PUBLIC SCHOOL TEACHERS' PENSION AND RETIREMENT FUND OF CHICAGO

ACTUARIAL VALUATION AS OF JUNE 30, 2008

January 21, 2009

Board of Trustees
Public School Teachers' Pension
and Retirement Fund of Chicago
203 N. LaSalle Street
Suite 2600
Chicago, Illinois 60601

Re: <u>Actuarial Valuation as of June 30, 2008</u>

Dear Board Members:

I am pleased to submit our actuarial report on the financial position and funding requirements of the Public School Teachers' Pension and Retirement Fund of Chicago based on the actuarial valuation as of June 30, 2008.

The report consists of 10 Sections and 3 Appendices as follows:

I would be pleased to discuss any aspects of this report with you at your convenience.

Respectfully submitted,

Sandor Goldstein, F.S.A.
Consulting Actuary

A. PURPOSE AND SUMMARY

For purposes of GASB Statement No. 25 and GASB Statement No. 43, we have performed separate actuarial valuations of the pension benefits and retiree health insurance benefits provided under the Public School Teachers' Pension and Retirement Fund of Chicago and are preparing actuarial reports based on these valuations.

As has been done in past years, we have also performed a combined actuarial valuation as of June 30, 2008 of the pension and retiree health insurance benefits provided under the fund to measure the overall funded status and contribution requirements of the Fund. We believe that such a combined valuation is required under Section 17-129 of the Illinois Pension Code which specifies the funding requirements for the fund. The following funding provision is contained in Section 17-129 of the Illinois Pension Code: "For fiscal years 2011 through 2045, the minimum contribution to the Fund to be made by the Board of Education in each fiscal year shall be an amount to be determined by the Fund to be sufficient to bring the total assets of the Fund up to 90% of the total actuarial liabilities of the Fund by the end of fiscal year 2045…..". This report is intended to present the results of the combined valuation. The results of the combined valuation are summarized below:

1.	Total Actuarial Liability	$ 15,203,740,567
2.	Actuarial Value of Assets	12,114,406,423
3.	Unfunded Actuarial Liability	3,089,334,144
4.	Funded Ratio	79.7%
5.	Employer's Normal Cost for FY 09 as a percent of payroll	9.39%
6.	Board of Education Contribution Requirement For FY 10 Based on Public Act 89-15 and Public Act 90-548	$ 307,485,000

B. DATA USED FOR THE VALUATION

Participant Data. The participant data required to carry out the valuation was supplied by the Fund. The membership of the Fund as of June 30, 2008, on which the valuation was based, is summarized in Exhibit 1. It can be seen that there were 32,086 active contributors, 23,920 pensioners, and 3,479 vested terminated members included in the valuation. The total active payroll as of June 30, 2008 was $1,914,558,916.

Exhibit 1

Summary of Membership Data

1. Number of Members	
(a) Active Members	
(i) Vested Employees	20,568
(ii) Non-vested Employees	11,518
(iii) Total Active Members	32,086
(b) Members Receiving	
(i) Retirement Pensions	20,913
(ii) Disability Pensions	453
(iii) Survivor Pensions	2,554
(iv) Total Pensioners	23,920
(c) Vested Terminated Members	3,479
(d) Total	59,485
2. Total Annual Salaries	$ 1,914,558,916
(a) Average Salary	59,670
3. Total Accumulated Contributions of Active Members	$ 1,271,835,518
4. Annual Benefit Payments Currently Being Made	
(a) Retirement Pensions	$ 854,892,900
(b) Disability Pensions	12,531,346
(c) Survivor Pensions	37,412,587
(d) Total Pensions	$ 904,836,833

An age and service distribution for active members is provided in Exhibit 2.

EXHIBIT 2

AGE AND SERVICE DISTRIBUTION OF ACTIVE MEMBERS

Year 2008

Number of Members and Average Salaries by Age and Service Grouping (Male and Female Combined)

	Year of Service									
Age	**<1**	**1 to 4**	**5 to 9**	**10 to 14**	**15 to 19**	**20 to 24**	**25 to 29**	**30 to 34**	**35+**	**Total**
under 25	334	781								1115
	$16,549	$42,625								$34,813
25-29	574	3298	801							4673
	$16,753	$45,159	$56,389							$43,595
30-34	316	2047	2122	294						4779
	$16,592	$46,280	$59,515	$73,135						$51,846
35-39	223	1029	1424	1307	207					4190
	$12,430	$47,121	$60,646	$74,198	$83,856					$60,132
40-44	198	586	727	857	708	92				3168
	$10,929	$45,974	$59,686	$72,416	$78,971	$83,285				$62,541
45-49	154	531	577	705	592	433	101	1		3094
	$8,709	$44,653	$59,401	$70,959	$79,022	$82,325	$90,712	$56,710		$64,964
50-54	137	432	546	673	625	538	441	368	5	3765
	$9,274	$39,922	$57,842	$71,200	$77,540	$78,305	$82,117	$89,001	$90,899	$68,533
55-59	132	362	462	568	725	589	374	794	470	4476
	$7,106	$38,158	$57,023	$70,546	$77,188	$77,521	$82,233	$84,854	$90,033	$72,215
60-64	69	174	218	243	380	270	186	211	319	2070
	$7,283	$30,812	$51,168	$68,913	$76,014	$77,955	$77,151	$86,011	$89,702	$69,957
65-69	42	59	61	70	99	69	42	62	75	579
	$6,398	$24,133	$53,649	$59,537	$77,977	$78,881	$77,470	$83,785	$85,998	$64,237
70+	20	22	10	19	22	15	11	17	41	177
	$4,631	$16,904	$22,428	$58,404	$67,297	$77,140	$67,266	$72,563	$85,295	$55,970
Number	2,199	9,321	6,948	4,736	3,358	2,006	1,155	1,453	910	32,086
Salary	$13,523	$44,450	$58,731	$71,912	$78,190	$79,135	$81,796	$85,864	$89,376	$59,670

Assets. In November of 1994, the Governmental Accounting Standards Board (GASB) issued GASB Statement No. 25, which establishes standards of financial reporting for governmental pension plans. The statement is effective for periods beginning after June 15, 1996. Under GASB Statement No. 25, the actuarial value of assets to be used for determining a plan's funded status and annual required contribution needs to be market related. In determining the actuarial value of assets, smoothing changes in the market value of assets over a period of three to five years is considered to be appropriate.

The asset values used for the valuation were based on the asset information contained in the audited financial statements for the year ending June 30, 2008 prepared by the Fund. The actuarial value of assets was determined by smoothing unexpected gains or losses over a period of 4 years. The resulting actuarial value of assets is $12,114,406,423. The development of this actuarial value of assets is outlined in Exhibit 3. As of June 30, 2008, the market value of the assets of the fund amounted to $11,483,477,146.

Exhibit 3

Actuarial Value of Assets

A. Development of Investment Gain/(Loss) For Year Ending June 30, 2008

1.	Actuarial Value of Assets as of 6/30/07	$ 11,807,100,821
2.	Employer Contributions	229,270,412
3.	Employee Contributions	172,504,804
4.	Expenses	1,000,770,310
5.	Expected Investment Income	921,069,198
6.	Actual Investment Income	(737,538,769)
7.	Investment Gain/(Loss) (6 – 5)	$ (1,658,607,967)

B. Development of Actuarial Value of Assets

8.	Expected Value of Assets as of June 30, 2008 (1 + 2 + 3 – 4 + 5)	$ 12,129,174,925
9.	One-fourth of Investment Gain/(Loss) For Year Ending June 30, 2005	56,194,654
10.	One-fourth of Investment Gain/(Loss) For Year Ending June 30, 2006	69,623,535
11.	One-fourth of Investment Gain/(Loss) For Year Ending June 30, 2007	274,065,301
12.	One-fourth of Investment Gain/(Loss) For Year Ending June 30, 2008	(414,651,992)
13.	Actuarial Value of Assets as of June 30, 2008 (8 + 9 + 10 + 11 + 12)	$ 12,114,406,423

C. FUND PROVISIONS

Our valuation was based on the provisions of the Fund in effect as of June 30, 2008 as provided in Article 17 of the Illinois Pension Code. A summary of the principal provisions of the Fund on which the valuation was based is provided in Appendix 2.

D. ACTUARIAL ASSUMPTIONS AND COST METHOD

Based on an experience analysis of the fund over Fiscal Years 2003 through 2006, we have made the following changes in the actuarial assumptions used for the June 30, 2008 actuarial valuation: (1) the assumed rates of termination were reduced by approximately 20% for employees with less than 5 years of service, and (2) the assumed rates of retirement were reduced by approximately 25%. The other actuarial assumptions used for the June 30, 2008 valuation are the same as the assumptions that were used for the June 30, 2007 valuation.

The actuarial assumptions used for the June 30, 2008 valuation are outlined in Appendix 1. In our opinion, the actuarial assumptions used for the valuation are reasonable, in the aggregate, taking into account Fund experience and future expectations and represent our best estimate of anticipated experience.

The projected unit credit actuarial cost method was used for the June 30, 2008 actuarial valuation. This is the same actuarial cost method that was used for the June 30, 2007 valuation.

E. ACTUARIAL LIABILITY

The actuarial liability as determined under the valuation for the various classes of members is summarized in Exhibit 4. The total actuarial liability is then compared with the actuarial value of assets in order to arrive at the unfunded actuarial liability.

As of June 30, 2008, the total actuarial liability is $15,203,740,567, the actuarial value of assets is $12,114,406,423, and the unfunded liability is $3,089,334,144. The ratio of the actuarial value of assets to the actuarial liability, or funded ratio, is 79.7%.

Exhibit 4

Actuarial Liability as of June 30, 2008

1. Actuarial Liability for Active Members	
(a) Basic Retirement Annuity	$ 3,076,587,948
(b) Post Retirement Increase	802,865,376
(c) Lump Sum Death Benefit	9,925,688
(d) Survivor's Pension	326,924,641
(e) Disability Pension	84,034,554
(f) Withdrawal Benefit	229,381,092
(g) Total	$ 4,529,719,299
2. Actuarial Liability Members Receiving Benefits	
(a) Retirement Pensions	$ 10,015,880,218
(b) Survivor Pensions	349,613,500
(c) Disability Pensions	125,950,855
(d) Total	$ 10,491,444,573
3. Actuarial Liability for Inactive Members	182,576,695
4. Total Actuarial Liability	$ 15,203,740,567
5. Actuarial Value of Assets	12,114,406,423
6. Unfunded Actuarial Liability	$ 3,089,334,144
7. Funded Ratio	79.7%

F. EMPLOYER'S NORMAL COST

The employer's share of the normal cost for the year beginning July 1, 2008 is developed in Exhibit 5. The total normal cost is $340,778,025, employee contributions are estimated to be $161,037,666, resulting in the employer's share of the normal cost of $179,740,359.

Based on a payroll of $1,914,558,916 as of June 30, 2008, the employer's share of the normal cost can be expressed as 9.39% of payroll.

Exhibit 5

Employer's Normal Cost For Year Beginning July 1, 2008

		Dollar Amount	Percent Of Payroll
1.	Basic Retirement Pension	$ 169,219,851	8.84%
2.	Post Retirement Increases	44,005,648	2.30
3.	Lump Sum Death Benefits	738,764	.04
4.	Survivor's Pension	19,833,177	1.04
5.	Disability Benefits	6,636,150	.35
6.	Withdrawal Benefits	26,620,536	1.39
7.	Health Insurance Reimbursement	65,000,000	3.39
8.	Administrative Expenses	8,723,899	.45
9.	Total Normal Cost	$ 340,778,025	17.80%
10.	Employee Contributions	161,037,666	8.41
11.	Employer's Share of Normal Cost	$ 179,740,359	9.39%

Note. The above figures are based on a total active payroll of $1,914,558,916 as of June 30, 2008.

G. EMPLOYER CONTRIBUTION REQUIREMENTS FOR FISCAL YEAR 2010

Additional State Contributions. According to Section 17-127 of the Pension Code, the State shall make additional contributions of .544% of payroll to the Fund to offset a portion of the cost of benefit increases enacted under Public Act 90-582, except that no additional contributions are required if for the previous fiscal year the ratio of the fund's assets to total actuarial liabilities was at least 90%.

Based on the June 30, 2008 actuarial valuation, the ratio of the actuarial value of assets to total actuarial liabilities, or funded ratio, amounts to 79.7%. Therefore, additional State contributions will be required for Fiscal Year 2010. Based on a projected payroll of $1,978,286,000 for Fiscal Year 2010, we have determined the additional State contributions under Section 17-127 of the Pension Code to be $10,058,000.

Additional Board of Education Contributions. According to Section 17-127.2 of the Pension Code, the Board of Education shall make additional contributions of .58% of each teacher's salary to the Fund to offset a portion of the cost of benefit increases enacted under Public Act 90-582, except that no additional contributions are required if for the previous fiscal year the ratio of the fund's assets to total actuarial liabilities was at least 90%.

As the funded ratio as of June 30, 2008 is 79.7%, additional Board of Education contributions will be required for Fiscal Year 2010. Based on a projected payroll of $1,978,286,000 for Fiscal Year 2010, we have determined the additional Board of Education contribution under Section 17-127.2 of the Pension Code to be <u>$10,723,000</u>.

<u>Board of Education Required Contribution</u>. Under the funding plan established by Public Act 89-15, the minimum contribution to the Fund by the Board of Education shall be an amount determined by the Fund to be sufficient to bring the total assets of the Fund up to 90% of the total actuarial liabilities by the end of fiscal year 2045. The required Board of Education contribution is to be calculated as a level percent of payroll over the years through 2045. For fiscal years 2000 through 2010, the Board of Education's contribution, as a percentage of the applicable payroll, is to be increased in equal annual increments so that by Fiscal Year 2011, the Board of Education is contributing at the required rate.

Public Act 90-548, signed into law on December 4, 1997, revised the above funding plan to provide that the Board of Education contribution shall not be in excess of the amount needed to maintain the ratio of assets to total actuarial liability at the 90% level.

As of June 30, 2008, the ratio of the actuarial value of assets to the total actuarial liability is 79.7%. Using the results of the June 30, 2008 valuation as a starting point, we have projected the ratio of the actuarial value of assets to the total actuarial liability as of June 30, 2009 to be 78.7%. Thus, on the basis of the funding plan established by Public Act 89-15 as revised by Public Act 90-548, we have calculated the total employer required contribution for Fiscal Year 2010 to be $393,266,000. State appropriations are estimated to be $65,000,000. As indicated above, additional state contributions amount to $10,058,000, and additional Board of Education contributions amount to $10,723,000. Thus, based on the total employer required contribution for Fiscal Year 2010 and other sources of employer contribution, the net Board of Education contribution requirement for Fiscal Year 2010 under the funding plan specified in Section 17-129 of the Pension Code is calculated to be $307,485,000. Additional details regarding our calculations are shown below:

Board of Education Required Contribution For FY 2010

1.	Total required employer contribution for FY 2010	$ 393,266,000
2.	State appropriations	65,000,000
3.	Additional State contributions	10,058,000
4.	Additional Board of Education contribution	10,723,000
5.	Board of Education required contribution (1 – 2 – 3 – 4)	$ 307,485,000

In past years, the Board of Education has made certain contributions to the pension fund from federal funds. Any contribution by the Board of Education from federal funds in FY 2010 is to be applied to the Board of Education required contribution of $307,485,000.

H. RECONCILIATION OF CHANGE IN UNFUNDED ACTUARIAL LIABILITY

The net actuarial experience during the period July 1, 2007 to June 30, 2008 resulted in an increase in the Fund's unfunded actuarial liability of $219,250,620. This increase in unfunded actuarial liability is a result of several kinds of gains and losses. The financial effect of the most significant gains and losses is illustrated in Exhibit 6.

The employer contribution requirement for the year of normal cost plus interest on the unfunded actuarial liability amounted to $410,879,290. The total actual employer contribution for the year amounted to $229,466,511. Thus, the employer contribution for the year fell short of the funding requirement of normal cost plus interest on the unfunded liability by $181,412,779. Had all other aspects of the Fund's experience been in line with the actuarial assumptions, the unfunded liability would have increased by this amount.

The net rate of investment return earned by the Fund during the year, based on the actuarial value of assets, was approximately 7.88%, in comparison to the assumed rate of 8.0%. This resulted in an increase in the unfunded liability of $14,768,502. Salary increases higher than expected resulted in an increase in the unfunded liability of $168,853,909.

The changes made in the actuarial assumptions used for the June 30, 2008 valuation had the impact of reducing the unfunded liability by $386,588,901. The various other aspects of the Fund's experience resulted in an increase in the unfunded liability of $240,804,331. The aggregate financial experience of the Fund resulted in an increase in the unfunded liability of $219,250,620.

Exhibit 6

Reconciliation of Change in Unfunded Actuarial Liability
Over the Period July 1, 2007 to June 30, 2008

1.	Unfunded Actuarial Liability as of 07/01/07	$ 2,870,083,524
2.	Employer Contribution Requirement of Normal Cost Plus Interest on Unfunded Liability for Period 07/01/07 to 06/30/08	410,879,290
3.	Actual Employer Contribution for the Year	229,466,511
4.	Increase in Unfunded Liability Due to Employer Contribution Being Less Than Normal Cost Plus Interest on Unfunded Liability (2 – 3)	$ 181,412,779
5.	Increase in Unfunded Liability Due to Investment Return Lower Than Assumed	14,768,502
6.	Increase in Unfunded Liability Due to Salary Increases Higher Than Assumed	168,853,909
7.	Decrease in unfunded liability due to Changes in Actuarial Assumptions	386,588,901
8.	Increase in Unfunded Liability Due to Other Sources	240,804,331
9.	Net Increase in Unfunded Liability for the Year (4 + 5 + 6 – 7 + 8)	$ 219,250,620
10.	Unfunded Actuarial Liability as of June 30, 2008 (1 + 9)	$ 3,089,334,144

I. PROJECTION OF CONTRIBUTIONS, LIABILITIES, AND ASSETS

Based on the results of the June 30, 2008 actuarial valuation, we have projected valuation results for a 37-year period commencing with Fiscal Year 2009. We have based Board of Education contributions on the contribution requirements in the funding plan established under Public Act 89-15, as revised by Public Act 90-548.

For purposes of the projections, all assets, contributions, and benefit payments, including amounts attributable to the retiree health insurance program, have been included. Our projections of contributions, liabilities, and assets are based on the actuarial assumptions, membership data and benefit provisions that were used for the regular actuarial valuation.

In order to determine projected contributions, liabilities, and assets, certain calculations needed to be made that are not normally required in a regular actuarial valuation. Benefit payout requirements, actuarial liabilities, and payroll were estimated over the 37-year period from 2009 through 2045 by projecting the membership of the Fund over the 37-year period, taking into account the impact of new entrants into the Fund over the 37-year period.

To make the required projections, assumptions needed to be made regarding the age and salary distribution of new entrants as well as the size of the active membership of the Fund. The assumptions regarding the profile of new entrants to the Fund were based on the recent experience of the Fund with regard to new entrants. The size of the active membership of the Fund was assumed to remain constant over the 37-year projection period. The results of our projections are shown in Exhibit 7.

J. CERTIFICATION

This actuarial report has been prepared in accordance with generally accepted actuarial principles and practices and to the best of our knowledge, fairly represents the financial condition of the Public Teachers' Pension and Retirement Fund of Chicago as of June 30, 2008.

Respectfully submitted,

Sandor Goldstein, F.S.A.
Consulting Actuary

Carl J. Smedinghoff, A.S.A.
Associate Actuary

Exhibit 7
Public School Teachers' Pension and Retirement Fund of Chicago
Projection of Contributions, Liabilities and Assets

(Board of Education contributions are based on Public Act 89-15 as revised by Public Act 90-548.)
(All other employer contributions are assumed to remain level.)
(All dollar amounts are in millions. Actuarial Liability and asset figures as of end of year.)

Fiscal Year	Employee Contri-butions	Required Employer Contri-butions	State Appropri-ations	Additional State Contri-bution	Additional BOE Contri-bution	Required Board of Education Contri-butions	Total Actuarial Liability	Actuarial Value of Assets	Unfunded Actuarial Liability	Funded Ratio
2009	161.0	263.0	65.0	9.8	10.4	177.8	15,680.0	12,347.1	3,332.9	78.7%
2010	166.4	393.3	65.0	10.1	10.7	307.5	16,169.0	12,634.6	3,534.4	78.1%
2011	171.5	405.2	65.0	10.4	11.0	318.8	16,670.2	12,651.6	4,018.6	75.9%
2012	176.6	417.5	65.0	10.7	11.4	330.4	17,184.0	13,064.5	4,119.5	76.0%
2013	181.9	430.0	65.0	11.0	11.7	342.2	17,711.2	13,490.3	4,220.9	76.2%
2014	187.4	442.8	65.0	11.3	12.1	354.4	18,251.6	13,928.8	4,322.8	76.3%
2015	193.0	456.2	65.0	11.7	12.4	367.1	18,806.8	14,381.8	4,425.0	76.5%
2016	198.8	469.9	65.0	12.0	12.8	380.1	19,377.9	14,850.6	4,527.3	76.6%
2017	204.8	484.1	65.0	12.4	13.2	393.5	19,965.5	15,336.1	4,629.5	76.8%
2018	211.0	498.6	65.0	12.8	13.6	407.2	20,570.8	15,839.4	4,731.4	77.0%
2019	217.3	513.6	65.0	13.1	14.0	421.5	21,195.0	16,362.3	4,832.7	77.2%
2020	224.0	529.3	65.0	13.5	14.4	436.3	21,841.6	16,908.3	4,933.3	77.4%
2021	230.8	545.4	65.0	13.9	14.9	451.6	22,513.5	17,480.2	5,033.4	77.6%
2022	237.7	561.8	65.0	14.4	15.3	467.1	23,212.4	18,079.7	5,132.8	77.9%
2023	244.9	578.8	65.0	14.8	15.8	483.2	23,940.3	18,709.1	5,231.2	78.1%
2024	252.3	596.4	65.0	15.3	16.3	499.9	24,698.9	19,371.0	5,328.0	78.4%
2025	259.9	614.3	65.0	15.7	16.8	516.9	25,489.7	20,066.9	5,422.7	78.7%
2026	267.7	632.7	65.0	16.2	17.3	534.2	26,313.8	20,798.9	5,514.9	79.0%
2027	275.8	651.9	65.0	16.7	17.8	552.4	27,174.5	21,570.8	5,603.7	79.4%

Exhibit 7
Public School Teachers' Pension and Retirement Fund of Chicago
Projection of Contributions, Liabilities and Assets

(Board of Education contributions are based on Public Act 89-15 as revised by Public Act 90-548.)
(All other employer contributions are assumed to remain level.)
(All dollar amounts are in millions. Actuarial Liability and asset figures as of end of year.)

Fiscal Year	Employee Contri- butions	Required Employer Contri- butions	State Appropri- ations	Additional State Contri- bution	Additional BOE Contri- bution	Required Board of Education Contri- butions	Total Actuarial Liability	Actuarial Value of Assets	Unfunded Actuarial Liability	Funded Ratio
2028	284.1	671.4	65.0	17.2	18.3	570.9	28,071.6	22,383.7	5,687.9	79.7%
2029	292.5	691.4	65.0	17.7	18.9	589.8	29,006.4	23,239.7	5,766.7	80.1%
2030	301.1	711.7	65.0	18.2	19.4	609.1	29,980.9	24,141.4	5,839.5	80.5%
2031	310.1	732.8	65.0	18.7	20.0	629.1	30,996.7	25,091.5	5,905.1	80.9%
2032	319.3	754.6	65.0	19.3	20.6	649.7	32,052.4	26,090.3	5,962.1	81.4%
2033	328.6	776.6	65.0	19.9	21.2	670.5	33,147.1	27,138.3	6,008.8	81.9%
2034	338.1	799.1	65.0	20.4	21.8	691.9	34,279.4	28,236.3	6,043.1	82.4%
2035	347.8	822.0	65.0	21.0	22.4	713.6	35,447.7	29,384.6	6,063.1	82.9%
2036	357.7	845.4	65.0	21.6	23.1	735.7	36,648.7	30,582.4	6,066.3	83.4%
2037	367.7	869.1	65.0	22.2	23.7	758.2	37,878.5	31,828.5	6,050.0	84.0%
2038	377.9	893.1	65.0	22.8	24.4	780.9	39,131.4	33,120.5	6,011.0	84.6%
2039	388.3	917.8	65.0	23.5	25.0	804.3	40,403.3	34,457.1	5,946.2	85.3%
2040	399.1	943.2	65.0	24.1	25.7	828.4	41,686.8	35,835.2	5,851.6	86.0%
2041	410.2	969.4	65.0	24.8	26.4	853.2	42,976.1	37,252.8	5,723.3	86.7%
2042	421.8	996.8	65.0	25.5	27.2	879.2	44,287.8	38,724.7	5,563.0	87.4%
2043	435.0	1,028.1	65.0	26.3	28.0	908.7	45,629.7	40,264.0	5,365.7	88.2%
2044	449.4	1,062.1	65.0	27.2	29.0	941.0	47,008.6	41,881.5	5,127.1	89.1%
2045	464.9	1,098.8	65.0	28.1	30.0	975.8	48,427.9	43,585.1	4,842.8	90.0%

Appendix 1

Summary of Actuarial Assumptions and Actuarial Cost Method

Actuarial Assumptions

The actuarial assumptions used for the June 30, 2008 valuation are summarized below. The assumptions were adopted as of June 30, 2008.

Mortality Rates. For males, the UP-94 Table for Males, rated down three years; for females, the UP-94 Table for Females, rated down two years. For disabled males, the UP-94 Table for Males, rated up 5 years; for disabled females, the UP-94 Table for Males without adjustment.

Termination Rates. Termination rates based on the recent experience of the Fund. The following is a sample of the termination rates that were used:

1. Employees With 5 or Less Years of Service - Rates of Termination Per 1,000 Members

Years of Service	Rate of Termination
Less than 1 year	295
1 – 2 years	71
2 – 3 years	70
3 – 4 years	56
4 – 5 years	52

2. Employees With 5 to 10 Years of Service

Age	Rate of Termination Per 1,000 Members
25	46
30	48
35	44
40	37
45	32
50	30
55	30
60	30
62 and later	0

3. Employees With 10 or More Years of Service

Age	Rate of Termination Per 1,000 Members
30	24
35	25
40	19
45	12
50	10
55	10
60	10
62 and later	0

Disability Rates. Disability rates based on the recent experience of the Fund. The following is a sample of the disability rates that were used:

Age	Disabilities Per 1,000 Members
30	.7
40	1.0
50	2.0
60	2.5
62 and over	.0

Retirement Rates. Rates of retirement for each age from 55 to 75 based on the recent experience of the Fund were used. The following are samples of the rates of retirement that were used:

1. Employees With Less Than 33 Years of Service

Age	Rate of Retirement Per 1,000 Members
55	55
60	77
65	100
70	137
75	1,000

2. Employees With 33 or More Years of Service

Age	Rate of Retirement Per 1,000 Members
55	120
60	200
65	190
70	200
75	1,000

Salary Progression. Rates of salary increase, which vary by age. The following is a sample of the assumed rates of salary increase.

Age	Assumed Rate of Increase
25	11.2%
30	8.9%
35	7.3%
40	6.2%
45	5.4%
50	4.7%
55 and later	4.0%

Based on the above salary increase assumption, the assumption regarding general increases in salaries can be considered to be 4% per year.

Interest Rate. 8.0% per year, compounded annually. Of this 8% per year assumption, 3.0% can be attributed to inflation.

Marital Status. 80% of participants were assumed to be married.

Spouse's Age. Male spouses are assumed to be 2 years older than female spouses.

Assumption Regarding Total Service Credit At Retirement. It was assumed that a teacher's total service credit at retirement would be 103.3% of the teacher's regular period of service at retirement.

Actuarial Cost Method.

The projected unit credit actuarial cost method was used. Actuarial gains and losses are reflected in the unfunded actuarial liability. This actuarial cost method was adopted as of August 31, 1991.

Appendix 2

Summary of Principal Provisions

1. Eligibility for Pension. The right to a retirement pension vests (1) after 20 years of validated service, with the pension payable at age 55 or over; or (2) after 5 years validated service, with the pension payable at age 62 or over.

2. Amount of Retirement Pension. For service earned before July 1, 1998, the retirement pension is 1.67% of "final average salary" for each of the first 10 years of validated service, 1.90% for each of the next 10 years, 2.10% for each of the next 10 years, and 2.30% for each year above 30. For service earned after June 30, 1998, the pension is 2.2% of "final average salary" for each year of service.

Service earned before July 1, 1998 can be upgraded to the 2.2% formula through the payment of additional employee contributions of 1% of the teacher's highest salary within the last four years for each year of prior service. Maximum payment is 20% of salary, but all years are upgraded. The number of years for which contributions are required is reduced by one for each three full years of service after June 30, 1998. No contribution is required if the employee has at least 30 years of service.

The maximum pension is 75% of final average salary or $1,500 per month, whichever is greater.

3. Final Average Salary Defined. "Final average salary" for pension computation is the average of the highest rates of salary for any 4 consecutive years of validated service within the last 10 years of service.

4. Reduction in Pension for Early Retirement. Except for retirement after 34 years of service, the retirement pension in the case of retirement prior to age 60 is reduced 1/2 of 1% for each month that the teacher is under age 60.

5. Early Retirement Without Discount. Subject to authorization by the employer, an employee who retires on or before June 30, 2010 may elect to make a one-time contribution and thereby avoid the early retirement reduction. The exercise of this election by the employee also obligates the employer to make a one-time nonrefundable contribution.

6. Non-Duty Disability Retirement. A disability retirement pension is payable in the event of total or permanent disability for teaching service after 10 or more years of service, irrespective of age. The rate of pension is 2.2% of average salary for each year of service after June 30, 1998 and for each year of service that has been upgraded, and 1-2/3% of average salary for each other year of service. Upon disability retirement after 20 years or more of contributing service, but under age 55, the accrued retirement pension is payable, discounted 1/2 of 1% for each month the disabled teacher is under age 55, down to a minimum of 50 years.

If total service is 20 years or more and the member has attained age 55, the accrued retirement pension is payable without reduction. After 25 years of service, regardless of age, the accrued retirement pension is payable without reduction.

7. Duty Disability Benefit. A duty-connected disability benefit is provided equal to 75% of final average salary upon total incapacity for teaching service as a result of an injury sustained while in the performance of teaching service. The benefit is reduced by "Workers' Compensation" payments.

8. Post-Retirement Increases. Automatic annual increases in pension equal to 3% of the current amount of pension are provided. The increases accrued from the anniversary date of retirement or the 61st birthday, whichever is later.

9. Survivor's Pensions. Pensions are payable to survivors of teachers and pensioners under the following conditions:

Upon the death of a teacher or pensioner occurring on or after July 1, 1981, the maximum benefit is $400 per month to a spouse alone and $600 per month if there are other dependents. Payment of a survivor's pension is conditioned upon marriage having been in effect at least 1 year prior to death. On death after retirement, the total survivor's pension may not exceed retirement or disability pension paid to the deceased pensioner.

Upon the death of a teacher or pensioner occurring after December 31, 1986, the minimum total survivor's pension payable shall be 50% of the earned retirement pension of such teacher or pensioner.

If the surviving spouse is under age 50, and no unmarried minor children under age 18 survive, payment of the survivor's pension is deferred until age 50.

Survivor's pensions are subject to annual automatic increases of 3% of the current amount of pension.

10. Reversionary Pension. By accepting a reduced retirement pension, a member can provide a reversionary pension for a surviving beneficiary. If the reversionary pension was elected on or after January 1, 1984, and the beneficiary survives the date of the teacher's retirement, but does not survive the retired teacher, the teacher's pension shall be restored to the full amount of pension.

11. Refund of Contributions. Upon separation of service, a teacher is entitled to receive a refund of his total contributions and those contributions made on his behalf, without interest.

12. Death Benefits. Upon death while in service, a refund equal to the total contributions less contributions for survivor's pensions is payable without interest to a designed beneficiary or the

estate of the teacher. Upon death after retirement, the death benefit consists of the excess, if any, of the total contributions over the total pension payments paid to the member or his beneficiary. In addition, the following death benefit is payable:

Death in service. The amount of the benefit is equal to the last month's salary for each year of validated service up to 6 month's salary but not exceeding $10,000.

Death while on pension. The death benefit is equal to 6 month's salary but not to exceed $10,000 less 1/5 of the death benefit for each year or part of a year that the member has been on pension, down to a minimum of $5,000.

13. Health Insurance Reimbursement. The board may pay each recipient of a retirement, disability, or survivor's pension an amount to be determined by the board, which shall represent partial reimbursement for the cost of the recipient's health insurance coverage, with the total amount of payment not to exceed $65,000,000, or 75% of the total cost of health insurance coverage in any year.

14. Financing. Teachers are required to contribute a total of 9% of salary consisting of 7 1/2% towards the retirement pensions, 1% towards the survivor pension, and 1/2% towards the post-retirement increment. As of September 1981, the Board of Education has been paying 7% of the required teacher contributions for Chicago public school teachers. Charter school contributions may be contributed at various rates by the employers and teachers.

The remainder of the cost of benefits is financed by (1) contributions by the Chicago Board of Education; (2) allocations by the State of Illinois from the State Distributive Fund; and (3) investment income.

15. Retirement Systems Reciprocal Act. The Fund complies with the Retirement Systems Reciprocal Act (Chapter 40 Act 5 Article 20 of the Illinois Compiled Statutes) to provide reciprocal benefits if a member has service credit for other public employment in Illinois.

Appendix 3

Glossary of Terms used in Report

1. Actuarial Present Value. The value of an amount or series of amounts payable at various times, determined as of a given date by the application of a particular set of actuarial assumptions.

2. Actuarial Cost Method or Funding Method. A procedure for determining the actuarial present value of pension plan benefits and for determining an actuarially equivalent allocation of such value to time periods, usually in the form of a normal cost and an actuarial accrued liability.

3. Normal Cost. That portion of the present value of pension plan benefits, which is allocated to a valuation year by the actuarial cost method.

4. Actuarial Accrued Liability or Accrued Liability. That portion, as determined by a particular actuarial cost method, of the actuarial present value of pension benefits which is not provided for by future normal costs.

5. Actuarial Value of Assets. The value assigned by the actuary to the assets of the pension plan for purposes of an actuarial valuation.

6. Unfunded Actuarial Liability. The excess of the actuarial liability over the actuarial value of assets.

7. Projected Unit Credit Actuarial Cost Method. A cost method under which the projected benefits of each individual included in an actuarial valuation are allocated by a consistent formula to valuation years. The actuarial present value of benefits allocated to a valuation year is called the normal cost. The actuarial present value of benefits allocated to all periods prior to a valuation year is called the actuarial liability.

Under this method, the actuarial gains (losses), as they occur, generally reduce (increase) the unfunded actuarial liability.

8. Actuarial Assumptions. Assumptions as to future events affecting pension costs.

9. Actuarial Valuation. The determination, as of the valuation date, of the normal cost, actuarial liability, actuarial value of assets, and related actuarial present values for a pension plan.

10. Vested Benefits. Benefits that are not contingent on an employee's future service.