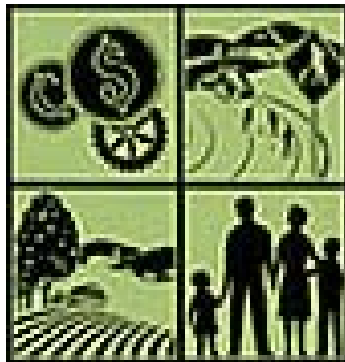


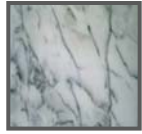
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# Franklin Regional Retirement System



Actuarial Valuation  
January 1, 2008





STONE  
CONSULTING, INC.

September 8, 2008

Franklin Regional Retirement Board  
278 Main Street, Suite 311  
Greenfield, MA 01301

Dear Franklin Regional Retirement Board:

Stone Consulting, Inc. has performed a January 1, 2008 actuarial valuation of the Franklin Regional Retirement System. This valuation and report was prepared using generally accepted actuarial principles and practices and meets the parameters set by the Governmental Accounting Standards Board Statement (GASB) No. 25. To the best of our knowledge, this report is complete and accurate, and the assumptions used represent our best estimate of anticipated experience of the system.

As part of performing the valuation, Stone Consulting, Inc. was furnished member data by the Franklin Regional Retirement System's administrative staff. Although examined for general reasonableness, the data was not audited by the actuary. In addition, the administrative staff furnished financial statements that were not audited by the actuary or by the plan's auditors.

The funding objective of the plan is to fully fund the system while attempting to maintain a stable contribution amount for the upcoming fiscal year that is consistent with prior funding schedules or if employer finances allow it, to increase the contribution amount. This funding objective is being met.

We anticipate over time the contribution level to decrease as a percentage of payroll. The contribution rate is determined by adding the normal cost plus an amortization of the unfunded actuarial accrued liability. The normal cost is expected to remain at a level percentage of payroll. The number of years of the amortization and/or the rate of increase of the amortization is adjusted to maintain a stable

contribution level for the upcoming fiscal year. The length of the funding schedule contained in this actuarial valuation report is seventeen years (fully funded by 2026) and the amortization increase is 2.38% amortization. The amortization increase cannot exceed 4.50% annually. The maximum length of the amortization is until Fiscal 2028. These limits are contained in Chapter 32 of the Massachusetts General Laws.

The contribution amount for Fiscal Year 2010 is \$4,789,021 that is \$1,074 more than the anticipated contribution amount from the prior funding schedule. PERAC and GASB guidelines indicate that actuarial valuations should be conducted at least every other year. The Franklin Regional Retirement Board conducted their previous actuarial valuation effective January 1, 2006. This satisfies these guidelines.

We are pleased to present the results of this valuation. If the Retirement Board has any questions on the content of this report, we would be glad to respond. Please note that this report is meant to be used in its entirety. Use of excerpts of this report may result in inaccurate or misleading understanding of the results.

Respectfully submitted,  
*STONE CONSULTING, INC.*  
Actuaries for the Plan

Lawrence B. Stone  
Member, American Academy of Actuaries





# FRANKLIN REGIONAL RETIREMENT SYSTEM

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## FRANKLIN REGIONAL RETIREMENT SYSTEM

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### INTRODUCTION

This report presents the results of the actuarial valuation of the Franklin Regional Retirement System. The valuation was performed at the request of the Retirement Board as of January 1, 2008 for the purpose of determining the contribution requirements for Fiscal Year 2010 and beyond. The contribution requirements are based on:

- The financial condition of the system as of December 31, 2007
- The benefit provisions of M.G.L. Chapter 32 and related statutes;
- The demographics of members in the system (i.e., active and inactive participants, retirees and beneficiaries as of January 1, 2008);
- Economic assumptions regarding salary increases and investment earnings; and
- Other actuarial assumptions (i.e., withdrawals, retirement, death, etc.)

### JANUARY 1, 2008 VALUATION SUMMARY

	January 1, 2008	January 1, 2006	Change
<b>Contribution Fiscal 2010</b>	\$4,789,021	\$4,787,947	\$1,074
<b>Funding Schedule Length</b>	17 years	19 years	-2 years
<b>Amortization Increase</b>	2.38%	3.50%	-1.12%
<b>Funding Ratio</b>	73%	67%	+ 6%
<b>Interest Rate Assumption</b>	8.00%	8.00%	0.00%
<b>Salary Increase Rate Assumption</b>	4.75%	4.75%	0.00%

- The Fiscal Year 2010 contribution is about the same as the planned 2010 contribution. The System experienced a \$4.6 million net investment gain over the expected market value return since January 1, 2006 (the prior valuation date). Stone Consulting, with agreement from the Retirement Board, values assets using an asset smoothing technique. In this approach, asset gains and losses are recognized over a four-year period. The purpose of this approach is to



## FRANKLIN REGIONAL RETIREMENT SYSTEM

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avoid wide swings in asset value from one year to the next. This valuation recognizes \$1.9 million of the above actuarial asset gain leaving \$2.7 million unrecognized. The unrecognized gain will be reflected in future valuations.

The System experienced a 9.6% average return on the actuarial value of assets versus our assumption of an 8.00% return. The market value of assets experienced an average return of 11.5%. The System's asset portfolio, effective December 31, 2007 was approximately 74% equities, alternative investments and real estate and 26% fixed income and short-term investments. The interest rate assumption was maintained at 8.00% to reflect anticipated market performance.

- We have kept the salary increase rate at 4.75%, consistent with the 2006 valuation. Total compensation changed by 15.5% over the prior valuation (two years), average compensation (compensation divided by number of active members) changed by 6.5%, (3.2% per year). The number of active members has increased, along with the age and service.
- The funding level of the Franklin Regional Retirement System is 73% (76% using market value of assets), compared to 67% for the January 1, 2006 actuarial valuation. Chapter 68 requires a minimum funding ratio of 65% along with additional criteria in order to avoid being labeled an “under performing system”. If you are considered an “under performing system” the system's assets are required to be transferred to PRIT. The funding level is estimated to be in the third quartile of Massachusetts' Contributory Retirement Systems.

The schedule length is seventeen (17) years. The schedule's length is two years less than the remainder of the funding schedule from the prior valuation as well as the maximum permitted under Chapter 32 of the Massachusetts General Laws (2028). The amortization percentage was changed from 3.50% to 2.38%, while maintaining a FY2010 contribution level consistent with the prior valuation. The maximum amortization permitted under Chapter 32 is 4.50%. There are two small early retirement incentive bases that are being amortized over ten (10) and (11) remaining years with a level amortization payment.

- The disability mortality assumption was changed from 7 years to a 2 year set forward which implies that disabled participants live an additional 5 years on average.



## FRANKLIN REGIONAL RETIREMENT SYSTEM

### JANUARY 1, 2008 ACTUARIAL VALUATION RESULTS

	January 1, 2008	January 1, 2006	Percentage Change
<b>Funding</b>			
• Contribution for Fiscal 2010	\$4,789,021		
• Contribution for Fiscal 2010 based on current schedule		\$4,787,947	0.0%
<b>Members *</b>			
• <i>Actives</i>			
a. Number	1,227	1,131	8.5%
b. Annual Compensation	\$30,302,151	\$26,228,669	15.5%
c. Average Annual Compensation	\$24,696	\$23,191	6.5%
d. Average Attained Age	47.7	47.5	0.4%
e. Average Past Service	9.3	9.1	2.2%
• <i>Retired, Disabled and Beneficiaries</i>			
a. Number	404	396	2.0%
b. Total Benefits*	\$4,368,496	\$3,885,580	12.4%
c. Average Benefits*	\$10,813	\$9,812	12.4%
d. Average Age	71.8	72.1	-0.4%
• <i>Inactives</i>			
a. Number	631	685	-7.9%
<b>Normal Cost</b>			
a. Total Normal Cost as of January 1, 2008	\$3,896,597	\$3,373,810	15.5%
b. Less Expected Members' Contributions	<u>2,565,686</u>	<u>3,373,810</u>	17.4%
c. Normal Cost to be funded by the Units	\$1,330,911	\$2,185,977	12.0%
d. Adjustment to July 1, 2009	95,945	85,630	12.0%
e. Administrative Expense Assumption	<u>439,764</u>	<u>426,850</u>	3.0%
f. Normal Cost Adjusted to July 1, 2009	\$1,866,620	\$1,700,313	9.8%

\*Excluding State reimbursed COLA



## FRANKLIN REGIONAL RETIREMENT SYSTEM

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### SUMMARY OF JANUARY 1, 2008 VALUATION (Continued)

	January 1, 2008	January 1, 2006	Percentage Change
<b>Actuarial Accrued Liability as of January 1, 2008</b>			
a. Active Members	\$62,190,942	\$52,364,364	18.8%
b. Inactive Members	2,278,893	2,331,116	-2.2%
c. Retired Members and Beneficiaries	<u>41,502,482</u>	<u>37,127,626</u>	11.8%
d. Total	\$105,972,317	\$91,823,106	15.4%
<b>Unfunded Actuarial Accrued Liability</b>			
a. Actuarial Accrued Liability as of January 1, 2008	\$105,972,317	\$91,823,106	15.4%
b. Less Actuarial Value of Assets as of January 1, 2008	<u>77,859,319</u>	<u>61,538,920</u>	26.5%
c. Unfunded Actuarial Accrued Liability as of January 1, 2008	\$28,112,998	\$30,284,186	-7.2%
d. Adjustment to July 1, 2009	<u>\$ 1,039,416</u>	<u>\$1,437,721</u>	
e. Unfunded Actuarial Accrued Liability as of July 1, 2009	\$29,152,414	\$31,721,907	



## FRANKLIN REGIONAL RETIREMENT SYSTEM

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### DEMOGRAPHIC INFORMATION

<b>Members</b>	<b>January 1, 2008</b>	<b>Percentage Change</b>
• <b>Actives</b>		
a. Number	1,227	8.5%
b. Annual Compensation	\$30,302,151	15.5%
c. Average Annual Compensation	\$24,696	6.5%
d. Average Attained Age	47.7	0.4%
e. Average Past Service	9.3	2.2%
• <b>Retired, Disabled and Beneficiaries</b>		
a. Number	404	2.0%
b. Total Annual Retirement Allowance excluding State-reimbursed COLA	\$4,368,496	12.4%
• <b>Inactives</b>		
a. Number	631	-7.9%

- The data was supplied by the Franklin Regional Retirement Board. The data was checked under broad parameters of reasonableness. With the assistance of the staff of the Franklin Regional Retirement Board, we were able to develop a database sufficient for valuation purposes.
- Payroll changed by 15.5% over the course of the past two years. Average annual compensation changed by 6.5% over the same time period.
- The salary increase assumption includes general wage adjustments, step increases, and promotional increases.



## FRANKLIN REGIONAL RETIREMENT SYSTEM

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### *HISTORY OF ACTIVE PARTICIPANTS*

<b>Valuation Year</b>	<b>Number</b>	<b>Average Age</b>	<b>Average Past Service</b>	<b>Average Ann'l Compensation</b>
2008	1,227	47.7	9.3	\$24,696
2006	1,131	47.5	9.1	\$23,191
2003	1,155	46.1	7.4	\$17,923
2001	1,222	45.7	10.8	\$36,945
1999	1,163	45.5	7.2	\$15,806

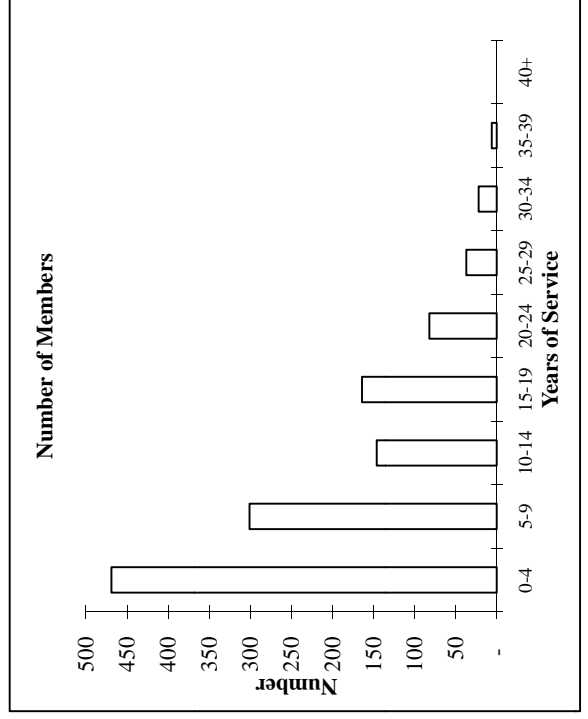
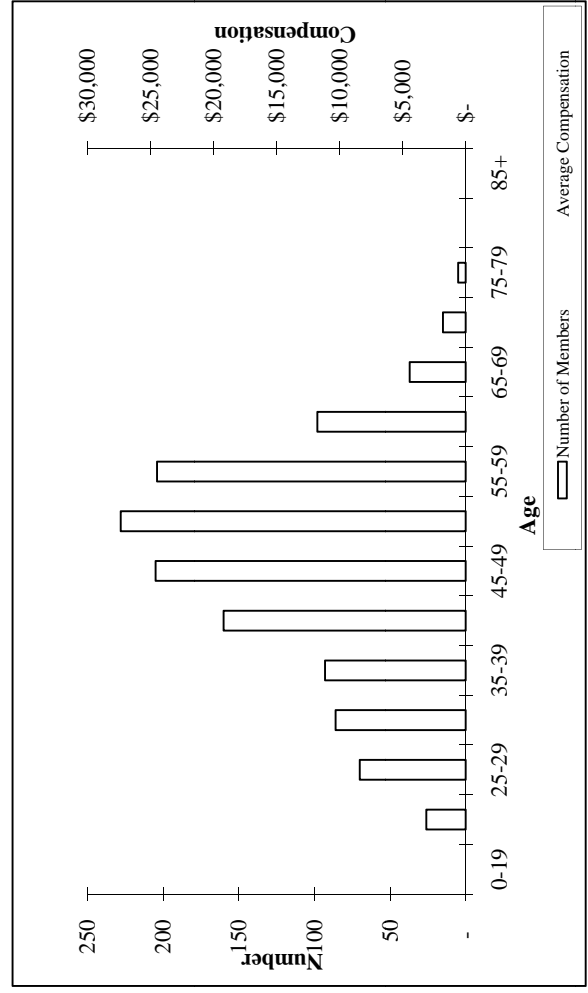
- Employee age has increased by 2.2 years and service has increased by 2.1 years over the course of the past nine years. Average annual compensation has grown by 56.2% over the same time period (5.1% per year).

The charts on the following pages summarize demographic information regarding active and retiree members.



**FRANKLIN REGIONAL RETIREMENT SYSTEM**  
**Distribution of Plan Members as of January 1, 2008**  
**Active Members**

AGE	0-4 Years	5-9 Years	10-14 Years	15-19 Years	20-24 Years	25-29 Years	30-34 Years	35-39 Years	40 + Years	Total	Total Compensation	Average Compensation
0-19	-	-	-	-	-	-	-	-	-	-	\$ -	-
20-24	-	26	-	-	-	-	-	-	-	26	462,214	17,777
25-29	63	7	-	-	-	-	-	-	-	70	1,532,023	21,886
30-34	52	29	5	-	-	-	-	-	-	86	2,130,679	24,775
35-39	48	28	11	5	-	-	-	1	-	93	2,277,629	24,491
40-44	79	38	16	16	10	1	-	-	-	160	3,905,832	24,411
45-49	73	66	31	22	9	4	-	-	-	205	5,213,069	25,430
50-54	70	53	39	35	15	9	6	1	-	228	5,994,923	26,294
55-59	34	47	24	56	23	11	9	-	-	204	5,445,994	26,696
60-64	15	17	15	18	19	9	4	1	-	98	2,215,501	22,607
65-69	7	11	3	9	3	2	2	2	-	37	782,230	21,141
70-74	2	5	1	1	2	1	1	1	-	15	247,000	16,467
75-79	-	-	1	1	2	1	-	-	-	5	95,056	19,011
80-84	-	-	-	-	-	-	-	-	-	-	-	-
85+	-	-	-	-	-	-	-	-	-	-	-	-
<b>TOTAL</b>	<b>469</b>	<b>301</b>	<b>146</b>	<b>164</b>	<b>82</b>	<b>37</b>	<b>22</b>	<b>6</b>	<b>-</b>	<b>1,227</b>	<b>\$ 30,302,151</b>	<b>\$ 24,696</b>





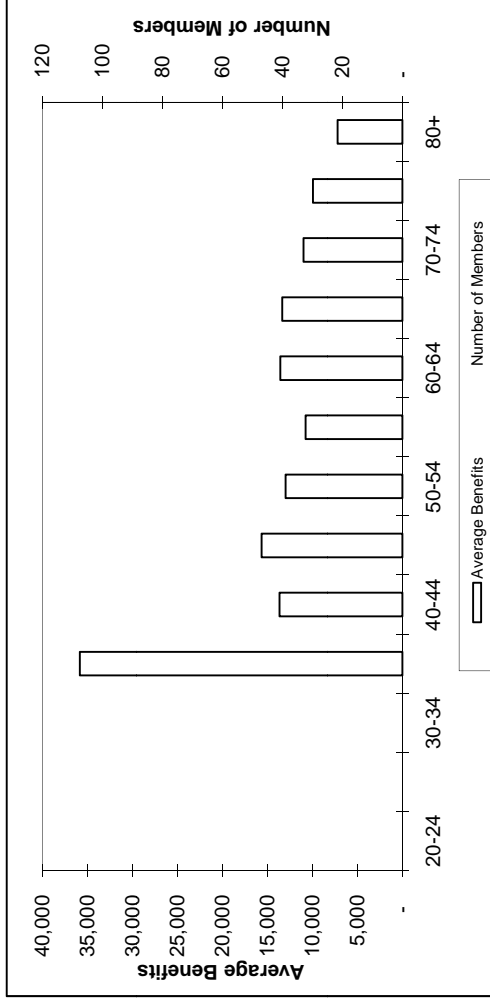
## FRANKLIN REGIONAL RETIREMENT SYSTEM

### Distribution of Plan Members as of January 1, 2008

#### Retired Members

Disabled Member			Retired Members and Beneficiaries			
Age	Number	Average Benefit	Age	Number	Average Benefit	Total Benefit
20-24	-	-	20-24	-	-	-
25-29	-	-	25-29	-	-	-
30-34	-	-	30-34	-	-	-
35-39	1	35,855	35-39	-	-	-
40-44	2	13,668	40-44	-	-	-
45-49	1	22,505	45-49	1	8,803	8,803
50-54	3	14,312	50-54	8	12,490	99,924
55-59	1	25,054	55-59	26	10,202	265,263
60-64	2	17,329	60-64	51	13,415	684,172
65-69	1	25,269	65-69	77	13,206	1,016,895
70-74	2	13,935	70-74	61	10,898	664,792
75-79	1	30,968	75-79	66	9,629	635,521
80+	-	-	80+	100	7,207	720,675
<b>TOTAL</b>	<b>14</b>	<b>\$ 19,461</b>	<b>TOTAL</b>	<b>390</b>	<b>\$ 10,503</b>	<b>\$ 4,096,045</b>

Total			
Age	Number	Average Benefit	Total Benefit
20-24	-	-	-
25-29	-	-	-
30-34	-	-	-
35-39	1	35,855	35,855
40-44	2	13,668	27,336
45-49	2	15,654	31,308
50-54	11	12,987	142,860
55-59	27	10,752	290,317
60-64	53	13,563	718,830
65-69	78	13,361	1,042,165
70-74	63	10,995	692,661
75-79	67	9,948	666,489
80+	100	7,207	720,675
<b>TOTAL</b>	<b>404</b>	<b>\$ 10,813</b>	<b>\$ 4,368,496</b>



Benefits shown are net of State reimbursed COLA.



STONE  
CONSULTING, INC.



## FRANKLIN REGIONAL RETIREMENT SYSTEM

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### VALUATION METHODOLOGY

Stone Consulting, Inc. used the Entry Age Normal actuarial funding method in this actuarial valuation. The use of the Entry Age Normal actuarial funding method is consistent with the requirements of Chapter 32 of the Massachusetts General Laws.

#### NORMAL COST

		<b>January 1, 2008</b>	<b>% of Payroll*</b>
Gross Normal Cost (GNC)	\$	3,896,597	12.9%
Employees Contribution		<u>2,565,686</u>	<u>8.5%</u>
Net Normal Cost (NNC)	\$	1,330,911	4.4%
Adjusted to Beginning of Fiscal Year 2010	\$	95,945	
Administrative Expense	\$	<u>439,764</u>	1.5%
Adjusted Net Normal Cost With Admin. Expense	\$	1,866,620	

\*Payroll paid in 2007 for employees as of January 1, 2008 is \$30,302,151. Payroll for new hires in 2007 was annualized.

- The gross normal cost (GNC) is the “price” of benefits accruing in the current year if the assumptions underlying the normal cost were realized.
- An individual normal cost represents that part of the cost of a member’s future benefits that are assigned to the current year as if the costs are to remain level as a percentage of the member’s pay. Benefits payable under all circumstances (i.e., retirement, death, disability, and terminations) are included in this calculation.
- Anticipated employee contributions to be made during the year are subtracted from the GNC to determine employer normal cost, or net normal cost (NNC).
- Administrative expenses are added to the NNC. The administrative expense does not include investment manager and custodial fees. These fees are considered part of the interest rate assumption that is net of fees.



## FRANKLIN REGIONAL RETIREMENT SYSTEM

### ACTUARIAL ACCRUED LIABILITY AND FUNDED STATUS

		<b>January 1, 2008</b>	<b>Percentage Change</b>
<b>Active Actuarial Accrued Liability</b>		\$ 62,190,942	18.8%
Superannuation	\$ 53,778,797		
Death	\$ 1,603,111		
Disability	\$ 4,138,104		
Termination	\$ 2,670,930		
<b>Retiree, Inactive, Survivor and Beneficiary Actuarial Accrued Liability</b>		<u>43,781,375</u>	11.0%
Retirees and Beneficiaries	\$ 38,329,357		
Disabled	\$ 3,173,125		
Inactive	\$ 2,278,893		
<b>Total Actuarial Accrued Liability (AAL)</b>		\$ <u>105,972,317</u>	15.4%
<b>Actuarial Value of Assets (AVA)</b>		\$ <u>77,859,319</u>	26.5%
<b>Unfunded Actuarial Accrued Liability</b>		\$ 28,112,998	-7.2%
<b>Funded Ratio (AVA / AAL)</b>			
2008 (8.00% interest rate):		73%	
2006 (8.00% interest rate):		67%	

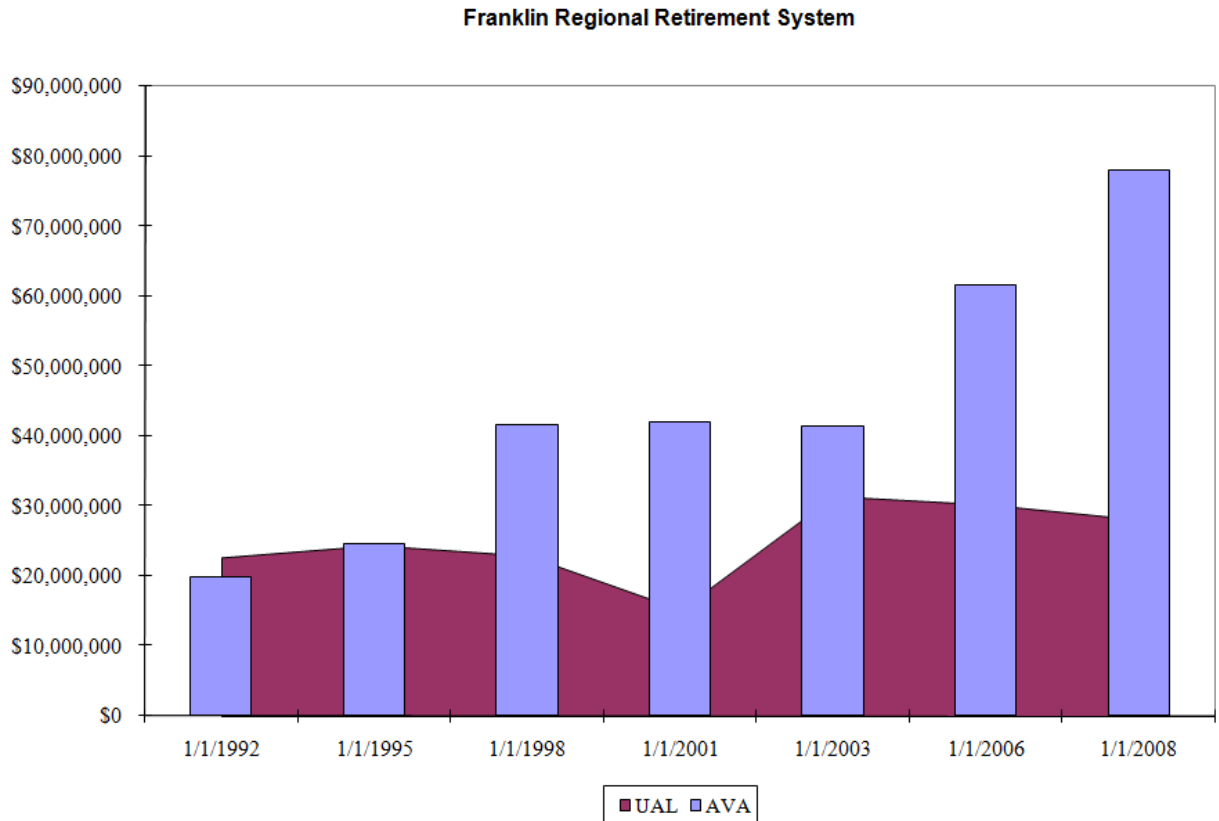
- Actuarial Accrued Liability (AAL) is the “price” of benefits attributable to benefits earned in past years, or in other words, represents today’s value of all benefits earned by active and inactive members.
- The total AAL is \$105,972,317. This along with an actuarial value of assets of \$77,859,319 produces a funded status of 73% (76% on market value). This compares to a funded status of 67% for the 2006 valuation.

The chart on the following page is a history of the unfunded actuarial accrued liability (UAL) and the valuation assets (AVA) over the course of the past seven actuarial valuations.



## FRANKLIN REGIONAL RETIREMENT SYSTEM

### HISTORY OF ACTUARIAL VALUATION OF ASSETS (AVA) AND UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAL)





## FRANKLIN REGIONAL RETIREMENT SYSTEM

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### DEVELOPMENT OF FUNDING SCHEDULE

Net Employer Normal Cost for Fiscal 2010	\$	1,866,620
Net 3(8)(c) Payments		224,605
Amortization		<u>2,607,404</u>
Total Appropriation	\$	4,698,629
Adjustment for semi-annual payments		<u>90,392</u>
Total Appropriation required for Fiscal 2010	\$	4,789,021

- The funding schedule is composed of the normal cost, the amortization of the actuarial accrued unfunded liability plus the net difference between 3(8)(c) payments and is adjusted by the administrative expense assumption. The contribution is assumed to be made semi-annually.
- The contribution amount for Fiscal 2010 is \$4,789,021. The funding schedule is presented on page 14. The schedule's length is seventeen (17) years (for the fresh start base) which is two years shorter than the January 1, 2006 valuation schedule's length. The maximum funding schedule length allowed by Chapter 32 of the Massachusetts General Laws is nineteen years to 2028.
- In developing the funding schedule, we used a fresh start approach in which the unfunded actuarial accrued liability, other than the liability associated with the early retirement incentive, is reamortized instead of maintaining the existing amortization amount and separately amortizing the actuarial gain or loss. The use of a fresh-start approach results in a funding schedule in which the changes in contribution amounts from year to year are more consistent. The amortization percentage changed from 3.50% from the January 1, 2006 valuation to 2.38%. The change in amortization increase allows the contribution amount in Fiscal 2010 to be consistent with prior schedules.



## FRANKLIN REGIONAL RETIREMENT SYSTEM

### FUNDING SCHEDULE

Fiscal Year	Normal Cost	Unfunded Liability	Funding Amortization of UAL	Net 3(8)(c) Payments	Schedule Contribution	Adjusted for Semiannual Payments
2010	1,866,620	29,152,414	2,607,404	224,605	4,698,629	4,789,021
2011	1,955,284	28,668,611	2,665,098	224,605	4,844,988	4,938,195
2012	2,048,160	28,083,793	2,724,166	224,605	4,996,931	5,093,062
2013	2,145,448	27,388,397	2,784,639	224,605	5,154,692	5,253,858
2014	2,247,357	26,572,059	2,846,552	224,605	5,318,513	5,420,830
2015	2,354,106	25,623,548	2,909,938	224,605	5,488,649	5,594,239
2016	2,465,926	24,530,699	2,974,832	224,605	5,665,364	5,774,353
2017	2,583,058	23,280,336	3,041,271	224,605	5,848,934	5,961,455
2018	2,705,753	21,858,190	3,109,292	224,605	6,039,650	6,155,840
2019	2,834,276	20,248,811	3,178,931	224,605	6,237,812	6,357,815
2020	2,968,905	18,435,470	3,109,239	224,605	6,302,749	6,424,001
2021	3,109,927	16,552,329	3,139,947	224,605	6,474,479	6,599,035
2022	3,257,649	14,485,373	3,214,678	224,605	6,696,932	6,825,767
2023	3,412,387	12,172,351	3,291,187	224,605	6,928,179	7,061,463
2024	3,574,476	9,591,657	3,369,517	224,605	7,168,598	7,306,507
2025	3,744,263	6,719,911	3,449,712	224,605	7,418,580	7,561,298
2026	3,922,116	3,531,815	3,531,815	224,605	7,678,536	7,826,255
2027	4,108,416	0	-	224,605	4,333,021	4,416,380
2028	4,303,566	0	-	224,605	4,528,171	4,615,284

#### Amortization of Unfunded Liability as of July 1, 2009

Year	Type	Original Amort. Amount	Percentage Increasing	Original # of Years	Current Amort. Amount	Years Remaining
2005	ERI*	140,988	0.00%	15	140,988	10
2006	ERI*	42,286	0.00%	15	42,286	11
2010	Fresh Start	2,424,130	2.38%	17	2,424,130	17

**Year is the year the amortization base was established.**

**Type is the reason for the creation of the base. Examples are Gain/(Loss) or Fresh Start.**

**Original Amortization Amount is the annual amortization amount when the base was established.**

**Percentage Increasing is the percentage that the Original Amortization Amount increases per year.**

**Original # of Years is the number of years over which the base is being amortized.**

**Current Amortization Amount is the amortization payment amount for this year.**

**Years Remaining is the number of years left to amortize the base.**

**ERI bases were changed to reflect change in interest rate.**





## FRANKLIN REGIONAL RETIREMENT SYSTEM

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### ASSUMPTIONS AND METHODOLOGY SUMMARY

The principal actuarial assumptions used in this valuation are the same as the assumptions used in the previous valuation, except where noted, and are summarized in the following table:

<u>Assumption</u>	<u>January 1, 2008 Valuation</u>
Interest Rate	8.00% (same as prior valuation)
Salary Increase	4.75% (same as prior valuation)
COLA	3% of \$12,000
COLA Frequency	Granted every year
Mortality	RP-2000 table. For members retired under an Accidental Disability (job-related), 40% of deaths are assumed to be from the same cause as the disability. Disabled mortality RP-2000 table, ages set forward 2 years. <i>(Prior valuation used a 7 year set forward)</i>
Overall Disability	<u>Groups 1 and 2</u> 45% ordinary disability 55% accidental disability  <u>Group 4</u> 10% ordinary disability 90% accidental disability
Retirement Rates	<u>Groups 1 and 2</u> Ages 55 - 65 <u>Group 4</u> Ages 50 - 65
Administrative Expense	\$439,764 budget estimated for FY 2010 provided by Franklin Regional Retirement Board.
Asset Valuation Methodology	Four Year Asset Smoothing. <i>(Prior valuation used market value)</i>



## FRANKLIN REGIONAL RETIREMENT SYSTEM

### ASSETS

a.	Cash	\$	1,663,315.54
b.	Equities		11,134,539.73
c.	Pooled Domestic Equity Funds		5,561,288.13
d.	Pooled Domestic Fixed Income Funds		9,763,998.77
e.	Pooled Real Estate Funds		4,061,779.57
f.	PRIT Fund		47,236,061.10
g.	Sub-Total:	\$	79,420,982.84
h.	Interest Due and Accrued		3,074.28
i.	Accounts Receivable	\$	1,257,830.46
j.	Accounts Payable		(84,229.83)
k.	Sub-Total:	\$	1,176,674.91
l.	<b>Market Value of Assets [(g) + (k)]</b>	\$	<b>80,597,657.75</b>

- We were furnished with the System's annual report by the Board. The market value of assets as of December 31, 2007 (adjusted for interest due and accrued, payables and receivables) is \$80,597,657.75.
- The asset allocation as of December 31, 2007 is approximately 4% cash, receivables, payables and short-term investments, 22% fixed income, and 74% equities, alternative investments, and real estate.
- Historically, 10 to 11% has been the expected long-term rate of return for equities, and 6 to 7% has been the expected long-term rate of return for fixed income securities. Many economists and investment professionals are projecting lower returns of 6.25 to 9.00% for equities and 3.65 to 6.00% for fixed income securities. In light of these projections, as well as historical investment returns, the 8.00% interest rate assumption is within the reasonable assumption range. We encourage close monitoring for changes in investment performance against expectations.



## FRANKLIN REGIONAL RETIREMENT SYSTEM

### CALCULATION OF VALUATION ASSETS as of January 1, 2008 4-Year Phase-In of Asset Gains and Losses

1.	Market value of assets including receivable/payable as of January 1, 2008				\$80,597,658
2.	Phase-in of asset gains and losses				
		Plan Year (1)	Original Amount (2)	Percent Unrecognized (3)	Amount Unrecognized (2) x (3)
	a.	2007	\$1,719,091	75%	\$1,289,319
	b.	2006	\$2,898,040	50%	\$1,449,020
	c.	2005	N/A	25%	N/A
	d.	Total			\$2,738,339
3.	Valuation assets without corridor as of January 1, 2008 (1. - 2.d.)				\$77,859,319
4.	Corridor Check				
	a.	90% of Market Value			\$72,537,892
	b.	110% of Market Value			\$88,657,424
5.	Valuation assets with corridor as of January 1, 2008 3. within Corridor				\$77,859,319
6.	Calculation of return on valuation assets				
	a.	Valuation assets as of January 1, 2006			\$61,538,920
	b.	ER contribs + EE contribs - Ben Pymts - Expenses			3,697,707
	c.	Actual return on valuation assets 5. - (6.a. + 6.b.)			\$12,622,692
	d.	Weighted value of valuation assets			62,471,876
	e.	Return on valuation assets 6.c. / 6.d.			20.2%
	f.	Annualized return on assets			9.6%





## FRANKLIN REGIONAL RETIREMENT SYSTEM

### DISCLOSURE INFORMATION UNDER GASB STATEMENT 25

#### Schedules of Funding Progress

(Dollars In Thousands)

Actuarial Valuation Date	Actuarial Value of Assets A	Actuarial Accrued Liability B	Unfunded AAL (UAAL) B-A	Funded Ratio A/B	Covered Payroll C	UAAL as a % of Covered Payroll (B-A)/C
1/1/2008	\$77,859	\$105,972	\$28,113	73%	\$30,302	93%
1/1/2006	\$61,539	\$91,823	\$30,284	67%	\$26,229	115%
1/1/2003	\$41,299	\$72,770	\$31,471	57%	\$23,638	133%
1/1/2001	\$42,002	\$57,235	\$15,233	73%	\$17,923	85%

#### Notes to Schedules

Additional information as of the latest actuarial valuation follows:

Valuation date	1/1/2008
Actuarial cost method	Entry Age Normal
Amortization method	Approximate level percent of payroll Closed
Remaining amortization period	17 years for the fresh start retirement benefits schedule; 11 years for the 2006 ERI; and 10 years for the 2005 ERI.
Asset valuation method	Market value adjusted by accounts payable and receivables adjusted to phase in over 4 years investment gains or losses above or below the expected rate of investment return. The actuarial value of assets must be no less than 90% of the adjusted market value nor more than 110% of the adjusted market value. Market value of assets is \$80,597,658.
Actuarial assumptions:	
Investment Rate of Return	8.00% per year
Projected Salary Increases	4.75% per year



## FRANKLIN REGIONAL RETIREMENT SYSTEM

### PERAC INFORMATION DISCLOSURE

The most recent actuarial valuation of the System was prepared by Stone Consulting, Inc. as of January 1, 2008

The normal cost for employees on that date was:                     \$2,565,686           8.5% of payroll

The normal cost for the employer was:                                     \$1,330,911           4.4% of payroll

The actuarial liability for active members was:                         \$62,190,942

The actuarial liability for retired members was (includes inactive):     \$43,781,375

Total actuarial accrued liability:   \$105,972,317

System assets as of that date:   77,859,319

Unfunded actuarial accrued liability:   \$28,112,998

The ratio of system's assets to total actuarial liability was:   73%

As of that date the total covered employee payroll was:   \$30,302,151

The principal actuarial assumptions used in the valuation are as follows:

Investment Return:                     8.00% per annum

Rate of Salary Increase:             4.75% per annum

### SCHEDULE OF FUNDING PROGRESS (Dollars in \$000's)

Actuarial Valuation Date	Value of Assets (a)	Actuarial Liability (AAL) (b)	Unfunded AAL (UAAL)		Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a % of Covered Payroll ((b-a)/c)
			(b-a)	(a/b)			
1/1/2008	\$77,859	\$105,972	\$28,113	73%		\$30,302	93%
1/1//2006	\$61,539	\$91,823	\$30,284	67%		\$26,229	115%
1/1/2003	\$41,299	\$72,770	\$31,471	57%		\$23,638	133%
1/1/2001	\$42,002	\$57,235	\$15,233	73%		\$17,923	85%



## FRANKLIN REGIONAL RETIREMENT SYSTEM

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### ACTUARIAL METHODS AND ASSUMPTIONS

#### Actuarial Methods

- 1. Actuarial Cost Method**

The Entry Age Normal Actuarial Cost Method has been used in this valuation. Under this method, the normal cost is the amount calculated as the level percentage of compensation necessary to fully fund the prospective benefits from each member's entry age to retirement age.

The actuarial accrued liability represents the theoretical accumulation of all prior years' normal costs for the plan members as if the program had always been in effect. The unfunded actuarial accrued liability is the excess of the actuarial accrued liability over plan assets.
- 2. Asset Valuation Method**

Market value of assets (adjusted by payables and receivables) adjusted to phase in investment gains or losses above or below the expected rate of investment return over a four-year rolling period starting with the 2006 calendar year investment return. The phase-in is 25% for year one, 50% for year two, 75% for year three and 100% for year four. The actuarial value of assets may be no less than 90%, or more than 110% of the market value of assets plus payables and receivables. *(Prior valuation used market value of assets adjusted by payables and receivables.)*
- 3. Fiscal Year Adjustment**

The actuarial results are adjusted by the valuation interest rate and salary scale to the beginning of Fiscal Year 2010. The unfunded actuarial accrued liability is rolled forward with normal cost and further adjusted by anticipated contributions and interest.

#### Actuarial Assumptions

- 1. Investment Return**

8.00% per year net of investment expenses. (Same as the prior valuation)
- 2. Salary Increases**

4.75% per year. (Same as the prior valuation)



## FRANKLIN REGIONAL RETIREMENT SYSTEM

### ACTUARIAL METHODS AND ASSUMPTIONS (Continued)

3. Withdrawal Prior to Retirement      The rates shown at the following sample ages illustrate the withdrawal assumption.

<i>Age</i>	<b>Rate of Withdrawal</b>	
	<b><i>Group 1 and 2</i></b>	<b><i>Group 4</i></b>
20	37.51%	3.15%
25	28.23%	2.85%
30	17.35%	2.48%
35	10.07%	1.88%
40	7.21%	0.84%
45	5.68%	0.06%
50	4.57%	0.00%
55	0.00%	0.00%

4. Disability Prior to Retirement      The rates shown at the following sample ages illustrate the assumption regarding the incidence of disability:

<i>Age</i>	<b>Rate of Disability</b>	
	<b><i>Group 1 and 2</i></b>	<b><i>Group 4</i></b>
20	0.03%	0.10%
25	0.04%	0.12%
30	0.06%	0.18%
35	0.08%	0.26%
40	0.12%	0.38%
45	0.18%	0.58%
50	0.31%	0.98%
55	0.50%	1.60%
60	0.61%	1.97%

Disability is assumed to be 45% ordinary and 55% accidental for Group 1 and 2 and 10% ordinary and 90% accidental for Group 4.



## FRANKLIN REGIONAL RETIREMENT SYSTEM

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### ACTUARIAL METHODS AND ASSUMPTIONS (Continued)

5. Rates of Retirement

The rates shown at the following ages illustrate the assumption regarding the incidence of retirement, once the member has achieved 10 years of service:

<i>Age</i>	<b>Rates of Retirement</b>	
	<i>Group 1 and 2</i>	<i>Group 4</i>
50	N/A	2%
51	N/A	2%
52	N/A	2%
53	N/A	2%
54	N/A	2%
55	10%	5%
56	3%	5%
57	3%	5%
58	3%	5%
59	5%	5%
60	5%	10%
61	5%	10%
62	10%	20%
63	10%	20%
64	10%	20%
65	100%	100%

6. Mortality

The RP-2000 mortality table for healthy annuitants (sex-distinct).

7. Disabled Life Mortality

The RP-2000 mortality table for healthy annuitants (sex-distinct) set-forward by 2 years. Death is assumed to be due to the same cause as the disability 40% of the time.

8. Regular Interest Rate Credited to Annuity Savings Account

2% per year.



## FRANKLIN REGIONAL RETIREMENT SYSTEM

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### ACTUARIAL METHODS AND ASSUMPTIONS (Continued)

- |                              |   |
|------------------------------|---|
| 9. Family Composition        | Members assumed married with 2 dependent children – one male and one female both age 15; age difference between member and spouse assumed to be 3 years (the male being the older). |
| 10. Cost-of-Living Increases | A 3% COLA on the first \$12,000 of a member's retirement allowance is assumed to be granted every year.   |
| 11. Administrative Expenses  | Estimated budgeted amount of \$439,764 for the Fiscal Year 2010 excluding investment management fees and custodial fee is added to the Normal Cost.                                 |
| 12. Step Increases           | Step increases are assumed to be part of the salary increase assumption.  |
| 13. Credited Service         | Service between date of hire and date of membership is assumed to be purchased by all members.  |
| 14. Contribution Timing      | Contributions are assumed to be made semi-annually; payments made on July 1 and January 1 of the Fiscal Year.   |
| 15. Valuation Date           | January 1, 2008.  |



## FRANKLIN REGIONAL RETIREMENT SYSTEM

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### SUMMARY OF PRINCIPAL PROVISIONS

1. Participant

Participation is mandatory for all full-time employees whose employment commences before age 65. There are three classes of members in the retirement system:

*Group 1:* general employees

*Group 2:* employees in specified hazardous occupations (e.g., electricians)

*Group 4:* police and firefighters
2. Member Contributions

Member contributions vary depending upon date hired as follows:

<b>Date of Hire</b>	<b>Member Contribution Rate</b>
Prior to 1975	5% of Pay
1975 – 1983	7% of Pay
1984 – June 30, 1996	8% of Pay
After June 30, 1996	9% of Pay

Members hired after 1978 contribute an additional 2% of pay over \$30,000.
3. Pay
  - a. Pay

Gross regular compensation excluding bonuses, overtime, severance pay, unused sick pay, and other similar compensation.
  - b. Average Pay

The average of pay during the 3 consecutive years that produce the highest average or, if greater, during the last three years (whether or not consecutive) preceding retirement.
4. Credited Service

Period during which an employee contributes to the retirement system plus certain periods of military service and “purchased” service.



# FRANKLIN REGIONAL RETIREMENT SYSTEM

## SUMMARY OF PRINCIPAL PROVISIONS (Continued)

### 5. Service Retirement

- a. Eligibility Completion of 20 years of credited service or attainment of age 55 and completion of 10 years of credited service. If hired prior to 1978 or a member of group 4, attainment of age 55.
- b. Retirement Allowance Determined as the product of the member's benefit percentage, average pay and credited service, where the benefit percentage is shown below (maximum allowance of 80% of average pay):

<b>Benefit Percentage</b>	<b>Group 1</b>	<b>Group 2</b>	<b>Group 4</b>
2.5%	65+	60+	55+
2.4	64	59	54
2.3	63	58	53
2.2	62	57	52
2.1	61	56	51
2.0	60	55	50
1.9	59	N/A	49
1.8	58	N/A	48
1.7	57	N/A	47
1.6	56	N/A	46
1.5	55	N/A	45

In addition, veterans receive an additional \$15 per year for each year of credited service up to 20 years.

### 6. Deferred Vested Retirement

- a. Eligibility Completion of 10 years of credited service (for elected and appointed members, 6 years in the event of involuntary termination).



## FRANKLIN REGIONAL RETIREMENT SYSTEM

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### SUMMARY OF PRINCIPAL PROVISIONS (Continued)

6. Deferred Vested Retirement *(continued)*
- b. Retirement Allowance
- Determined in the same manner as 5b. with the benefit payable at age 55, unless deferred until later at the member's option.
- Member contributions with interest may be withdrawn after separation from service. If contributions are withdrawn, eligibility for retirement benefits is forfeited. Members hired before 1984 receive full interest on contributions that are withdrawn; otherwise, one half the credited interest is provided for members who withdraw after 5 but before 10 years of credited service and no interest is provided for withdrawals before 5 years of credited service.
7. Ordinary Disability Retirement
- a. Eligibility
- Non-job related disability after completion of 10 years of credited service.
- b. Retirement Allowance
- Determined in the same manner as 5b. with the benefit payable immediately. Veterans receive 50% of pay (during final year) plus an annuity based on accumulated member contributions with interest.
8. Accidental Disability Retirement
- a. Eligibility
- Disabled as a result of an accident in the performance of duties. No age or service requirement.
- b. Retirement Allowance
- 72% of pay plus an annuity based on accumulated member contributions with interest. Also, a dependent's allowance per year for each child. Total allowance not to exceed 100% of pay (75% for members hired after 1987).



## FRANKLIN REGIONAL RETIREMENT SYSTEM

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### SUMMARY OF PRINCIPAL PROVISIONS (Continued)

9. Non-Occupational Death

- a. Eligibility Dies while in active service, but not due to occupational injury. 2 years of service.
- b. Retirement Allowance Benefit as if Option C had been elected (see below). Minimum monthly benefits provided as follows: spouse - \$250, first child - \$120, each additional child - \$90.

10. Occupational Death

- a. Eligibility Dies as a result of an occupational injury.
- b. Benefit Amount Same as 8b.

11. Cost-of-Living Increases

An increase of up to 3% applied to the first \$12,000 of annual benefit. Funded by the Municipality from Fiscal Year 1999. Percentage increase is voted on each year by the Retirement Board. Cost-of-living increases granted during Fiscal Year 1982 through Fiscal 1998 are reimbursed by the Commonwealth.

12. Optional Forms of Payment

- a. Option A Allowance payable monthly for the life of the member.
- b. Option B Allowance payable monthly for the life of the member with a guarantee of remaining member contributions with interest.
- c. Option C Allowance payable monthly for the life of the member with 66-2/3% continuing to the member's beneficiary upon the member's death. If the beneficiary predeceases the member, the allowance amount "pops up" to the non-reduced amount.



## FRANKLIN REGIONAL RETIREMENT SYSTEM

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### GLOSSARY OF TERMS

1. Present Value of Benefits Represents the dollar value today of all benefits expected to be earned by current members if all actuarial assumptions are exactly realized.
2. Actuarial Cost Method The procedure that is used to allocate the present value of benefits between the liability that is attributable to past service (Actuarial Accrued Liability) and that attributable to future service.
3. Actuarial Assumptions Estimates are made as to the occurrence of certain events that determine the level of benefits to be paid and how long they will be provided. The more important actuarial assumptions include the investment return on assets, salary increases and the rates of turnover, disability, retirement and mortality.
4. Actuarial Accrued Liability The portion of the Present Value of Benefits that is attributable to past service.
5. Normal Cost The portion of the Present Value of Benefits that is attributable to benefits to be earned in the coming year.
6. Actuarial Assets Market value of assets (adjusted by payables and receivables) adjusted to phase in investment gains or losses above or below the expected rate of investment return over a four-year rolling period starting with the 2004 calendar year investment return. The phase-in is 25% for year one, 50% for year two, 75% for year three and 100% for year four. The actuarial value of assets may be no less than 90%, or more than 110% of the market value of assets plus payables and receivables.
7. Unfunded Actuarial Accrued Liability That portion of the Actuarial Accrued Liability not covered by System Assets.
8. PERAC Public Employee Retirement Administration Commission, a division of the State government which has regulatory authority over the administration of the retirement system.



## FRANKLIN REGIONAL RETIREMENT SYSTEM

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9. PRIT Pension Reserves Investment Trust Fund is the state controlled and administered fund for the investment of assets for members of the retirement system.
10. GASB Government Accounting Standards Board (issues guidance for disclosure of retirement system liabilities).



## FRANKLIN REGIONAL RETIREMENT SYSTEM

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### **Acknowledgement of Qualification**

Acknowledgement of Qualification for January 1, 2008 actuarial valuation of the Franklin Regional Employees' Retirement System:

I, Lawrence Stone, am a consultant for Stone Consulting, Inc. I am a member of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Lawrence B. Stone  
Member, American Academy of Actuaries