STATE OF NEW YORK INSURANCE DEPARTMENT

REPORT ON EXAMINATION

OF THE

CITY OF NEW YORK

FIRE DEPARTMENT PENSION FUND, SUBCHAPTER 2

AS OF

JUNE 30, 1999

DATE OF REPORT:	FEBRUARY 23, 2001
EXAMINER:	JAMES MURPHY

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STATE OF NEW YORK
INSURANCE DEPARTMENT
25 BEAVER STREET
NEW YORK, NEW YORK 10004

February 23, 2001

Honorable Gregory V. Serio
Superintendent of Insurance
Albany, New York 12257

Sir:

In accordance with instructions contained in Appointment No. 21622 dated October 4, 2000 and annexed hereto, an examination has been made of the condition and affairs of the City of New York Fire Department Pension Fund, Subchapter 2, hereinafter referred to as "the Fund," located at 9 MetroTech Center, Brooklyn, New York 11201.

Wherever "Department" appears in this report, it refers to the State of New York Insurance Department.

The report indicating the results of this examination is respectfully submitted.

1. EXECUTIVE SUMMARY

The Fund was established pursuant to Local Law No. 53 which was enacted July 14, 1941 to provide retirement benefits for uniformed members of the City of New York Fire Department.

The examiner's review of a sample of transactions did not reveal any differences which materially affected the Fund's financial condition as presented in its financial statements contained in the June 30, 1999 filed annual statement. (See item 5 of this report)

The examiner recommends that the Fund report all resisted claims and corresponding dollar amounts in Schedule F. (See item 6 of this report)

2. SCOPE OF EXAMINATION

The prior examination was conducted as of June 30, 1994. This examination covers the period from July 1, 1994 through June 30, 1999. As necessary, the examiner reviewed transactions occurring subsequent to June 30, 1999 but prior to the date of this report (i.e., the completion date of this examination).

This examination comprised a verification of assets and liabilities as of June 30, 1999 to determine whether the Fund's 1999 filed annual statement fairly presents its financial condition. The examiner reviewed income and disbursements necessary to accomplish such verification and conducted a review or audit of the following matters:

Fund history
Management and control
Growth of the Fund
Accounts and records
Financial statements
Member benefits

The examiner reviewed the corrective actions taken by the Fund with respect to the comments contained in the prior report on examination. The results of the examiner's review are contained in item 9 of this report.

This report on examination is confined to financial statements and comments on those matters which involve departure from laws, regulations or rules, or which require explanation or description.

3. DESCRIPTION OF THE FUND

A. History

The New York City Fire Department Pension Fund - Article 1-B was established pursuant to Local Law No. 53 enacted July 14, 1941. In accordance with this law, all firefighters covered under Article 1-A on that date and those subsequently appointed to the Fire Department were granted the option of membership in either Article 1-A or Article 1-B. At that time, all members of the Article 1-A Fund became participants in the Fund established under Article 1-B and, with one exception, all new appointees elected membership in the Article 1-B Fund. Effective July 1, 1980, the Article 1-A Fund was terminated and its assets were transferred to the Article 1-B Fund.

New laws enacted in the 1980's recodified the Administrative Code of the City of New York ("Code") and resulted in the name of the Fund being changed to the City of New York Fire Department Pension Fund, Subchapter 2. The new legislation amended the benefit provisions of the Fund, effective July 1, 1981, by establishing a new plan known as the "Improved Benefits Plan." The old plan, known as the "Original Plan," was closed to new entrants on June 30, 1981. Membership in the Improved Benefits Plan is mandatory for uniformed employees hired on or after the effective date. Members of the Original Plan have the option to transfer to the Improved Benefits Plan each year during the months of June, July and August. The new plan provides increased benefits and higher member and City contributions.

B. Management

Section 13-316 of the Code requires that the Fund's board of trustees consist of twelve members. The Code also specifies which City offices and which associations within the Fire Department must be represented on the board. Finally, the Code requires that board members representing the fire officers must also be elected members of the executive board of the Uniformed Fire Officers Association of the Fire Department. The board generally meets at least once a month.

The following is a list of the twelve members of the board of trustees and the office or association represented, as of June 30, 1999:

Name	Title
Rudolph W. Giuliani	Mayor City of New York
Thomas Von Essen	Fire Commissioner Chairperson Board of Trustees
Alan G. Hevesi	Comptroller City of New York
Michael A. Carter	Vice President Uniformed Firefighters Association of Greater New York
Richard D. Brower	Captains Representative Uniformed Fire Officers' Association Second Vice Chairman Board of Trustees
Daniel Lynch	Chairperson of the Board of Trustees Uniformed Firefighters Association of Greater New York
John F. Corr	Lieutenants' Representative Uniformed Fire Officers' Association
Thomas LaMacchia	Treasurer Uniformed Firefighters Association of Greater New York
Arthur J. Parrinello	Chiefs' Representative Uniformed Fire Officer's Association
Joseph J. Lhota	Acting Commissioner Department of Finance
Kevin Gallagher	President Uniformed Firefighters Association of Greater New York First Vice Chairman Board of Trustees
John Buhler	President Uniformed Pilots' and Marine Engineers' Association

The examiner's review of the minutes of the meetings of the board of trustees indicated that the meetings were well attended and that each member attended a majority of meetings.

The following is a list of the three elected officers of the executive board of the Uniformed Fire Officers Association as of June 30, 1999:

Name	Title
Arthur J. Parrinello	Chiefs' Representative
Richard D. Brower	Captains' Representative
John F. Corr	Lieutenants' Representative

4. SIGNIFICANT OPERATING RESULTS

The following table indicates the Fund's financial growth (including the group life insurance plan) during the period under review:

	June 30, 1994	June 30, 1999	Increase
Admitted assets	$3,517,761,866	$6,786,338,233	$3,268,576,367
Total net reserves and other liabilities	$3,383,120,511	$5,521,402,371	$2,138,281,860
Excess of admitted assets over net reserves and other liabilities	134,641,355	1,264,935,862	1,130,294,507
Sum of liabilities and excess	$3,517,761,866	$6,786,338,233	$3,268,576,367

The Fund's admitted assets as of June 30, 1999 were mainly invested in bonds (40.7%), stocks (39.6%), international investment funds (11.6%) and short-term investments (8.1%).

The following is a condensed analysis of income and disbursements for the Fund (including the group life insurance plan) during the years under review:

	Fiscal Year Ending June 30,				
	1995	1996	1997	1998	1999
Receipts	$568,471,546	$756,799,056	$821,521,882	$909,368,121	$1,040,517,578
Disbursements	$519,554,757	$510,453,880	$516,705,951	$458,270,731	$628,704,585
Excess	$48,916,789	$246,345,176	$304,815,931	$451,097,390	$411,812,993

The following table indicates the growth in membership of the Fund during the period under review:

	June 30, 1994	June 30, 1999	Increase
Active members	11,350	11,477	127
Service pensioners	5,408	6,523	1,115
All other pensioners	6,740	9,623	2,883
Total	23,498	27,623	4,125

5. FINANCIAL STATEMENTS

The following statements of the Fund, including the Group Life Insurance Plan, show the comparative statement of income and disbursements for the period under review, and the statement of assets and liabilities for the fiscal year ended June 30, 1999, as contained in the June 30, 1999 filed annual statement. The examiner's review of a sample of transactions did not reveal any differences which materially affected the Fund's financial condition as presented in its financial statements contained in the June 30, 1999 filed annual statement.

A. STATEMENT OF INCOME AND DISBURSEMENTS

(Fiscal Year Ending June 30,)

	1995	1996	1997	1998	1999
Amount of ledger assets, end of previous year	$3,032,757,426	$3,081,674,215	$3,328,019,391	$3,632,835,322	$4,083,932,713
Income					
From Members					
Regular contributions and payments for military	$ 23,070,993	$ 25,362,928	$ 24,530,720	$ 27,152,990	$ 31,699,216
Transfers from other systems	88,531	2,603	0	0	0
Subtotal	$ 23,159,524	$ 25,365,531	$ 24,530,720	$ 27,152,990	$ 31,699,216
From Employer					
Regular contributions and military	$ 183,349,884	$ 252,063,559	$ 254,952,702	$ 261,323,690	$ 256,097,398
Transfers from other systems	0	2,198,542	2,752,932	215,777	0
Excess Skim Transfers	0	0	6,717,767	0	0
City supplement	6,015,823	4,522,468	2,703,493	7,962,027	11,354,858
Subtotal	$ 189,365,707	$ 258,784,569	$ 267,126,894	$ 269,501,494	$ 267,452,256

	1995	1996	1997	1998	1999
From Interest					
Collateral loans	$ 1,085,643	$ 837,263	$ 881,036	$ 299,240	$ 110,942
Bonds	120,480,393	84,149,566	87,376,980	91,078,839	97,201,259
Dividends on stocks	43,385,365	44,764,565	44,680,309	44,958,846	46,649,201
Member loans	3,202,636	3,390,641	3,715,567	4,056,649	4,385,520
Commercial papers and short term investment funds	5,770,117	7,802,172	8,965,393	16,656,987	9,574,707
Subtotal	$ 173,924,154	$ 140,944,207	$ 145,619,285	$ 157,050,561	$ 157,921,629
From other sources					
Withholding tax and forgery	$ 0	$ 2,240,086	$ 1,724	$ 18,732	$ 32,793,345
Miscellaneous income	1,300,095	611,159	330,532	10,413,585	16,528,577
Miscellaneous-accounting basis	0	0	140,140,279	0	0
Health and life insurance	0	347,780	363,541	202	0
Gross profit on sale of bonds	36,092,497	40,818,722	20,254,193	58,260,383	23,525,583
Gross profit on sale of stocks	140,607,887	276,343,817	215,869,554	372,783,308	499,517,529
Increase by adjustment in book value of bonds	4,021,682	11,343,185	7,285,160	14,186,867	11,079,442
Subtotal	$ 182,022,161	$ 331,704,749	$ 384,244,983	$ 455,663,077	$ 583,444,476
Total income	$ 568,471,546	$ 756,799,056	$ 821,521,882	$ 909,368,121	$1,040,517,578
Increase by transfers	154,053,856	0	0	211,604,360	0
Sum of income and increase by transfers	$ 722,525,402	$ 756,799,056	$ 821,521,882	$1,120,972,481	$1,040,517,578

	1995	1996	1997	1998	1999
Disbursements					
Payments on account of retirements:					
Annual or other periodic payments	$ 314,863,928	$ 349,875,144	$ 363,629,386	$ 385,672,633	$ 400,851,809
Lump sum payments on account of death after retirement	3,764,518	3,550,623	1,820,256	2,786,502	1,885,053
Health and life insurance	539,953	4,048,680	4,348,871	73	5,975,243
Payment on account of death prior to retirement	1,027,278	653,336	1,756,622	242,569	1,337,847
Payments on account of resignation and dismissal	113,604	61,408	64,507	0	0
Payments on account of excess contributions	544,730	1,120,430	1,145,826	1,059,086	1,906,473
Other benefit payments	243,824	75,000	241,523	280,856	348,320
Disability payments	94,190	4,179	0	0	0
ITHP	169,496	578,608	342,488	261,835	305,221
Miscellaneous	43,771,201	610,300	73,330,143	7,070,536	6,463,009
City supplement	6,131,576	6,751,310	0	48,636,186	63,594,030
Paid to variable supplements funds	12,645,122	108,303,775	43,638,832	0	0
Withholding tax and forgery	3,864,694	2,240,086	114,874	317,335	32,198,245
Gross loss on sale of bonds	50,465,108	28,904,429	14,383,173	8,920,897	23,543,297
Gross loss on sale of stocks	77,921,612	0	2,942,382	0	86,145,073
Decrease by adjustment in book value of ledger assets:					
Bonds	3,388,395	3,408,246	2,647,068	3,022,224	4,150,965
Reversal on premium amortization	0	180,593	0	0	0
Miscellaneous investment expenses	5,528	87,733	6,300,000	0	0
Total disbursements	$ 519,554,757	$ 510,453,880	$ 516,705,951	$ 458,270,731	$ 628,704,585
Decrease by transfers	154,053,856	0	0	211,604,360	0
Sum of disbursements and decrease by transfers	$ 673,608,613	$ 510,453,880	$ 516,705,951	$ 669,875,091	$ 628,704,675
Amount of ledger assets, end of current year	$3,081,674,215	$3,328,019,391	$3,632,835,322	$4,083,932,713	$4,495,745,707

B. STATEMENT OF ASSETS AND LIABILITIES

(Fiscal Year Ending June 30,)

	1995	1996	1997	1998	1999
Assets					
Ledger assets					
Collateral loans	$ 57,805,000	$ 137,165,000	$ 0	$ 0	$ 0
Book value of bonds	1,262,088,373	1,315,309,204	1,401,504,188	1,602,712,661	1,796,695,767
Book value of stocks	1,221,667,094	1,287,022,156	1,457,788,863	1,615,831,815	1,745,336,517
Short term obligations	150,965,389	217,490,802	272,074,571	264,702,488	357,098,180
International investment funds	329,373,500	329,373,500	429,259,846	530,568,639	511,059,658
Cash on deposit not on interest	(8,968,848)	(31,655,538)	(9,189,397)	(17,873,307)	(9,547,094)
Member loans	68,743,707	73,314,267	81,397,251	87,990,417	95,102,679
Total ledger assets	$3,081,674,215	$3,328,019,391	$3,632,835,322	$4,083,932,713	$4,495,745,707
Non-ledger assets					
Interest due and accrued:					
Bonds	$ 18,446,066	$ 19,754,897	$ 20,500,958	$ 20,977,117	$ 22,084,235
Collateral loans	3,609,987	3,125,033	3,005,331	3,275,634	3,541,182
Short term investments	16,856	104,682	10,398	16,159	10,941
Market value of stocks over book value	697,511,442	1,037,902,040	1,523,988,249	1,850,706,238	2,088,485,299
Market value of international investments over book value	75,016,365	0	0	0	0
Due City payroll	2,492,867	2,626,920	2,279,007	2,295,036	1,558,321
Receivable from Subchapter 1	6,916,997	6,916,997	6,916,997	6,916,997	6,916,997
Receivable for investment securities sold	71,117,790	24,486,788	214,917,530	116,175,080	167,995,550
Employer contribution receivable (G.T.L.I.)	2,222,638	2,187,793	2,143,020	2,087,243	2,019,286
Employer contribution receivable (Long term)	440,982,157	434,068,487	425,184,882	414,118,024	400,634,700

	1995	1996	1997	1998	1999
Total non-ledger assets	$1,318,333,165	$1,531,173,637	$2,198,946,372	$2,416,567,528	$2,693,246,511
Gross assets	$4,400,007,380	$4,859,193,028	$5,831,781,694	$6,500,500,241	$7,188,992,219
Deduct assets not admitted					
Employer contribution receivable (Long term)	$ 440,982,157	$ 434,068,487	$ 425,184,882	$ 414,118,024	$ 400,634,700
Employer contributions receivable (G.T.L.I.)	2,222,638	2,187,793	2,143,020	2,087,243	2,019,286
Total assets not admitted	$ 443,204,795	$ 436,256,280	$ 427,327,902	$ 416,205,267	$ 402,653,986
Total admitted assets	$3,956,802,585	$4,422,936,748	$5,404,453,792	$6,084,294,974	$6,786,338,233

	1995	1996	1997	1998	1999
Liabilities					
A. Accumulated contributions of members	$ 140,951,985	$ 0	$ 0	$ 0	$ 0
Present value of benefits payable on account of beneficiaries now drawing allowances:					
Service retirement	$1,281,447,904	$1,214,870,445	$1,252,649,472	$1,241,128,938	$1,276,395,808
Ordinary disability retirement	310,844,936	351,752,997	376,068,022	378,631,417	376,022,520
Accidental disability retirement	1,258,056,467	1,396,897,949	1,483,846,536	1,534,133,854	1,585,990,995
Accidental death benefits	28,147,787	35,437,511	38,656,019	48,032,436	49,446,886
Beneficiaries of deceased pensioners under joint and survivor options	18,984,013	23,729,958	24,740,963	19,614,973	20,668,220
Supplemental benefits	156,702,909	252,778,902	238,421,396	329,354,883	304,957,770
B. Subtotal	$2,954,184,016	$3,275,467,762	$3,414,382,408	$3,550,896,501	$3,613,482,199
Present value of benefits for members now in active service:					
Service retirement	$1,284,743,092	$1,713,896,075	$1,775,119,997	$1,900,845,890	$2,045,735,453
Ordinary disability retirement	244,017,781	136,028,481	136,018,104	140,991,664	152,156,759
Accidental disability retirement	1,034,485,749	1,119,775,061	1,143,522,392	1,177,119,363	1,274,719,490
Ordinary death benefits	66,781,846	81,044,306	80,610,579	83,579,475	89,628,652
Accidental death benefits	16,840,206	30,765,767	31,246,540	31,272,741	33,774,658
Vesting benefits	9,736,432	10,728,254	10,205,901	12,561,156	12,788,664
ITHP benefits	239,952,612	0	0	0	0
Return of contributions	7,670	1,974,779	1,940,221	2,415,232	2,627,535
C. Subtotal	$2,896,565,388	$3,094,212,723	$3,178,663,734	$3,348,785,521	$3,611,431,211
D. Less present value of prospective contributions and appropriations on account of above benefits	$2,440,081,404	$2,645,839,272	$2,571,713,978	$2,464,620,790	$2,258,030,046

	1995	1996	1997	1998	1999
E. Net reserves for members now in active service (C - D)	$ 456,486,984	$ 448,373,451	$ 606,949,756	$ 884,164,731	$1,353,401,165
F. Present value of future skim	$ 0	$ 135,139,787	$ 135,798,836	$ 102,597,768	$ 83,123,636
G. Total net reserves (A+B+E+F)	$3,551,619,985	$3,858,981,000	$4,157,131,000	$4,537,659,000	$5,050,007,000
Benefits due and unpaid	4,562,213	3,119,192	2,898,837	3,375,729	2,531,886
Amounts due and unpaid to variable supplements funds	106,029,053	66,155,455	0	0	0
Payable for securities purchased	220,309,957	230,181,164	454,733,617	372,032,984	468,863,485
Amount in transit	(22,483,907)	120,878,563	243,905,540	245,343,613	234,204,310
Reserve to offset amount in transit	22,483,907	(120,878,563)	(243,905,540)	(245,343,613)	(234,204,310)
Deferred Employer Contribution	9,868,311	0	0	0	0
Reserve a/c loan receivable	0	0	81,397,251	0	0
Total net reserves and all other liabilities	$3,892,389,519	$4,158,436,811	$4,696,160,705	$4,913,467,713	$5,521,402,371
Excess of admitted assets over total net reserves and all other liabilities	$ 64,413,066	$ 264,499,937	$ 708,293,087	$1,170,827,261	$1,264,935,862
Sum of above two lines	$3,956,802,585	$4,422,936,748	$5,404,453,792	$6,084,294,974	$6,786,338,233

The following comparative financial statements indicate the income and disbursements of the Group Life Insurance Plan for the period under review and the assets and liabilities as of the end of each fiscal year from June 30, 1995 through June 30, 1999. These figures are included in Tables A and B of this section.

C. STATEMENT OF INCOME AND DISBURSEMENTS

(Fiscal Year Ending June 30,)

	1995	1996	1997	1998	1999
Amount of ledger assets at end of previous year	$35,396,267	$39,094,321	$43,182,128	$46,575,583	$49,545,283
Income					
Contributions from City	$ 778,117	$ 1,067,870	$ 1,054,558	$ 1,044,529	$ 1,067,947
Interest on bonds	3,669,937	3,669,937	3,088,897	2,275,171	1,944,025
Total income	$ 4,448,054	$ 4,737,807	$ 4,143,455	$ 3,319,700	$ 3,011,972
Disbursements					
Lump sum payments on account of death after retirement	$ 500,000	$ 500,000	$ 100,000	$ 300,000	$ 150,000
Payment on account of death before retirement	250,000	150,000	650,000	50,000	300,000
Total disbursements	$ 750,000	$ 650,000	$ 750,000	$ 350,000	$ 450,000
Net income	$ 3,698,054	$ 4,087,807	$ 3,393,455	$ 2,969,700	$ 2,561,972
Amount of ledger assets at end of current year	$39,094,321	$43,182,128	$46,575,583	$49,545,283	$52,107,255

D. STATEMENT OF ASSETS AND LIABILITIES

(Fiscal Year Ending June 30,)

	1995	1996	1997	1998	1999
Assets					
Ledger assets					
Bonds (apportioned share)	$39,094,321	$43,182,128	$46,575,583	$49,545,283	$52,107,255
Non-ledger assets					
Due from City for group term life insurance	2,222,638	2,187,793	2,143,020	2,087,243	2,019,286
Gross assets	$41,316,959	$45,369,921	$48,718,603	$51,632,526	$54,126,541
Deduct assets not admitted	2,222,638	2,187,793	2,143,020	2,087,243	2,019,286
Total admitted assets	$39,094,321	$43,182,128	$46,575,583	$49,545,283	$52,107,255
Liabilities					
Amount in transit	$39,094,321	$43,182,128	$46,575,583	$49,545,283	$52,107,255
Total liabilities	$39,094,321	$43,182,128	$46,575,583	$49,545,283	$52,107,255

6. SCHEDULE F - CLAIMS

Schedule F of the annual statement requires the reporting of "all applications for benefits which have been resisted or postponed during the fiscal year, all actions of the retiring body which have been reversed and all actions at law to which the system has been a party during the year."

The examiner noted that only claims for benefits that were initiated during a fiscal year which remained unsettled at the end of such fiscal year were included in its filed Schedule F for such fiscal year. Claims initiated in prior fiscal years that the board of trustees had deferred and cases in litigation were omitted from its filed Schedule F. The examiner's review revealed seven claims that were omitted from the Schedule.

In addition, some of the claims listed on Schedule F had no approximate dollar amount claimed. In some instances, the column "Reason Why Unsettled or Delayed" was also left blank.

These comments were made in the last four reports on examination. In response to the immediately preceding report on examination, the Fund indicated that all claims resisted and corresponding dollar amounts would be reported. The examiner again recommends that the Fund report all resisted claims and corresponding dollar amounts in Schedule F.

7. VARIABLE SUPPLEMENTS FUNDS

Subchapter 5 and Subchapter 6 of Title 13 of the Code provided for the establishment of the Firefighters' Variable Supplements Fund ("FVSF") and the Fire Officers' Variable Supplements Fund ("FOVSF"), respectively, as of July 1, 1970. The FVSF and FOVSF were established to provide supplemental benefits to firefighters who are service retirees of the Fund who retired on or after October 1, 1968. The FVSF and FOVSF are not considered to be pension funds or retirement systems. The FVSF and FOVSF receive certain excess earnings from the Fund pursuant to provisions of the Code.

The Code provides that the Fund transfer to the FVSF and the FOVSF an amount equal to certain excess earnings, referred to as "SKIM," on equity investments which exceed what the earnings might have been had such funds been hypothetically invested in fixed income investments, less any cumulative earnings deficiencies, and limited to the unfunded accumulated benefit obligation of the Fund. If earnings on equity investments were below those of the hypothetical fixed income securities, no SKIM would be available and the potential for a deficiency would exist.

During the period under examination, the following amounts were transferred from the Fund to the variable supplements funds:

(Fiscal Year Ending June 30,)

	1995	1996	1997	1998	1999
FFVSF	$0	$45,000,000	$16,430,339	$0	$0
FOVSF	$0	$36,000,000	$53,598,714	$0	$0

8. TREATMENT OF MEMBERS

The examiner reviewed a random sample of various types of death benefits and accidental and service retirements to determine whether members and beneficiaries were treated fairly and in accordance with plan provisions and Fund rules. The examiner also reviewed the various controls involved, checked the accuracy of the computations and traced the accounting data to the books of account.

Based on the sample reviewed, no significant findings were noted.

9. PRIOR REPORT SUMMARY AND CONCLUSIONS

Following are the violations, recommendations and comments contained in the prior report on examination and the subsequent actions taken by the Fund in response to each citation:

Item	Description
A	The Fund violated Section 310 of the New York Insurance Law and Section 136.4 of Department Regulation No. 85 by failing to provide documents requested by the examiner.
	The Fund provided all documents requested by the examiner during this examination.
B	The examiner recommends that the Fund establish procedures to ensure the integrity of amounts reported in its general ledger and filed annual statement.
	A review indicated that the Fund instituted procedures to ensure the integrity of the amounts reported in its general ledger and filed annual statement.
C	The examiner recommends that the Fund report the results of all investment transactions occurring during the fiscal year in its filed annual statement.
	A review indicated that the Fund has complied with this recommendation.
D	The examiner recommends that the Fund reconcile purchases and sales of mutual funds between the general ledger and the bank statement.
	A review indicated that the Fund has complied with this recommendation.
E	The examiner recommends that the Fund comply with the reporting requirements of the annual statement.
	A review indicated that the Fund has complied with the reporting requirements of the annual statement.
F	The examiner recommends that the Fund maintain an inventory, by individual member, to verify the amount of each member’s outstanding loan, as well as to support the balance of this asset.
	A review indicated that the Fund now maintains an inventory, by individual member, of each member’s outstanding loan.

Item	Description
G	The Fund violated Section 13-342 of the New York City Administrative Code by failing to calculate at least five percent of the member's earnable compensation which should be deducted from bi-weekly earnings and applied to loan balance repayments. A review indicated that the Fund now deducts at least five percent of the member's earnable compensation from bi-weekly earnings and applies it to loan repayments.
H	The Fund failed to abide by assurances made to the Department in response to the last three reports on examination regarding completion of Schedule F of the annual statement. A review indicated that the Fund again failed to abide by assurances made to the Department in response to the last four reports on examination regarding completion of Schedule F of the annual statement.

10. SUMMARY AND CONCLUSIONS

Following is the comment contained in this report:

Item		Page No.
A	The examiner recommends that the Fund report all resisted claims and corresponding dollar amounts in Schedule F.	17

Respectfully submitted,

_______/s/_______________
James Murphy
Associate Insurance Examiner

STATE OF NEW YORK)
)SS:
COUNTY OF NEW YORK)

JAMES MURPHY, being duly sworn, deposes and says that the foregoing report, subscribed to by him, is true to the best of his knowledge and belief.

_______/s/_______________
James Murphy

Subscribed and sworn to before me

this__________ day of _____________2001.

APPOINTMENT NO. 21622

STATE OF NEW YORK

INSURANCE DEPARTMENT

I, NEIL D. LEVIN , Superintendent of Insurance of the State of New York, pursuant to the provisions of the Insurance Law, do hereby appoint:

JAMES MURPHY

as a proper person to examine into the affairs of the

CITY OF NEW YORK FIRE DEPARTMENT
PENSION FUND, SUBCHAPTER 2

and to make a report to me in writing of the condition of the said

FUND

with such other information as he shall deem requisite.

In Witness Whereof, I have hereunto subscribed by name
and affixed the official Seal of the Department
at the City of New York

this 4th day of October, 2000

NEIL D. LEVIN
Superintendent of Insurance

by ***GREGORY V. SERIO***
First Deputy Superintendent

NEW YORK CITY
FIRE DEPARTMENT,
SUBCHAPTER TWO PENSION FUND

Report of the Examining Actuary

Michael J. Lambert, ASA, MAAA, EA

Condition as of: June 30, 1999

Table of Contents

I. Liabilities of the Fund

The liabilities of the Fund as reported in its annual statements to the New York State Insurance Department are summarized in the following table:

Valuation Date	(1) Accumulated Contributions of Members	(2) Present Value of Benefits Payable to Beneficiaries Now Drawing Allowances	(3) Present Value of Benefits Provided for Members Now in Active Service	(4) Unfunded Accrued Liability
6/30/94	$110,731,018	$2,612,883,235	$2,791,704,658	$1,081,767,152
6/30/95	140,951,985	2,954,184,016	2,896,565,388	1,216,431,738
6/30/96		3,275,467,762	3,094,212,723	1,341,799,167
6/30/97		3,414,382,408	3,178,663,734	1,315,971,630
6/30/98		3,550,896,501	3,348,785,521	1,388,296,245
6/30/99		3,613,482,199	3,611,431,211	1,342,104,968

Valuation Date	(5) Present Value of All Other Prospective Contributions	(6) Net Reserves (1)+ (2) + (3) – (4) – (5)	(7) Benefits, Expenses and Other Amounts Due and Unpaid	(8) Amounts Due Variable Supplements Funds
6/30/94	$1,077,908,741	$3,355,643,018	$27,477,493	$0
6/30/95	1,223,649,666	3,551,619,985	234,740,481	106,029,053
6/30/96	1,168,900,317	3,858,981,000	233,300,356	66,155,455
6/30/97	1,119,943,512	4,157,131,000	539,029,705	0
6/30/98	973,726,780	4,537,659,000	375,808,713	0
6/30/99	832,801,442	5,050,007,000	471,395,371	0

Valuation Date	(9) Net Reserves and All Other Liabilities (6)+(7)+(8)	(10) Admitted Assets	(11) Excess of Assets over Reserves and Liabilities (10) – (9)
6/30/94	$3,383,120,511	$3,517,761,866	$134,641,355
6/30/95	3,892,389,519	3,956,802,585	64,413,066
6/30/96	4,158,436,811	4,422,936,748	264,499,937
6/30/97	4,696,160,705	5,404,453,792	708,293,087
6/30/98	4,913,467,713	6,084,294,974	1,170,827,261
6/30/99	5,521,402,371	6,786,338,233	1,264,935,862

[1] Beginning with the June 30, 1996 Annual Statement, the liabilities for active members include liabilities for benefits attributable to employee contributions; in prior years, the liabilities for active members excluded liabilities for benefits attributable to employee contributions, and the accumulated contributions of members was shown as a separate liability item.

[2] Beginning with the June 30, 1996 Annual Statement, this value has been reduced by the excess of the present value of future 'skim' over the present value of future employee contributions.

Because of the way pension plans are funded, the values in Column (11), "Excess of Assets over Reserves and Liabilities", would, in general, be zero. They are not zero here primarily because of differences between Admitted Assets, as shown in the Annual Statement, and the Actuarial Value of Assets, used for developing the employer contribution. Those differences are discussed further in Section V of this report.

II. Actuarial Cost Method and Calculation of Employer Contributions

The actuarial cost method by which employer contributions to the System are computed is the Frozen Entry Age Actuarial Cost Method. A significant aspect of that method is that the present value of future normal contributions is a balancing item, calculated by subtracting the sum of the actuarial value of assets, the present value of future employee contributions and the unfunded actuarial accrued liability from the actuarial present value of future benefits as of the valuation date. Consequently, actuarial gains and losses are amortized implicitly over members' future working lifetimes as part of the employer's normal contribution.

Contributions are required of employees in both benefit tiers, reducing the amount the employer otherwise would have to contribute. The typical method for achieving the reduction in employer costs is to include the full formula benefit in the present value of future benefits and then deduct the present value of future employee contributions.

However, the contributions required of Fund members are not set at a uniform percentage of salary, but instead are targeted to provide a certain percentage of the total formula benefit. Any excess contributions at the time of retirement may be applied to increase the retirement allowance, and any deficiency in contributions will result in a reduction in the allowance. In addition, members are permitted to borrow against their contributions, and unpaid loan balances are liquidated at the time of retirement by reducing the member’s total accumulated contributions.

As a result, the present value of future employee contributions is difficult to determine. So, for the June 30, 1994 (and prior) actuarial valuations, the Fund, based on past experience, derived a “P-factor,” representing the employer's average share of total retirement benefit costs. In calculating the present value of future benefits for employees, the System used the P-factor to adjust the total formula benefit so that only the employer's share is reflected in the present value and hence in the normal contribution rate. The value of the P-factor was 82%.

Beginning with the June 30, 1995 actuarial valuation, the liability attributable to employee contributions was included in total active member liabilities, and the "P-factor" approach was no longer used. The annual statements reflect the above change in methodology as of June 30, 1996, since they were not changed retroactively.

The normal contribution rate for the Fund is computed so as to amount to a level percentage of payroll, as follows: the present value of prospective normal contributions (the aforementioned balancing item) is divided by the present value of projected future salaries of members on the payroll as of the valuation date. The employer normal contribution for the ensuing fiscal year is derived by multiplying the normal contribution rate by aggregate annual salaries. This results in a value that is appropriate for an employer contribution at the beginning of the fiscal year. To recognize the fact that the employer contribution is typically paid monthly throughout the year, the calculation of the present value of prospective normal contributions includes an interest adjustment. For the June 30, 1994 (and prior) valuations, the adjustment to reflect monthly contributions is made after the normal contribution rate is determined.

In addition to the normal contribution, the total employer contribution includes a contribution to amortize the unfunded actuarial accrued liability (UAL contribution) and, for the June 30, 1994 (and prior) valuation, a contribution for increased take home pay (ITHP contribution). The ITHP contribution represents the assumption by the employer of a portion of the contribution that otherwise would be required of members, and is computed as a percentage of the salaries of those members. Beginning with the June 30, 1995 valuation, the liability attributable to the ITHP contribution was included in the present value of future normal contributions, so there was no longer a separate cost component for ITHP.

The determination of the employer contribution to be made for a fiscal year is based on values determined as of the last day of the immediately preceding fiscal year; e.g., values as of June 30, 1994 are used to determine the contribution for the fiscal year ending June 30, 1995.

Employer contributions were computed as follows:

($000)

Fiscal Year Ending 6/30	(1) Actuarial Present Value of Benefits	(2) Actuarial Value of Assets	(3) Unfunded Accrued Liability	(4) Present Value of Future Employee Contributions
1994	$ 5,390,855	$ 3,244,912	$ 1,081,767	$ 12,670
1995	6,256,792 [3]	3,617,403	1,262,597	151,646
1996	6,504,820	3,858,981	1,341,799	160,064
1997	6,728,845	4,157,131	1,315,972	158,721
1998	7,002,280	4,537,659	1,388,296	234,962
1999	8,045,875	6,179,799	148,911	263,743

Fiscal Year Ending 6/30	(5) Present Value of Future Normal Contributions (1) – (2) – (3) – (4)	(6) Present Value of Future Compensation	(7) Normal Contribution Rate (5) ÷ (6)	(8) Aggregate Annual Salaries
1994	$ 1,051,506	$ 7,089,755	14.831%	$ 606,288
1995	1,225,146	6,194,685	19.777%	642,879
1996	1,143,976	6,300,951	18.156%	647,725
1997	1,097,021	6,378,980	17.197%	660,839
1998	841,363	6,275,061	13.408%	676,130
1999	1,453,422	6,702,410	21.685%	729,726

Fiscal Year Ending 6/30	(9) Normal Contribution (7) x (8)	(10) UAL Contribution	(11) Gross Employer Contribution (9) + (10)	(12) Employer Payroll Rate (11) ÷ (8)
1994	$ 93,662 [1]	$ 101,101	$ 209,068 [2]	34.48%
1995	127,142	124,922	252,064	39.21%
1996	117,601	137,352	254,953	39.36%
1997	113,644	147,680	261,324	39.54%
1998	90,656	165,441	256,097	37.88%
1999	158,241	17,632	182,854 [4]	25.06%

[1] Reflects multiplication by 1.041633 to account for monthly contribution by employer

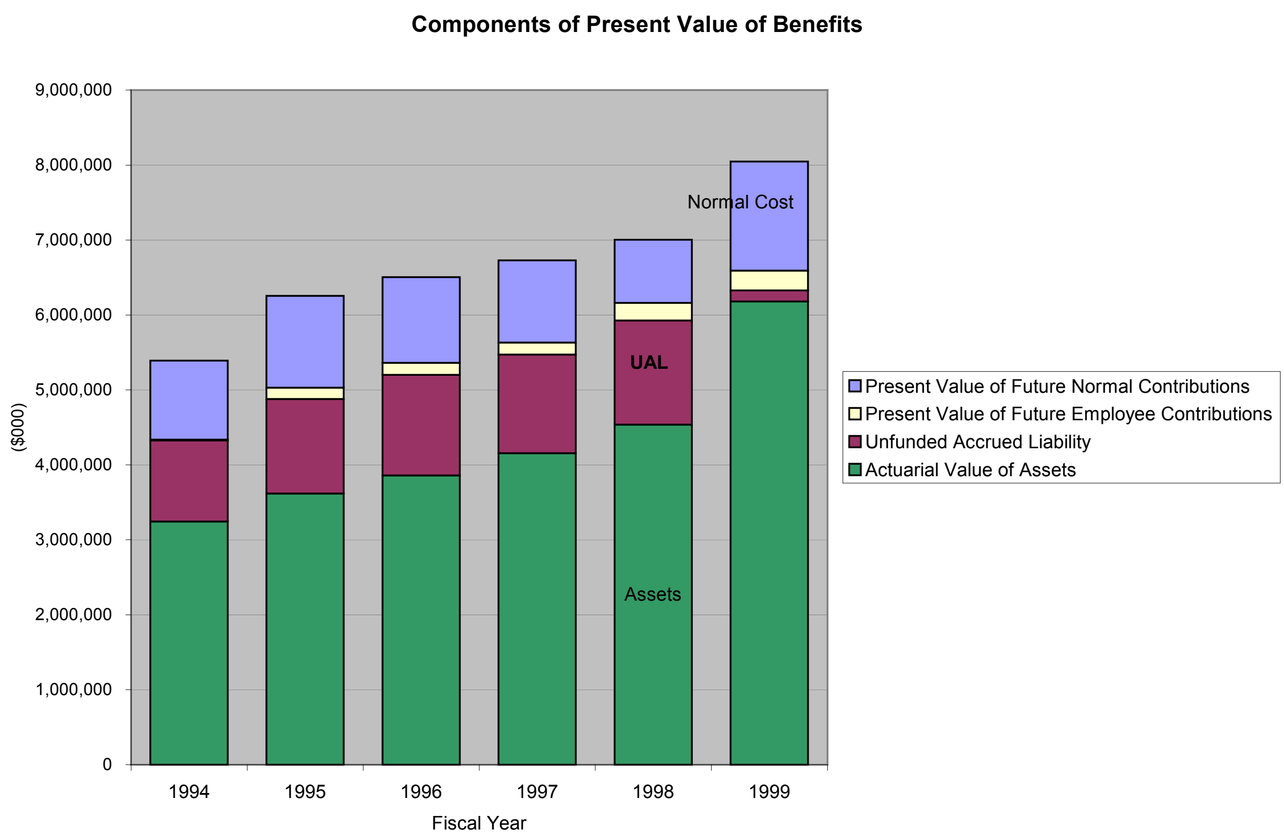
[2] Reflects $14,304,000 in ITHP contribution

[3] Beginning with the June 30, 1995 valuation, the present value of future "skim" due to the variable supplements funds was included in the liability

[4] Includes $6,980,000 investment expense

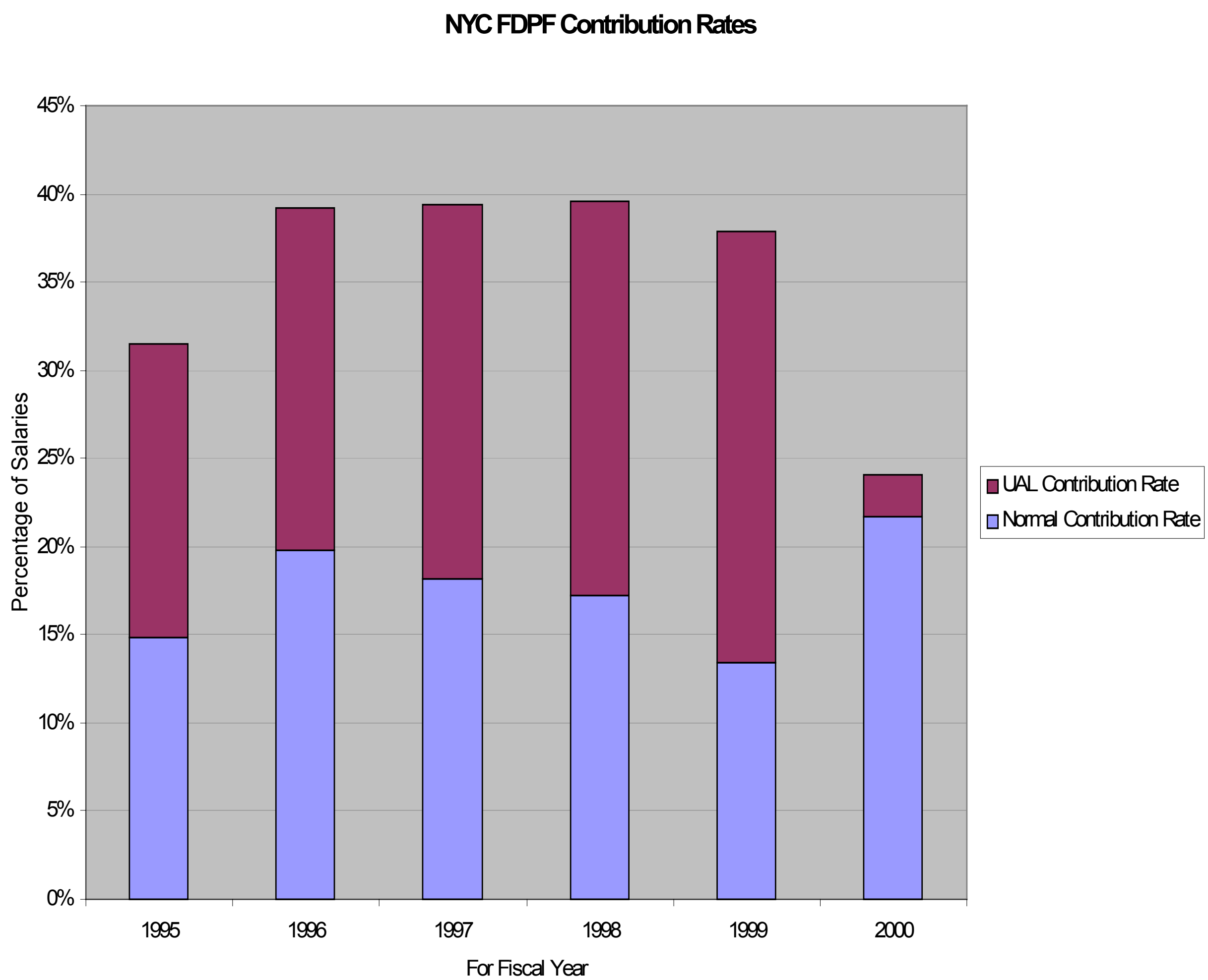
The figures shown above as of June 30, 1999 (used for the contribution for the fiscal year ending June 30, 2000) are based on assumptions and methods that were proposed by the System's actuary and adopted by the Board of Trustees. In order to become effective, certain assumptions and methods must be enacted into law; that was done with Chapter 85 of the Laws of 2000. The changes in assumptions were based, in part, on an experience study performed by the then current independent actuarial auditor. One of the method changes resulted in a higher actuarial asset value, and another method change resulted in the elimination (for this valuation) of the Balance Sheet Liability (BSL) portion of the unfunded actuarial accrued liability. The net result of the changes was a reduction in employer contribution for the 2000 fiscal year from over 33% of salaries to about 25% of salaries.

Below is a graph showing the major components of the total Actuarial Present Value of Benefits.



Shown below is a graph of the employer contribution rate, expressed as a percent of annual salaries. The contribution rate for each year is shown as composed of the two major components: the normal contribution and the UAL contribution (which includes the BSL contribution).

The valuation date for each fiscal year is the last day of the preceding fiscal year; e.g., the contributions to be made for the fiscal year ending June 30, 2000 are based on census and asset data as of June 30, 1999. Therefore the right-most bar in the chart above



corresponds to the right-most bar in the chart below.

Two changes in calculation methodology, both effective with the June 30, 1995 valuation, are reflected above.

(1) For the June 30, 1994 (and prior) valuation, the Normal Contribution was calculated as of the first day of the fiscal year, then adjusted with interest to reflect monthly contributions throughout the year. Thus, the Normal Contribution for the 1995 fiscal year (based on a June 30, 1994 valuation date) is calculated first as the product of the Normal Contribution Rate and the Aggregate Annual Salaries; that result is then multiplied by 1.044031 (based on a 9% annual interest rate) to reflect monthly contributions by the employer. For the 1996 and subsequent fiscal years, the liabilities that are used to determine the Normal Contribution Rate already reflect the monthly adjustment, so that a subsequent multiplication by the monthly contribution factor is not necessary.

(2) For the 1995 (and prior) fiscal year, the employer contribution attributable to Increased-Take-Home-Pay benefits was determined as a separate item, and was then added to the sum of the Normal Contribution and the UAL Contribution to yield the total employer contribution. Beginning with the 1996 fiscal year, the liability arising from the ITHP benefit attributable to a fixed account is included in the Actuarial Present Value of Benefits.

Another change in methodology was effective with the June 30, 1999 valuation. Investment expenses had, in previous years, been paid from plan assets, but there was no actuarial assumption that explicitly addressed the anticipated expense. As a result, the determination of the true investment gain/(loss) (net of expenses) for a completed year was under/(over)stated. The investment expenses ended up being spread, as part of the gain/(loss), and funded as a portion of the normal contribution. As a result of the change in methodology, the amount of investment expenses paid during the 1999 fiscal year was determined and reimbursed to the fund as a separate component of cost, in addition to the normal contribution, for the 2000 fiscal year. The investment expense portion of the total fiscal year 2000 contribution is about $7,000,000, which represents about .1% of the market value of assets as of the beginning of the fiscal year.

The foregoing figures reflect a number of events and trends during the five-year examination period. As can be noted above, the Normal Contribution Rate shows a general decreasing trend from the 1996 through the 1999 fiscal years. One trend that was a major contributing factor in the reduction in Normal Contribution Rates was the investment results. For each year in the examination period, the investment yield was significantly greater than the actuarially assumed rate of return.

However, for the same four-year period (1996 – 1999), the UAL contribution rate increased, so that the total employer contribution, as a percentage of payroll, remained relatively level. The increasing UAL rate was due partly to benefit improvements, and partly to the fact that some UAL components are amortized not in level dollar amounts, but in amounts increasing by 3% per year.

Effective June 30, 1999, for the 2000 fiscal year, actuarial assumptions and methods were changed as described further in Section VIII; as a result, the normal contribution increased, and the UAL contribution decreased significantly.

III. Employer Contributions and Annual Statement Liabilities

During the current examination period the liabilities reported in the System's annual statements to the New York Insurance Department generally were the same as those used in calculating employer contributions for the following fiscal year.

The final funding calculations as of a given fiscal year end are generally completed after the Annual Statement for that fiscal year is filed with the Insurance Department. Therefore, for some years, the final funding calculations show different values than what is reported in the Annual Statement because of changes made after the Annual Statement is filed. This is particularly apparent for values determined as of June 30, 1999. The Annual Statement values are based on assumptions and methods that were first effective with the June 30, 1995 valuation. However, after the 1999 Annual Statement was filed with the Insurance Department, changes in assumptions and methods were finalized and the fiscal year 2000 contribution calculation was based on liability and asset values that were significantly different from what was originally reported to the Insurance Department.

The present value of future benefits is presented somewhat differently in the System's annual statements compared to the employer contribution calculations. In the annual statements, the present value of the ITHP contribution to be paid in the following fiscal year, referred to as "future ITHP," is included in the present value of benefits provided for members now in active service and in the contra-liability, present value of prospective contributions.

For the June 30, 1994 (and prior) valuations, in computing employer contributions it has been the System's practice to deduct the balance in the Member Contribution Accumulation Fund from both liabilities and assets. The two deductions cancel one another; i.e., the effect on the normal contribution rate is the same as if no deduction had been made. Beginning with the June 30, 1995 valuation, employee contributions were recognized in both the liabilities and assets in determining the normal contribution rate. This change was made in accordance with Chapter 598, Laws of 1996.

IV. Unfunded Actuarial Accrued Liability

The unfunded actuarial accrued liability (UAL) of a pension plan refers to the present value of required employer contributions other than normal contributions (and, in the case of the System, other than certain ITHP contributions for fiscal years prior to 1995). The UAL usually relates to service rendered before the valuation date, so-called past service.

UAL should not be viewed as a measure of the overall funding status of a pension plan. One such measure is discussed in Section VII of this report under the caption, “Funding Ratios.”

The specific items to be funded through UAL contributions, and the computation of the initial UAL balance, are determined by the choice of funding method. Under the System's funding method, new unfunded accrued liability balances generally are established in connection with improvements in member benefits attributable to past service and in connection with changes in actuarial assumptions. The amount of such new UAL balances is computed by the actuarial funding method known as Entry Age Normal.

The System's total UAL at any point in time comprises the aggregate present value of the remaining payments in amortization of all previously established UAL balances, together with the “balance sheet liability” (BSL). The BSL is the non-ledger and not-admitted asset described elsewhere in this Report on Examination as “Employer Contribution Receivable.”

As of June 30, 1994, the beginning of the examination period, the UAL consisted of two components: the “consolidated UAL” of around $633,000,000, and the BSL mentioned above, around $449,000,000.

Chapter 249 of the Laws of 1996 changed many actuarial assumptions, changed the asset valuation method, and re-established and consolidated the total UAL and the BSL as of June 30, 1995. The re-established UAL and BSL is to be amortized over a period of 15 years, where each annual payment after the first is to be 103% of the preceding annual payment.

Chapter 119 of the Laws of 1995 provided additional benefits to retirees. It produced an unfunded liability amount on June 30, 1996 of $101,000,000, which is to be amortized over 10 years with level payments.

Chapter 390 of the Laws of 1998 provided additional benefits to reflect cost-of-living increases for certain retirees. That legislation increased benefits for members who retired prior to 1993, and resulted in an initial UAL component of about $111,000,000 as of June 30, 1998, which was to be funded over a period of 10 years with level payments. The City Council, under the legislation, elected a second increase in benefits for members who retired after June 30, 1993 and before 1994; that increase resulted in an initial UAL component of about $5,000,000 as of June 30, 1999.

Chapter 85 of the Laws of 2000 changed actuarial assumptions, changed the asset valuation method, eliminated the BSL and reestablished the UAL as of June 30, 1999. As a consequence of the changes in assumptions, the resulting UAL as of June 30, 1999 was $149,000,000, and is to be amortized over 11 years with payments after the first equal to 103% of the preceding payment.

The progression of the total UAL (including the BSL) and the total annual amortization payment is shown below. The amounts shown are based on the final calculation of pension cost, which, for some years, reflects changes that had not yet been incorporated in the Annual Statement.

Valuation Date June 30	Total UAL	Payment
1994	$1,082,000,000	$101,000,000
1995	1,263,000,000	125,000,000
1996	1,342,000,000	137,000,000
1997	1,316,000,000	148,000,000
1998	1,388,000,000	165,000,000
1999	149,000,000	18,000,000

V. Actuarial Asset Valuation Method

As already mentioned, the value of the System's assets directly affects the amount of employer contributions for the following fiscal year (except for variable funds, where the experience is passed through to the members and has little effect on employer contributions). Market values of assets generally are considered too volatile to use directly in computing employer contributions, and, accordingly, the System applies an actuarial asset valuation (AAV) method to produce a smoother progression of asset values from year to year.

Beginning with the June 30, 1991 valuation the System adopted a new AAV method, under which the current year's market value was adjusted so as to recognize “unexpected return” over a five year period. “Unexpected return” was defined as the excess of actual investment income, including realized and unrealized changes in market value, over expected investment income. Expected investment income, in turn, was defined to be the valuation interest rate multiplied by the mean actuarial value of investable assets.

In conjunction with the actuarial assumption and method changes effective June 30, 1995 mentioned above, a “market value restart” was implemented. Thus, as of June 30, 1995 the actuarial value of investable assets was set equal to market value and the five year averaging of “unexpected return” was phased in with the valuations of June 30, 1996 through June 30, 1999.

One of the changes effective June 30, 1999 was, again, a “market value restart”. The actuarial asset value for the June 30, 1999 valuation prior to the change was $5.1 billion. The actuarial asset value was reset to the market value of $6.2 billion.

The value of assets reported on the annual statement is different from the value used for pension funding purposes, for three primary reasons: (1) the asset value used for funding generally reflects "smoothing" of prior values, as discussed above, and (2) the asset value used for funding is based on the market value of bonds, while the asset value used for the annual statement is based on book value, and (3) the asset value reported on the annual statement includes some items which are not available for future benefits.

Shown below is reconciliation between the asset values used for funding and the asset values reported on the annual statements.

	($000) Fiscal Year ending June 30				
	1995	1996	1997	1998	1999
Annual Statement Admitted	3,956,803	4,422,937	5,404,454	6,084,295	6,786,338
BV – MV of Bonds	66,248	11,074	26,088	41,755	(30,640)
Securities Payable	(220,310)	(230,181)	(454,734)	(372,033)	(468,863)
Member Loans Receivable	(68,744)	(73,314)	(81,397)	(87,990)	(95,103)
Accrued Benefits Payable	(4,562)	(3,119)	(2,899)	(3,776)	(2,532)
Amount Due to VSF	(90,000)	(75,029)	0	0	0
Revision in Accounts Payable	3,865	3,864	1,186	1,290	(2,009)
Receivable from Subchapter	(6,917)	(6,917)	(6,917)	(6,917)	(6,917)
Due City Payroll	(9,868)	(2,627)	(2,279)	(2,295)	(1,558)
Smoothing Adjustment	0	(187,707)	(726,371)	(1,116,670)	0
Unreconciled Difference	(9,112)	0	0	0	1,083
Actuarial Value of Assets	3,617,403	3,858,981	4,157,131	4,537,659	6,179,799

VI. Interest Earned and Interest Required

Included in the System's annual statements to the Insurance Department are the total investment income actually earned during the year, including realized and unrealized changes in market values, before and after "transferable earnings", and the amount of interest required to maintain those funds. See Section IX for comments on Transferable Earnings. As indicated in column (5) below, the Transferable Earnings in the 1997, 1998 and 1999 fiscal years were zero.

Interest required to maintain funds is computed by multiplying the assumed valuation interest rate by the mean actuarial value of assets. Thus, the amount reported as interest required to maintain funds represents the expected investment income for the fiscal year.

The amounts of interest required to maintain funds and the interest earned both before and after deduction of transferable earnings during the period under examination were as follows:

Fiscal Year Ending 6/30	(1) Interest Required	(2) Interest Earned before Transferable Earnings	(3) Excess (2) - (1)	(4) Ratio (2) ÷ (1)
1995	288,453,809	488,361,576	199,907,767	169%
1996	321,699,824	697,687,486	375,987,662	217%
1997	350,230,738	849,323,510	499,092,772	243%
1998	380,524,189	911,932,674	531,408,485	240%
1999	420,967,673	812,751,831	391,784,158	193%
Total	1,761,876,233	3,760,057,077	1,998,180,844	213%

Fiscal Year Ending 6/30	(5) Transferable Earnings Included	(6) Interest Earned after Transferable Earnings (2) – (5)	(7) Net Excess (6) - (1)	(8) Net Ratio (6) ÷ (1)
1995	106,029,053	382,332,523	93,878,714	133%
1996	41,126,402	656,561,084	334,861,260	204%
1997	0	849,323,510	499,092,772	243%
1998	0	911,932,674	531,408,485	240%
1999	0	812,751,831	391,784,158	193%
Total	147,155,455	3,612,901,622	1,851,025,389	205%

The table indicates that actual investment earnings significantly exceeded expected investment income for the five-year examination period as a whole, as indicated above in Section II.

VII. Funding Ratios

Attachment B of the System's annual statements to the Insurance Department provides, as a measure of funding adequacy, the ratio of assets available for active members to the projected benefit obligation (PBO) for active members.

The PBO is the present value of pension benefits resulting from employee service up to the date of the annual statement, based on salaries projected to the date of retirement. (PBO thus is different from the annual statement's “Present Value of Benefits for Members now in Active Service,” which involves members’ total anticipated service as of the date of retirement.) The PBO includes vested benefits for terminated members.

The PBO was developed according to Statement No. 5 of the Government Accounting Standards Board (GASB 5), even though GASB 5 has been largely superseded by GASB 27. However, according to both GASB 5 and GASB 27, where the actuarial cost method is the Frozen Entry Age, for purposes of computing the PBO the member's total projected benefit at retirement is prorated uniformly over total anticipated service, even if the plan's benefit formula provides a non-uniform pattern of benefit accrual. For some members of the System, one element of the benefit formula may result in benefits accruing more rapidly in the later years of service. For such members the uniform prorate required by GASB 5 or GASB 27 produces a higher PBO. Hence for the entire plan GASB 5 or GASB 27 would generate a less favorable funding ratio than would be produced by allocating benefits to years of service strictly according to the benefit formula.

Assets available for active members are the System's admitted assets reduced by the following: present value of benefits to beneficiaries now drawing allowances, accumulated member contributions, benefits due and unpaid and other miscellaneous liabilities. Amounts relating to group life insurance benefits are excluded from assets as well as from the PBO.

The funding ratio, as developed here, is independent of the actuarial cost method used for determining contributions to the pension plan; therefore funding ratios between plans would be comparable. However, the funding ratio is dependent on the actuarial assumptions used for determining those contributions. Funding ratios for plans that used different actuarial assumptions, and for the same plan but at different valuation dates where different actuarial assumptions were used, would not be directly comparable. Actuarial assumptions that are more optimistic lead to a lower level of future funding requirements and produce a higher funding ratio.

Funding ratios are shown in the following table (dollar figures are shown to nearest thousand).

Valuation Date	(1) Assets Available for Active Members	(2) Projected Benefit Obligation	(3) Funding Ratio (1) ÷ (2)
6/30/94	$ 731,274	$ 1,702,850	42.94 %
6/30/95	481,803	1,765,540	27.29
6/30/96	804,831	1,870,726	43.02
6/30/97	1,404,466	1,937,752	72.48
6/30/98	2,108,044	2,073,727	101.65
6/30/99	2,649,353	2,221,509	119.26

The increase in Funding Ratio shown above is due, in part, to the investment gains referred to earlier in this report.

It should be noted that the increase in Funding Ratio shown above does not reflect the change in funded status of the entire Plan. The Funding Ratio above is based on a comparison between the liabilities for active members and assets “available” for active members. The value of assets “available” for active members is the total plan assets reduced by the liability attributable to non-active members. Thus all plan investment gains or losses flow through to this funding ratio, which excludes non-active members. This “leveraging” effect magnifies the apparent change in funded status of the entire plan.

The table below shows the funding ratio based on all plan liability, including that for retired members, and all plan assets. The funding ratio shows a general upward trend, due largely to investment gains, as mentioned earlier. However, the magnitude of the changes for the entire plan is much smaller than in the previous table, which “funnels” much of the plan gain or loss into a subset of the total plan.

Valuation Date	(1) Total Assets	(2) Projected Benefit Obligation	(3) Funding Ratio (1) ÷ (2)
6/30/94	$ 3,482,366	$ 4,315,733	80.69 %
6/30/95	3,917,708	4,719,724	83.01
6/30/96	4,379,755	5,146,193	85.11
6/30/97	5,387,878	5,352,134	100.67
6/30/98	6,034,750	5,624,623	107.29
6/30/99	6,734,231	5,834,991	115.41

VIII. Actuarial Assumptions and Methods

During the prior examination period the System engaged a pension consulting organization (William M. Mercer, Inc.) to analyze System experience in relation to the actuarial assumptions used to determine employer contributions. The consulting organization issued a final report dated December 29, 1994 in which a number of changes in actuarial assumptions were recommended. Based in part on the consulting organization's recommendations, the System's own actuary (i.e., the City of New York Office of the Actuary) presented recommendations for changes in actuarial assumptions to the System's Board of Trustees. As a result, Chapter 249 of the Laws of 1996 effected a reduction in the assumed rates of increase in salaries and various adjustments in the rates of decrement to better reflect expected future experience.

The changes in actuarial assumptions due to the aforementioned legislation, effective with the June 30, 1995 valuation, were:

- The assumed investment return assumption was changed from 8.50% to 8.75%.
- The salary scale assumption consists of a general wage increase assumption with age-specific and sex-specific merit and promotion assumptions. The general wage increase component was 5½% for the June 30, 1994 valuation, and decreased to 4% for the June 30, 1995 and subsequent valuations.
- The mortality rates for service pensioners prior to the 1995 valuation were age-specific, but sex-neutral. Effective June 30, 1995, they were changed to both age- and sex-specific, and were changed such that the new rates were lower than the former rates for younger ages (generally 70 or less) and higher for older ages.
- Assumptions for decrements from active service due to mortality, ordinary disability and accidental disability were changed.

- Assumptions for withdrawal from active service both before and after eligibility for service retirement were changed.

Effective with the June 30, 1995 valuation, the Unfunded Actuarial Accrued Liability was consolidated and reestablished, as described further in Section IV.

Also effective with the June 30, 1995 valuation, the actuarial value of assets was determined by a market value restart, where the actuarial value of assets was set equal to the market value of assets. For years prior to 1995, the actuarial value of assets was determined using a five year average of "unexpected investment returns". For years subsequent to 1995, a similar five year average approach was used, but the weights applied to the each of the five years were modified slightly from the prior approach.

Also effective with the 1995 valuation and enacted with Chapter 249 of the Laws of 1996:

- A change that eliminated the "p-factor" method of determining benefits attributable to employer contributions.

- The value of benefits attributable to employee contributions was included in the calculation of total plan liabilities and plan assets to determine the employer contribution.

- The methodology for determining the estimated value of assets that may become transferable from this fund to the Variable Supplements Funds was changed.

Several changes in assumptions and methods were proposed by the Office of the Actuary for the June 30, 1999 valuation. These changes were implemented in Chapter 85 of the Laws of 2000, and included the following:

- The actuarial interest rate was changed from 8.75% to 8.00%

- The General Wage Increase component of the salary scale assumption was changed from 4% to 3%.

- The assumed rates of mortality, withdrawal, retirement and disability were changed based on recent experience studies.

- The Unfunded Actuarial Accrued Liability was consolidated and reestablished using the Entry Age Actuarial Cost Method, and the BSL was eliminated.

- The actuarial asset value was reset to market value.

- The investment expenses were reimbursed to the Fund as a separately-identified contribution amount.

IX. Transferable Earnings

Associated with the Fund are two so-called variable supplements funds, the Firefighters' Variable Supplements Fund (FVSF) and the Fire Officers' Variable Supplements Fund (FOVSF). As originally conceived, the FVSF and FOVSF (VSFs) were to use favorable earnings from the Fund's equity investments to provide supplemental benefits to retired members. The amounts to be transferred from the Fund into the VSFs in order to provide the supplemental benefits became known as "transferable earnings" or as "skim."

Prior to 1988 the supplemental benefits to be paid each year were determined by the Boards of Trustees of the VSFs, consistent with the amount of transferable earnings received. Starting in 1988, pursuant to Chapter 247 of the Laws of 1988, the indeterminate benefits of the FVSF were replaced by a fixed, defined schedule of benefits. Likewise, in 1993, pursuant to Chapter 479 of the Laws of 1993, a fixed, defined schedule of benefits was enacted for the FOVSF.

Although payment of the fixed supplemental benefit schedule is guaranteed by those chapters of law, the mechanism for funding both variable supplements funds continues to be transferable earnings. However, transferable earnings will not, other than by pure coincidence, equal the amount needed to fund the guaranteed benefits. In order to provide for any possible shortfall, the Office of the Actuary began including the present value of estimated future payments needed to fund the VSFs in the Fund's liabilities effective with the 1995-96 fiscal year, consistent with Section 2 of Chapter 598 of the Laws of 1996. The present value of estimated future payments was determined by subtracting the assets of the VSFs from the present value of future benefits provided by the VSFs.

The computation of transferable earnings is a multi-step process, involving:

- Determining actual earnings, including capital gains and losses, on the Fund's equity portfolio;
- Determining what those earnings would have amounted to had the assets been invested in grade Aa corporate utility bonds instead of equities ("hypothetical earnings");
- Keeping track of any negative differentials between actual and hypothetical earnings, including interest thereon;
- Comparing positive differentials between actual and hypothetical earnings with the Accumulated Benefit Obligation (ABO) of the FVSF and the FOVSF separately, and with accumulated negative earnings differentials, if any; and
- Computing ratios of weighted salaries of members of the FVSF and FOVSF separately to salaries of members of both variable supplement funds in combination.

Transferable Earnings, calculated in the above manner, was $0 as of June 30, 1997 through 1999, as shown in the table in Section V.

In order to allow for funding of the benefits provided by the VSFs in a more actuarial manner, beginning with the June 30, 1995 valuation an amount called "present value of future skim" was added to the total present value of benefits. This "present value of future skim" was the Projected Benefit Obligation (PBO) of the VSFs reduced by the assets of the VSFs. The "present value of future skim" is not less than $0, so that if the assets of the VSFs exceed the PBO of the VSFs, no additional amount is added to the liability of the Pension Fund. This was the situation with the June 30, 1999 valuation, so that even if the Transferable Earnings for June 30, 1999, as described in the previous paragraph, were greater than $0, no amount would have been added to the liability calculations for the Pension Fund.

Given that the benefits of the VSFs are now on a fixed, guaranteed schedule, are no longer linked to favorable earnings on the Fund's investments and are being funded within the Fund's liabilities, there no longer would appear to be any logical reason to continue the time-consuming process of computing transferable earnings. It would be more desirable and straightforward to compute payments to the variable supplements funds in accordance with a recognized defined benefit actuarial funding method, such as the frozen entry age method used for computing contributions to the Fund.

X. Recommendation

The actuarial asset valuation method, as described in Section V, adjusts the current year market value to attempt to smooth the volatility normally encountered with equities. As described in Section VIII, the actuarial asset valuation method was changed with the June 30, 1995 valuation and again with the June 30, 1999 valuation. In each case, the change made was a "market value restart", where the actuarial asset value was set equal to the market value of assets. Also, in each case the market value of assets was higher than the actuarial value that would have otherwise been calculated, thus resulting in a lower contribution requirement.

Even though, as mentioned above, this plan is not subject to the funding requirements promulgated by the Internal Revenue Service, we can look to the Code et al. for guidelines. The IRS permits actuarial asset valuation methods that smooth fluctuations, and even permits, with certain restrictions, changing from one method to another (e.g., from a method which smoothes assets fluctuations to a market value of assets; i.e., a market value restart) without prior IRS approval. The general intent of the IRS rules is to require that an actuarial asset valuation method be applied on a consistent basis. If changes in the actuarial asset valuation method are made, they should not produce results that are consistently above or below the fair market value.

The Department has a concern that, in some years, the actuarial asset valuation method has been changed in order to reduce the contribution requirement. The result is that contributions that would otherwise be made in that year are deferred to future years. The ultimate cost of a pension plan is the plan benefits plus expenses less investment income. This deferral of contribution would result primarily in less investment income, which means that the ultimate cost of the pension plan would be greater than it otherwise would be. In addition, changing the actuarial asset valuation method via the fresh-start method can result in contribution requirements that are not directly comparable to previous years, and may produce a misleading indication of the magnitude of future contribution requirements.

The Department recommends that the current actuarial asset valuation method be applied more consistently, and that changes in the actuarial asset valuation method not be made primarily in order to reduce contribution requirements.

XI. Comments

1. This comment considers a longer period than the five year period encompassed by this report.

   The actuarial interest rate and the salary scale assumption are related, since they share a component: the assumed wage increase. A single measure that incorporates certain aspects of both the actuarial interest rate and the salary scale assumption is the *spread*, or excess of the interest rate over the salary scale assumption. The spread is often viewed as a measure of the degree of conservatism or liberalism inherent in the interest and salary scale assumptions. As the spread increases, the assumptions are considered to be more liberal (i.e., optimistic, or leading to lower employer contributions). Conversely, as the spread decreases, the assumptions are considered more conservative. The salary scale assumption of the New York Fire Department Pension Fund is made up of a wage increase assumption, which is uniform for all ages, and a merit and productivity assumption, which varies by years of service. The merit and productivity assumption decreases from 5% in the first year to 1% in the fifth year. The spread, for the purposes of this comment, is considered to be the excess of the interest rate assumption over the wage increase assumption.

   The table below shows the changes in the interest assumption and the salary increase assumption, and the resulting spread, over the last several years.

Effective Date June 30	Interest Assumption	Wage Increase	Spread
1989	8.25	5.50	2.75
1990	8.50	5.50	3.00
1995	8.75	4.00	4.75
1999	8.00	3.00	5.00

Over the last 10 years the spread has increased from 2.75% to 5.00%. Since about 50% of the total plan liability is due to the active population (for which a salary scale assumption is relevant), this increasing spread over the last several years reflects an increasingly liberal funding posture.

Each of the two primary assumptions, the interest rate and the wage increase, appear to be reasonable; therefore the resulting spread between the two would be reasonable. (The wage increase assumption appears reasonable considering that the total salary scale assumption is the sum of the wage increase assumption and the merit and productivity assumption, as described above.) However, the observation of the spread in subsequent year's valuations can provide a useful measure of a general trend in actuarial assumptions used for funding.

2. As noted in Section IV, some of the components of the Unfunded Actuarial Liability (including the BSL) are amortized in a manner that does not produce level dollar amortization payments. Rather, the amortization payments after the first are 103% of the preceding payment.

   This plan is not subject to the minimum funding standards of Internal Revenue Code section 412; however, we can look to the IRC for guidance on matters of funding. That section states that unfunded liabilities are to be amortized "… in equal annual installments …". Clearly, the method described above to amortize certain components of unfunded liability does not satisfy that standard.

Another source for guidance is the Governmental Accounting Standards Board. GASB 27 provides for two possible methods of amortizing unfunded actuarial liability: either as level dollar amounts or as a level percentage of projected payroll. The salary scale assumption for the June 30, 1999 valuation consisted of the wage increase assumption of 3% plus merit and productivity percentages that vary by age. The current amortization method does not conform to either of the two alternatives presented by GASB 27, but it does produce amortization payments that lie between the two series of payments that would be produced by the two alternatives.

The Department has a concern here that by using increasing payments to amortize components of the unfunded liability, the System is deferring some funding that would otherwise be made sooner. Because the current funding level, as shown in Section VII, appears to be relatively healthy, it might seem that some deferral of funding would be acceptable. However, the current funded status of the System is due largely to a period of unusually high investment gains. Such gains are unlikely to be sustained in the future, and the funded status could deteriorate from the current level. The Department will be considering further recommendations or guidelines in this matter.

Respectfully submitted,

/s/
Michael J. Lambert
Principal Actuary

State of New York
County of New York } *SS*

MICHAEL J. LAMBERT, being duly sworn, deposes and says that the foregoing actuarial report, subscribed by him, is true to the best of his knowledge and belief.

/s/
Michael J. Lambert

Subscribed and sworn to before me
this ________ day of ___________, 2001.