	174,283
52	61	257,068
53	57	203,297
54	60	219,005
55	43	124,786
56	34	93,424
57	30	107,710
58	35	111,695
59	30	98,731
60	32	138,883
61	24	95,208
62	19	79,620
63	21	119,458
64	17	129,066
65 & Up	24	50,586
Totals	2,034	\$5,288,090

ERFC 2001

**INACTIVE VESTED MEMBERS DECEMBER 31, 2011
ANNUAL DEFERRED BENEFITS - BY ATTAINED AGES**

Attained Ages	No.	Annual Amount
25	1	\$ 7,122
27	3	9,177
28	14	48,593
29	29	103,783
30	52	184,170
31	66	238,506
32	81	276,801
33	58	207,794
34	52	172,230
35	42	142,066
36	29	87,697
37	32	94,005
38	21	62,457
39	10	31,197
40	26	80,366
41	15	41,463
42	11	38,762
43	17	50,907
44	17	51,858
45	13	37,624
46	11	30,198
47	13	34,225
48	8	16,016
49	15	37,879
50	13	27,447
51	10	27,071
52	14	29,831
53	8	19,503
54	9	22,240
55	17	53,606
56	13	27,465
57	19	68,784
58	19	56,114
59	18	55,626
60	7	18,009
61	4	9,882
62	1	783
63	4	11,459
64	2	5,028
65 & Over	4	16,521
Totals	798	\$2,534,265

SECTION F

FINANCIAL REPORTING UNDER GASB REQUIREMENTS

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

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.

The statements described above will be replaced by new GASB standards starting in the 2014 fiscal year.

STATEMENT OF REPORTED PLAN ASSETS

	December 31	
	2011	2010
Assets		
Cash and short-term investments		
Cash	\$ 3,682,671	\$ 2,468,850
Cash with fiscal agent	1,156,789	1,523,063
Cash collateral for securities on loan	70,162,084	69,178,433
Short-term investments	41,344,503	63,268,119
Prepaid assets	24,792	24,792
Total cash & short-term investments	\$ 116,370,839	\$ 136,463,257
Receivables		
Interest and dividends	2,832,034	2,546,841
Securities Sold	45,860,482	70,520,723
Miscellaneous accounts receivable	0	451,803
Total Receivables	\$ 48,692,516	\$ 73,519,367
Investments at fair value		
US Government obligations	\$ 7,254,567	\$ 9,793,077
Mortgage-backed securities	1,824,177	2,438,190
Domestic corporate bonds	88,961,391	87,613,743
International and Convertible bonds	46,590,381	40,107,265
Common stock	531,773,566	625,819,215
Preferred stock	6,141,627	5,663,430
Global Asset Allocation / Better Beta	271,024,679	276,625,640
Real Estate	140,212,932	133,643,189
Hedge Fund of Funds	132,259,441	82,638,665
Private Equity	12,990,487	981,547
Commingled Funds - Bonds	291,280,679	261,779,323
Commingled Funds - Equity	176,836,074	229,756,466
Total Investments	\$1,707,150,001	\$1,756,859,750
Other Assets (Furniture and equip. net of accum. deprec.)	113,821	49,641
Total Assets	\$1,872,327,177	\$1,966,892,015
Liabilities		
Accounts payable	\$ 14,548	\$ 886
Securities purchased	57,553,457	75,175,617
Securities lending collateral	70,162,084	69,178,433
Total Liabilities	\$ 127,730,089	\$ 144,354,936
Net Assets held in trust for pension benefits (a schedule of funding progress is presented on page F-5)	\$1,744,597,088	\$1,822,537,079

STATEMENT OF CHANGES IN REPORTED PLAN ASSETS

	Reconciliation as of December 31	
	2011	2010
Additions		
Contributions		
Employer	\$ 49,499,117	\$ 41,626,695
Plan members	47,880,636	47,569,052
Donated fixed assets	0	0
Total Contributions	97,379,753	89,195,747
Investment Income		
Net appreciation in fair value of investments	(49,539,117)	197,040,058
Interest and dividends	41,021,778	41,373,884
Real estate	2,276,848	1,518,832
Net securities lending	250,151	222,517
Miscellaneous	110,061	159,513
Total Investment Income	(5,880,279)	240,314,804
Less: Investment Expenses	9,115,850	7,099,467
Net Investment Income	(14,996,129)	233,215,337
Total Additions	82,383,624	322,411,084
Deductions		
Benefits	152,703,450	145,927,465
Refunds	4,197,966	3,743,400
Administrative expense	3,422,200	4,637,246
Total Deductions	160,323,616	154,308,111
Net increase/(decrease)	\$ (77,939,991)	\$ 168,102,973
Net Assets held in trust for pension benefits		
Beginning of year	\$1,822,537,079	\$1,654,434,106
End of year	\$1,744,597,088	\$1,822,537,079

**NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED DECEMBER 31, 2011**

Membership information as of December 31, 2011, the date of the latest actuarial valuation, is as follows:

Retirees and beneficiaries	9,467
Inactive members	2,861
Active members	20,976
Total	33,304

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 contribute 3% of pay effective July 1, 2012. 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. As of December 31, 2011, the remaining amortization period is 27 years.

On the basis of the December 31, 2011 actuarial valuation, the Annual Required Employer Contribution for Fiscal 2014 determined in accordance with GASB Statement No. 25 for accounting purposes was determined to be 5.51% of payroll as follows:

1) Normal Cost	5.76%
2) Accrued Liability	2.75%
3) Total	8.51%
4) Member Contribution	3.00%
5) Annual Required Contribution	5.51%

Please see page 3 for comments about changes in GASB reporting standards.

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

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) - Entry Age (b)	Unfunded AAL (UAAL) (b) - (a)	Funded Ratio (a)/(b)	Covered Payroll (c)	UAAL as a Percent of Covered Payroll [(b) - (a)] / (c)
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 %
12/31/08*	1,733,946	2,255,298	521,352	76.88 %	1,211,140	43.05 %
12/31/09#	1,769,540	2,339,869	570,329	75.63 %	1,208,093	47.21 %
12/31/10*	1,822,603	2,384,061	561,458	76.45 %	1,191,290	47.13 %
12/31/11\$	1,866,952	2,470,964	604,012	75.56 %	1,246,973	48.44 %

After Experience Study.

\$ After change in benefit structure.

* After changes in actuarial assumptions and/or methods.

SCHEDULE OF EMPLOYER CONTRIBUTIONS

Plan Year Ended June 30	Annual Required Contribution	Percent Contributed
2004	\$37,331,203	100%
2005	32,198,596	100%
2006	34,648,918	100%
2007	36,644,001	100%
2008	38,334,140	100%
2009	37,281,658	107%
2010	35,146,816	108%
2011	47,118,111	100%

The figures on this page show the actual employer contribution required for compliance with Governmental Accounting Standards (GASB No. 25). 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, 2011
Actuarial cost method	Individual entry age actuarial cost method (see page G-2)
Amortization method	Level percent of payroll
Remaining amortization period	27 years
Asset valuation method	5-year smoothed market 75%/125% corridor
Actuarial assumptions	
Investment rate of return*	7.50%
Projected salary increase*	3.75 - 9.05%
* <i>Includes wage inflation at</i>	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**

Fiscal Year Ended June 30	ARC (Annual Required ER Conts)	Interest on Prior Year's NPO	ARC Adjustment (NPO Amort)	Net Change to ARC	APC (Annual Pension Cost)	Actual ER Contribution	Change in NPO	New NPO (NPA) Balance
2009	\$ 37,281,658	\$ 0	\$ 0	\$ 0	\$ 37,281,658	\$ 40,012,480	(2,730,822)	\$(2,730,822)
2010	35,146,816	(204,812)	(174,046)	(30,766)	35,116,050	37,868,623	(2,752,573)	(5,483,395)
2011	47,118,111	(411,255)	(313,771)	(97,484)	47,020,627	47,118,111	(97,484)	(5,580,879)

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, 2010 actuarial valuation, based upon a study of experience during the period January 1, 2005 to December 31, 2009.

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 accrued years of service on page G-8. Part of the assumption for accrued service 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 3 years for males and 3 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. This was adjusted to 75% - 125% in the December 31, 2008 valuation, as requested by the Board.

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 Paragraphs 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 Paragraph 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 75% of market value or more than 125% of market value, the actuarial value of assets shall be reset to 75% of market value or 125% of market value, as the case may be, and the total difference between market and actuarial value shall be spread over 4 future years. Based upon consultation with the actuary, the Trustees may combine bases in order to reset the actuarial value to be equal to the market value when the difference between market value and actuarial value is 5% or less of market value.

SINGLE LIFE RETIREMENT VALUES

STANDARD MORTALITY

Sample Attained Ages	Present Value of \$1 Monthly for Life Increasing 3.0% Annually		Percent Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women	Men	Women
55	\$187.03	\$201.44	0.3213%	0.1734%	28.85	32.99
60	169.63	185.77	0.5581%	0.2919%	24.39	28.31
65	150.45	167.93	1.0147%	0.5832%	20.18	23.82
70	130.51	148.72	1.8034%	1.0764%	16.37	19.65
75	110.33	128.05	2.8481%	1.6506%	12.98	15.78
80	89.95	106.03	4.5171%	2.8366%	9.96	12.22
Ref:	261 x 1.00	262 x 1.00				
	sb 3	sb 3				

DISABLED MORTALITY

Sample Attained Ages	Present Value of \$1 Monthly for Life Increasing 3.0% Annually		Percent Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women	Men	Women
55	\$128.18	\$144.69	3.3740%	2.6550%	17.14	20.34
60	118.67	135.13	4.2210%	2.9790%	15.18	18.04
65	110.09	124.28	4.7460%	3.3300%	13.46	15.71
70	99.71	111.14	5.1730%	3.6990%	11.60	13.27
75	86.55	94.59	5.8940%	4.4280%	9.55	10.66
80	70.31	76.55	7.8960%	6.7140%	7.37	8.16
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		2.0%			
46		2.0%			
47		2.0%			
48		2.0%			
49		2.0%			
50		2.0%			
51		3.0%			
52		6.0%			
53		8.0%			
54		8.0%			
55	45.0%	9.0%	22.5%	30	22.5%
56	35.0%	4.0%	17.5%	31	17.5%
57	25.0%	4.0%	12.5%	32	12.5%
58	25.0%	4.0%	12.5%	33	12.5%
59	25.0%	4.0%	12.5%	34	12.5%
60	30.0%	8.0%	15.0%	35	15.0%
61	35.0%	9.0%	17.5%	36	17.5%
62	35.0%	15.0%	17.5%	37	17.5%
63	30.0%	18.0%	15.0%	38	35.0%
64	25.0%	18.0%	12.5%	39	50.0%
65	25.0%		12.5%	40 & Up	100.0%
66	25.0%		12.5%		
67	25.0%		25.0%		
68	25.0%		25.0%		
69	20.0%		20.0%		
70	20.0%		20.0%		
71	20.0%		20.0%		
72	20.0%		20.0%		
73	30.0%		30.0%		
74	30.0%		30.0%		
75	100.0%		100.0%		
76	100.0%		100.0%		
77	100.0%		100.0%		
78	100.0%		100.0%		
79	100.0%		100.0%		
80	100.0%		100.0%		
Ref:	1891	1893	1892		1894

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	4 & Up	0.02%	0.01%	0.00%	0.00%	0.03%	0.02%	0.01%	0.00%	11.20%	15.40%
30		0.03%	0.01%	0.00%	0.00%	0.03%	0.02%	0.01%	0.01%	7.60%	11.20%
35		0.03%	0.02%	0.00%	0.00%	0.05%	0.04%	0.01%	0.01%	5.40%	7.60%
40		0.04%	0.02%	0.00%	0.00%	0.07%	0.06%	0.02%	0.02%	3.80%	4.20%
45		0.05%	0.03%	0.01%	0.00%	0.10%	0.09%	0.03%	0.02%	3.00%	3.00%
50		0.08%	0.04%	0.01%	0.01%	0.17%	0.15%	0.04%	0.04%	2.00%	3.00%
55		0.13%	0.07%	0.02%	0.01%	0.29%	0.25%	0.07%	0.06%	3.20%	4.20%
60	0.22%	0.12%	0.03%	0.01%	0.49%	0.35%	0.12%	0.09%	4.00%	5.00%	
Ref:		0.40 x 261	0.40 x 262	0.05 x 261	0.05 x 262					669	670
		sb 3	sb 3	sb 3	sb 3	0.16 x 16	0.16 x 17	0.04 x 16	0.04 x 17	1153	1154

Rates of separation for members with less than 4 years of service are assumed to be: 16% in the first year for both men and women, 13% in the second and third years for men, and 14% in the second and third years for women.

SAMPLE PAY INCREASE ASSUMPTIONS FOR AN INDIVIDUAL MEMBER

Pay Increase Assumption			
Service Index	Merit & Seniority	Base (Economy)	Increase Next Year
1	5.30%	3.75%	9.05%
2	3.80%	3.75%	7.55%
3	3.30%	3.75%	7.05%
4	3.10%	3.75%	6.85%
5	2.90%	3.75%	6.65%
6	2.70%	3.75%	6.45%
7	2.70%	3.75%	6.45%
8	2.30%	3.75%	6.05%
9	2.10%	3.75%	5.85%
10	1.80%	3.75%	5.55%
11	1.80%	3.75%	5.55%
12	1.80%	3.75%	5.55%
13	1.80%	3.75%	5.55%
14	1.80%	3.75%	5.55%
15	1.80%	3.75%	5.55%
16	1.80%	3.75%	5.55%
17	1.80%	3.75%	5.55%
18	1.80%	3.75%	5.55%
19	1.80%	3.75%	5.55%
20	1.00%	3.75%	4.75%
21	1.00%	3.75%	4.75%
22	1.00%	3.75%	4.75%
23	1.00%	3.75%	4.75%
24	1.00%	3.75%	4.75%
25	0.00%	3.75%	3.75%
Ref:	386	3.75%	

RATES OF FORFEITURE FOLLOWING VESTED SEPARATION

Age at Separation	Sample Entry Age				
	25	30	35	40	45
30	0.5000				
31	0.4750				
32	0.4500				
33	0.4250				
34	0.4000				
35	0.3750	0.5000			
36	0.3500	0.4667			
37	0.3250	0.4333			
38	0.3000	0.4000			
39	0.2750	0.3667			
40	0.2500	0.3333	0.5000		
41	0.2250	0.3000	0.4500		
42	0.2000	0.2667	0.4000		
43	0.1750	0.2333	0.3500		
44	0.1500	0.2000	0.3000		
45	0.1250	0.1667	0.2500	0.5000	
46	0.1000	0.1333	0.2000	0.4000	
47	0.0750	0.1000	0.1500	0.3000	
48	0.0500	0.0667	0.1000	0.2000	
49	0.0250	0.0333	0.0500	0.1000	
50	0.0000	0.0000	0.0000	0.0000	0.0000

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 Price 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 Price 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
1/2007	4.1	0.6	5.6	(1.4)	1.3	1.7	1.5	1.2
1/2008	0.1	1.5	25.8	8.7	(37.1)	(0.6)	(11.5)	(20.1)
1/2009	2.7	(2.5)	(17.1)	0.3	23.2	1.7	8.0	13.1
1/2010	1.5	(1.4)	8.5	10.7	13.4	9.7	10.4	11.0
1/2011	3.0	(2.9)	24.5	14.6	(0.9)	11.2	7.1	3.8
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
5/2005	2.5	(0.4)	5.1	6.6	(2.0)	3.4	2.0	0.7
5/2010	2.2	0.0	3.3	3.6	0.1	3.1	2.6	2.0
5/2011	2.3	(1.0)	8.2	6.4	(2.5)	4.6	2.7	1.1
30/2011	3.0	1.6	7.8	7.6	7.8	7.6	7.6	7.6

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" swell the retired population?



Basic Series Year-by-Year Total Returns (1926 – 2011)

For Stocks, Bonds, and Bills,
RED means a Real Return of less than 3%
[(Total Return - Inflation) < 3%]

For Inflation,
RED means a loss of purchasing power

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
2008	-37.00	-36.72	8.78	25.87	13.11	1.60	0.09
2009	26.46	28.09	3.02	-14.90	-2.40	0.10	2.72
2010	15.06	31.36	12.44	10.14	7.12	0.12	1.50
2011	2.11	-3.26	17.95	28.23	9.46	0.04	2.96

GABRIEL, ROEDER, SMITH & COMPANY from SBBI Yearbook * Calculated using December to December CPI-U (1982-84=100, when available), not seasonally adjusted.

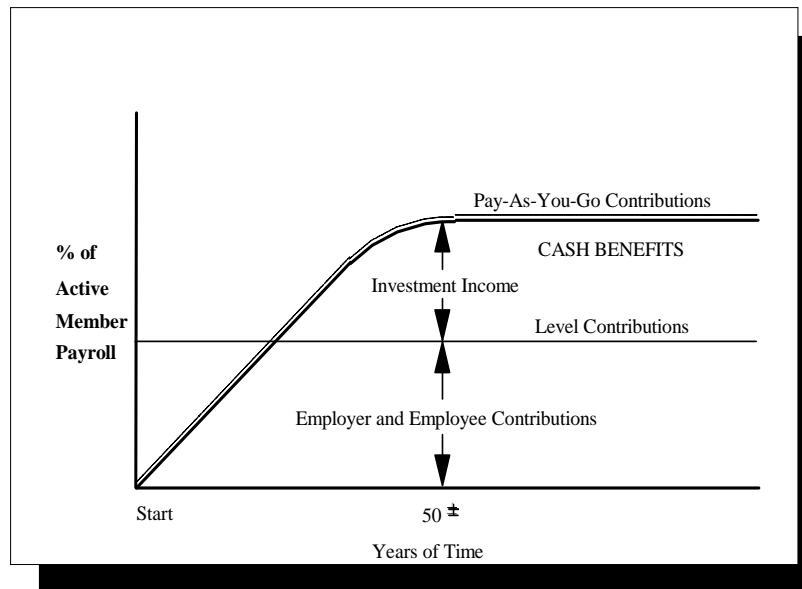
SELECTION OF ASSUMPTIONS USED IN ACTUARIAL VALUATIONS

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, 2011

Marriage Assumption:	100% of males and 100% of females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses.
Pay Increase Timing:	Nine months after the valuation date (October 1).
Decrement Timing:	Decrements of all types are assumed to occur mid-year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Miscellaneous Loads:	For members hired prior to July 1, 2001 computed liabilities and normal costs are increased by 3.25% to reflect service credit for unused sick leave that may be granted at retirement.
Decrement Relativity:	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Decrement Operation:	Disability, mortality and turnover do not operate during retirement eligibility.
Incidence of Contributions:	Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
Normal Form of Benefit:	The assumed normal form of benefit is the straight life form.
Benefit Service:	Exact Fractional Service is used to determine the amount of benefit payable.
Actuarial Equivalent Factors:	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 st preceding the Calendar year of retirement. Mortality is based upon a 20% unisex blend of the 1994 Group Annuity Mortality Table set back 3 years for males and 3 year for females.

July 16, 2012

ERFC Board of Trustees
c/o Ms. Jeanne M. Carr, CFA, Executive Director/CIO
8001 Forbes Place, Suite 300
Springfield, Virginia 22151

Re: The Report of the ERFC Annual Actuarial Valuation December 31, 2011

Dear Jeanne:

Enclosed are 10 copies of the report. Please call if you need additional copies.

Sincerely,



Judith A. Kermans

JAK:clh
Enclosures