



**STATE OF NEW YORK INSURANCE DEPARTMENT**

**REPORT ON EXAMINATION**

**OF THE**

**NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM**

**AND**

**NEW YORK CITY PUBLIC EMPLOYEES'**

**GROUP LIFE INSURANCE PLAN**

**CONDITION:**

**JUNE 30, 2002**

**DATE OF REPORT:**

**JUNE 25, 2009**

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**EXAMINER:**

**JOSHUA WEISS**

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David A. Paterson  
Governor

Eric R. Dinallo  
Superintendent

June 25, 2009

Honorable Eric R. Dinallo  
Superintendent of Insurance  
New York, New York 10004

Sir:

In accordance with instructions contained in Appointment No. 22147, dated February 4, 2004 and annexed hereto, an examination has been made into the condition and affairs of the New York City Employees' Retirement System, hereinafter referred to as "NYCERS" or the "System," and the New York City Public Employees' Group Life Insurance Plan at its home office located at 335 Adams Street 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

This examination covers the period from July 1, 1999 through June 30, 2002. The examination comprised a verification of assets and liabilities as of June 30, 2002 to determine whether the System's 2002 filed annual statement fairly presents its financial condition. 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.

The examination revealed the following key findings and recommendations:

1. The Department recommends that the System enhance its practices with respect to audits conducted by the Department and make a greater effort to facilitate the examiner's request for information on future examinations. (See item 17 of this report)
2. Based on the examiner's review, it was revealed that during the period of examination the System did not have a comprehensive Investment Policy Statement that governed, controlled, and monitored its investment activities. However, subsequent to the examination period the System did develop a comprehensive Investment Policy Statement which the Department believes satisfies its concerns about proper governance of the System's investment activities. It is noted that the System and the Comptroller maintain that the System did have various policies and guidelines in place governing investment activities, and that in an effort to consolidate those guidelines an Investment Policy Statement was adopted starting in 2004. (See item 17 of this report)
3. Based on the examiner's review of transcripts of the board of trustees meetings, the board's interactions with the Comptroller (BAM) and legal counsel indicate that the trustees need to be vigilant regarding the inherent potential institutional conflict of counsel. (See item 17 of this report)
4. With regard to loaned securities, it was noted that the board of trustees and the Comptroller's office did not give clear guidance to Citibank on how to deal with downgraded securities in the portfolio. This issue was also a concern raised in the Independent Fiduciary Services, Inc. Management Study and Operations Review report of the New York City Comptroller's Asset Management Function. Subsequent to the examination period, however, the System adopted an Investment Policy Statement which the Department believes has controls that should provide adequate oversight of the Systems Securities Lending Program. (See item 8 of this report)

## 2. SCOPE OF EXAMINATION

The prior examination was conducted as of June 30, 1999. This examination covers the period from July 1, 1999 through June 30, 2002. As necessary, the examiner reviewed transactions occurring subsequent to June 30, 2002, but prior to the date of this report.

The examination comprised a verification of assets and liabilities as of June 30, 2002 to determine whether the System's 2002 filed annual statement fairly presents its financial condition. The examiner reviewed the System's income and disbursements necessary to accomplish such verification and utilized examination procedures, as deemed appropriate, in the review or audit of the following matters:

- History of the System
- Management and control
- Corporate governance
- Growth of the System
- Accounts and records
- Financial statements
- Member benefits

The examiner reviewed the corrective actions taken by the System with respect to violations, recommendations and/or comments contained in the prior report on examination. The results of the examiner's review are contained in Item 18 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 SYSTEM

#### A. History

The New York City Employees' Retirement System was established by enactment of Chapter 427 of the laws of 1920 and began operations on October 1, 1920. The legal provisions of the retirement law governing this retirement system were part of the New York City Charter until it was recodified in 1937 when such provisions were transferred to Chapter 3, Title B of the Administrative Code of the City of New York ("Administrative Code"). The laws were subsequently recodified, changing Title B to Title 13.

Certain sections of the Retirement and Social Security Law ("RSSL"), especially with regard to federal old age and survivors insurance benefits to employees of the State and its political subdivisions, apply to the System.

#### B. Management

Prior to July 1, 1969, the management of the System was vested in the Board of Estimate of the City of New York. Legislation was enacted in 1969 establishing a board of trustees to administer the System. The board consists of representatives of the Mayor, the Comptroller of the City of New York ("Comptroller"), the Public Advocate, the five borough presidents, and the chief executive officers of each of the three employee organizations representing the largest membership in the System (Local 100 – TWU, District Council 37 – AFSCME and Local 237 – International Brotherhood of Teamsters).

Each member of the board has one vote except for the borough presidents, who have one-fifth vote each. The maximum number of votes cast by the board is therefore seven. Each vote of the board requires at least three and three-fifths votes for passage of any resolution. The same number constitutes a quorum of the board.

The 11 board members and their titles as of June 30, 2002, were as follows:

<u>Name</u>	<u>Title</u>
Susan Rockford	Chairperson Representative of the Mayor's office
Adolfo Carrion, Jr.	Borough President – Bronx Represented by Bob Castellanete
C. Virginia Fields	Borough President – Manhattan Represented by Denise Outram
Marty Markowitz	Borough President – Brooklyn Represented by Seth Cummins, Counsel
Betsy Gotbaum	Public Advocate Represented by Ed Norris
Carroll E. Haynes	President, Local 237 – International Brotherhood of Teamsters Represented by Nicholas Mancuso
William C. Thompson	Comptroller of the City of New York Represented by Horatio Sparkes
Roger Toussaint	President, Local 100 – TWU Represented by Ed Watt
James P. Molinaro	Borough President – Staten Island Represented by Daniel Master, Counsel
Lillian Roberts	Administrator, District Council 37 - AFSCME Represented by Joel Giller
Helen Marshall	Borough President – Queens Represented by Hugh Weinberg

The examiner's review of the minutes of the meetings of the board of trustees indicated that the meetings were well attended.

The following is a listing of the principal officers of the System as of June 30, 2002:

<u>Name</u>	<u>Title</u>
Martha E. Stark	Chairman of the Board
John J. Murphy	Executive Director
William C. Thompson	Comptroller
Robert C. North	Actuary

C. Membership and Employers

Membership in NYCERS is open to all New York City (“NYC”) employees who are not eligible to participate in the NYC Teachers’ Retirement System, the NYC Police Pension Fund, the NY Fire Department Pension Fund, or the NYC Board of Education Retirement System. All NYC employees holding permanent civil service positions in the competitive or labor class are required to become members of the System six months after their date of appointment, but may voluntarily join the System prior to their mandated membership date. All other eligible employees have the option of joining the System upon their appointment or at any time thereafter.

In addition to the various departments of the City of New York, members of NYCERS are also employed by the New York City Transit Authority, the Triborough Bridge and Tunnel Authority, the NYC Housing Authority, the NYC Health and Hospitals Corporation, the NYC Off-Track Betting Corporation, the NYC Residential Mortgage Insurance Corporation, the NYC Housing Development Corporation, the City University of New York, and the New York City School Construction Authority. As of June 30, 2002, there were 177,511 active members.

#### 4. SIGNIFICANT OPERATING RESULTS

Indicated below is significant information concerning the operations of the System during the period under examination and extracted from its filed annual statements. Failure of items to add to the totals shown in any table in this report is due to rounding.

The following table indicates the System's financial growth during the period under review:

	<u>June 30, 1999</u>	<u>June 30, 2002</u>	<u>Increase (Decrease)</u>
Admitted assets	<u>\$40,784,812,867</u>	<u>\$31,913,280,638</u>	<u>\$(8,871,532,229)</u>
Reserves	\$33,093,949,843	\$43,561,103,000	\$10,467,153,157
Benefits due and unpaid	97,798,005	164,425,483	66,627,478
Other liabilities	<u>1,766,010</u>	<u>2,976,008</u>	<u>1,209,998</u>
Net reserves and all other liabilities	<u>\$33,193,513,858</u>	<u>\$43,728,504,491</u>	<u>\$10,534,990,633</u>
Excess of admitted assets over total net reserves and all other liabilities	<u>7,591,299,009</u>	<u>(11,815,223,853)</u>	<u>(19,406,522,862)</u>
Total	<u>\$40,784,812,867</u>	<u>\$31,913,280,638</u>	<u>\$(8,871,532,229)</u>

The decrease in admitted assets was due primarily to a downturn in the equities market. The System's ledger assets as of June 30, 2002 were mainly comprised of stocks (62.7%), bonds (42.9%), and collateral loans (15.3%).

#### Fiscal Year Ended June 30,

	<u>2000</u>	<u>2001</u>	<u>2002</u>
Receipts	\$5,346,955,554	\$4,061,884,418	\$3,560,489,170
Disbursements	<u>3,332,433,300</u>	<u>3,599,493,355</u>	<u>4,143,955,915</u>
Net Receipts	<u>\$2,014,522,254</u>	<u>\$ 462,391,063</u>	<u>\$( 583,466,745)</u>

The following table indicates the membership of the System at the beginning and closing dates of the examination:

	<u>July 1, 1999</u>	<u>June 30, 2002</u>	<u>Increase</u>
Active members	169,458	177,511	8,053
Service pensioners	95,777	96,883	1,106
All other pensioners	<u>26,103</u>	<u>26,594</u>	<u>491</u>
Total	<u>291,338</u>	<u>300,988</u>	<u>9,650</u>

## 5. FINANCIAL STATEMENTS

The following statements show the assets and liabilities of the System as of June 30, 2002, as contained in the System's 2002 filed annual statement; and the comparative statements of income and disbursements for each of the fiscal years under review. The examiner's review of a sample of transactions did not reveal any differences which materially affected the System's financial condition as presented in its financial statements contained in the June 30, 2002 filed annual statement.

### A. STATEMENT OF ASSETS AND LIABILITIES FISCAL YEAR ENDED JUNE 30, 2002

#### Assets

##### Ledger assets

Mortgage loans on real estate	\$ 2,593,062
Collateral loans	4,106,996,332
Bonds	11,484,843,297
Stocks	16,771,452,408
Cash on deposit	(193,224,056)
Receivable for investments sold	586,810,813
Payable for investments purchased	(1,941,409,896)
Payable for securities lending	(4,106,996,332)
Miscellaneous receivables	1,422,577
Miscellaneous payable	<u>(917,892)</u>
Total ledger assets	<u>\$26,711,570,313</u>

<u>Non-ledger assets</u>	
Interest due on Tier 4 loans	\$ 57,196,225
Interest accrued on mortgages	6,973
Interest accrued on bonds	130,938,892
Dividends declared and unpaid on equities	19,432,023
Member loans receivable	858,416,143
Due from employers - annuity deductions	5,313,140
Due from employers – employer contributions	10,159,603
Due from employees – Tier 4 loan insurance	1,148,061
Market value of equities over book value	5,193,469,663
Fixed assets – capitalization of new facilities costs	<u>10,725,000</u>
Total non-ledger assets	\$ <u>6,286,805,723</u>
Gross assets	\$ <u>32,998,376,036</u>
<u>Deduct: assets not admitted</u>	
Fixed assets – capitalization of new facilities costs	\$ 10,725,000
Book value of bonds over investment value	215,954,255
Member loans receivable	<u>858,416,143</u>
Total non – admitted assets	\$ <u>1,085,095,398</u>
Total admitted assets	\$ <u>31,913,280,638</u>

Liabilities

Present value of benefits payable on account of beneficiaries now drawing allowances	\$ 20,347,229,214
Net reserves for benefits provided by the employer for members now in active service	22,185,779,456
PV of future skim A/C VSF	<u>1,028,094,330</u>
Total net reserves	\$ 43,561,103,000
Accrued benefits payable	164,425,483
Amount in transit	9,921,615,718
Reserve to offset amount in transit	(9,921,615,718)
Due to variable supplement funds	1,143,000
Administrative expenses due to vendors	<u>1,833,008</u>
Net reserves and all other liabilities	\$ <u>43,728,504,491</u>
Excess of admitted assets over total net reserves and all other liabilities	\$ <u>(11,815,223,853)</u>
Total	\$ <u>31,913,280,638</u>

**B. STATEMENT OF INCOME AND DISBURSEMENTS**  
**FISCAL YEAR ENDING JUNE 30,**

	<u>2000</u>	<u>2001</u>	<u>2002</u>
Amount of ledger assets at end of previous year	\$ <u>24,818,123,742</u>	\$ <u>26,832,645,996</u>	\$ <u>27,295,037,059</u>
<b><u>Income:</u></b>			
<b><u>From Members:</u></b>			
Regular contributions	\$ 248,727,732	\$ 235,967,634	\$ 180,432,429
Contributions for buy back	6,556,831	19,874,089	27,233,749
Member loan repayments	216,174,344	236,033,205	252,420,865
Improved benefit retirement program	115,837,710	112,623,096	107,107,781
Improved benefit retirement program – buy back	0	367,104	11,569,096
Optional insurance	8,657	7,580	8,281
Transfers from other NYS retirement systems	3,544,052	1,958,158	7,464,471
Payment of additional interest on T1 & 2 loans to CRF	2,347,186	1,472,817	789,295
<b><u>From Employers:</u></b>			
City of New York	26,897,489	48,513,636	56,152,543
Other employers	28,459,258	50,221,451	54,969,800
Reserves transferred from other systems	13,235,181	7,522,587	0
Administrative fees	0	0	744,391
Tier 4 administrative charges	779,525	808,845	0

	<u>2000</u>	<u>2001</u>	<u>2002</u>
<u>From Interest:</u>			
Mortgage interest	\$ 838,911	\$ 669,976	\$ 517,181
Bond interest	801,791,562	912,422,567	753,165,738
Equity earnings	316,254,806	286,966,194	293,103,982
Interest on money market	72,180	27,079	0
Interest on tier 4 loans	44,701,104	46,883,192	48,922,157
Reimbursement for TA death gamble	4,054,530	0	0
Interest on collateral loans	15,628,476	16,666,829	24,681,787
<u>From Other Sources</u>			
Re-deposited benefits	886,026	986,936	729,592
Insurance premiums on member loans	1,401,150	1,292,837	2,279,953
Miscellaneous investment income	4,430,207	5,649,290	2,471,738
Misc.– non-investment income	0	0	13,944,141
Mortgage escrow and replacement	1,047,434	1,256,165	956,124
Gain on sale of bonds	192,766,093	367,210,973	387,149,868
Gain on sale of stocks	3,237,975,205	1,627,152,492	1,261,637,194
Increase in book value bonds	57,252,153	74,096,514	66,517,166
Reimbursement for administrative and investment expenses	<u>5,287,752</u>	<u>5,233,170</u>	<u>5,519,846</u>
Total income	\$ 5,346,955,554	\$4,061,884,418	\$3,560,489,170
Increase by transfer of funds	\$ <u>4,926,449,182</u>	\$ <u>4,380,012,946</u>	\$ <u>3,210,633,682</u>
Amounts carried forward	\$ <u>10,273,404,736</u>	\$ <u>8,441,897,364</u>	\$ <u>6,771,122,852</u>

	<u>2000</u>	<u>2001</u>	<u>2002</u>
<u>Disbursements</u>			
Annual/periodic payments	\$ 1,957,128,538	\$ 2,220,960,300	\$ 2,345,534,428
Lump sum death-option 1	11,555,504	13,819,509	11,619,239
Lump sum death-option 4	7,740,180	8,577,057	8,101,006
Articles 11, 14 and 15	4,471,565	5,653,089	5,256,208
Death in service	61,478,356	70,606,389	70,092,518
Refunds	20,019,258	19,231,663	96,992,332
Pay tier 4 loans via refund & retirement	15,811,895	23,417,774	27,732,762
Excess	12,180,271	16,990,940	9,302,635
TRF to members accounts	3,251	0	24,009
Payment of additional interest on T1 & T2 loans to CRF	2,347,186	1,467,260	789,295
Transfers to other systems	14,777,757	14,042,411	7,678,302
Designated annuitants paid	3,600,296	3,477,837	3,602,113
Designated annuities-option B	14,839	4,428	0
Administrative expenses	40,638,811	34,449,860	34,430,761
Member loans	316,746,534	332,279,292	276,927,338
Miscellaneous fund expenses	0	0	28
Mortgage escrow & reserves	691,710	1,558,958	600,723
Tier 4 loan insurance payments	0	1,655,630	0
Loan insurance payments – all tiers	1,507,856	0	2,014,983
Investment expenses	32,472,524	41,344,086	37,192,227
Paid to variable supplemental funds	217,628	98,668,701	1,703,000
Gross loss on sale of bonds	436,708,118	237,181,212	421,155,296
Gross loss on sale of stocks	367,185,941	430,853,034	755,336,569
Decrease by adjustment in book value of bonds	<u>25,135,282</u>	<u>23,253,923</u>	<u>27,870,144</u>
Total disbursements	\$ 3,332,433,300	\$ 3,599,493,355	\$ 4,143,955,915
Decrease by transfer of funds	<u>\$ 4,926,449,182</u>	<u>\$ 4,380,012,946</u>	<u>\$ 3,210,633,682</u>
Sum of disbursements and decreases by transfers	<u>\$ 8,258,882,482</u>	<u>\$ 7,979,506,301</u>	<u>\$ 7,354,589,597</u>
Amount of ledger assets at end of current year	<u>\$26,832,645,996</u>	<u>\$27,295,037,059</u>	<u>\$26,711,570,313</u>

## 6. TREATMENT OF MEMBERS

The examiner reviewed a sample of various types of benefits to members and beneficiaries to determine whether they were treated fairly and in accordance with the rules of the System. 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 upon the sample reviewed, no significant findings were noted.

## 7. ACCOUNTING RECORDS

### Annual Statement

Section 307(a)(1) of the New York Insurance Law states, in part:

“. . . every pension fund, retirement system . . . shall file in the office of the superintendent, annually on or before the first day of March, a statement, to be known as its annual statement . . . showing its condition at last year-end . . .”

The System violated Section 307(a)(1) of the New York Insurance Law by filing its 2002 annual statement in February 2004, eleven months after its due date. This delay in filing the annual statement occurred under the old annual statement filing process. For the fiscal year ending 2007, the Department has adopted a new and more streamlined electronic annual statement filing process.

## 8. SECURITIES LENDING

### Board of Trustee Oversight

Pursuant to the Administrative Code, NYCERS delegates to the New York City Comptroller certain responsibilities for the investment and management of NYCERS's assets. The Comptroller retained Citibank, a unit of Citigroup, as custodial bank for NYCERS and the other New York City pension funds, by agreement (“Custodian Agreement”) dated January 1,

1998, between the Comptroller and Citibank. Pursuant to the Custodian Agreement, Citibank also established and provided a securities lending program for the New York City pension funds, (“Securities Lending Program”). The terms of the Securities Lending Program required that Citibank, acting as the securities lending agent, loan securities to qualified borrowers in exchange for cash collateral from the borrowers of such lent securities. Citibank was authorized to invest the cash collateral in certain securities, pursuant to written investment guidelines developed by the Comptroller.

Citibank, on behalf of NYCERS, Teachers’ Retirement System of the City of New York, New York City Police Pension Fund, and the New York Fire Department Pension Fund purchased an \$80 million principal amount of NPF XII, Inc., Series 2000-2 Class A Health Care Receivables Securitization Program Notes, in a private placement offering in October 2000 using \$80 million of cash collateral from the Securities Lending Program. NPF XII, Inc. is a special purpose entity and wholly-owned subsidiary of National Century Financial Enterprises, Inc. (“NCFE”). NYCERS portion of the total purchase was \$30 million. As a result of fraudulent conduct by NCFE and its officers, and a series of downgrades, NCFE declared bankruptcy in November 2002. The New York City pension funds sustained a loss of \$80 million, with NYCERS incurring \$30 million of the total loss.

The New York City Corporation Counsel informed Citibank that they were prepared to assert and pursue against Citibank causes of action arising from the \$80 million loss. At issue was the question of whether Citibank, as custodian, should have sold NCFE securities once the securities were downgraded. Although Citibank denied any responsibility for the loss, in order to avoid litigation concerning the dispute, the parties agreed to settle the dispute. The agreement involved an immediate payment by Citigroup of \$15 million and possible additional payments dependent upon amounts recovered from other parties involved in the transaction. The \$15 million was divided among all the NYC pension funds that participated in the NCFE transaction. The System has subsequently advised that recovery efforts continued after the examination period, and that total recoveries are expected to be at least \$50 million. Based on the examiner’s review, it appears that Citibank was given authority by the New York City Comptroller to invest the cash collateral received from the Securities Lending Program.

It was also noted that the board of trustees and the Comptroller's office did not give clear guidance to Citibank on how to deal with downgraded securities in the portfolio. This issue was also a concern raised in the Independent Fiduciary Services, Inc. Management Study and Operations Review report of the New York City Comptroller's Asset Management Function. However, on November 23, 2004, the System adopted an Investment Policy Statement which states the following:

“Cash collateral received will be invested in a high-quality investment program that emphasizes the return of principal, maintains required daily liquidity, and ensures diversification across approved investment types.”

“Each agent bank is required to act as a fiduciary with respect to NYCERS and the Fund, and to have systemic and procedural controls in place to ensure adherence to guidelines for operating the securities lending program on behalf of the Fund. The results of the securities lending program are reported to the Board on a regular basis.”

The Department believes that the above additional controls should provide adequate oversight of the System's Securities Lending Program.

## 9. ACTUARIAL COST METHOD AND EMPLOYER CONTRIBUTION

The actuarial cost method by which employer contributions to the New York City Employees' Retirement System are computed is the Frozen Initial Liability Actuarial Cost Method. Under this method, the present value of future normal contributions is developed as a balancing item, calculated by subtracting the sum of the actuarial value of assets, the unfunded actuarial accrued liability and the actuarial present value of prospective required employee contributions from the actuarial present value of prospective benefits as of the valuation date. This can be written symbolically as:

$$PVFNC = PVB - (AVA + UAAL + PVFeeC)$$

Where

PVFNC = Present Value of Future Normal (Employer) Contributions

PVB = Present Value of Prospective Benefits (section 10)

AVA = Actuarial Value of Assets (section 12)

UAAL = Unfunded Actuarial Accrued Liability (section 11)

PVFeeC = Present Value of Future Required Employee Contributions

For the June 30, 2002 valuation, the above values are (to the nearest million dollars):

PVB =	43,587	Present value of future benefits
AVA =	43,561	Assets on hand (actuarial value)
UAAL =	59	Portion of future employer contributions
PVFeeC =	1,327	Present value of employee contributions

The present value of future normal employer contributions is then

$$\begin{aligned} PVFNC &= 43,587 - (43,561 + 59 + 1,327) \\ &= 43,587 - 44,947 \\ &= (1,360) \end{aligned}$$

This calculation is displayed in more detail in the next table.

Generally, the present value of future employer normal contributions is a positive number. However, because investment returns in the late 1990's were unusually high, the

resulting actuarial value of assets used above was greater than it ordinarily would be, and the amount calculated as present value of future employer normal contributions was a negative number. In that situation, the employer normal contribution is set at zero.

As a consequence of this cost method, actuarial gains and losses (deviations of actual experience from what was assumed) are reflected in the normal contribution rate.

The fiscal year runs from July 1 through June 30. The valuation date (date as of which System liabilities and assets are determined for the purpose of calculating the employer contribution) is the last day of each fiscal year, June 30. The values determined as of that date are used to calculate the amount of employer contribution due for the next succeeding fiscal year, beginning one day after the valuation date.

The New York City Office of the Actuary, which performs the actuarial valuation, sends an Estimated Appropriation letter to the System in May or June. This letter informs the System of the estimated amount to be contributed for the fiscal year beginning July 1. This estimated amount is determined by the Office of the Actuary based on current actuarial assumptions, projections of the census data from the prior actuarial valuation, and any known significant legislation. The System then begins making monthly contributions for the fiscal year beginning July 1 on the basis of the Estimated Appropriation letter.

Usually by the spring of the year, the Office of the Actuary has completed the valuation as of the preceding June 30. The Office of the Actuary then sends an Appropriations “True-Up” letter to the System informing it of the actual contribution due for the fiscal year ending on the next June 30. The System adjusts the monthly contributions it is making so that, by June 30, the total amount it has contributed during the fiscal year, including the estimated amounts commencing at the beginning of the fiscal year and the adjusted amounts contributed in the last few months of the fiscal year, is the amount specified by the Appropriations True-Up letter.

For example, for the fiscal year ending June 30, 2002, the events described above were as follows:

- June 14, 2001: Office of the Actuary (OA) sends Estimated Appropriation Letter to System stating that the estimated employer contribution for the 2002 fiscal year is \$110,426,000.
- July, 2001: System begins making monthly contributions for 2002 fiscal year based on the Estimated Appropriation Letter.

- July, 2001: OA begins work on actuarial valuation for 2002 fiscal year. This valuation is based on census and asset data as of June 30, 2001.
- June 6, 2002: OA sends “True-Up” Appropriation Letter to System stating that the employer contribution for the 2002 fiscal year is \$105,660,000. At that point, the System has probably one more monthly contribution to be made for the 2002 fiscal year, and the amount of that contribution is reduced by \$4,766,000 so that the sum of the previous eleven contributions and that final contribution is \$105,660,000.

The formula above shows the development of the Present Value of Future Normal Contributions as a balancing item. The normal contribution rate is calculated by dividing the present value of future normal contributions by the present value of projected future salaries of members on the payroll as of the valuation date. This contribution rate is calculated to be a level percentage of payroll in future years. The employer normal contribution for the ensuing fiscal year is derived by multiplying the normal contribution rate by aggregate annual salaries. The resulting normal contribution is appropriate for a value that is to be paid immediately on the valuation date; in fact, as mentioned above, the contribution is paid throughout the year. To adjust for the timing, the present value of projected future salaries reflects an interest adjustment, so that the resulting normal cost is appropriate for a mid-year contribution.

The total employer contribution is made up of several components. The normal contribution, described above, is generally the largest component. Other components are described below.

Amortization of unfunded actuarial accrued liability (UAAL contribution): This component is itself made up of one or more components, each one of which is a contribution to amortize a liability amount which is not being funded through the normal cost. The UAAL is described further in section 11.

Administrative Expenses: The actual operating expenses for the System for a given fiscal year, after some minor loan expense and revenue adjustments, are used as the basis for the projected operating expenses included in the total employer contribution for the next succeeding fiscal year. The administrative expense included in the total employer contribution for a fiscal year is

the adjusted actual operating expenses for the preceding fiscal year increased by the assumed interest rate; i.e., multiplied by 1.08.

Investment Expenses: Beginning with the June 30, 1999 actuarial valuation, investment expenses were explicitly addressed in the calculation of the employer contribution; previously, the amount of investment expenses had been implicitly recognized in the calculation of the normal cost. The investment expense included in the total employer contribution for a fiscal year is the actual investment expense for the preceding fiscal year increased by the assumed interest rate; i.e., multiplied by 1.08.

Group Term Life Insurance (GTLI) Premium: In addition to retirement benefits, the System provides death benefits for members. Internal Revenue Code Section 79 states that the first \$50,000 of group life insurance benefits has no tax consequences to the employee or the employer; amounts of insurance in excess of \$50,000 are included in employee income. To accommodate that distinction, the first \$50,000 of life insurance benefit paid on account of death in active service in the Retirement System is paid from the funds of the Group Term Life Insurance Plan. The amount in excess of \$50,000 is paid from the funds of the Retirement System. The GTLI premium is the amount of the employer contribution necessary to fund the benefits to be paid from the Group Term Life Insurance Plan.

This section of the examination report from the Examining Actuary covers the three fiscal years ending June 30, 2000 through June 30, 2002. The following table, and many of the subsequent tables in this report, includes values for those three fiscal years, as well as values for the immediately preceding fiscal year, ending June 30, 1999. The values determined as of June 30, 1999, are used to determine the employer contribution to be made during the fiscal year ending June 30, 2000.

Employer contributions were computed as follows (dollar amounts shown to nearest thousand):

	<u>6/30/99</u>	<u>6/30/00</u>	<u>6/30/01</u>	<u>6/30/02</u>
<b>Liabilities</b>				
PV Benefits for beneficiaries	15,419,480	15,806,744	16,650,515	17,139,513
PV Supplemental Benefits	874,096	3,306,883	3,263,052	3,207,716
PV Benefits for Actives	19,361,121	21,357,417	22,750,238	24,463,468
PV Future Skim for VSF	691,875	853,205	923,161	1,028,094
Total	36,346,572	41,324,249	43,586,966	45,838,791
Deferred per 2000/125 <sup>1</sup>	-	-	-	2,251,914
Net Total	36,346,572	41,324,249	43,586,966	43,586,877
<b>Assets</b>				
Actuarial Asset Value	40,936,024	42,393,627	43,015,355	43,561,103
<b>Prospective Assets</b>				
PV Future UAL Contribs	0	25,122	72,215	58,833
PV Future Employee Contribs	2,334,565	1,297,937	1,325,586	1,327,314
Total	43,270,589	43,716,686	44,413,156	44,947,250
PV Future Normal Contribs	(6,924,017)	(2,392,437)	(826,190)	(1,360,373)
PV Future Salaries	65,934,085	67,444,485	72,701,247	74,689,710
Normal Rate	0.000%	0.000%	0.000%	0.000%
Annual Salaries	7,593,156	7,871,003	8,515,270	8,901,110
<b>Components of Contribution</b>				
Normal Contribution	0	0	0	0
Contribution credit per 2000/125 <sup>1</sup>	-	-	-	0
UAL Contribution	0	6,055	18,436	18,436
Administrative expenses	21,075	38,447	31,718	32,465
Investment expenses	27,168	40,419	39,994	40,643
GTLI Premium	20,377	15,104	15,512	16,448
Total Pension Expense	68,620	100,025	105,660	107,992
City Rate	0.904%	1.271%	1.241%	1.213%

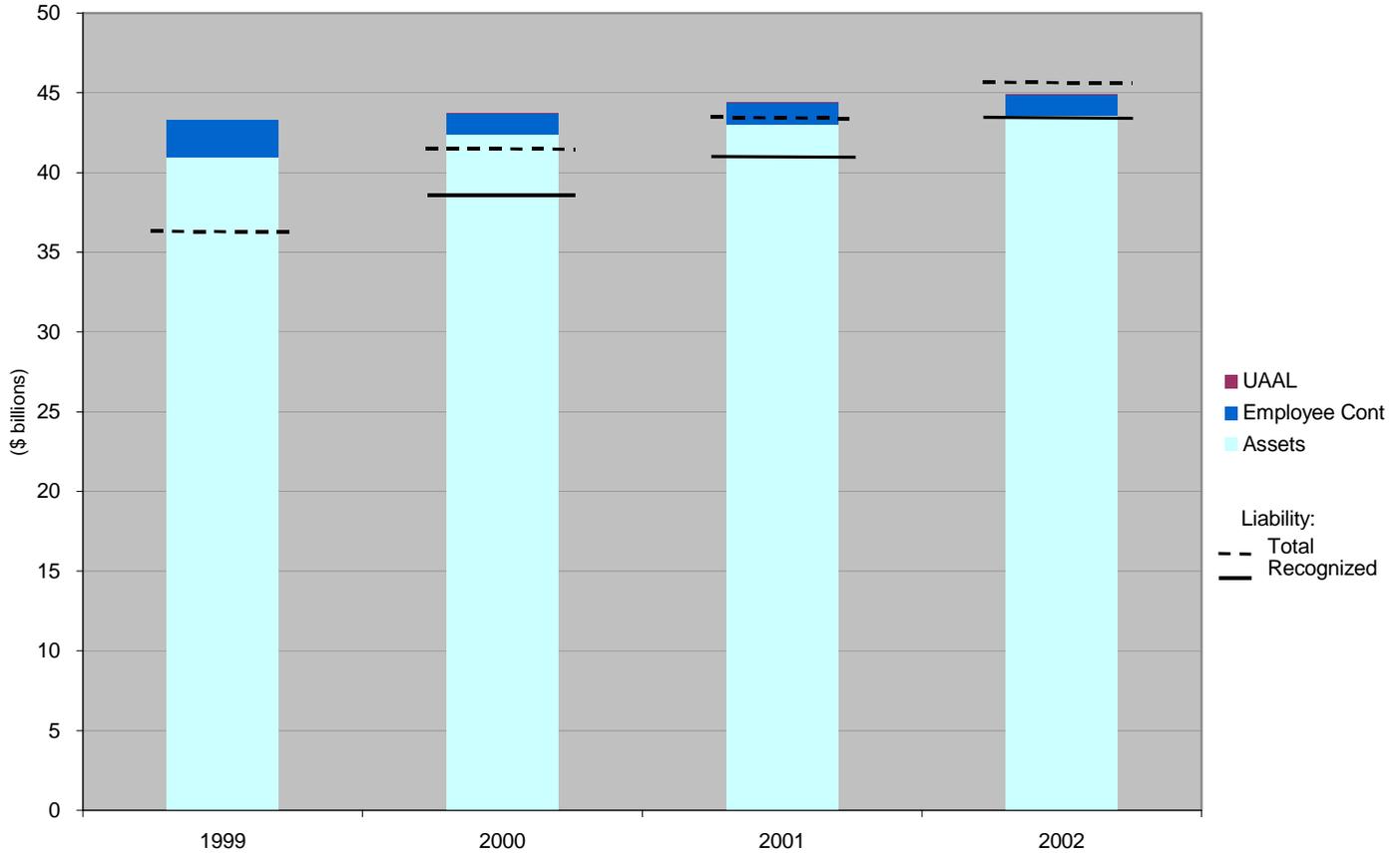
<sup>1</sup> Sections 13-696.i and .j of the Administrative Code of the City of New York, as added by Chapter 125 of the Laws of 2000 and amended by Chapter 278 of the Laws of 2002, requires that the funding for the additional liability attributable to the automatic cost-of-living adjustments provided by Chapter 125 of the Laws of 2000 be deferred.

The table above shows that the normal contribution, usually the largest single component of the total employer contribution, was zero for each of the last four years. The normal contribution had decreased to zero in the late 1990's due to significant investment gains, as well as changes in actuarial assumptions and methodology. During the period this examination covers, investment results were significantly less than expected. In addition, significant benefit increases were provided. As a result, the normal contribution rate, as developed by the traditional actuarial process, would have begun to increase.

Chapter 125 of the Laws of 2000 provided automatic cost-of-living allowances to retirees, reduced member contributions to certain members, and other benefit increases. That chapter also required that the funding for the additional liability created by the chapter be phased in over five years. Chapter 278 of the Laws of 2002 modified that phase-in period so that the additional liability created by Chapter 125 was phased in over a ten year period.

Shown below is a chart of the primary asset and liability components.

**Liability and Asset Components**

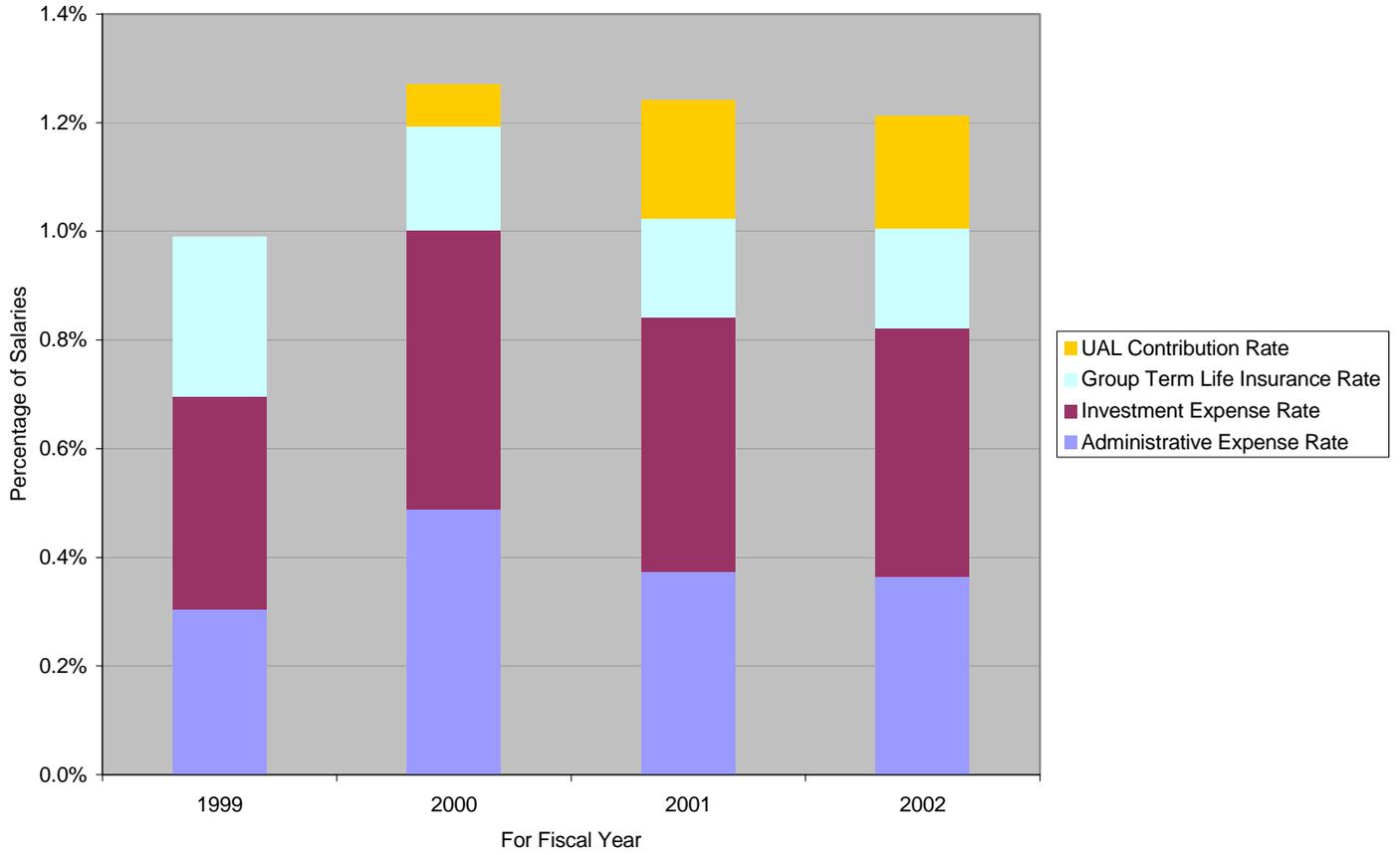


This chart illustrates the major components that were used to develop the employer contribution requirement. The bars represent the assets (present and future), and the horizontal lines (dashed and solid) represent the liabilities. The graph clearly shows that the existing assets (actuarial value, not market value) make up the major portion of the total assets. The present value of future employee contributions represents another portion of the total assets. The Unfunded Actuarial Liability is a relatively small amount, and may not be discernable on this chart. The dashed horizontal line represents the total plan liabilities. The solid horizontal line is the liability amount that is being funded for; it is the total plan liability less the amount that is not being recognized for funding based on Chapter 278 of the Laws of 2002. It can be seen that the liabilities are increasing more rapidly than the asset values. However, even for 2002, the total

assets (including future employee contributions and unfunded actuarial liability) were greater than the recognized liability, so no employer contribution is required.

The following chart illustrates the components of employer costs shown as a percentage of salaries. The administrative and investment expenses are the costs to run the System. The unfunded actuarial liability is the cost to fund a relatively small portion of the System benefits. In most years in the past, there has also been a normal cost, which is the cost of funding the remaining portion of the System benefits. That normal cost tends to fluctuate from year to year, but has exceeded 10% of salaries in the past. The total employer contribution, including expenses, unfunded actuarial liability, and the normal cost, has, since 1981, ranged from over 20% to around 1% of salaries. For the four years shown in this chart, the funded status of the plan, based on recognized liabilities, has resulted in a \$0 normal cost, and therefore a relatively small total employer cost of around 1% of salaries. However, in the few years since the examination date, the normal cost has increased to more historically average levels; the total employer contribution for the 2007 fiscal year was 15.6% of salaries.

### NYC ERS Employer Contribution Rates



10. ACTUARIAL PRESENT VALUE OF BENEFITS AND ANNUAL STATEMENT  
LIABILITIES

The liabilities of the Fund as reported in its annual statements to the New York State Insurance Department are summarized in the following table (dollar figures are shown to nearest thousand):

Valuation <u>Date</u>	(1) Present Value of Benefits Payable to Beneficiaries Now <u>Drawing Allowances</u>	(2) Present Value of Benefits Provided for Members Now <u>in Active Service</u>	(3) Unfunded Accrued <u>Liability</u>	(4) Present Value of Future Employee Contributions
6/30/99	15,420,792	19,914,210	(531,809)	2,406,106
6/30/00	19,113,627	22,038,057	25,122	1,297,937
6/30/01	19,913,567	23,502,391	72,215	1,325,586
6/30/02	20,347,229	24,463,468	58,833	1,327,314
Valuation <u>Date</u>	(5) Present Value of Other Employer Contributions inc. <u>Deferred</u>	(6) Present Value of Future Skim a/c <u>VSF</u>	(7) Net Reserves (1) + (2) - (3) - (4) <u>- (5) + (6)</u>	(8) Benefits, Expenses and Other Amounts <u>Due and Unpaid</u>
6/30/99	366,755		33,093,950	99,346
6/30/00	(2,392,437)	853,205	43,074,267	136,474
6/30/01	(821,124)	928,227	43,767,508	213,654
6/30/02	891,541	1,028,094	43,561,103	166,259
Valuation <u>Date</u>	(9) Amounts Due Variable Supplements <u>Funds</u>	(10) Net Reserves and All Other Liabilities <u>(7)+(8)+(9)</u>	(11) Admitted <u>Assets</u>	(12) Excess of Assets over Reserves and Liabilities <u>(11) - (10)</u>
6/30/99	218	33,193,514	40,784,813	7,591,299
6/30/00	96,730	43,307,471	42,561,462	(746,009)
6/30/01	750	43,981,912	37,158,401	(6,823,511)
6/30/02	1,143	43,728,505	31,913,281	(11,815,224)

Funding calculations are generally completed after the Annual Statement is filed. Values in the Annual Statement may not reflect benefit changes and assumption and method changes that are then finalized and incorporated in the funding calculations. Therefore some of the items in the table above may differ from the corresponding values shown in funding calculations.

Beginning with the June 30, 2000 Annual Statement, the actuarially-determined liability for future transfers to be made to the Variable Supplements Funds (“VSF”) was explicitly shown in the liabilities for NYCERS. The benefits of the VSF are now on a fixed, guaranteed schedule, are no longer linked to favorable earnings on the System’s investments, and are being funded within the System’s liabilities.

## 11. UNFUNDED ACTUARIAL ACCRUED LIABILITY

The unfunded actuarial accrued liability (UAAL) of a pension plan refers to the present value of required employer contributions other than normal contributions. Generally, UAAL is a liability that is attributable to benefit increases. UAAL is not a measure of the overall funding status of the pension plan. Such measures are discussed elsewhere in this report in the section titled Funding Ratios.

The items to be funded through UAAL contributions, and the computation of the initial UAAL balance, are affected 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 UAAL balances is computed by the Entry Age Normal Cost Method.

The System's total UAAL at any point in time is the aggregate present value of the remaining payments in amortization of all previously established UAAL balances.

As of June 30, 1999, just prior to the examination period, the UAAL was zero; the previous UAAL had been eliminated due to a reestablishment of the UAAL as of June 30, 1999 as specified by Chapter 85 of the Laws of 2000. The elimination of the UAAL due to the reestablishment does not reduce the measurement of the total plan liability; it merely shifts the liability from the UAAL component, where it would have been amortized over a fixed number of years, to the Normal Cost component, where it is funded over the remaining working lifetime of the active participants.

Chapter 70 of the Laws of 1999 provided an early retirement incentive for active members. The additional liability attributed to that legislation generated a UAAL component of

about \$25,000,000 as of June 30, 2000. That component is to be amortized over five years at the valuation interest rate of 8% with level annual payments of about \$6,000,000.

Chapter 86 of the Laws of 2000 provided an early retirement incentive for active members. The additional liability attributed to that legislation generated a UAAL component of about \$51,000,000 as of June 30, 2001. That component is to be amortized over five years at the valuation interest rate of 8% with level annual payments of about \$12,000,000.

The progression of the total UAAL and the total annual amortization payment is shown below.

<u>Valuation Date</u> <u>June 30</u>	<u>Total UAAL</u>	<u>Payment</u>
1999	\$ 0	\$ 0
2000	25,122,250	6,054,508
2001	72,215,427	18,436,080
2002	58,833,325	18,436,080

If no additional components of UAAL are generated (e.g., by benefit improvements), the total UAAL would be amortized (reach \$0) by June 30, 2006.

## 12. ACTUARIAL ASSET VALUATION METHOD

Assets are reported in the System's annual statements at amortized value for bonds and market value for stocks. More than half of the System's total assets are invested in stocks, and their market value is considered too volatile to use directly in computing employer contributions. Accordingly, for purposes of computing employer contributions, market values are smoothed by the use of an actuarial asset valuation (AAV) method.

The AAV method (adopted with the June 30, 1991 valuation) adjusts the current year's market value to recognize "unexpected return" over a five year period. "Unexpected return" is 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, is defined to be the valuation interest rate multiplied by the mean actuarial value of investable assets.

Within a short period prior to this examination period, a “market value restart” was implemented two times, on June 30, 1995 and June 30, 1999. In a market value restart, the actuarial value of assets is set equal to the market value of assets. On both of those dates, prior to the restart, the actuarial value of assets was less than the market value of assets. Therefore, as a result of the restarts, the new actuarial value of assets was higher than what it otherwise would have been. The employer contribution rate, calculated using the higher asset values, was lower than it otherwise would have been. It is recognized that the change in actuarial asset valuation method is being made in conjunction with other changes in actuarial assumptions and methods. However, the actuarial standard of practice regarding actuarial asset valuation methods promulgated by the Actuarial Standards Board requires that the general effect of this recent change in the actuarial asset valuation method be disclosed. (This standard was discussed beginning in 2002, and has since become effective.) While the published reports on the 1995 and 1999 actuarial valuations stated that the actuarial asset valuation method was changed, there was no mention of the general effect of that change, as would be required by the actuarial standard of practice. In fact, the consequence of both changes was a reduction in current employer contribution requirements, and therefore an increase in later employer contribution requirements; i.e., a deferral of employer contribution requirements to later years. During this examination period there were no market value restarts.

In the annual statements filed by the System with the New York Insurance Department, the balance sheet entry, "Excess of admitted assets over total net reserves and all other liabilities," embodies the difference between admitted assets and the actuarial value of assets. To arrive at the actuarial asset value used in computing pension expense, it is necessary to deduct amounts not available for future benefits, such as benefits due and unpaid and mortgage escrow.

Until the June 30, 2002 valuation, it had been the System's practice to deduct member loans from both assets and liabilities in the pension expense computations. That practice was changed with the June 30, 2002 valuation: member loans were viewed as another form of investment for the fund, and were thus included in the determination of plan assets.

The table below shows the relationship between the actuarial value of assets for pension expense purposes and the assets in the annual statement:

	(1)	(2)	(3)	
Valuation	Admitted	Excess of Admitted	Member Loans	
<u>Date</u>	<u>Assets</u>	Assets over	Deducted from	
		<u>Total Reserves</u>	<u>Liabilities Above</u>	
6/30/99	\$40,784,812,867	\$7,591,299,009	\$598,580,843	
6/30/00	42,561,461,798	(746,009,182)	680,639,328	
6/30/01	37,158,400,863	(6,823,511,475)	752,153,837	
6/30/02	31,913,280,638	(11,815,223,853)		<sup>a</sup>

	(4)	(5)	(6)	(7)
Valuation	Accrued Benefits	Reserve in Escrow	All Other Amounts	Assets for Pension
<u>Date</u>	<u>Payable</u>	<u>for Mortgages</u>	<u>Due and Unpaid</u>	Expense
				(1)-(2)-(3)-(4)
				<u>-(5)-(6)</u>
6/30/99	\$ 97,798,005	\$ 226,083	\$ 1,539,927	\$32,495,369,000 <sup>b</sup>
6/30/00	133,640,175	1,273,518	98,290,959	42,393,627,000
6/30/01	212,095,414	279,015	2,029,072	43,015,355,000
6/30/02	164,425,483	0	2,976,008	43,561,102,999

<sup>a</sup> Beginning with the June 30, 2002 valuation, member loans were not excluded from plan assets.

<sup>b</sup> As mentioned above, the actuarial value of assets as of June 30, 1999 was reset to market value; the value shown in this table is the initially calculated actuarial value before the "restart".

### 13. ALLOCATION OF COSTS AMONG OBLIGORS OF THE SYSTEM

Members of the System include employees of various public authorities and other entities in addition to persons employed by the City of New York. The following obligors contribute to the System on account of employees who are members:

- New York City Transit Authority
- New York City Housing Authority
- New York City Health and Hospitals Corporation
- Triborough Bridge and Tunnel Authority
- New York City Off-Track Betting Corporation
- New York City Housing Development Corporation
- New York City School Construction Authority
- New York City Residential Mortgage Insurance Corporation
- The State of New York, on account of certain judiciary employees
- New York City Municipal Water Authority

To allocate the normal contribution among obligors, contributions for various groupings of employees are computed according to the entry age normal actuarial cost method, and the total normal contribution is distributed in proportion to the calculated entry age normal contributions. The normal contribution is distributed within groupings, if necessary, in proportion to salaries. At the beginning of the examination period, separate entry age normal contributions were computed for the following groups of employees:

- Sanitation Department employees
- Transit Authority employees covered under 20-year non-contributory plan
- Housing Police, Transit Police
- Corrections Officers
- Triborough Bridge and Tunnel Authority
- All other employees

The UAL contributions were distributed among obligors in the same proportion as the previous, separate UAL balances. Any UAL balances arising subsequently were distributed among obligors directly, based on employees that generated the balances.

As mentioned previously in this Report, the cost for a fiscal year is based on values determined as of the last day of the immediately preceding fiscal year. Thus, the cost for the fiscal year ending June 30, 2003 is based on values determined as of June 30, 2002. The table below shows the appropriation for each of the obligors.

<u>Obligor</u>	<u>For fiscal year ending June 30,</u>			
	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
New York City Transit Authority	18,473,519	26,597,130	24,765,127	25,209,405
New York City Housing Authority	4,652,454	6,268,367	7,828,662	7,981,626
New York City Health and Hospitals Corporation	9,316,963	17,457,775	20,696,341	21,429,329
Triborough Bridge and Tunnel Authority	652,861	998,929	950,847	976,870
New York City Off-Track Betting Corporation	359,360	733,329	1,090,426	1,110,170
New York City Housing Development Corporation	4,737	9,756	15,728	20,362
New York City School Construction Authority	35,393	56,514	52,551	57,261
New York City Residential Mortgage Insurance Corporation	3,193	1,881	1,606	3,558
State Judiciary Employees	7,389	8,628	6,375	6,177
New York City Municipal Water Authority	828	1,151	1,263	8,171
City University of NY Senior Colleges			1,602,654	1,706,385
All Others	<u>35,113,048</u>	<u>47,890,941</u>	<u>48,648,489</u>	<u>49,483,182</u>
Total from City and Other Obligor	68,619,745	100,024,692	105,660,069	107,992,496

#### 14. INTEREST EARNED AND INTEREST REQUIRED

Included in the System's annual statements to the Insurance Department are the amount of interest required to maintain funds and the total investment income actually earned during the year, including realized and unrealized changes in market values. Interest required to maintain funds is computed by applying the assumed valuation interest rate to 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 reported for the three years of the examination period, as well as the year immediately preceding, were as follows:

Fiscal Year ending <u>6/30</u>	(1)  <u>Interest Earned</u>	(2)  <u>Interest Required</u>	(3)  Excess <u>(1) - (2)</u>	(4)  Ratio <u>(1) ÷ (2)</u>
1999	5,551,607,541	2,250,898,690	3,300,708,851	247%
2000	3,836,343,159	2,906,585,667	929,757,492	132%
2001	(3,378,927,690)	3,626,732,440	(7,005,660,130)	(93%)
2002	(2,991,566,084)	3,628,079,317	(6,619,645,401)	(82%)
TOTAL	<u>3,017,456,925</u>	<u>12,412,296,112</u>	<u>(9,394,839,190)</u>	24%

As the table indicates, actual investment earnings was over two times the expected investment income during the 1999 fiscal year, then began a significant drop. The magnitude of the investment losses during each of the 2001 and 2002 fiscal years was almost as large as the expected investment earnings (but in the opposite direction). While this examination does not cover the 2003 fiscal year, the results for that year are more favorable; the interest earned was a positive number, not negative.

## 15. 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 is based on 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 many members the System's benefits accrue more rapidly in the earlier years of a member's service than in the later years. For such members the uniform prorate required by GASB produces a lower PBO, and hence a more favorable funding ratio, than would be produced by prorating benefits 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.

A strength of this funding ratio as a measure of funding adequacy is that it is independent of the actuarial cost method used for determining contributions to the pension plan. Its weakness is that it is dependent on the actuarial assumptions used for determining those contributions. Actuarial assumptions that are more optimistic lead to a lower level of future funding requirements and produce a more favorable funding ratio.

Funding ratios, as reported in Schedule B of the Annual Statement, are shown below:

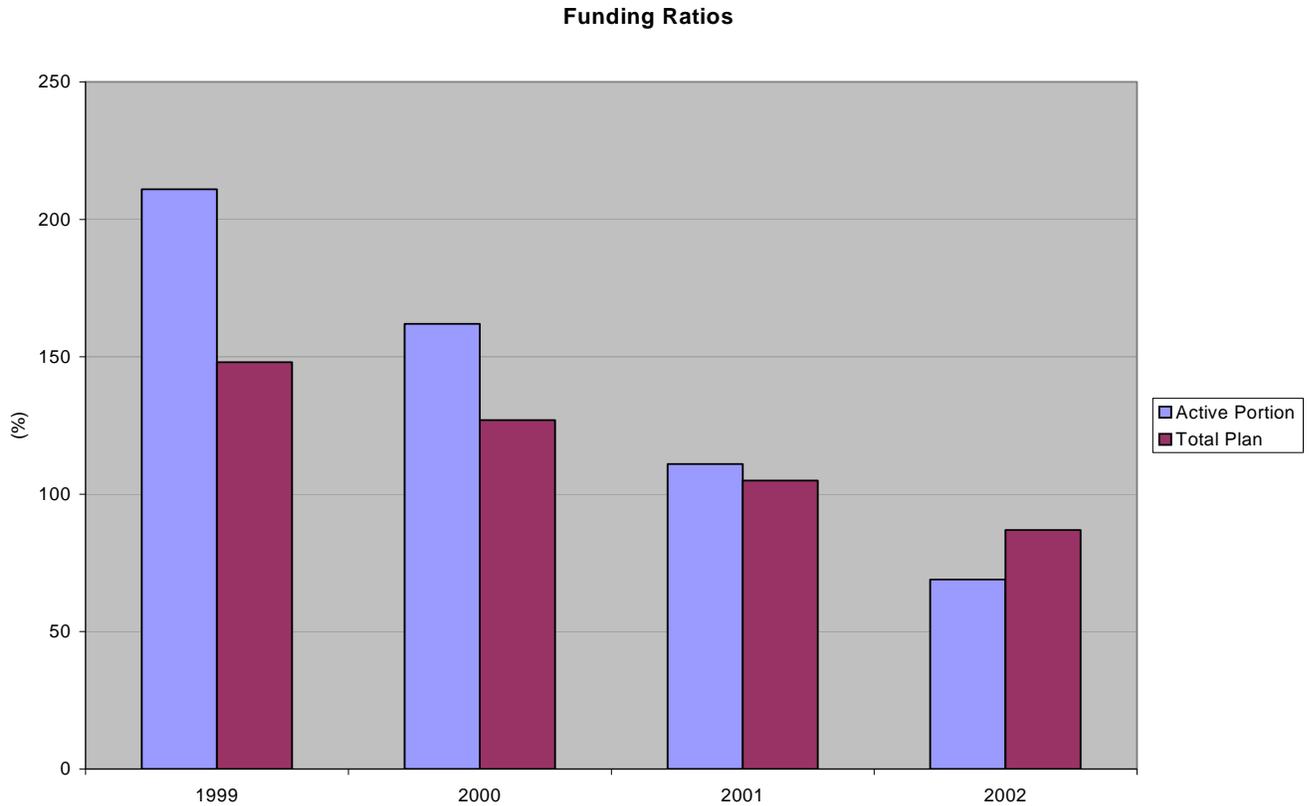
Valuation <u>Date</u>	(1) Assets Available for <u>Active Members</u>	(2) Projected Benefit <u>Obligation</u>	(3) Funding Ratio <u>(1) ÷ (2)</u>
6/30/99	24,861,593,482	11,794,012,811	211%
6/30/00	22,775,434,473	14,035,035,670	162%
6/30/01	16,560,282,786	14,954,455,745	111%
6/30/02	10,890,014,233	15,878,595,625	69%

The decrease in Funding Ratio shown above is due primarily to the decrease in investment yield referred to earlier in this report.

It should be noted that the decrease 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; this measurement excludes liabilities attributable to retirees, etc., and to assets that could be allocated to those retirees. The value of assets “available” for active members is the total plan assets reduced by the liability attributable to non-active members. Thus, for the purpose of this measurement, 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 ratios for total plan assets and liabilities.

Valuation <u>Date</u>	(1) <u>Assets</u>	(2) Projected Benefit <u>Obligation</u>	(3) Funding Ratio <u>(1) ÷ (2)</u>
6/30/99	40,371,587,232	27,214,804,882	148%
6/30/00	42,112,700,700	33,148,662,936	127%
6/30/01	36,679,821,367	34,868,022,821	105%
6/30/02	31,400,857,296	36,225,824,839	87%

The first table, reflecting only a portion of plan assets and liabilities, shows a decrease in funding ratio from 211% to 69%. The second table, reflecting all plan assets and liabilities, shows a somewhat less steep reduction, from 148% to 87%. This relationship can be seen in the chart below.



## 16. ACTUARIAL ASSUMPTIONS AND METHODS

Several changes in assumptions and methods were proposed by the Office of the Actuary for the June 30, 1999 valuation, just prior to the beginning of the three-year period this examination covers. 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 balance sheet liability (“BSL”) was eliminated. The resulting UAL was \$0.
- The actuarial asset value was reset to market value.
- The investment expenses were reimbursed to the System as a separately-identified contribution amount.

During the examination period the System engaged a pension consulting organization (Gabriel, Roeder, Smith & Company) to analyze System experience in relation to the actuarial assumptions. The study reviewed experience data from June 30, 1988 to June 30, 2001. The consulting organization issued a final report dated October, 2003 in which a number of changes in actuarial assumptions were recommended. Because the publication date of the report is a relatively short time before the completion of this examination, it would not be reasonable to expect that any of the changes recommended in the report would have been implemented by the completion of this examination. The recommendations in the consultant’s report included making changes in the salary scale assumption, withdrawal assumption, and mortality assumption, among others.

The principal actuarial assumptions include an interest assumption (the assumed investment yield, which is also the rate at which liabilities are discounted), a salary scale

assumption (the assumed percentage increase in salaries), and assumptions regarding the rate at which members leave active status according to reason: mortality, retirement, withdrawal or disability. A selected summary of the assumptions is shown below:

Interest: 8% per year  
 Salary Scale:

<u>Age</u>	<u>Annual Percentage Increase</u>
25	6.50%
40	4.40
55	4.00

Withdrawal from active service (for other than service retirement):

<u>Age</u>	<u>Termination</u>	<u>Ordinary Disability Retirement</u>	<u>Ordinary Death</u>
25	12.51%	.04%	.04%
40	3.39	.21	.12
55	2.10	.50	.57

Withdrawal from active service (for service retirement):

<u>Age</u>	<u>- - Years of service since eligibility - -</u>		
	<u>0-1</u>	<u>1-2</u>	<u>2+</u>
50	12%	0%	0%
55	12	10	8
60	12	10	8
65	30	30	30
70	100	100	100

Both the interest assumption and the salary scale assumption are made up of other, more fundamental, components. The interest assumption is composed of a price inflation assumption and a “real” interest rate; i.e., a rate of return in the absence of any price inflation. The salary scale assumption is composed of the price inflation assumption, a “real” wage increase (in the

absence of any price inflation), and a merit/promotion increase. The merit/promotion increase assumption varies by age and service. The components of the interest assumption and the salary scale assumption can be illustrated as follows:

<u>Component</u>	<u>Investment Return</u>	<u>Salary Scale</u>
Price inflation	2.5%	2.5%
Real interest rate	5.5	---
Real wage growth	---	.5
Merit/Promotion	---	varies by age and service
Total	8.0%	3.0% plus value that varies by age and service

Actuarial Standard of Practice No. 27 (ASOP 27), “Selection of Economic Assumptions for Measuring Pension Obligations”, provides professional actuarial guidelines for choosing an investment return assumption; generally, the discount rate, used in determining the present value of expected future plan payments, is the same as the investment return assumption. ASOP 27 states that, for the investment return assumption, the actuary should choose a single point that is within a “best-estimate range”, which is also developed by the actuary.

The prior report on examination (for the period July 1, 1994 to June 30, 1999) contained a comment related to the “spread”, or excess of the interest rate assumption over the wage growth assumption. The wage growth assumption is the sum of the price inflation and the real wage growth. The spread for the three-year period of this examination, based on the values shown in the table above, is  $8.0 - (2.5 + .5) = 8.0 - 3.0 = 5.0\%$ . The comment in the prior report noted that the spread has increased from 2.75% to 5% over the previous eleven years. An increasing spread results in decreasing employer contributions. The comment in the prior report was meant to raise awareness of the fact that the spread has been increasing, resulting in a less conservative funding approach. Although the spread did not increase further during the three years covered by this examination (July 1, 1999 to June 30, 2002), it still remains at a relatively high level compared to the spread for this system for much of its history. The spread is also

higher than that of most other public retirement systems in this country during the same time period. As mentioned above, a higher spread results in lower current contributions, but also higher contributions in subsequent years; i.e., a deferral of a portion of the otherwise required employer contribution.

#### Minor Error

In reviewing the actuarial equivalence factors used to calculate or verify benefits to be paid in a joint and survivor form, the examiner found that one of the factors, for a specific benefit form, a specific member age and joint annuitant age, was incorrect. The incorrect factor was in a set of tables maintained by the Office of the Actuary that would most likely have been used to verify benefit calculations performed by the benefit calculation unit at NYCERS. It is unlikely that the incorrect factor was used to calculate benefits. The magnitude of the error amounted to a one percent understatement of the pension benefit. The error was a transcription error, and so is not believed to be systemic. Subsequent to notification of the error to staff of the Office of the Actuary, the error was corrected.

## 17. INVESTMENT MANAGEMENT OPERATIONS

The highest governing body at NYCERS is its board of trustees. The trustees are fiduciaries for NYCERS, its members and its retirees. The trustees delegate NYCERS investment functions to the New York City Comptroller, pursuant to Section 13-702 of the New York City Administrative Code. The investment powers transferred to the Comptroller are subject to written delegations which may not exceed one year. Although this authority is renewed annually, the System is not required to use the Comptroller for investment services. The investment services provided to NYCERS by the Comptroller are provided through the Bureau of Asset Management (BAM), a division of the Comptroller's office. The delegated powers authorize the Comptroller of the City of New York to make any investment which NYCERS trustees are authorized to make. Also, the Comptroller is authorized to hold, sell, assign, transfer, or dispose of any of the properties, securities or investments in which any of the funds of the System have been invested.

Section 136.2 of Department Regulation No. 85 states in part:

(b) "*Administrative head* shall mean,...the board of trustees of a retirement system, in their individual and collective capacities"

Section 136.6 of Department Regulation No. 85 states in part:

"(a) The administrative heads are fiduciaries and as such shall act solely in the interests of the members and beneficiaries of the systems they administer. They shall perform their responsibilities in a manner consistent with those of a reasonably prudent person exercising care, skill and caution. (b) The assets of a system shall at all times be under the control of the administrative head. (c) No investment or loan transaction shall be made by a system unless the same has been approved by the administrative head. The administrative head may delegate its powers of investment to a committee or agent of the administrative head within well-defined established guidelines. Such committee or agent shall render timely written reports of its activities to the administrative head under a schedule to be established by the administrative head and shall render special reports whenever requested by the administrative head. (d) In respect to the delegation of investment powers, the administrative head shall periodically review: (1) the present holdings in the investment account; (2) any marked changes in the account during the preceding period; (3) the reasons for such changes and the results achieved thereby; (4) the investment activity in the account including the rate of turnover; and (5) any other factors the administrative head considers

pertinent to an analysis of the financial performance and planning, consistent with its obligation as a fiduciary.”

As outlined in Department Regulation No. 85, the trustees are the fiduciaries of the System and as such must act solely in the interests of its members and beneficiaries. No board collectively, no trustee individually, nor any administrative head, can delegate their fiduciary obligations to others. They must perform their responsibilities in a manner consistent with those of a reasonably prudent person exercising care, skill and caution. The Regulation requires that the assets, at all times, be under the control of the trustees and that investments and loan transactions be approved by the trustees. Department Regulation No. 85 allows the trustees to delegate its investment powers within well-defined established guidelines and with the rendering of timely written reports of its activities to the trustees under a schedule established by the trustees. At a minimum, the Department believes that appropriate implementation of such guidelines requires a comprehensive Investment Policy Statement.

#### A. Investment Policy Statement

The examiner reviewed a sample of the transcripts of the meetings of the board of trustees for the period under examination, and made the following findings:

1. The sampled transcripts revealed instances where the trustees were concerned about the lack of an overall Investment Policy Statement.
2. The sampled transcripts show that the board began to formulate a comprehensive investment policy statement only toward the end of the period that is the subject of this review. The transcripts reveal no material substantive consideration of an investment policy statement’s specific contents or provisions before the end of that period. Similarly, in the following areas, where the responsibility to establish standards belongs to the trustees, the board meeting transcripts reveal little board discussion:
  - a. The sampled transcripts reveal no board discussion of establishing an investment policy statement of sufficient detail to guide a third party when trying to implement the trustees’ instructions.
  - b. The sampled transcripts do not reveal a clear definition of the duties and responsibilities of the investment committee, the Comptroller’s office (either as custodian or as fund manager), the investment consultants, or the separate account managers.

Based on the examiner's review, it was revealed that during the period of examination the System did not have a comprehensive Investment Policy Statement that governed, controlled, and monitored its investment activities. However, subsequent to the examination period the System did develop a comprehensive Investment Policy Statement which the Department believes satisfies its concerns about proper governance of the System's investment activities. It is noted that the System and the Comptroller maintain that the System did have various policies and guidelines in place governing investment activities, and that in an effort to consolidate those guidelines an Investment Policy Statement was adopted starting in 2004.

#### B. Trustee Conflicts

The board of trustees is comprised of representatives of the Mayor's office, the Comptroller's office, the Borough Presidents, the Public Advocate and several union presidents and administrators. The board's fiduciary responsibility is to act solely in the interest of the members and beneficiaries of the System.

By statute, the New York City Corporation Counsel is legal counsel for NYCERS and for the Comptroller. NYCERS counsel's dual responsibilities present an inherent potential institutional conflict in providing the trustees with the frank and unbiased counsel to which they are entitled. While serving as NYCERS counsel, during the period under examination, the Corporation Counsel was also representing New York City in a labor contract negotiation with a union. When board members asked if some of the funding for that contract would come from NYCERS, a situation in which New York City would be binding NYCERS and reflecting truly separate and conflicting interests between the city and NYCERS, the Corporation Counsel failed to provide a reply on which the board could act.

Based on the examiner's review of the sampled transcripts of the board of trustees meetings, the board's interactions with the Comptroller (BAM) and legal counsel indicate that the trustees need to be vigilant regarding the inherent potential institutional conflict of counsel.

#### C. Use of Investment Managers

The 2002 portfolio data shows that NYCERS has over sixty investment managers for fifty equity and twenty-five fixed income mandates. The eight largest equity managers hold 90% of NYCERS's equities with just two of them holding 67% (\$13.7 billion, in index funds).

However, NYCERS's 57 largest single equity investments are held among ten or more managers. NYCERS explained the large number of managers as a policy to avoid "*too much business risk associated with any one investment firm*", yet this purpose is defeated by concentrations in the top two or top eight. The topic of finding a balance between operational risk and operational efficiency merits further discussion by NYCERS board of trustees.

#### D. Failure to Facilitate the Examination

Section 310 (a)(2) of the New York Insurance Law states in part:

" Any examiner authorized by the superintendent shall be given convenient access at all reasonable hours to the books, records, files, securities and other documents of such insurer or other person, including those of any affiliated or subsidiary companies thereof, which are relevant to the examination, and shall have power to administer oaths and to examine under oath any officer or agent of such insurer or other person, and any other person having custody or control of such documents, regarding any matter relevant to the examination."

The Department's Capital Markets Bureau ("CMB") submitted its first written request for information to the System (Request No. 38) on June 21, 2004. NYCERS subsequently requested a meeting to discuss this request and that meeting was held on July 8, 2004 at the Comptroller's offices with representatives of the Comptroller's office, including BAM, and from NYCERS, including two trustees, one of whom was their Executive Director. At that meeting CMB was told that the information requested would be sent beginning the following week. Despite following-up every 2 to 3 weeks, nothing was received until September 23, 2004, three months later. Detailed review of the September 23<sup>rd</sup> package by the Department's examiners proved it significantly incomplete. A second written request (Request No. 44) was made on November 16, 2004 for the missing information. Several follow-up items resulting from the review of the September 23<sup>rd</sup> materials were included in Request No. 44. In lieu of responding to the Department's November 16<sup>th</sup> letter, on December 2, 2004, NYCERS sent a letter questioning the Department's authority regarding the items in Requests Nos. 38 & 44, and requested a meeting between the Department and certain NYCERS trustees to discuss CMB's scope of the examination. This meeting was held on February 23, 2005. Shortly after that letter, CMB was advised that NYCERS's trustees were seeking an opinion from their legal counsel regarding the

Department's authority. The examiners were informed on January 4, 2005 that their counsel had affirmed the Trustees duty to comply with our examination requests. As a result of that opinion, on February 2, 11, and 16, 2005 NYCERS finally produced the remaining documents and information for Requests No. 38 & 44 - seven months and three months late, respectively.

The Department recommends that the System enhance its practices with respect to audits conducted by the Department and make a greater effort to facilitate the Insurance Department examiner's request for information on future examinations.

## 18. 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 System in response to each citation:

<u>Item</u>	<u>Description</u>
A	<p>The examiner recommends that the System facilitate the Department in obtaining proper confirmations from its custodians.</p> <p>This examiner received a proper confirmation during the current examination.</p>
B	<p>Comment that there was an un-reconciled difference between the cash balances as reported by NYCERS and the cash balances as reported by the Comptroller's office.</p> <p>The System wrote off the difference in fiscal year 2003.</p>
C	<p>The examiner recommends that reconciliations between the Comptroller's cash balances and NYCERS' cash balances be done on a monthly basis.</p> <p>The cash reconciliations are now being done on a monthly basis.</p>
D	<p>The examiner recommends that the System establish procedures to monitor stale checks.</p> <p>The System has established procedures to monitor stale checks.</p>
E	<p>The examiner recommends that the System facilitate the Department in obtaining proper cash confirmations from its bank.</p> <p>The System facilitated the Department's obtaining cash confirmations from its banks during the current examination period.</p>

<u>Item</u>	<u>Description</u>
F	<p>The System violated Section 307(a)(1) of the New York Insurance Law for filing its annual statement five months after the due date.</p> <p>The System once again violated the above noted Section when it filed its 2002 annual statement eleven months after the due date.</p>
G	<p>The System violated Section 136.4(c) of Department Regulation No. 85 by not maintaining a description of the content of each account.</p> <p>The System maintains a proper chart of accounts with a description of each account.</p>
H	<p>The System violated Section 136.4(a) of Department Regulation No. 85 by not providing the loan files requested by the examiner.</p> <p>The System provided the loan files requested by the examiner during the current period under review.</p>
I	<p>The examiner recommended that the System report all member loans as an asset.</p> <p>The System started reporting member loans as an asset during fiscal year 2002.</p>
J	<p>The examiner recommended that the loans to members be treated as plan assets to calculate pension cost.</p> <p>The System implemented that change effective with the June 30, 2002 valuation.</p>
K	<p>Comment that the actuarial value of assets was adjusted twice, as of June 30, 1995 and June 30, 1999, in such a way as to reduce the employer contribution each time. The examiner recommended that, if the System continued to make adjustments to the actuarial value of assets, it do so in such a way as to not consistently bias the level of contributions (in either direction).</p> <p>During the three years of this examination, the System has not made any similar asset adjustments.</p>

## 19. SUMMARY AND CONCLUSIONS

Following are the violations, recommendations and comments contained in this report:

<u>Item</u>	<u>Description</u>	<u>Page No(s).</u>
A	The System violated Section 307(a)(1) of the New York Insurance Law for filing its annual statement eleven months after the due date. This delay in filing the annual statement occurred under the old annual statement filing process. For the fiscal year ending 2007, the Department has adopted a new more streamlined electronic annual statement filing process.	15
B	With regard to loaned securities, it was noted that the board of trustees and the Comptroller's office did not give clear guidance to Citibank on how to deal with downgraded securities in the portfolio. This issue was also a concern raised in the Independent Fiduciary Services, Inc. Management Study and Operations Review report of the New York City Comptroller's Asset Management Function. Subsequent to the examination period, however, the System adopted an Investment Policy Statement which the Department believes has controls that will provide adequate oversight of the Systems Securities Lending Program.	17
C	The examination noted that the "spread" which has increased over the years prior to the examination period still remains at a relatively high level compared to the spread for this system for much of its history.	40
D	The examination noted that one of the actuarial factors used to calculate a benefit was incorrect. After notification of the error to the staff of the Office of the Actuary, the error was corrected.	41
E	Based on the examiner's review, it was revealed that during the period of examination the System did not have a comprehensive Investment Policy Statement that governed, controlled, and monitored its investment activities. However, subsequent to the examination period the System did develop a comprehensive Investment Policy Statement which the Department believes satisfies its concerns about proper governance of the System's investment activities. It is noted that the System and the Comptroller maintain that the System did have various policies and guidelines in place governing investment activities, and that in an effort to consolidate those guidelines an Investment Policy Statement was adopted starting in 2004.	44

Item	Description	<u>Page No(s).</u>
F	Based on the examiner's review of the sampled transcripts of the board of trustees meetings, the board's interactions with the Comptroller (BAM) and legal counsel indicate that the trustees need to be vigilant regarding the inherent potential institutional conflict of counsel.	44
G	The examination noted the large number of investment managers and the concentration of equity investments in a small number of managers. It is recommended that NYCERS board of trustees discussions include finding a balance between operational risk and operational efficiency.	44
H	The Department recommends that the System enhance its practices with respect to audits conducted by the Department and make a greater effort to facilitate the Insurance Department examiner's request for information on future examinations.	46

Respectfully submitted,

\_\_\_\_\_/s/\_\_\_\_\_  
Joshua Weiss  
Associate Insurance Examiner

STATE OF NEW YORK )

)SS:

COUNTY OF NEW YORK )

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

\_\_\_\_\_/s/\_\_\_\_\_  
Joshua Weiss

Subscribed and sworn to before me

this \_\_\_\_\_ day of \_\_\_\_\_ 2009.

Respectfully submitted,

\_\_\_\_\_/s/\_\_\_\_\_  
Michael J. Lambert  
Principal Actuary

STATE OF NEW YORK     )

)SS:

COUNTY OF NEW YORK    )

Michael J. Lambert, being duly sworn, deposes and says that the foregoing 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 \_\_\_\_\_ 2009.