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# Fairfax County Police Officers Retirement System

A Pension
Trust Fund of
Fairfax County
Virginia

COUNTY OF FAIRFAX
FARE FAC
1742
VIRGINIA

# Comprehensive Annual Financial Report

***For the Fiscal Year Ended June 30, 2001***

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FAIRFAX COUNTY
VIRGINIA

**BOARD OF TRUSTEES**
**POLICE OFFICERS RETIREMENT SYSTEM**
10680 Main Street, Suite 280
Fairfax, Virginia 22030-3812

Telephone: (703) 279-8200 (800) 333-1633 FAX: (703) 273-3185

April 15, 2002

Dear Members of the Board of Trustees:

I am pleased to submit to you the annual report of the Fairfax County Police Officers Retirement System ("System") for the fiscal year ended June 30, 2001. This annual report is provided as an aid to understanding the structure and evaluating the status of the System. The System's management is responsible for the accuracy of financial information contained herein.

The annual report for fiscal year 2001 consists of five sections: (1) an Introductory Section that contains this transmittal letter along with the organization structure and review of plan provisions; (2) a Financial Section that contains the opinion of the independent auditors, the financial statements of the System and required supplementary information; (3) an Investment Section that contains investment results; (4) the Actuarial Section that includes the independent actuary's certification letter, a summary of the results of the actuarial valuation, and actuarial procedures and assumptions; and (5) the Statistical Section that contains information regarding the System membership.

**History**

The Fairfax County Police Officers Retirement System was created under the authority granted by Chapter 303 of the Acts of Assembly (law of the Commonwealth of Virginia) on March 29, 1944 to provide defined benefit pension plan coverage for sworn full-time law enforcement officers of the Fairfax County Police Department. In 1981, Fairfax County enacted Article 7 of the Fairfax County Code which adopted and continued Chapter 303 as amended. There were 1,169 active members and 631 retirees participating in the System as of June 30, 2001.

**Benefit Provisions**

The benefit provisions of the System are established by County Ordinance. The System provides normal service retirement and early service retirement benefits for members who attain age or service requirements. Coverage for service-connected disability benefits is immediate upon membership in the System. Ordinary (non-service related) disability benefits are provided after the attainment of five years of service. Members are vested after five years of service and are eligible for the benefits at the early or normal service retirement date.

**Capital Markets and Economic Conditions**

Fiscal year 2001 saw a reversal of the trend experienced in the capital markets during the previous decade. Prices of domestic and international equities fell substantially. The Standard & Poors 500 Index declined by 14.8% for the year and the international equity indices fell by over 20%. Equity valuations in the technology sector lead the decline with large capitalization U.S. growth stocks declining 32%. Returns on fixed income investments were relatively strong with the Lehman Brothers Aggregate Index up 11.2%, helping to moderate the impact of the decline in the equity markets.

In this difficult environment, the System's investments earned a return of -3.1% for the year, net of investment management fees. While the total return was negative and well below those of recent years, the System did well in relative terms, as the -3.1% was within the top quartile of public funds.

After accounting for all cash flows, including contributions, expenses, and benefit payments, the market value of the System's net assets declined 2.7%, from $621.9 million on June 30, 2000 to $605.4 million on June 30, 2001.

**Major Initiatives**

During the year, we adopted and implemented a structured re-balancing process and implemented a commission recapture program.

With the System in a fully funded status as June 30, 2000, we began a review of the current actuarial funding policy. In anticipation of increased volatility in future employer contribution rates due to the size of the System's assets relative to contributions and a funding ratio at or near 100%, alternatives to the current funding methodology were reviewed. This review will continue during the next year.

**Financial Highlights**

*Internal and Budgetary Controls*

The System's management is responsible for maintaining internal accounting controls to provide reasonable assurance that transactions are properly authorized and recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles. We believe the internal controls in effect during the fiscal year ended June 30, 2001, adequately safeguard the System's assets and provide reasonable assurance regarding the proper recording of financial transactions. In addition, the budget for the System is annually presented to and approved by the Board of Trustees and the County's Board of Supervisors.

*Additions*

The primary sources of additions for the System include member and employer contributions as well as net investment income. Total contributions and net investment income for fiscal year 2001 totaled $5.8 million, a decrease of $58.3 million versus fiscal year 2000.

**Table 1. Contributions and Investment Income**

| | FY 2001 (millions) | FY 2000 (millions) | Increase/ (Decrease) Amount | Increase/ (Decrease) Percentage |
|---|---|---|---|---|
| Employer Contributions | $17.1 | $12.0 | $5.1 | 42.5% |
| Member Contributions | 8.0 | 7.5 | 0.5 | 6.7% |
| Net Investment (Loss) Income | (19.3) | 44.6 | (63.9) | (143.3)% |
| | $5.8 | $64.1 | $(58.3) | (91.0)% |

*Contributions*
Contributions from Fairfax County increased 42.5% over the prior year. The increase in employer contributions was attributable to an increase in payroll and an increase in the employer contribution rate from 18.40% of payroll in FY 2000 to 25.69% in FY 2001. Member contributions increased 6.7% over the prior year, also due to the higher payroll base.

*Investments*
The net investment income portion of total additions decreased by $63.9 million declining from a positive $44.6 million in FY 2000 to a negative $19.3 million in fiscal year 2001. Dividend and interest income increased by $1.9 million or 9.3%. Realized and unrealized losses on investments totalled $39.3 million, compared to gains in FY 2000 of $26.8 million. Investment expenses decreased by $0.2 million or 8.1%. The market value of net assets increased to $605.4 million from $621.9 million.

*Deductions*
The deductions from the System include the payment of retiree and beneficiary payments, the refund of employee contributions to former members and other expenses. Deductions for fiscal year 2001 totaled $22.3 million, an increase of $3.8 million or 20.5% over the prior fiscal year.

**Table 2. Deductions by Type**

| | FY 2001 (millions) | FY 2000 (millions) | Increase/ (Decrease) Amount | Increase/ (Decrease) Percentage |
|---|---|---|---|---|
| Benefits | $21.7 | $17.8 | $3.9 | 21.9% |
| Refunds and Other Expenses | 0.6 | 0.7 | (0.1) | (14.3)% |
| | $22.3 | $18.5 | $3.8 | 20.5% |

The increase in benefit payments to $21.7 million was due both to an increase in the number of retirees and growth in the average benefit payment. The number of retirees and beneficiaries increased to 631 at June 30, 2001 from 583 a year earlier. Retirees also received a 3.8% cost-of-living increase effective July 1, 2000.

**Funded Status**

An actuarial valuation of the System to determine funding requirements is performed annually. The System's funding policy provides for periodic employer contributions at actuarially determined rates which will remain relatively level over time as a percentage of payroll and will accumulate sufficient assets to meet the costs of benefit payments when due. The valuation of the System performed as of July 1, 2000 indicated that the ratio of assets accumulated by the System to total actuarial accrued liabilities for benefits declined from 103.2% to 96.9%. The Actuarial Section contains further information on the results of the July 1, 2000 valuation.

**Investment Policies and Strategies**

The Board of Trustees has an adopted Statement of Investment Objectives and Policy. This Statement establishes the investment goals, guidelines, constraints and performance standards the Board of Trustees will use when exercising its fiduciary duties to manage the investment assets of the System. The Board operates in conformity with the standard of care required in making investments as stated in the Code of Virginia §26-45.1.A.

The Board receives quarterly reporting from staff to ensure compliance with its stated objectives and policy. Staff also monitors the performance of the System and its investment managers; rate of return information is included in the Investment Section.

Securities of the System except for mutual funds and a short-term investment fund are held by State Street Bank and Trust Company, as agent, in the System's name. State Street Boston Corporation, the parent company, carries Financial Institution Bond insurance coverage including a Computer Crime Policy. An additional Excess Securities policy covers all risk of physical loss to securities.

**Other Information**

*Independent Audit and Actuarial Certifications*

An independent auditors' report and certifications from the actuary are included in this report.

*Acknowledgements*

The annual report of the Police Officers Retirement System was prepared by the System's staff under the leadership of the Board of Trustees. I would like to thank the staff who have worked hard throughout the year to ensure the successful operation of the System. This report is intended to provide complete and reliable information for determining the financial status of the System. It is being submitted to the Board of Supervisors and other interested parties.

Respectfully submitted,

Laurnz A. Swartz
Executive Director

## BOARD OF TRUSTEES

## ADMINISTRATIVE ORGANIZATION

### Administrative Staff

Laurnz A. Swartz
*Executive Director*

Jeffrey A. Willison
*Investment Manager*

*Retirement Administrator*

### Professional Services

**Actuary**

Milliman & Robertson, Inc.
Actuaries
Vienna, VA

**Auditor**

KPMG LLP
Certified Public Accountants
Washington, DC

### Investment Managers

Credit Suisse Asset Management
New York, NY

Capital Guardian Trust Company
Los Angeles, CA

Cohen & Steers Capital Management, Inc.
New York, NY

Janus Capital Corporation
Denver, CO

Oak Associates
Akron, OH

Dodge & Cox, Investment Managers
San Francisco, CA

ING Furman Selz Capital Management LLC
New York, NY

PIMCO
Newport Beach, CA

Robert E. Torray & Co., Inc.
Bethesda, MD

**Attorney**

W. McCauley Arnold
McCandlish & Lillard
Fairfax, VA

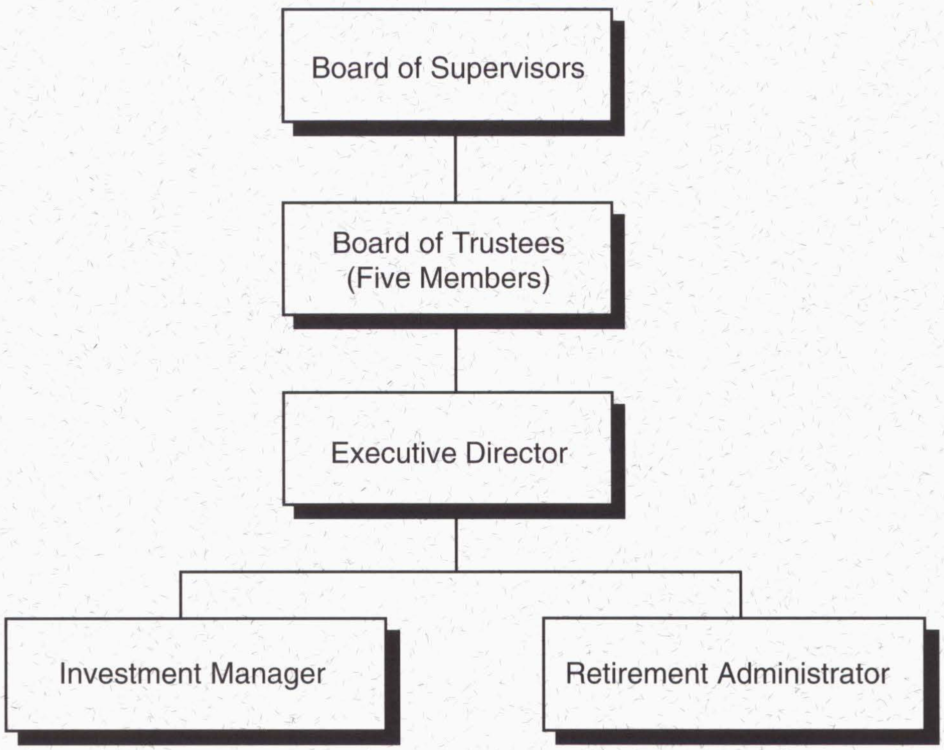
**Custodial Bank**

State Street Bank and Trust Company
Boston, MA

### Investment Consultant

Mercer Investment Consulting, Inc.
Atlanta, GA

## ORGANIZATIONAL CHART



## SUMMARY OF PLAN PROVISIONS

Membership in the Fairfax County Police Officers Retirement System includes full-time sworn law enforcement officers in the Fairfax County Police Department.

The general provisions of the Police Officers Retirement System are as follows:

**Contribution Rate:** 12% of base salary (including roll call and holiday pay). Police Officers do not contribute to Social Security, except Police Officers hired after April 1, 1986 contribute to Medicare.

**Benefit:** 2.8% of average final compensation (highest consecutive three years) times creditable service up to a maximum of 84%. The total benefit is then increased by 3%.

**Normal Retirement:** is either age 55 or at least 25 years of creditable service (20 years if sworn in before July 1, 1981).

**Early Retirement:** is 20 years of creditable service if sworn in on or after July 1,1981.

**Deferred Vested Retirement:** is available for vested members (vesting is at 5 years of creditable service) who leave their contributions in the System when they terminate. These members are entitled to their normal retirement benefit based on service with the Police Department at age 55.

**Service-Connected Disability Retirement:** is available for members, regardless of their length of service, who become disabled as a result of a job-related illness or injury. Benefits for total disability are $66^2/_3$% of their average final compensation if sworn in on or after July 1, 1981. If sworn in before July 1, 1981, the total disability benefit is based on $66^2/_3$% of the salary the member would have received if he or she had not been disabled. Any member who is still disabled when they reach their normal retirement date will have their benefit reduced to 60% of the salary he or she would have received if he or she had not been disabled.

**Non-Service Connected Disability Retirement:** is available for vested members who become disabled due to an injury or illness that is not job-related. Normal retirement benefits are paid (minimum is 10% of the member's salary).

## SUMMARY OF PLAN PROVISIONS

(Continued)

**Death Benefits:** *Before Retirement* — An automatic monthly benefit is payable to the spouse and children. This benefit equals $1,472.72 for the spouse (until remarriage before age 60) or surviving handicapped child (if there is no spouse) plus each eligible child receives $589.09 up to a total family benefit of $2,945.49 (these benefits are indexed to inflation). If the death occurred in the line of duty, the spouse or surviving handicapped child (if there is no spouse) may elect to receive 66²/₃% of the member's regular salary at the time of death in lieu of the automatic benefits. If no automatic benefit is payable, contributions will be refunded to the member's beneficiary.

*After Retirement* — For those retiring on a regular service or service-connected disability retirement, an automatic monthly benefit is payable to the spouse and children. This benefit equals $1,472.72 for the spouse (until remarriage before age 60) or surviving handicapped child (if there is no spouse) plus each eligible child receives $589.09 up to a total family benefit of $2,945.49 (these benefits are indexed to inflation). In addition, members who retire on a regular service retirement may elect a Joint and Contingent Spouse and Handicapped Child option which provides 100%, 66²/₃%, or 50% of the retiree's reduced benefit to the spouse or eligible handicapped child for life. The member's annuity is reduced by a percentage based on the difference in age between the member and his or her spouse. If the spouse predeceases the member, the annuity is restored to what it would have been if this option had not been elected. If no automatic benefit is payable, contributions not yet paid out in benefits will be refunded to the member's beneficiary.

**Cost of Living Benefit:** Annual cost of living adjustments are provided to retirees and beneficiaries equal to the lesser of 4 percent or the percentage increase in the Consumer Price Index for the Washington Consolidated Metropolitan Statistical Area.

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KPMG

2001 M Street, N.W.
Washington, DC 20036

**Independent Auditors' Report**

The Board of Supervisors
County of Fairfax, Virginia

The Board of Trustees
of the Fairfax County Police Officers
Retirement System:

We have audited the financial statements of the Fairfax County Police Officers Retirement System (System), a pension trust fund of the County of Fairfax, Virginia, as of and for the years ended June 30, 2001 and 2000, as listed in the accompanying table of contents. These financial statements are the responsibility of the System's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the plan net assets of the System as of June 30, 2001 and 2000, and changes in plan net assets for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Our audits were made for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplementary information on pages 19 and 20 is required by the Governmental Accounting Standards Board. Such information has been subjected to the auditing procedures applied in the audits of the basic financial statements and, in our opinion, is fairly stated in all material respects in relation to the basic financial statements taken as a whole.

We did not audit the information included in the introductory, investment, actuarial, and statistical sections, and accordingly, express no opinion thereon.

KPMG LLP

October 4, 2001

## STATEMENTS OF PLAN NET ASSETS

as of June 30, 2001 and 2000

| **Assets** | **2001** | **2000** |
|---|---|---|
| Equity in County's pooled cash and temporary investments | $ 2,156,214 | $ 1,957,716 |
| Accrued interest and dividends receivable | 3,512,044 | 3,269,177 |
| Receivable from sale of investments | 7,465,550 | 10,928,838 |
| Investments, at fair value | | |
| U.S. Government obligations | 23,712,034 | 27,614,506 |
| Asset-backed securities | 96,766,164 | 110,729,368 |
| Municipal bonds | 400,411 | 466,146 |
| Corporate bonds | 85,925,956 | 67,079,597 |
| Common and preferred stock | 307,611,694 | 323,464,212 |
| Mutual funds | 69,803,116 | 76,511,946 |
| Short-term investments | 44,012,232 | 56,228,233 |
| Cash collateral received under securities lending agreements | 31,713,740 | 69,580,246 |
| Total investments | 659,945,347 | 731,674,254 |
| Total assets | 673,079,155 | 747,829,985 |
| **Liabilities** | | |
| Payable for collateral received under securities lending agreements | 31,713,740 | 69,580,246 |
| Payable for purchase of investments | 35,071,340 | 55,396,849 |
| Accounts payable and accrued expenses | 907,180 | 990,862 |
| Total liabilities | 67,692,260 | 125,967,957 |
| **Net assets held in trust for pension benefits** | **$ 605,386,895** | **$ 621,862,028** |

(A schedule of funding progress is presented on page 19.)

See accompanying notes to financial statements.

## STATEMENTS OF CHANGES IN PLAN NET ASSETS

For the Years Ended June 30, 2001 and 2000

| **Additions** | **2001** | **2000** |
|---|---|---|
| Contributions | | |
| Employer | $ 17,149,427 | $ 11,950,073 |
| Plan members | 8,038,085 | 7,521,134 |
| Total contributions | 25,187,512 | 19,471,207 |
| Investment income | | |
| *From investment activities* | | |
| Net (depreciation) appreciation in fair value of investments | (39,326,988) | 26,764,785 |
| Interest | 16,043,053 | 13,945,633 |
| Dividends | 6,435,447 | 6,625,771 |
| Other | 10,922 | 4,767 |
| Total income from investment activities | (16,837,566) | 47,340,956 |
| Less investment activity expenses | | |
| Management fees | 2,385,978 | 2,601,593 |
| Custodial fees | 132,197 | 115,629 |
| Consultant | 69,596 | 119,000 |
| Allocated administrative expense | 104,879 | 93,779 |
| Total investment activity expenses | 2,692,650 | 2,930,001 |
| Net (loss) income from investment activities | (19,530,216) | 44,410,955 |
| *From securities lending activities* | | |
| Securities lending income | 3,641,028 | 3,307,373 |
| Securities lending expenses | | |
| Borrower rebates | 3,338,653 | 3,048,303 |
| Management fees | 105,841 | 90,680 |
| Total securities lending expenses | 3,444,494 | 3,138,983 |
| Net income from securities lending activities | 196,534 | 168,390 |
| Total net investment (loss) income | (19,333,682) | 44,579,345 |
| Total additions | 5,853,830 | 64,050,552 |
| **Deductions** | | |
| Annuity benefits | 19,534,126 | 15,660,231 |
| Disability benefits | 1,205,413 | 1,202,447 |
| Survivor benefits | 983,452 | 862,053 |
| Refunds and Other Expenses | 605,972 | 726,351 |
| Total deductions | 22,328,963 | 18,451,082 |
| **Net (decrease) increase** | (16,475,133) | 45,599,470 |
| **Net assets held in trust for pension benefits** | | |
| Beginning of fiscal year | 621,862,028 | 576,262,558 |
| **End of fiscal year** | **$ 605,386,895** | **$ 621,862,028** |

See accompanying notes to financial statements.

## NOTES TO THE FINANCIAL STATEMENTS

For the Year Ended June 30, 2001 and 2000

The Fairfax County Police Officers Retirement System ("System" or "plan") is a legally separate single-employer defined benefit pension plan established under the Code of Virginia to provide defined benefit pension benefits to certain Fairfax County, Virginia's ("County") police and park police officers. As such, the System is considered part of the County reporting entity and its financial statements are included in the County's general purpose financial statements as a pension trust fund.

### A. Summary of Significant Accounting Policies

*Basis of Accounting.* The System's financial statements have been prepared under the accrual basis of accounting in accordance with accounting standards applicable to governmental units in the United States of America. Member and employer contributions to the plan are recognized in the period in which the contributions are due. Benefits and refunds are recognized when due in accordance with the terms of the plan. The cost of administering the plan is paid by the System.

*Method Used to Value Investments.* Short-term investments are reported at cost, which approximates fair value. All other investments are reported at fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. Asset-backed securities are valued on the basis of future principal and interest payments and are discounted at prevailing interest rates for similar instruments. The System records investment purchases and sales as of the trade date. These transactions are not finalized until the settlement date, which occurs approximately three business days after the trade date. The amounts of trade receivables and payables are shown as receivables and payables on the Statements of Plan Net Assets. Cash received as collateral on securities lending transactions and investments made with such cash are reported as assets along with a related liability for collateral received.

*Equity in County's pooled cash and temporary investments.* The System maintains its cash with the County, which invests cash and allocates interest earned, net of a management fee, on a daily basis to the System based on the System's average daily balance of equity in pooled cash. As of June 30, 2001 and 2000, the bank balance of the County's public deposits was either insured by the Federal Deposit Insurance Corporation or through the State Treasury Board pursuant to the provisions of the Security for Public Deposit Act.

### B. Plan Description and Contribution Information

*Membership.* At July 1, 2000, the date of the latest actuarial valuation, membership in the System consisted of:

| | |
|---|---|
| Retirees and beneficiaries receiving benefits | 583 |
| Terminated plan members entitled to but not yet receiving benefits | 3 |
| Active plan members | 1,115 |
| **Total** | **1,701** |

## NOTES TO THE FINANCIAL STATEMENTS

(Continued)

*Plan Description.* The System is a single-employer defined benefit pension plan. The plan covers County police officers who are not covered by other plans of the County or the Virginia Retirement System and former Park Police officers who elected to transfer to the System effective January 22, 1983. Benefit provisions are established and may be amended by County ordinances. All benefits vest at five years of service. To be eligible for normal retirement, an individual must meet the following criteria: (a) if employed before July 1, 1981; attained the age of 55 or completed 20 years of service, or (b) if employed on or after July 1, 1981; attained the age of 55 or completed 25 years of service. The normal retirement benefit is calculated using average final compensation (i.e., the highest consecutive three years) and years (or partial years) of service at date of termination. The plan provides that unused sick leave credit may be used in the calculation of average final compensation by projecting the final salary during the unused sick leave period. To be eligible for early retirement, the employee must have 20 years of service (does not apply if hired before July 1, 1981). Benefits are determined based on the normal retirement benefit calculated using average final compensation and service at early retirement actuarially reduced.

Annual cost-of-living adjustments are provided to retirees and beneficiaries equal to the lesser of 4 percent or the percentage increase in the Consumer Price Index for the Washington Consolidated Metropolitan Statistical Area.

*Contributions.* The contribution requirements of System members are established and may be amended by County ordinances. Member contributions are based on 12 percent of compensation. The County is required to contribute at an actuarially determined rate; the rates for the years ended June 30, 2001 and 2000 were 25.69 percent and 18.40 percent of annual covered payroll, respectively.

*Deductions.* The deductions from the System include the payment of retiree and beneficiary payments, the refund of employee contributions to former members and other expenses.

### C. Investments

The authority to establish the System is set forth in Chapter 303 of the Acts of Assembly (law of the Commonwealth of Virginia). Section 26-40 of the *Code of Virginia* (Code) authorizes the System to purchase the following investments:

*Obligations of the Commonwealth of Virginia and its instrumentalities*
*U.S. Treasury and agency securities*
*Obligations of counties, cities, towns, and other public bodies located within the Commonwealth of Virginia*
*Obligations of state and local governmental units within other states*
*Obligations of the International Bank for Reconstruction and Development*
*Obligations of the Asian Development Bank*
*Obligations of the African Development Bank*

In addition, the Code provides that the System may purchase other investments for pension funds (including common and preferred stocks and corporate bonds) that meet the standard of judgment and care set forth in Section 26-45.1 of the Code.

The System does not have investments (other than U.S. Government and U.S. Government guaranteed obligations) in any one organization that represent 5 percent or more of net assets available for benefits.

## NOTES TO THE FINANCIAL STATEMENTS
(Continued)

All investments, except for the mutual funds, short-term investment fund, and short-term collateral investment pool, are held by an unaffiliated custodian in the name of the System. Investment decisions for these assets are made by the Board of Trustees or investment managers selected by the Board.

*Derivative financial instruments.* As permitted by the Code described above, the System invests in derivative instruments on a limited basis in accordance with the Board of Trustees' policy. Derivative instruments are financial contracts whose value depends on the values of one or more underlying assets, reference rates or financial indexes. They include futures, forwards and options or swap contracts. In addition, some traditional securities can have derivative-like characteristics such as structured notes in which the return may be linked to one or more indexes, and asset-backed securities such as collateralized mortgage obligations which are sensitive to changes in interest rates and prepayments. Futures, forwards, options and swaps are generally not recorded on the financial statements, whereas structured notes and asset-backed investments generally are reported.

The System purchases forward currency contracts to protect the base currency (US dollars) from fluctuations in the exchange rates of foreign currencies. The credit risk of the forward currency contract lies with the potential nonperformance of the counterparty to the transaction. The maximum credit risk is usually equal to any unrealized profit on the contracts. Market risk in forward currency contracts is related to adverse movements in currency exchange rates. During the year ended June 30, 2001, the System sold forward currency contracts with a market value of $24,086,878 and purchased forward currency contracts with a market value of $24,301,999. During fiscal 2000, the System sold forward currency contracts with a market value of $15,506,974 and purchased forward currency contracts with a market value of $15,906,828.

In the area of on-financial statement instruments with derivative-like characteristics, the System invests in various asset-backed securities such as collateralized mortgage obligations and principal only strips. These securities were purchased to increase earnings, provide exposure to portions of the mortgage market or to control duration within the portfolio. The credit risk of these investments results from the creditworthiness of the counterparties to the contracts. There is an additional credit risk related to the creditworthiness of the related consumers or mortgagees. The market risk of these securities is dependent on changes in interest rates and the level of the underlying prepayments, i.e., when the underlying principal and interest are repaid to the mortgagors. At June 30, 2001 and 2000 the System held $19,884,258 or 3.3% of the fair value of investments and $24,639,101 or 4.0% of the fair value of investments, respectively, in on-financial statement instruments with derivative-like characteristics.

*Securities Lending.* Board of Trustees' policies permit the System to lend its securities to broker-dealers and other entities (borrowers) for collateral that will be returned for the same securities in the future. The System's custodian is the agent in lending the plan's domestic securities for collateral of 102 percent and international securities for collateral of 105 percent. The custodian receives cash or securities as collateral. All securities loans can be terminated on demand by either the System or the borrower. Cash collateral is invested in the lending agent's collective collateral investment pool, which at June 30, 2001 had a weighted average duration of 75 days and a weighted average maturity of 548 days; and at June 30, 2000 had a weighted average duration of 74 days and a weighted average maturity of 485 days. The relationship between the maturities of the investment pool and the System's loans is affected by the maturities of securities loans made by other plan entities that invest cash collateral in the investment pool.

The System did not impose any restrictions during fiscal 2001 or 2000 on the amounts of loans the lending agent made on its behalf, and the agent indemnifies the System by agreeing to purchase

## NOTES TO THE FINANCIAL STATEMENTS

(Continued)

replacement securities, or return the cash collateral thereof, in the event a borrower fails to return loaned securities or pay distributions thereon. There were no such failures by any borrower during either fiscal year, nor were there any losses resulting from a default of the borrower or lending agent.
Securities on loan for securities collateral are classified in the following schedule of investments according to the category of the collateral received. Securities on loan at each year-end for cash collateral are unclassified as the cash collateral is invested in a collective collateral investment pool. At each year end, the System had no credit risk exposure to borrowers because the amounts the System owed the borrowers exceeded the amounts the borrowers owed the System.

As of June 30, 2001 and 2000, the market value of securities on loan were $33,039,201 and $68,977,331, respectively. Cash received as collateral and the related liabilities of $31,713,740 as of June 30, 2001 and $69,580,246 as of June 30, 2000 are shown on the Statements of Plan Net Assets. Securities received as collateral are not reported as assets since the System does not have the ability to pledge or sell the collateral securities absent borrower default.

*Categorization.* The System's investments are categorized to give an indication of the level of risk assumed by the System at year end. Category 1 includes investments that are insured or registered or for which the securities are held by the System or its agent in the System's name. Category 2 includes uninsured and unregistered investments for which the securities are held by a counterparty's trust department or agent in the System's name. Category 3 includes uninsured and unregistered investments for which the securities are held by a counterparty or its trust department or agent, but not in the System's name. All of the System's investments meet the criteria of Category 1, except investments in mutual funds, a short-term investment fund, a short-term collateral investment pool and those securities on loan for which the cash collateral is invested in the collateral investment pool. These investments by their nature are not required to be categorized.

A schedule of investments as of June 30, 2001 and 2000 follows:

| | 2001 | 2000 |
|---|---|---|
| **Categorized investments** | | |
| U.S. Government obligations | $ 4,673,661 | $ 3,212,203 |
| Asset-backed securities | 96,766,164 | 107,276,672 |
| Municipal bonds | 400,411 | 466,146 |
| Corporate bonds | 85,337,472 | 65,837,047 |
| Common and preferred stock | | |
| Not on securities loan | 294,199,350 | 283,584,431 |
| On securities loan for securities collateral | 4,095,515 | 3,505,541 |
| Total categorized investments | 485,472,573 | 463,882,040 |
| **Uncategorized investments** | | |
| Short-term investment fund | 44,012,232 | 56,228,233 |
| Mutual funds | 69,803,116 | 76,511,946 |
| Securities lending short-term collateral investment pool | 31,713,740 | 69,580,246 |
| Investments held by broker dealers under securities loans with cash collateral: | | |
| U.S. Government obligations | 19,038,373 | 24,402,303 |
| Corporate bonds | 588,484 | 1,242,550 |
| Asset-backed securities | 0 | 3,452,696 |
| Common and preferred stock | 9,316,829 | 36,374,240 |
| Total uncategorized investments | 174,472,774 | 267,792,214 |
| **Total investments** | **$ 659,945,347** | **$ 731,674,254** |

## NOTES TO THE FINANCIAL STATEMENTS
(Continued)

### D. Income Taxes

The Internal Revenue Service issued a determination letter on February 23, 1995, which stated that the System and its underlying trust qualify under the applicable provisions of the Internal Revenue Code and therefore are exempt from federal income taxes. In the opinion of the plan administrator, the System and its underlying trust have operated within the terms of the System and are qualified under the applicable provisions of the Internal Revenue Code.

## REQUIRED SUPPLEMENTARY INFORMATION

Six-year historical trend information about the System is presented herewith as required supplementary information. This information is intended to help users assess the System's funding status on a going-concern basis, assess progress made in accumulating assets to pay benefits when due, and make comparisons with other public employee retirement systems.

## SCHEDULE OF FUNDING PROGRESS

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability - AAL Entry Age (b) | Unfunded AAL-UAAL (b-a) | Funded Ratio (a/b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a)/c) |
|---|---|---|---|---|---|---|
| 7/1/95 | $ 284,506,069 | $ 346,712,876 | $ 62,206,807 | 82.06% | $ 45,743,970 | 135.99% |
| 7/1/96 | 343,288,369 | 388,917,113 | 45,628,744 | 88.27% | 49,065,647 | 93.00% |
| 7/1/97 | 399,772,825 | 414,534,604 | 14,761,779 | 96.44% | 50,307,487 | 29.34% |
| 7/1/98 | 434,259,212 | 442,727,265 | 8,468,053 | 98.09% | 51,955,916 | 16.30% |
| 7/1/99 | 503,649,251 | 487,951,047 | (15,698,204) | 103.22% | 55,081,103 | (28.50%) |
| 7/1/00 | 568,941,559 | 586,938,958 | 17,997,399 | 96.93% | 64,946,049 | 27.71% |

Analysis of the dollar amounts of plan net assets, actuarial accrued liability, and unfunded actuarial accrued liability in isolation can be misleading. Expressing plan net assets as a percentage of the actuarial accrued liability provides one indication of the System's funding status on a going-concern basis. Analysis of this percentage over time indicates whether the system is becoming financially stronger or weaker. Generally, the greater this percentage, the stronger the system. Trends in the unfunded actuarial accrued liability and annual covered payroll are both affected by inflation. Expressing the unfunded actuarial accrued liability as a percentage of annual covered payroll approximately adjusts for the effects of inflation and aids analysis of the system's progress made in accumulating sufficient assets to pay benefits when due. Generally, the smaller this percentage, the stronger the system.

## SCHEDULE OF EMPLOYER CONTRIBUTIONS

| Fiscal Year Ended June 30 | Annual Required Contribution | Percentage Contributed |
|---|---|---|
| 1996 | $ 10,912,200 | 100% |
| 1997 | 11,892,690 | 100% |
| 1998 | 11,321,194 | 100% |
| 1999 | 10,685,734 | 100% |
| 2000 | 11,950,073 | 100% |
| 2001 | 17,149,427 | 100% |

## NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the date indicated. Additional information as of the latest actuarial valuation follows.

| | |
|---|---|
| Valuation date | July 1, 2000 |
| Actuarial cost method | Entry age |
| Amortization method | Level percent closed |
| Remaining amortization period | Weighted average of 7.62 years |
| Asset valuation method | 3-Year smoothed market |
| Actuarial assumptions: | |
| Investment rate of return* | 7.5% |
| Projected salary increases* | 4.5%-8.0% |
| *Includes inflation at | 4.0% |
| Cost-of-living adjustments | 3.0% |

The actuarial assumptions used have been recommended by the actuary and adopted by the System's Board of Trustees based on the most recent review of the System's experience, completed in 1996.

The rate of employer contributions to the plan is composed of the normal cost, amortization of the unfunded actuarial accrued liability and an allowance for administrative expenses. The normal cost is a level percent of payroll cost which, along with the member contributions, will pay for projected benefits at retirement for the average plan participant. The actuarial accrued liability is that portion of the present value of projected benefits that will not be paid by future employer normal costs or member contributions. The difference between this liability and the funds accumulated as of the same date is the unfunded actuarial accrued liability. The allowance for administrative expenses is based upon the plan's actual administrative expenses.

Investment gains from prior years have more than offset an increase in the unfunded liability due to plan enhancements adopted during fiscal 2000. The impact of investment gains and the plan enhancements resulted in the adoption of an employer contribution rate of 21.79% for the fiscal year ending June 30, 2002, a decrease of 3.90% from the fiscal year 2001 rate of 25.69%.

## CAPITAL MARKETS AND ECONOMIC CONDITIONS

### *Financial and Economic Summary*

Fiscal-year 2001, ending June 30, proved to be a turbulent year for equity markets, ending the string of 12 consecutive fiscal years of positive returns for the S&P 500 Index. The S&P 500 Index, which had averaged a compound annual gain of 15% for the previous 10 years, declined 14.8% in 2001. Following an extraordinary 10-year period of rapid expansion, the US economy slowed sharply in fiscal 2001. Corporate America slashed production and capital spending in response to bulging inventories and eroding profitability. Weakness in Europe, Asia and Latin America failed to provide much demand for US goods. Rising costs of energy, escalating unemployment, a falling "wealth effect", and a rise in labor costs exacerbated the slowdown, draining the purchasing power of both businesses and consumers. About the only good news on the economic front was that inflation remained under control, and consumers continued to outspend their incomes. As interests rates started falling, housing and automobiles sales were able to remain at very high levels through the year.

In a determined effort to stimulate a re-growth of economic expansion, the Federal Reserve Board cut the Fed Funds rate six times in the last six months of fiscal 2001, reducing short term interest rates by 2.75 points to 3.75 percent, the lowest level in seven years.

After reaching record levels in early 2000, fueled by the boom in technology, media and telecommunications (TMT), equity markets fell into a sharp tailspin, bringing an abrupt end to the longest, strongest bull market in the post-World War II era. The technology-heavy NASDAQ Composite Index declined 45.5% during the fiscal year, and was off nearly 60% from its March 2000 peak. During fiscal 2001, investors bailed out of TMT sectors, rotating into "defensive" sectors that possessed reasonable valuations and consistent earnings. For example, the Russell 3000 Value Index outperformed its growth-style counterpart by an incredible 46.9 percentage points — the largest margin advantage in the 23-year history of the two indexes. Small-and mid-cap stocks significantly outperformed large cap stocks as markets broadened over the fiscal year.

The healthy performance achieved by international equities in the prior year did not carry over into fiscal-year 2001. International companies were hurt by the slowdown in the US economy as well as the continued strength of the dollar. Similar to the US experience, international growth stocks in the technology, media and telecommunications sectors were the hardest impacted. The primary international benchmark covering 21 developed nations, the Morgan Stanley Capital International Europe, Australia, Far East Index (MSCI EAFE) declined 23.6% in dollar terms during fiscal-year 2001.The world's emerging markets once-again underperformed developed markets as the MSCI Emerging Markets Free Index fell 25.8% for the fiscal year.

Real estate, after lagging the general markets for two years, became the best performing sector during fiscal 2001. Strong revenue and dividend growth fueled the rebound in real estate shares as other corporate earnings faltered. REIT (Real Estate Investment Trust) shares out-performed virtually all other asset classes, as evidenced by the NAREIT (National Association of Real Estate Investment Trusts) Equity REIT Index return of 25.4% for the year ended June 30, 2001.

In contrast to the turbulence in the broad equity markets, the fixed-income markets benefited from the slowdown in the US economy. The US bond market generated double-digit gains for the 2001 fiscal year, supported by Federal Reserve interest rate cuts, the absence of any serious inflation threat, and the turmoil in the equity markets. With the bursting of the dot-com bubble and the impact of the slowing economy on corporate earnings, investors fled from high yielding corporate bonds to high quality Treasuries and investment-grade credit securities. The broad Lehman Brothers Aggregate Bond Index was positive in all four quarters of the fiscal year, and finished 2001 with a strong gain of 11.2%. Due to slowing international economies, international bonds were up modestly for the year when measured in local currencies, but these returns turned negative to US investors after translating for the strong US dollar.

### *System*

The Police Officers Retirement System operates a sound and diversified investment program with disciplined asset re-balancing to achieve strategic long-term goals. That disciplined investment process has been effective in achieving a long-term record of consistent asset growth. The investment program's cost effectiveness as measured by the expense ratio was 48 basis points and included investment office administrative expenses, consultant fees, money manager fees and master custodian fees. Any short-run downturn in the bond and equity markets would not have a material effect on the funded status of the System.

On a market value basis, the total net assets held in trust declined from $621.9 million at June 30, 2000, to $605.4 million at June 30, 2001. For the fiscal year 2001, investments provided a return of -3.1%, net of fees, reflecting market conditions throughout the year. While these investment returns were disappointing in an absolute sense, this return ranked in the top quartile of all public plan sponsors. The System's annualized rate of return, net of fees, was 4.1% over the last three years and 10.0% over the last 5 years. The Police Officers Retirement System's annualized net return over the last five years has outperformed the actuarially assumed rate of 7.5%. At year-end 2001, the System's assets were allocated by manager mandate as follows: Domestic and international equities — 51.0%; Fixed income securities — 36.6%; and Real estate REITs — 12.4%.

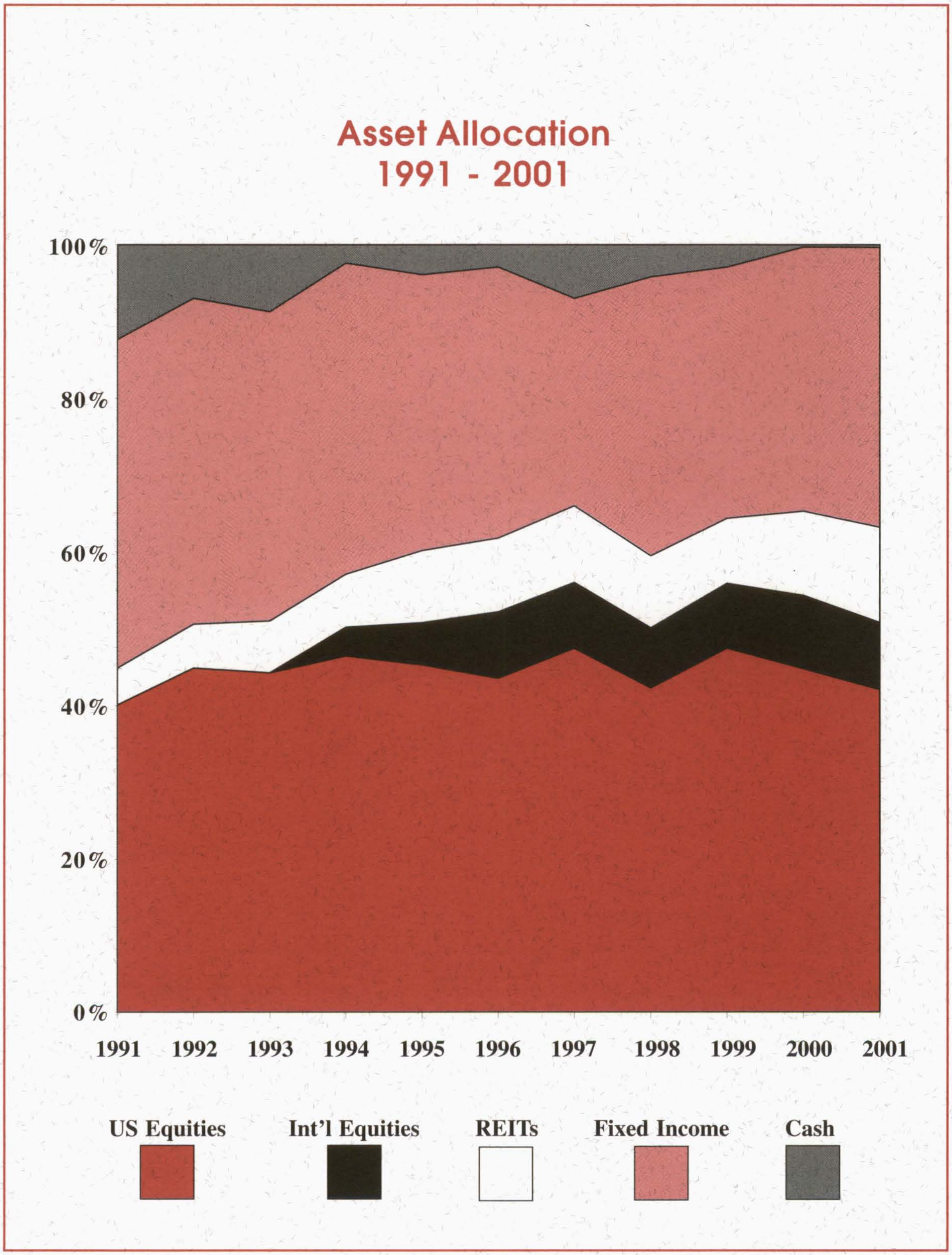
## ASSET ALLOCATION BY CATEGORY AND INVESTMENT MANAGER

June 30, 2001

| Asset Class / Manager | Investment Style | Total Assets | % of Total Assets |
|---|---|---|---|
| ***Domestic Equities*** | | | |
| Robert E. Torray | Active Large Cap Value | $73,320,560 | 12.1% |
| Furman Selz | Active Small Cap Growth | 63,847,722 | 10.5% |
| Janus Capital | Active Large Cap Growth | 36,028,934 | 5.9% |
| Oak Associates | Active Large Cap Growth | 19,461,980 | 3.2% |
| PIMCO Stocksplus LP * | Enhanced Large Cap Index | 62,517,481 | 10.3% |
| ***International Equities*** | | | |
| Capital Guardian | Active Developed Markets | 52,894,030 | 8.7% |
| ***Real Estate*** | | | |
| Cohen & Steers | Active Equity REITs | 75,126,336 | 12.4% |
| ***Domestic Fixed Income*** | | | |
| Dodge & Cox | Active Domestic Core | 101,394,376 | 16.7% |
| ***Global Fixed Income*** | | | |
| Credit Suisse | Active Global Core | 119,518,918 | 19.7% |
| ***Cash Held by County Treasurer*** | Active Short Term | 2,183,738 | 0.4% |
| **Net Assets**** | | **$606,294,075** | **100.0%** |

** Pooled Fund*

*** Without deduction for accounts payable and accrued liabilities.*


Asset Allocation
1991 - 2001
100%
80%
60%
40%
20%
0%
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
US Equities
Int'l Equities
REITs
Fixed Income
Cash

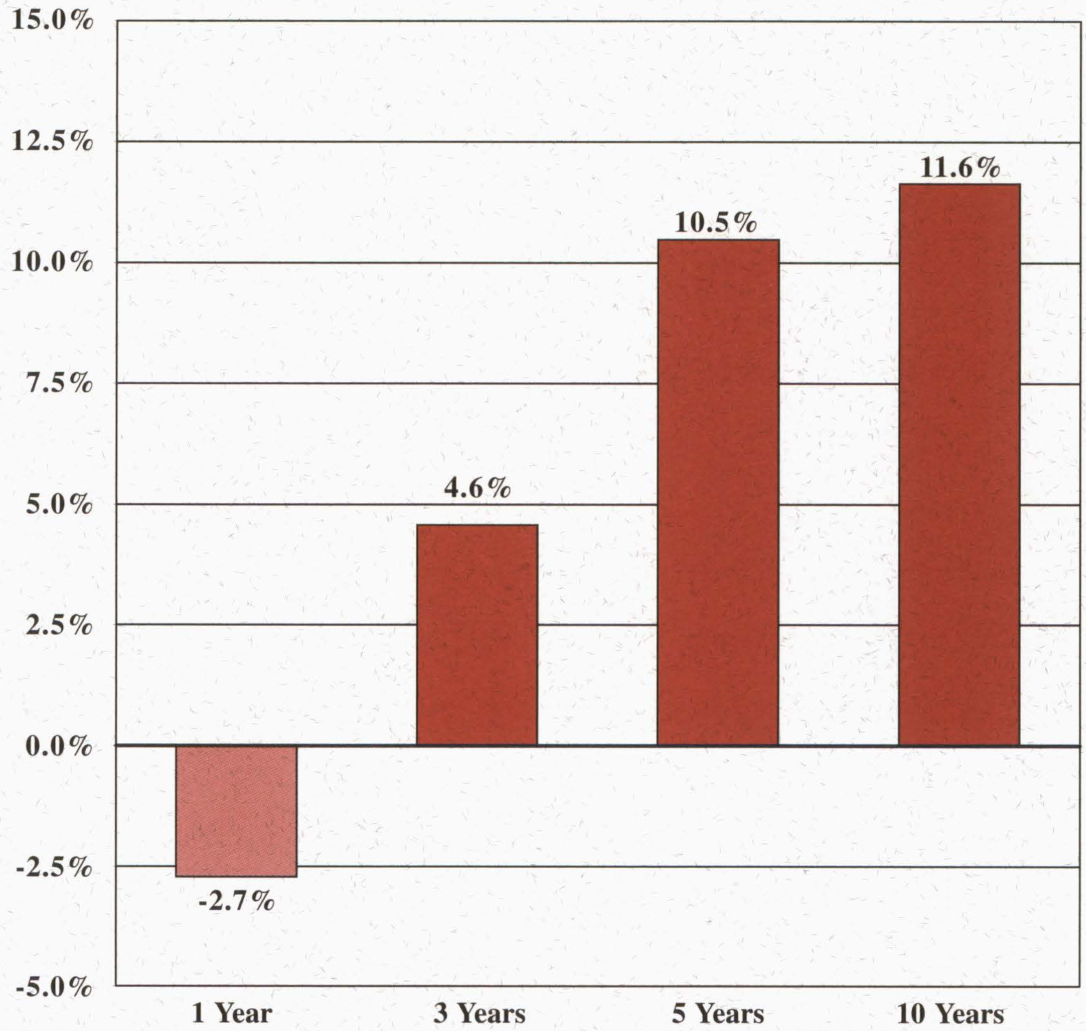
## LIST OF LARGEST ASSETS HELD

June 30, 2001

| Fifteen Largest Equity Holdings | Shares | Market Value |
|---|---|---|
| Abbott Labs | 84,300 | $ 4,047,243 |
| General Motors Corp. | 192,900 | $ 3,906,225 |
| AOL Time Warner, Inc. | 70,957 | $ 3,760,721 |
| Boston Scientific Corp. | 217,500 | $ 3,697,500 |
| General Electric Co. | 69,965 | $ 3,410,794 |
| Illinois Tool Works, Inc. | 51,400 | $ 3,253,620 |
| Veritas Software Corp. | 48,120 | $ 3,201,424 |
| General Dynamics Corp. | 40,600 | $ 3,159,086 |
| Tribune Co. New | 78,300 | $ 3,132,783 |
| Franklin Resources, Inc. | 68,000 | $ 3,112,360 |
| JP Morgan Chase & Co | 69,560 | $ 3,102,376 |
| Clear Channel Communications | 48,765 | $ 3,057,566 |
| Markel Corp. | 14,200 | $ 2,790,300 |
| Kimberly Clark Corp. | 48,850 | $ 2,730,715 |
| Procter & Gamble Co. | 39,700 | $ 2,532,860 |

| Fifteen Largest Fixed Income Holdings | Interest Rate | Maturity Date | Market Value |
|---|---|---|---|
| Commitment to purchase FNMA 30 year Single Family TBA Mortgage Pool | 8.000% | July 31, 2031 | $ 10,792,865 |
| Commitment to purchase FNMA 30 year Single Family TBA Mortgage Pool | 7.500% | July 31, 2031 | $ 6,019,829 |
| United States Treasury Notes | 4.250% | March 31, 2003 | $ 5,750,920 |
| Commitment to purchase FNMA 30 year Single Family TBA Mortgage Pool | 7.000% | July 31, 2031 | $ 5,423,652 |
| Federal National Mortgage Association (FNMA) Mortgage Pool | 6.000% | March 25, 2008 | $ 5,078,100 |
| United States Treasury Notes | 6.250% | February 28, 2002 | $ 4,217,438 |
| United States Treasury Bonds | 6.250% | May 15, 2030 | $ 3,837,600 |
| Federal Home Loan Mortgage Corp. Mortgage Pool | 7.000% | August 15, 2007 | $ 3,617,005 |
| United States Treasury Notes | 3.875% | January 15, 2009 | $ 3,174,633 |
| Federal National Mortgage Association Mortgage Pool | 6.250% | March 25, 2009 | $ 3,043,110 |
| Federal National Mortgage Assn. Mortgage Pool | 7.500% | February 25, 2029 | $ 2,970,723 |
| Federal National Mortgage Assn. Mortgage Pool | 6.000% | February 1, 2009 | $ 2,869,764 |
| Commitment to purchase FNMA 15 year Single Family Mortgage Pool | 7.000% | July 31, 2016 | $ 2,643,888 |
| Federal Home Loan Mortgage Corp. Mortgage Pool | 6.500% | January 15, 2008 | $ 2,566,400 |
| Federal National Mortgage Assn. Mortgage Pool | 7.125% | February 15, 2005 | $ 2,564,450 |

## Compound Annual Return on Investment Portfolio




*Returns are gross of expenses*

MILLIMAN & ROBERTSON, INC.
Actuaries & Consultants
*Internationally WOODROW MILLIMAN*

Suite 1000, 8000 Towers Crescent Drive, Vienna, VA 22182-2700
Telephone: 703/917-0143
Fax: 703/827-9266

March 2, 2001

Board of Trustees
Fairfax County Police Officers
Retirement System
10680 Main Street - Suite 280
Fairfax, VA 22030-3805

Dear Members of the Board:

At your request, we have performed our annual actuarial valuation of the Fairfax County Police Officers Retirement System as of July 1, 2000. The results of the valuation are contained in this report.

**Funding Objective**

The funding objective of the System is to establish contribution rates which, over time, will remain level as a percent of payroll. In order to achieve this, a contribution rate has been determined which will provide for current cost (i.e., normal cost expressed as a level percent of payroll) plus level percent of payroll amortizations of each layer of the unfunded liability over a 15 year period. This funding objective is currently being realized.

**Assumptions**

The actuarial assumptions used in this valuation have been recommended by the actuary and adopted by the Board of Trustees based upon the most recent review of the System's experience completed in 1996. We believe the assumptions used, in the aggregate, represent our best estimate of future experience of the plan.

The assumptions and methods used in performing this valuation meet the parameters set for disclosure presented in the financial section by Government Accounting Standards Board (GASB) Statement No. 25, *Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans.*

**Reliance on Others**

In preparing our report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, statutory provisions, employee data, and financial information. We found the data to be reasonably consistent and comparable with data used in the prior valuation.

Board of Trustees Fairfax County
Police Officers Retirement System
March 2, 2001
Page 2

**Supporting Schedules**

We were responsible for all supporting schedules to be found in the Actuarial Section.

We were responsible for all years of the Schedule of Funding Progress, Schedule of Employer Contributions and Notes to Trend Data shown in the Financial Section.

**Compliance with Code of Virginia §51.1-800**

Code of Virginia §51.1-800 requires that the benefits provided a retiree at age 65 from a local retirement system equal or exceed two-thirds of the allowance to which the employee would be entitled under the provisions of the Virginia Retirement System (VRS). The Board of Trustees of the VRS is to determine whether a local system satisfies this condition, taking into account differences in member contributions between the local system and the VRS.

Although there is no formal procedure for making this comparison, we have compared the least valuable accrual rate under the Police Officers" Plan to the most valuable accrual rate under the VRS, making adjustments for the fact that employee contributions are required in excess of the VRS 5% rate. The employer provided accruals rates do exceed $^2/_3$ of the employer provided accrual rates under the VRS plan.

I certify that, to the best of my knowledge and understanding, the Fairfax County Police Officers Retirement System satisfies the requirements of the Code of Virginia §51.1-800.

**Certification**

On the basis of the foregoing, we certify that, to the best of our knowledge, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the applicable Guides to Professional Conduct, Amplifying Opinions, and supporting Recommendations and Interpretations of the American Academy of Actuaries.

Respectfully submitted,

MILLIMAN & ROBERTSON, INC.

Fiona E. Liston

Fiona E. Liston, F.S.A.
Consulting Actuary

MILLIMAN & ROBERTSON, INC.

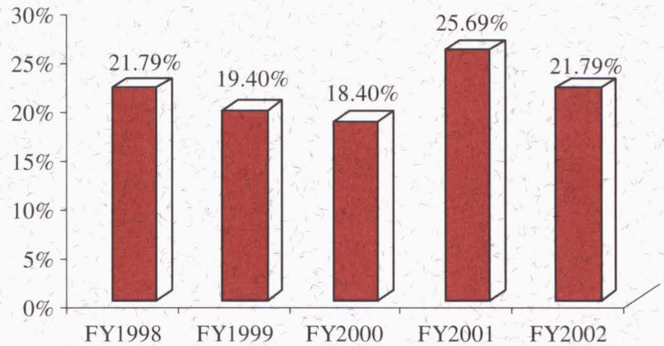
## SUMMARY OF VALUATION RESULTS

### Overview

This report presents the results of our July 1, 2000 actuarial valuation of the Fairfax County Police Officers Retirement System.

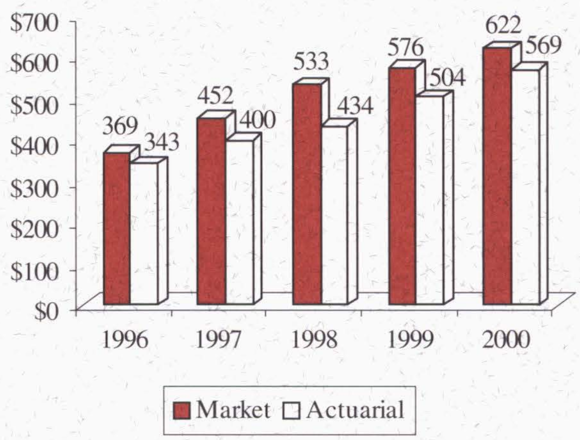
The major findings of the valuation are summarized in the following charts.

**Employer Contribution Rates**
(as % of Payroll)




*The employer contribution rate decreased over the last year due to investment gains which offset liability losses.*

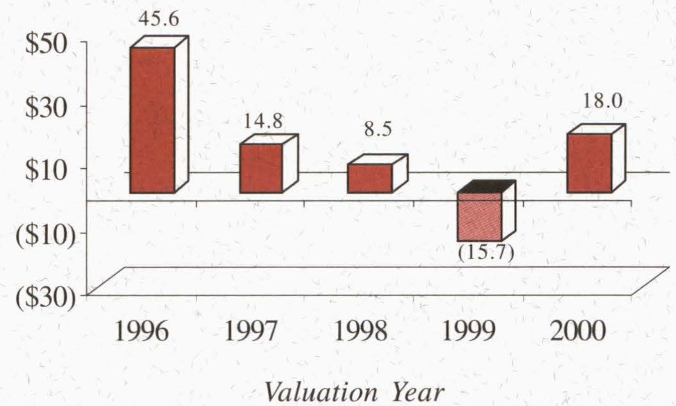
**System Assets**
(in Millions)




*The rate of return this year on the market value of assets was 7.73%, down from last year's return of 8.06%. The System still has a cushion of $53 million against future possible adverse performance.*

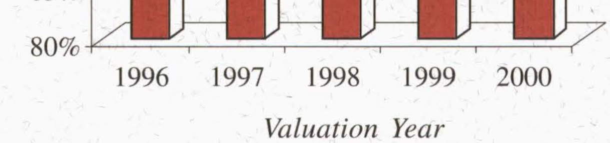
## SUMMARY OF VALUATION RESULTS
(Continued)

### Unfunded Actuarial Liability
(in Millions)




*The unfunded actuarial liability increased $33.7 million. This was due to the benefit enhancements increasing liabilities and offset by the investment gains realized since 1999.*

### Funding Ratio




*The ratio of actuarial assets to the actuarial accrued liability decreased over the past year due to the Plan improvements. This is the GASB #25 measure of funding progress.*

## SUMMARY OF VALUATION RESULTS
(Continued)

### Summary of Results

This table compares the principal results from the 1999 and 2000 valuations. The 2000 liabilities do not reflect any additional amounts for the potential impact of the policy change on partial duty positions.

### SUMMARY OF PRINCIPAL RESULTS

| Participant Data | July 1, 1999 | July 1, 2000 | Percent Change |
|---|---|---|---|
| Number of: | | | |
| Active Members | 1,039 | 1,115 | + 7.3% |
| Retired Members and Beneficiaries | 514 | 537 | +4.5% |
| Disabled Members | 46 | 46 | - |
| Vested Former Members | 3 | 3 | - |
| Annual Salaries of Active Members | $54,105,856 | $60,774,712 | + 12.3% |
| Annual Benefits for Retired and Disabled Members, and Beneficiaries | $17,149,399 | $20,675,727 | +20.6% |

| Assets and Liabilities | July 1, 1999 | July 1, 2000 | Percent Change |
|---|---|---|---|
| Total Actuarial Liability | $ 487,951,047 | $ 586,938,958 | +20.3% |
| Assets for Cost Purposes | $ 503,649,251 | $568,941,559 | + 13.0% |
| Unfunded Actuarial Liability | $ (15,698,204) | $ 17,997,399 | +214.6% |

**Contribution Results** *(as percent of payroll)*

| | | |
|---|---|---|
| Employer Normal Cost Rate | 12.29% | 14.85% |
| Unfunded Actuarial Liability Contribution | (0.85) | 4.11 |
| Administrative Expenses | 0.30 | 0.30 |
| Total Employer Contribution | 11.74% | 19.26% |
| Contingency for Policy Change in Partial Duty Positions | 2.74% | 2.53% |
| Total Employer Contribution | 14.48% * | 21.79% |

* 11.21% was added to the employer contribution rate developed in the 1999 valuation to cover the cost of plan improvements.

## SUMMARY OF VALUATION RESULTS
(Continued)

### Valuation Highlights

#### System Assets

As of July 1, 2000, the System had assets at market value of $621.9 million, as compared to $576.3 million as of July 1, 1999. The increase of $45.6 million was attributable to the following:

- an increase of $19.5 million due to employer and member contributions;
- a decrease of $18.5 million due to payment of System benefits and expenses;
- an increase of $44.6 million due to System investment experience (realized and unrealized).

When measured on an actuarial basis for contribution purposes (in order to smooth the peaks and valleys of market fluctuations), System assets were $568.9 million as of July 1, 2000, up from $503.6 million as of July 1, 1999. For valuation purposes, we capture the market value of assets at July 1 of each year, as of the beginning of each fiscal year.

Overall, the rate of return on System assets during the year was 7.73% on a market value basis and 12.75% on an actuarial basis.

#### System Liabilities

Two types of liabilities are presented in this report; actuarial liabilities and the liability for benefits accrued to date. Actuarial liabilities are developed and used for ongoing funding purposes and include a portion of future anticipated pay increases and service credit. This measure is also used as the measurement of actuarial accrued liability required to be disclosed under Governmental Accounting Standards Board Statement No. 25.

The liability for benefits accrued to date, which is used for accounting purposes, measures the present value of all future System benefits based on service to date. In this report we present a measure of the liability for benefits accrued which conforms with Statement No. 35 of the Financial Accounting Standards Board.

As of July 1, 2000, the System actuarial liabilities were $586.9 million, as compared to $487.9 million as of July 1, 1999. When measured against System assets (actuarial value) of $568.9 million, there are System unfunded actuarial liabilities of $18.0 million. This compares to negative $15.7 million of unfunded actuarial liabilities as of July 1, 1999.

Viewed another way, the ratio of assets to actuarial liabilities decreased from 103.2% (July 1, 1999) to 96.9% (July 1, 2000).

With respect to the liabilities for benefits accrued as of the valuation date, this valuation shows a liability under FASB rules of $488.7 million as compared to $407.3 million as of July 1, 1999.

## SUMMARY OF VALUATION RESULTS
(Continued)

Since these liabilities are based upon a current "snapshot" of members' pay and service, the common approach is to compare this liability with the fair (i.e. current) value of System assets. This comparison as of July 1, 2000, shows that the ratio of System assets (fair value) to liabilities accrued to date under FASB Statement 35 has decreased from 141.5% to 127.2%.

### System Contributions

Contributions to the System include a "normal cost rate" which is to cover a portion of projected liabilities on account of service of members during the year following the valuation date.

In addition, an unfunded actuarial liability contribution is made which, together with assets on hand, will fund the portion of projected liabilities on account of service rendered prior to the valuation date.

Finally, a provision for System administrative expenses is made by adding 0.30% of member payroll to the total contribution.

As determined by the valuation just completed, the employer normal cost rate is 14.85% of member payroll. The unfunded actuarial liability rate is 4.11% of payroll. Together with the administrative expense rate, this results in a total employer contribution rate as of July 1, 2000 of 19.26% of payroll compared with a July 1, 1999 rate of 11.74% of payroll. In addition to the calculated rate of 19.26%, we are recommending that an additional 2.53% be budgeted to account for the increase that might occur due to the implementation of the County's policy on partial duty positions.

The decrease in the employer contribution rate as a percentage of payroll is attributable to the following:

| | |
|---|---|
| Employer contribution rate per July 1, 1999 valuation | 14.48% |
| Increase due to benefit enhancements | 11.21 |
| Decrease due to asset gains | (3.68) |
| Increase due to ad-hoc COLA | 0.00 |
| Liability Losses | (0.22) |
| Employer contribution rate per July 1, 2000 valuation | 21.79% |

### Membership

The total active membership of the Police Officers Retirement System increased by 76 to 1,115. With respect to inactive members, the number of retired members and their beneficiaries has increased from 514 as of July 1, 1999 to 537 on July 1, 2000. The number of disabled members receiving benefits remains at 46 , and the number of former members with vested rights remains at three.

In total, the membership of the System, both active and inactive, has increased 6.2% from 1,602 members as of July 1, 1999 to 1,701 members as of July 1, 2000.

## SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

### Funding Method

The funding method used for this valuation is the "aggregate accrual modification of the entry age normal cost method." Under this method, the employer contribution has three components--the normal cost, the payment toward the unfunded actuarial liability, and the expense rate.

The normal cost is a level percent of pay cost which, along with the member contributions, will pay for projected benefits at retirement for the average plan participant. The level percent developed is called the normal cost rate and the product of that rate and payroll is the normal cost.

The actuarial liability is that portion of the present value of projected benefits that will not be paid by future employer normal costs or member contributions. The difference between this liability and funds accumulated as of the same date is referred to as the unfunded actuarial liability.

The expense rate is added to cover the System's administrative expenses.

### Actuarial Value of Assets

For purposes of determining the County contribution to the plan we use an actuarial value of assets. The asset adjustment method dampens the volatility in asset values that could occur because of fluctuations in market conditions. Use of an asset smoothing method is consistent with the long term nature of the actuarial valuation process.

In determining the actuarial value of assets, we calculate an expected actuarial value based on cash flow for the year and imputed returns at the actuarial assumed rate. This expected value is compared to the market value and one-third of the difference is added to the preliminary actuarial value to arrive at the final actuarial value.

### Changes Since Last Valuation

None.

## ACTUARIAL ASSUMPTIONS AND METHODS

**Long Term Assumptions Used to Determine System Costs and Liabilities**

### Demographic Assumptions:

#### Mortality:

**1994 Uninsured Pensioners Mortality Table**
**Annual Deaths Per 1,000 Members***

| Age | Male Deaths | Female Deaths | Age | Male Deaths | Female Deaths |
|---|---|---|---|---|---|
| 20 | 1 | 0 | 65 | 16 | 9 |
| 25 | 1 | 0 | 70 | 26 | 15 |
| 30 | 1 | 0 | 75 | 40 | 24 |
| 35 | 1 | 1 | 80 | 67 | 42 |
| 40 | 1 | 1 | 85 | 105 | 73 |
| 45 | 2 | 1 | 90 | 164 | 125 |
| 50 | 3 | 2 | 95 | 251 | 200 |
| 55 | 5 | 2 | 100 | 341 | 297 |
| 60 | 9 | 5 | 105 | 441 | 415 |

*20% of deaths are assumed to be service-connected.

**Termination of Employment** : (Prior to Normal Retirement Eligibility)

**Annual Terminations per 1,000 Members**

| Years of Service | Terminations |
|---|---|
| 0 | 100 |
| 1 | 75 |
| 2 | 50 |
| 3 | 50 |
| 4 | 30 |
| 5 or more | 15 |

It is assumed that members who terminate before normal or early retirement age elect to receive a refund of contributions instead of vested benefits.

## ACTUARIAL ASSUMPTIONS AND METHODS
(Continued)

### Disability:

| Age | Annual Disabilities per 1,000 Members* (Male and Female) | Annual Disabilities per 1,000 Members for Partial-Duty Contingency** (Male and Female) |
|---|---|---|
| 25 | 2 | 5 |
| 30 | 2 | 5 |
| 35 | 2 | 5 |
| 40 | 2 | 6 |
| 45 | 4 | 11 |
| 50 | 6 | 17 |
| 55 | 6 | 17 |
| 60 | 6 | 17 |

| Age | Annual Deaths Per 1,000 Disabled Members (Male and Female) |
|---|---|
| 45 | 43 |
| 50 | 48 |
| 55 | 53 |
| 60 | 58 |
| 65 | 64 |
| 70 | 73 |
| 75 | 89 |
| 80 | 107 |

*70% of disabilities are assumed to be service-connected, and are assumed to receive Workers Compensation benefits.

**Assumes that 3 Partial-Duty officers per year are expected to receive benefit.

### Retirement:

| Years of Service | Probability of Retirement: Hired pre-7/1/81 | Probability of Retirement: Hired post-7/1/81 |
|---|---|---|
| 20 | 25% | N/A |
| 21 | 25% | N/A |
| 22 | 25% | N/A |
| 23 | 25% | N/A |
| 24 | 25% | N/A |
| 25 | 25% | 25% |
| 26 | 25% | 25% |
| 27 | 25% | 25% |
| 28 | 25% | 25% |
| 29 | 25% | 25% |
| 30 | 100% | 100% |

## ACTUARIAL ASSUMPTIONS AND METHODS
(Continued)

**Merit/Seniority Salary Increase:** (In addition to across-the-board increase)

| Years of Service | Merit/Seniority Increase |
|---|---|
| 0 | 4.0% |
| 5 | 4.0% |
| 10 | 1.7% |
| 15 | 1.4% |
| 20 | 1.1% |
| 25 | 0.8% |
| 30 | 0.5% |

**Family Composition:**

For purposes of valuing the pre-retirement death benefit, an assumption concerning how many employees are married is needed. The assumption used in this valuation is that 80% of employees are married at death while active and that the female spouse is 5 years younger than the male spouse. In addition, each married employee is assumed to have two children, 22 and 24 years younger than the employee.

**Sick Leave Credit:**

It is assumed that retirees, deferred vested terminations, and deceased members receive an additional 3% of service credit due to sick leave.

## ACTUARIAL ASSUMPTIONS AND METHODS
(Continued)

### Economic Assumptions

**Investment Return:** 7.50% compound per annum.

**Cost-of-Living Benefit Increases:** 3.00% compound per annum.
(Based on assumed CPI increase of 4%.)

**Across-the-Board Increase in County Salaries:** 4.00% compound per annum.

**Total Payroll Increase (for amortization):** 4.00% compound per annum.

**Administrative Expenses:** 0.30% of payroll.

### Changes Since Last Valuation

None.

## ANALYSIS OF FINANCIAL EXPERIENCE

**Gains and Loss in Accrued Liability During Years Ended June 30**
**Resulting from Differences Between Assumed Experience and Actual Experience**

| Type of Activity | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|
| | *Gain (or Loss) for Year ending June 30,* | | | |
| Investment Income | $ 26,316,711 | $ 2,262,366 | $ 36,306,654 | $ 26,460,234 |
| Combined Liability Experience | 3,274,850 | 5,167,343 | (9,545,346) | 90,399 |
| Gain (or Loss) During Year from Financial Experience | $29,591,561 | $7,429,709 | $26,761,308 | $26,550,573 |
| Non-Recurring Items | 0 | (2,195,961) | (2,668,187) | (62,239,875) |
| Composite Gain (or Loss) During Year | **$ 29,591,561** | **$ 5,233,748** | **$ 24,093,121** | **$ (35,689,302)** |

## SCHEDULE OF RETIREES AND BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS

| | Added to Rolls | | Removed From Rolls | | On Rolls @ Yr. End | | | |
|---|---|---|---|---|---|---|---|---|
| Year Ended June 30 | No. | Annual Allowance | No. | Annual Allowance | No. | Annual Allowance | % Increase Allowance | Average Allowance |
| 1995 | 48 | 1,996,537 | 17 | 337,571 | 439 | 12,025,239 | 16.00% | 27,392 |
| 1996 | 21 | 817,684 | 7 | 138,637 | 453 | 12,704,286 | 5.65% | 28,045 |
| 1997 | 39 | 1,309,515 | 6 | 132,576 | 486 | 13,881,225 | 9.26% | 28,562 |
| 1998 | 52 | 1,942,183 | 6 | 98,211 | 532 | 15,725,197 | 13.28% | 29,559 |
| 1999 | 30 | 1,471,335 | 2 | 47,133 | 560 | 17,149,399 | 9.06% | 30,624 |
| 2000 | 35 | 3,754,716 | 9 | 205,494 | 586 | 20,698,621 | 20.70% | 35,322 |

## SOLVENCY TEST

**Aggregate Accrued Liabilities For**

| Valuation Date | (1) Active Member Contributions | (2) Retirees Vested Terms, Beneficiaries | (3) Active Members (Employer Financed Portion) | Reported Assets | Portion of Accrued Liabilities Covered by Reported Assets (1) | (2) | (3) |
|---|---|---|---|---|---|---|---|
| 7/1/95 | $ 40,220,658 | $ 182,268,442 | $ 124,223,776 | $ 284,506,069 | 100% | 100% | 50% |
| 7/1/96 | 44,117,091 | 202,684,707 | 142,115,315 | 343,288,369 | 100% | 100% | 68% |
| 7/1/97 | 47,116,095 | 220,184,346 | 147,234,163 | 399,772,825 | 100% | 100% | 90% |
| 7/1/98 | 48,387,340 | 249,724,374 | 144,615,551 | 434,259,212 | 100% | 100% | 94% |
| 7/1/99 | 51,421,149 | 270,112,380 | 166,417,518 | 503,649,251 | 100% | 100% | 100% |
| 7/1/00 | 55,487,975 | 323,515,804 | 207,935,179 | 568,941,559 | 100% | 100% | 91% |

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## SCHEDULE OF ADDITIONS BY SOURCE

| Fiscal Year | Plan Member Contributions | Employer Contributions | Employer Contributions % of Covered Payroll | Net Investment Income (loss) | Total Revenues |
|---|---|---|---|---|---|
| 1996 | $ 5,874,078 | $ 10,912,200 | 22.24% | $ 50,837,320 | $ 67,623,598 |
| 1997 | 6,030,834 | 11,892,690 | 23.64% | 79,291,566 | 97,215,090 |
| 1998 | 6,235,043 | 11,321,194 | 21.79% | 78,218,263 | 95,774,500 |
| 1999 | 6,861,605 | 10,685,734 | 19.40% | 42,983,245 | 60,530,584 |
| 2000 | 7,521,134 | 11,950,073 | 18.40% | 44,579,345 | 64,050,552 |
| 2001 | 8,038,085 | 17,149,427 | 25.69% | (19,333,682) | 5,853,830 |

## SCHEDULE OF DEDUCTIONS BY TYPE

| Fiscal Year | Benefit Payments | Refunds of Contributions | Administrative Expenses | Total Expenses |
|---|---|---|---|---|
| 1996 | $ 12,421,488 | $ 415,766 | $ 175,394 | $ 13,012,648 |
| 1997 | 13,252,630 | 268,755 | 140,522 | 13,661,907 |
| 1998 | 14,765,658 | 476,784 | 153,738 | 15,396,180 |
| 1999 | 16,428,235 | 464,747 | 158,989 | 17,051,971 |
| 2000 | 17,724,731 | 530,622 | 195,729 | 18,451,082 |
| 2001 | 21,722,991 | 388,850 | 217,122 | 22,328,963 |

## SCHEDULE OF BENEFIT PAYMENTS BY TYPE

| Fiscal Year Ended June 30 | Annuity | Service-Connected Disability | Ordinary Disability | Survivor | Total |
|---|---|---|---|---|---|
| 1996 | $ 10,882,682 | $ 822,283 | $ 96,212 | $ 620,311 | $ 12,421,488 |
| 1997 | 11,610,814 | 815,848 | 98,785 | 727,183 | 13,252,630 |
| 1998 | 12,939,235 | 906,259 | 100,147 | 820,017 | 14,765,658 |
| 1999 | 14,435,055 | 1,030,037 | 102,885 | 860,258 | 16,428,235 |
| 2000 | 15,660,231 | 1,096,252 | 106,195 | 862,053 | 17,724,731 |
| 2001 | 19,534,126 | 1,068,524 | 136,889 | 983,452 | 21,722,991 |

## SCHEDULE OF RETIRED MEMBERS BY BENEFIT TYPE

| Fiscal Year Ended June 30 | Annuity | Service-Connected Disability | Ordinary Disability | Survivor | Total |
|---|---|---|---|---|---|
| 1996 | 368 | 33 | 8 | 43 | 452 |
| 1997 | 388 | 35 | 8 | 55 | 486 |
| 1998 | 431 | 38 | 8 | 55 | 532 |
| 1999 | 459 | 38 | 8 | 55 | 560 |
| 2000 | 481 | 41 | 8 | 56 | 586 |
| 2001 | 522 | 40 | 9 | 63 | 634 |

## SCHEDULE OF AVERAGE MONTHLY BENEFIT AMOUNTS

| Fiscal Year Ended June 30 | Annuity | Service-Connected Disability | Ordinary Disability | Survivor | Average |
|---|---|---|---|---|---|
| 1995 | $ 2,473 | $ 1,930 | $ 1,055 | $ 1,188 | $ 2,283 |
| 1996 | 2,476 | 2,027 | 1,006 | 1,208 | 2,297 |
| 1997 | 2,603 | 2,002 | 1,049 | 1,243 | 2,380 |
| 1998 | 2,671 | 2,121 | 1,068 | 1,276 | 2,463 |
| 1999 | 2,753 | 2,362 | 1,095 | 1,310 | 2,563 |
| 2000 | 3,214 | 2,362 | 1,136 | 1,398 | 2,955 |
| 2001 | 3,360 | 2,432 | 1,397 | 1,465 | 3,088 |

## Fairfax County Police Officers Retirement System

# Comprehensive Annual Financial Report

*produced by*


**Fairfax County Retirement Administration Agency**

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