

DENVER PUBLIC SCHOOLS RETIREMENT SYSTEM
ANNUAL ACTUARIAL VALUATION REPORT
DECEMBER 31, **2008**

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May 29, 2009

The Board of Trustees
Denver Public Schools Retirement System
Denver, Colorado

Dear Board Members:

The results of the *Annual Actuarial Valuation* of the Denver Public Schools Retirement System are presented in this report. The purpose of the valuation was to measure the system's funding progress and to determine the computed employer contribution rate for the next fiscal year.

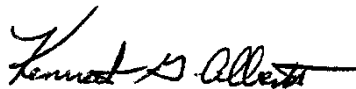
The valuation was based upon information, furnished by Retirement System staff, concerning Retirement System benefits, financial transactions, and active members, terminated members, retirees and beneficiaries. Data was checked for internal and year-to-year consistency, but was not otherwise audited. All promised benefits were included in the actuarially computed contribution rates.

The date of the valuation was *December 31, 2008*.

To the best of our knowledge, this report is complete and accurate and the valuation was conducted in accordance with standards of practice prescribed by the Actuarial Standards Board. It is our opinion, that the actuarial assumptions used for the valuation produce results which are reasonable.

The signing actuaries are Members of the American Academy of Actuaries (MAAA) as indicated, and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,



Kenneth G. Alberts



Norman L. Jones, FSA, MAAA

KGA:mrbb

SECTION A

VALUATION RESULTS

FUNDING OBJECTIVE AND EXECUTIVE SUMMARY

The funding objective of the Retirement System is to establish and receive contributions, expressed as percents of active member payroll, that will accumulate assets during each member's working years which, together with regular interest, will be sufficient to pay promised benefits after retirement.

EXECUTIVE SUMMARY

- The recommended employer contribution rate for the fiscal year beginning July 1, 2010, based on normal cost plus 30-year amortization of unfunded accrued liabilities is 15.30% of payroll.
- During the 2nd quarter of the plan year, the plan sponsor issued pension certificates of participation (PCOPs) and deposited the revenue from those certificates into the fund (approximately \$400 million). The intent was to fully fund the plan and then reduce the on-going employer contribution rate to normal cost only.
- After the large employer contribution (from the PCOPs revenue), the market had an unprecedented short-term decline. On a market value basis, the fund lost approximately 26% of its value. As a result, the plan is not fully funded. However, employer contributions through June 30, 2009 have been reduced to the normal cost rate due to the PCOPs revenue deposit. Since no contributions are being made to finance unfunded accrued liabilities until July 1, 2009, the funded status will continue to deteriorate over the next couple of years even if the market returns return to assumed levels.
- There was an experience loss equal to 16.1% of beginning of year accrued liabilities. The details of that loss are shown on page A-4. The loss is comprised of a 16.0% loss due to recognized investment return less than assumed and a 0.1% loss due to liability growth more than assumed. Due to this loss, the fund is not fully funded and the computed employer contribution rate is more than double the employer normal cost rate.

FUNDING OBJECTIVE AND EXECUTIVE SUMMARY

- The market value of the investment loss is spread over 4 years in accordance with the asset valuation method. Although DPSRS is currently 84.3% funded on an actuarial basis, it is only 70.3% funded on a market basis. This, combined with the reduced employer contributions through July 1, 2010, will result in a material decline in the funded status of the plan over the next few years, unless there are substantial offsetting gains during that period.
- Changes to miscellaneous and technical assumptions included removing the 1.75% adjustment to normal, early, and deferred retirement benefits to reflect the removal of the employer subsidy in the option factors.
- This plan was valued as an on-going, stand-alone plan. Just before final production of this report, the governor signed into law legislation that merges DPSRS into Colorado PERA (CoPERA) on January 1, 2010. We have not been provided the details of the statutory contribution rates that will fund this plan after the merger and have therefore not evaluated the proposed statutory contribution level, post merger.

**CONTRIBUTIONS TO PROVIDE BENEFITS
EXPRESSED AS PERCENTS OF ACTIVE MEMBER PAYROLL
FOR FISCAL YEARS BEGINNING JULY 1, 2009 AND 2010**

	Employer Fiscal Year	
	Beginning 7/1/10	Beginning 7/1/09
Contributions for	Recommended#	Recommended
Normal cost of benefits:		
Age & service	11.85 %	12.09 %
Disability	1.00 %	1.01 %
Death-in-service	0.22 %	0.23 %
Refunds of member contributions	2.25 %	2.24 %
Total normal cost	15.32 %	15.57 %
Member contributions	8.00 %	8.00 %
Employer normal cost	7.32 %	7.57 %
Unfunded actuarial accrued liabilities	7.98 %*	6.35 %* ##
COMPUTED EMPLOYER RATE	15.30 %	13.92 %

* Amortized as a level percent-of-payroll over an open period of 30 years.

Results shown include changes in benefit provisions.

Paid during FY 2008.

Actual employer contributions for the last completed calendar (plan) year were reported to be \$434,811,169.

DERIVATION OF EXPERIENCE GAIN (LOSS)

YEAR ENDED DECEMBER 31, 2008

Actual experience will never (except by coincidence) coincide exactly with assumed experience. Gains and losses often offset one another over a period of years, but sizable year-to-year fluctuations are common. Detail on the derivation of the experience gain (loss) is shown below.

	<u>12/31/2008</u>
(1) UAAL* at start of year	\$414,464,061
(2) Normal cost from last valuation	56,426,483
(3) Actual contributions	464,715,530
(4) Interest accrual: $[(1) + \{(2)-(3)\}/2] \times .085$	17,877,161
(5) Expected UAAL before changes: (1) + (2) - (3) + (4)	24,052,175
(6) Change in benefit provisions#	(19,057,464)
(7) Changes in methods and assumptions	0
(8) Expected UAAL after changes: (5) + (6) + (7)	4,994,711
(9) Actual UAAL at end of year	548,718,981
(10) Gain (loss): (8) - (9)	\$ (543,724,270)
(11) Gain (loss) as percent of actuarial accrued liabilities at start of year (\$3,383,258,097)	(16.1%)

* *Unfunded actuarial accrued liability.*

Eliminated subsidized optional forms of payment. Also includes \$1.3 million for improved data reporting for retirees, indicating pop-up benefit.

DERIVATION OF EXPERIENCE GAIN (LOSS) BY SOURCE
YEAR ENDED DECEMBER 31, 2008

	<u>\$ Amount</u>	<u>% of AAL*</u>
Age & Service Retirements	\$3,105,814	0.1%
Less members retired than assumed, causing a gain.		
Disability Retirements	1,596,442	0.0%
Disability claims were less than assumed, causing a gain.		
Death-in-Service Benefits	200,986	0.0%
Survivor claims were less than assumed, causing a gain.		
Withdrawal from Employment	5,386,839	0.2%
More liabilities were released by withdrawals than assumed, causing a gain.		
Pay Increases	(7,471,602)	(0.2%)
Pay increases were higher than assumed, causing a loss.		
Investment Income	(540,217,500)	(16.0%)
Recognized investment income was less than assumed, causing a loss.		
New Entrants	(7,685,301)	(0.2%)
New members with prior service, causing a loss.		
Death After Retirement	7,723,301	0.2%
Retirees lived for a shorter period than assumed, causing a gain.		
Other	(6,363,249)	(0.2%)
Miscellaneous gains and losses resulting from other data adjustments, timing of financial transactions, subsidized service purchases, recognition of additional outside and non-qualified service, etc.		
Gain (or Loss) During Year From Experience	\$ (543,724,270)	(16.1%)

* AAL: Beginning of year actuarial accrued liability.

SUMMARY STATEMENT OF SYSTEM RESOURCES AND OBLIGATIONS

Present Resources and Expected Future Resources

A.	Present valuation assets	
	1. Net assets from system financial statements	\$2,453,576,680
	2. Funding value adjustment	490,715,336
	3. Valuation assets	<u>2,944,292,016</u>
B.	Actuarial present value of expected future employer contributions	
	1. For normal costs	203,089,561
	2. For unfunded actuarial accrued liability	548,718,981
	3. Totals	<u>751,808,542</u>
C.	Actuarial present value of expected future member contributions	<u>222,638,796</u>
D.	Total Present and Expected Future Resources	\$3,918,739,354

Actuarial Present Value of Expected Future Benefit Payments

A.	To retirees and beneficiaries	
	1. Annual allowances	\$2,422,882,621
	2. Unallocated Reserve	0
	3. Totals	<u>2,422,882,621</u>
B.	To vested terminated members	29,466,749
C.	To present active members	
	1. Allocated to service rendered prior to valuation date - actuarial accrued liability	1,040,661,627
	2. Allocated to service likely to be rendered after valuation date	425,728,357
	3. Totals	<u>1,466,389,984</u>
D.	Total Actuarial Present Value of Expected Future Benefit Payments	\$3,918,739,354

COMPUTED EMPLOYER CONTRIBUTIONS COMPARATIVE STATEMENT

December 31,	Active Members				Retirees & Beneficiaries			Employer Contribution Rate		
	No.#	Valuation Payroll			No.	Annual Benefits		Normal Cost	Unfunded Accrued Liabilites	
		Total	Average	% Incr.		Dollars	% of Payroll		Total	
1999	6,677	\$264,079,253	\$39,551	2.29 %	5,158	\$ 115,755,528	43.8 %	N/A	N/A	2.90 %
2000	7,182	292,404,031	40,713	2.94 %	5,222	125,550,888	42.9 %	N/A	N/A	2.90 %
2001	7,466	307,833,700	41,231	1.27 %	5,514	141,383,423	45.9 %	6.75 %	(1.77)%	4.98 %*
2002@	7,691	331,607,085	43,116	4.57 %	5,610	151,283,074	45.6 %	7.42 %	0.70 %	8.12 %*
2003	7,311	318,121,662	43,513	0.92 %	5,699	160,764,146	50.5 %	7.79 %	0.87 %	8.66 %*
2004@!	7,192	315,156,876	43,820	0.71 %	5,869	174,668,685	55.4 %	7.35 %	3.79 %	11.14 %*
2005	7,179	318,405,492	44,352	1.21 %	5,961	185,016,528	58.1 %	7.83 %	5.00 %	12.83 %*
2006@	7,102	328,608,500	46,270	4.32 %	6,069	194,691,350	59.2 %	7.58 %	6.43 %	14.01 %
2007	7,282	357,049,419	49,032	5.97 %	6,168	204,760,169	57.3 %	7.57 %	6.35 %	13.92 %
2008!	7,540	388,651,516	51,545	5.13 %	6,186	212,221,188	54.6 %	7.32 %	7.98 %	15.30 %

* Based on funding policy, which phased into 100% of the rate recommended by the actuary.

Excludes affiliate members.

@ After experience study.

! After changes in benefit provisions.

ACTUARIAL ACCRUED LIABILITIES & VALUATION ASSETS COMPARATIVE STATEMENT

December 31	Actuarial Accrued Liability (AAL)	Valuation Assets	Unfunded Actuarial Accrued Liability (UAAL) (1) - (2)	Ratio of Present Assets to AAL (2)/(1)	Annual Covered Payroll	Ratio of UAAL to Valuation Payroll (3)/(5)
	(1)	(2)	(3)	(4)	(5)	(6)
1999	\$1,983,399,740	\$2,044,332,158	\$ (60,932,418)	103.1 %	\$264,079,253	-
2000	2,371,925,173	2,308,030,298	63,894,875 #	97.3 %	292,404,031	21.9 %
2001	2,550,556,774	2,462,548,441	88,008,333	96.5 %	307,833,700	28.6 %
2002*	2,712,292,741	2,465,049,249	247,243,492	90.9 %	331,607,085	74.6 %
2003	2,793,788,109	2,531,745,553	262,042,556	90.6 %	318,121,662	82.4 %
2004* @	2,960,990,156	2,611,523,735	349,466,421	88.2 %	315,156,876	110.9 %
2005	3,065,854,901	2,693,685,848	372,169,053	87.9 %	318,405,492	116.9 %
2006*	3,233,713,315	2,854,304,339	379,408,976	88.3 %	328,608,500	115.5 %
2007	3,383,258,097	2,968,794,036	414,464,061	87.7 %	357,049,419	116.1 %
2008 @	3,493,010,997	2,944,292,016	548,718,981	84.3 %	388,651,517	141.2 %

Actual UAAL on valuation date before any offsets.

* After experience study.

@ After changes in benefit provisions.

The Ratio of Valuation Assets to AAL is a traditional measure of a system's funding progress. Except in years when the system is amended or actuarial assumptions are revised or there are extraordinary experience gains or losses, this ratio can be expected to move gradually toward 100%.

The Ratio of UAAL to Valuation Payroll is another relative index of condition. Actuarial unfunded liabilities represent debt, while active member payroll represents the system's capacity to collect contributions to pay toward debt. The lower the ratio is, the greater the financial strength and vice-versa.

The Short Condition Test is another way of looking at a system's progress under its funding program - based on the entry age accrued liability. In a short condition test, the plan's valuation assets are compared with:

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

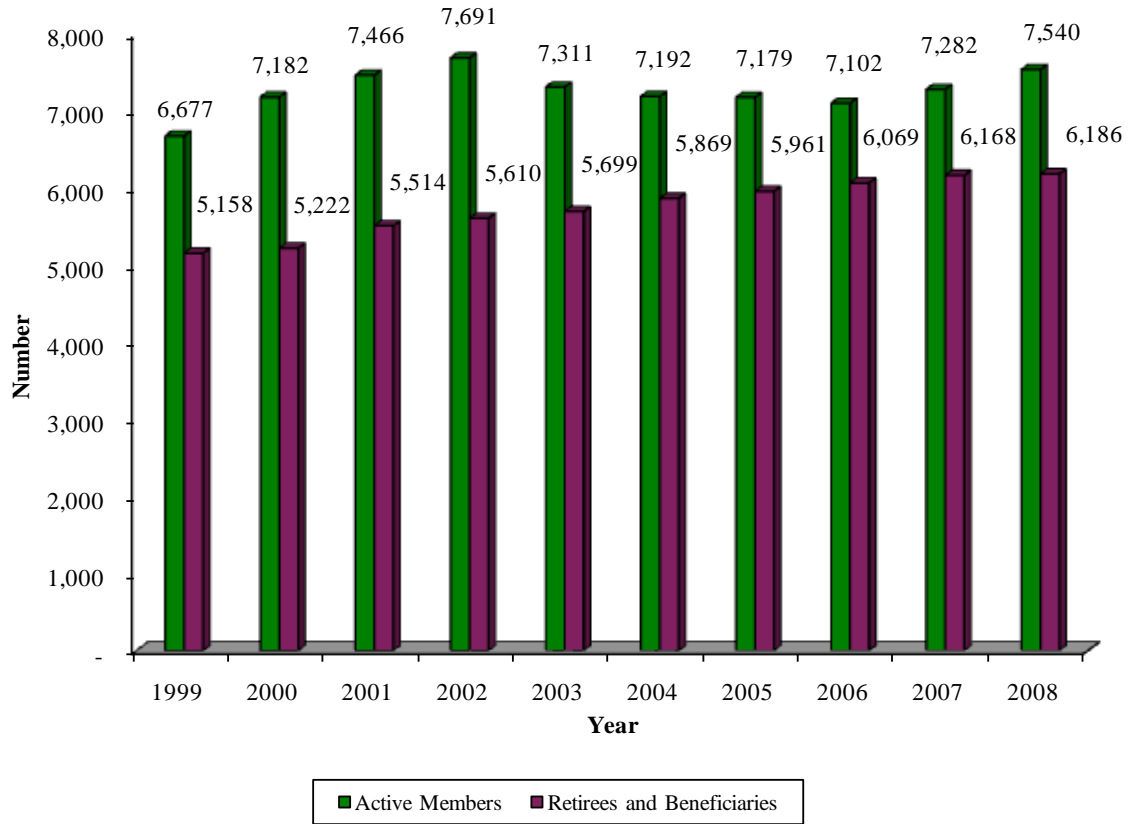
In a system that has been following the discipline of level percent of payroll financing, the liabilities for active member contributions on deposit (liability 1) and the liabilities for future benefits to present retired lives (liability 2) will be fully covered by valuation assets (except in rare circumstances). In addition, the liabilities assigned to service already rendered by active members (liability 3) will be partially covered by the remainder of the valuation assets. The larger the funded portion of liability 3, the stronger the condition of the system.

The schedule below illustrates the history of liabilities 1, 2 and 3.

**SHORT CONDITION TEST
COMPARATIVE STATEMENT
(\$ AMOUNTS IN THOUSANDS)**

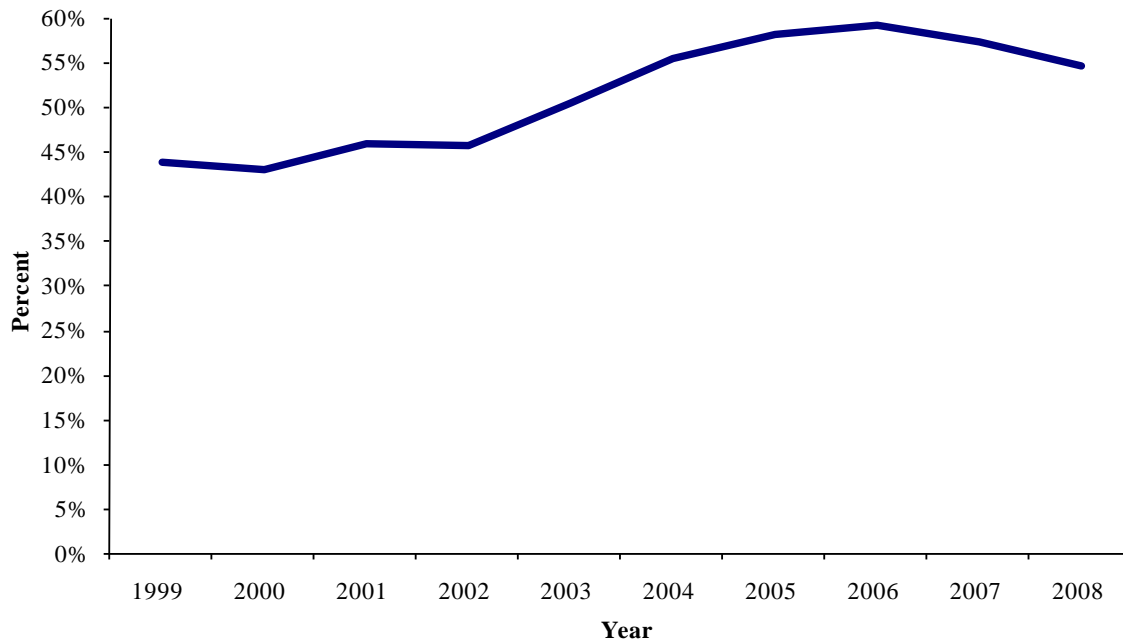
Valuation Date	Entry Age Accrued Liability			Valuation Assets	Accrued Liability Covered by Assets		
	(1) Active Member Contr.	(2) Retirants and Benef.	(3) Active Members (Employer Financed Portion)		(1)	(2)	(3)
1/1/2001	\$206,820	\$1,431,788	\$733,317	\$2,308,030	100%	100%	91%
1/1/2002	200,222	1,631,424	718,910	2,462,548	100	100	88
1/1/2003	212,403	1,742,486	757,404	2,465,049	100	100	67
1/1/2004	229,828	1,841,065	722,895	2,531,746	100	100	64
1/1/2005	226,554	2,029,799	704,637	2,611,524	100	100	50
1/1/2006	233,032	2,132,638	700,185	2,693,686	100	100	47
1/1/2007	240,040	2,255,016	738,657	2,854,304	100	100	49
1/1/2008	247,305	2,363,997	771,956	2,968,794	100	100	46
1/1/2009	263,618	2,422,883	806,510	2,944,292	100	100	32

Active* and Retired Members and Beneficiaries



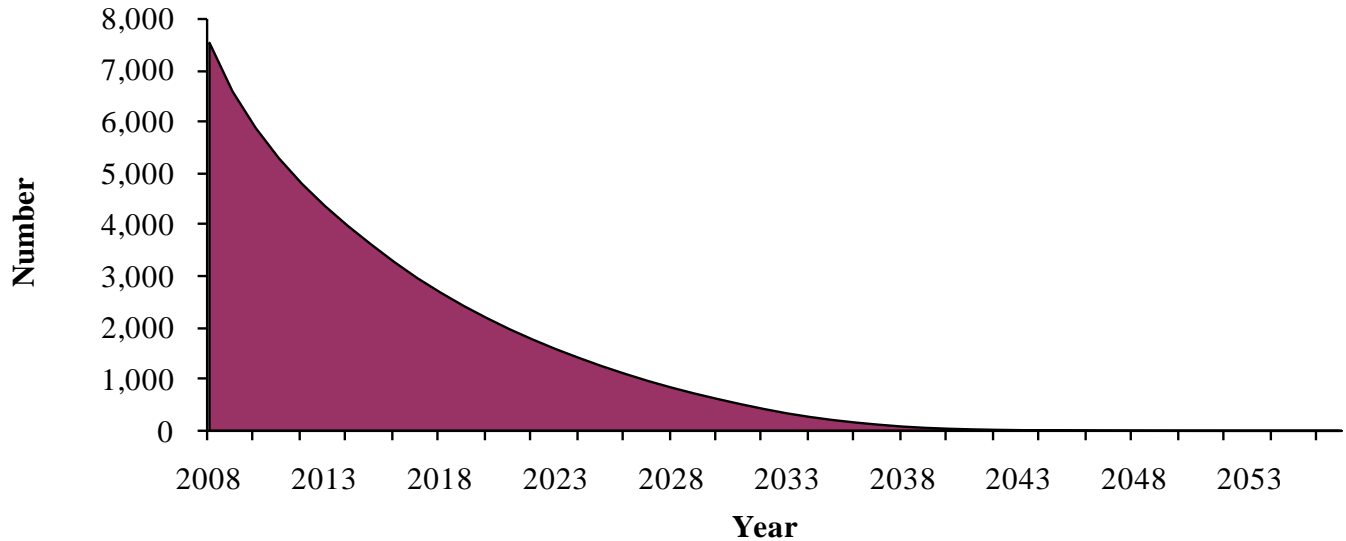
* Excludes affiliate members.

Benefits as a Percent of Payroll

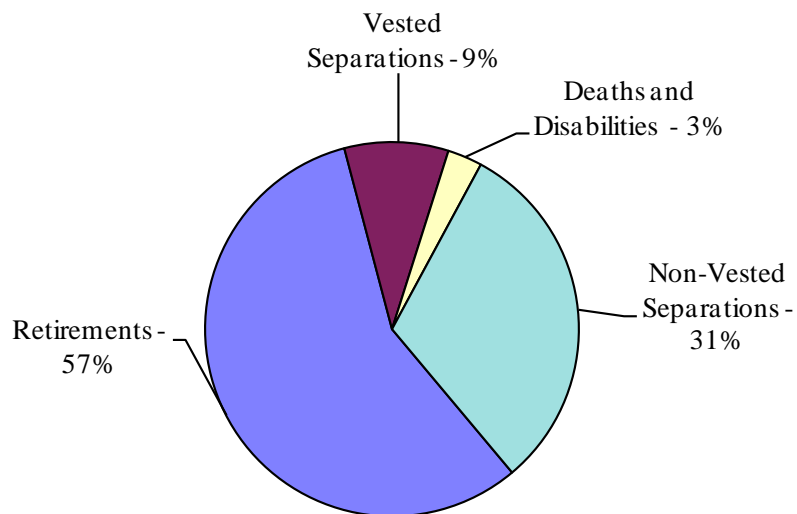


EXPECTED DEVELOPMENT OF PRESENT POPULATION BASED ON CURRENT PLAN ASSUMPTIONS

Closed Group Population Projection



Expected Terminations from Active Employment for Current Active Members



SECTION B

SUMMARY OF BENEFIT PROVISIONS AND VALUATION DATA

BRIEF SUMMARY OF BENEFIT PROVISIONS EVALUATED

DECEMBER 31, 2008

Regular Retirement (no reduction factor for age):

Eligibility - Age 50 with 30 or more years of earned service or age 55 with 25 or more years of earned and outside service (must include 15 years with the District), or age 65 with 5 years of earned service.

Type of Final Average Salary (FAS) - Highest 36 months of earned service or career average, whichever is greater.

Annual Amount - 2.5% of FAS times earned service. Minimum benefit is \$15 times first 10 years of earned service plus \$20 times earned service over 10 years plus an amount equal to the annuitized member balance, including any amount paid to purchase service.

Early Retirement:

Eligibility – Age 55 with 15 years of service with the District but less than 25 years of service or any age with at least 25 years of service with the District.

Annual Amount - Same as regular retirement but reduced by the following amount:

<u>Age</u>	<u>Service</u>	<u>Reduction Amount*</u>
Under 50	30 years	4% for each year prior to age 50
Under 50	25-30 years	Greater of: <ul style="list-style-type: none">• 4% for each year of service below 30 years• 4% for each year below age 50
Age 50 - 55	25-30 years	Lesser of: <ul style="list-style-type: none">• 4% for each year under age 55• 4% for each year of service below 30 years
Over 55	15 years	Lesser of: <ul style="list-style-type: none">• 4% for each year under age 65• 4% for each year below 25 years

* Reduction amounts based on 6% rather than 4% for those hired (or re-hired, if contributions were refunded) on or after July 1, 2005.

Deferred Retirement (vested benefit):

Eligibility - 5 years of service. Benefit begins at age 50 with 30 years of service, age 55 with 25 years of service (15 with District), or age 65 with 5 years of service.

Annual Amount - Computed as regular retirement but based upon service and final average salary at time of termination. In lieu of retirement benefits, members may receive 200% of accumulated contributions in a lump sum or an annuity equal to the actuarial equivalent of 200% of contributions plus minimum benefit.

Disability Retirement:

Eligibility – 5 years of service. Recalculated benefit is payable at age 55 with 25 years of service, at age 50 with 30 years of service, or at age 65.

Annual Amount – Accrued benefit immediately. Upon attaining voluntary retirement age, additional qualified service credit is granted and benefit is recomputed.

Death Before Retirement:

Eligibility - No age or service requirements for a refund of member contributions.

Annual Amount – If the member is eligible for retirement, the beneficiary may receive a refund of accumulated contributions, survivor benefits, or the regular or early retirement benefit.

Survivor benefits are as follows and require that the member have a minimum of 5 years of earned service with the district immediately prior to death:

Type of Survivor	Survivor Benefits
Child	The greater of 10% of Final Average Salary for each child up to a limit of 30%; and \$160 (pro-rated) for each child up to a limit of \$480.
Spouse and child	The greater of the difference between the child benefit above and 30% (40% if 15 years of service plus 2% for each year of service beyond 25 years) of Final Average Salary; and \$480.
Dependent Parent	The greater of 10% of Final Average Salary; and \$240 per parent.
Spouse:	
• Less than 15 years of service	The lesser of 30% of Final Average Salary; and \$480.
• 15 years of service or more	The greater of 30% of Final Average Salary, plus an additional 1% for each year of service over 15 years; and \$480.
Spouse's benefit is payable at age 50 with at least 15 years of service or at age 60.	

Member Contributions:

8.0% of annual compensation. Interest is credited at a rate of 5% per year compounded monthly.

Post-Retirement Increases: (ARAA)

3.25% per year compounded. Effective on the January 1st immediately following retirement. Associate members are not eligible for the annual retirement increase. For those hired on or after July 1, 2005, the increase is based on the lesser of 3.00% per year or the increase in the Consumer Price Index (CPI-W) for all urban wage earners and clerical workers, with the first increase calculated on a pro-rated basis.

SERVICE

Earned Service is used in the determination of benefits and eligibility. It includes periods of employment (regular or casual) with the District, a Charter School or the System.

Outside and Non-qualified Service counts as service up to a total of 10 years of service in determining eligibility for full retirement with 25 years of service. If purchased, also counts as earned service.

OPTIONAL FORMS OF PAYMENT

Option A:	Single life annuity (SLA) with residual refund of member contributions.
Option B:	Installment refund annuity (SLA with reserve balance paid to beneficiary in monthly installments upon employee's death).
Option C:	100% joint and survivor with 10 years certain.
Option D:	Cash refund on annuity portion and SLA on pension portion.
Option E:	50% joint and survivor with 10 years certain.
Option P2:	50% joint and survivor with pop-up and residual refund of member contributions.
Option P3:	100% joint and survivor with pop-up and residual refund of member contributions.

RETIREES AND BENEFICIARIES DECEMBER 31, 2008

TABULATED BY OPTIONAL FORM BEING PAID

	Optional Form							
	A	B	C	D	E	P2	P3	TOTAL
Superannuation and Early Retirement								
(Includes survivors of deceased employees)								
Males								
Number	202	129	1,229	135	161	13	32	1,901
Average Monthly Benefit	\$2,845	\$2,960	\$3,473	\$3,112	\$3,006	\$3,189	\$2,635	\$3,290
Females								
Number	841	506	1,207	762	359	45	72	3,792
Average Monthly Benefit	\$2,875	\$2,506	\$2,892	\$2,952	\$2,618	\$3,289	\$2,848	\$2,827
Total								
Number	1,043	635	2,436	897	520	58	104	5,693
Average Monthly Benefit	\$2,869	\$2,598	\$3,185	\$2,976	\$2,738	\$3,267	\$2,782	\$2,982
Regular Disability								
Males								
Number	57	8	32	5	6	0	2	110
Average Monthly Benefit	\$1,597	\$1,120	\$1,768	\$2,100	\$1,752	\$0	\$610	\$1,625
Females								
Number	143	18	54	23	17	2	1	258
Average Monthly Benefit	\$1,680	\$1,380	\$1,400	\$1,199	\$1,367	\$1,750	\$1,116	\$1,535
Total								
Number	200	26	86	28	23	2	3	368
Average Monthly Benefit	\$1,656	\$1,300	\$1,537	\$1,360	\$1,467	\$1,750	\$779	\$1,562
Survivors of Active Members and Disability Deaths								
Number								125
Average Monthly Benefit								\$1,084
Grand Total								
Number								6,186
Average Monthly Benefit								\$2,859

RETIREES AND BENEFICIARIES DECEMBER 31, 2008 **TABULATED BY ATTAINED AGES**

Attained Ages	Years Since Retirement								Total
	0-4	5-9	10-14	15-19	20-24	25-29	30+		
Under 45	Number	4	2	1	0	0	0	0	7
	Total Benefit	\$ 36,416	\$ 24,640	\$ 7,154	\$ 0	\$ 0	\$ 0	\$ 0	\$ 68,210
45-49	Number	22	2	2	0	0	0	0	26
	Total Benefit	\$ 411,017	\$ 22,908	\$ 28,259	\$ 0	\$ 0	\$ 0	\$ 0	\$ 462,184
50-54	Number	73	12	6	2	0	0	0	93
	Total Benefit	\$ 2,582,222	\$ 291,556	\$ 52,686	\$ 14,477	\$ 0	\$ 0	\$ 0	\$ 2,940,941
55-59	Number	375	111	22	5	3	0	0	516
	Total Benefit	\$ 15,840,766	\$ 4,078,135	\$ 437,013	\$ 47,702	\$ 30,179	\$ 0	\$ 0	\$ 20,433,795
60-64	Number	388	592	90	21	2	2	1	1,096
	Total Benefit	\$ 15,040,829	\$ 26,552,242	\$ 2,848,184	\$ 426,953	\$ 23,092	\$ 8,224	\$ 3,289	\$ 44,902,813
65-69	Number	322	291	279	125	3	0	0	1,020
	Total Benefit	\$ 7,825,096	\$ 11,742,689	\$ 10,971,315	\$ 4,572,673	\$ 49,553	\$ 0	\$ 0	\$ 35,161,326
70-74	Number	61	272	133	419	18	1	0	904
	Total Benefit	\$ 1,394,724	\$ 6,757,082	\$ 4,526,351	\$ 17,575,548	\$ 456,540	\$ 4,305	\$ 0	\$ 30,714,550
75-79	Number	10	32	133	446	251	2	0	874
	Total Benefit	\$ 165,092	\$ 654,529	\$ 2,756,059	\$ 17,195,767	\$ 9,359,082	\$ 27,951	\$ 0	\$ 30,158,480
80-84	Number	5	5	22	321	327	158	3	841
	Total Benefit	\$ 168,765	\$ 151,821	\$ 490,593	\$ 9,379,965	\$ 11,985,346	\$ 4,985,765	\$ 45,812	\$ 27,208,067
85-89	Number	0	2	3	44	272	170	33	524
	Total Benefit	\$ 0	\$ 67,264	\$ 68,313	\$ 1,210,417	\$ 7,023,955	\$ 5,378,934	\$ 750,317	\$ 14,499,200
90 & Over	Number	0	0	0	3	28	148	106	285
	Total Benefit	\$ 0	\$ 0	\$ 0	\$ 69,357	\$ 628,028	\$ 2,846,634	\$ 2,127,603	\$ 5,671,622
Totals	Number	1,260	1,321	691	1,386	904	481	143	6,186
	Total Benefit	\$ 43,464,927	\$ 50,342,866	\$ 22,185,927	\$ 50,492,859	\$ 29,555,775	\$ 13,251,813	\$ 2,927,021	\$ 212,221,188

Average Age = 72.0

Average Years Since Retirement 12.8
(excluding beneficiaries)

**INACTIVE MEMBERS
ELIGIBLE FOR DEFERRED BENEFITS DECEMBER 31, 2008
TABULATED BY ATTAINED AGES**

Attained Ages	No.	Monthly Allowances
25-29	2	\$ 3,076
30-34	33	44,855
35-39	48	67,454
40-44	82	117,068
45-49	65	95,877
50-54	73	95,971
55-59	94	90,139
60-64	92	80,587
Totals	489	\$595,027

ACTIVE MALE MEMBERS DECEMBER 31, 2008
BY ATTAINED AGE AND YEARS OF SERVICE

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20									
20-24	71	2						73	\$ 2,504,707
25-29	148	15	2					165	6,364,220
30-34	178	74	15	2				269	11,761,566
35-39	109	88	46	14	3			260	13,279,860
40-44	114	66	52	29	11	1		273	15,307,812
45-49	82	59	51	48	48	13	10	311	17,672,731
50-54	63	62	44	49	58	25	9	310	17,907,433
55-59	63	47	38	38	42	15	12	255	14,512,654
60	8	10	6	6	7	2	1	40	2,324,805
61	8	10	11	5	9	3	2	48	2,844,392
62	3	8	9	7	6	2	2	37	2,273,332
63	4	5	8	4	1	1		23	1,574,638
64	5	4	1	6	1		1	18	1,045,397
65	2	2	2	3	1		2	12	709,654
66		1	1	1	2	2		7	304,822
67	2	4	1					7	364,642
68		2	1	1	1	1		6	260,108
69	1	1		1				3	129,080
70			1	2				3	193,220
71	1							1	41,314
72				1				1	27,216
73	1		1	1	1			4	146,751
74		1			1			2	105,258
75									
76	1							1	57,680
77			1	1				2	44,133
78									
79				3				3	99,161
Totals	864	461	291	222	192	65	39	2,134	\$111,856,586

Group Averages

Age: 44.5 years
Service: 9.28 years
Annual Pay: \$52,416

ACTIVE FEMALE MEMBERS DECEMBER 31, 2008
BY ATTAINED AGE AND YEARS OF SERVICE

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20	1							1	\$ 20,896
20-24	212	1						213	7,922,438
25-29	540	54	1					595	23,347,046
30-34	441	223	23					687	30,602,995
35-39	288	252	119	6	1			666	33,293,991
40-44	192	175	129	67	11			574	29,782,265
45-49	163	143	122	99	90	11		628	33,322,850
50-54	119	138	128	114	131	79	12	721	40,586,403
55-59	125	109	120	138	112	92	32	728	42,496,527
60	26	15	21	22	22	14	7	127	7,840,733
61	12	24	11	15	7	14	2	85	4,848,817
62	13	19	17	12	17	18	9	105	6,514,324
63	11	12	9	17	14	8	6	77	4,657,268
64	9	5	10	11	6	6	4	51	3,039,303
65	4	12	7	8	6	6	6	49	2,812,656
66		11	4	5	6	5	2	33	2,110,307
67	1	6	2	3	3	2	2	19	1,136,438
68	2	4		2	2	2	2	14	848,272
69	1	3		2			3	9	452,647
70			1		1	1	1	4	136,277
71			1			1	1	3	194,111
72		2		1		1		4	205,310
73	1		1		1	1	1	5	232,180
74									
75				1				1	42,730
76			1	1			1	3	124,149
77					1			1	83,863
78			1					1	32,582
79				1			1	2	107,552
Totals	2,161	1,208	728	525	431	261	92	5,406	\$276,794,930

Group Averages

Age: 44.0 years
Service: 9.38 years
Annual Pay: \$51,201

TOTAL ACTIVE MEMBERS DECEMBER 31, 2008
BY ATTAINED AGE AND YEARS OF SERVICE

Attained Age	Years of Service to Valuation Date								Totals
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20	1							1	\$ 20,896
20-24	283	3						286	10,427,145
25-29	688	69	3					760	29,711,266
30-34	619	297	38	2				956	42,364,561
35-39	397	340	165	20	4			926	46,573,851
40-44	306	241	181	96	22	1		847	45,090,077
45-49	245	202	173	147	138	24	10	939	50,995,581
50-54	182	200	172	163	189	104	21	1031	58,493,836
55-59	188	156	158	176	154	107	44	983	57,009,181
60	34	25	27	28	29	16	8	167	10,165,538
61	20	34	22	20	16	17	4	133	7,693,209
62	16	27	26	19	23	20	11	142	8,787,656
63	15	17	17	21	15	9	6	100	6,231,906
64	14	9	11	17	7	6	5	69	4,084,700
65	6	14	9	11	7	6	8	61	3,522,310
66		12	5	6	8	7	2	40	2,415,129
67	3	10	3	3	3	2	2	26	1,501,080
68	2	6	1	3	3	3	2	20	1,108,380
69	2	4		3			3	12	581,727
70			2	2	1	1	1	7	329,497
71	1		1			1	1	4	235,425
72		2		2		1		5	232,526
73	2		2	1	2	1	1	9	378,931
74		1			1			2	105,258
75				1				1	42,730
76	1		1	1			1	4	181,829
77			1	1	1			3	127,996
78			1					1	32,582
79				4			1	5	206,713
Totals	3,025	1,669	1,019	747	623	326	131	7,540	\$388,651,516

Group Averages

Age: 44.2 years
Service: 9.4 years
Annual Pay: \$51,545

COMPARATIVE SCHEDULES

Active Members December 31,

	2008	2007	2006	2005	2004
Active and Affiliate Members	7,560	7,303	7,130	7,212	7,223
Payroll (in thousands)*	\$388,652	\$357,049	\$328,609	\$318,405	\$315,157
Average Salary*	\$ 51,545	\$ 49,032	\$ 46,270	\$ 44,352	\$ 43,820
Average Age*	44.2	44.5	44.8	44.7	44.6
Average Service*	9.4	9.5	9.8	9.8	9.8

* Excluding Affiliate Members.

All Plan Members December 31, 2008

	Males	Females	Total
Active Members			
Number	2,134	5,406	7,540
Annual Payroll	\$ 111,856,588	\$ 276,794,928	\$ 388,651,516
Affiliate Members	4	16	20
Deferred Retirements			
Number	133	356	489
Estimated Monthly Benefit	\$ 191,050	\$ 403,977	\$ 595,027
Retired Members			
Number	1,945	3,873	5,818
Annual Benefit	\$ 75,653,075	\$ 129,669,161	\$ 205,322,236
Disabled Participants			
Number	110	258	368
Annual Benefits	\$ 2,145,365	\$ 4,753,587	\$ 6,898,952
Subtotal Number	4,326	9,909	14,235
Nonvested and Unelected Vested Terminations			
Terminated, Owed Refunds			832
Total Number			15,067

DEVELOPMENT OF FUNDING VALUE OF RETIREMENT SYSTEM ASSETS DECEMBER 31, 2008

Valuation Date December 31:	2007	2008	2009	2010
A. Funding Value Beginning of Year	\$ 2,854,304,339	\$ 2,968,794,036		
B. Market Value End of Year	3,006,971,321	2,453,576,680		
C. Market Value Beginning of Year	2,854,304,339	3,006,971,321		
D. Non-Investment Net Cash Flow	(135,109,769)	252,631,163		
E. Investment Income				
E1. Market Total: B-C-D	287,776,751	(806,025,804)		
E2. Assumed Rate	8.50%	8.50%		
E3. Amount for Immediate Recognition	236,873,704	263,084,317		
E4. Amount for Phased-In Recognition	50,903,047	(1,069,110,121)		
F. Phased-In Recognition of Investment Income				
F1. Current Year: 0.25 x E4	12,725,762	(267,277,530)		
F2. First Prior Year		12,725,762	\$ (172,055,620)	
F3. Second Prior Year			12,725,762	\$ (172,055,620)
F4. Third Prior Year				12,725,761
F5. Total Recognized Investment Gain	12,725,762	(254,551,768)	(159,329,858)	(159,329,859)
G. Funding Value End of Year				
G1. Preliminary Funding Value End of Year: A+D+E3+F5	\$ 2,968,794,036	\$ 3,229,957,748		
G2. Upper Corridor Limit: 120% x B	\$ 3,608,365,585	\$ 2,944,292,016		
G3. Lower Corridor Limit: 80% x B	\$ 2,405,577,057	\$ 1,962,861,344		
G4. Actuarial Value End of Year	\$ 2,968,794,036	\$ 2,944,292,016		
H. Difference Between Market & Funding Value	38,177,285	(490,715,336)		
I. Recognized Rate of Return	9.0%	(9.0)%		
J. Market Rate of Return	10.3%	(25.7)%		
K. Ratio of Funding Value to Market Value	99%	120%		

The Funding Value of Assets recognizes 25% of the difference between Market Value and expected Funding Value each year. Expected Funding Value is equal to last year's Funding Value increased by contributions and assumed investment income and decreased by benefit payments. During periods when investment performance exceeds the assumed rate, Funding Value of Assets will tend to be less than Market Value. During periods when investment performance is less than the assumed rate, Funding Value of Assets will tend to be greater than Market Value.

SUMMARY OF ACTUARIAL ASSETS, REVENUES AND EXPENDITURES

BALANCE SHEET

Valuation Assets		Reserves for	
Cash, receivables, accruals and other short-term assets	\$ 34,755,785	Member contributions	\$ 264,882,442
Stocks	1,268,720,865	Pensions and annuities	2,504,609,724
Bonds	914,567,517	Deferred retirement allowances	19,102,581
Other	235,532,513	Unrealized asset appreciation	(335,018,067)
Funding value adjustment	490,715,336	Funding value adjustment	490,715,336
Total Current Assets	\$2,944,292,016	Total Applied Reserves	\$2,944,292,016

REVENUES AND EXPENDITURES

	2008	2007
Balance - January 1	\$2,968,794,036	\$2,854,304,339
BOY Adjustments	0	0
Adjusted BOY Balance (A)	2,968,794,036	2,854,304,339
Revenues		
Member contributions	29,904,361	28,184,570
Employer contributions	434,811,169	40,572,810
Recognized investment income (I)	12,029,079	253,012,399
Total	476,744,609	321,769,779
Expenditures		
Benefit payments	212,084,367	203,867,149
Administrative expenses (E)	3,496,530	3,412,933
Total	215,580,897	207,280,082
Balance - December 31	3,229,957,748	2,968,794,036
EOY Adjustments	(285,665,732)	0
Adjusted EOY Balance (B)	\$2,944,292,016	\$2,968,794,036
Recognized rate of return: $(I-E)/[\frac{1}{2} \times (A+B-I+E)]$	-9.0% *	9.0% *

* Market value rate of return was -25.2% in 2008 and 10.3% in 2007.

RECOMMENDED RESERVE TRANSFERS

DECEMBER 31, 2008

1. Reserve for Retired Service and Age - Basic	
a. Ledger Reserve as of December 31, 2008	\$1,182,671,463
b. Required reserve according to actuarial valuation	<u>1,282,379,999</u>
c. Amount to be transferred to this reserve	99,708,536
2. Reserve for Retired Regular Disability - Basic	
a. Ledger Reserve as of December 31, 2008	\$ 38,321,522
b. Required reserve according to actuarial valuation	<u>41,204,979</u>
c. Amount to be transferred to this reserve	2,883,457
3. Reserve for Survivor Benefits - Basic	
a. Ledger Reserve as of December 31, 2008	\$ 6,669,867
b. Required reserve according to actuarial valuation	<u>8,593,325</u>
c. Amount to be transferred to this reserve	1,923,458
4. Reserve for Retired Service and Age - ARAA	
a. Ledger Reserve as of December 31, 2008	\$ 969,058,698
b. Required reserve according to actuarial valuation	<u>1,051,832,232</u>
c. Amount to be transferred to this reserve	82,773,534
5. Reserve for Retired Regular Disability - ARAA	
a. Ledger Reserve as of December 31, 2008	\$ 28,632,348
b. Required reserve according to actuarial valuation	<u>30,509,737</u>
c. Amount to be transferred to this reserve	1,877,389
6. Reserve for Survivor Benefits - ARAA	
a. Ledger Reserve as of December 31, 2008	\$ 6,370,345
b. Required reserve according to actuarial valuation	<u>8,362,349</u>
c. Amount to be transferred to this reserve	1,992,004
7. Total Reserve Liability Transfers	
a. Ledger Reserve as of December 31, 2008	\$2,231,724,243
b. Required reserve according to actuarial valuation	<u>2,422,882,621</u>
c. Amount to be transferred to this reserve	191,158,378

In order to maintain an exact balance between reserve accounts and retiree liabilities, as calculated in the December 31, 2008 valuation, the above transfers should be made.

SECTION C

SUMMARY OF VALUATION METHODS AND ASSUMPTIONS

ACTUARIAL COST METHODS

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

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

The normal cost and the present value of future normal cost is based on the benefit levels available to members hired on or after July 1, 2005. The present value of benefits is based on the benefit levels available to each member. The accrued liability is the difference between the present value of benefits and the present value of normal cost.

Financing of Unfunded Actuarial Accrued Liabilities (UAAL). Unfunded actuarial accrued liabilities (full funding credit of assets exceed liabilities) are amortized by level (principal & interest combined) percent-of-payroll contributions over a period of 30 future years from the contribution effective date. There is currently a 1.5 year lag between the valuation date and the computed employer contribution effective date. Employer contribution rates during this lag have been previously adopted by the Board. To determine the percent of payroll contribution needed to pay off the UAAL, the UAAL as of the valuation date is projected to the contribution effective date based on:

- valuation payroll;
- payroll projections to the appropriate employer fiscal year using the wage growth assumption;
- the employer contribution rates previously adopted by the Board;
- assumed interest; and
- a 30-year level percent of payroll amortization factor.

ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION

The actuary calculates the contribution requirements and benefit values by applying actuarial assumptions to the benefit provisions and census data furnished, using the actuarial cost methods described on the previous page.

The principal areas of financial risk which require assumptions about future experiences are:

- long-term rates of investment return to be generated by system assets.
- patterns of pay increases to members.
- rates of mortality among members, retirees and beneficiaries.
- rates of separation (withdrawal) from active membership.
- rates of disability among active members.
- the age patterns of actual retirement.

In a valuation, the actuary calculates the monetary effect of each assumption for as long as each covered person survives - - - a period of time which can be as long as a century.

Actual experience of the Fund will not coincide exactly with assumed experience, regardless of the quality of the assumptions, or the skill of the actuary and the precision of the many calculations made. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experience. The result is a continual series of adjustments (usually small) to the computed contribution rate.

From time to time it is appropriate to modify one or more of the assumptions to reflect experience trends (but not random year-to-year fluctuations).

The rates of salary increase used for individual members are in accordance with the following table. This assumption is used to project a member's current salary to the salaries upon which benefits will be based.

Sample Ages	% Increase in Salary at Sample Ages		
	Merit and Seniority	Base (Economic)*	Increase Next Year
20	3.5%	4.5%	8.0%
25	3.5%	4.5%	8.0%
30	3.2%	4.5%	7.7%
35	2.8%	4.5%	7.3%
40	2.1%	4.5%	6.6%
45	1.3%	4.5%	5.8%
50	0.8%	4.5%	5.3%
55	0.4%	4.5%	4.9%
60	0.2%	4.5%	4.7%
65	0.0%	4.5%	4.5%

* Includes 3.75% for price inflation and 0.75% for productivity increases.

The payroll growth rate for financing unfunded actuarial accrued liabilities was assumed to be 4.5% per year.

The rate of net investment return was 8.50% a year, compounded annually. This assumption is used to make money payable at one point in time equal in value to a different amount of money payable at another point in time.

The assumed real return is the rate of return in excess of price inflation. Considering other assumptions used in the valuation, the 8.50% nominal rate translates to a net real return of 4.75% a year. Experience over the last 4 years has been more favorable than assumed, as illustrated below:

	Year Ended December 31				4-Year Average
	2008	2007	2006	2005	
1. Nominal rate (net)	(9.0)%	9.0 %	9.0 %	8.2 %	4.0 %
2. Increase in CPI	0.1 %	4.1 %	2.5 %	3.4 %	2.5 %
3. Average salary increase	5.1 %	6.0 %	4.3 %	1.2 %	4.1 %
4. Real return as measured by					
- CPI: (1)-(2)					1.5 %
- Salary increases: (1)-(3)					(0.1)%

The nominal rate of return was computed using the approximate formula: $i = I$ divided by $1/2 (A+B-I)$, where I is realized investment income, A is the beginning of year asset value and B is the end of year asset value.

The mortality table was as shown below:

Sample Attained Ages	Value at Retirement of \$1 Monthly Increasing 3.25% Annually After Retirement		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	\$181.42	\$192.26	32.65	36.49
55	169.93	181.53	28.35	31.85
60	156.09	168.39	24.11	27.27
65	139.54	153.10	19.98	22.88
70	121.87	135.71	16.22	18.72
75	103.91	116.40	12.91	14.84
80	86.45	96.35	10.08	11.39

This assumption is used to measure the probabilities of each benefit payment being made after retirement. The possibility of members dying before retirement is 50% of the rates shown above.

Disabled life mortality was based on the healthy life mortality rates, set forward 10 years.

The rates of retirement used to measure the probability of eligible members retiring during the next year were as follows:

Retirement Ages	Normal Retirement		Early Retirement	
	Men	Women	Men	Women
50	30%	30%	10%	5%
51	30%	30%	10%	5%
52	30%	30%	10%	6%
53	30%	30%	10%	7%
54	35%	35%	10%	8%
55	35%	35%	10%	8%
56	35%	25%	10%	9%
57	35%	25%	10%	10%
58	30%	25%	11%	10%
59	30%	25%	12%	10%
60	30%	20%	13%	11%
61	35%	20%	14%	12%
62	40%	30%	15%	13%
63	35%	20%	15%	14%
64	35%	30%	15%	15%
65	35%	35%		
66	30%	30%		
67	25%	25%		
68	25%	25%		
69	25%	25%		
70	100%	100%		

Rates of separation from active membership were as shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment.

Sample Ages	Years of Service	% of Active Members Separating Within Next Year	
		Men	Women
ALL	0	23.00%	23.00%
	1	20.00%	20.00%
	2	16.00%	16.00%
	3	14.00%	14.00%
	4	12.00%	12.00%
25	5 & Over	7.36%	9.89%
30		6.09%	8.85%
35		5.12%	7.36%
40		4.43%	5.82%
45		3.91%	3.93%
50		3.39%	2.76%
55		3.11%	2.53%
60		2.88%	2.53%
65		2.30%	2.53%

Rates of disability among active members.

Sample Ages	% Becoming Disabled Within Next Year	
	Men	Women
20	0.00%	0.00%
25	0.06%	0.05%
30	0.06%	0.05%
35	0.07%	0.06%
40	0.10%	0.09%
45	0.17%	0.15%
50	0.31%	0.28%
55	0.56%	0.50%
60	1.19%	1.07%
65	0.00%	0.00%

MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

DECEMBER 31, 2008

Marriage Assumption	80% of members are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses.
Pay Increase Timing	Eight months after valuation date.
Decrement Timing	Decrements of all types are assumed to occur at the middle of the year.
Eligibility Testing	Eligibility for benefits is determined based upon the age nearest birthday and exact fractional service.
Decrement Relativity	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Decrement Operation	All decrements operate during the first 5 years of service.
Incidence of Contributions	Contributions are assumed to be received continuously throughout the year based upon the computed percent-of-payroll shown in this report, and the actual payroll payable at the time contributions are made.
Normal Form of Benefit	Straight Life.
Option Factors	Option factors are based on 8.50% interest and a 50% unisex blend of male and female mortality and reflect the COLA of 3.25% or 3% depending on date of hire.
Service Accruals	It is assumed that members accrue one year of service credit per year.
Price Inflation	3.75% per year.
Assumed COLA Increases	3.25% for members hired before July 1, 2005; 3.0% for members hired on or after July 1, 2005.

SECTION D

BASIC FINANCIAL OBJECTIVE AND OPERATION OF THE RETIREMENT SYSTEM

BASIC FINANCIAL OBJECTIVE AND OPERATION OF THE RETIREMENT SYSTEM

Benefit Promises Made Which Must Be Paid For. A retirement program is an orderly means of handing out, keeping track of, and financing contingent pension promises to a group of employees. As each member of the retirement program acquires a unit of service credit they are, in effect, handed an “IOU” which reads: “Your Retirement System promises to pay you one unit of retirement benefits, payments in cash commencing when you retire.”

The principal related financial question is: When shall the money required to cover the “IOU” be contributed? This year, when the benefit of the member’s service is received? Or, some future year when the “IOU” becomes a cash demand?

The financial objective of DPSRS relative to funding the benefits is to establish and receive contributions, expressed as percents of active member payroll, which will remain approximately level from year-to-year and will not have to be increased for future generations of taxpayers.

Translated into actuarial terminology, a level percent-of-payroll contribution objective means that the contribution rate must be at least:

Normal Cost (the current value of benefits likely to be paid on account of members’ service being rendered in the current year)

. . . plus . . .

Interest on the Unfunded Actuarial Accrued Liability (the difference between the actuarial accrued liability and current system assets).

If contributions to the retirement program are less than the preceding amount, the difference, *plus investment earnings not realized thereon*, will have to be contributed at some later time, or, benefits will have to be reduced, to satisfy the fundamental fiscal equation under which all retirement programs must operate; that is:

$$B = C + I - E$$

Benefit payments to any group of members and their beneficiaries cannot exceed the sum of:

Contributions received on behalf of the group

. . . plus . . .

Ivestment earnings on contributions received and not required for immediate payment of benefits

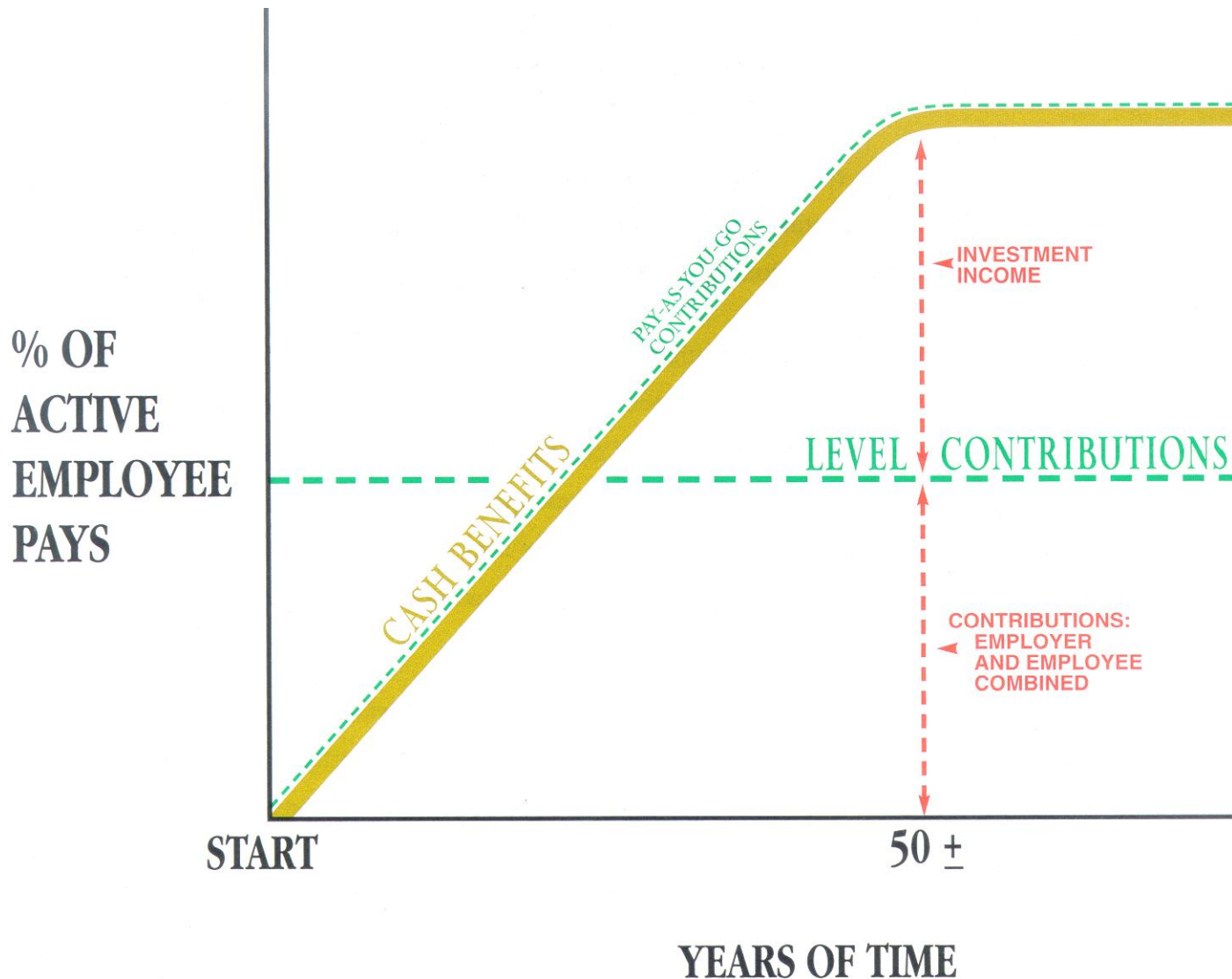
. . . minus . . .

Expenses incurred in operating the program.

There are retirement programs designed to defer the bulk of contributions far into the future. Lured by artificially low present contributions, the inevitable consequence is a relentlessly increasing contribution rate to a level greatly in excess of the level percent-of-payroll rate.

A by-product of the level percent-of-payroll contribution objective is the accumulation of invested assets for varying periods of time. Invested assets are a by-product of level percent-of-payroll contributions, not the objective. *Investment income becomes the major contributor* to the retirement program, and the amount is directly related to the amount of contributions and investment performance.

Computed Contribution Rate Needed To Finance Benefits. From a given schedule of benefits and from the data furnished him, the actuary calculates the contribution rate *by means of an actuarial valuation* - the technique of assigning monetary values to the risks assumed in operating a retirement program.



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

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

Economic Risk Areas

- Rates of investment return
- Rates of pay increase
- Changes in active member group size

Non-Economic Risk Areas

- Ages at actual retirement
- Rates of mortality
- Rates of withdrawal of active members (turnover)
- Rates of disability

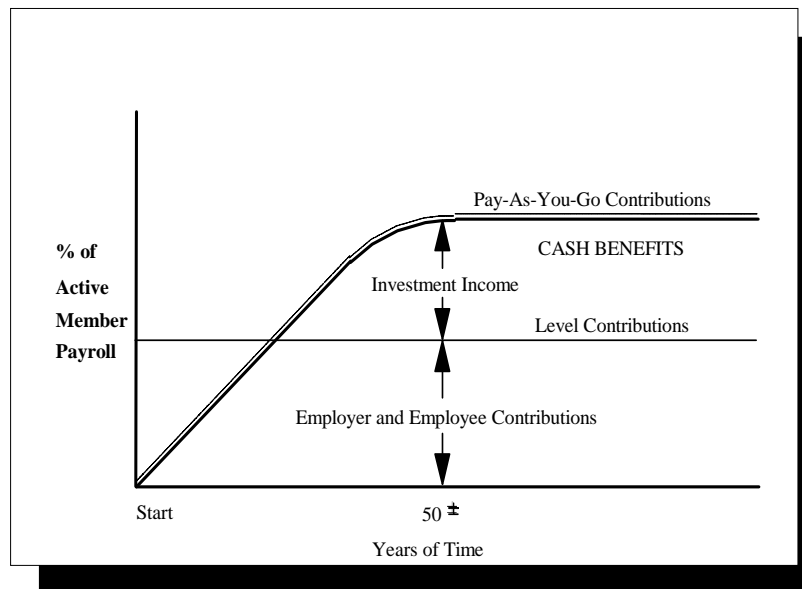
SELECTION OF ASSUMPTIONS USED IN ACTUARIAL VALUATIONS

Economic Assumptions

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

Demographic Assumptions

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



RELATIONSHIP BETWEEN PLAN GOVERNING BODY AND THE ACTUARY

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

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

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

GLOSSARY

Actuarial Accrued Liability

The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as “accrued liability” or “past service liability.”

Accrued Service

The service credited under the plan which was rendered before the date of the actuarial valuation.

Actuarial Assumptions

Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method

A mathematical budgeting procedure for allocating the dollar amount of the “actuarial present value of future plan benefits” between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the “actuarial funding method.”

Actuarial Equivalent

A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.

Actuarial Present Value

The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Amortization

Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

Experience Gain (Loss)

A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

Normal Cost

The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as “current service cost.” Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

Plan Termination Liability

The actuarial present value of future plan benefits based on the assumption that there will be no further accruals for the future service and salary. The termination liability will generally be less than the liabilities computed on a “going-concern” basis and is not normally determined in a routine actuarial valuation.

Reserve Account

An account used to indicate that funds have been set aside for a specific purpose and that are not generally available for other uses.

Unfunded Actuarial Accrued Liability

The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as “unfunded accrued liability.”

Valuation Assets

The value of current plan assets recognized for valuation purposes. Generally related to market value in a manner which spreads unexpected gains or losses over a period of future years.



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June 1, 2009

Mr. Norman Ruggles
Executive Director
Denver Public Schools Retirement System
3700 East Alameda Ave.
Suite 400
Denver, Colorado 80209-3172

Dear Mr. Ruggles:

Enclosed are seventy-five copies of the Annual Actuarial Valuation as of December 31, 2008 of the Denver Public Schools Retirement System. Please let us know if you need additional copies.

Sincerely,

A handwritten signature in black ink, appearing to read 'Kenneth G. Alberts'.

Kenneth G. Alberts

KGA:mrh
Enclosures

cc: Koren Holden
Norman L. Jones