

**WISCONSIN RETIREMENT SYSTEM**

**GAIN/LOSS ANALYSIS OF EXPERIENCE AMONG ACTIVE MEMBERS  
DURING CALENDAR YEAR 2008**

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August 27, 2009

The Employee Trust Funds Board  
Wisconsin Retirement System  
801 West Badger Road  
Madison, Wisconsin 53713

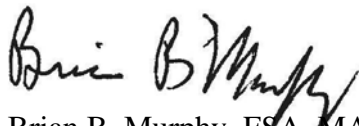
Ladies and Gentlemen:

The results of the *Gain/Loss Analysis of Experience Among Active Participants* of the Wisconsin Retirement System, *covering the calendar year 2008 are presented in this report.* (The results of the December 31, 2008 regular annual actuarial valuation of active members were submitted in our report dated June 3, 2009.)

Your Secretary and staff furnished the statistical data concerning active participant changes and related financial information that was required for this analysis. The actuary did not audit the data. The actuarial assumptions used are shown in the Appendix portion of the December 31, 2008 annual actuarial valuation of active participants.

To the best of our knowledge, this report is complete and accurate and was made in accordance with generally recognized actuarial methods. The actuaries submitting this statement are Members of the American Academy of Actuaries (MAAA), and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,



Brian B. Murphy, FSA, MAAA



Mark Buis, FSA, MAAA

BBM/MB:lr

## ACTIVE MEMBER GAIN/LOSS ANALYSIS

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### Introduction

*Purpose of Gain/Loss Analysis.* Regular actuarial valuations provide information about the composite change in computed contribution rates and total liabilities -- whether or not the rates and related liabilities are increasing or decreasing, and by how much. However, valuations do not show the portion of the change attributable to each risk area within the Retirement System financial mechanism: the rate of investment income on plan assets; the rates of withdrawal of active participants who leave covered employment; the rates of mortality; the rates of disability; the rates of salary increases; and the assumed ages at actual retirement. In an actuarial valuation, assumptions are made as to what these rates will be for the next year and for decades in the future.

*The objective of a gain and loss analysis is to determine the portion of the change that is attributable to each risk area.*

The fact that actual experience differs from assumed experience should be expected. The future cannot be predicted with complete precision. Further, year-to-year statistical fluctuations occur, even in very large groups. This year's report reflects just a single year's experience. Changes in the valuation assumed experience for a risk area should be made only when the differences between assumed and actual experience have been observed to be sizable and persistent. One year's gain and loss analysis may or may not be indicative of *long-term trends, which are the basis of actuarial assumptions*. In the Wisconsin Retirement System, longer term trends are reviewed in connection with the regular 3-year investigation of experience (the most recent 3-year investigation covered the period January 1, 2003 to December 31, 2005). It is the results of the 3-year investigation that lead to recommendations for changes in the actuarial assumptions.

## POPULATION DEVELOPMENT DURING CALENDAR YEAR 2008

	General	Executive & Elected	Protective		Total	Expected
			With S.S.	Without S.S.		
<b>Beginning Census</b>	237,124	1,427	19,757	2,695	261,003	
(-) Normal Retirement	2,795	25	280	62	3,162	3,824
(-) Early Retirement	3,074	9	76	8	3,167	3,875
(-) Death	293	5	19	1	318	286
(-) Disability Retirement						
-Total Disabilities approved	165	0	13	5	183	330
-Less Pending at Beginning of Year	49	0	8	2	59	
-Net new from active status	116	0	5	3	124	
(-) Other Separations	10,413	65	456	36	10,970	10,667
(-) Transfers Out	1,069	22	131	2	1,224	
(+) Transfers In	979	44	166	35	1,224	
(+) New Entrants	18,651	85	1,082	106	19,924	
<b>Ending Census</b>	238,994	1,430	20,038	2,724	263,186	

This schedule reconciles the active member populations reported in connection with the 2007 and 2008 valuations on an actual and expected basis. Assumptions related to population development are a primary focus of the gain/loss analysis. They generally tend to be more stable than economic assumptions, and therefore, measurements have more meaning.

## COMMENTS

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### **Population Results (refer to schedules on Pages 4 and 9)**

**Normal Retirements** varied by group and gender. Overall, there were fewer normal retirements than expected. In general, fewer normal retirements than assumed often creates a gain. However, looking at counts alone is not always an accurate predictor of whether a gain or loss occurs. If there are fewer retirements in shorter service, lower paid groups and more retirements than expected in longer service, higher paid groups, there will be a net loss to the System even if the actual total counts might be equal to or less than expected. The net result for this past year was a small gain.

**Early Retirements** were less than expected in most groups, overall producing a small loss.

**Deaths** among active participants were higher than expected. The net result for the past year was a small loss. While a gain is typical in such circumstances, a loss can occur depending on the distribution of people who die and what they might have done otherwise. For example, if a young person quits, a benefit of one times accumulated employee required contributions is paid. If the same person dies, a value of twice the contributions is paid.

**Disabilities** were less than expected and produced a gain in most groups. This means that the reserves needed for the disability benefit were slightly smaller than the reserves that had been held for retirement benefits.

**Other Separations** varied by group, gender, and service. Other separations among short (under 10 years) service were higher than expected. Separations among longer service participants were slightly less than expected. The net result was an actuarial loss.

**In total**, the population risk areas (retirement, death, disability, and other separations) produced a small actuarial loss in 2008.

## COMMENTS

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### **Economic Results (refer to schedules on Pages 9 and 12)**

**Investment Return** activity produced a loss for all groups. However, the investment loss of \$2.7 billion was partially absorbed by \$1.7 billion loss in the combined value of variable excess benefits and money purchase benefits, resulting in a net loss of \$1.0 billion.

**Pay Increases** were less than expected in most groups, producing a gain.

### **Other Analysis (refer to schedule on Page 10)**

The schedule on page 10 analyzes gains or losses due to sources other than the demographic and economic areas. The **Reserve difference** produced a loss of about \$152 million. This typically means that the actual benefits calculated for new retirees were higher than those estimated from the valuation data. This is most often due to higher pay or service amounts used in the actual benefit calculation than the pay or service amounts estimated by our valuation data. For refunds, the opposite was true. Actual refunds were lower than the expected refunds producing a **Refund difference** gain of about \$21 million. The persistent reserve loss will be a matter of attention in the next experience study. **Re-established liability** represents the liability for new or rehired active members who were not active in the prior year. Typically, it is expected a new hire will have very little liability. However, often new members appear with more than one year of service or with liability greater than contributions made on their behalf. Although this amount is difficult to determine accurately due to the timing of contribution amounts, we estimate the Re-established liability loss at about \$43 million.

### **Contribution Rate Change**

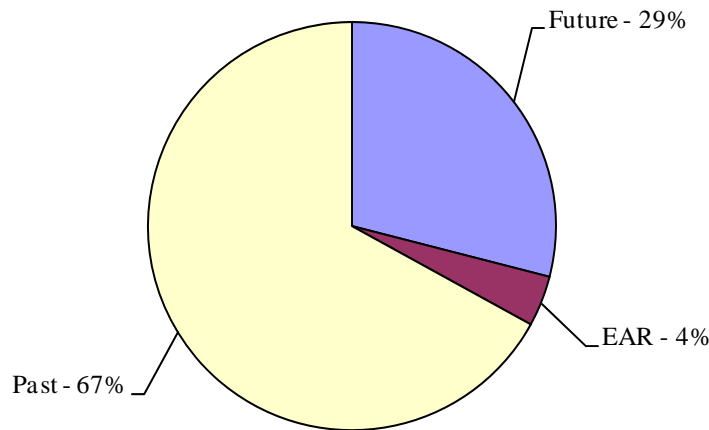
In total, the plan experienced a net loss of \$1.1 billion. Losses were primarily attributable to unfavorable investment return. As a result, the total normal cost contribution increased for all valuation groups. The net losses have resulted in a reduction in the Experience Amortization Reserve (EAR). The EAR is used to minimize short-term fluctuations in contribution rates. As the EAR reduces in size, the ability to stabilize contribution rates will also be reduced.

This Gain/Loss Analysis is the third in the normal three-year experience cycle. It will be part of the basis for the experience investigation covering the period January 1, 2006 to December 31, 2008.

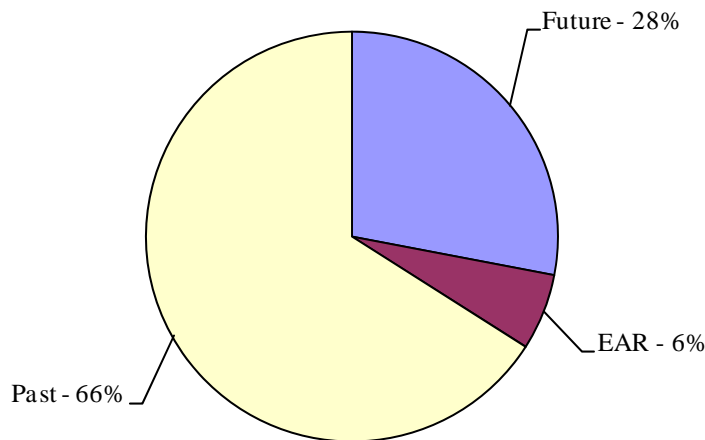
# FINANCING RETIREMENT SYSTEM BENEFIT LIABILITIES AT DECEMBER 31

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## 2008 - \$52.0 Billion



## 2007 - \$51.5 Billion



The gain/loss analysis studies changes in entry age normal accrued liabilities which are reflected in the Experience Amortization Reserve (EAR) as shown on page G-4. Future liabilities are financed via normal cost contributions each year as they accrue. Past liabilities are financed by application of present assets and unfunded liability contributions. The liabilities assigned to the EAR are technically part of the future. However, as part of the valuation method, they are financed as though they were part of the past. The EAR amortization period is selected each year to minimize short term contribution rate fluctuations.



**GAIN/LOSS ANALYSIS  
2008 EXPERIENCE  
DIVISIONS COMBINED**

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**ACTUARIAL GAINS & LOSSES DURING CALENDAR YEAR 2008**  
**(\$ MILLIONS)**

Type of Activity	General	Executive & Elected	Protective		Total
			With S.S.	Without S.S.	
<b>Decrement Risk Areas</b>					
Normal Retirement	\$ (4.3)	\$ 1.9	\$ 3.6	\$1.0	\$ 2.2
Early Retirement	(3.1)	0.3	0.6	0.2	(2.0)
Death with Benefit	(1.0)	(0.9)	(0.1)	0.0	(2.0)
Disability Retirement	20.3	0.1	2.2	0.8	23.4
Other Separations	(27.5)	(0.6)	(6.7)	0.3	(34.5)
<b>Economic Risk Areas</b>					
Salary Increases	66.3	(1.3)	4.6	1.6	71.2
Investment Return	(832.7)	(2.8)	(144.7)	(46.9)	(1,027.1)
<b>Other Activity (See Page 10)</b>	(144.0)	(4.1)	(7.4)	(3.0)	(158.5)
<b>Total Gain(Loss)</b>	<b>\$ (926.0)</b>	<b>\$(7.4)</b>	<b>\$ (147.9)</b>	<b>\$(46.0)</b>	<b>(1,127.3)</b>
<b>-% of accrued liability</b>	<b>(2.9)%</b>	<b>(2.5)%</b>	<b>(4.5)%</b>	<b>(5.9)%</b>	<b>(3.1)%</b>

**ANALYSIS OF OTHER ACTIVITY**  
**(\$ MILLIONS)**

	General	Executive & Elected	Protective		Total
			With S.S.	Without S.S.	
Expected Reserve Transfers					
Normal Retirement	\$1,344	\$11	\$ 133	\$48	\$1,536
Early Retirement	922	3	40	6	971
Death	42	1	3	0	46
Disability Retirement	37	0	2	2	41
Deferred Retirement	303	5	24	10	342
Expected Total Reserve Transfers	2,648	20	202	66	2,936
Actual Reserve Transfer (From Retiree Report)	2,785	26	208	69	3,088
<b>Reserve Difference</b>	(137)	(6)	(6)	(3)	(152)
Expected Refunds	47	0	2	0	49
Actual Refunds	25	0	2	1	28
<b>Refund Difference</b>	22	0	0	(1)	21
<b>Re-established Liability</b>	(38)	0	(4)	(1)	(43)
Total Explained Difference	(153)	(6)	(10)	(5)	(174)
Unknown Difference	9	2	3	2	15
Total Other Activity	\$ (144)	\$ (4)	\$ (7)	\$ (3)	\$ (159)

This schedule analyzes reserve transfers and contribution refunds and shows the portion of “other” activity that can be explained by those sources.

**COMPARATIVE SCHEDULE OF EXPERIENCE  
5-YEAR HISTORY OF GAINS AND (LOSSES)  
(\$ MILLIONS)**

Year	Normal & Early Retmt.	Disability Retmt.	Other Separations*	Salary Increases	Investment Return	Other	Total
<b>GENERAL</b>							
2004	\$ (1.0)	\$ 13.4	\$ (10.3)	\$ 116.6	\$ 41.6	\$ (190.2)	\$ (29.9)
2005	(3.9)	15.8	(5.0)	231.8	(211.5)	(166.6)	(139.4)
2006	(8.5)	13.5	(14.8)	124.8	277.3	(192.0)	200.3
2007	(6.5)	14.1	(27.3)	78.6	830.8	(210.4)	679.3
2008	<b>(7.4)</b>	<b>20.3</b>	<b>(28.5)</b>	<b>66.3</b>	<b>(832.7)</b>	<b>(144.0)</b>	<b>(926.0)</b>
<b>EXECUTIVE &amp; ELECTED</b>							
2004	\$ (0.6)	\$ 0.1	\$ 0.5	\$ 2.2	\$ (0.6)	\$ (4.5)	\$ (2.9)
2005	0.4	0.1	0.7	3.5	(3.3)	(4.5)	(3.1)
2006	0.4	0.1	(0.6)	2.6	1.1	(5.0)	(1.4)
2007	(0.8)	0.1	0.3	(0.2)	10.2	(6.1)	3.5
2008	<b>2.2</b>	<b>0.1</b>	<b>(1.5)</b>	<b>(1.3)</b>	<b>(2.8)</b>	<b>(4.1)</b>	<b>(7.4)</b>
<b>PROTECTIVE WITH SOCIAL SECURITY</b>							
2004	\$ 0.5	\$ 1.1	\$ (0.6)	\$ 22.8	\$ 6.5	\$ (12.7)	\$ 17.6
2005	1.1	0.5	3.0	47.8	(33.6)	(13.4)	5.4
2006	(1.6)	0.5	(2.0)	(21.3)	51.0	(24.6)	2.0
2007	3.0	(0.7)	(3.8)	0.3	102.2	(21.2)	79.8
2008	<b>4.2</b>	<b>2.2</b>	<b>(6.8)</b>	<b>4.6</b>	<b>(144.7)</b>	<b>(7.4)</b>	<b>(147.9)</b>
<b>PROTECTIVE WITHOUT SOCIAL SECURITY</b>							
2004	\$ 1.6	\$ 0.6	\$ (0.2)	\$ 6.2	\$ 2.3	\$ (3.2)	\$ 7.3
2005	1.0	0.6	0.1	6.4	(9.9)	(2.7)	(4.5)
2006	(0.2)	0.7	(0.5)	3.6	14.6	(4.9)	13.3
2007	1.1	-	(0.5)	0.8	34.8	(4.6)	31.6
2008	<b>1.2</b>	<b>0.8</b>	<b>0.3</b>	<b>1.6</b>	<b>(46.9)</b>	<b>(3.0)</b>	<b>(46.0)</b>

\* Includes separation due to death.

**GAIN (LOSS) FROM INVESTMENT INCOME DURING CALENDAR YEAR 2008**  
**(\$ MILLIONS)**

	General	Executive & Elected	Protective		Total
			With SS	Without SS	
(1) Beginning of Year Active Participant Assets					
(a) Participant Accumulation Reserve	\$14,946.8	\$109.4	\$1,234.1	\$337.6	\$16,627.9
(b) PAR Closing Adjustment	6.3	0.0	0.6	0.1	7.0
(c) Employer Accumulation Reserve	20,040.7	188.6	2,297.9	604.6	23,131.8
(d) EAR Closing Adjustment	78.0	0.7	8.5	2.3	89.5
(e) Total	35,071.8	298.7	3,541.1	944.6	39,856.2
(2) End of Year Active Participant Assets					
(a) Participant Accumulation Reserve	14,274.8	94.8	1,210.1	317.6	15,897.3
(b) Employer Accumulation Reserve	19,467.8	193.7	2,310.2	594.7	22,566.4
(c) Total	33,742.6	288.5	3,520.3	912.3	38,463.7
(3) Investment Earnings Credited					
(a) Participant Accumulation Reserve	70.8	0.9	5.4	1.3	78.4
(b) Employer Accumulation Reserve	221.9	3.1	38.4	10.0	273.4
(c) Total	292.7	4.0	43.8	11.3	351.8
(4) Average Balance: $.5 \times \{(1e)+(2c)-(3c)\}$	34,260.9	291.6	3,508.8	922.8	38,984.1
(5) Expected Earnings: $.078 \times (4)$	2,672.4	22.7	273.7	72.0	3,040.8
(6) Gain (Loss) for year from investment experience: $(3c)-(5)$	(2,379.7)	(18.7)	(229.9)	(60.7)	(2,689.0)
(7) Portion applied to Change in Variable Excess Reserve and Money Purchase Minimum Benefit	(1,547.0)	(15.9)	(85.2)	(13.8)	(1,661.9)
<b>(8) Remaining Gain (Loss): (6)-(7)</b>	<b>\$ (832.7)</b>	<b>\$ (2.8)</b>	<b>\$ (144.7)</b>	<b>\$(46.9)</b>	<b>\$ (1,027.1)</b>

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**SECTION A**

**WITHDRAWAL EXPERIENCE**

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**GENERAL MALES  
WITHDRAWAL EXPERIENCE**

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**Male Service-Based Withdrawals**

<b>Service Index</b>	<b>Withdrawals</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Withdrawals</b>
1	390	1,907	0.2045	0.2100	400
2	450	3,221	0.1397	0.1300	419
3	216	2,435	0.0887	0.0950	231
4	155	2,038	0.0761	0.0750	153
5	112	1,491	0.0751	0.0550	82
6	91	1,420	0.0641	0.0450	64
7	76	1,556	0.0488	0.0400	62
8	90	1,821	0.0494	0.0375	68
9	67	1,656	0.0405	0.0350	58
10	33	1,500	0.0220	0.0325	49
Totals	1,680	19,045	0.0882	0.0833	1,586

**Male Age-Based Withdrawals**

<b>Age</b>	<b>Withdrawals</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Withdrawals</b>
25-29	-	6	0.0000	0.0300	-
30-34	7	272	0.0257	0.0300	8
35-39	24	1,344	0.0179	0.0230	31
40-44	39	2,695	0.0145	0.0180	49
45-49	60	4,711	0.0127	0.0140	66
50-54	82	6,481	0.0127	0.0130	84
Over 54	76	-	N/A		76
Totals	288	15,509	0.0186	0.0202	314

**GENERAL FEMALES  
WITHDRAWAL EXPERIENCE**

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**Female Service-Based Withdrawals**

<b>Service Index</b>	<b>Withdrawals</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Withdrawals</b>
1	957	5,045	0.1897	0.2000	1,009
2	1,179	7,849	0.1502	0.1400	1,099
3	591	5,938	0.0995	0.1000	594
4	400	4,856	0.0824	0.0800	388
5	337	4,215	0.0800	0.0700	295
6	274	3,834	0.0715	0.0600	230
7	233	3,699	0.0630	0.0500	185
8	183	3,668	0.0499	0.0450	165
9	136	3,105	0.0438	0.0425	132
10	113	2,819	0.0401	0.0400	113
<b>Totals</b>	<b>4,403</b>	<b>45,028</b>	<b>0.0978</b>	<b>0.0935</b>	<b>4,210</b>

**Female Age-Based Withdrawals**

<b>Age</b>	<b>Withdrawals</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Withdrawals</b>
25-29	-	8	0.0000	0.0400	-
30-34	19	399	0.0476	0.0350	14
35-39	63	1,887	0.0334	0.0300	57
40-44	93	3,703	0.0251	0.0250	93
45-49	161	6,673	0.0241	0.0200	133
50-54	158	9,256	0.0171	0.0180	167
Over 54	142	-	N/A		142
<b>Totals</b>	<b>636</b>	<b>21,926</b>	<b>0.0290</b>	<b>0.0276</b>	<b>606</b>



**PUBLIC SCHOOLS MALES  
WITHDRAWAL EXPERIENCE**

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**Male Service-Based Withdrawals**

<b>Service Index</b>	<b>Withdrawals</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Withdrawals</b>
1	89	593	0.1501	0.1400	83
2	107	1,050	0.1019	0.1100	115
3	67	930	0.0720	0.0700	65
4	39	906	0.0430	0.0525	48
5	40	833	0.0480	0.0400	33
6	31	775	0.0400	0.0325	25
7	28	877	0.0319	0.0275	24
8	22	947	0.0232	0.0250	24
9	18	922	0.0195	0.0225	21
10	23	877	0.0262	0.0200	18
<b>Totals</b>	<b>464</b>	<b>8,710</b>	<b>0.0533</b>	<b>0.0524</b>	<b>456</b>

**Male Age-Based Withdrawals**

<b>Age</b>	<b>Withdrawals</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Withdrawals</b>
25-29	-	-	N/A	0.0200	-
30-34	2	230	0.0087	0.0160	4
35-39	15	1,758	0.0085	0.0130	23
40-44	17	2,247	0.0076	0.0115	26
45-49	23	2,235	0.0103	0.0100	22
50-54	21	2,804	0.0075	0.0090	25
Over 54	21	-	N/A		21
<b>Totals</b>	<b>99</b>	<b>9,274</b>	<b>0.0107</b>	<b>0.0130</b>	<b>121</b>

**PUBLIC SCHOOLS FEMALES  
WITHDRAWAL EXPERIENCE**

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**Female Service-Based Withdrawals**

<b>Service Index</b>	<b>Withdrawals</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Withdrawals</b>
1	217	1,829	0.1186	0.1100	201
2	296	3,154	0.0938	0.0900	284
3	193	2,764	0.0698	0.0700	193
4	159	2,639	0.0603	0.0600	158
5	132	2,468	0.0535	0.0500	123
6	111	2,346	0.0473	0.0425	100
7	99	2,512	0.0394	0.0375	94
8	93	2,565	0.0363	0.0325	83
9	57	2,464	0.0231	0.0275	68
10	45	2,354	0.0191	0.0250	59
Totals	1,402	25,095	0.0559	0.0543	1,363

**Female Age-Based Withdrawals**

<b>Age</b>	<b>Withdrawals</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Withdrawals</b>
25-29	-	1	0.0000	0.0250	-
30-34	8	544	0.0147	0.0200	11
35-39	49	3,946	0.0124	0.0160	63
40-44	42	5,363	0.0078	0.0130	70
45-49	48	5,420	0.0089	0.0110	60
50-54	64	6,746	0.0095	0.0100	67
Over 54	58	-	N/A		58
Totals	269	22,020	0.0122	0.0149	329

**UNIVERSITY MALES  
WITHDRAWAL EXPERIENCE**

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**Male Service-Based Withdrawals**

<b>Service Index</b>	<b>Withdrawals</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Withdrawals</b>
1	64	381	0.1680	0.2000	76
2	108	590	0.1831	0.1600	94
3	94	567	0.1658	0.1300	74
4	59	478	0.1234	0.1100	53
5	47	470	0.1000	0.0900	42
6	39	380	0.1026	0.0750	29
7	38	399	0.0952	0.0600	24
8	29	386	0.0751	0.0500	19
9	17	381	0.0446	0.0400	15
10	14	319	0.0439	0.0350	11
<b>Totals</b>	<b>509</b>	<b>4,351</b>	<b>0.1170</b>	<b>0.1004</b>	<b>437</b>

**Male Age-Based Withdrawals**

<b>Age</b>	<b>Withdrawals</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Withdrawals</b>
25-29	-	-	N/A	0.0350	-
30-34	3	19	0.1579	0.0350	1
35-39	9	163	0.0552	0.0350	6
40-44	10	383	0.0261	0.0325	12
45-49	13	630	0.0206	0.0250	16
50-54	20	1,009	0.0198	0.0150	15
Over 54	10	-	N/A		10
<b>Totals</b>	<b>65</b>	<b>2,204</b>	<b>0.0295</b>	<b>0.0272</b>	<b>60</b>

**UNIVERSITY FEMALES  
WITHDRAWAL EXPERIENCE**

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**Female Service-Based Withdrawals**

<b>Service Index</b>	<b>Withdrawals</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Withdrawals</b>
1	81	433	0.1871	0.2000	87
2	109	692	0.1575	0.1700	118
3	95	712	0.1334	0.1400	100
4	67	567	0.1182	0.1200	68
5	62	531	0.1168	0.1000	53
6	37	409	0.0905	0.0900	37
7	34	432	0.0787	0.0800	35
8	30	402	0.0746	0.0700	28
9	22	350	0.0629	0.0625	22
10	12	321	0.0374	0.0550	18
Totals	549	4,849	0.1132	0.1167	566

**Female Age-Based Withdrawals**

<b>Age</b>	<b>Withdrawals</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Withdrawals</b>
25-29	-	-	N/A	0.0550	-
30-34	2	23	0.0870	0.0550	1
35-39	8	189	0.0423	0.0550	10
40-44	10	411	0.0243	0.0420	17
45-49	7	654	0.0107	0.0280	18
50-54	17	901	0.0189	0.0160	14
Over 54	5	-	N/A		5
Totals	49	2,178	0.0225	0.0298	65

**PROTECTIVE WITH SOCIAL SECURITY  
WITHDRAWAL EXPERIENCE**

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**Male and Female Service-Based Withdrawals**

<b>Service Index</b>	<b>Withdrawals</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Withdrawals</b>
1	66	564	0.1170	0.1200	68
2	89	1,118	0.0796	0.0650	73
3	33	847	0.0390	0.0450	38
4	28	772	0.0363	0.0410	32
5	21	805	0.0261	0.0325	26
6	32	777	0.0412	0.0300	23
7	29	945	0.0307	0.0275	26
8	37	1,128	0.0328	0.0250	28
9	14	930	0.0151	0.0225	21
10	10	903	0.0111	0.0200	18
<b>Totals</b>	<b>359</b>	<b>8,789</b>	<b>0.0408</b>	<b>0.0402</b>	<b>353</b>

**Male and Female Age-Based Withdrawals**

<b>Age</b>	<b>Withdrawals</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Withdrawals</b>
25-29	-	10	0.0000	0.0200	-
30-34	5	570	0.0088	0.0200	11
35-39	20	2,141	0.0093	0.0160	34
40-44	26	2,414	0.0108	0.0130	31
45-49	25	2,315	0.0108	0.0110	25
50-54	13	487	0.0267	0.0100	5
Over 54	8	-	N/A		8
<b>Totals</b>	<b>97</b>	<b>7,937</b>	<b>0.0122</b>	<b>0.0144</b>	<b>114</b>

**PROTECTIVE WITHOUT SOCIAL SECURITY  
WITHDRAWAL EXPERIENCE**

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**Male and Female Service-Based Withdrawals**

<b>Service Index</b>	<b>Withdrawals</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Withdrawals</b>
1	4	33	0.1212	0.0500	2
2	2	72	0.0278	0.0300	2
3	4	115	0.0348	0.0200	2
4	-	63	0.0000	0.0150	1
5	2	76	0.0263	0.0140	1
6	-	89	0.0000	0.0130	1
7	2	69	0.0290	0.0120	1
8	-	125	0.0000	0.0110	1
9	2	135	0.0148	0.0100	1
10	2	133	0.0150	0.0090	1
<b>Totals</b>	<b>18</b>	<b>910</b>	<b>0.0198</b>	<b>0.0143</b>	<b>13</b>

**Male and Female Age-Based Withdrawals**

<b>Age</b>	<b>Withdrawals</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Withdrawals</b>
25-29	-	-	N/A	0.0090	-
30-34	1	64	0.0156	0.0080	1
35-39	3	320	0.0094	0.0080	3
40-44	5	379	0.0132	0.0080	3
45-49	5	467	0.0107	0.0070	3
50-54	4	81	0.0494	0.0070	1
<b>Totals</b>	<b>18</b>	<b>1,311</b>	<b>0.0137</b>	<b>0.0084</b>	<b>11</b>

**EXECUTIVE AND ELECTED MALES  
WITHDRAWAL EXPERIENCE**

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**Male and Female Service-Based Withdrawals**

<b>Service Index</b>	<b>Withdrawals</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Withdrawals</b>
1	12	54	0.2222	0.1600	9
2	19	117	0.1624	0.1400	16
3	9	53	0.1698	0.1200	6
4	5	55	0.0909	0.1000	6
5	4	31	0.1290	0.0950	3
6	4	34	0.1176	0.0900	3
7	1	17	0.0588	0.0850	1
8	2	26	0.0769	0.0800	2
9	2	19	0.1053	0.0750	1
10	2	31	0.0645	0.0700	2
<b>Totals</b>	<b>60</b>	<b>437</b>	<b>0.1373</b>	<b>0.1121</b>	<b>49</b>

**Male and Female Age-Based Withdrawals**

<b>Age</b>	<b>Withdrawals</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Withdrawals</b>
25-29	-	-	N/A	0.0700	-
30-34	-	2	0.0000	0.0700	-
35-39	-	14	0.0000	0.0700	1
40-44	-	41	0.0000	0.0500	2
45-49	3	94	0.0319	0.0450	4
50-54	1	157	0.0064	0.0400	6
Over 54	1	-	N/A		1
<b>Totals</b>	<b>5</b>	<b>308</b>	<b>0.0162</b>	<b>0.0455</b>	<b>14</b>

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**SECTION B**

**DISABILITY EXPERIENCE**

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**GENERAL  
DISABILITY EXPERIENCE  
DURING CALENDAR YEAR 2008**

**Male Disability Experience**

<b>Age</b>	<b>Disabilities</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Disabilities</b>
Under 20	-	-	N/A	0.0001	-
20-24	-	17	0.0000	0.0001	-
25-29	-	537	0.0000	0.0001	-
30-34	-	1,765	0.0000	0.0001	-
35-39	-	2,987	0.0000	0.0003	1
40-44	2	4,341	0.0005	0.0008	4
45-49	1	6,504	0.0002	0.0011	7
50-54	11	8,010	0.0014	0.0030	24
55-59	13	6,484	0.0020	0.0053	34
60-64	7	2,888	0.0024	0.0105	30
65-69	-	444	0.0000	0.0040	2
70-74	-	181	0.0000	0.0036	1
75 and over	-	-	N/A	0.0036	-
<b>Totals</b>	<b>34</b>	<b>34,158</b>	<b>0.0010</b>	<b>0.0030</b>	<b>103</b>

**Female Disability Experience**

<b>Age</b>	<b>Disabilities</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Disabilities</b>
Under 20	-	-	N/A	0.0001	-
20-24	-	60	0.0000	0.0001	-
25-29	-	1,083	0.0000	0.0001	-
30-34	-	3,023	0.0000	0.0004	1
35-39	-	4,574	0.0000	0.0005	2
40-44	4	7,017	0.0006	0.0008	5
45-49	7	11,342	0.0006	0.0010	12
50-54	15	13,886	0.0011	0.0018	25
55-59	19	11,119	0.0017	0.0034	38
60-64	10	5,952	0.0017	0.0043	25
65-69	-	909	0.0000	0.0034	3
70-74	-	227	0.0000	0.0029	1
75 and over	-	-	N/A	0.0029	-
<b>Totals</b>	<b>55</b>	<b>59,192</b>	<b>0.0009</b>	<b>0.0019</b>	<b>112</b>

The people shown on this page are cases involving \$40.63 disability benefits and includes those who were either active or inactive with pending benefits at the beginning of the year. The LTDI plan is described in a separate report.

**PUBLIC SCHOOLS  
DISABILITY EXPERIENCE  
DURING CALENDAR YEAR 2008**

**Male Disability Experience**

<b>Age</b>	<b>Disabilities</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Disabilities</b>
Under 20	-	-	N/A	0.0001	-
20-24	-	-	N/A	0.0001	-
25-29	-	363	0.0000	0.0001	-
30-34	-	2,198	0.0000	0.0001	-
35-39	-	2,851	0.0000	0.0001	-
40-44	-	2,846	0.0000	0.0003	1
45-49	-	2,679	0.0000	0.0006	2
50-54	1	3,136	0.0003	0.0022	7
55-59	4	2,379	0.0017	0.0029	7
60-64	-	706	0.0000	0.0051	4
65-69	1	59	0.0169	0.0072	-
70-74	-	21	0.0000	0.0075	-
75 and over	-	-	N/A	0.0075	-
<b>Totals</b>	<b>6</b>	<b>17,238</b>	<b>0.0003</b>	<b>0.0012</b>	<b>21</b>

**Female Disability Experience**

<b>Age</b>	<b>Disabilities</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Disabilities</b>
Under 20	-	-	N/A	0.0001	-
20-24	-	-	N/A	0.0001	-
25-29	-	1,255	0.0000	0.0001	-
30-34	-	5,694	0.0000	0.0001	1
35-39	-	6,520	0.0000	0.0001	1
40-44	-	7,029	0.0000	0.0004	3
45-49	2	6,926	0.0003	0.0013	9
50-54	1	8,038	0.0001	0.0018	14
55-59	14	7,149	0.0020	0.0028	20
60-64	1	2,318	0.0004	0.0038	9
65-69	-	163	0.0000	0.0022	-
70-74	-	30	0.0000	0.0018	-
75 and over	-	-	N/A	0.0018	-
<b>Totals</b>	<b>18</b>	<b>45,122</b>	<b>0.0004</b>	<b>0.0013</b>	<b>57</b>

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**UNIVERSITY  
DISABILITY EXPERIENCE  
DURING CALENDAR YEAR 2008**

**Male Disability Experience**

<b>Age</b>	<b>Disabilities</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Disabilities</b>
Under 20	-	-	N/A	0.0001	-
20-24	-	-	N/A	0.0001	-
25-29	-	52	0.0000	0.0001	-
30-34	-	251	0.0000	0.0001	-
35-39	-	663	0.0000	0.0001	-
40-44	-	908	0.0000	0.0001	-
45-49	-	1,060	0.0000	0.0004	-
50-54	-	1,328	0.0000	0.0006	1
55-59	1	1,227	0.0008	0.0020	2
60-64	1	694	0.0014	0.0019	1
65-69	-	67	0.0000	0.0024	-
70-74	-	18	0.0000	0.0021	-
75 and over	-	-	N/A	0.0021	-
<b>Totals</b>	<b>2</b>	<b>6,268</b>	<b>0.0003</b>	<b>0.0006</b>	<b>4</b>

**Female Disability Experience**

<b>Age</b>	<b>Disabilities</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Disabilities</b>
Under 20	-	-	N/A	0.0001	-
20-24	-	-	N/A	0.0001	-
25-29	-	78	0.0000	0.0001	-
30-34	-	378	0.0000	0.0001	-
35-39	-	663	0.0000	0.0005	-
40-44	-	930	0.0000	0.0007	1
45-49	-	1,072	0.0000	0.0005	1
50-54	-	1,212	0.0000	0.0013	2
55-59	1	1,116	0.0009	0.0017	2
60-64	-	573	0.0000	0.0027	2
65-69	-	69	0.0000	0.0018	-
70-74	-	11	0.0000	0.0015	-
75 and over	-	-	N/A	0.0015	-
<b>Totals</b>	<b>1</b>	<b>6,102</b>	<b>0.0002</b>	<b>0.0013</b>	<b>8</b>

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**PROTECTIVE WITH SOCIAL SECURITY  
DISABILITY EXPERIENCE  
DURING CALENDAR YEAR 2008**

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**Male and Female Disability Experience**

<b>Age</b>	<b>Disabilities</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Disabilities</b>
Under 20	-	-	N/A	0.0002	-
20-24	-	18	0.0000	0.0002	-
25-29	-	919	0.0000	0.0002	-
30-34	-	2,421	0.0000	0.0002	-
35-39	-	3,261	0.0000	0.0004	1
40-44	-	3,007	0.0000	0.0005	2
45-49	-	2,709	0.0000	0.0008	2
50-54	5	1,870	0.0027	0.0013	2
55-59	-	315	0.0000	0.0280	9
60-64	-	131	0.0000	0.0300	4
65-69	-	26	0.0000	0.0020	-
70-74	-	-	N/A	0.0020	-
75 and over	-	-	N/A	0.0020	-
<b>Totals</b>	<b>5</b>	<b>14,677</b>	<b>0.0003</b>	<b>0.0014</b>	<b>20</b>

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**PROTECTIVE WITHOUT SOCIAL SECURITY  
DISABILITY EXPERIENCE  
DURING CALENDAR YEAR 2008**

---

**Male and Female Disability Experience**

<b>Age</b>	<b>Disabilities</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Disabilities</b>
Under 20	-	-	N/A	0.0005	-
20-24	-	1	0.0000	0.0005	-
25-29	-	73	0.0000	0.0005	-
30-34	-	300	0.0000	0.0005	-
35-39	-	499	0.0000	0.0005	-
40-44	-	453	0.0000	0.0009	-
45-49	-	489	0.0000	0.0018	1
50-54	3	308	0.0097	0.0126	4
55-59	-	9	0.0000	0.0018	-
60-64	-	4	0.0000	0.0018	-
65-69	-	-	N/A	0.0018	-
70-74	-	-	N/A	0.0018	-
75 and over	-	-	N/A	0.0018	-
<b>Totals</b>	<b>3</b>	<b>2,136</b>	<b>0.0014</b>	<b>0.0023</b>	<b>5</b>

The people shown on this page are cases involving §40.63 disability benefits and includes those who were either active or inactive with pending benefits at the beginning of the year. The LTDI plan is described in a separate report.

**EXECUTIVE AND ELECTED  
DISABILITY EXPERIENCE  
DURING CALENDAR YEAR 2008**

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**Male and Female Disability Experience**

<b>Age</b>	<b>Disabilities</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Disabilities</b>
Under 20	-	-	N/A	0.0000	-
20-24	-	-	N/A	0.0000	-
25-29	-	1	0.0000	0.0000	-
30-34	-	12	0.0000	0.0000	-
35-39	-	36	0.0000	0.0001	-
40-44	-	64	0.0000	0.0002	-
45-49	-	132	0.0000	0.0003	-
50-54	-	202	0.0000	0.0005	-
55-59	-	222	0.0000	0.0020	-
60-64	-	109	0.0000	0.0018	-
65-69	-	33	0.0000	0.0015	-
70-74	-	17	0.0000	0.0015	-
75 and over	-	-	N/A	0.0015	-
<b>Totals</b>	-	<b>828</b>	<b>N/A</b>	<b>N/A</b>	-

The people shown on this page are cases involving \$40.63 disability benefits and includes those who were either active or inactive with pending benefits at the beginning of the year. The LTDI plan is described in a separate report.

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## **SECTION C**

### **PAY INCREASES AND MERIT AND LONGEVITY PORTION**

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**GENERAL**  
**MERIT & LONGEVITY PAY INCREASE ASSUMPTION**

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**Service-Based Pay Increase Experience**

<b>Service Group</b>		<b>Total % Increase</b>	
<b>Beginning of Year</b>	<b>Number</b>	<b>Actual</b>	<b>Expected</b>
1-5	16,044	14.54 %	7.60 %
6-10	17,635	8.09 %	6.10 %
11-15	14,236	6.83 %	5.50 %
16-20	11,828	4.95 %	5.30 %
21-25	7,479	4.14 %	5.10 %
26-30	5,204	3.83 %	4.90 %
31-35	3,623	3.70 %	4.70 %
36-40	812	3.30 %	4.50 %
Over 40	103	2.51 %	4.50 %
<b>Total</b>	<b>76,964</b>		



**PUBLIC SCHOOLS**  
**MERIT & LONGEVITY PAY INCREASE ASSUMPTION**

---

**Service-Based Pay Increase Experience**

<b>Service Group</b>		<b>Total % Increase</b>	
<b>Beginning of Year</b>	<b>Number</b>	<b>Actual</b>	<b>Expected</b>
1-5	16,044	14.54 %	9.60 %
6-10	17,635	8.09 %	7.70 %
11-15	14,236	6.83 %	6.40 %
16-20	11,828	4.95 %	5.30 %
21-25	7,479	4.14 %	4.80 %
26-30	5,204	3.83 %	4.40 %
31-35	3,623	3.70 %	4.40 %
36-40	812	3.30 %	4.30 %
Over 40	103	2.51 %	4.30 %
<b>Total</b>	<b>76,964</b>		

**UNIVERSITY**  
**MERIT & LONGEVITY PAY INCREASE ASSUMPTION**

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**Service-Based Pay Increase Experience**

<b>Service Group</b>		<b>Total % Increase</b>	
<b>Beginning of Year</b>	<b>Number</b>	<b>Actual</b>	<b>Expected</b>
1-5	4,695	14.29 %	7.60 %
6-10	4,106	5.32 %	7.10 %
11-15	2,585	3.78 %	6.60 %
16-20	2,115	3.21 %	6.10 %
21-25	1,518	3.45 %	5.60 %
26-30	955	2.96 %	5.30 %
31-35	597	2.16 %	5.10 %
36-40	219	2.74 %	4.80 %
Over 40	69	2.00 %	4.70 %
<b>Total</b>	<b>16,859</b>		

**PROTECTIVE WITH SOCIAL SECURITY  
MERIT & LONGEVITY PAY INCREASE ASSUMPTION**

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**Male and Female Service-Based Pay Increase Experience**

<b>Service Group</b>		<b>Total % Increase</b>	
<b>Beginning of Year</b>	<b>Number</b>	<b>Actual</b>	<b>Expected</b>
1-5	3,824	15.06 %	9.10 %
6-10	4,745	5.98 %	5.90 %
11-15	3,944	5.52 %	5.10 %
16-20	2,914	5.12 %	5.00 %
21-25	1,871	5.12 %	4.90 %
26-30	1,097	4.67 %	4.80 %
31-35	350	5.17 %	4.70 %
36-40	39	3.86 %	4.60 %
Over 40	6	10.28 %	4.50 %
<b>Total</b>	<b>18,790</b>		

**PROTECTIVE WITHOUT SOCIAL SECURITY  
MERIT & LONGEVITY PAY INCREASE ASSUMPTION**

---

**Male and Female Service-Based Pay Increase Experience**

<b>Service Group</b>		<b>Total % Increase</b>	
<b>Beginning of Year</b>	<b>Number</b>	<b>Actual</b>	<b>Expected</b>
1-5	349	16.80 %	8.85 %
6-10	546	4.66 %	5.65 %
11-15	541	4.47 %	4.85 %
16-20	504	4.56 %	4.75 %
21-25	368	4.11 %	4.65 %
26-30	213	5.93 %	4.55 %
31-35	58	5.48 %	4.45 %
36-40	4	3.40 %	4.35 %
Over 40	-	N/A	4.25 %
<b>Total</b>	<b>2,583</b>		

**EXECUTIVE AND ELECTED  
MERIT & LONGEVITY PAY INCREASE ASSUMPTION**

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**Service-Based Pay Increase Experience**

<b>Service Group</b>		<b>Total % Increase</b>	
<b>Beginning of Year</b>	<b>Number</b>	<b>Actual</b>	<b>Expected</b>
1-5	372	11.61 %	5.30 %
6-10	205	6.07 %	5.20 %
11-15	161	5.86 %	5.10 %
16-20	183	5.28 %	5.00 %
21-25	149	7.24 %	4.80 %
26-30	115	6.10 %	4.60 %
31-35	76	5.59 %	4.50 %
36-40	32	5.70 %	4.10 %
Over 40	8	5.20 %	4.10 %
<b>Total</b>	<b>1,301</b>		

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**SECTION D**

**NORMAL AND EARLY RETIREMENT EXPERIENCE**

---

**GENERAL MALES  
NORMAL RETIREMENT EXPERIENCE**

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**Male Age-Based Retirement Experience**

<b>Age</b>	<b>Retirements</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Retirements</b>
57	83	418	0.1986	0.2500	105
58	70	354	0.1977	0.2500	89
59	60	338	0.1775	0.2500	85
60	68	310	0.2194	0.2500	78
61	51	276	0.1848	0.2000	55
62	52	202	0.2574	0.3500	71
63	34	102	0.3333	0.3500	36
64	13	69	0.1884	0.2500	17
65	98	441	0.2222	0.2500	110
66	72	310	0.2323	0.2500	78
67	21	194	0.1082	0.1000	19
68	24	183	0.1311	0.1000	18
69	10	123	0.0813	0.1000	12
70	15	131	0.1145	0.1000	13
71	6	94	0.0638	0.1000	9
72	2	106	0.0189	0.1000	11
73	1	81	0.0123	0.1000	8
74	1	60	0.0167	0.1000	6
Totals	681	3,792	0.1796	0.2162	820
75 & Over	17	254			254
Totals	698	4,046			1,074

**GENERAL MALES  
EARLY RETIREMENT EXPERIENCE**

---

**Male Age-Based Early Retirement Experience**

<b>Age</b>	<b>Retirements</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Retirements</b>
55	105	1,652	0.0636	0.0750	124
56	87	1,720	0.0506	0.0750	129
57	41	1,218	0.0337	0.0400	49
58	33	1,014	0.0325	0.0500	51
59	33	880	0.0375	0.0500	44
60	51	837	0.0609	0.0750	63
61	52	726	0.0716	0.0700	51
62	83	628	0.1322	0.1800	113
63	54	379	0.1425	0.1800	68
64	45	318	0.1415	0.1500	48
<b>Totals</b>	<b>584</b>	<b>9,372</b>	<b>0.0623</b>	<b>0.0790</b>	<b>740</b>



**GENERAL FEMALES  
NORMAL RETIREMENT EXPERIENCE**

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**Female Age-Based Retirement Experience**

<b>Age</b>	<b>Retirements</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Retirements</b>
57	61	376	0.1622	0.2000	75
58	59	324	0.1821	0.2000	65
59	40	295	0.1356	0.2000	59
60	38	219	0.1735	0.2000	44
61	33	201	0.1642	0.2000	40
62	41	148	0.2770	0.3000	44
63	34	106	0.3208	0.3000	32
64	18	85	0.2118	0.2500	21
65	169	785	0.2153	0.2500	196
66	139	573	0.2426	0.2500	143
67	46	297	0.1549	0.1500	45
68	40	288	0.1389	0.1000	29
69	20	197	0.1015	0.1000	20
70	15	162	0.0926	0.1000	16
71	15	135	0.1111	0.1000	14
72	12	123	0.0976	0.1000	12
73	9	92	0.0978	0.1000	9
74	6	81	0.0741	0.1000	8
Totals	795	4,487	0.1772	0.1943	872
75 & Over	27	270			270
Totals	822	4,757			1,142

**GENERAL FEMALES  
EARLY RETIREMENT EXPERIENCE**

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**Female Age-Based Early Retirement Experience**

<b>Age</b>	<b>Retirements</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Retirements</b>
55	120	2,757	0.0435	0.0525	145
56	103	2,606	0.0395	0.0525	137
57	81	2,128	0.0381	0.0400	85
58	71	1,862	0.0381	0.0500	93
59	96	1,766	0.0544	0.0500	88
60	101	1,737	0.0581	0.0750	130
61	106	1,485	0.0714	0.0750	111
62	152	1,200	0.1267	0.1500	180
63	125	835	0.1497	0.1500	125
64	90	695	0.1295	0.1500	104
<b>Totals</b>	<b>1,045</b>	<b>17,071</b>	<b>0.0612</b>	<b>0.0702</b>	<b>1,198</b>

**PUBLIC SCHOOL MALES  
NORMAL RETIREMENT EXPERIENCE**

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**Male Age-Based Retirement Experience**

<b>Age</b>	<b>Retirements</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Retirements</b>
57	128	355	0.3606	0.4000	142
58	69	277	0.2491	0.3500	97
59	55	201	0.2736	0.3000	60
60	39	148	0.2635	0.3000	44
61	27	125	0.2160	0.3000	38
62	24	83	0.2892	0.4000	33
63	12	44	0.2727	0.4000	18
64	7	36	0.1944	0.2500	9
65	25	90	0.2778	0.2500	23
66	13	58	0.2241	0.2500	15
67	6	42	0.1429	0.1500	6
68	4	20	0.2000	0.1500	3
69	2	18	0.1111	0.2000	4
70	6	23	0.2609	0.2000	5
71	1	10	0.1000	0.2000	2
72	-	6	0.0000	0.2000	1
73	1	5	0.2000	0.2000	1
74	-	6	0.0000	0.2000	1
Totals	419	1,547	0.2708	0.3245	502
75 & Over	2	21			21
Totals	421	1,568			523

**PUBLIC SCHOOL MALES  
EARLY RETIREMENT EXPERIENCE**

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**Male Age-Based Early Retirement Experience**

<b>Age</b>	<b>Retirements</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Retirements</b>
55	72	703	0.1024	0.1500	105
56	61	705	0.0865	0.1500	106
57	33	399	0.0827	0.1500	60
58	27	289	0.0934	0.1500	43
59	22	283	0.0777	0.1000	28
60	20	219	0.0913	0.1500	33
61	13	195	0.0667	0.1500	29
62	26	160	0.1625	0.2500	40
63	10	78	0.1282	0.2500	20
64	13	54	0.2407	0.1500	8
<b>Totals</b>	<b>297</b>	<b>3,085</b>	<b>0.0963</b>	<b>0.1530</b>	<b>472</b>

**PUBLIC SCHOOL FEMALES  
NORMAL RETIREMENT EXPERIENCE**

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**Female Age-Based Retirement Experience**

<b>Age</b>	<b>Retirements</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Retirements</b>
57	134	551	0.2432	0.3000	165
58	96	404	0.2376	0.3000	121
59	54	314	0.1720	0.3000	94
60	92	261	0.3525	0.3000	78
61	42	182	0.2308	0.3500	64
62	31	94	0.3298	0.4000	38
63	13	49	0.2653	0.3500	17
64	15	55	0.2727	0.2500	14
65	48	188	0.2553	0.3000	56
66	38	120	0.3167	0.2500	30
67	16	68	0.2353	0.2500	17
68	8	51	0.1569	0.2000	10
69	4	49	0.0816	0.2000	10
70	5	32	0.1563	0.2000	6
71	-	23	0.0000	0.2000	5
72	2	18	0.1111	0.2000	4
73	1	20	0.0500	0.2000	4
74	2	12	0.1667	0.2000	2
Totals	601	2,491	0.2413	0.2951	735
75 & Over	6	35			35
Totals	607	2,526			770

**PUBLIC SCHOOL FEMALES  
EARLY RETIREMENT EXPERIENCE**

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**Female Age-Based Early Retirement Experience**

<b>Age</b>	<b>Retirements</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Retirements</b>
55	153	1,946	0.0786	0.1100	214
56	161	1,892	0.0851	0.1100	208
57	108	1,299	0.0831	0.1100	143
58	98	1,107	0.0885	0.1200	133
59	84	905	0.0928	0.1200	109
60	90	759	0.1186	0.1500	114
61	76	655	0.1160	0.1500	98
62	76	419	0.1814	0.2500	105
63	59	272	0.2169	0.2000	54
64	38	213	0.1784	0.1500	32
<b>Totals</b>	<b>943</b>	<b>9,467</b>	<b>0.0996</b>	<b>0.1278</b>	<b>1,210</b>

**UNIVERSITY MALES  
NORMAL RETIREMENT EXPERIENCE**

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**Male Age-Based Retirement Experience**

<b>Age</b>	<b>Retirements</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Retirements</b>
57	2	33	0.0606	0.2000	7
58	5	44	0.1136	0.1500	7
59	5	43	0.1163	0.1500	6
60	5	44	0.1136	0.1500	7
61	11	61	0.1803	0.1700	10
62	11	68	0.1618	0.1700	12
63	15	63	0.2381	0.1700	11
64	11	53	0.2075	0.1700	9
65	22	139	0.1583	0.2000	28
66	22	108	0.2037	0.2000	22
67	11	65	0.1692	0.2000	13
68	10	63	0.1587	0.2000	13
69	9	43	0.2093	0.2000	9
70	6	33	0.1818	0.2000	7
71	6	27	0.2222	0.2000	5
72	1	19	0.0526	0.2000	4
73	3	12	0.2500	0.2000	2
74	1	11	0.0909	0.2000	2
Totals	156	929	0.1679	0.1873	174
75 & Over	2	39			39
Totals	158	968			213

**UNIVERSITY MALES  
EARLY RETIREMENT EXPERIENCE**

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**Male Age-Based Early Retirement Experience**

<b>Age</b>	<b>Retirements</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Retirements</b>
55	15	283	0.0530	0.0500	14
56	14	276	0.0507	0.0500	14
57	4	256	0.0156	0.0300	8
58	9	231	0.0390	0.0350	8
59	11	181	0.0608	0.0350	6
60	10	166	0.0602	0.0550	9
61	6	172	0.0349	0.0750	13
62	14	157	0.0892	0.1000	16
63	5	105	0.0476	0.0900	9
64	7	94	0.0745	0.0800	8
<b>Totals</b>	<b>95</b>	<b>1,921</b>	<b>0.0495</b>	<b>0.0547</b>	<b>105</b>



**UNIVERSITY FEMALES  
NORMAL RETIREMENT EXPERIENCE**

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**Female Age-Based Retirement Experience**

<b>Age</b>	<b>Retirements</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Retirements</b>
57	11	40	0.2750	0.1500	6
58	6	31	0.1935	0.1500	5
59	3	27	0.1111	0.1500	4
60	6	34	0.1765	0.1500	5
61	6	25	0.2400	0.2500	6
62	1	29	0.0345	0.2500	7
63	5	22	0.2273	0.2000	4
64	5	18	0.2778	0.2000	4
65	15	59	0.2542	0.2000	12
66	14	54	0.2593	0.2000	11
67	6	33	0.1818	0.2000	7
68	5	29	0.1724	0.2000	6
69	1	25	0.0400	0.2000	5
70	1	8	0.1250	0.2000	2
71	2	4	0.5000	0.2000	1
72	-	6	0.0000	0.2000	1
73	1	5	0.2000	0.2000	1
74	-	3	0.0000	0.2000	1
Totals	88	452	0.1947	0.1947	88
75 & Over	1	12			12
Totals	89	464			100

**UNIVERSITY FEMALES  
EARLY RETIREMENT EXPERIENCE**

---

**Female Age-Based Early Retirement Experience**

<b>Age</b>	<b>Retirements</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Retirements</b>
55	5	269	0.0186	0.0600	16
56	11	258	0.0426	0.0600	15
57	14	243	0.0576	0.0500	12
58	9	182	0.0495	0.0600	11
59	9	164	0.0549	0.0800	13
60	10	158	0.0633	0.1000	16
61	14	134	0.1045	0.0750	10
62	15	109	0.1376	0.1500	16
63	9	109	0.0826	0.1500	16
64	14	63	0.2222	0.1500	9
<b>Totals</b>	<b>110</b>	<b>1,689</b>	<b>0.0651</b>	<b>0.0793</b>	<b>134</b>

**PROTECTIVE WITH SOCIAL SECURITY  
NORMAL RETIREMENT EXPERIENCE**

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**Male and Female Age-Based Retirement Experience**

<b>Age</b>	<b>Retirements</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Retirements</b>
50	16	288	0.0556	0.0800	23
51	27	365	0.0740	0.0800	29
52	29	320	0.0906	0.0800	26
53	61	280	0.2179	0.3000	84
54	53	363	0.1460	0.2000	73
55	26	271	0.0959	0.2000	54
56	25	255	0.0980	0.1800	46
57	18	209	0.0861	0.1800	38
58	14	169	0.0828	0.1800	30
59	20	133	0.1504	0.1800	24
60	14	103	0.1359	0.1800	19
61	13	94	0.1383	0.1800	17
62	15	73	0.2055	0.2000	15
63	6	33	0.1818	0.3000	10
64	4	24	0.1667	0.2000	5
65	5	16	0.3125	0.3000	5
66	5	11	0.4545	0.2500	3
67	1	9	0.1111	0.2500	2
68	2	6	0.3333	0.2500	2
69	-	5	0.0000	0.2500	1
70	1	2	0.5000	1.0000	2
71	-	-	N/A	1.0000	-
72	-	-	N/A	1.0000	-
73	-	1	0.0000	1.0000	1
74	-	-	N/A	1.0000	-
Totals	355	3,030	0.1172	0.1680	509
75 & Over	1	1			1
Totals	356	3,031			510

**PROTECTIVE WITHOUT SOCIAL SECURITY  
NORMAL RETIREMENT EXPERIENCE**

---

**Male and Female Age-Based Retirement Experience**

<b>Age</b>	<b>Retirements</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Retirements</b>
50	4	63	0.0635	0.0300	2
51	4	65	0.0615	0.0300	2
52	2	66	0.0303	0.0700	5
53	9	65	0.1385	0.2500	16
54	11	62	0.1774	0.3000	19
55	12	57	0.2105	0.3000	17
56	12	36	0.3333	0.3000	11
57	8	25	0.3200	0.3500	9
58	4	18	0.2222	0.3000	5
59	2	2	1.0000	0.2000	-
60	-	2	0.0000	0.2000	-
61	1	7	0.1429	0.2000	1
62	-	2	0.0000	0.2000	-
63	-	2	0.0000	0.2000	-
64	-	-	N/A	0.2000	-
65	-	1	0.0000	0.4000	-
66	1	1	1.0000	0.4000	-
67	-	-	N/A	0.4000	-
68	-	-	N/A	0.4000	-
69	-	-	N/A	0.4000	-
70	-	-	N/A	1.0000	-
71	-	-	N/A	1.0000	-
72	-	-	N/A	1.0000	-
73	-	-	N/A	1.0000	-
74	-	-	N/A	1.0000	-
Totals	70	474	0.1477	0.1835	87
75 & Over	-	-	N/A		-
Totals	70	474			87

**EXECUTIVE AND ELECTED  
NORMAL RETIREMENT EXPERIENCE**

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**Male and Female Age-Based Retirement Experience**

<b>Age</b>	<b>Retirements</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Retirements</b>
57	1	9	0.1111	0.1500	1
58	1	10	0.1000	0.1500	2
59	3	10	0.3000	0.1500	2
60	-	13	0.0000	0.1500	2
61	-	11	0.0000	0.1500	2
62	3	41	0.0732	0.1000	4
63	-	32	0.0000	0.1000	3
64	2	29	0.0690	0.1000	3
65	2	23	0.0870	0.1000	2
66	3	22	0.1364	0.2000	4
67	3	16	0.1875	0.2000	3
68	-	8	0.0000	0.2000	2
69	-	8	0.0000	0.2000	2
70	1	11	0.0909	0.1000	1
71	-	5	0.0000	0.1000	1
72	1	3	0.3333	0.1000	-
73	-	5	0.0000	0.1000	1
74	-	6	0.0000	0.1000	1
Totals	20	262	0.0763	0.1374	36
75 & Over	5	24			24
Totals	25	286			60

**EXECUTIVE AND ELECTED  
EARLY RETIREMENT EXPERIENCE**

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**Male and Female Age-Based Early Retirement Experience**

<b>Age</b>	<b>Retirements</b>	<b>Exposure</b>	<b>Crude Rates</b>	<b>Current Rates</b>	<b>Expected Retirements</b>
55	1	35	0.0286	0.0600	2
56	2	62	0.0323	0.0600	4
57	-	49	0.0000	0.0400	2
58	1	35	0.0286	0.0400	1
59	-	41	0.0000	0.0400	2
60	4	42	0.0952	0.0600	3
61	-	30	0.0000	0.0600	2
62	-	10	0.0000	0.0400	-
63	1	12	0.0833	0.0400	-
64	-	5	0.0000	0.0400	-
Over 64	-	75	0.0000		
<b>Totals</b>	<b>9</b>	<b>396</b>			<b>16</b>

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**SECTION E**

**MORTALITY EXPERIENCE**

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## DEATH-IN-SERVICE

### Male

Age	Deaths	Exposure	Crude Rates	Current Rates	Expected Deaths
Under 20	-	18	0.0000	0.0002	-
20-24	1	1,640	0.0006	0.0003	-
25-29	3	6,827	0.0004	0.0004	3
30-34	6	9,554	0.0006	0.0004	4
35-39	6	12,027	0.0005	0.0005	5
40-44	2	12,996	0.0002	0.0006	8
45-49	13	14,867	0.0009	0.0010	14
50-54	30	16,520	0.0018	0.0017	28
55-59	40	14,551	0.0027	0.0027	40
60-64	33	7,302	0.0045	0.0037	27
65-69	13	2,025	0.0064	0.0065	13
70-74	11	651	0.0169	0.0112	7
75 and over	10	-	N/A	0.0214	-
<b>Totals</b>	<b>168</b>	<b>98,978</b>	<b>0.0017</b>	<b>0.0015</b>	<b>149</b>

### Female

Age	Deaths	Exposure	Crude Rates	Current Rates	Expected Deaths
Under 20	-	76	0.0000	0.0001	-
20-24	-	2,714	0.0000	0.0001	-
25-29	-	12,181	0.0000	0.0001	1
30-34	1	14,995	0.0001	0.0002	2
35-39	8	17,294	0.0005	0.0002	4
40-44	8	20,985	0.0004	0.0003	7
45-49	24	25,568	0.0009	0.0005	13
50-54	21	27,556	0.0008	0.0008	22
55-59	37	24,559	0.0015	0.0017	42
60-64	32	11,807	0.0027	0.0025	30
65-69	10	2,862	0.0035	0.0038	11
70-74	6	735	0.0082	0.0068	5
75 and over	3	-	N/A	0.0122	-
<b>Totals</b>	<b>150</b>	<b>161,332</b>	<b>0.0009</b>	<b>0.0008</b>	<b>137</b>



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**SECTION F**

**ACTIVE PARTICIPANTS IN 12/31/2008  
VALUATIONS**

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**ACTIVE PARTICIPANTS AS OF DECEMBER 31, 2008**  
**GENERAL PARTICIPANTS**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

Attained Ages	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
15-19	198							198	\$ 3,398,990
20-24	4,814	37						4,851	121,754,255
25-29	15,187	2,277	18					17,482	600,610,192
30-34	9,636	10,648	1,532	8				21,824	898,454,999
35-39	8,240	7,773	8,233	1,234	9			25,489	1,154,708,420
40-44	8,567	7,179	6,636	6,994	1,186	11		30,573	1,409,974,760
45-49	8,773	7,994	6,345	6,458	5,688	1,544	85	36,887	1,687,924,905
50-54	6,610	7,498	6,477	6,297	5,673	5,763	2,676	40,994	1,973,918,884
55	1,091	1,190	1,171	1,258	1,214	1,102	1,316	8,342	421,855,361
56	957	1,143	1,138	1,205	1,046	973	1,357	7,819	396,251,373
57	907	1,063	1,138	1,175	1,059	943	1,418	7,703	391,811,323
58	835	927	982	1,077	964	792	1,225	6,802	341,104,308
59	708	829	801	963	831	677	1,063	5,872	297,740,793
60	655	724	787	854	712	604	883	5,219	260,638,481
61	629	599	635	753	703	454	707	4,480	216,650,889
62	557	565	597	684	616	419	638	4,076	199,620,440
63	358	338	317	378	326	237	326	2,280	108,825,663
64	342	302	271	316	262	179	257	1,929	87,204,989
65	261	235	201	243	203	123	222	1,488	66,981,421
66	223	198	166	137	149	89	139	1,101	49,063,258
67	187	135	87	86	72	55	86	708	29,077,581
68	163	94	80	68	45	33	74	557	20,505,712
69	167	70	52	56	41	17	58	461	16,269,505
70	120	58	41	43	30	17	40	349	12,078,645
71	108	47	31	31	21	13	29	280	9,252,743
72	103	46	26	12	17	12	16	232	6,564,507
73	109	40	29	15	14	6	24	237	6,571,625
74	75	33	16	9	7	8	10	158	4,195,181
75 & Up	293	152	42	32	23	13	48	603	13,265,559
<b>Totals</b>	<b>70,873</b>	<b>52,194</b>	<b>37,849</b>	<b>30,386</b>	<b>20,911</b>	<b>14,084</b>	<b>12,697</b>	<b>238,994</b>	<b>\$10,806,274,762</b>

**ACTIVE PARTICIPANTS AS OF DECEMBER 31, 2008**  
**PROTECTIVE PARTICIPANTS WITH SOCIAL SECURITY**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

Attained Ages	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
15-19	9							9	\$ 224,925
20-24	836	10						846	29,617,875
25-29	1,799	722	13					2,534	113,195,232
30-34	760	1,671	616	4				3,051	156,395,715
35-39	432	965	1,762	430	1			3,590	198,396,458
40-44	275	512	933	1,245	322	1		3,288	192,409,546
45-49	167	347	433	737	878	274	5	2,841	173,805,770
50	34	66	61	107	125	140	17	550	34,166,322
51	33	48	52	92	126	157	38	546	34,430,974
52	36	61	33	71	93	172	45	511	31,982,350
53	32	47	51	53	85	97	51	416	25,077,279
54	27	31	44	63	69	86	78	398	24,833,816
55	12	29	25	47	51	48	59	271	16,727,246
56	16	31	40	39	47	41	37	251	14,819,345
57	14	29	23	36	44	26	38	210	12,360,125
58	10	33	19	27	35	29	39	192	11,133,841
59	11	14	14	26	29	22	26	142	8,551,399
60	8	17	16	19	22	10	18	110	6,112,006
61	4	17	14	16	11	13	10	85	4,803,810
62	7	11	8	14	16	8	9	73	4,073,173
63	3	2	10	10	3	3	8	39	2,213,872
64	2	7	6	1	3	3	4	26	1,429,237
65	3	2	3	2	2		5	17	834,583
66	3	2		2	2		1	10	430,725
67	3	4		5		1		13	580,086
68	2	1	2					5	148,249
69	1	2	1	1				5	217,235
70 & Up	4	1	2				2	9	301,409
<b>Totals</b>	<b>4,543</b>	<b>4,682</b>	<b>4,181</b>	<b>3,047</b>	<b>1,964</b>	<b>1,131</b>	<b>490</b>	<b>20,038</b>	<b>\$1,099,272,603</b>

**ACTIVE PARTICIPANTS AS OF DECEMBER 31, 2008**  
**PROTECTIVE PARTICIPANTS WITHOUT SOCIAL SECURITY**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

Attained Ages	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24	73							73	\$ 3,074,977
25-29	194	56						250	13,027,202
30-34	102	208	71					381	22,723,151
35-39	53	156	241	81				531	34,508,483
40-44	14	70	160	172	40			456	31,008,480
45-49	3	20	72	144	195	66		500	36,155,122
50	2	3	8	23	26	31	2	95	7,175,045
51	1	2	6	21	25	30	8	93	6,889,886
52		1	6	13	24	26	11	81	6,072,375
53			1	12	19	20	14	66	5,239,709
54			3	10	24	18	10	65	5,051,431
55	2	1	2	10	13	9	10	47	3,596,295
56			1	4	6	7	13	31	2,290,397
57			1	1	6	4	7	19	1,420,722
58			2	1	5	5	4	17	1,445,634
59		1		1	1	1	2	6	482,407
60						1		1	102,889
61		1				2	1	4	357,470
62		1	1			2	1	5	362,173
63									
64		1					1	2	88,610
65							1	1	79,809
<b>Totals</b>	<b>444</b>	<b>521</b>	<b>575</b>	<b>493</b>	<b>384</b>	<b>222</b>	<b>85</b>	<b>2,724</b>	<b>\$181,152,267</b>

**ACTIVE PARTICIPANTS AS OF DECEMBER 31, 2008**  
**ELECTIVE AND ELECTED OFFICIALS**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

Attained Ages	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24	2							2	\$ 46,893
25-29	8							8	\$ 188,248
30-34	20	9						29	1,678,063
35-39	36	21	17	3				77	4,998,711
40-44	54	14	24	18	2			112	6,734,790
45-49	58	30	27	33	31	4	2	185	13,253,213
50-54	62	30	35	33	30	35	18	243	17,261,179
55	19	6	8	6	8	8	5	60	4,422,645
56	8	8	3	9	7	7	12	54	4,642,781
57	13	9	9	8	18	11	11	79	6,508,256
58	18	5	10	7	7	8	9	64	5,142,278
59	15	9	9	7	9	8	6	63	4,463,311
60	6	7	4	9	11	8	11	56	5,037,294
61	15	6	9	6	7	5	9	57	4,375,667
62	16	9	4	4	10	4	15	62	4,661,878
63	7	6	4	6	5	5	7	40	3,064,648
64	7	4	5	4	7	4	7	38	3,326,102
65	7	4	3	7	4	2	5	32	2,261,738
66	16	3	2	4	5	3	3	36	2,468,126
67	2		3	2	2		1	10	839,075
68	8	3	2	3	2	1	5	24	1,515,588
69	6		3		1	1	1	12	475,317
70	10	1	1	1	2	1	2	18	753,267
71	2		1	1			4	8	603,612
72	5	1	2			1		9	414,410
73	1	2			1			4	155,356
74	6	3		1		1	1	12	327,165
75 & Up	22	5	3	2		1	3	36	931,639
<b>Totals</b>	<b>449</b>	<b>195</b>	<b>188</b>	<b>174</b>	<b>169</b>	<b>118</b>	<b>137</b>	<b>1,430</b>	<b>\$100,551,250</b>

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## **APPENDIX**

### **ACTUARIAL METHODS**

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## ACTUARIAL VALUATION METHOD

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The actuarial funding method prescribed in the statute for WRS is the **Frozen Initial Liability Method**. Under this method, the amount of remaining unfunded accrued actuarial liabilities at any valuation date is affected only by the monthly amortization payments, compound interest, the added liability created by new employer units, and any added liabilities caused by changes in benefit provisions.

Actuarial gains or losses arising from the difference between actual and assumed experience are reflected in the determination of the normal cost. In this manner, experience gains or losses in any year are amortized (spread) over the average future working lifetime of the active participant group - a period of approximately 13 years. Hence, the computed normal cost is made up of two parts:

- The pure entry-age normal cost (EANC) determined without regard to past gains or losses, and
- an experience amortization component.

Section 40.04(1) of the Wisconsin Statutes provides authority to maintain accounts and reserves determined to be “useful in achieving the funds’ purposes - - -”. A fundamental WRS objective is stable contribution rates. Accordingly, based on the authority granted under Section 40.04, the experience portion of the normal cost is separately calculated each year and the amortization period is varied upward or downward in order to minimize short-term rate fluctuations.

## ASSET VALUATION METHOD

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An essential step in the valuation process is comparing valuation assets with computed liabilities. Computed liabilities result from actuarial calculations involving the covered population, the benefits, and actuarial assumptions. Valuation assets are those assets that are recognized and available to fund the System's liabilities. WRS assets are invested in the Core Investment Trust, and in the Variable Investment Trust, both of which are managed by the State of Wisconsin Investment Board (SWIB). Assets in the Variable Investment Trust are marked to market each year. Assets in the Core Investment Trust (most of the assets) are valued (or recognized) using an "asset valuation method."

Asset valuation methods are distinguished by the timing of the recognition of investment return. Total investment return is the sum of ordinary income and capital value changes. Under a pure market value approach, ordinary investment income and all capital value changes are recognized immediately. Because of market volatility, use of pure market values in retirement funding can result in volatile contribution rates and unstable financial ratios, contrary to WRS objectives.

The asset valuation method used for WRS valuations is statutory, and is referred to as the "Market Recognition Account" or MRA. Act 11 of 1999 closed the former Transaction Amortization Account (TAA) and created the Market Recognition Account. The MRA recognizes assumed return fully each year. Differences between actual and assumed return are phased in over a closed 5-year period. The objective is to give recognition to long-term changes in asset values while minimizing the effect of short-term fluctuations in the capital markets. In accordance with its smoothing objective, the MRA will tend to exceed the market value when the markets are doing poorly, and will fall short of the market value when markets are doing well. Some retirement systems set limits on the amount by which the recognized value of assets can differ from the market value.

The development of the Market Recognition Account is shown on the following page. The Core Investment Trust includes assets for other programs, such as Sick Leave, that are not related to the funding of the Wisconsin Retirement System, and does not include assets related to the Variable Investment Trust. Consequently, the asset value developed on the next page will not balance to the total system assets. ETF Staff maintains the breakdown of the separate asset accounts.



## DEVELOPMENT OF EAR AS OF DECEMBER 31, 2008

	General	Executive & Elected Officials	Protective Occupation		Total
			With Soc. Sec	Without Soc. Sec.	
<b>\$ Millions</b>					
1. Present Value of Future Benefits for Non-Retired	\$45,279.2	\$379.0	\$5,138.6	\$1,160.9	\$51,957.7
2. Present Value of Future Entry Age Normal Costs	12,880.0	88.6	1,868.6	381.5	15,218.7
3. Entry Age Accrued Liability: (1)-(2)	32,399.2	290.4	3,270.0	779.4	36,739.0
4. Non-Retired Assets-WRS	33,742.6	288.4	3,520.3	912.3	38,463.6
-LTDI	139.9	1.5	27.6	6.2	175.2
-Total	33,882.5	289.9	3,547.9	918.5	38,638.8
5. Entry Age Unfunded Accrued Liability:(3)-(4)	(1,483.3)	0.5	(277.9)	(139.1)	(1,899.8)
6. WRS Frozen Unfunded Accrued Liability	238.1	0.7	6.9	6.9	252.6
<b>7. EAR:(6)-(5)</b>	<b>\$ 1,721.4</b>	<b>\$ 0.2</b>	<b>\$ 284.8</b>	<b>\$ 146.0</b>	<b>\$ 2,152.4</b>

**ACTUAL VS. EXPECTED CHANGES IN EXPERIENCE AMORTIZATION RESERVE (EAR) - CALENDAR YEAR 2008**  
**(\$ MILLIONS)**

	December 31, 2008				
	General	Executive & Elected	Protective		Total
			With S.S.	Without S.S.	
(1) Entry Age UAAL at start of year	\$ (2,327.2)	\$ (6.6)	\$ (419.4)	\$ (182.4)	\$ (2,935.6)
(2) Normal cost from last valuation (Total)	1,309.6	12.0	175.3	38.1	1,535.0
(3) Actual contributions	1,213.9	11.8	150.0	27.0	1,402.7
(4) Interest	(177.8)	(0.5)	(31.7)	(13.8)	(223.8)
(5) Expected UAAL before changes: (1) + (2) - (3) + (4)	(2,409.3)	(6.9)	(425.8)	(185.1)	(3,027.1)
(6) Change from experience study	0.0	0.0	0.0	0.0	0.0
(7) Other changes	0.0	0.0	0.0	0.0	0.0
(8) Expected UAAL after changes: (5) + (6) + (7)	(2,409.3)	(6.9)	(425.8)	(185.1)	(3,027.1)
(9) Actual Entry Age UAAL at end of year	(1,483.3)	0.5	(277.9)	(139.1)	(1,899.8)
<b>(10) Gain (loss): (8) - (9)</b>	<b>\$ (926.0)</b>	<b>\$ (7.4)</b>	<b>\$ (147.9)</b>	<b>\$ (46.0)</b>	<b>\$ (1,127.3)</b>

The gain loss analysis is intended to explain the financial effect of differences between actual and assumed experience in basic risk areas: Investment Income, Pay increases, retirement rates, turnover rates, etc. In order for the gain loss analysis to proceed, the change in the Entry Age Unfunded Actuarial Accrued Liabilities from one year to the next is analyzed to remove the effect of expected changes. The table above develops this year's gain or loss (line 10) which is added to the Experience Amortization Reserve (EAR). When the EAR increases "unexpectedly," this is favorable experience and downward pressure is exerted on contribution rates. Similarly, an unexpected decrease in the EAR is unfavorable experience and upward pressure is exerted on contribution rates. In addition to the gain or (loss) described in line 10, non-recurring changes in lines 6 and 7 also may affect contribution rates.

By measuring gains and losses each year and, to the extent possible, determining the "responsible" assumptions, insight is gained into how well the actuarial assumptions estimate WRS liabilities. Such information aids in understanding financial effects of emerging trends and is particularly useful during preparation of the WRS experience study.

August 27, 2009

Mr. David Stella, Deputy Secretary  
Wisconsin Department of Employee Trust Funds  
801 West Badger Road  
Madison, Wisconsin 53713

**Re: 2008 Gain Loss Analysis**

Dear Dave:

Enclosed are 75 bound copies of this report.

Sincerely,

A handwritten signature in black ink that reads "Mark Buis". The signature is written in a cursive, slightly slanted style.

Mark Buis

MB:lr  
Enclosures