

**METROPOLITAN BOARD OF EDUCATION
TEACHER RETIREMENT PLAN**

**ACTUARIAL VALUATION
AND REPORT**

JULY 1, 2008

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June 9, 2009

Administrative Retirement Committee
Metropolitan Board of Public Education
2601 Bransford Avenue
Nashville, Tennessee 37204

Dear Committee Members:

The attached report summarizes the results of the actuarial valuation of the Metropolitan Board of Education Teacher Retirement Plan as of July 1, 2008. We trust this report will be helpful in updating the Committee with respect to the financing of the plan and complying with the reporting requirements of the Governmental Accounting Standards Board.

The opportunity to serve the Metropolitan Board of Public Education is appreciated, and we will be pleased to supplement this report in any way, as you request.

The actuarial valuation summarized in this report has been performed utilizing generally accepted actuarial principles and is based on actuarial assumptions which we consider to be reasonably related, in the aggregate, to reasonable expectations. It is our opinion that the results fully and fairly disclose the actuarial position of the plan on the valuation date. The undersigned is an actuary at BPS&M, is a member of the American Academy of Actuaries, and has met the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions herein.

Sincerely,

J. Bradford Fisher, F.S.A.

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Current Valuation

An actuarial valuation of the Metropolitan Board of Education Teacher Retirement Plan was performed as of July 1, 2008. The purpose of the valuation was to examine the Plan's liabilities and to determine the necessary amounts to comply with GASB financial reporting.

Historical Perspective

When the Metropolitan Board of Education Teacher Retirement Plan was initially developed, the intent was that funding of benefits in excess of state reimbursements would be shared in the aggregate equally by the Board and by the teachers, with the employer assuming past service costs. The concept was discarded because the plan was closed to new entrants in 1969. At that point, the membership represented an aging population with no young new entrants to create a stable population that would have permitted such a concept to continue to apply. In 1977, the Board adopted a funding method that amortized costs over the average life expectancy of all active and retired members.

The valuation performed in 1993 set forth funding levels that were significantly higher than the amount of funds available from the budget. As a result, the Board of Education, at the recommendation of the Administrative Retirement Committee, accepted an interim funding schedule, the "1994 Interim Funding Schedule". The purpose of the 1994 Interim Funding Schedule was to provide an actuarially sound method to bring the budgeted amount up to the Actuarially Determined Funding Level over time.

The 1994 Interim Funding Schedule projected that the Board could return to the Actuarially Determined Funding Level by the 2005-2006 fiscal year. Due primarily to actuarial gains from investment returns above those assumed, a return to the Actuarially Determined Funding Level was permitted during the 1999-2000 fiscal year (that is, the Actuarially Determined Funding Level for the 1999-2000 fiscal year was less than the amount set forth in the 1994 Interim Funding Schedule). In effect, the plan had "caught-up". The actual funding was limited by continuing budget constraints.

Beginning on July 1, 2000, the Plan became a component of the Guaranteed Payment Program (GPP), an umbrella plan created by the state and local government to ensure actuarially sound funding for a group of five plans supervised by the Metro Benefit Board and the Board of Education. Under the GPP, unfunded liabilities of the aggregate plan are amortized over a period of no more than thirty years. Payments for the Plan move to a payment account from which distributions are paid to the constituent plans of the GPP as necessary to satisfy current benefit needs and to satisfy funding objectives of the GPP. Funding issues that are specific to the GPP are addressed in a separate report.

SUMMARY OF REPORT**Yearly Comparison of Selected Plan Information**

	2008-09	2007-08	2006-07	2005-06	2004-05
Active Participants					
Number	6	6	10	13	18
Annual Payroll	\$384,557	\$374,495	\$622,419	\$806,833	\$1,175,623
Average Earnings	64,092	62,415	62,241	62,064	65,312
Retired and Disabled Participants					
Number	1,192	1,209	1,238	1,263	1,289
Average Age	72.26	71.34	70.67	69.94	69.33
Annual Payroll	\$36,424,255	\$36,160,139	\$36,267,198	\$35,977,693	\$35,609,648
Average Earnings	30,557	29,909	29,294	28,485	27,625
Vested Terminations					
Number	8	8	8	12	12
Annual Payroll	\$65,877	\$65,877	\$66,386	\$104,904	\$104,395
Average Earnings	8,234	8,234	8,298	8,742	8,699
Total Participants					
	1,206	1,223	1,256	1,288	1,319
Actuarial Asset Value	\$76,820,678	\$81,844,272	\$84,919,612	\$90,047,496	\$99,291,833
Present Value of Future Benefits	226,334,210	228,256,030	232,961,701	233,221,651	233,366,481
GASB Annual Required Contribution	14,112,255	13,592,019	13,535,466	13,140,571	11,932,549
Actual Board Contribution	---	4,285,000	4,285,000	4,285,000	4,285,000
Transfer From (To) Guaranteed Payment Program	---	3,607,115	3,056,680	2,717,328	2,570,595
Assumed Rate of Return	8.0%	8.0%	8.0%	8.0%	8.0%

The Basis of Valuation section of this report sets forth a summary of benefits provided under the Metropolitan Board of Education Teacher Retirement Plan and summarizes the actuarial assumptions on which the valuation was based. The Actuarial Computations and Disclosure Information sections set forth details of the plan's funded status in accordance with GASB Statements Number 25 and 27 and shows a projection of expected benefit payments over the next 20 years under the existing plan. The Employee Data section summarizes the employee data on which this valuation was based.

All calculations made in this report have been made utilizing employee data supplied by the Metropolitan Board of Public Education, asset information supplied by Northern Trust and the Finance Department of Metro Nashville Government, and the actuarial assumptions summarized herein.

Summary of Provisions of the Plan

Eligibility

Employees hired after April 1, 1963 became participants as a condition of employment. Employees on April 1, 1963, whether participants in a former plan, or not, were allowed to become a participant in the present plan provided written application was received prior to July 1, 1965. The Plan was closed to new entrants as of July 1, 1969, and employees hired after that date became members of the Tennessee Consolidated Retirement System.

Normal Retirement

Condition

The normal date of retirement is the first day of the month following the participant's 65th birthday, or the first day of the month following termination after completion of 25 years of credited service, or completion of 20 years of credited service and attainment of age 60.

Benefit

The normal retirement benefit, which is payable monthly for life, is determined as 2% of average earnings for each year of service.

Earnings are defined as total cash compensation from regular employment.

Average earnings are the average during the thirty-six (36) consecutive months in which earnings were highest.

Early Retirement

Condition

Participants may elect early retirement after 15 years of service and attainment of age 55.

Benefit

A deferred benefit, commencing at age 65, is computed in the same manner as the Normal Retirement Benefit above, based on service as of the participant's early retirement date.

Alternatively, an actuarially reduced benefit commencing immediately may be elected.

Disability Retirement

Condition

Any participant who becomes disabled and who has completed 10 years of service or who is at least 50 years of age and has completed at least 5 years of service may retire and receive a disability benefit. Disability incurred in line of duty has no age or service requirements. Disability means medically determinable injury, disease or mental disorder. Receipt of benefits is subject to an earnings test.

Benefit

The benefit, payable to age 65, is the amount of the "net disability benefit," (i.e., the amount by which the "gross disability benefit" exceeds the sum of his Primary Social Security benefit and his "Disability Deduction" applicable to that month).

The gross disability benefit is 55% of average monthly earnings, plus an additional 10% of average monthly earnings if he has at least one dependent child. The Disability Deduction shall be the amount, if any, by which his average earnings in the 12 months preceding disability are exceeded by the sum of his gross disability benefit and his earnings while disabled.

At age 65 the normal retirement benefit commences. The benefit is computed in the same manner as the Normal Retirement Benefit above, with years of disability counting as years of credited service.

Death of a Disabled Participant

If a disabled participant dies, a survivor benefit is payable to his surviving spouse until her death or remarriage and thereafter, or if there is no surviving spouse, to surviving dependent children.

The amount of the survivor benefit shall equal 75% of the difference between (i) the participant's disability retirement benefit, determined as if his Disability Deduction were zero, and (ii) 50% of all Social Security benefits that the survivor may receive. However, the amount of the survivor benefit payable after the deceased participant's 65th anniversary of his birthdate shall not be greater than the benefit that would have commenced at age 65, based on his average earnings at the time of his termination, if the participant's termination had not occurred until he reached age 65 and he had elected Option A.

Death Before Retirement

- If the death of a Member occurs after he could have elected early or normal retirement, a survivor's benefit shall be payable monthly to the Member's named beneficiary for life. The amount of the survivor benefit is actuarially equivalent in value to the benefit that would otherwise be payable to the beneficiary if the Member had then retired and had elected Option A.
- If the death of a Member occurs before he could have elected early or normal retirement, but after he completed at least 15 years of service, a survivor's benefit shall be payable monthly to the Member's named beneficiary for life. The amount of the survivor benefit is actuarially equivalent in value to the benefit that would otherwise be payable to the beneficiary if the Member had then retired and had elected Option B.
- If death occurs in line of duty, a survivor benefit is payable, and is computed in the same manner as the Disability Retirement, Death of a Disabled Participant benefit above, as though he had died after commencing to receive a disability retirement benefit.

Death after Retirement

If a participant dies after retirement benefits have become payable, no death benefit is payable unless an optional form of benefit has been elected which provides for a death benefit.

Optional Retirement Benefits

The following optional forms of settlement are available:

- Option A: 100% joint and survivor
- Option B: 50% joint and survivor
- Option C: Social Security option
- Option D: Life income with guaranteed payments
- Option E: 100% joint and survivor with pop-up
- Option F: 50% joint and survivor with pop-up
- Option G: Special Design

Termination of Employment - Vesting

Any participant whose termination occurs after he has completed at least 15 years of service and before he attains age 55 shall leave his employee contributions in the plan and be eligible to receive a retirement benefit computed in the same manner as the Early Retirement Benefit above, or may elect a refund of his contributions with no further plan benefits.

Any participant whose termination occurs before he has completed at least 15 years of service will receive a refund of his contributions with no further plan benefits.

Cost-of-Living Increases

Each July 1, up to 3% of the original retirement benefit is added to a member's retirement benefit. The percentage increase is based on the increase in the Consumer Price Index (all items--United States city average) for the preceding calendar year, but will not exceed 3%. In any year when the CPI increase is less than 1% or a decrease, there is no benefit adjustment made on the following July 1.

Unused Sick Leave

A member may use unused sick leave as creditable service on the basis of 20 days equalling to one month.

Transfer Option

A member may elect to transfer to the Tennessee Consolidated Retirement System at any time prior to retirement.

Military Service

A member who had active duty military service during certain periods may claim up to a maximum of four years of creditable service.

Employee Contributions

Participants contribute in the calendar year 1973 and thereafter

- 3.0% of calendar year earnings which are subject to Social Security Tax, plus
- 6.5% of calendar year earnings in excess of the amount subject to Social Security tax.

Employer Contributions

Each year the employer contributes an amount determined in accordance with the Guaranteed Payment Program.

Investment of Pension Funds

The assets of the plan are divided into various investment management accounts that are custodied by the plan's master custodian. All distributions of benefits are made from these funds.

Summary of Actuarial Assumptions(Sample Values per 1,000 Lives)

	AGE			
	35	50	60	70
<u>Mortality Rates</u>				
1994 Uninsured Pensioner Mortality Table				
Male	0.92	2.77	8.58	25.52
Female	0.51	1.54	4.77	14.76
<u>Disablement Rate</u>				
127% of Class 2 – 1985 Disability Study				
Male	2.53	10.54	28.78	N/A
Female	3.20	10.85	22.77	N/A
<u>Withdrawal Rate</u>				
Estimated Experience	50.00	20.00	0.00	N/A
<u>Mortality Following Disablement</u>				
Male: 75% of Pension Benefit Guaranty Corporation	20.90	28.70	45.20	55.40
Female: Pension Benefit Guaranty Corporation	21.40	25.70	33.10	41.10
<u>Assumed Salary Increases</u>				
5.00% per annum until retirement age				
<u>Rate of Investment Return</u>				
8.00% per annum				
<u>Rate of Retirement</u>				
4/5 retire at later of date of eligibility and age 65				
1/5 retire as soon as eligible				
<u>Cost of Living Increases</u>				
Benefits increase 3% annually after commencement				

Actuarial Funding Method

Level Dollar Amortization

Asset Valuation Method

Five-year smoothing of difference between market value and expected valuation assets

Balance Sheet, July 1, 2008

	<u>Market Value</u>
Assets	
<i>Cash & Equivalents</i>	
Held at Northern Trust	\$ 2,119,480
Held at SunTrust	170,212
<i>Fixed Income</i>	
Government Agencies	33,639
Other Fixed Income	17,382,067
<i>Equities</i>	
Common Stock	45,525,667
Preferred Stock	62,382
Convertible Equity	183,825
<i>Accruals</i>	
Income	68,821
Pending Trades	(233,201)
Transfer from GPP	807,114
Total assets	<u>\$ 66,120,006</u>
Liabilities	
Reserve for plan participants	\$ 66,120,006

Deviation From Expected Asset Value

Trust Fund, July 1, 2007 (At Market)	\$ 89,132,657
Assumed Return at 8.00%	7,130,613
Employer Contributions, with Interest	8,207,800
Net Withdrawals for Benefit Payments, with Interest	<u>(19,543,800)</u>
Expected Trust Fund, June 30, 2008	\$ 84,927,270
Actual Trust Fund, June 30, 2008	<u>66,120,006</u>
Deviation From Expected Asset Value	\$ (18,807,264)

Historical Deviations

2008	\$ (18,807,264)
2007	5,562,402
2006	2,138,477
2005	761,533

Actuarial Value of Assets

Market Value Assets, June 30, 2008	\$66,120,006
Receivable Contribution for 2008	0
Adjusted Market Assets	<u>\$66,120,006</u>
- 80% of prior year's deviation	15,045,811
- 60% of second prior year's deviation	(3,337,441)
- 40% of third prior year's deviation	(855,391)
- 20% of fourth prior year's deviation	<u>(152,307)</u>
Valuation Assets	\$76,820,678

Determination of GASB "Annual Required Contribution"

Present Value of Benefits (Net of State Reimbursements)	
Active Lives	\$ 1,636,678
Retired Lives	224,141,715
Deferred Vested Lives	555,817
Total Present Value of Benefits	<u>\$ 226,334,210</u>
Actuarial Asset Value	(76,820,678)
Present Value of Future Employee Contributions	<u>(20,575)</u>
Present Value of Future Employer Costs	\$ 149,492,957
30-Year Amortization of Future Costs from July 1, 2000	13,569,476
Interest Adjustment for Mid-year Payment	542,779
Annual Required Contribution	<u>\$ 14,112,255</u>

Projected Schedule of Retirement Benefit Payments

Plan Year	Number Retiring	Total Payout *
2009	7	\$20,898,289
2010	0	21,114,575
2011	1	21,311,530
2012	5	21,448,173
2013	0	21,650,860
2014	1	21,758,052
2015	0	21,786,190
2016	0	21,730,217
2017	0	21,588,172
2018	0	21,358,800
2019	0	21,041,650
2020	0	20,637,169
2021	0	20,146,819
2022	0	19,573,128
2023	0	18,919,706
2024	0	18,191,214
2025	0	17,393,328
2026	0	16,532,764
2027	0	15,617,264
2028	0	14,655,534

* Excludes reimbursements from the State.

Governmental Accounting Standards Board Statement Nos. 25 and 27 Information

Governmental Accounting Standards Board Statement 25 establishes financial reporting standards for defined benefit pension plans sponsored by employers that are subject to governmental accounting standards. Governmental Accounting Standards Board Statement 27 provides standards for reporting pension expenditures and expense, and related pension liabilities and assets, for such plans. This section provides pertinent plan disclosure information for the 2008-2009 financial statements.

The Schedule of Employer Contributions and the Three-Year Trend Information should be updated at year-end to reflect the contributions made during the current fiscal year.

Actuarial computations under Statements 25 and 27 are for purposes of fulfilling employer governmental accounting requirements. The calculations reported herein have been made on a basis consistent with our understanding of the statements.

Schedule of Funding Progress

Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability (AAL) - Entry Age	Unfunded AAL (UAAL)	Funded Ratio	Covered Payroll	UAAL as a Percentage of Covered Payroll
07/01/2001	\$108,873,419	\$236,573,475	\$127,700,056	46.0%	\$6,471,686	1,973.2%
07/01/2002	107,937,347	235,616,521	127,679,174	45.8%	4,752,700	2,686.5%
07/01/2003	101,996,664	236,236,129	134,239,465	43.2%	3,216,887	4,173.0%
07/01/2004	99,291,833	233,243,203	133,951,370	42.6%	1,175,623	11,394.1%
07/01/2005	90,047,496	233,143,995	143,096,499	38.6%	806,833	17,735.6%
07/01/2006	84,919,612	232,911,728	147,992,116	36.5%	622,419	23,776.9%
07/01/2007	81,844,272	228,229,232	146,384,960	35.9%	374,495	39,088.6%
07/01/2008	76,820,678	226,313,635	149,492,957	33.9%	384,557	38,874.1%

Determination of Annual Pension Cost

Annual Required Contribution	\$14,112,255
Interest on net pension obligation	5,623,602
Adjustment to annual required contribution	(6,891,134)
Annual pension cost	<u>\$12,844,723</u>

Schedule of Employer Contributions

Fiscal Year Ending	Annual Required Contribution (ARC)	Actual Contribution	Percentage Contributed
06/30/2002	\$11,020,413	\$5,722,295	51.9%
06/30/2003	11,125,636	9,679,865	87.0%
06/30/2004	11,821,256	9,850,814	83.3%
06/30/2005	11,932,549	6,855,595	57.5%
06/30/2006	13,140,571	7,002,328	53.3%
06/30/2007	13,535,466	7,341,680	54.2%
06/30/2008	13,592,019	7,892,115	58.1%

Three-Year Trend Information

Fiscal Year Ending	Annual Pension Cost (APC)	Percentage of APC Contributed	Net Pension Obligation
na	na	na	na
na	na	na	na
na	na	na	na
na	na	na	na
06/30/2006	\$12,388,237	56.5%	\$60,384,320
06/30/2007	12,631,003	58.1%	65,673,643
06/30/2008	12,513,500	63.1%	70,295,028

EMPLOYEE DATA

Distribution of Active Participants' Earnings

BY AGE

Age Group	Male			Female			Total		
	No	Earnings		No	Earnings		No	Earnings	
		Total	Average		Total	Average		Total	Average
1-20	0	\$ 0	\$ 0	0	\$ 0	\$ 0	0	\$ 0	\$ 0
21-25	0	0	0	0	0	0	0	0	0
26-30	0	0	0	0	0	0	0	0	0
31-35	0	0	0	0	0	0	0	0	0
36-40	0	0	0	0	0	0	0	0	0
41-45	0	0	0	0	0	0	0	0	0
46-50	0	0	0	0	0	0	0	0	0
51-55	0	0	0	0	0	0	0	0	0
56-60	0	0	0	1	87,952	87,952	1	87,952	87,952
61-65	1	64,647	64,647	3	180,053	60,017	4	244,700	61,175
66-70	0	0	0	1	51,905	51,905	1	51,905	51,905
71-75	0	0	0	0	0	0	0	0	0
76-80	0	0	0	0	0	0	0	0	0
81-85	0	0	0	0	0	0	0	0	0
86-90	0	0	0	0	0	0	0	0	0
TOTAL	1	\$64,647	\$64,647	5	\$319,910	\$63,982	6	\$384,557	\$64,092

Distribution of Retired Participants' Gross Pensions**BY AGE**

Age Group	Male			Female			Total		
	No	Pensions		No	Pensions		No	Pensions	
		Total	Average		Total	Average		Total	Average
1-20	0	\$ 0	\$ 0	1	\$ 34,187	\$34,187	1	\$ 34,187	\$34,187
21-25	0	0	0	0	0	0	0	0	0
26-30	1	16,359	16,359	2	26,254	13,127	3	42,613	14,204
31-35	1	26,889	26,889	0	0	0	1	26,889	26,889
36-40	1	16,359	16,359	1	29,473	29,473	2	45,832	22,916
41-45	3	32,334	10,778	1	14,703	14,703	4	47,037	11,759
46-50	5	55,040	11,008	3	27,468	9,156	8	82,508	10,313
51-55	3	16,319	5,439	3	17,539	5,846	6	33,858	5,643
56-60	1	6,128	6,128	6	207,182	34,530	7	213,310	30,472
61-65	76	3,065,202	40,331	180	6,399,590	35,553	256	9,464,792	36,971
66-70	99	3,521,411	35,569	170	5,341,327	31,419	269	8,862,738	32,946
71-75	84	3,013,095	35,870	155	4,639,056	29,929	239	7,652,151	32,017
76-80	70	2,096,648	29,952	140	3,865,762	27,612	210	5,962,410	28,392
81-85	32	879,996	27,499	92	2,075,060	22,555	124	2,955,056	23,831
86+	9	204,946	22,771	53	795,928	15,017	62	1,000,874	16,143
TOTAL	385	\$12,950,726	\$33,638	807	\$23,473,529	\$29,087	1,192	\$36,424,255	\$30,557

EMPLOYEE DATA

Distribution of Vested Terminated Participants' Pensions

BY AGE

Age Group	Male			Female			Total		
	No	Pensions		No	Pensions		No	Pensions	
		Total	Average		Total	Average		Total	Average
1-20	0	\$ 0	\$ 0	0	\$ 0	\$ 0	0	\$ 0	\$ 0
21-25	0	0	0	0	0	0	0	0	0
26-30	0	0	0	0	0	0	0	0	0
31-35	0	0	0	0	0	0	0	0	0
36-40	0	0	0	0	0	0	0	0	0
41-45	0	0	0	0	0	0	0	0	0
46-50	0	0	0	0	0	0	0	0	0
51-55	0	0	0	0	0	0	0	0	0
56-60	0	0	0	0	0	0	0	0	0
61-65	2	13,643	6,821	5	35,243	7,048	7	48,886	6,983
66-70	0	0	0	1	16,991	16,991	1	16,991	16,991
71-75	0	0	0	0	0	0	0	0	0
76-80	0	0	0	0	0	0	0	0	0
81-85	0	0	0	0	0	0	0	0	0
86-90	0	0	0	0	0	0	0	0	0
TOTAL	2	\$13,643	\$6,821	6	\$52,234	\$8,705	8	\$65,877	\$8,234