# Teachers' Retirement System of the City of New York



# Comprehensive Annual Financial Report

Fiscal Year Ended June 30, 2002 New York, New York



A Pension Trust Fund of the City of New York

# Comprehensive Annual Financial Report

**Teachers' Retirement Board** 

Teachers' Retirement System of the City of New York

Fiscal Year Ended June 30, 2001



# 1. Introduction

#### COMPREHENSIVE ANNUAL FINANCIAL REPORT A PENSION TRUST FUND OF THE CITY OF NEW YORK FOR FISCAL YEAR ENDED JUNE 30, 2002

**Prepared by Accounting Units** 

#### **QUALIFIED PENSION PLAN**

#### **TEACHERS' RETIREMENT BOARD MEMBERS**

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Ms. Sandra March

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Mr. Donald S. Miller

Executive Director Teachers' Retirement System Mr. Paul J. Raucci

Chief Accountant Teachers' Retirement System

MR. ROBERT C. NORTH, JR.

**Chief Actuary** 

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK

40 Worth Street New York, NY 10013

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#### TEACHERS' RETIREMENT BOARD TEACHERS' RETIREMENT SYSTEM 40 WORTH STREET, NEW YORK, N.Y. 10013

December 27, 2002

Dear Members of the Board of Trustees:

We are pleased to present herewith the Comprehensive Annual Financial Report of the Teachers' Retirement System of the City of New York (TRS) for the Fiscal Year ended June 30, 2002. Responsibility for the accuracy of the data and the completeness and fairness of the presentation, including all disclosures, rests with TRS. To the best of our knowledge, the enclosed data is accurate in material respects and is reported in a manner designed to present fairly the financial position and results of the operations of TRS. All disclosures necessary to enable the reader to gain an understanding of the financial activities of TRS have been included.

The Comprehensive Annual Financial Report is presented in five sections: Introduction, Financial, Investment, Actuarial, and Statistical. The Introduction includes this transmittal letter, an organization chart, and a list of TRS' principal officials. The Financial Section includes Statements of Plan Net Assets Available for Pension Benefits, Statements of Changes in Plan Net Assets Available for Pension Benefits, the Independent Auditor's Report on the financial statements and schedules, and Management's Discussion and Analysis. The Investment Section includes investment information and tables that track investment yields and performance. The Actuarial Section contains the Actuary's certification letter, the Actuary's statements, a summary of actuarial assumptions and methods, and the actuarial tables. The Statistical Section includes financial and demographic information.

**ECONOMIC CONDITION AND OUTLOOK**—The performance of the Pension Fund yielded a negative annual return of 8.05%. The monthly Unit Value for the Variable A Annuity Program decreased from \$61.900 (July 2001) to \$50.928 (July 2002). The Variable A annual return declined from -12.62% to -14.44%. The Unit Value for the Variable B Annuity Program increased from \$19.527 (July 2001) to \$19.744 (July 2002), for an annual return of 5.16%. The annual returns include a 4% rate for the variable increment factor. The July Unit Value was based on the portfolio's return as of June 30.

HISTORY OF THE PLAN—TRS was established as of August 1, 1917 under Chapter 303 of the Laws of 1917 and is governed by the Administrative Code of the City of New York and the New York State Retirement and Social Security Law. TRS covers all the teachers and administrative personnel employed by the Department of Education and certain employees of the City University of New York.

MAJOR INITIATIVES REALIZED— In Fiscal Year 2002, TRS introduced the Quarterly Account Statement (QAS), which provides detailed and user-friendly summaries of inservice members' account balances, contributions, investment elections, loan status, and account activity. (There are separate statements for Qualified Pension Plan (QPP) and Tax-Deferred Annuity (TDA) Program funds.) With the QAS, members now receive account information on a more frequent and timely basis.

Due to the continued enhancement of our comprehensive computer system, the Unified Pension System (UPS), TRS now initiates advance payments to retirees automatically once we have received a completed retirement application and verified the member's eligibility for retirement. Members who submit all necessary documentation can be assured of receiving some form of retirement income within one to two months of retiring.

We also redesigned our website, making it easier for members to navigate. The enhancement of our website will continue in the new fiscal year when we will introduce new features that will allow members to manage their TDA accounts online.

FINANCIAL INFORMATION—The management of TRS is responsible for establishing and maintaining an internal control structure designed to ensure that TRS' assets are protected from loss, theft, or misuse, and to guarantee that adequate accounting data is compiled to allow for the preparation of financial statements in conformity with generally accepted accounting principles. The internal control structure is designed to provide reasonable assurance that these objectives are met. The concept of reasonable assurance recognizes that [1] the cost of a control should not exceed the benefits likely to be derived from it; and [2] the valuation of costs and benefits requires estimates and judgment by management.

**SOURCE OF REVENUES**—The funds needed to finance retirement benefits are accumulated through the collection of employer and member contributions and through income from investments. Contribution and investment income for Fiscal Year 2002 amounted to a negative total of \$2,560,762,000.

#### **REVENUES**

#### In Thousands

	Fiscal Year 2002	Fiscal Year 2001	Increase	
	Amount	Amount	(Decrease)	
Member Contributions	\$ 87,386	\$ 129,783	\$ (42,397)	
Employer Contributions	509,932	444,965	64,967	
Other Employer Contributions	22,020	21,324	696	
Other Receipts	(631)	9,706	(10,337)	
Investment Income	(3,179,469)	(3,805,107)	625,638	
TOTAL	\$ (2,560,762)	\$ (3,199,329)	\$ 638,567	

**EXPENDITURES**—The primary expense of a retirement system relates to the purpose for which it was created, namely the payment of benefits. Consequently, recurring benefit payments and death benefits prescribed by the Plan and refunds of contributions to terminated employees comprise major expenses. Expenses for Fiscal Year 2002 totaled \$2,221,557,000, reflecting an increase of \$262,681,000 in benefit expenses from Fiscal Year 2001. This increase includes \$27,356,719 as contribution refunds due to the implementation of Chapter 126 of the Laws of 2000, which provides for benefit enhancements for certain members of the City of New

York retirement systems; \$90,563,383 closed loans at retirement that were not included in last year's benefits expenses; and \$142,812,007, which was a result, primarily, from an increase in the number of new retirees. Administrative expenses totaled \$32,523,000, an increase of \$1,948,000 over Fiscal Year 2001's total of \$30,575,000.

#### **EXPENDITURES**

#### In Thousands

	Fiscal Year 2002	Fiscal Year 2001	Increase	
	Amount	Amount	(Decrease)	
Benefits Paid & Refunds	\$2,189,034	\$1,928,301	\$260,733	
Administrative	32,523	30,575	1,948	
TOTAL	\$2,221,557	\$1,958,876	\$ 262,681	

**INVESTMENTS**— The Administrative Code of the City of New York authorizes the investments of plan assets subject to the terms, conditions, limitations, and restrictions imposed by law for investments by savings banks and domestic life insurance companies. The New York State Retirement and Social Security Law and the Administrative Code establish the criteria for permissible equity investments. Details concerning the criteria for TRS' investments may be found in the Notes to the Financial Statements.

**PROFESSIONAL SERVICES**—Consultants are appointed by the Teachers' Retirement Board to perform professional services that are essential to the effective and efficient operation of TRS. The Office of the Comptroller also provides investment services for the pension portfolio through independent advisors.

Actuarial services are provided by the Office of the Actuary of the City of New York, which is employed by the City's five major pension systems. The Chief Actuary's report and certifications are included in this Report.

The City's Corporation Counsel provides legal services to TRS in addition to private legal counsel providing services to the Variable Annuity and Tax-Deferred Annuity Programs.

CRA RogersCasey is working as investment consultant to TRS.

All investment decisions are reviewed and approved by the Teachers' Retirement Board.

**INDEPENDENT AUDIT**—State statutes require an annual audit by independent certified public accountants. The accounting firms of Deloitte & Touche Tohmatsu and Watson, Rice & Co. were selected by the Teachers' Retirement Board. The Independent Auditor's Report on the financial statements and schedules is included in the Financial Section of this Report.

**AWARDS**—The Government Finance Officers Association (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to TRS for its

Comprehensive Annual Financial Report for the Fiscal Year ended June 30, 2001. This was the fourteenth consecutive year that TRS was accorded this prestigious award.

In order to be awarded a Certificate of Achievement, TRS published an easily readable and efficiently organized Comprehensive Annual Financial Report. This Report satisfied both the generally accepted accounting principles and the applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe that our current Comprehensive Annual Financial Report continues to meet the Certificate of Achievement Program's requirements and are submitting it to the GFOA for consideration.

**ACKNOWLEDGEMENTS**—The compilation of the Report reflects the efforts of the TRS staff under the leadership of the Board of Trustees.

It is intended to provide complete and reliable information as a basis for making management decisions, as a means of determining compliance with legal provisions, and as a means for determining responsible stewardship for the assets contributed by the members and their employers.

The Report is available to both administrative personnel and members of TRS. We believe they will find this material informative and helpful.

Finally, we would like to take this opportunity to express our gratitude to the staff, the advisors, and the many people who have worked diligently to ensure the successful operation of TRS.

Sincerely,

Stanley J. Kessock Executive Director Paul J. Raucci Chief Accountant

# Certificate of Achievement for Excellence in Financial Reporting

Presented to

### Teachers' Retirement System of the City of New York

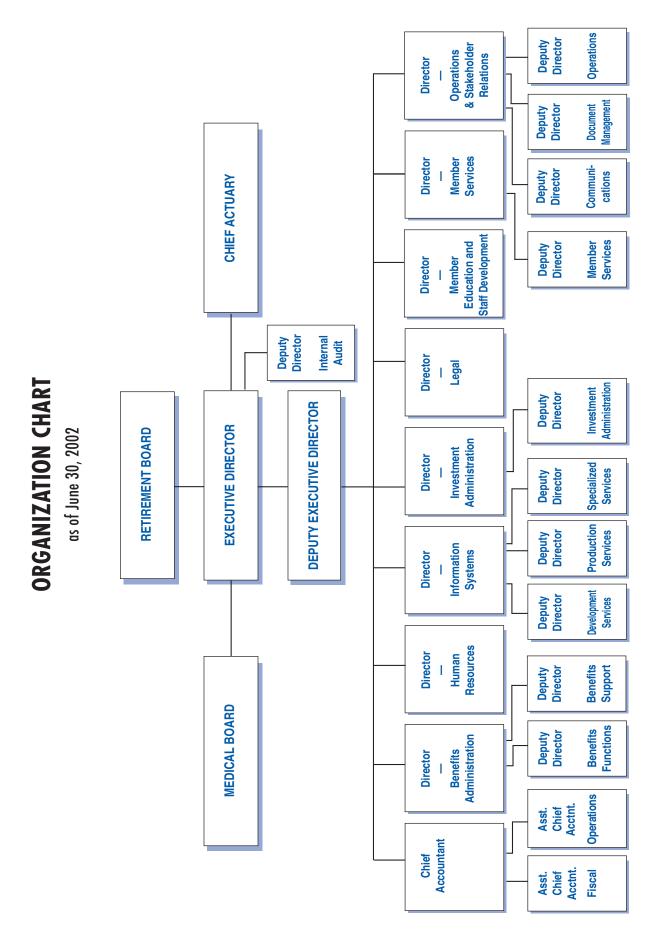
For its Comprehensive Annual Financial Report for the Fiscal Year Ended June 30, 2001

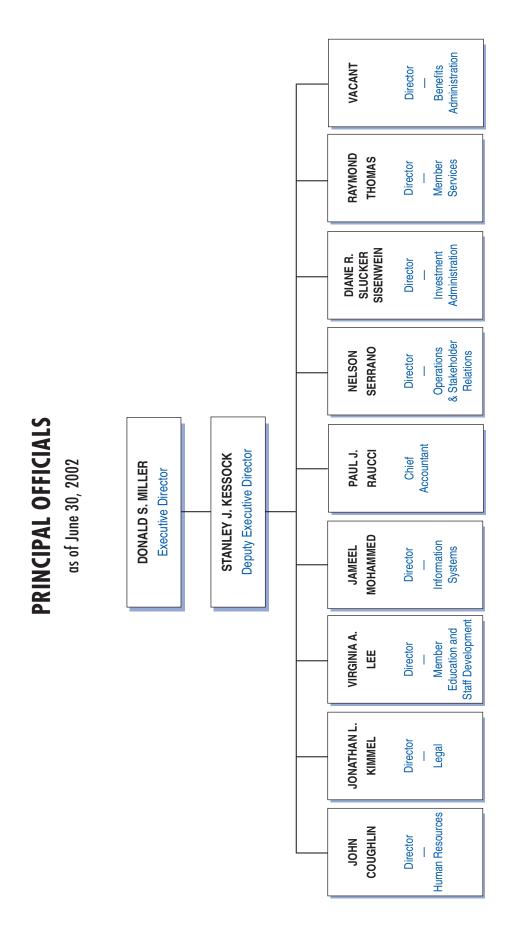
A Certificate of Achievement for Excellence in Financial Reporting is presented by the Government Finance Officers Association of the United States and Canada to government units and public employee retirement systems whose comprehensive annual financial reports (CAFRs) achieve the highest standards in government accounting and financial reporting.



President

**Executive Director** 







# 2. Financial Section

#### **SCHEDULE 4: COMMISSIONS AND PAYMENTS** TO BROKERS AND CONSULTANTS Year Ended June 30, 2002

Investment Agent	Service	TRS' Share of Fees and Commissions
<u> </u>	0011100	
FIXED ANNUITY PROGRAM	In antonial Marria	Ф. 700.000
Aeltus Investment Mgmt., Inc.	Investment Manage	
Allegra Capital Partners, IV, L.P.	Investment Manage	
Alliance Capital Management L.P.	Investment Manage	
Apollo Investment Fund	Investment Manage	
Ariel Capital	Investment Manage	er 141,000
Bank of Ireland Asset Management (U.S.) Ltd.	Investment Manage	er 1,052,800
Barclays Global Investors, N.A.	Investment Manage	
BlackRock Financial Management - Corp.	Investment Manage	er 190,900
BlackRock Financial Management - Mortgage	Investment Manage	
BZW Barclays Global Investors	Investment Manage	
Capital Guardian Trust Co. (Domestic Eq.)	Investment Manage	
Capital Guardian Trust Co. (Int'l.)	Investment Manage	
Carlyne Partners III	Investment Manage	
Credit Suisse (BEA Associates) Corp.	Investment Manage	
Credit Suisse (BEA Associates) Mgmt.	Investment Manage	
Cypress Advisors	Investment Manage	
Delaware International Advisors		
	Investment Manage	
Fisher, Francis, Trees & Watts, Inc Corp.	Investment Manage	
Fisher, Francis, Trees & Watts, Inc Govt.	Investment Manage	
FdG Capital Partners L.L.C.	Investment Manage	
GE Investment Management, Inc.	Investment Manage	
Lincoln Capital Management Company - Govt.	Investment Manage	
Lincoln Capital Management Company - Mortgage	Investment Manage	
Lincolnshire Equity Fund	Investment Manage	
Loomis, Sayles & Co., L.P.	Investment Manage	
Mellon Capital Management Corporation	Investment Manage	
Morgan Stanley	Investment Manage	
New Mountain Partners	Investment Manage	er 862,663
Pacific Investment Management Company (PIMCO)	Investment Manage	er 1,229,300
Putnam Advisory Company, Inc.	Investment Manage	
Putnam Institutional Management	Investment Manage	
RRE Ventures	Investment Manage	
Rowe Price Fleming International Inc.	Investment Manage	
Schroder Capital Management Int'l., Inc.	Investment Manage	
SCP Private Equity Partners	Investment Manage	
Sprucegrove Investment Management Ltd.	Investment Manage	
T. Rowe Price Associates, Inc.	Investment Manage	
Taplin, Canida & Habacht	Investment Manage	
W.R. Huff Asset Management Co., L.L.C.	Investment Manage	
Worthook Invoctment Advisors I. D.		
Westpeak Investment Advisors L.P. Consultant Fees	Investment Manage	er 317,800
		538,734
TOTAL FIXED ANNUITY PROGRAM		\$24,643,65

Alliance Capital Management L.P. Amalgamated Bank of New York	Investment Manager Investment Manager	\$ 177,861 23,098
Barclays Global Investors, N.A. – Int'l. Alpha Tilts	Investment Manager	525,540
Barclays Global Investors, N.A. – Int'l. EAFE	Investment Manager	34,523
Barclays Global Investors, N.A. – Russell 3000	Investment Manager	61,723
Barclays Global Investors, N.A. – Tactical Asset	Investment Manager	341,069
Deutsch Bank Trust Co., New Hampshire	Investment Manager	158,517
Fidelity Management Trust Company	Investment Manager	586,524
Freedom Capital Management L.L.C.	Investment Manager	65,968
Goldman Sachs Asset Management	Investment Manager	731,744
INTECH (Enhanced Investment Technologies, Inc.)	Investment Manager	678,798
Mellon Capital Management Corporation – Russell 3000	Investment Manager	55,000

Continued on page 2.29

# SCHEDULE 4: COMMISSIONS AND PAYMENTS TO BROKERS AND CONSULTANTS (Continued) Year Ended June 30, 2002

INVESTMENT EXPENSES Investment Agent	Service Ti	RS' Share of	f Fees and Co	mmissi	ions Paid
VARIABLE A ANNUITY PROGRAM					
Mellon Capital Mgmt. Corp. – Enhanced Asset Allocation New South Capital Management, Inc. PanAgora Asset Management, Inc. Paradigm Asset Management Co., L.L.C. Small Core Large Core Putnam Advisory Company, Inc. Sound Shore Management, Inc. Trust Company of the West UBS Global Asset Mgt. Trust Co. State Street Bank & Trust Co. Consultant Fees	Investment Mana Investment Mana Investment Mana Investment Mana Investment Mana Investment Mana Investment Mana Investment Mana Custodial Bank	ger ger ger ger ger ger	694,513 201,606 336,834 40,657 172,212 565,125 293,596 134,190 200,866 138,814 130,772		
TOTAL VARIABLE A ANNUITY PROGRAM				\$	6,349,550
VARIABLE B ANNUITY PROGRAM					
Certus Asset Advisors State Street Bank & Trust Co. Consultant Fees	Funding Advisor Custodial Bank	\$	137,456 11,667 42,778		

<sup>\*</sup> See Notes of Financial Statements No. 7 for the Corpus Expenses.

TOTAL VARIABLE B ANNUITY PROGRAM

TOTAL INVESTMENT EXPENSES\*

SCHE	EDULE 5: PROFESSIONAL FEES Year Ended June 30, 2002	
PROFESSIONAL CRA RogersCasey Citibank	NATURE OF SERVICE Consulting Banking Service	\$ 413,550 292,400
TOTAL		\$ 705,950

191,901

\$ 31,185,102

SCHEDULE 6: ADMINISTRATIVE EXPENSES Year Ended June 30, 2002			
PERSONNEL SERVICES			
Staff Salaries	13,794,843		
Social Security	703,219		
Insurance (Health)	921,727		
Welfare Benefit Fund	504,434		
TOTAL PERSONNEL SERVICES		\$15,924,223	
PROFESSIONAL SERVICES			
Data Processing Services and Supplies		\$13,388,426	
COMMUNICATION			
Telephone	145,801		
Postage	297,832		
Traveling Expenses	52,820		
TOTAL COMMUNICATION		\$ 496,453	
RENTALS			
Office Space	1,341,958		
Equipment Leasing	180,573		
TOTAL RENTALS		\$ 1,522,531	
MISCELLANEOUS			
Utilities	54,049		
Supplies and Materials	90,711		
Maintenance, Repairs, and Services	229,640		
Office Equipment and Furniture	29,547		
Advertising Expenses	54,076		
Storage	71,181		
Printing	609,392		
Training Program	45,149		
Books	7,157		
TOTAL MISCELLANEOUS		\$ 1,190,902	
TOTAL ADMINISTRATIVE EXPENSES*			\$ 32,522,535

<sup>\*</sup> Other administrative expenses of \$3,130,291 were paid on our behalf under Regulation 85 of the New York State Superintendent of Insurance Regulations.

See Notes of Financial Statements No. 7 for the Corpus Expenses.



# 3. Investment Section

#### **CRA ROGERSCASEY**

Comprehensive Annual Financial Report
Teachers' Retirement System of the City of New York
Introduction to Report on Investment Activity
Prepared by CRA RogersCasey, Investment Consultant
to the Teachers' Retirement System of the City of New York

TRS maintains three investment programs: the Fixed Annuity Program, the Variable A Annuity Program and the Variable B Annuity Program. Each one of these programs' structure differs, depending upon its investment objective, but all three programs are well-diversified, multi-manager portfolios that are carefully monitored based upon well-defined guidelines and expectations.

The Pension Fund includes a) all funds that Tier I/II members invested in the Fixed Annuity Program and b) all Tier III/IV QPP funds. The Fixed Annuity Program currently provides Tier I/II participants with an 8.25% return. This rate is guaranteed through June 30, 2004, and may then be continued or reset based on action by the New York State Legislature. Tier III/IV members are credited 5% in their QPP accounts. The Pension Fund totaled \$24.328 billion as of June 30, 2002 and earned a return of -8.05% for the fiscal year. This Fund has as its target a mix of 55% U.S. equity investments, 15% non-U.S. equity investments and 30% fixed income investments. This asset allocation policy is based on the fund's long-term investment horizon of more than 20 years. The investment structure has a significant emphasis on risk control and, as of June 30, 2002, 83% of U.S. equity and 30% of non-U.S. equity assets were invested in indexed or enhanced index strategies. This emphasis on indexed and enhanced index strategies also enables the program to more effectively control costs. The Fund's fixed-income holdings are very high quality U.S. securities, with a small (5%) allocation to enhanced yield securities.

The Variable A Fund has as its objective to provide participants with a very diversified equity investment portfolio. As of June 30, 2002, Variable A had \$6.575 billion in assets and had a total return of -14.45% for the fiscal year. This portfolio has as its target a mixture of U.S. equities (70%), non-U.S. equities (15%), and tactical asset allocation strategies (15%), which shift between U.S. stocks, bonds and cash depending upon the managers' analysis of market conditions. The diversification of this portfolio beyond U.S. equities is intended to protect participants against significant market downturns within a single asset class (*i.e.*, U.S. stocks). Again, risk control and cost-effectiveness are a very important focus of the investment structure, and at June 30, 2002, approximately 70% of Variable A's portfolios were managed in indexed or enhanced index strategies.

The Variable B Fund is structured to preserve participants' capital and to provide current income with a low level of volatility. At June 30, 2002, Variable B's assets totaled \$0.409 billion and the portfolio earned a return of 5.17% for the fiscal year. This portfolio is diversified among investment contracts provided by insurance companies and high-quality bond portfolios. These bond portfolios are all covered by insurance contracts, which ensure that participants will not receive less than book value or cost on any withdrawals from this Fund. As the Fund's investments mature or make principal payments, the proceeds are re-invested so as to ensure that the Fund maintains a level of current income that tracks short-term interest rates.

In summary, as of June 30, 2002, each of TRS' three investment programs were well defined and appropriately invested. These portfolios continue to receive intensive scrutiny and ongoing monitoring to ensure that the investment policies and strategies are consistent with the Funds' objectives and that the programs are being managed in line with the investment guidelines and benchmarks.

CRA RogersCasey

One Parklands Drive Darien, Connecticut 06820 203-656-5900

#### **GLOBAL ECONOMY**

The global economy experienced a difficult and, in many ways, unprecedented year ending June 30, 2002. Given the magnitude of the events, the devastating terrorist attacks on September 11 had a damaging impact far beyond the U.S. market. The global equity markets plummeted after the attacks, as consumer confidence was shaken to the core. Despite a short rally during the fourth quarter of 2001, the recovery in the global markets stalled in the first two quarters of 2002, given questions about the U.S. economy and ongoing tensions in the Middle East. The U.S. outlook remains center stage, as the engine of worldwide growth. While dropping precipitously in the wake of September 11, the U.S. economy showed great resilience in the fourth quarter of 2001, but retreated to further declines in the first and second quarters of 2002. Despite signs of positive macroeconomic news, investors suffered a confidence crisis as a result of high-profile corporate scandals and fraudulent accounting practices. Outside of the U.S., economic sentiment surveys suggested that continental Europe is on the path to recovery. Notwithstanding, the strength and scope of this recovery remained questionable and uneven among the member countries within the Eurozone. After a dismal calendar year 2001, the Japanese economy rebounded in 2002. Likewise, emerging markets fared relatively well, with emerging Asia and emerging Europe posting positive performance for the year. Latin American markets declined for the trailing one-year, with weak performances from Argentina, Brazil, and Chile.

#### **U.S. MARKETS**

The U.S. economy showed great resilience after the devastating terrorist attacks on September 11. After a grim third quarter, equity markets rallied and finished the fourth quarter of 2001 on a positive note. However, the equity markets experienced significant volatility during the first quarter of 2002, mostly as the result of ongoing concerns about corporate accounting practices. The second quarter of 2002 was particularly difficult, as a seemingly endless stream of negative corporate news, coupled with tensions in the Middle East, overshadowed positive macroeconomic and earning news. For the year ending June 30, 2002, the S&P 500 declined 18.0% and the Dow Jones Industrial Average Index was down 10.3%. The technology-laden NASDAQ Composite was hampered by lingering concerns about valuations and earnings prospects in the technology sector and finished the year with a return of -32.3%. Influenced by the decline in technology shares, value stocks outperformed growth stocks across the capitalization spectrum for the year. Additionally, small-cap stocks outperformed their larger counterparts for the one-year period ending June 30, 2002.

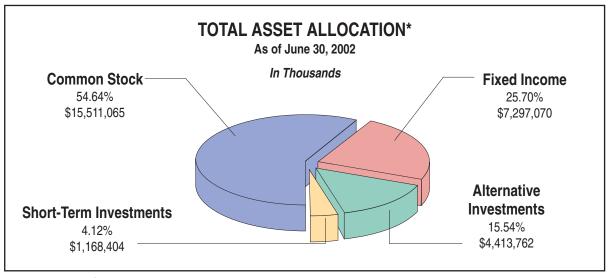
After lowering the Federal Fund's rate a record eleven times during 2001, the Federal Open Market Committee decided to leave the rate unchanged during the first and second quarters of 2002, as there were no clear signs of an acceleration in the economy. The U.S. fixed-income markets finished the year on a strong note, with most of the major indices in positive territory. For the one-year period ending June 30, 2002, the Lehman Brothers Aggregate Index and the Lehman Brothers Government Credit Index returned 8.6% and 8.2%, respectively. The credit sector lagged the broad market with the Lehman Brothers Corporate Index returning 7.0% for one year ending June 2002. After two positive quarters, the high-yield markets suffered one of the worst performances during the second quarter of 2002, as rapidly increasing corporate default rates and several high profile bankruptcies roiled the market. The Lehman Brothers High Yield Index returned -3.6% and Salomon High Yield Index returned -4.7% for the one-year period ending June 30, 2002.

#### INTERNATIONAL MARKETS

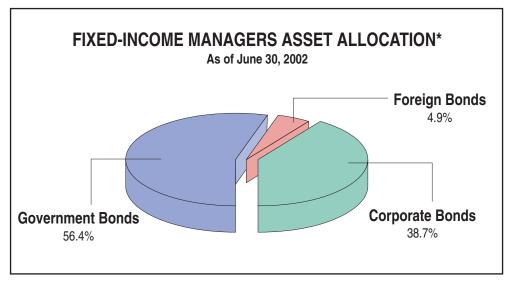
International stocks posted meager results, due to a sluggish economic recovery. The developed international markets, as measured by the MSCI EAFE Index, fell 9.2% in U.S. dollar terms for one year ending June 30, 2002. The depreciation of the U.S. dollar during the second quarter of 2002 helped performance of both developed and emerging markets. Europe ex-U.K. returned -7.5%, while the U.K. was down 6.9% for one year ending June 30, 2002. Japan showed signs of recovery during the first two quarters of 2002 after losses during the later half of year 2001. The MSCI Japan index returned -16.6% in U.S. dollar terms, while the Pacific Basin ex-Japan was down 0.6% for the one-year period ending June 30, 2002.

The emerging markets remained in positive territory for the trailing year as measured by the MSCI EMF Index, posting a gain of 1.3% in U.S. dollar terms for the one-year period ending June 30, 2002. The strong one-year performance was uneven, however, as macroeconomic and microeconomic issues took their toll on all regions during the second quarter of 2002, and the major emerging markets declined significantly. In terms of regional performance, Asia returned 16.2% for the trailing one year, emerging Europe rose 7.9%, and Latin America declined -20.0% for the trailing one-year period ending June 30, 2002.

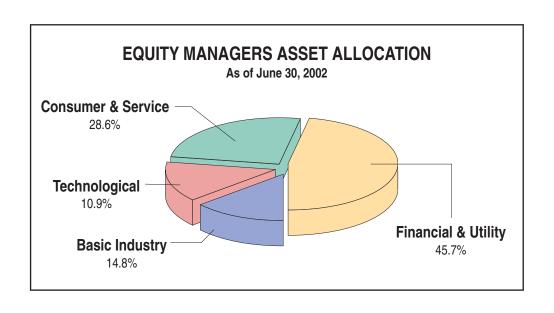
INVESTMENT SUMMARY As of June 30, 2002			
Type of Investment	Market Value In Thousands	Percent of Total Market Value	
Fixed Income:			
Government Bonds	\$4,113,238	14.49%	
Corporate Bonds	2,825,815	9.95	
Foreign Bonds	358,017	1.26	
Preferred Stock	0	0	
Total Fixed Income	\$7,297,070	25.70%	
Common Stock:			
Financial & Utility	\$7,088,901	24.97%	
Basic Industry	2,296,281	8.09	
Consumer & Service	4,442,517	15.65	
Technological	1,683,366	5.93	
Total Common Stock	\$15,511,065	54.64%	
Alternative Investments:			
Guaranteed Investment Contracts (GICs)	\$145,667	0.51%	
Managed Investment Contracts	173,510	0.61	
International	4,094,125	14.42	
Mortgages	460	0	
Total Alternative Investments	\$4,413,762	15.54%	
Short-Term Investments:			
Short-Term Investment	\$786,085	2.77%	
Commercial Paper	382,319	1.35	
Total Short-Term Investments	\$1,168,404	4.12%	
Total	\$28,390,301*	100.00%	

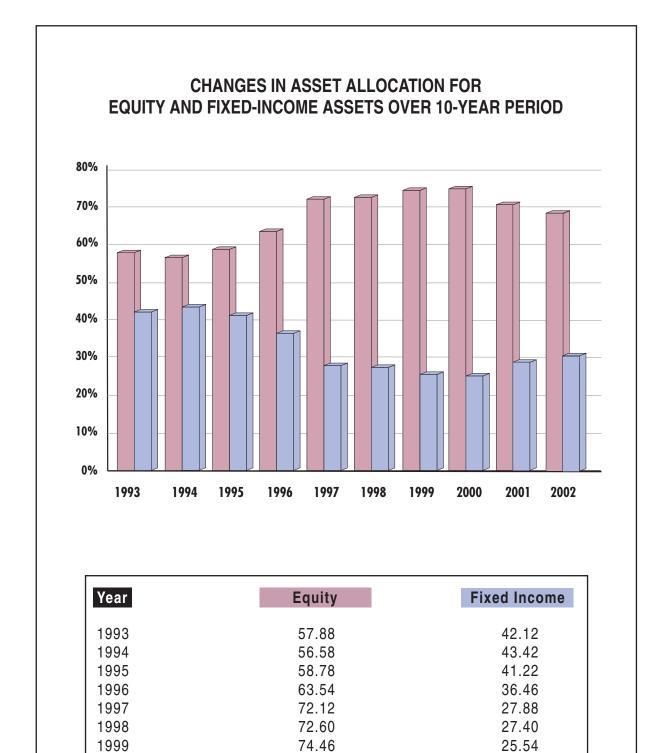


<sup>\*</sup> Excludes \$2,921,724 in securities-lending.



\*Note: Preferred stock investments (0.03%) are not reflected in this pie.





74.87

71.53

69.06

2000

2001

2002

25.13

28.47

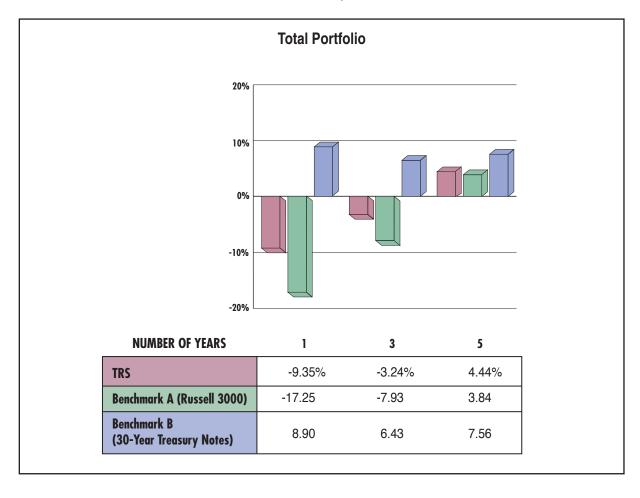
30.94

#### **ANNUALIZED INVESTMENT RESULTS\***

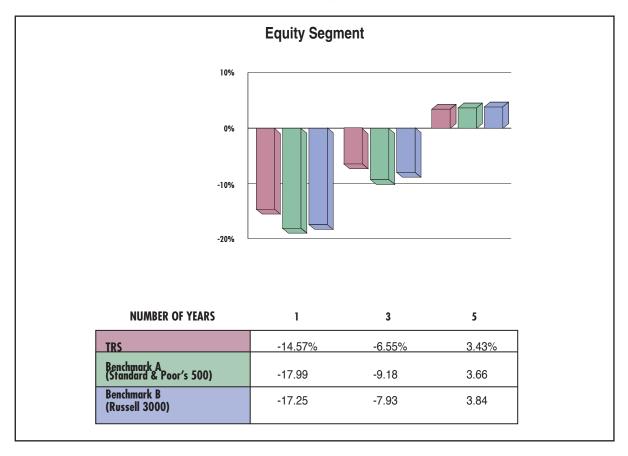
	Current Year	Annu	alized
	2002	3-Year	5-Year
<b>Total Portfolio (TRS)</b> Benchmark A (Russell 3000) Benchmark B (30-Year Treasury Notes)	-9.35%	-3.24%	4.44%
	-17.25	-7.93	3.84
	8.90	6.43	7.56
Equity Segment (TRS) Benchmark A (Standard & Poor's 500) Benchmark B (Russell 3000)	-14.57	-6.55	3.43
	-17.99	-9.18	3.66
	-17.25	-7.93	3.84
Fixed-Income Segment (TRS) Benchmark A (5-Year Treasury Notes) Benchmark B (30-Year Treasury Notes)	6.07	6.54	6.82
	9.14	7.62	7.10
	8.90	6.43	7.56
Guaranteed Investment Contracts (GICs) (TRS) Benchmark A (GICs —2-Year Treasury Notes) Benchmark B	5.16	5.68	5.75
	7.10	7.96	6.91
	-	-	–
Cash-Equivalents Segment (TRS) Benchmark A (30-Year Treasury Notes) Benchmark B	3.53	6.04	5.83
	8.90	6.43	7.56
	-	-	-

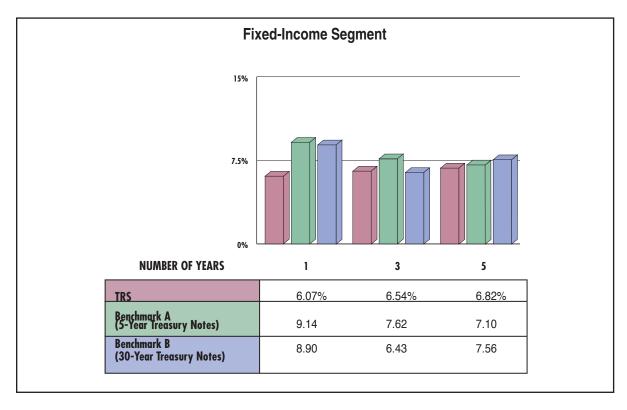
<sup>\*</sup> The calculations were prepared using a time-weighted rate of return based on the market rate of return in accordance with the Association for Investment Management & Research's (AIMR's) Performance Presentation Standards.

#### **ANNUALIZED INVESTMENT RESULTS**

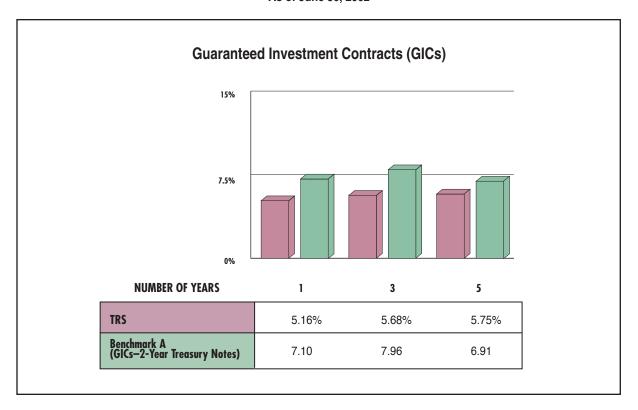


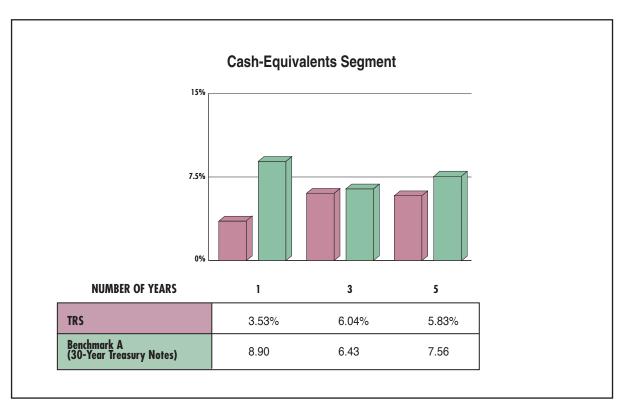
#### **ANNUALIZED INVESTMENT RESULTS (Continued)**





#### **ANNUALIZED INVESTMENT RESULTS (Continued)**





### LIST OF LARGEST BOND ASSETS HELD (BY MARKET VALUE)

As of June 30, 2002

Par Value		Interest Rate	Due Date	Market Value
\$120,975,000	Federal Nat Mtg Assn Gtd Pass Ctf Pool #T/B/A	6.500%	08/01/32	\$122,846,332
103,775,000	United States Treasury Bonds	6.375	08/15/27	113,180,128
74,460,000	United States Treasury Bonds	8.125	08/15/19	95,378,792
88,000,000	Federal Nat Mtg Assn Gtd Pass Ctf Pool #T/B/A	5.500	07/18/17	88,055,000
81,000,000	Federal Home Ln Mtg Corp Partn Group #T/B/A	6.000	07/15/32	80,424,090
69,743,000	Federal Nat Mtg Assn Gtd Pass Ctf Pool #T/B/A	6.000	07/01/32	69,666,283
64,000,000	Federal Nat Mtg Assn Gtd Pass Ctf Pool #T/B/A	7.000	08/01/32	66,090,000
63,000,000	Govt Nat Mtg Assn Reg Pool #T/B/A	7.000	08/21/32	65,521,890
60,134,000	Federal Home Ln Mtg Corp PC Gold Group #T/B/	A 6.500	07/01/32	61,066,077

### LIST OF LARGEST EQUITY ASSETS HELD (BY MARKET VALUE)

As of June 30, 2002

Shares	Equity	Market Value	
1,893,337	General Electric Co.	\$55,001,442	
986,796	Microsoft Corp.	53,977,727	
1,366,197	Citigroup Inc.	52,940,135	
1,432,536	Pfizer Inc.	50,138,775	
1,165,602	Exxon Mobil Corp.	47,696,442	
626,259	American Int'l Group Inc.	42,729,662	
799,307	Johnson & Johnson	41,771,758	
699,332	Wal-Mart Stores Inc.	38,470,247	
1,596,062	Intel Corp.	29,160,056	
400,420	Bank America Corp.	28,173,585	
679,313	Verizon Communications	27,274,433	
341,327	International Business Machines	24,575,511	
473,258	Merck & Co. Inc.	23,965,772	
268,445	ChevronTexaco Corp.	23,757,394	
613,191	Home Depot Inc.	22,522,499	
296,294	Fannie Mae	21,851,699	
419,609	Wells Fargo & Co. New	21,005,624	
1,343,236	AOL Time Warner Inc.	19,759,005	
345,840	Coca Cola Co.	19,367,019	
732,984	Dell Computer Corp.	19,160,196	

Note: The above tables reflect assets of both the Qualified Pension Plan (QPP) and Tax-Deferred Annuity (TDA) Program. The complete list of the assets held by TRS' three investment programs is included in the publication *Investment Portfolios under the Qualified Pension Plan and the Tax-Deferred Annuity Program.* 

### SCHEDULE OF INVESTMENT MANAGERS AND OTHER SERVICE FEES (BY CATEGORY)

For The Fiscal Year Ended June 30, 2002 (In Thousands)

	Assets under Management		Fees	Percent of Fees Over Assets
INVESTMENT MANAGERS' FEES				
Fixed Income managers	\$7,297,531	\$ 7,945		.109%
Equity managers	19,605,189	22,240		.113%
Other	319,177	137		.043%
TOTAL INVESTMENT MANAGERS' FEES	\$27,221,897*	\$30,322		 .111%
OTHER INVESTMENT SERVICE FEES				
Custodian fees	\$28,390,301**	\$	449	
Investment Consultant fees	31,312,025		414	.002%
TOTAL INVESTMENT SERVICE FEES		\$	863	 .001%

<sup>\*</sup> Excludes \$1,168,404 in short-term and \$2,921,724 in securities-lending.

<sup>\*\*</sup> Excludes \$2,921,724 in securities-lending.

#### PARTICIPATING EMPLOYERS

Board of Education City University of New York

#### SUMMARY OF INVESTMENT MANAGERS

#### PENSION FUND INVESTMENT MANAGERS

**Equity** 

Aeltus Investment Mgmt., Inc.

Bank of Ireland Asset Management (U.S.) Limited

Barclays Global Investors, N.A. Capital Guardian Trust Company **Delaware International Advisors** GE Investment Management, Inc.

Mellon Capital Management Corporation

Putnam Advisory Company, Inc. Rowe Price Fleming International, Inc. Schroder Capital Management Int'l., Inc. Sprucegrove Investment Management Ltd.

Westpeak Investment Advisors L.P.

**Fixed Income** 

BlackRock Financial Management Credit Suisse (BEA Associates) Fisher, Francis, Trees & Watts, Inc. Lincoln Capital Management Company Miller, Anderson & Sherrerd, L.L.P.

Pacific Investment Management Company (PIMCO)

T. Rowe Price Associates, Inc. Taplin, Canida & Habacht

**Enhanced Yield/Alternative** 

Allegra Capital Partners IV. L.P. Alliance Capital Management, L.P.

Apollo Investment Fund

Ariel Capital Carlyne Partners III Credit Suisse

Cypress Advisors

FdG Capital Partners L.L.C. Lincolnshire Equity Fund Loomis, Sayles & Co., L.P. New Mountain Partners

RRE Ventures

SCP Private Equity Partners

W.R. Huff Asset Management Co., L.L.C.

Mellon Capital Management Corporation

Pacific Investment Management Company (PIMCO)

New South Capital Management, Inc.

#### VARIABLE A INVESTMENT MANAGERS

Alliance Capital Management L.P. Amalgamated Bank of New York

Bank of Ireland Asset Management (U.S.) Limited

Barclays Global Investors, N.A.

Deutsche Bank Trust Co. New Hampshire

Enhanced Investment Technologies, Inc. (INTECH)

Fidelity Management Trust Company Freedom Capital Management L.L.C. Goldman Sachs Asset Management

PanAgora Asset Management, Inc. Paradigm Asset Management Co. L.L.C. Putnam Fiduciary Trust Company

Sound Shore Management, Inc. Trust Company of the West

UBS Global Asset Management Trust Co.

#### **VARIABLE B INVESTMENT MANAGERS**

Certus Asset Advisors

Credit Suisse Asset Management, L.L.C.

Putnam Advisory Company, Inc.



# 4. Actuarial Section



#### OFFICE OF THE ACTUARY

220 CHURCH STREET • ROOM 1205 NEW YORK, NY. 10013-6301 (212) 442-5775 • FAX: (212) 442-5777

ROBERT C. NORTH, JR.

CHIEF ACTUARY

November 26, 2002

Retirement Board
Teachers' Retirement System
of the City of New York
40 Worth Street
New York, NY 10013

Re: Actuarial Information for the Comprehensive Annual Financial Report ("CAFR") for the Fiscal Year ended June 30, 2002

Dear Members:

The financial objective of the Teachers' Retirement System of the City of New York-Qualified Pension Plan (the "Plan") is to fund members' retirement benefits during their active service and to establish employer normal contribution rates which, expressed as a percentage of active member annualized covered payroll, will remain approximately level over the future working lifetimes of those active members that, together with member contributions, will be sufficient to accumulate assets to pay benefits when due.

Employer contributions to the Plan are made on a statutory basis based on actuarial valuations performed annually as of June 30.

Actual statutory contributions for Fiscal Year 2002 were less than the annual pension costs. This relationship occurs because Chapter 125 of the Laws of 2000 ("Chapter 125/00"), which provides eligible retirees and eligible beneficiaries with automatic Cost-of-Living Adjustments ("COLA") beginning September 2000, also provides for a phase-in schedule for funding the additional liabilities created by the benefits provided by Chapter 125/00.

The annual pension costs were computed in accordance with Governmental Accounting Standards Board Statement Number 25 ("GASB 25") and consistent with generally accepted actuarial principles.

Retirement Board Teachers' Retirement System of the City of New York Page 2

#### Actuarial Assumptions and Methods in Effect as of June 30, 2001

Provided in this Actuarial Section of the CAFR is a "Summary of Actuarial Assumptions and Methods in Effect as of June 30, 2001." These actuarial assumptions and methods were employed in the June 30, 2001 actuarial valuation that was used to determine Fiscal Year 2002 employer contributions to the Plan.

These actuarial assumptions and methods are generally the same as those employed in the June 30, 2000 actuarial valuation that was used to determine Fiscal Year 2001 employer contributions to the Plan.

#### Benefits and Census Data

A summary of the benefits available under the Plan is shown later in this Actuarial Section of the CAFR.

Census data are submitted by the Plan's administrative staff, by the employers' payroll facilities, and by the Comptroller of the City of New York, and are reviewed by the Office of the Actuary for consistency and reasonability.

A summary of the census data as of June 30, 2001 is included in this CAFR. A summary of the census data used in the June 30, 2000 actuarial valuation of the Plan is available in the June 30, 2001 CAFR.

#### Funded Status

With respect to the funded status of the Plan, included in the Financial Section of the CAFR is a Schedule of Funding Progress (Schedule 1).

Included in the Actuarial Section of the CAFR is a Solvency Test (i.e., Comparative Summary of Actuarial Values and Percentages Covered by Actuarial Value of Assets) as prescribed by the Government Finance Officers Association ("GFOA"). This Solvency Test represents an alternative approach to describing progress toward funding objectives.

Retirement Board Teachers' Retirement System of the City of New York Page 3

#### Presentation Style and Sources of Information

The actuarial information herein is being presented in a manner believed to be consistent with the requirements of the GFOA and with GASB 25, which was adopted for financial reporting purposes beginning Fiscal Year 1995.

As prescribed by GASB 25, included in the Financial Section of the CAFR are the following schedules:

- Schedule of Funding Progress—prepared by the Office of the Actuary.
- Schedule of Employer Contributions-prepared by the Plan's Administrative Staff.
- Actuarial Methods and Assumptions-prepared by the Office of the Actuary.

The following supporting schedules in the Actuarial Section of the CAFR were prepared by the Office of the Actuary:

- Summary of Actuarial Assumptions and Methods in Effect as of June 30, 2001.
- Schedule of Active Member Valuation Data.
- Schedule of Retirants and Beneficiaries Added to and Removed from the Rolls.
- Comparative Summary of Actuarial Values Percentages Covered by Actuarial Value of Assets -Solvency Test.
- Schedule of Actual vs. Required Contributions.

Respectfully submitted, Robert C North J

Robert C. North, Jr., F.S.A.

Chief Actuary

cc: Mr. S.J. Kessock

ACTUARIAL 4.3

## SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT AS OF JUNE 30, 1999

- 1 The assumed investment return rate is 8.0% per annum (4.0% per annum for benefits payable under the Variable Annuity Programs).
- **2** The mortality tables for service and disability pensioners were developed from an experience study of the Plan's pensioners. Sample probabilities are shown in Table 1.
- 3 Active Service tables are used to predict various withdrawals from active service. Sample probabilities are shown in Table 2 for members withdrawing from active service other than for Service Retirement and in Table 3 for members withdrawing from active service on account of Service Retirement.
- 4 A Salary Scale is used to estimate salaries at retirement or death. Sample percentage increases are shown in Table 4. The Salary Scale includes an assumed General Wage Increase rate of 3.0% per annum.
- **5** The economic assumptions (*i.e.*, the assumed investment return rate and the General Wage Increase rate) were developed assuming a long-term Consumer Price Inflation assumption of 2.5% per year.
- **6** The valuation method assumes a closed group. Salaries of members on the valuation date are assumed to increase in accordance with the Salary Scale.
- 7 The Frozen Initial Liability Actuarial Cost Method is utilized by the Plan's Actuary to calculate the contributions from the employers. Under this Actuarial Cost Method, the Initial Liability has been established by the Entry Age Actuarial Cost Method but with the Unfunded Actuarial Accrued Liability ("UAAL") not less than \$0.

Under this method, the excess of the actuarial present value of projected benefits of members as of the valuation date, over the sum of the Actuarial Value of Assets plus UAAL, if any, is allocated on a level basis over the future earnings of members who are on payroll as of the valuation date. Actuarial gains and losses are reflected in the employer normal contribution rate.

Chapter 85/00 re-established the UAAL and eliminated the Balance Sheet Liability ("BSL") as of June 30, 1999. The schedules of payment toward the re-established UAAL provides that the UAAL, if any, be amortized over a period of 11 years beginning Fiscal Year 2000, where each annual payment after the first annual payment equals 103% of its preceding annual payment.

**8** The Actuarial Asset Valuation Method ("AAVM") was changed as of June 30, 1999 to reflect a market basis for investments held by the Plan and was made as one component of an overall revision of actuarial assumptions and methods as of June 30, 1999.

This AAVM recognizes expected investment returns immediately and phases in investment returns greater or less than expected (*i.e.*, Unexpected Investment Returns ("UIR")).

Under this AAVM, any UIR for Fiscal Years 2000 and later will be phased into the AAV beginning the following June 30 at a rate of 10%, 15%, 20%, 25%, and 30% per year (or at a cumulative rate of 10%, 25%, 45%, 70%, and 100% over five years).

For assets of the Variable Annuity Programs, current Market Value is used.

**9** The actuarial assumptions and methods described herein were adopted by the Retirement Board to

4.4 ACTUARIAL

## SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT AS OF JUNE 30, 1999 (Continued)

be effective for Fiscal Years beginning on and after July 1, 1999 and, where required, enacted by the New York State Legislature and Governor as part of Chapter 85/00. These assumptions and methods are generally based upon recommendations made by the Actuary in a Report dated January 20, 2000. The Actuary's Report took into account an actuarial experience study and recommendations made by the independent actuarial auditor, Watson Wyatt and Company, in a report entitled **Report On The Experience Study Of The New York City Retirement Systems For The Four Years Ended June 30 1997,** dated October 1999.

#### SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT AS OF JUNE 30, 1999 (Continued)

## TABLE 1 DEATHS AMONG SERVICE AND DISABILITY PENSIONERS

Percentage Of Pensioners Dying Within Next Year

	SERVICE P	ENSIONERS	DISABILITY	PENSIONERS
AGE	MALE	FEMALE	MALE	FEMALE
40	.1151%	.0645%	1.5101%	2.9247%
50	.2631%	.1543%	1.8462%	2.5618%
60	.6163%	.3832%	2.2326%	1.4957%
70	1.8461%	1.0802%	3.1342%	1.9287%
80	4.6919%	3.0798%	6.0619%	4.8143%
90	12.9028%	10.3790%	12.9554%	11.4430%
100	30.1977%	28.6331%	30.1977%	28.6331%
110	100.0000%	100.0000%	100.0000%	100.0000%

# TABLE 2 WITHDRAWALS FROM ACTIVE SERVICE (OTHER THAN FOR SERVICE RETIREMENT)

Percentage Of Active Members Separating Within Next Year

	WITHD	DRAWAL*		IDENT BILITY		INARY BILITY	DE	EATH
AGE	MALE	<b>FEMALE</b>	MALE	<b>FEMALE</b>	MALE	FEMALE	MALE	FEMALE
20	2.40%	1.80%	.00%	.00%	.02%	.01%	.0351%	.0183%
25	2.30%	1.80%	.00%	.00%	.02%	.01%	.0432%	.0245%
30	2.20%	1.80%	.01%	.00%	.02%	.01%	.0565%	.0332%
35	2.00%	1.80%	.01%	.01%	.03%	.02%	.0800%	.0462%
40	1.80%	1.80%	.01%	.01%	.04%	.06%	.1151%	.0645%
45	1.40%	1.40%	.02%	.01%	.05%	.09%	.2030%	.0980%
50	1.00%	1.00%	.03%	.02%	.07%	.10%	.3635%	.1598%
55	1.00%	1.00%	.04%	.02%	.12%	.13%	.5702%	.2465%
60	1.00%	1.00%	.05%	.03%	.17%	.15%	.8517%	.4114%
65	1.00%	1.00%	.06%	.04%	.24%	.17%	1.4501%	.6852%
70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

<sup>\*</sup> These probabilities are utilized until active member becomes eligible for a Service Retirement benefit.

4.6 ACTUARIAL

#### SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT AS OF JUNE 30, 1999 (Continued)

## TABLE 3 WITHDRAWALS FROM ACTIVE SERVICE (FOR SERVICE RETIREMENT)

Percentage Of Eligible Active Members Retiring Within Next Year

MALE	FEMALE

WITH REDUCED BENEFITS		WITH EDUCED BE SERVICE SI	<u>NEFITS</u> NCE ELIGIBII	LITY	WITH REDUCED BENEFITS	_		TH <u>D Benefits</u> INCE ELIGIBILITY
	0.4		MORE THAN	405		0.4	4.0	MORE THAN
	0–1	1–2	2	AGE		0–1	1–2	2
2.00%	0.00%	0.00%	0.00%	50	2.00%	0.00%	0.00%	0.00%
2.00%	12.00%	0.00%	0.00%	55	2.00%	10.00%	0.00%	0.00%
5.00%	12.00%	10.00%	10.00%	60	5.00%	10.00%	8.00%	8.00%
0.00%	30.00%	30.00%	30.00%	65	0.00%	30.00%	30.00%	30.00%
N/A	100.00%	100.00%	100.00%	70	N/A	100.00%	100.00%	100.00%

## TABLE 4 SALARY SCALE

Assumed Annual Percentage Increase Within Next Year\*

AGE	MALE	FEMALE
20	9.50%	9.50%
25	8.50%	8.50%
30	7.50%	7.50%
35	6.00%	6.00%
40	5.50%	5.50%
45	5.00%	5.00%
50	4.75%	4.75%
55	4.75%	4.75%
60	4.75%	4.75%

<sup>\*</sup>Salary scale includes an assumed General Wage Increase rate of 3.0% per annum.

#### SCHEDULE OF ACTIVE MEMBER VALUATION DATA JUNE 30, 1994 TO JUNE 30, 1999

As of June 30	Number	Annual Payroll	Annual Average Salary	Percentage Increase (Decrease) In Average Salary
1994	76,034	\$3,305,656,614	\$43,476	2.6%
1995	78,180	3,592,991,788	45,958	5.7
1996	76,672	3,507,775,452	45,750	(.5)
1997	78,335	3,556,940,495*	45,407	(.7)
1998	83,940	3,873,154,740	46,142	1.6
1999	86,682	4,217,560,016	48,656	5.4

<sup>\*</sup> Beginning June 30, 1997, the Annual Payroll includes salaries for summer pay, which became pensionable as a consequence of Chapter 683 of the Laws of 1986 ("Chapter 683/86")

#### SCHEDULE OF RETIRANTS AND BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS FISCAL YEARS 1994-1999

	ADDED TO THE ROLLS	REMOVED FROM THE ROLLS	ROLLS-	END OF YEAR		
Fiscal Year Ended June 30	Number	Number	Number	Annual Allowances	% Increase (Decrease) In Annual Allowances	Average Annual Allowances
1994	1,581	1,305	43,387	\$ 960,425,003	(1.67)%	\$22,136
1995	1,690	1,421	43,656	1,009,488,338	5.11	23,124
1996	4,832	1,319	47,169	1,188,798,485	17.76	25,203
1997	4,600	1,461	50,308	1,414,392,627	18.98	28,115
1998 1999	1,483 1,794	1,523 1,537	50,268 50,525	1,493,972,061 1,604,299,434	5.63 7.38	29,720 31,753

4.8 ACTUARIAL

## COMPARATIVE SUMMARY OF ACTUARIAL VALUES AND PERCENTAGES COVERED BY ACTUARIAL VALUE OF ASSETS

#### **SOLVENCY TEST**

(In Thousands)

	AGGREGAT	E ACCRUED LIA	BILITIES FOR				
As Of June 30	Accumulated Employee Contributions	Current Retirants and Beneficiaries	Active Members' Employer- Financed Portion	Actuarial Value of Assets	Value	s Cover	Actuarial red by of Assets
	(A)	(B)	(C)	(D)	(A)	(B)	(C)
1994	\$1,738,878	\$ 8,433,535	\$ 8,018,208	\$17,981,775	100%	100%	97%
1995*	2,036,476	9,256,495	9,318,636	20,412,808	100	100	98
1996	2,142,463	11,319,076	9,005,355	22,176,110	100	100	97
1997	2,351,730	13,409,951	8,764,743	24,354,924	100	100	98

<sup>\*</sup> As of June 30, 1995 and June 30, 1999, economic and non-economic assumptions were revised due to experience review, and the Actuarial Values of Assets were reset to Market Value.

Also, see following "SOLVENCY TEST—NOTES."

## COMPARATIVE SUMMARY OF ACTUARIAL VALUES AND PERCENTAGES COVERED BY ACTUARIAL VALUE OF ASSETS

#### **SOLVENCY TEST—NOTES**

The ultimate test of financial soundness in a retirement system is its ability to pay all of its promised benefits when due. The retirement system's progress in accumulating assets to pay all promised benefits can be measured by comparing the Valuation Assets of the retirement system with the Aggregate Accrued Liabilities for:

- (A) Accumulated Employee Contributions;
- (B) Current Retirants and Beneficiaries; and
- (C) Active Members' Employer-Financed Portion.

The Aggregate Accrued Liabilities are the actuarial present value of credited projected benefits produced by the credited projected benefit attribution approach prorated on service. The Aggregate Accrued Liabilities were calculated in accordance with previously issued Governmental Accounting Standards Board Statement No. 25.

This comparative summary allocates assets as if they were priority groups, somewhat similar to (but not identical with) the priority categories of Section 4044 of the Employee Retirement Income Security Act of 1974.

The values in the table are dependent upon census data, benefit levels (which have changed on occasion over the past years), and the actuarial assumptions and methods employed at each valuation date. These underlying bases can be found within the Comprehensive Annual Financial Report for each respective year.

To fully evaluate trends in financial soundness, changes in assumptions need to be evaluated. The economic assumptions used in the actuarial calculations are as follows:

Assumed Annual Rate Of Return On Investments	Merit And Promotion Increases Plus An Assumed General Wage Increase Per Year Of
9.00%	5.5%
8.75	4.0
8.75	4.0
8.75	4.0
8.75	4.0
8.00	3.0
	9.00% 8.75 8.75 8.75 8.75

4.10 ACTUARIAL

### SCHEDULE OF ACTUAL VS. REQUIRED CONTRIBUTIONS FISCAL YEARS 1995-2000

Fiscal Year Ended June 30	Actual Employer Contribution*	Required Employer Contribution	Employer Rate Of Contribution**
1995	\$369,726,776***	\$369,726,776	11.185%
1996	397,471,082****	397,471,082	11.062
1997	364,172,052	364,172,052	10.382
1998	441,892,829	441,892,829	12.423
1999 2000	460,515,983 181,769,965****	460,515,983 181,769,965	11.890 4.310

<sup>\*</sup> Equals Total Employer Contributions accrued for Fiscal Year.

<sup>\*\*</sup> The Employer Rates of Contribution represent a percentage of the salaries of members who were on payroll as of the preceding June 30th adjusted, where applicable, to be consistent with collective bargaining agreements estimated to be achieved.

<sup>\*\*\*</sup> Represents Total Employer Contributions made during Fiscal Year 1995 including \$11,041,094 received in Fiscal Year 1994 for Fiscal Year 1995 and \$25,009 received during Fiscal Year 1996 for Fiscal Year 1995.

<sup>\*\*\*\*</sup> Represents Total Employer Contributions made during Fiscal Year 1996 net of \$25,009 for Fiscal Year 1995.

<sup>\*\*\*\*\*</sup> Represents Total Employer Contributions made during Fiscal Year 2000 net of \$176,700,260 deferred to Fiscal Year 2001.

#### **CHRONOLOGY OF PLAN**

The Teachers' Retirement Law, Title 13, Chapter 4 of the Administrative Code of the City of New York, provides that the Actuary of the Teachers' Retirement System ("TRS") shall make an actuarial valuation of the various TRS funds at such times as (s)he shall determine. A valuation was made as of June 30, 1999, and the results are presented in this report.

TRS was established as of August 1, 1917 and, at the outset, the Teachers' Retirement Board adopted the mortality tables, service tables, and other tables necessary for calculating contribution rates and for preparing valuation figures. Periodic comparisons of the actual experience with the expected experience, as obtained by calculations from the latest adopted tables, have been made since August 1, 1917.

#### SUMMARY OF KEY BENEFIT AND FUNDING CHANGES

2000 Chapter 85 of the Laws of 2000 amends the Administrative Code of the City of New York to implement changes in actuarial assumptions and methods that require legislation.

Chapter 86 of the Laws of 2000 authorizes a retirement incentive for certain members in eligible titles.

Chapter 110 of the Laws of 2000 amends the language of legislation that later became Chapter 126 of the Laws of 2000, which provides for benefit enhancements for certain members of the City of New York retirement systems.

Chapter 125 of the Laws of 2000 provides eligible retirees with a permanent Cost-of-Living Adjustment.

Chapter 126 of the Laws of 2000 provides for benefit enhancements (*i.e.*, elimination of member contributions for Tier III/IV members with more than 10 years of membership, additional pension credit for Tier I/II members of up to a maximum of 24 months of additional service retirement credit, and allows Tier III/IV members to retire at age 55 with reduced benefits under the same formula as used for Tier II members) for certain members of the City of New York retirement systems.

Chapter 548 of the Laws of 2000 permits certain members to purchase up to 3 years of credit for certain U.S. Military Service by paying 3% of imputed salary.

Chapter 552 of the Laws of 2000 permits Tiers II/III/IV members with at least 2 years of credited service to receive credit for certain previous service in a New York State Public Retirement System ("NYSPRS").

Chapter 553 of the Laws of 2000 lowers the reduction factors for Tier IV members who retire before age 62 with less than 30 years of service.

Chapter 554 of the Laws of 2000 provides that Tiers II/III/IV members who joined prior to January 1, 2001 and who elected Death Benefit One will receive the greater of Death Benefit 1 or Death Benefit 2 coverage. New members on and after January 1, 2001 will only receive coverage under Death Benefit 2.

All the above Laws of 2000 except Chapter 85 are not reflected in the actuarial values presented in this report.

1999 Chapter 70 of the Laws of 1999 authorizes a retirement incentive for certain persons in eligible titles.

Chapter 409 of the Laws of 1999 amends Chapter 616 of the Laws of 1998 to include the death gamble benefit of Tier I.

Chapter 575 of the Laws of 1999 re-opens Chapter 666 of the Laws of 1990, which allows a retroactive transfer of pension credit under certain circumstances.

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Chapter 581 of the Laws of 1999 allows Tier II members to receive service credit while under a leave of absence for union activities.

Chapter 628 of the Laws of 1999 provides Tier I and II members the opportunity to switch their retirement plans.

Chapter 646 of the Laws of 1999 provides active and future members the right to reinstate earlier membership by repaying prior member contributions with 5% interest.

Chapter 659 of the Laws of 1999 reduces the amount of service credit needed for Tier III/IV vested members to receive benefits at age 55 to 5 years.

1998 Chapter 7 (as amended by Chapter 47) of the Laws of 1998 authorized a retirement incentive for certain persons in eligible titles who are public employees and Plan members.

Chapter 266 of the Laws of 1998 amended the Retirement and Social Security Law to reduce the service required for Tier IV normal retirement benefits from 25 years to 20 years and to permit certain Tier III retirees to receive Tier IV benefits.

Chapter 366 of the Laws of 1998 increased the period of absence before loss of membership from 5 years to 7 years, provided member contributions are not withdrawn.

Chapter 388 of the Laws of 1998 provided a pre-retirement death benefit for certain vested members of the Plan.

Chapter 389 of the Laws of 1998 allowed members of the Plan to become vested after five years of service.

Chapter 390 of the Laws of 1998 ("Chapter 390/98") provided additional benefits for cost-of-living increases for certain retirees of the Plan. An initial increase for members who retired on or before Calendar Year 1992 is effective as of September 1998 as elected by the City Council on August 27, 1998. A subsequent increase for members who retired on or before Calendar Year 1993 is effective as of September 1999 as elected by the City Council on August 27, 1998.

Chapter 616 of the Laws of 1998 allowed Plan members who are terminally ill and eligible for disability retirement to elect advance payment of ordinary death benefit.

1997 Chapter 41 of the Laws of 1997 authorized a retirement incentive for certain persons in eligible titles who are public employees and who are members of the Plan.

Chapter 601 of the Laws of 1997 amended the Administrative Code of the City of New York and the Retirement and Social Security Law ("RSSL") to bring the Plan into compliance with the requirement of the Federal Older Workers' Benefit Protection Act of 1990 ("OWBPA").

1996 Chapter 30 of the Laws of 1996 established an Early Retirement Incentive ("ERI") for certain employees and was enacted by a Board Resolution.

Chapter 249 of the Laws of 1996 amended the schedules of payments toward the Unfunded Actuarial Accrued Liability ("UAAL") and Balance Sheet Liability ("BSL") to provide that the UAAL and BSL as of June 30, 1995 be amortized over a period of 15 years beginning Fiscal Year 1996, where the amount of each annual payment after the first is to equal 103% of the preceding annual payment.

Chapter 592 of the Laws of 1996 permitted excess earnings of annuity fund to reduce employer contribution to the Plan.

Chapter 593 of the Laws of 1996 permitted corpus funding of administrative expenses after July 1, 1996.

Chapter 712 of the Laws of 1996 permitted the increase in investment of Plan assets in equities to 70%.

Chapter 12 of the Laws of 1995 established an Early Retirement Incentive ("ERI") for certain CUNY employees and was enacted by a resolution of CUNY's Board.

Chapter 74 of the Laws of 1995 amended Chapter 12 to offer the ERI to certain Board of

1995

Education employees.

Chapter 119 of the Laws of 1995 amended the General Municipal Law and the Administrative Code of the City of New York and provides for Supplemental Retirement Allowances for certain retirees.

Chapter 642 of the Laws of 1995 amended the Administrative Code of the City of New York in relation to the rate of regular interest used in calculating contributions to TRS, as well as to the crediting of special and additional interest to members and the allowance of supplementary interest on TRS funds.

1994

Chapter 633 of the Laws of 1994 amended the schedules of payments toward the UAAL and BSL to provide that the UAAL and BSL of June 30, 1993 be amortized over a period of 17 years beginning Fiscal Year 1994, where the amount of each annual payment after the first is to equal 103% of the preceding annual payment.

Chapter 675 of the Laws of 1994 amended the Retirement and Social Security Law in relation to the maximum amount of compensation that may be used in the determination of pension benefits. The annual compensation of each employee taken into account under the plan for any year may not exceed \$150,000 for plan years beginning after June 30, 1996. This figure is subject to cost-of-living adjustment. The State legislation grandfathers those who become members prior to July 1, 1996. This new law brings the New York City Retirement Systems into compliance with certain portions of the Tax Reform Act of 1986 and Internal Revenue Service regulations issued thereunder.

1992

Chapter 221 of the Laws of 1992 amended the Administrative Code of the City of New York, in relation to treatment of surplus, deficits and investment earnings of TRS' Tax-Deferred Annuity ("TDA") Program.

Chapter 494 of the Laws of 1992 provided an early retirement incentive for certain City University professional staff members of TRS.

1991

Chapter 178 of the Laws of 1991 became law on June 17, 1991. This law provided for a retirement incentive for eligible employees of the Board of Education; this incentive granted up to three years of retirement credit.

Chapter 607 of the Laws of 1991 amended the funding provisions effective June 30, 1990. This law provided that the Consolidated UAAL and BSL as of June 30, 1990 be amortized over 20 years with non-level payments for the first five years. The schedule of payments for the combined UAAL and BSL components for the first five years is to be comparable in pattern to the schedule of payments that was in effect under the amortization schedules immediately prior to the change in funding provisions. The balance of the combined UAAL and BSL components at the end of five years is to be amortized using level payments over the remaining 15 years. The BSL component is to be amortized using level payments over 20 years from June 30, 1990.

1990

Chapter 210 became a law on June 6, 1990. This law provides for a retirement incentive for eligible employees of CUNY, effective September 1, 1991.

Chapter 357 became a law on July 12, 1990. This law amended Chapter 835 of the Laws of 1987 in relation to medical review as provided by §13-522.1 of the Administrative Code of the City of New York. These provisions, which had been scheduled to expire on June 30, 1989, were made permanent.

Chapter 483 became a law on July 18, 1990. This law amended Chapter 296 of the Laws of 1984 by extending the elimination of mandatory retirement to tenured employees of CUNY.

Chapter 666 became a law on July 22, 1990. This law amended §13-503 of the Administrative Code of the City of New York in relation to the availability of additional pension benefits to certain retirees of other New York City retirement systems as the result of their joining TRS for an extended second public employment.

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Chapter 878 became a law on July 25, 1990. This law amended the Administrative Code of the City of New York in relation to the rate and method of payment of regular interest, special interest, additional interest and supplementary interest to be credited by TRS.

Chapter 919 became a law on July 30, 1990, with an effective date of July 1, 1991. This law amended §§517 and 613 of the Retirement and Social Security Law by permitting Tier III/IV members to borrow up to 75% of their accumulated contributions.

Chapter 948 of the Laws of 1990 became law on December 26, 1990. This law amended the funding provisions of the Retirement System effective June 30, 1990. The funding provisions were amended in relation to the interest rates used in the actuarial valuation of liabilities and amortization payments, for the purpose of calculating employer contributions. This law provided that an actuarial interest rate assumption of 9% per annum for TRS (4% per annum for benefits payable under the variable annuity programs) would be in effect for that purpose with respect to employer contributions due for Fiscal Years 1991-1995. However, this law was superseded by Chapter 607 of the Laws of 1991 before it was scheduled to take effect on June 30, 1990.

1989

Chapter 580 of the Laws of 1989 amended the funding provisions of the pension systems effective June 30, 1988 in relation to eliminating the deferred charge account.

Chapter 581 of the Laws of 1989 amended the funding provisions of the pension systems effective June 30, 1988 in relation to the interest rate used in the actuarial valuation of liabilities for the purpose of calculating employer contributions. The law provided that an 8¼% interest rate will be in effect for that purpose with respect to employer contributions due for Fiscal Years 1989 and 1990.

1988

Chapter 8 became a law on February 29, 1988. This law superseded many provisions of \$13-680 of the Administrative Code of the City of New York in relation to the payment of supplemental retirement allowances to certain retirees.

Chapter 182 became a law on June 27, 1988. This law amended §13-582 of the Administrative Code of the City of New York in relation to permitting deferral of the distribution of a member's TDA account to the latest date allowable by the Internal Revenue Code.

Chapter 273 became a law on July 19, 1988. This law amended §§13-568, 571, 581, and 582 of the Administrative Code of the City of New York in relation to the extent and frequency of participation in elections made by members and beneficiaries with respect to the Variable Annuity and TDA Programs.

Chapter 454 became a law on August 1, 1988, effective immediately, providing for the payment of monthly supplemental retirement allowances to certain spouses of deceased members or retirees. Generally, spouses of deceased members or retirees who are designated annuitants (*i.e.*, beneficiaries covered under Option I or Option IV-b, who, upon the death of the members or retirees, elect a monthly form of payment of the death benefit, rather than a lump sum) will be eligible to collect an extra \$50 per month as supplemental retirement allowance, provided the member or retiree died prior to January 1, 1980. However, any spouse who may become eligible to receive, or who is already receiving, a supplemental retirement allowance is not eligible for this benefit. Payments to an eligible spouse will be effective on the later of either [a] the month following the one in which the member's or retiree's death occurred, or [b] July 1, 1983.

Chapter 522 became a law on August 2, 1988. This law amended the Retirement and Social Security Law in relation to TRS membership. Generally, any Tier III/IV member who was employed by the Board of Education as a regular substitute for at least one term during one of the three school years immediately prior to July 27, 1976 would have the same rights and privileges as a Tier II member, provided (s)he filed the appropriate application prior to July 1, 1989.

Chapter 523 became a law on August 2, 1988. This law amended the Retirement and Social Security Law in relation to TRS membership. Generally, any Tier II member who was employed

by the Board of Education as a regular substitute for at least one term during one of the three school years immediately prior to July 1, 1973 would have the same rights and privileges as a Tier I member, provided (s)he filed the appropriate application prior to July 1, 1989.

Chapter 548 became a law on August 11, 1988. This law provided that pension service credit be granted to Tier III/IV members on leave of absence without pay for the purpose of conducting labor relations activity.

Chapter 768 became a law on December 26, 1988 to become effective January 1, 1990. This law amended the Retirement and Social Security Law to include a new Article 15-A (§620) which provides that all TRS members and those who join TRS after this date will receive benefits payable subject to certain limitations of §415 of the Internal Revenue Code. The benefits payable will be subject to the greater of either [a] the limitations of §415 of the Internal Revenue Code, or [b] the accrued benefit of the member without regard to any benefit increases in accordance with plan amendments adopted after October 14, 1987.

Chapter 773 became a law on December 29, 1988. This law amended §13-521 of the Administrative Code of the City of New York in relation to providing certain benefits involving supplemental annuity contributions on behalf of certain Tier III/IV members.

Chapter 782 became a law on December 29, 1988. This law amended §\$517 and 613 of the Retirement and Social Security Law in relation to the treatment of Tier III/IV member contributions for income tax purposes under the provisions of the Internal Revenue Code.

Chapter 783 became a law on December 29, 1988. This law made certain technical changes to Chapter 782 of the Laws of 1988.

1986

Chapter 617 of the Laws of 1986 amended the Retirement and Social Security Law by repealing the Article 14 and the Article 15 Ordinary Death Benefits provisions and replacing them with provisions nearly identical to the Death Benefits applicable to Article 11 TRS members.

Chapter 630 of the Laws of 1986, which amended \$B20-37.0 and \$13-540 of the Administrative Code of the City of New York, increased the insurance for loans taken by TRS members from \$2,000 to \$10,000, effective July 1, 1986.

Chapter 683 of the Laws of 1986 amends \$4402-\$4406, \$4408, \$3030, \$3202, \$3602 and \$3635 of the Education Law and \$236 of the Family Court Act to provide additional educational opportunity in the months of July and August in and after Fiscal Year 1988 for severely handicapped children. In addition, this law established the "Additional Employer Specific Skills Training Grant Program" to conduct summer employer-specific skill training in coordination with participating employers. Also, the bill covers allocations of costs and educational services required of youths incarcerated in a correctional facility.

Chapter 793 of the Laws of 1986 amended \$6214 of the Education Law and \$13-630 of the Administrative Code of the City of New York in relation to the new members of the instructional staff at community colleges within the City University of New York, who will be eligible to become TRS members. In addition, present members of the New York City Employees' Retirement System who are employed on the instructional staff at community colleges within the City University of New York will have the right, until June 30, 1987, to transfer to TRS.

1984

Chapter 910 of the Laws of 1985 made it possible for TRS to use modernized actuarial tables in computing pension benefits. The Teachers' Retirement Board approved a resolution adopting new mortality tables for the purpose of determining certain benefits. The implementation of such a resolution was contingent upon the enactment of State legislation increasing regular interest from 4% to 7%. Chapter 910 was signed into law on August 19, 1985.

Chapter 911 of the Laws of 1985 authorized TRS to continue to assume an 8% rate of return on investments. The Teachers' Retirement Board approved a resolution adopting new actuarial assumptions for the purpose of determining employer contributions to TRS for Fiscal Year 1986. The implementation of such a resolution was contingent upon the enactment of State

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legislation which would maintain the assumed rate of return on investments at 8%. Chapter 911 of the Laws of 1985 was signed into law on August 19, 1985. As a result, the new actuarial assumptions were utilized to determine pension expenses for Fiscal Year 1986 and thereafter.

1984

Chapter 371 of the Laws of 1984 amended the Administrative Code of the City of New York in relation to the payment of supplemental retirement allowances to spouses of certain deceased retirees.

Chapter 658 of the Laws of 1984 amended \$D49-40.0 of the Administrative Code of the City of New York, increasing the amount of Supplemental Retirement Allowance (SRA) payable to every eligible retiree from 3% of the retiree's maximum fixed retirement allowance (*i.e.*, the "base amount") for post-1971 retirees to 42% for pre-1959 retirees. In addition, the retirement allowance ceiling on which SRA is based was raised from \$8,000 to \$10,500. These benefit increases began in September 1986, and the increase in percentages occurred over a two-year period.

1983

Chapter 414 of the Laws of 1983 amended the Retirement and Social Security Law by adding a new article—Article 15. This Law established a new state-wide pension plan, the Coordinated Retirement Plan, effective September 1, 1983, covering most employees joining on or after July 27, 1976. This Plan, which sets a normal retirement age of 62 and mandates 3% contributions by members, superseded the Plan (CO-ESC) enacted as Chapter 890 of the Laws of 1976. However, members who joined from July 27, 1976 through August 31, 1983 may elect to receive a benefit from CO-ESC or the Coordinated Plan, whichever provides greater benefits.

1982

Chapter 914 of the Laws of 1982 amended the Administrative Code of the City of New York in relation to employer contributions, the actuarial valuation, the determination and appraisal of the liabilities, the disposition of TRS' investment earnings, the crediting of special interest and additional interest to members, and the allowance of supplementary interest on TRS' funds. It further provided for the determining of obligations of the State, the City University of New York, and TRS in relation to certain employer contributions payable to TRS on account of employees of the senior colleges of the City University of New York.

1981

Chapter 422 of the Laws of 1981 provided new or additional supplemental pensions for certain pensioners and made the funding of these benefits the obligation of TRS.

1977

Chapter 976 of the Laws of 1977 amended TRS' funding provisions, effective July 1, 1977.

1973

Chapter 1046 of the Laws of 1973 established Article 11 of the Retirement and Social Security Law, which imposed certain limitations on the benefits available to members joining TRS after June 30, 1973 and created Plans C and D, which are modifications of Plans A and B.

1970

Legislation in 1970 substantially revised TRS provisions. Chapter 274 established two new retirement plans effective July 1, 1970. Members who joined TRS on or after the effective date were required to choose either [1] The Twenty-Year Pension Plan (Plan A), or [2] The Age-55-Increased-Benefits Pension Plan (Plan B).

A member who joined TRS prior to the effective date could continue under his/her existing plan, or could elect one of these new plans, providing such election was made before the member had rendered two years of service after June 30, 1970.

Chapter 581 of the Laws of 1970 made it possible for the Teachers' Retirement Board to adopt Rules and Regulations establishing a Group Term Life Insurance Plan. In accordance with these Rules and Regulations, the first \$50,000 of benefits on account of each death in active service will be payable from the funds of the Group Term Life Insurance Plan rather than those of TRS. With respect to the Group Term Life Insurance Plan, the Teachers' Retirement Board adopted premium rates computed to be necessary to fund the benefits payable.

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#### **SUMMARY OF PLAN PROVISIONS**

This section summarizes TRS' principal benefit provisions. The benefits available under the Coordinated Retirement Plan are provided by Article 15 of the Retirement and Social Security Law. The benefits available under the Twenty-Year Pension Plan and Age-55-Increased-Benefits Pension Plan are provided by Chapter 274 of the Laws of 1970 as well as the restrictions prescribed by Article 11 of the Retirement and Social Security Law.

#### COORDINATED RETIREMENT PLAN

A member whose date of membership is July 27, 1976 or later belongs to the Coordinated Retirement Plan.

#### **SERVICE RETIREMENTS**

**Benefits:** 

**Benefits:** 

#### **Normal Service Retirement**

**Eligibility:** A member is eligible to retire at age 62 with immediate payability after 5 or more years

of service, subsequent to the date of membership.

{1} For a member with fewer than 20 years of service, the benefit is ½0 of FAS (see note below) multiplied by years of service.

{2} For a member with at least 20 but fewer than 30 years of service, the benefit is  $\frac{1}{50}$  of FAS multiplied by years of service.

{3} For a member with 30 or more years of service, the benefit is  $\frac{1}{50}$  of FAS for each of the first 30 years of service plus  $\frac{3}{200}$  of FAS for each additional year.

Note: In the Coordinated Retirement Plan, Final Average Salary (FAS) is the average wages earned during any three consecutive years providing the highest average wage. However, if wages earned during any year included in the three-year period exceed that of the average of the previous two years by more than 10%, the amount in excess of 10% will be excluded from the computation of FAS. Wages are defined as the regular compensation earned by, and paid to, a member.

#### **Early Service Retirement**

**Eligibility**: A member is eligible to retire at age 55 or later with immediate payability, after 5 or more

years of service, subsequent to the date of membership.

The pension is calculated similarly to the pension of a Normal Service Retirement, but it is reduced as follows:

- {1} For a member with fewer than 30 years of service, the reduction is equal to  $\frac{1}{15}$  for each of the first two years by which the early retirement precedes age 62, plus a further reduction of  $\frac{1}{20}$  for each year by which early retirement precedes age 60.
- {2} A member with 30 or more years of service receives no reduction in benefits because of early retirement.

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#### **Deferred Vested Benefit**

Eligibility: A member who has 5 or more years of credited service upon termination of employ-

ment, including 5 years of membership service subsequent to July 26, 1976, is entitled to a deferred vested benefit payable at age 62 or later. A member who has upon termination of employment, 5 years of membership service subsequent to July 26, 1976, is entitled to a deferred vested benefit payable at age 55 or later. If such years of service include purchased service credited in a former membership, the purchased service is

not limited to post-July 27, 1976 service.

**Benefits:** The benefit formulas are the same as those set forth under a Normal Service Retirement

and an Early Service Retirement. Should a member who elected to receive a vested deferred retirement allowance die before the attainment of payability age and had at least 10 years of service, the death benefit is  $\frac{1}{2}$  of the Ordinary Death Benefit in force

on the last day of service.

#### **DISABILITY RETIREMENTS**

**Eligibility**: A member is eligible for Ordinary Disability Retirement benefits if (s)he has completed

10 or more years of service and is incapacitated for performance of gainful employ-

If the disability is judged to be the result of an accident in the performance of duty, the

10-year requirement is waived.

**Benefits:** The benefit is the greater of: (a)  $\frac{1}{3}$  of FAS; or (b)  $\frac{1}{60}$  of FAS multiplied by the credited

service.

#### **ORDINARY DEATH BENEFITS**

**Benefits:** Upon joining TRS, a member must elect one of the following death benefits:

#### Death Benefit 1:

This benefit provides one month's salary for each year of service up to a maximum of three years' salary. If the member would have been eligible to receive an unreduced retirement allowance at the time of his/her death, the benefit is the reserve on the retirement allowance which would have been payable had the member retired on the day before his/her death, if greater.

#### **Death Benefit 2:**

This benefit provides one year's salary for each year of service up to a maximum of three years' salary after three years of service. The benefits reduce after age 60 at the rate of 5% per year, to a maximum reduction of 50% of the benefit in effect at age 60.

A benefit is also payable upon death after retirement and is expressed as follows:

- \* If death occurs in the first year after retirement, 50% of the benefit in force immediately before retirement.
- \* If death occurs in the second year following retirement, 25% of the benefit in force immediately before retirement.
- \* If death occurs subsequently, 10% of the benefit in force at age 60 or immediately before retirement if retirement was earlier than age 60.

If retirement occurs after age 60, the minimum death benefit payable after retirement is 10% of the death benefit in force at age 60.

The Rules and Regulations adopted by the Teachers' Retirement Board in accordance with Chapter 581 of the Laws of 1970 provide that the first \$50,000 of each benefit on account of death in active service is payable from the Group Term Life Insurance Plan. Only the amount in excess of \$50,000, if any, is payable by TRS.

Members who joined TRS on or after July 27, 1976 and before September 1, 1983 are entitled to the following Article 14 Death Benefits, if greater (by ruling of the Court of Appeals in Public Employees' Federation v. Cuomo, dated June 29, 1984).

#### THE DEATH BENEFITS UNDER ARTICLE 14 ARE AS FOLLOWS:

IF DEATH OCCURS BEFORE AGE 60 AND SERVICE IS:				M BENEFITS ECTIVE
At Least	But Not More Than	Lump-Sum Benefit	4/1/99– 3/31/00	4/1/00-
3/31/01				
1 Year	2 Years	One x Final Rate of Pay, But Not in Excess of:	\$36,300	\$37,300
2 Years	3 Years	Two x Final Rate of Pay, But Not in Excess of:	\$72,500	\$74,500
3 Years	Or More	Three x Final Rate of Pay, But Not in Excess of:	\$90,600	\$93,100

If death occurs at age 60, the benefits determined shall be reduced by 5%. If death occurs after age 60, there is an additional 5% reduction for each year that death occurs thereafter to a maximum of a 50% reduction.

The maximum lump-sum death benefit is subject to increase each April 1st at a maximum rate of 3% per annum based on the Consumer Price Index as of the previous December 31st.

**Beneficiaries:** 

The latest named beneficiary, duly designated on a TRS Form filed with TRS, will receive the death benefits. If none is designated, the benefits will be paid to the member's estate.

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#### **ACCIDENTAL DEATH BENEFITS**

Eligibility: A beneficiary is entitled to the benefit if the member died before the effective date of

retirement as a natural and proximate result of an accident sustained in the performance

of duty, and if the accident was not caused by the member's willful negligence.

**Benefits:** The beneficiary receives a pension equal to 50% of the wages the member earned

during the last year of actual service, but the application must be filed within 60 days

of the member's death.

Other Provision:

{1} If the eligible beneficiary becomes ineligible to continue to receive the benefits, it shall be continued for all other members of the next eligible class of beneficiaries, and if none, to each successive class.

{2} If the benefits paid do not exceed the amount of the ordinary lump-sum death benefit because of the absence of eligible beneficiaries, the difference is to be paid to the last eligible beneficiary, or if none, to the member's estate.

**Beneficiaries:** Beneficiaries are prescribed in the following order:

{1} A surviving spouse who has not renounced survivorship rights in a separation agreement, or has not remarried;

- {2} Surviving children until age 25;
- {3} Dependent parents whose eligibility shall be determined in accordance with regulations promulgated by the Teachers' Retirement Board;
- {4} Any other person who qualifies as a dependent on the final income tax return the member filed in the year preceding his/her year of death, until such person reaches 21 years of age.

## THE TWENTY-YEAR PENSION PLAN AND AGE-55-INCREASED BENEFITS PENSION PLAN

A member who elects the Twenty-Year Pension Plan may cancel such election at any time, in which case (s)he will become eligible for the benefits provided by the Age-55-Increased-Benefits Pension Plan and vice versa.

See page 4.25 for definitions of terms used in these plan descriptions.

#### SERVICE RETIREMENT

#### **Twenty-Year Pension Plan**

#### Eligibility:

- {1} A member who joined TRS prior to July 1, 1973 and who elects the Twenty-Year Pension Plan is eligible to retire after having completed 20 years of service, with benefits to begin on the payability date. Regardless of the number of years of service, such a member who has elected the Twenty-Year Pension Plan and who is at least 55 years of age may retire with benefits payable immediately by canceling his/her election of the Twenty-Year Pension Plan, thereby becoming eligible for the benefits under the Age-55-Increased-Benefits Pension Plan.
- {2} A member who joined TRS after June 30, 1973 must also have rendered five years of continuous service immediately prior to retiring and must have attained age 55.

#### **Benefits:**

The service retirement allowance for a member who joined prior to July 1, 1973, is the sum of the following:

- {1} 50% of the average salary, reduced by an annuity which is the actuarial equivalent of the minimum accumulation;
- {2} an annuity which is the actuarial equivalent of the accumulated deductions; and
- {3} for service in excess of 20 years, (a) a pension for Increased-Take-Home-Pay which is the actuarial equivalent of the Reserve for Increased-Take-Home-Pay credited in such years, and (b) 1.2% of the average salary for each such year prior to July 1, 1970 and 1.7% of the average salary for each such year beginning on that date.

If a member who joined TRS after June 30, 1973 retires prior to age 62 with less than 30 years of service, his/her pension for service is reduced by 0.5% for each of the first 24 months that the payability date precedes age 62, and by 0.25% for each additional month.

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#### Age-55-Increased-Benefits Pension Plan

**Eligibility**:

- {1} A member who joined TRS prior to July 1, 1973 and who either elects the Age-55-Increased-Benefits Pension Plan or who cancels his/her election of the Twenty-Year Pension Plan may retire after having attained age 55 with benefits payable immediately upon retirement.
- {2} A member who joined TRS after June 30, 1973 must also have rendered five years of continuous service immediately prior to retiring and must have attained age 55.

**Benefits:** 

The service retirement allowance consists of a pension for service, a pension for Increased-Take-Home-Pay, and an annuity.

The pension for service is equal to 1.2% of the average salary multiplied by years of service prior to July 1, 1970, plus 1.53% of the average salary multiplied by years of service after June 30, 1970. The pension for Increased-Take-Home-Pay is the actuarial equivalent of the Reserve for Increased-Take-Home-Pay, and the annuity is the actuarial equivalent of the member's accumulated deductions.

If a member who joined TRS after June 30, 1973 retires prior to age 62 with less than 30 years of service, his/her pension for service is reduced by 0.5% for each of the first 24 months that the payability date precedes age 62, and by 0.25% for each additional month.

#### **ORDINARY DISABILITY RETIREMENT**

**Eligibility:** 

Regardless of the Plan elected, a member who has completed 10 or more years of City service preceding the occurrence of disability, for causes other than an accident in the actual performance of duty, is entitled to an ordinary disability retirement allowance.

**Benefits:** 

If, at the time of becoming disabled, the member could have retired for service with benefits payable immediately, the ordinary disability allowance will be the same as the service retirement allowance without reduction on account of age. For all other members, the ordinary disability allowance is computed in the same manner as though the member had been eligible for service retirement under the Age-55-Increased-Benefits Pension Plan with benefits payable immediately, but never less than the allowance that would have been payable under the provisions in effect prior to July 1, 1970.

#### **ACCIDENT DISABILITY RETIREMENT**

**Eligibility:** 

A member is entitled to an accident disability retirement allowance upon the occurrence of a disability caused by an accident in the actual performance of duty.

**Benefits:** 

The retirement allowance will consist of a pension equal to three-fourths of the average salary in the last five years, a pension for Increased-Take-Home-Pay which is the actuarial equivalent of the Reserve for Increased-Take-Home-Pay, and an annuity purchased with the member's accumulated deductions. The pensions are subject to reduction because of Workers' Compensation benefits granted on the account of the accident.

#### **VESTED DEFERRED RETIREMENT ALLOWANCE**

Eligibility: A member who either resigns or is dismissed from service would receive a benefit equal

to his/her accumulated deductions. However, a member who is eligible for the benefits under the Age-55-Increased-Benefits Pension Plan and who has at least 5 years of service, immediately preceding resignation, may instead elect to receive a vested allowance.

**Benefits:** This allowance is computed in the same manner as the retirement allowance for service

retirement under the Age-55-Increased-Benefits Pension Plan, except that the allowance is deferred to age 55. Should a member who elected to receive a vested deferred retirement allowance die before the attainment of age 55 and who had 10 years of service, the death benefit is ½ of the Ordinary Death Benefit in force on the last day of service.

#### **ORDINARY DEATH BENEFITS**

**Benefits:** Upon the death of a member in active service, a benefit is paid to his/her estate or to such person(s) as (s)he shall have nominated.

#### Members who joined TRS before July 1, 1973:

- \* If a member completed less than 10 years of credited service, the benefit is equal to the compensation earnable by the member in the six months immediately preceding death.
- \* If the total number of years of City service is greater than 10, but less than 20, the benefit is equal to the compensation earnable by the member during the 12 months immediately preceding death.
- \* If the total number of years of City service exceeds 20, the benefit is equal to twice the compensation earnable by the member during the 12 months immediately preceding death.
- \* In addition, the member's accumulated deductions and the Reserve for Increased-Take-Home-Pay are paid to the member's estate or to the designated beneficiary.

The benefits payable on account of such a member who, at the time of his/her death, would have been eligible for service retirement is either the benefit described above or an amount equal to the reserve on the retirement allowance which would have been payable had the member retired on the day before his/her death, whichever is larger.

Members who joined TRS between July 1, 1973 and July 27, 1976 must choose between the two following death benefits so that, upon the member's death, benefits are paid pursuant to the member's election:

**Death Benefit 1:** This benefit provides one month's salary for each year of service, up to a maximum of three years' salary. In addition, the member's accumulated deductions are payable. If the member would have been eligible to receive an unreduced retirement allowance at the time of his/her death, the benefits are the reserve on the retirement allowance which would have been payable had the member retired on the day before his/her death, if greater.

**Death Benefit 2:** In addition to a refund of the member's accumulated deductions, this benefit provides one year's salary for each year of service up to a maximum of three years' salary after three years of service. The benefit reduces after age 60 at the rate of 5% per year, to a maximum reduction of 50% of the benefits in effect at age 60.

A benefit is also payable upon death after retirement and is expressed as follows:

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- \* If death occurs in the first year after retirement, 50% of the benefit in force immediately before retirement.
- \* If death occurs in the second year following retirement, 25% of the benefit in force immediately before retirement.
- \* If death occurs subsequently, 10% of the benefit in force at age 60 or immediately before retirement if retirement was earlier than age 60.

If retirement occurs after age 60, the minimum death benefit payable after retirement is 10% of the death benefit in force at age 60.

The Rules and Regulations adopted by the Teachers' Retirement Board in accordance with Chapter 581 of the Laws of 1970 provide that the first \$50,000 of each benefit on account of death in active service is payable from the Group Term Life Insurance Plan. Only the amount in excess of \$50,000, if any, is payable by TRS.

#### **ACCIDENTAL DEATH BENEFITS**

**Eligibility**: A member is entitled to accidental death benefits upon the occurrence of death caused

by an accident in the actual performance of duty.

Benefits: The accidental death benefits are (a) a lump-sum equal to the Reserve for Increased-Take-Home-Pay and (b) a pension equal to one-half of the average salary in the last five

Take-Home-Pay and (b) a pension equal to one-half of the average salary in the last five years payable annually to the widow until remarriage or death, or if there is no widow, to a child or children until the attainment of age 18 of the youngest child, or if there is no widow, or child, to the dependent parents, and (c) a lump-sum equal to the member's accumulated deductions and Reserve for Increased-Take-Home-Pay payable to the member's estate or to the designated beneficiary. Alternatively, if the member joined TRS prior to July 1, 1973, the beneficiary may elect to receive the reserve on the retirement allowance which would have been payable if the member had retired on the day before the member's death, provided that the death occurred after the member became eligible to retire for service. The pension is subject to reduction because of Workers' Compensation benefits granted on account of the accidental death.

#### SUPPLEMENTAL RETIREMENT ALLOWANCE

**Eligibility:** 

A Supplemental Retirement Allowance is payable during the life of certain retired members. One half of the amount is also payable during the life of spousal beneficiaries if such retired member had elected one of the options under the Administrative Code which provides that benefits are to be continued for the life of such spouse after the death of the retired member, and where the death of such retired member occurred or occurs more than thirty days after the effective date of the retirement of such member.

Supplemental Retirement Allowances are payable to members who retired prior to Calendar Year 1994 (see Chapter 390/98). Service retirees who have attained age 62 and all disability retirees are eligible for this supplemental payment.

**Benefits:** 

The benefit is equal to a percentage, depending on the Calendar Year of retirement, of the first \$14,000 of the non-variable portion of the retirement allowance entitled had the member not elected any optional forms of benefit.

The Supplemental Retirement Allowance described above and the actuarial values presented in this report do not reflect the enhanced supplementation benefits provided by Chapter 125 of the Laws of 2000.

#### **DEFINITIONS**

**Accumulated Deductions**—The total contributions the member made to his/her Annuity Savings Account, with regular and special interest thereon.

**Average Salary**—{1} For a member who joined prior to July 1, 1973, salary earnable in the last year of the most recent three-year period during which (s)he held no more than one position, or the average annual salary earnable in any five consecutive years designated by the member. {2} For a member who joined after June 30, 1973, the average salary earned during any three consecutive years which provides the highest average salary. However, if the salary earned during any year included in this three-year period exceeds the average of the previous two years by more than 20%, the amount in excess of 20% is excluded from the computation.

**City Service**—All service as an employee of the City.

**Minimum Accumulation**—The difference between: {1} the amount of normal contributions during the member's first 20 years of City service accumulated with interest to the member's payability date, and {2} the amount of the Reserve for Increased-Take-Home-Pay on the date such period of 20 years is completed.

**New Entrant**—With minor exceptions, a teacher appointed to the public schools after August 1, 1917.

**Payability Date**—For members who elected the Twenty-Year Pension Plan, the date on which the Service Retirement allowance begins, which is the latest of {1} the date when the member retires, or {2} the date when (s)he attains age 55, or {3} the date when the member could have completed 25 years of City service had (s)he remained active. For all other members, the retirement allowance begins on the date of retirement.

**Present Teacher**—A teacher in the public schools on August 1, 1917 and certain other specified school and college members.

**Prior Service**—All City service and all teaching and supervisory service in schools maintained by the City prior to September 16, 1917, for the present teachers and, in the case of a new entrant, prior to the date of appointment.

A member, upon retirement, may receive his/her basic retirement allowance in monthly installments

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**Reserve For Increased-Take-Home-Pay**—A reserve of 2½%, 5%, or 8% of the member's salary pursuant to the provisions of §13-546, accumulated with regular and additional interest.

#### **OPTIONS ON RETIREMENT OR DEATH**

A member, upon retirement, may receive his/her basic retirement allowance in monthly installments throughout life with all payments ending at death, or may elect to receive the actuarial equivalent in the following optional forms.

#### Members who joined prior to July 27, 1976:

- {1} For members who joined prior to July 1, 1973, a cash refund allowance under which reduced payments will be made during life with a provision that, in case of death before such payments have equaled the present value of the retirement allowance at the date of retirement, the balance shall be paid to the designated beneficiary or estate in a lump sum. For members who joined after June 30, 1973, this option is only available with regard to the benefit derived from accumulated deductions.
- {2} A ten-year or five-year certain and life allowance under which reduced payments will be made during life with a provision that in case of death within ten or five years of retirement, the balance that would have been payable had the member survived for ten or five years shall continue to be paid to the designated beneficiary or estate.
- {3} A joint-and-survivor allowance under which reduced payments will be made during life with a provision that upon the member's death, the same payments or one-half of such payments shall be continued throughout the life of such other person(s) as the member shall have designated.
- {4} Such other forms of actuarial equivalent as may be certified by the Actuary and approved by the Teachers' Retirement Board. By resolution, the Teachers' Retirement Board has approved an option under which reduced payments will be made during life with a provision that, upon the member's death, a sum specified by the member at the time of retirement shall be paid to the designated beneficiary or estate.

Upon a member's death, the beneficiary may elect to receive the actuarial equivalent of the lump-sum otherwise payable in one of the following forms: 1) An annual amount payable for life in monthly installments, all payments ending at death; or 2) A cash refund allowance under which reduced payments will be made during life, with a provision that, in case of death before such payments have equaled the lump-sum payable upon the member's death, the balance shall be paid to the designated beneficiary or estate. This is only available to the beneficiary of a member who joined prior to July 1, 1973.

#### Members who joined on or after July 27, 1976:

- {1} The same five-year or ten-year certain and life allowance as described in #2 above.
- {2} A joint-and-survivor allowance under which reduced payments will be made during life with a provision that upon the member's death, 100%, 75%, 50% or 25% of such payments shall be continued throughout the life of such other person(s) as the member shall have designated.

#### CONTRIBUTIONS

TRS benefits are financed by employee and employer contributions and from earnings on TRS' invested funds.

#### **MEMBER CONTRIBUTIONS**

#### **Coordinated Retirement Plan (Article 15):**

A member of this Plan is mandated to contribute 3% of annual wages during all the years of coverage. If a member resigns or is otherwise terminated from City service prior to eligibility for a benefit, all of his/her contributions with 5% interest will be refunded upon request.

#### **Twenty-Year Pension Plan:**

A member of this Plan is required to contribute a percentage of salary which, if paid from the date of entry until the date of completion of 20 years of City service, would provide at the payability date, an annuity of  $\frac{1}{8}$  of the member's final salary as of the completion of 20 years of City service.

#### **Age-55-Increased-Benefits Pension Plan:**

A member of this Plan is required to contribute a percentage of salary, which if paid to the age for service retirement under the law in effect prior to July 1, 1970, would provide an annuity equal to 1% of the average annual compensation during the last five years of service multiplied by years of service.

Member contributions are accumulated with interest in individually maintained accounts. Except under Article 15, upon retirement, the amount to the member's credit (*i.e.*, accumulated deductions) is used to purchase his/her annuity on the basis of the tables adopted by the Teachers' Retirement Board. Upon death in service, the death benefits, including the accumulated deductions, are paid to the beneficiary and, on termination of employment other than by death or retirement, the accumulated deductions are returned to the member.

Loans: Subject to certain limitations, a member not covered under Article 15 may borrow an amount not exceeding 75% of the member's accumulated deductions. Effective July 1, 1991, subject to certain limitations, a member covered under Article 15 may borrow an amount not exceeding 75% of the member's accumulated deductions, provided it can be repaid with interest within five years by payroll deductions. Beginning 30 days after the inception of the loan, the amount of the unpaid portion of the loan is insured in full. Should the borrower subject to Article 15 retire before the loan is repaid, the actuarial equivalent of the outstanding loan is deducted from his/her retirement allowance.

**ITHP:** In general, the retirement and death benefits payable to or on account of members are supplemented by the Reserve For Increased-Take-Home-Pay, accumulated from City contributions at a rate equal to the Increased-Take-Home-Pay factor times salary. In general, the total benefit is equal to the benefit that would have been paid if the members' rates of contributions had not been reduced by the Increased-Take-Home-Pay rate. However, the Reserve For Increased-Take-Home-Pay is not payable upon the death of a member who joined after June 30, 1973.

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Beginning July 1, 1960, on a year-to-year basis, the required contributions of members were reduced by an Increased-Take-Home-Pay factor initially equal to 2½% of salary. The following tables shows effective periods and Increased-Take-Home-Pay factors.

PERIOD	INCREASED-TAKE-HOME-PAY-FACTOR				
	Board Of Education Employees				
7/1/60-6/30/61	21/2%				
7/1/61-8/31/67	5%				
9/1/67–9/1/68	8%				
	Board Of Higher Education Employees				
9/1/67–9/1/68	5%				
	Twenty-Year and Age-55-Increased Benefits Pension Plan Members				
9/1/68-6/30/70	8%				
7/1/70-12/31/75	5%				
1/1/76–6/30/99	21/2%				
	Article 15 Members				
1/1/76–6/30/99	0%				

#### **EMPLOYER CONTRIBUTIONS**

The Frozen Initial Liability Actuarial Cost Method is utilized by the Plan's Actuary to calculate the contribution from the employers.

Employer contributions are accrued by the Plan and are funded by the employers on a current basis. The contributions amounted to \$181,769,965 for the Fiscal Year ended June 30, 2000.

Other contributions consist of payments made by the employer for the benefit of certain members of the Plan who have attained the maximum grade of their salary schedule, in accordance with amendments to the Administrative Code of the City of New York. Teachers at maximum grade have \$400 per annum credited on a monthly basis to their accounts, while \$550 per annum is credited on a monthly basis to the accounts of supervisory personnel at maximum grade.

#### **VARIABLE ANNUITY PROGRAMS**

Variable A: Beginning January 1, 1968, members were given the option to participate in a variable annuity program now known as the Variable A Annuity Program, thereby providing a means which can reasonably be expected to protect a portion of their retirement income against the effect of increases in the cost of living. The monthly Variable A Annuity payment is a fixed number of units, the value of which varies each month to reflect the financial experience of the investments which are almost entirely in common stocks.

On January 1, 1968, the effective date of the Variable A Annuity Program, a unit was assigned an arbitrary value of \$10. Each month thereafter, the unit value changed, reflecting the investment experience of the common stock fund during the preceding month. Since January 1, 1968, the value of the Variable A unit varied between a high of \$76.533 on April 1, 2000 and a low of \$5.453 on October 1, 1974.

Variable B: Beginning July 1, 1983, members were given the option to participate in a second variable annuity program, designated the Variable B Annuity Program. Variable B is income-oriented and is intended to be less volatile than Variable A. Variable B is aimed at positive returns with a minimum of fluctuation. The monthly Variable B payment is a fixed number of units, the value of which varies each month to reflect the financial experience of the investments, which may include guaranteed investment contracts with insurance companies, long-term bonds, money market instruments, etc.

On July 1, 1983, the effective date of the Variable B Annuity Program, a unit was assigned an arbitrary value of \$10. Each month thereafter, the unit value changed, reflecting the investment experience of the changes in market value and income received from the investments in the fund during the preceding month. Since July 1, 1983, the value of the Variable B unit varied between a high of \$19.115 on July 1, 2000 and the low of \$10 at inception on July 1, 1983.

A member may elect to place part or all of his/her contributions and the City's contributions for Increased-Take-Home-Pay in either variable annuity program. The normal pension for service which is provided by the City will be paid in fixed dollars. Subject to certain prescribed limitations, a member may periodically elect either to participate in the variable annuity programs or to revoke a previous election.

Individual accounts of the members' own contributions are maintained in each variable annuity savings fund. Individual accounts, based on the City's contribution for Increased-Take-Home-Pay, are maintained in the Variable Pension Accumulation Funds. Deposits in these accounts are credited in terms of units, the value of which is determined at the beginning of each month and remains unchanged during that month.



# 5. Statistical Section

## SCHEDULE 1 REVENUE BY SOURCE (UNAUDITED)

In Thousands

Year Ended June 30	Net Member Contributions	Employer Contributions	Net Investment Income	Other	Total	Employer Contributions as a Percentage of Annual Covered Payroll
1993	\$69,916	\$403,023	\$2,277,129	\$0	\$2,750,068	12.8%
1994	74,824	397,514	647,224	0	1,119,562	11.6
1995	62,283	379,987	3,328,461	0	3,770,731	11.2*
1996	89,615	405,872	3,517,358	0	4,012,845	11.1*
1997	97,261	366,141	5,089,064	0	5,552,466	10.4*
1998	76,570	439,898	5,648,628	0	6,165,096	12.4*
1999	99,903	453,946	4,505,546	0	5,058,795	11.7*
2000	118,155	202,758	3,704,203	0	4,025,116	4.8*
2001	129,783	466,289	(3,805,107)	0	(3,209,035)	9.9*
2002	87,386	531,952	(3,179,469)	(631)	(2,560,762)	10.6*

Note: Member contributions are shown net of loans to members.

## SCHEDULE 2 EXPENSE BY TYPE (UNAUDITED)

In Thousands

Year Ended June 30	Benefit Payments	Refunds	Other	Total	Employer Contributions as a Percentage of Annual Covered Payroll
1993	\$1,047,336	\$13,537	\$10,856	\$ 1,071,729	12.8%
1994	1,090,865	16,411	9,252	1,116,528	11.6
1995	1,136,611*	15,101	6,908	1,158,620	11.2**
1996	1,421,614*	62,618	3,584	1,487,816	11.1**
1997	1,612,938*	60,599	(1,552)	1,671,985	10.4**
1998	1,650,368*	31,006	13,051	1,694,425	12.4**
1999	1,779,610*	45,151	(18,617)	1,806,144	11.7**
2000	2,718,101***	40,796	(20,630)	2,738,267	4.8**
2001	1,878,760*	80,116	(9,706)	1,949,170	9.9**
2002	2,095,132*	126,425****	0	2,221,557	10.6

<sup>\*</sup> Including Administrative expenses of \$7,891 for 1995, \$9,085 for 1996, \$15,909 for 1997, \$25,058 for 1998, \$27,005 for 1999, \$30,575 for 2001, and \$32,523 for 2002.

<sup>\* 1995</sup> to 2002 are calculated using active members' salaries on the preceding June 30th.

<sup>\*\* 1995</sup> to 2001 are calculated using active members' salaries on the preceding June 30th.

<sup>\*\*\*</sup> Including Administrative expenses of \$29,732 and BSL of \$838,285.

<sup>\*\*\*\*</sup> Including \$27,356 of Chapter 126/00 contribution refunds.

#### **SCHEDULE OF PARTICIPATING EMPLOYERS**

As of June 30, 2001

Employer		Number of ervice Members	Annual Payroll
NYC Board of Education and City University of New York		95,247	\$5,008,290,304
NYC School Construction Authority		2	136,568
Charter Schools			
International High School	43		\$2,271,872
Kipp Academy	8		392,185
Middle College	40		2,278,043
Reach	6		268,206
Renaissance	28		1,502,116
Wildcat	7_		309,847
SUBTOTAL		132	\$7,022,269
TOTAL		95,381*	\$5,015,449,141

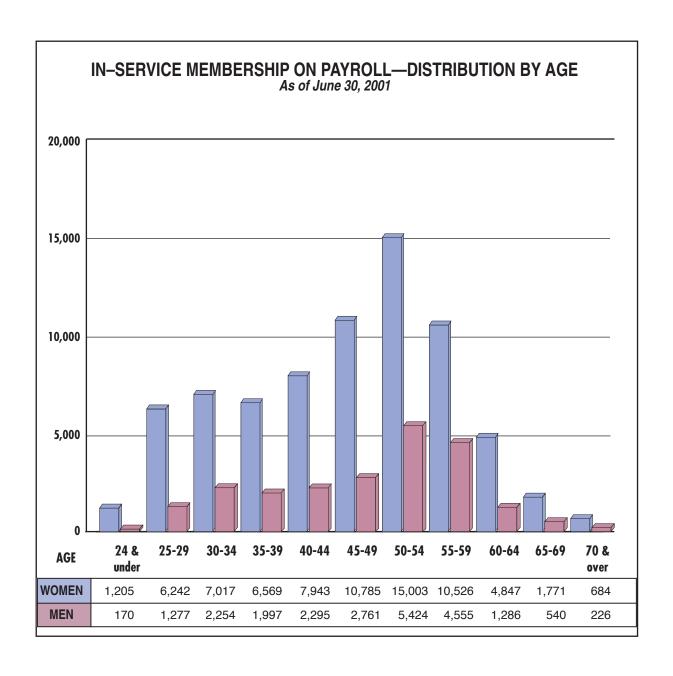
<sup>\*</sup> Includes only current in-service members receiving salary as of each June 30th.

#### **AVERAGE SALARIES OF IN-SERVICE MEMBERS**

As of June 30, 2001

MEN				WOMEN	
Age	Number of In-Service Member	Average s Salaries	Age	Number of In-Service Membe	Average rs Salaries
24 & under	170	\$ 30,234	24 & under	1,205	\$ 31,840
25-29	1,277	36,698	25-29	6,242	36,438
30-34	2,254	42,593	30–34	7,017	41,765
35-39	1,997	48,177	35–39	6,569	44,899
40-44	2,295	52,035	40–44	7,943	46,513
45-49	2,761	56,359	45–49	10,785	50,773
50-54	5,424	68,060	50-54	15,003	58,630
55-59	4,555	71,522	55–59	10,526	58,913
60-64	1,286	66,486	60–64	4,847	54,583
65-69	540	63,735	65–69	1,771	53,936
70 & over	226	66,424	70 & over	684	54,946
TOTAL	22,785*	\$ 59,211	TOTAL	72,592*	\$ 50,504
TOTAL ANNUA	L SALARIES	\$ 1,349,116,078	TOTAL ANNUAL	L SALARIES	\$ 3,666,218,209

<sup>\*</sup> The member count and the annual payroll include only those who were on the June 30th payroll.



	In Thous	ands	
Year Ended June 30	Retirement Benefits	Death Benefits	Total Benefit Payments
1996	1,188,798	232,816	1,421,614
1997	1,414,393	198,545	1,612,938
1998	1,493,972	156,396	1,650,368
1999	1,604,299	175,311	1,779,610
2000	1,660,118	219,698	1,879,816*
2001	1,748,006	130,754	1,878,760*

	SCHEDULE OF AVERAGE ANNUAL BENEFIT PAYMENT AMOUNTS							
		RVICE NT BENEFITS		(NON-DUTY) Y BENEFITS		TAL (DUTY) Y BENEFITS	SURVIVOR	S' BENEFITS
Year		Average		Average		Average		Average
Ended June 30	Number	Annual Allowance	Number	Annual Allowance	Number	Annual Allowance	Number	Annual Benefit
1996	42,187	\$26,480	\$1,799	\$12,828	396	\$25,364	\$2,787	\$13,830
1997	45,171	29,449	1,778	14,407	417	27,047	2,942	16,070
1998	45,000	31,129	1,761	15,341	427	28,481	3,080	17,532
1999	45,215	33,200	1,755	16,960	426	30,019	3,129	19,375
2000	45,586	34,051	1,738	17,264	426	30,625	3,218	20,138
2001	46,637	35,041	1,727	18,551	431	32,972	3,184	21,216

MEN Number of Retirees  0 0 0	As of Jun  Average Annual Allowance  — — — —	Age under 30 30–34 35–39	WOMEN Number of Retirees	Average Annual Allowance — —
Number of Retirees  0 0 0		under 30 30–34	Number of Retirees 0 0	
0 0 0		under 30 30–34	of Retirees 0 0	
0		30–34	0	
0	_ _		•	_
•	_	35–39	0	
0			0	_
U	_	40–44	0	_
0	_	45–49	0	_
34	\$38,355	50-54	32	\$35,827
1,895	46,652	55–59	2,281	39,829
2,763	47,595	60–64	4,091	37,030
2,875	45,601	65–69	5,492	31,941
2,836	43,089	70–74	6,063	30,286
2,355	39,429	75–79	5,058	28,594
1,273	36,403	80–84	3,568	25,708
762	36,815	85–89	2,348	26,142
518	43,065	90 & over	2,393	29,191
15,311	\$43,372	TOTAL	31,326	\$30,968
	34 1,895 2,763 2,875 2,836 2,355 1,273 762 518	0     —       34     \$38,355       1,895     46,652       2,763     47,595       2,875     45,601       2,836     43,089       2,355     39,429       1,273     36,403       762     36,815       518     43,065       15,311     \$43,372	0       —       45–49         34       \$38,355       50–54         1,895       46,652       55–59         2,763       47,595       60–64         2,875       45,601       65–69         2,836       43,089       70–74         2,355       39,429       75–79         1,273       36,403       80–84         762       36,815       85–89         518       43,065       90 & over         15,311       \$43,372       TOTAL	0       —       45–49       0         34       \$38,355       50–54       32         1,895       46,652       55–59       2,281         2,763       47,595       60–64       4,091         2,875       45,601       65–69       5,492         2,836       43,089       70–74       6,063         2,355       39,429       75–79       5,058         1,273       36,403       80–84       3,568         762       36,815       85–89       2,348         518       43,065       90 & over       2,393         15,311       \$43,372       TOTAL       31,326

		As of Jun	e 30, 2001		
	MEN		•		
Age	Number of Retirees	Average Annual Allowance	Age	Number of Retirees	Average Annual Allowance
under 30	0	_	under 30	0	_
30-34	0	_	30–34	0	_
35–39	0	_	35–39	2	\$15,642
40-44	7	\$13,217	40–44	13	12,756
45-49	16	15,513	45–49	41	15,666
50-54	71	23,933	50–54	144	20,928
55-59	101	23,150	55–59	191	19,467
60-64	53	18,468	60–64	193	14,353
65-69	42	18,984	65–69	116	13,149
70–74	40	18,027	70–74	97	13,888
75–79	30	19,945	75–79	95	16,153
80–84	44	26,325	80–84	125	18,683
85-89	33	34,870	85–89	136	19,795
90 & over	14	32,491	90 & over	123	16,464
TOTAL	451	\$22,700	TOTAL	1,276	\$17,085

Age under 30 30–34	MEN Number of Retirees	Average Annual Allowance	Age	WOMEN Number of Retirees	Average
under 30 30–34	of Retirees		Age		
30–34	•	_		or ricinees	Annual Allowance
	^		under 30	0	_
	0	_	30–34	0	_
35–39	0	_	35–39	1	\$9,957
40-44	1	\$10,327	40–44	2	15,407
45-49	2	27,445	45-49	8	26,664
50-54	35	33,355	50–54	42	32,467
55-59	47	38,496	55–59	55	31,756
60-64	18	38,546	60–64	34	32,865
65-69	17	37,198	65–69	35	26,318
70–74	15	35,450	70–74	31	29,996
75–79	10	34,995	75–79	29	33,117
80–84	6	36,817	80–84	28	35,110
85–89	5	34,614	85–89	8	29,104
90 & over	1	27,409	90 & over	1	30,656
TOTAL	157	\$36,122	TOTAL	274	\$31,167

		DEATH BEN	EFIIS—QI	אר	
		As of Jur	ne 30, 2001		
	MEN			I	
Age	Number of Beneficiaries	Average Annual Benefit	Age	Number of Beneficiaries	Average Annual Benefit
under 30	4	\$19,715	under 30	3	\$19,155
30-34	2	4,474	30-34	5	17,918
35-39	9	9,774	35-39	7	9,964
40-44	4	13,644	40-44	17	8,358
45-49	13	10,758	45-49	14	12,186
50-54	27	8,435	50-54	46	21,910
55-59	30	22,757	55-59	98	26,585
60-64	40	17,590	60-64	112	30,489
65-69	58	17,750	65-69	174	28,767
70-74	83	19,846	70–74	277	24,809
75–79	121	18,301	75–79	380	22,209
80-84	144	17,545	80–84	454	21,799
85-89	145	13,823	85–89	406	21,099
90 & over	180	15,185	90 & over	331	21,490
TOTAL	860	\$16,441	TOTAL	2,324	\$22,983
TOTAL ANNUA	L BENEFITS PAID	\$14,139,575	TOTAL ANNU	JAL BENEFITS PAID	\$53,411,963

## PENSION FUND Performance Highlights

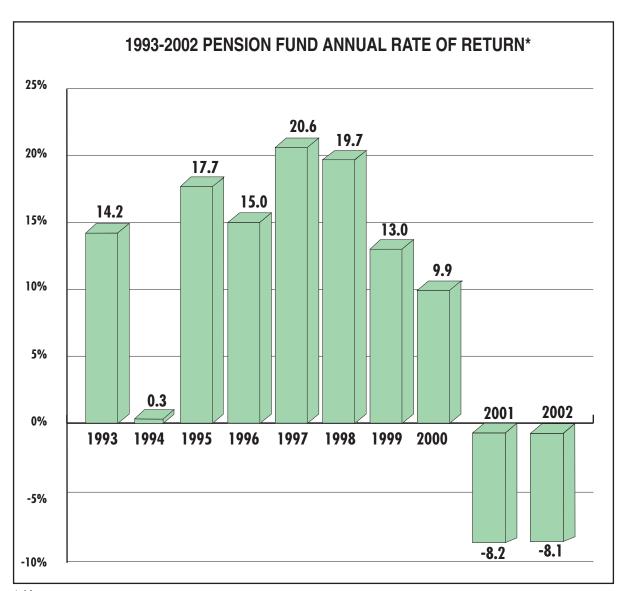
Fiscal Year 2002

#### Return: -8.05% Total Investments: \$24.328 Billion

During the 2002 Fiscal Year, the Pension Fund's portfolio, consisting primarily of equities and fixed-income instruments, yielded a -8.05% return after fees. This was an increase from the -8.20% return for the 2001 Fiscal Year.

The Pension Fund includes all Fixed Annuity Program funds in the Qualified Pension Plan (QPP) and all Tier III/IV QPP funds. The Fixed Annuity Program, which is available to Tier I and Tier II members for their QPP funds, currently provides participants with an 8.25% return. This rate is guaranteed through June 30, 2004; the rate is guaranteed not to fall below 7%.

The Comptroller of the City of New York invests the Pension Fund's holdings in a diversified portfolio, as authorized by the Teachers' Retirement Board. This portfolio consists almost entirely of U.S. and international equities and bonds.



<sup>\*</sup> After expenses

## VARIABLE A FUND Performance Highlights

Fiscal Year 2002

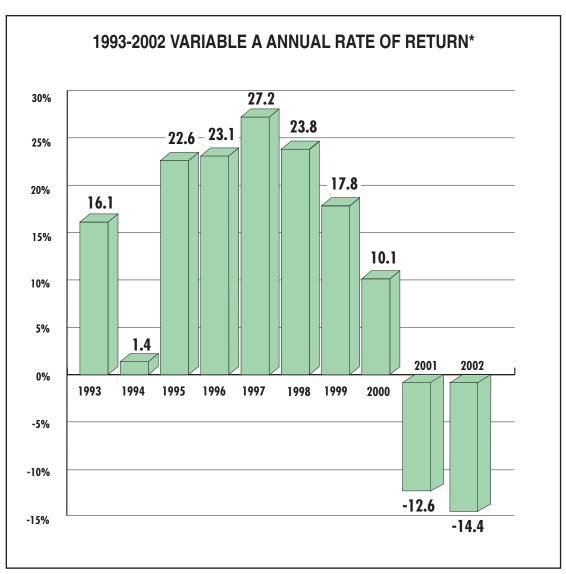
#### Return: -14.44% Total Investments: \$ 6.575 Billion

Despite a volatile financial environment, Variable A delivered a consistent performance for the fiscal year ending June 30, 2002. After fees and expenses, Variable A returned -14.44%, outperforming the composite benchmark's return of -14.50%. The composite benchmark, which includes no fees or expenses, provides a passive reflection of Variable A's actual asset allocation among domestic stocks, domestic fixed-income securities, and international equities.

As of June 30, 2002, approximately 80.0% of Variable A's portfolio was invested in the U.S. common stock market and 13.7% in international stock markets. This portfolio also included 6.3% in U.S. fixed-income securities, which successfully provided diversification and contributed strongly to Variable A's outperformance of the composite benchmark.

Three out of four sectors outperformed their benchmarks for the year. Returns for all of Variable A's component sectors are as follows:

- The Passive Core sector returned -17.02%, slightly outperforming the Russell 3000 Index's return of -17.25%.
- The Active Domestic Equity sector returned -16.44%, outperforming the Russell 3000 Index by 81 basis points (0.81%). This sector's two components, risk-controlled and eclectic, returned -15.97% and -17.90%, respectively.
- The Tactical Asset Allocation sector returned -8.33%, underperforming the sector's benchmark (60% S&P 500/40% Lehman Brothers Long Treasury Bond Index) by 92 basis points (-0.92%).
- The International Equity sector returned -8.38%, outperforming this sector's benchmark by 83 basis points (0.83%). This sector's outperformance of the benchmark was primarily due to the active managers' stock selection in the U.K., European, and Japanese markets, along with an avoidance of certain areas of the battered telecommunications, energy, and technology sectors.



<sup>\*</sup> After expenses

## VARIABLE B FUND Performance Highlights

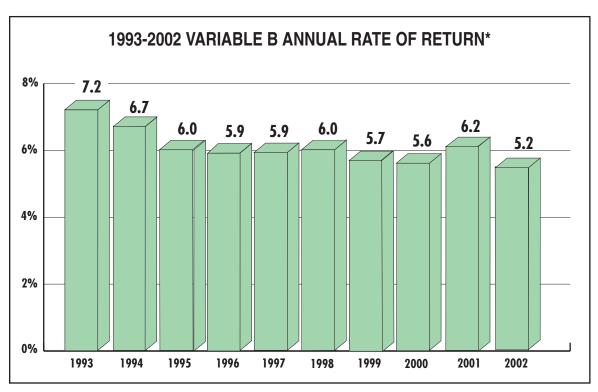
Fiscal Year 2002

Return: 5.16% Total Investments: \$0.409 Billion

Variable B's portfolio earned 5.16% after fees and expenses for the fiscal year ending June 30, 2002. Variable B's return lagged behind the Ryan Three-Year GIC Index, which yielded a return of 6.27%. This index measures the average of monthly yields for three-year Guaranteed Investment Contracts (GICs) issued by high-quality insurance companies. Likewise, Variable B, which is valued at cost or book value, underperformed a market-valued benchmark, the Merrill Lynch 1-3 Year Treasury Index. This index, with a 6.65% annual return, benefited greatly from declining interest rates during the previous 12 months.

Consistent with its objectives, Variable B's assets are invested in a well-diversified portfolio of stable-value investments, such as conventional and synthetic GICs. Conventional GICs are securities, issued by high-quality life insurance companies, which usually carry a fixed rate of interest for a stated time.

Synthetic GICs are also stable-value investments, but they consist of a single high-quality bond, or a portfolio of high-quality bonds, combined with a "wrapper." A wrapper is an insurance contract, issued by a high-quality financial institution, which ensures that participants can withdraw their money at book value (principal plus interest).



<sup>\*</sup> After expenses