SCANNED 1-13-05 JAN 11 2005

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January 11, 2005

Mr. Kevin Huber
Interim Executive Director
Public School Teachers' Pension
and Retirement Fund of Chicago
55 West Wacker Drive – 13th Floor
Chicago, Illinois 60601
2004
Re: **Actuarial Valuation as of June 30, 2004**

Dear Kevin:

Enclosed is one copy of our actuarial report based on the actuarial valuation of the Public School Teachers' Pension and Retirement Fund of Chicago as of June 30, 2004.

I will bring additional copies of the report for all the board members to the board meeting on January 20.

Yours sincerely,

Sandor Goldstein
Consulting Actuary

PUBLIC SCHOOL TEACHERS' PENSION
AND RETIREMENT FUND OF CHICAGO

ACTUARIAL VALUATION
AS OF JUNE 30, 2004

GOLDSTEIN & ASSOCIATES

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January 11, 2005

Board of Trustees
Public School Teachers' Pension
and Retirement Fund of Chicago
55 West Wacker Drive - 13th Floor
Chicago, Illinois 60601

Re: <u>Actuarial Valuation as of June 30, 2004</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, 2004.

The report consists of 11 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

Sandor Goldstein, F.S.A.
Consulting Actuary

A. PURPOSE AND SUMMARY

We have carried out an actuarial valuation of the Public School Teachers' Pension and Retirement Fund of Chicago (the Fund) as of June 30, 2004. The purpose of the valuation was to determine the financial position and funding requirements of the Fund. This report is intended to present the results of the valuation. The results of the valuation are summarized below:

1. Total Actuarial Liability	$ 12,105,680,577
2. Actuarial Value of Assets	10,392,193,115
3. Unfunded Actuarial Liability	1,713,487,462
4. Funded Ratio	85.8%
5. Employer's Normal Cost for FY 05 as a percent of payroll	9.87%
6. Annual Required Contribution for FY 05 Based on GASB Statement No. 25	258,883,211
7. Board of Education Contribution Requirement For FY 06 Based on Public Act 89-15 and Public Act 90-548	$ 15,820,000

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, 2004, on which the valuation was based, is summarized in Exhibit 1. It can be seen that there were 37,362 active contributors, 19,266 pensioners, and 1,930 vested terminated members included in the valuation. The total active payroll as of June 30, 2004 was $1,767,631,306.

Exhibit 1

Summary of Membership Data

1. Number of Members	
(a) Active Members	
(i) Vested Board of Education Employees	22,789
(ii) Non-vested Board of Education Employees	13,424
(iii) Vested Charter School Employees	209
(iv) Non-vested Charter School Employees	940
(v) Total Active Members	37,362
(b) Members Receiving	
(i) Retirement Pensions	16,542
(ii) Disability Pensions	393
(iii) Survivor Pensions	2,254
(iv) Reversionary Pensions	77
(v) Total Pensioners	19,266
(c) Vested Terminated Members	1,930
(d) Total	58,558
2. Annual Salaries	
(a) Salary for Board of Education Employees	$ 1,724,047,999
(b) Salary for Charter School Employees	43,583,307
(c) Total Salary	$ 1,767,631,306
(d) Average Salary	47,311
3. Total Accumulated Contributions of Active Members	$ 1,193,225,162
4. Annual Benefit Payments Currently Being Made	
(a) Retirement Pensions	$ 556,756,912
(b) Disability Pensions	9,476,817
(c) Survivor Pensions	27,491,224
(d) Reversionary Pensions	646,194
(e) Total Pensions	$ 594,371,147

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, 2004 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 $10,392,193,115. The development of this actuarial value of assets is outlined in Exhibit 2. As of June 30, 2004, the market value of the assets of the fund amounted to $10,321,555,491.

Exhibit 2

Actuarial Value of Assets

A. Development of Investment Gain/(Loss) For Year Ending June 30, 2004

1.	Actuarial Value of Assets as of 6/30/03	$ 10,494,754,698
2.	Employer Contributions	78,213,558
3.	Employee Contributions	169,598,212
4.	Expenses	672,759,115
5.	Expected Investment Income	822,909,486
6.	Actual Investment Income	1,478,859,791
7.	Investment Gain/(Loss) (6 – 5)	$ 655,950,305

B. Development of Actuarial Value of Assets

8.	Expected Actuarial Value of Assets as of June 30, 2004 (1 + 2 + 3 – 4 + 5)	$ 10,892,716,839
9.	One-fourth of Investment Gain/(Loss) For Year Ending June 30, 2001	(237,323,180)
10.	One-fourth of Investment Gain/(Loss) For Year Ending June 30, 2002	(296,503,324)
11.	One-fourth of Investment Gain/(Loss) For Year Ending June 30, 2003	(130,684,796)
12.	One-fourth of Investment Gain/(Loss) For Year Ending June 30, 2004	163,987,576
13.	Actuarial Value of Assets as of June 30, 2004 (8 + 9 + 10 + 11 + 12)	$ 10,392,193,115

C. FUND PROVISIONS

Our valuation was based on the provisions of the Fund in effect as of June 30, 2004 as provided in Article 17 of the Illinois Pension Code. Since the date of the last actuarial valuation, House Bill 1269, which was signed into law on June 28, 2004 as Public Act 93-0677, made some changes in the benefit provisions of the fund. The bill increased the maximum amount of reimbursement for health insurance coverage that the fund may pay in any year from $40 million to $65 million. The bill also provided that the total amount of payment may not exceed 75% of the total cost of health insurance coverage for the year.

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

The actuarial assumptions used for the June 30, 2004 actuarial valuation are the same as those used for the June 30, 2003 valuation. The actuarial assumptions used for the June 30, 2004 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, 2004 actuarial valuation. This is the same actuarial cost method that was used for the June 30, 2003 valuation.

E. ACTUARIAL LIABILITY

The actuarial liability as determined under the valuation for the various classes of members is summarized in Exhibit 3. The total actuarial liability is then compared with the actuarial value of assets in order to arrive at the unfunded actuarial liability.

F. EMPLOYER'S NORMAL COST

The employer's share of the normal cost for the year beginning July 1, 2004 is developed in Exhibit 4. The total normal cost is $333,599,656, employee contributions are estimated to be $159,086,818, resulting in the employer's share of the normal cost of $174,512,838.

Based on a payroll of $1,767,631,306 as of June 30, 2004, the employer's share of the normal cost can be expressed as 9.87% of payroll.

Exhibit 4

Employer's Normal Cost For Year Beginning July 1, 2004

	Dollar Amount	Percent Of Payroll
1. Basic Retirement Pension	$170,178,116	9.63%
2. Post Retirement Increases	43,918,552	2.48
3. Lump Sum Death Benefits	864,501	.05
4. Survivor's Pension	18,009,837	1.02
5. Disability Benefits	6,204,861	.35
6. Withdrawal Benefits	31,859,474	1.80
7. Health Insurance Reimbursement	55,186,459	3.12
8. Administrative Expenses	7,377,856	.42
9. Total Normal Cost	$333,599,656	18.87%
10. Employee Contributions	159,086,818	9.00
11. Employer's Share of Normal Cost	$174,512,838	9.87%

Note. The above figures are based on a total active payroll of $1,767,631,306 as of June 30, 2004.

G. EMPLOYER CONTRIBUTION REQUIREMENTS FOR FISCAL YEAR 2006

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, 2004 actuarial valuation, the ratio of the actuarial value of assets to total actuarial liabilities, or funded ratio, amounts to 85.8%. Therefore, additional State contributions will be required for Fiscal Year 2006. Based on a projected payroll of $1,815,597,000 for Fiscal Year 2006, we have determined the additional State contributions under Section 17-127 of the Pension Code to be $9,877,000.

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, 2004 is 85.8%, additional Board of Education contributions will be required for Fiscal Year 2006. Based on a projected payroll of $1,815,597,000 for Fiscal Year 2006, we have determined the additional Board of Education contribution under Section 17-127.2 of the Pension Code to be $10,530,000.

Board of Education Required Contribution. 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, 2004, the ratio of the actuarial value of assets to the total actuarial liability is 85.8%. Using the results of the June 30, 2004 valuation as a starting point and assuming no Board of Education contribution in Fiscal Year 2005, we have projected the ratio of the actuarial value of assets to the total actuarial liability as of June 30, 2005 to be 82.6%. 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 2006 to be $114,721,000. State appropriations are estimated to be $65,000,000. As indicated above, additional state contributions amount to $9,877,000, and additional Board of Education contributions amount to $10,530,000. Other employer contributions are estimated to be $13,494,000. Thus, based on the total employer required contribution for Fiscal Year 2006 and other sources of employer contribution, the net Board of Education contribution requirement for Fiscal Year 2006 under the funding plan specified in Section 17-129 of the Pension Code is calculated to be $15,820,000. Additional details regarding our calculations are shown below:

Board of Education Required Contribution For FY 2006

1.	Total required employer contribution for FY 2006	$ 114,721,000
2.	State appropriations	65,000,000
3.	Additional State contributions	9,877,000
4.	Additional Board of Education contribution	10,530,000
5.	Other employer contributions	13,494,000
6.	Board of Education required contribution (1 – 2 – 3 – 4 – 5)	$ 15,820,000

H. ANNUAL REQUIRED CONTRIBUTION FOR GASB STATEMENT NO. 25

GASB Statement No. 25 requires the disclosure of the annual required employer contribution (ARC), calculated in accordance with certain parameters. Based on the results of the June 30, 2004 actuarial valuation, we have therefore calculated the annual required contribution for Fiscal Year 2005. In accordance with the parameters prescribed in GASB Statement No. 25, in calculating the annual required contribution, we have used a 40-year level-percent-of-payroll amortization of the unfunded liability. On this basis, the annual required contribution for Fiscal Year 2005 has been determined to be as follows:

	Fiscal Year 2005
1. Employer's normal cost	$ 174,512,838
2. Annual amount to amortize the unfunded liability (surplus) over 40 years as a level percent of payroll	84,370,373
3. Annual required contribution (1 + 2)	$ 258,883,211

The same actuarial assumptions and actuarial cost method were used to determine the annual required contribution for GASB Statement No. 25 as were used to determine funding requirements in Section G. The funding plan currently in effect does not meet the requirements for amortizing the unfunded liability provided under GASB Statement No. 25. In all other respects, the assumptions and methods used for funding purposes meet the parameters set forth for financial statement disclosure in GASB Statement No. 25.

Additional historical trend information required under GASB Statement No. 25 is provided in a supplement to this actuarial report.

I. RECONCILIATION OF CHANGE IN UNFUNDED ACTUARIAL LIABILITY

The net actuarial experience during the period July 1, 2003 to June 30, 2004 resulted in an increase in the Fund's unfunded actuarial liability of $796,713,796. 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 5.

Certain adjustments were made to the active membership data used for the June 30, 2003 actuarial valuation. Making these adjustments to the June 30, 2003 active membership data resulted in a net increase in the unfunded liability of $74,043,562.

The employer contribution requirement for the year of normal cost plus interest on the unfunded actuarial liability amounted to $235,927,256. The total actual employer contribution for the year amounted to $78,213,558. Thus, the employer contribution for the year fell short of the funding requirement of normal cost plus interest on the unfunded liability by $157,713,698. 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 3.1%, in comparison to the assumed rate of 8.0%. This resulted in an increase in the unfunded liability of $500,523,724. Salary increases lower than expected resulted in a decrease in the unfunded liability of $163,105,603.

The various other aspects of the Fund's experience resulted in a net increase in the unfunded liability of $227,549,415. The aggregate financial experience of the Fund resulted in an increase in the unfunded liability of $796,713,796.

Exhibit 5

Reconciliation of Change in Unfunded Actuarial Liability
Over the Period July 1, 2003 to June 30, 2004

1.	Unfunded Actuarial Liability as of 7/1/03	$ 916,773,666
2.	Increase in Unfunded Liability due to Adjustments in June 30, 2003 Actives Data	74,032,562
3.	Employer Contribution Requirement of Normal Cost Plus Interest on Unfunded Liability for Period 7/1/02 to 6/30/03	235,927,256
4.	Actual Employer Contribution for the Year	78,213,558
5.	Increase in Unfunded Liability Due to Employer Contribution Being Less Than Normal Cost Plus Interest on Unfunded Liability (3 – 4)	$ 157,713,698
6.	Increase in Unfunded Liability Due to Investment Return Lower Than Assumed	500,523,724
7.	Decrease in Unfunded Liability Due to Salary Increases Lower Than Assumed	163,105,603
8.	Increase in Unfunded Liability Due to Other Sources	227,549,415
9.	Net Increase in Unfunded Liability for the Year (2 +5 + 6 – 7 + 8)	$ 796,713,796
10.	Unfunded Actuarial Liability as of June 30, 2004 (1 + 9)	$ 1,713,487,462

J. PROJECTION OF CONTRIBUTIONS, LIABILITIES, AND ASSETS

Based on the results of the June 30, 2004 actuarial valuation, we have projected valuation results for a 41-year period commencing with Fiscal Year 2005. 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 41-year period from 2005 through 2045 by projecting the membership of the Fund over the 41-year period, taking into account the impact of new entrants into the Fund over the 41-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 41-year projection period. The results of our projections are shown in Exhibit 6.

K. 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, 2004.

Respectfully submitted,

Sandor Goldstein
Sandor Goldstein, F.S.A.
Consulting Actuary

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

Exhibit 6
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	Other Employer Contri-butions	Required Board of Education Contri-butions	Total Actuarial Liability	Actuarial Value of Assets	Unfunded Actuarial Liability	Funded Ratio
2005	159.1	76.1	65.0	0.0	0.0	13.5	0.0	12,665.3	10,466.2	2,199.1	82.6%
2006	163.4	114.7	65.0	9.9	10.5	13.5	15.8	13,230.9	10,831.5	2,399.4	81.9%
2007	167.7	155.2	65.0	10.1	10.8	13.5	55.8	13,800.0	11,356.7	2,443.3	82.3%
2008	172.0	197.7	65.0	10.4	11.1	13.5	97.7	14,371.6	11,760.8	2,610.8	81.8%
2009	176.5	242.3	65.0	10.7	11.4	13.5	141.8	14,946.3	12,200.3	2,746.0	81.6%
2010	181.2	289.4	65.0	11.0	11.7	13.5	188.2	15,523.4	12,679.3	2,844.1	81.7%
2011	186.2	297.3	65.0	11.3	12.0	13.5	195.6	16,104.3	13,161.2	2,943.1	81.7%
2012	191.5	305.7	65.0	11.6	12.3	13.5	203.3	16,690.3	13,647.0	3,043.3	81.8%
2013	197.1	314.7	65.0	11.9	12.7	13.5	211.6	17,284.2	14,139.4	3,144.8	81.8%
2014	203.0	324.1	65.0	12.3	13.1	13.5	220.2	17,887.9	14,639.9	3,248.0	81.8%
2015	209.4	334.3	65.0	12.7	13.5	13.5	229.6	18,503.1	15,151.0	3,352.1	81.9%
2016	215.9	344.7	65.0	13.1	13.9	13.5	239.3	19,131.6	15,674.2	3,457.4	81.9%
2017	222.7	355.6	65.0	13.5	14.4	13.5	249.3	19,776.1	16,211.7	3,564.4	82.0%
2018	229.8	366.9	65.0	13.9	14.8	13.5	259.7	20,438.0	16,765.1	3,672.9	82.0%
2019	237.2	378.8	65.0	14.3	15.3	13.5	270.6	21,119.3	17,336.5	3,782.8	82.1%
2020	245.2	391.6	65.0	14.8	15.8	13.5	282.5	21,824.2	17,930.0	3,894.2	82.2%
2021	253.5	404.7	65.0	15.3	16.3	13.5	294.6	22,555.3	18,548.1	4,007.2	82.2%
2022	262.1	418.4	65.0	15.8	16.9	13.5	307.2	23,314.9	19,193.2	4,121.7	82.3%
2023	271.0	432.8	65.0	16.4	17.5	13.5	320.4	24,105.9	19,868.3	4,237.6	82.4%
2024	280.3	447.6	65.0	16.9	18.1	13.5	334.1	24,928.9	20,574.8	4,354.1	82.5%
2025	290.2	463.3	65.0	17.5	18.7	13.5	348.6	25,788.6	21,317.1	4,471.5	82.7%

Exhibit 6
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 Contributions	Required Employer Contributions	State Appropriations	Additional State Contribution	Additional BOE Contribution	Other Employer Contributions	Required Board of Education Contributions	Total Actuarial Liability	Actuarial Value of Assets	Unfunded Actuarial Liability	Funded Ratio
2026	300.6	479.9	65.0	18.2	19.4	13.5	363.9	26,688.5	22,099.0	4,589.5	82.8%
2027	311.5	497.4	65.0	18.8	20.1	13.5	380.0	27,632.0	22,924.6	4,707.4	83.0%
2028	322.9	515.5	65.0	19.5	20.8	13.5	396.7	28,620.7	23,796.1	4,824.6	83.1%
2029	334.4	534.0	65.0	20.2	21.6	13.5	413.7	29,655.0	24,714.9	4,940.1	83.3%
2030	346.4	553.1	65.0	20.9	22.3	13.5	431.4	30,736.8	25,683.6	5,053.2	83.6%
2031	358.9	573.1	65.0	21.7	23.1	13.5	449.8	31,867.3	26,704.5	5,162.8	83.8%
2032	371.9	593.8	65.0	22.5	24.0	13.5	468.9	33,046.5	27,778.8	5,267.7	84.1%
2033	385.3	615.2	65.0	23.3	24.8	13.5	488.6	34,272.9	28,906.8	5,366.1	84.3%
2034	399.0	637.1	65.0	24.1	25.7	13.5	508.7	35,542.2	30,087.0	5,455.2	84.7%
2035	413.0	659.5	65.0	25.0	26.6	13.5	529.4	36,850.7	31,318.6	5,532.1	85.0%
2036	427.3	682.2	65.0	25.8	27.5	13.5	550.4	38,191.2	32,597.2	5,594.0	85.4%
2037	441.9	705.5	65.0	26.7	28.5	13.5	571.9	39,559.3	33,921.7	5,637.6	85.7%
2038	457.0	729.6	65.0	27.6	29.4	13.5	594.1	40,971.3	35,305.2	5,666.1	86.2%
2039	473.5	756.0	65.0	28.6	30.5	13.5	618.4	42,436.0	36,758.3	5,677.7	86.6%
2040	491.3	784.4	65.0	29.7	31.7	13.5	644.6	43,960.8	38,290.4	5,670.4	87.1%
2041	510.1	814.5	65.0	30.8	32.9	13.5	672.3	45,548.0	39,906.0	5,642.0	87.6%
2042	530.0	846.2	65.0	32.0	34.2	13.5	701.5	47,202.8	41,612.8	5,590.0	88.2%
2043	550.8	879.5	65.0	33.3	35.5	13.5	732.2	48,932.6	43,420.9	5,511.7	88.7%
2044	572.6	914.3	65.0	34.6	36.9	13.5	764.3	50,744.9	45,340.5	5,404.4	89.3%
2045	595.4	950.6	65.0	36.0	38.4	13.5	797.8	52,649.2	47,384.3	5,264.9	90.0%

Appendix 1

Summary of Actuarial Assumptions and Actuarial Cost Method

Actuarial Assumptions

The actuarial assumptions used for the June 30, 2004 valuation are summarized below. The assumptions were adopted as of June 30, 2003.

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.

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	Under Age 60	Over Age 60
Less than 1 year	360	180
1 – 2 years	71	71
2 – 3 years	70	70
3 – 4 years	68	68
4 – 5 years	63	63

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	71
60	103
65	155
70	186
75	1,000

2. Employees With 33 or More Years of Service

Age	Rate of Retirement Per 1,000 Members
55	100
60	270
65	250
70	180
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%

Interest Rate. 8.0% per year, compounded annually.

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, 2005 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. <u>Health Insurance Reimbursement.</u> 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. <u>Financing.</u> 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. <u>Retirement Systems Reciprocal Act.</u> 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.