

OHIO PUBLIC EMPLOYEES RETIREMENT SYSTEM

# The Comprehensive *Annual Financial Report*

*To provide retirement, disability, and survivor  
benefit programs for the public employees of Ohio.*

*For the Year Ended December 31, 2002*





Ohio Public Employees Retirement System

# The Comprehensive Annual Financial Report

*For the Year Ended December 31, 2002*



*This report was prepared under the direction of the OPERS Finance Division.*

277 East Town Street, Columbus, Ohio 43215-4642



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THE COMPREHENSIVE ANNUAL FINANCIAL REPORT 2002

# Introductory SECTION





# Certificate of Achievement in Financial Reporting

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## Certificate of Achievement for Excellence in Financial Reporting

Presented to

### Public Employees Retirement System of Ohio

For its Comprehensive Annual  
Financial Report  
for the Fiscal Year Ended  
December 31, 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



## Public Pension Principles Achievement Award

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**Public Pension Coordinating Council**

**Public Pension Principles**

***2000 Achievement Award***

Presented to

**Public Employees Retirement System of Ohio**

In recognition of instituting professional standards for public employee retirement systems as established by the Public Pension Principles.

*Presented by the Public Pension Coordinating Council, a confederation of*

Government Finance Officers Association (GFOA)

National Association of State Retirement Administrators (NASRA)

National Conference on Public Employee Retirement Systems (NCPERS)

National Council on Teacher Retirement (NCTR)

Michael L. Mory  
Chairman





## The OPERS Board of Trustees

*(Left to right):* Barbara J. Thomas, representing county employees; Charlie Adkins, representing college/university employees; Sharon M. Downs, representing retirees; Ronald C. Alexander, representing state employees; Ken Thomas, representing municipal employees; Gloria L. Gaylord\*, representing the Attorney General; C. Scott Johnson, Director of the Ohio Department of Administrative Services; Cinthia Sledz, representing miscellaneous employees; and Richard Moore\*, representing the Auditor of State.

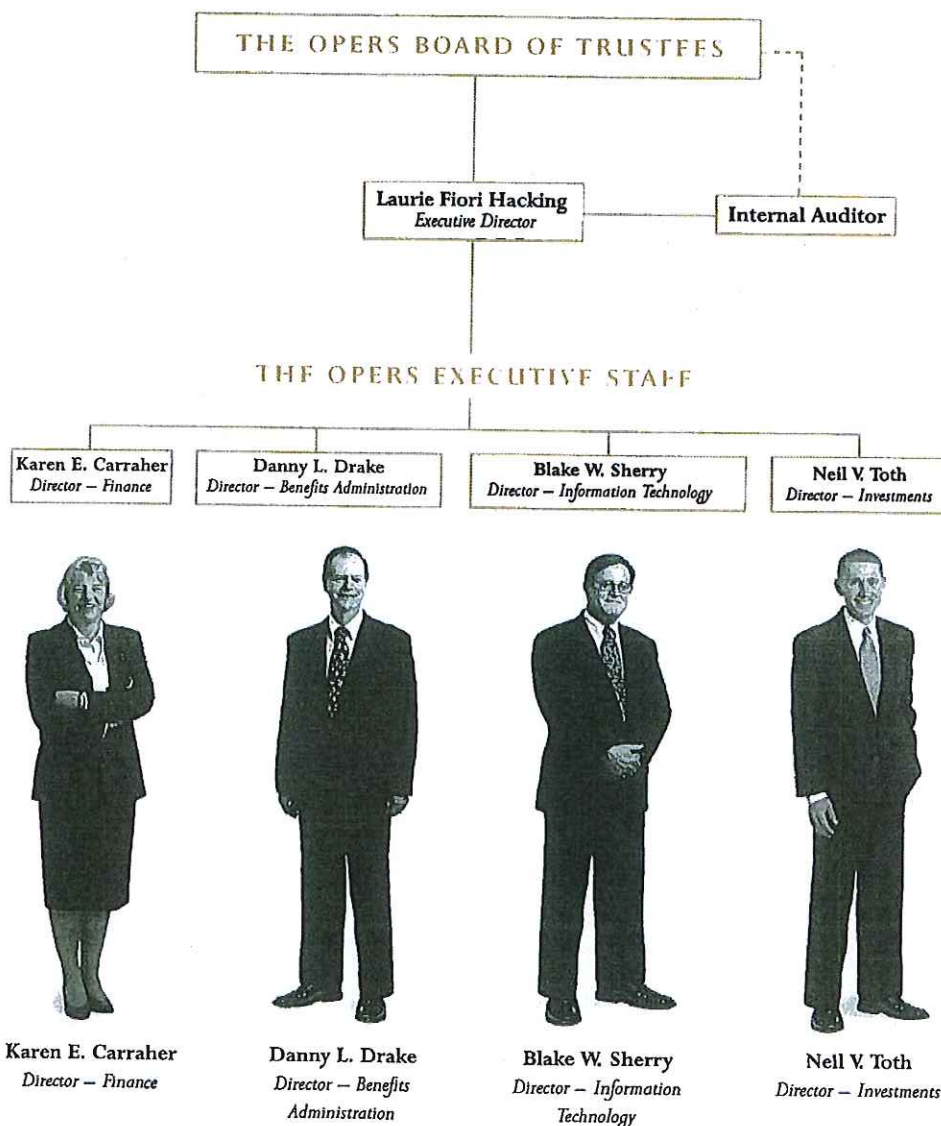
The Board of Trustees is the governing body of OPERS, with responsibility for administration and management. Six of the nine members are elected by the groups they represent: retirees; employees of the state; employees of counties; employees of municipalities; non-teaching employees of state colleges and universities; and miscellaneous employees. The Director of Administrative Services, Attorney General, and the Auditor of State are statutory members.

The Retirement Board appoints the Executive Director, an actuary, and other employees necessary for the transaction of business. The Board meets monthly and receives no compensation, but is reimbursed for necessary expenses. By law, the State Treasurer is custodian of the funds of OPERS.

*\*as of April, 2003.*



## Organizational Structure



### Advisors

**Actuary —**  
Gabriel, Roeder, Smith & Company  
Detroit, Michigan

**Investment Policy Advisors  
To The Retirement Board —**  
EnnisKnupp + Associates  
Chicago, Illinois

### Auditors

Deloitte & Touche LLP  
Columbus, Ohio  
(Under Contract With The Auditor Of State)



## Letter of Transmittal

277 East Town Street



Columbus, Ohio 43215-4642

### **Ohio Public Employees Retirement System**

(614) 466-2085 • 1-800-222-PERS (7377)

[www.opers.org](http://www.opers.org)

April 28, 2003

Dear Chairman and Members of the Board:

It is our privilege to submit to you the Comprehensive Annual Financial Report (CAFR) for the Ohio Public Employees Retirement System (OPERS) for the fiscal year ending December 31, 2002. As in the past, responsibility for both the accuracy of the data, as well as the completeness and fairness of the presentation, rests with the management of the System. We believe this report reflects adherence to the Board's directives that OPERS management maintains careful stewardship of the System's assets and dedicated service to both our members and our retirees.

#### **Historical Overview**

OPERS was established January 1, 1935 to make available a secure means to provide retirement for employees of the state of Ohio. From 1935 to the present the system has experienced strong growth which has enabled us to provide benefit and service enhancements for members and retirees. In 1938, the System expanded to include employees of counties, municipalities, health departments and park and conservancy districts. Membership was made optional for elected officials in 1941. Survivor benefits were made part of the OPERS benefit structure in 1951. In 1982, a Law Enforcement Division was established. Legislation enacted in 2000 improved benefits for active members and retirees and allowed for Defined Contribution Plans to be established—these plans were announced in 2002 and implemented effective January 1, 2003.

Participating employers are divided, for actuarial purposes, into state, local government and law enforcement divisions. OPERS provides retirement, disability and survivor benefit protection for thousands of public employees throughout the state. Employees, and their employers, pay into the System during the employee's working years. OPERS, in turn, pays benefits to these members throughout their retirement, and to qualified beneficiaries upon a member's or retiree's death. For additional information on membership and benefits available, see the Plan Statement section of this document commencing on page 111.

#### **CAFR Organization**

This CAFR is divided into six sections: (1) an Introductory Section, which contains the administrative organization, the Certificate of Achievement for Excellence in Financial Reporting, the Public Pension Coordinating Council Achievement Award and our Letter of Transmittal; (2) a Financial Section, which contains the report of the Independent Auditors, Management's Discussion and Analysis, and the financial statements of the System and certain required supplementary information; (3) an Investment Section, which contains a report on investment activity, investment policies, investment results, and various investment schedules; (4) an Actuarial Section, which contains an Actuary's Certification Letter and the results of the annual actuarial valuation; (5) a Statistical Section, which includes significant data pertaining to the System and (6) the System's Plan Statement.



### Major Initiatives

OPERS was established and exists solely for the purpose of providing retirement, disability, and survivor benefits to Ohio's public employees. This purpose continues to be our central focus.

At the direction of our Board, OPERS' current strategic goals center on improving customer service while maximizing operational efficiencies. The major projects of 2002 reflected strong progress toward achieving those goals. As touched on above, during 2002, OPERS implemented the infrastructure and systems necessary to bring the Defined Contribution Plans to our members. The new plans, the OPERS Member Directed Plan and the Combined Pension Plan, began accepting members on January 1, 2003. Under each of these retirement plans, members have the opportunity to direct the investment of their OPERS contributions, allowing them to build assets for their retirement. The Member Directed Plan will provide 401 (k) like retirement options to Ohio's public employees. The Combined Plan combines features of the traditional Defined Benefit Plan with those of the Member Directed Plan. The Defined Contribution Plans are available to new members hired on or after January 1, 2003, as well as to members with less than five years of service credit as of year-end 2002.

Continuing to work toward our goal of superior customer service, in 2002 OPERS completed another major customer service initiative with the introduction of an Interactive Voice Response System (IVR). The IVR initiative was part of the overall Call Center enhancement and allows members and retirees to access routine information such as account information and request forms around-the-clock. This lets our Call Center employees work one-on-one with members who have non-routine requests or who simply prefer to talk directly with a Call Center associate. The implementation of an effective IVR is especially important during this time when we are experiencing exceptional growth in our member and retiree ranks.

A third key customer service initiative, an employer-based contribution website (ECS) was launched in 2001. This system enables employers to reduce the time required to submit contributions to OPERS because it allows employers to electronically submit contribution information and to transmit the associated funds through either bank wire or the use of automated clearing house (ACH was initiated in 2002) funds. Productivity has been enhanced at OPERS because the member contribution reports are electronically edited prior to submission to OPERS. Because this assures data are accurate when submitted, funds can be posted to members' accounts immediately.

A fourth customer service initiative was our web-based member benefit system (MBS). This system allows members and retirees to access their accounts whenever they sign on, allowing a member or retiree to access account information 24/7. Between October and December 2002, 16,039 members registered for personal account access, and 9,783 members actually logged in before the end of the year. (Many waited until January to view their accounts.)

Future services and enhancements expected to be rolled out in 2003 include a Partial Lump-Sum Option Plan for benefit payments. This option allows an age-and-service retiree to choose to take part of his/her retirement benefit in a lump sum at the beginning of retirement. If a member chooses to take a lump-sum option, the amount of the monthly pension benefit paid to the member would be actuarially reduced so no additional costs to the System are incurred. We believe this Partial Lump-Sum Option Plan provides additional choices to OPERS members without adding actuarial costs to the System.

### The Future of Health Care Benefits

While providing pension benefits has always been our primary responsibility, we've also made it our priority to provide substantial health care benefits as well. While neither guaranteed nor mandated by statute, the OPERS Board and staff recognize the importance of post-retirement health care coverage for our members and benefit recipients.



Health care benefits are an ancillary, not primary, goal for OPERS to provide to members. This is an expense that has increased significantly in the past years—more than 12% in 2002. Because of the potential impact on OPERS' funding status, we are carefully monitoring this benefit and exploring every possible option to keep health care benefits available, all the while maintaining the System's financial integrity. We are committed to providing quality health care benefits to the extent our resources will allow.

Managing costs will continue to be critical for OPERS to continue to offer quality health care options. As you know, over the years, we've implemented a variety of cost-containment measures to maximize our available health care resources. These measures have included implementing a preferred pharmacy network, two preferred provider networks, individual case management, use of generic and mail order prescriptions (where appropriate), a patient pre-certification program and utilization of Medicare risk health maintenance organizations. We've made available several voluntary health management programs on a variety of conditions including diabetes, coronary artery disease, chronic pulmonary obstructive disease and chronic heart disease. These programs assist our benefit recipients in dealing with their conditions and ultimately help reduce health care expenses.

In addition to the OPERS Health Care Plan, residents in 40 Ohio counties have access to alternative health plans. In 2003, OPERS offers two Medicare Plus Choice health maintenance organizations (HMO) as alternatives to the traditional OPERS Health Care Plan as well as an additional commercial HMO. As of 2002, OPERS also began offering AultCare, a preferred provider organization available to members in five counties and six partial counties in Ohio. Nearly 7,200 OPERS-insured persons are covered by these alternative plans, which are fully insured offerings.

In December 2001, the Board adopted the health care "Choices" plan in its continuing effort to respond to the rise in the cost of health care. The Choices plan is offered to all persons hired under OPERS after January 1, 2003 who also have no prior service credit accumulated toward health care coverage. The Choices plan uses a graded scale to calculate a monthly health care benefit, ranging from 10-30 years as opposed to the 10 year "cliff" eligibility standard established with the Traditional Plan. Choices, as the name suggests, incorporates a cafeteria approach, offering a broad range of health care options. Each benefit recipient may select the options that best meet his/her needs and financial circumstances. This plan also offers a spending account feature, enabling the benefit recipient to apply his/her allowance toward specific medical expenses, much like a Medical Spending Account.

In 2003, the OPERS Board will be conducting a comprehensive review of the funding and benefit structures of our health care program, comparing the OPERS plan with other retirement systems and employer plans throughout the nation. We're certain this review of best practices will help identify further opportunities to preserve health care funds while maintaining our ability to offer health care benefits.

### **Legislative Changes**

During 2002, OPERS was significantly impacted by the enactment of several pieces of important pension legislation.

The major piece of legislation enacted at the state level was Senate Bill 247, which requires OPERS to establish a Partial Lump-Sum Option Plan (PLOP) for its members no later than July 1, 2004. As discussed above, once the PLOP is implemented, future retirees from OPERS will have the option of taking a portion of their pension as a lump-sum payment at the time of retirement.

The amount payable under the PLOP is limited to a minimum of six months and a maximum of 36 months worth of the original unreduced monthly pension benefit and is capped at no more than 50% of the retirement benefit amount.



PLOP provides future retiring public employees with additional flexibility in how they receive their retirement benefits. Senate Bill 247 requires OPERS to implement the PLOP no later than July 1, 2004 but OPERS staff is working toward implementation by the end of 2003. Senate Bill 247 also made some necessary modifications to the statutes governing the new Defined Contribution Plan options that were made available to eligible members on or after January 1, 2003.

Effective February 1, 2002, OPERS staff completed implementation of legislation (House Bill 157) enacted at the end 2001 that changed the annual cost-of-living adjustment for OPERS retirees to a fixed 3%, regardless of the change in the Consumer Price Index (CPI). On the same date, OPERS staff implemented House Bill 158, which made major changes to the OPERS Law Enforcement program to allow each of its members to retire with full benefits at age 48 with 25 years of service as a law enforcement officer.

At the federal level, Congress enacted the Sarbanes-Oxley Act of 2002, which was signed into law on July 30, 2002. The impetus for the rapid pace of this legislation was the events that followed the collapse of Enron, Global Crossing, WorldCom and other companies accompanied by allegations of corporate fraud and accounting abuse. State pension funds were some of the biggest financial losers in the wake of these scandals and for this reason OPERS and other public pension plans strongly supported the provisions of the Sarbanes-Oxley Act. Major provisions of the new law are the creation of a new Public Company Accounting Oversight Board, new standards for auditor independence, and significant new criminal penalties for offenders.

Also in 2002, implementation continued on the establishment of a qualified excess benefit arrangement (QEBA) for OPERS members whose monthly retirement benefit would be limited by Internal Revenue Code section 415. A private letter ruling allowing the establishment of the QEBA was received from the IRS in March of 2003.

### **Future Legislative Initiatives**

At the state level, OPERS will pursue legislation to change the due date for transmittal of employer contributions. Currently, employee contributions are transferred to OPERS on a monthly basis but employer contributions are transferred on a quarterly basis. Clearly, this results in a lengthy lag time between the time a member is paid wages and the time employer contributions are deposited with OPERS. A change in the due date for employer contributions became an issue because of the new Defined Contribution (DC) Plan option, effective January 1, 2003. The traditional delay is no longer acceptable because the delay could result in a loss of investment earnings to DC Plan participants.

As a result, OPERS is seeking to change state law, effective July 2003, to require both employee and employer contributions to be submitted to OPERS on a monthly basis. Because this is a difficult budget period for state and local governments, OPERS is working with affected employers to allow the costs associated with the one-time catch-up of employer contributions to be spread over a reasonable period of time. In addition to benefiting DC Plan participants, the new employer-remittance schedule would also have a positive impact on the funding status of the system since employer contributions will be available for investment by OPERS in a more timely fashion.

At the federal level, OPERS is active in the national health care policy debate—and will become more active on this front in the future. The OPERS Board has directed staff to support federal legislation aimed at providing a Medicare prescription drug benefit as well as legislation aimed at bring generic drugs to market faster. While the war in Iraq and the weak economy make it doubtful that Congress will enact any comprehensive reform of the health care system in 2003, OPERS will continue to increase its advocacy efforts for any reasonable federal legislation targeting controlling escalating health care costs.



### Internal Controls

The management of OPERS is responsible for and has implemented systems of internal accounting controls. These controls are designed to provide responsible assurances for the safeguarding of assets and the reliability of financial records. We believe that the internal accounting controls currently in place are adequate to meet the purpose for which they were intended. We also believe the financial statements, supporting schedules and statistical tables to be fairly presented in all material respects.

### Accounting System and Reports

The accrual basis of accounting is used in recording financial transactions. Expenses are recorded when the liability is incurred, and revenues are recorded in the accounting period in which they are earned and become measurable. Interest earned is accrued on a monthly basis. Accounts receivable at year end, in addition to accrued interest receivable, reflect accrued member and employer charges and investment proceeds due on sales that have not yet settled. Investments are recorded at fair value. Fixed assets are listed at cost less accumulated depreciation. Under our cash management program, receipts are immediately deposited and are recorded as undistributed deposits until such time as they are allocated to member contributions, employer receivables, employer contributions, and investment income.

### Additions to Plan Net Assets

The collection of employer and employee contributions, as well as income from investments, provides the reserves needed to finance retirement benefits. Contributions, investment, and other income for fiscal year 2002 totaled (\$2,906,977,223).

	2002	2001	Increase (Decrease) Amount	Increase (Decrease) Percentage
Employer Contributions	\$ 1,683,021,503	\$ 1,408,392,987	\$ 274,628,516	19.5%
Members Contributions	1,094,343,553	931,050,640	163,292,913	17.5%
Net Investment Income	(5,684,965,700)	(2,717,233,466)	(2,967,732,234)	(109.2%)
Misc. Income	623,421	92,291	531,130	575.4%
<b>Total</b>	<b>\$ (2,906,977,223)</b>	<b>\$ (377,697,548)</b>	<b>\$ (2,529,279,675)</b>	<b>(669.7%)</b>

Employer and member contributions increased by \$274,628,516 or 19.5% and \$163,292,913 or 17.5%, respectively from 2001 to 2002. The increase in contributions was high in both 2001 and 2002 because of higher salaries. In 2002, the increase was higher than it would have otherwise been due to enhanced estimating procedures for year-end accruals and a one-time employer rollback which resulted in reduced employer contributions during the last quarter of 2000 and the first quarter of 2001. Both member and employer contributions for the year ended December 31, 2002 include year-end accruals based upon estimates derived from historical payment patterns. Prior to 2002, both member and employer contributions included only contributions due and payable as of the fiscal year end. (Contributions on members' salaries are due 30 days after the month salaries are earned and employer contributions are due 90 days after the calendar quarter in which the associated member salaries were earned.) Contribution rates remained unchanged during 2002. Net investment income decreased significantly in 2002 due to the continued downward trend in the financial markets. Other income which consists of court settlements and other various small miscellaneous items increased significantly as a percentage from 2001 to 2002 even though in dollar terms the change was fairly modest.



### Deductions to Plan Net Assets

The principal purpose for which the System was created was to provide retirement, disability and survivor benefits to qualified members and their beneficiaries. The cost of such programs includes recurring benefit payments, refunds of contributions to terminated employees, and the cost of administering the System.

	2002	2001	Increase (Decrease) Amount	Increase (Decrease) Percentage
Benefit	\$ 2,836,137,068	\$ 2,574,189,051	\$ 261,948,017	10.2%
Administrative Expenses	56,267,175	40,081,348	16,185,827	40.4%
Refunds	187,051,815	262,681,258	(75,629,443)	(28.8%)
<b>Total</b>	<b>\$ 3,079,456,058</b>	<b>\$2,876,951,657</b>	<b>\$ 202,504,401</b>	<b>7.0%</b>

Expenses for fiscal year 2002 totaled \$3,079,456,058, an increase of 7% over fiscal year 2001 expenses. The majority of the increase is due to an increase in the number of benefit recipients and associated benefit payouts. The decrease in refund dollars paid out is directly attributable to a reduced number of members withdrawing their contributions. The number of members taking refunds dropped by more than 8,000 from 2001 to 2002. The increase in administrative expenses is largely attributable to increased payroll costs and the costs associated with instituting the newly established Member Directed and Combined Plans. Administrative expenses are detailed in the Financial Section on page 43 of this CAFR.

### Funding and Reserves

Funds, derived from the excess of revenues over expenses, are accumulated by the System in order to meet current and future benefit obligations to retirees and beneficiaries. The higher the level of funding, the larger the accumulation of assets, hence, the greater the investment income potential. Continuous improvement in the funding of the System is sought through the accumulation of adequate reserves, higher investment earnings and effective cost containment programs. The latest actuarial valuation, dated December 31, 2001, indicates that the actuarial value of assets exceeds actuarial liabilities by \$1,256 million. This means that the actuarial value of accumulated assets, plus future investment earnings at actuarial assumption rate of 8%, should be sufficient to pay benefits to all current members and retirees based upon service credit established as of year-end 2001. Due to recent declines in the financial markets, however, it is expected that the System's funding ratio will fall to below 100% beginning with the System's next annual actuarial valuation for 2002. See the Management's Discussion and Analysis section, starting on page 19 for a more in-depth discussion of OPERS' funded status.

### Investments

The System's investments are governed by Section 145.11 of the Ohio Revised Code (ORC). This section of the ORC requires a "prudent person" standard be applied to all investment decisions. The prudent person standard establishes a standard for all fiduciaries, which includes anyone who has authority over the fund's investments. Under the prudent person standard, fiduciaries are to "discharge their duties solely in the interest of the fund participants and beneficiaries and with the degree of diligence, care and skill which prudent persons would ordinarily exercise under similar circumstances in a like position." The OPERS Board determines the asset allocation strategy for our investments. That



asset allocation strategy requires a prudent diversification of investments within the fund enabling OPERS to reduce overall risk while targeting an adequate rate of return for the fund over the long-term.

For the year ended December 31, 2002, total return on investments was a negative 10.74%. The annualized rate of return over the past three years was a negative 5.44% and a positive 1.64% over the past five years. See the Investments section starting on page 45 for a more comprehensive discussion of OPERS' investment program.

#### **Certificate of Achievement**

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Public Employees Retirement System of Ohio for its CAFR for the fiscal year ended December 31, 2001. In order to be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized CAFR, whose contents meet or exceed program standards. Such reports must satisfy both generally accepted accounting principles and applicable legal requirements. A Certificate of Achievement is valid only for one year. We believe our current report continues to conform to the Certificate of Achievement Program requirements and we are submitting it to the GFOA.

#### **Public Pension Principles Achievement Award**

The Public Employees Retirement System of Ohio was awarded the Public Pension Coordinating Council's Public Pension Principles 2000 Achievement Award (the latest year for which this award is available). This award recognizes the achievement of high professional standards in the areas of benefits, actuarial valuations, financial reporting, investments and disclosures to members.

#### **Professional Services**

Professional services are provided to the Ohio Public Employees Retirement System by consultants appointed by the Board to aid in efficient and effective management of the System. Actuarial services are provided by Gabriel, Roeder, Smith & Company; Detroit, Michigan. The investment advisor to the Board is EnnisKnupp + Associates; Chicago, Illinois. The financial records of the System were audited by Deloitte & Touche LLP, Certified Public Accountants, Columbus, Ohio, under contract with the Auditor of the state of Ohio.

#### **Acknowledgments**

The preparation of this report reflects the combined efforts of the System's staff under the direction of the Board. Our sincere appreciation is extended to all who assisted in and contributed toward the completion of this document.

The purpose of this report is to provide complete and reliable information as a basis for making management decisions, as a means for determining compliance with the legal provisions, and as a means for determining responsible stewardship over the assets held in trust for the members of this System. We sincerely hope we have accomplished those goals.

This report is being mailed to all employer units of the system, each state legislator, and other interested parties.

Respectfully submitted,

*Laurie Fiori Hacking*

LAURIE FIORI HACKING  
Executive Director

*Karen E. Carraher*

KAREN CARRAHER, CPA  
Director - Finance





KAREN E. CARRAHER, CPA  
*Director - Finance*

LAURIE FIORI HACKING  
*Executive Director*



THE COMPREHENSIVE ANNUAL FINANCIAL REPORT 2002

# Financial SECTION





# Independent Auditor's Report

Deloitte & Touche LLP  
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Columbus, Ohio 43215-3611

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**Deloitte  
& Touche**

To the Board of Trustees of  
Ohio Public Employees Retirement System

We have audited the accompanying combining statements of fiduciary net assets of the Ohio Public Employees Retirement System (the "System") as of December 31, 2002 and 2001, and the related combining statements of changes in fiduciary net assets for the years then ended. 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 audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit 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 combining 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 combining financial statements referred to above present fairly, in all material respects, the financial status of the System as of December 31, 2002 and 2001, and the changes in fiduciary net assets for the years then ended in conformity with accounting principles generally accepted in the United States of America.

Management's discussion and analysis is not a required part of the combining financial statements, but is supplementary information required by the GASB. This supplementary information is the responsibility of the System's management. We have applied certain limited procedures, which consist principally of inquiries of management regarding the methods of measurement and presentation of the supplementary information. However, we did not audit the information and express no opinion on it.

Our audits were performed for the purpose of forming an opinion on the basic combining financial statements of the System taken as a whole. The schedules of administrative expenses and summary of investment expenses for the years ended December 31, 2002 and 2001 are presented for the purposes of additional analysis and are not a required part of the basic financial statements. This additional information is the responsibility of the System's management. Such additional information has been subjected to the auditing procedures applied to our audit of the basic financial statements for the years ended December 31, 2002 and 2001 and, in our opinion, is fairly stated in all material respects when considered in relation to the basic combining financial statements taken as a whole.

**Deloitte  
Touche  
Tohmatsu**



The transmittal letter and statistical data on pages 103 - 110 is presented for the purpose of additional analysis and is not a required part of the basic combining financial statements of the System. Such additional information has not been subjected to the auditing procedures applied in our audit of the basic combining financial statements and, accordingly, we express no opinion on it.

In accordance with *Government Auditing Standards*, we have also issued our report dated April 4, 2003 on our consideration of the System's internal control structure and on its compliance with laws and regulations. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* and should be read in conjunction with this report in considering the results of our audits.

*Deloitte & Touche LLP*

April 4, 2003



# Management's Discussion and Analysis

AS MANAGEMENT of the Ohio Public Employees Retirement System (OPERS), we offer readers of the System's financial statements this narrative overview of the financial activities of OPERS for the year ended December 31, 2002. This narrative supplements the System's financial statements, and we encourage you to consider the information presented here in conjunction with these statements, which begin on page 24.

## Overview of the Financial Statements

The following discussion and analysis are intended to serve as an introduction to OPERS' financial statements. The basic financial statements are:

- 1) Statement of Fiduciary Net Assets
- 2) Statement of Changes in Fiduciary Net Assets
- 3) Notes to the Financial Statements

As required by the Governmental Accounting Standard Board's (GASB) Statement No. 25, this report also contains the following schedules as Required Supplementary Information to the basic financial statements:

- 1) Schedule of Funding Progress
- 2) Schedule of Employer Contributions
- 3) Notes to the Required Supplementary Information

Expenses associated with administering the System are presented immediately following the Notes to the Required Supplementary Information in the following schedules:

- 1) Administrative Expenses
- 2) Schedule of Investment Expenses
- 3) Schedule of Payments to Consultants

The basic financial statements contained in this Comprehensive Annual Financial Report are described below.

- The Statement of Fiduciary Net Assets is a point-in-time snapshot of account balances at fiscal year-end. It reports the assets available for future payments to retirees, and any current liabilities that are owed as of the statement date. The resulting fiduciary net

asset value ( $\text{Assets} - \text{Liabilities} = \text{Net Assets}$ ) represents the value of assets held in trust for pension and post-employment health care benefits.

- The Statement of Changes in Fiduciary Net Assets, shows the effect of pension fund transactions that occurred during the fiscal year, where  $\text{Additions} - \text{Deductions} = \text{Net Increase (or decrease) in net assets}$ . This net increase (or decrease) in net assets reflects the change in the net asset value of the Statement of Fiduciary Net Assets from the prior year to the current year. Both statements are in compliance with GASB disclosure requirements.
- The Notes to the Financial Statements are an integral part of the financial statements and provide additional information that is essential for a comprehensive understanding of the data provided in the financial statements. The Notes describe the accounting and administrative policies under which OPERS operates, and provide additional levels of detail for selected financial statement items. (See Notes to the Financial Statements on pages 28-39 of this report.)

Because of the long-term nature of a defined benefit pension plan, financial statements alone cannot provide sufficient information to properly reflect the ongoing plan perspective. Therefore, in addition to the financial statements explained above, this financial report includes two additional Required Supplementary Information schedules with historical trend information.

- The Schedule of Funding Progress (page 40) includes actuarial information about the status of the plan from an ongoing, long-term perspective, and the progress made in accumulating sufficient assets to pay pension benefits when due. Valuation Assets in excess of Actuarial Accrued Liabilities indicate that sufficient assets exist to fund the future pension benefits of the current members and benefit recipients.



- The Schedule of Employer Contributions (page 40) presents historical trend information for the value of total annual contributions required to be paid by employers, and the actual performance of employers in meeting this requirement.
- The Notes to Required Supplementary Information provide background information and explanations to help you understand the required supplementary schedules.

The administrative expense schedules that follow the Required Supplementary Information display the operating costs of managing the System. These expenses include costs for investment and consultant services, which are detailed in the accompanying schedules.

### *Financial Highlights*

- The plan net assets of OPERS exceeded its liabilities at the close of year 2002, with \$47,986 million in net assets held in trust for pension and post employment health care benefits.
- Plan net assets decreased by \$5,986 million or 11.1% during 2002, primarily due to declines in the investment market.
- OPERS' funding objective is to meet long-term benefit obligations and, to the extent possible, fund health care benefits. As of December 31, 2001, the date of the latest actuarial valuation, the funded ratio of OPERS was 103%. In general, this means that for every dollar of pension benefits due, OPERS has approximately \$1.03 of net assets available for payment. It's important to understand this measure reflects the actuarial value of OPERS' net assets, which exceeds the actual fair value published in our financial statements, due to smoothing market value gains and losses.
- Revenues (additions to plan net assets) for the year 2002 were (\$2,907) million, which includes member and employer contributions of \$2,777 million and net losses from investment activities and other miscellaneous income totaling (\$5,684) million.
- Expenses (deductions to plan net assets) increased from \$2,877 million during 2001 to \$3,079 million in 2002 or about 7%. The increase relates to increases in pension benefits and health care payments. Refunds of member contributions (including interest and some matching employer funds) decreased by more than \$75 million from 2001 to 2002.

### *Analysis of Financial Activities*

OPERS' funding objective is to meet long-term benefit obligations through investment income and contributions. Accordingly, the collection of employer and member contributions, and the income from investments provide the reserves needed to finance future retirement benefits.

Member and employer contributions continue to rise as average salaries increase. However, declining financial markets produced the third straight year of negative returns on OPERS' investments. Net assets held in trust for pension and health care benefits declined by \$5,986 million in 2002. In fact, over the past three years, 2000 through 2002, OPERS' net assets have declined by \$9,958 million. Of that amount, \$8,846 million relates directly to investment losses. Since investment earnings are critical to OPERS funding, the three successive years of negative returns have deteriorated OPERS' funding status.

Although member and employer contributions continue to rise due to wage inflation, they have remained fairly level over time as a percent of payroll. As the years roll forward, and total assets and liabilities grow, OPERS' investment income will play an increasingly significant role in funding future retirement benefits--eventually providing 80-90% of the necessary funds. Therefore, investment return over the long term is critical to the funding status of the System.

*OPERS' Net Assets (Table 1)*

As of December 31, 2002 and 2001

	2002	2001	Increase (Decrease) Amount	Increase (Decrease) Percentage
Current and other Assets	\$ 1,820,102,781	\$ 1,347,104,562	\$ 472,998,219	35.1%
Investments at Fair Value	48,912,969,775	55,914,172,674	(7,001,202,899)	(12.5)%
Fixed Assets	118,128,817	87,472,883	30,655,934	35.0%
Total Assets	50,851,201,373	57,348,750,119	(6,497,548,746)	(11.3)%
Current Liabilities	2,864,904,308	3,376,019,773	(511,115,465)	(15.1)%
Total Liabilities	2,864,904,308	3,376,019,773	(511,115,465)	(15.1)%
Net Assets	\$47,986,297,065	\$53,972,730,346	\$ (5,986,433,281)	(11.1)%

OPERS' funding status can be somewhat misleading when looking strictly at OPERS' actuarial reports because actuarial reports generally take about eight months to complete (which is typical for pension funds). Therefore, the data is eight months old at best. In addition, the actuarial assets used to calculate funded status are not based on year end fair values as of the valuation date. Market gains and losses, for actuarial funding purposes, are smoothed over a rolling four years. This means that in periods of extended market decline, the actual, or fair value of assets, will usually be less than the funding, or actuarial value of assets. This is the case with OPERS during this extended down market. At December 31, 2001, the date of our latest actuarial evaluation, the actuarial value of assets set aside to pay pension benefits (non-health care assets) was \$48,748 million. The fair value of these assets, the value on the financial statements of OPERS, at December 31, 2001 was \$44,036 million. It is important to understand these realities when reviewing the actuarial data contained within this report.

Based on our latest actuarial valuation for the year ended December 31, 2001, the System's actuarial value of assets exceeds its actuarial value of liabilities by \$1,256 million. This means that assuming future actuarial financing assumptions are met, OPERS had accumulated

sufficient assets as of December 31, 2001, to fund the pension liabilities of its current members and benefit recipients.

Rising health care costs continue to be a concern. Health care expenses rose from \$693 million in 2001 to \$776 million in 2002, an increase of more than 12%. By contrast, the Consumer Price Index (CPI) shows the national rate for non-health care inflation for the same period rose by only about 2%. The continued increase in health care costs in excess of general inflation is a serious concern. The OPERS Board of Trustees is currently reviewing alternatives in health care plan design and funding.

### *Financial Analysis - Summary*

Net assets may serve over time as a useful indication of OPERS' financial position (see Table 1 above). At the close of 2002, the assets of OPERS exceeded its liabilities, with \$47,986 million in net assets held in trust for pension and post employment health care benefits. The net assets are available to meet OPERS' ongoing obligation to plan participants and their beneficiaries.

The market decline and associated investment losses have deteriorated OPERS' funding status.



It is likely that over the next several years, the amount of employer contributions used to fund post-retirement health care (currently 5%) will need to be reduced or eliminated and redirected toward funding OPERS' non-health care retirement benefits.

### Capital Assets

As of December 31, 2002, OPERS' investment in capital assets totaled \$118 million (net of accumulated depreciation and amortization). This investment in capital assets includes equipment, furniture, the home-office complex and construction in progress.

OPERS invested more than \$34 million in capital assets during 2002. The major capital investment project during this period was the continued construction of OPERS' new office facility. This facility will accommodate the increased staff needed to support the rapidly growing number of benefit recipients, and provide space for the additional service personnel necessary to improve support services to employers, members and retirees alike. The new office facility is targeted for completion around the end of 2003.

### Reserves

OPERS' reserves are established from employer and member contributions, and the accumulation of investment income, net of investment and administrative expenses and benefit payments.

State statute requires that the Annuity and Pension Reserve Fund (A & P R Fund) and the Survivors' Benefit Fund be fully funded. These two funds hold reserves set aside to pay benefits to retired members and their survivors. This statute ensures that priority is first given to setting aside funds necessary to pay non-health care pension and survivor benefits to those who have already retired and to their beneficiaries. Once these pension obligations have been met, reserves are accumulated to fund the future pension benefits of active members.

As of December 31, 2001, the date of our latest actuarial valuation, OPERS had not only accumulated sufficient assets to fund retirees and their beneficiaries, but had also provided sufficient reserves to fund pensions for active members, based on service credit earned through year-end 2001.

Because 2002 provided a third straight year of investment losses, it is likely that the actuarial review for the year ended December 31, 2002 (due out in the fall of 2003) will indicate a decrease in the level of funding.

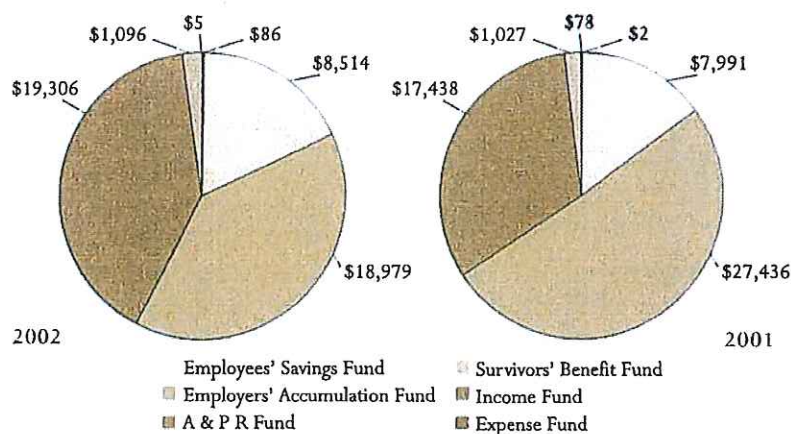
#### OPERS' Reserves (Table 2)

As of December 31, 2002 and 2001 (Dollars in Millions)

	2002	2001
Employees' Savings Fund	\$ 8,513,859,664	\$ 7,991,271,196
Employers' Accumulation Fund	18,979,364,269	27,435,948,587
A & P R Fund	19,305,720,320	17,438,484,109
Survivors' Benefit Fund	1,096,358,667	1,027,255,264
Income Fund	86,024,578	77,946,292
Expense Fund	4,969,567	1,824,898
<b>Total Reserves at Fair Value</b>	<b>\$47,986,297,065</b>	<b>\$ 53,972,730,346</b>

#### OPERS' Reserves

(Dollars in Millions)



**Revenues - Additions to Fiduciary Net Assets (Table 3)**

As of December 31, 2002 and 2001

	2002	2001	Increase (Decrease) Amount	Increase (Decrease) Percentage
Employer Contributions	\$ 1,683,021,503	\$ 1,408,392,987	\$ 274,628,516	19.5%
Members Contributions	1,094,343,553	931,050,640	163,292,913	17.5%
Net Investment Income	(5,684,965,700)	(2,717,233,466)	(2,967,732,234)	(109.2%)
Misc. Income	623,421	92,291	531,130	575.5%
<b>Total</b>	<b>\$(2,906,977,223)</b>	<b>\$(377,697,548)</b>	<b>\$(2,529,279,675)</b>	<b>(669.7%)</b>

**Revenues-Additions to Plan Net Assets**

As noted above, the reserves needed to finance retirement benefits are accumulated through the collection of employer and employee contributions and through earnings on investment income (net of investment expense). Revenues for the year ended December 31, 2002, were negative due to investment losses. Revenues/(Losses) for 2002 totaled (\$2,906) million.

Revenues for 2002 decreased by \$2,529 million or 670%, from the prior year primarily due to investment losses. The investment section of this report summarizes the results of investment activity for the year ended December 31, 2002.

**Expenses - Deductions in Fiduciary Net Assets (Table 4)**

As of December 31, 2002 and 2001

	2002	2001	Increase (Decrease) Amount	Increase (Decrease) Percentage
Benefit	\$ 2,836,137,068	\$ 2,574,189,051	\$ 261,948,017	10.2%
Administrative Expenses	56,267,175	40,081,348	16,185,827	40.4%
Refunds	187,051,815	262,681,258	(75,629,443)	(28.8)%
<b>Total</b>	<b>\$3,079,456,058</b>	<b>\$2,876,951,657</b>	<b>\$202,504,401</b>	<b>7.0%</b>

**Expenses-Deductions from Plan Net Assets**

OPERS was created to provide retirement, survivor and disability benefits to qualified members and their beneficiaries. The cost of such programs includes recurring benefit payments as designated by the plan, elective refunds of contributions to employees who terminate employment with a participating employer, and the cost of administering the System.

Expenses for the year ended December 31, 2002 totaled \$3,079 million an increase of 7% over 2001. The increase in benefits paid resulted primarily from an increase in the number of retirees receiving benefits and an increase in retiree health care expenses. OPERS has consistently managed within its Administrative Expense Budget, authorized annually by the Board, with no material variances between planned and actual expenditures.

**Fiduciary Responsibilities**

The Board of Trustees and executive management of OPERS are fiduciaries of the pension trust fund. Fiduciaries are charged with the responsibility of assuring that the assets of OPERS are used exclusively for the benefit of plan participants and their beneficiaries.

**Request for Information**

This financial report is designed to provide the Board, our membership, taxpayers, investment managers, and creditors with an overview of OPERS' finances and accountability for the money received. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to:

Karen E. Carraher, Director – Finance  
Ohio Public Employees Retirement System  
277 East Town Street  
Columbus, Ohio 43215-4642



## Combining Statements of Fiduciary Net Assets

As of December 31, 2002 and 2001

	2002		
	Pensions	Post-employment Health Care	Total
<b>Assets:</b>			
Cash and Short-Term Investments (Note 3)	\$ 807,850,411	\$ 185,571,147	\$ 993,421,558
<b>Receivables:</b>			
Employers	202,286,527	46,467,195	248,753,722
Retirement Incentive Plan	79,182,328	18,188,956	97,371,284
Investment Sales Proceeds	171,470,633	39,388,483	210,859,116
Accrued Interest and Dividend	119,447,589	27,438,280	146,885,869
Total Receivables	572,387,077	131,482,914	703,869,991
<b>Investments, at fair value (Note 3):</b>			
Global Bonds	4,993,902,434	1,147,148,273	6,141,050,707
Mortgage & Mortgage Backed	3,196,612,385	734,293,155	3,930,905,540
Equities	17,976,586,163	4,129,397,805	22,105,983,968
Real Estate	3,772,440,252	866,566,452	4,639,006,704
Private Equity	209,751,027	48,181,864	257,932,891
International Securities	7,731,721,550	1,776,052,122	9,507,773,672
Total Investment	37,881,013,811	8,701,639,671	46,582,653,482
<b>Collateral on Loaned Securities</b>	1,895,013,209	435,303,084	2,330,316,293
<b>Fixed Assets:</b>			
Land	3,037,150	697,663	3,734,813
Building and Building Improvements	77,062,896	17,702,101	94,764,997
Furniture and Equipment	36,287,883	8,335,682	44,623,565
	116,387,929	26,735,446	143,123,375
Accumulated Depreciation	(20,325,575)	(4,668,983)	(24,994,558)
Total Fixed Assets	96,062,354	22,066,463	118,128,817
<b>Prepaid Expenses and Other</b>	99,870,094	22,941,138	122,811,232
<b>TOTAL ASSETS</b>	41,352,196,956	9,499,004,417	50,851,201,373
<b>Liabilities:</b>			
Undistributed Deposits	4,466,539	1,026,008	5,492,547
Medical Benefits Payable		95,374,085	95,374,085
Investment Commitments Payable	346,221,826	79,530,542	425,752,368
Accrued Administrative Expenses (Note 5)	6,480,403	1,488,612	7,969,015
Obligations Under Securities Lending	1,895,013,209	435,303,084	2,330,316,293
<b>TOTAL LIABILITIES</b>	2,252,181,977	612,722,331	2,864,904,308
<b>Net assets held in trust for pension and postemployment healthcare benefits</b>	<b>\$ 39,100,014,979</b>	<b>\$ 8,886,282,086</b>	<b>\$47,986,297,065</b>

A schedule of funding progress is presented on page 40.

See Notes to Financial Combining Statements for more information.

2001		
Pensions	Post-employment Health Care	Total
\$ 669,981,977	\$ 152,283,582	\$ 822,265,559
118,681,412	26,975,696	145,657,108
29,808,248	6,775,267	36,583,515
62,677,062	14,246,185	76,923,247
128,780,682	29,271,211	158,051,893
339,947,404	77,268,359	417,215,763
5,593,427,658	1,271,358,373	6,864,786,031
3,331,836,403	757,309,894	4,089,146,297
20,901,354,249	4,750,774,185	25,652,128,434
4,254,402,062	967,004,493	5,221,406,555
56,901,324	12,933,389	69,834,713
8,810,895,610	2,002,672,885	10,813,568,495
42,948,817,306	9,762,053,219	52,710,870,525
2,610,050,591	593,251,558	3,203,302,149
3,043,126	691,687	3,734,813
54,500,234	12,387,633	66,887,867
31,093,253	7,067,342	38,160,595
88,636,613	20,146,662	108,783,275
(17,363,708)	(3,946,684)	(21,310,392)
71,272,905	16,199,978	87,472,883
87,691,416	19,931,824	107,623,240
46,727,761,599	10,620,988,520	57,348,750,119
27,774,945	6,313,108	34,088,053
	72,859,185	72,859,185
45,560,072	10,355,578	55,915,650
8,029,639	1,825,097	9,854,736
2,610,050,591	593,251,558	3,203,302,149
2,691,415,247	684,604,526	3,376,019,773
\$ 44,036,346,352	\$ 9,936,383,994	\$ 53,972,730,346



# Combining Statements of Changes in Fiduciary Net Assets

As of December 31, 2002 and 2001

	2002		
	Pensions	Post-employment Health Care	Total
<b>Additions:</b>			
Contributions:			
Members	\$ 1,094,343,553		\$ 1,094,343,553
Employers	1,109,983,205	573,038,298	1,683,021,503
Total Contributions	2,204,326,758	573,038,298	2,777,365,056
Investment Income			
From Investing Activities:			
Net Depreciation in Fair Value of Investments	(5,045,933,248)	(899,648,951)	(5,945,582,199)
Bond Interest	493,628,592	135,276,163	628,904,755
Dividends	239,080,967	65,521,483	304,602,450
Real Estate Operating Income, net	166,588,433	45,652,477	212,240,910
International Income	(690,803,335)	(189,310,970)	(880,114,305)
Other Investment Income	6,585,487	1,801,360	8,386,847
Security Lending Income, net (Note 2)	4,025,826	1,104,834	5,130,660
Total Investment Income	(4,826,827,278)	(839,603,604)	(5,666,430,882)
Less: Investment Management Expenses	(15,072,514)	(3,462,304)	(18,534,818)
Net Income from Investing Activities	(4,841,899,792)	(843,065,908)	(5,684,965,700)
Other Income	623,421		623,421
Total Additions	(2,636,949,613)	(270,027,610)	(2,906,977,223)
<b>Deductions:</b>			
Benefits	2,060,130,216	776,006,852	2,836,137,068
Refunds of Contributions	187,051,815		187,051,815
Administrative Expenses	52,199,729	4,067,446	56,267,175
Total Deductions	2,299,381,760	780,074,298	3,079,456,058
Net Decrease	(4,936,331,373)	(1,050,101,908)	(5,986,433,281)
Net assets held in trust for pension and post-employment healthcare benefits			
Balance, Beginning of Year	44,036,346,352	9,936,383,994	53,972,730,346
<b>Balance, End of Year</b>	<b>\$ 39,100,014,979</b>	<b>\$ 8,886,282,086</b>	<b>\$47,986,297,065</b>

See Notes to Combining Financial Statements for additional information.



2001		
Pensions	Post-employment Health Care	Total
\$ 931,050,640		\$ 931,050,640
977,289,237	431,103,750	1,408,392,987
1,908,339,877	431,103,750	2,339,443,627
(3,890,244,452)	(1,604,110,433)	(5,494,354,885)
584,202,235	361,752,777	945,955,012
211,640,138	130,998,066	342,638,204
222,643,642	137,855,938	360,499,580
921,291,152	207,880,501	1,129,171,653
467,207	105,421	572,628
7,075,255	4,381,419	11,456,674
(1,942,924,823)	(761,136,311)	(2,704,061,134)
(10,732,816)	(2,439,516)	(13,172,332)
(1,953,657,639)	(763,575,827)	(2,717,233,466)
92,291		92,291
(45,225,471)	(332,472,077)	(377,697,548)
1,880,704,941	693,484,110	2,574,189,051
262,681,258		262,681,258
36,992,160	3,089,188	40,081,348
2,180,378,359	696,573,298	2,876,951,657
(2,225,603,830)	(1,029,045,375)	(3,254,649,205)
46,261,950,182	10,965,429,369	57,227,379,551
\$44,036,346,352	\$9,936,383,994	\$53,972,730,346

# Notes to Combining Financial Statements

## 1. DESCRIPTION OF OPERS

**a. Organization** — The Ohio Public Employees Retirement System (OPERS) is a cost-sharing multiple-employer public employee retirement system for all public employees in Ohio except those covered by one of the other state or local retirement systems in Ohio. OPERS is administered in accordance with Chapter 145 of the Ohio Revised Code (ORC). The accompanying financial statements comply with the provisions of the Governmental Accounting Standards Board (GASB) Statement No. 14, The Financial Reporting Entity. This statement requires that financial statements of the reporting entity include all of the organizations, activities, functions and component units for which the reporting entity is financially accountable. Financial accountability is defined as the appointment of a voting majority of the component unit's board and either (1) the reporting entity's ability to impose its will over the component unit, or (2) the possibility that the component unit will provide a financial benefit to or impose a financial burden on the reporting entity. OPERS does not have financial accountability over any entities.

OPERS is not part of the state of Ohio financial reporting entity. Responsibility for the organization is vested in the System's Board of Trustees, there is no financial interdependency with the state of Ohio, nor does the state of Ohio have financial accountability for the System. The Board is the governing body of OPERS, with responsibility for administration and management. Six of the nine members are elected by the groups they represent: retirees; employees of the state; employees of counties; employees of municipalities; non-teaching employees of state colleges and universities; and miscellaneous employees (such as employees working for a park district, conservancy district, sanitary district, health district, township, metropolitan housing authority, state retirement board, public library, county law library, union cemetery, joint hospital or institutional commissary). The Auditor of State, Attorney General, and the Director of Administrative Services are statutory members.

The Board appoints the Executive Director, an actuary and other consultants necessary for the transaction of business. The Retirement Board meets monthly and receives no compensation, but is reimbursed for necessary expenses.

Employer, employee and retiree data as of December 31, 2001 and 2000 (our latest available actuarial data) follows:

	2001	2000
<b>Employer Units</b>		
State group	266	318
Local government group	3,169	3,233
Law enforcement group	255	232
<b>Employee Members and Retirees</b>		
Retirees and beneficiaries currently receiving benefits	136,456	132,603
Terminated employees not yet receiving benefits	78,289	62,930
<b>Active Employees</b>		
State group	109,219	113,099
Local government group	243,202	245,831
Law enforcement group	7,892	8,045



All public employees, except those covered by another state retirement system in Ohio or the Cincinnati Retirement System, are required to become contributing members of OPERS when they begin public employment unless they may be exempted or excluded. For actuarial purposes, vested employees represent those employees who have earned sufficient service credit (5 years or 60 contributing months) to be entitled to a future benefit from OPERS.

**b. Benefits** — All benefits of the System and any benefit increases are established by the legislature. Chapter 145 of the ORC provides the Retirement Board with the authority to provide health care benefits. Health care benefits are not statutorily required nor are they vested benefits. Health care benefits may be reduced or eliminated at the discretion of the Board.

- *Age and Service Benefits* — Benefits are calculated on the basis of age, final average salary, and service credit. Members are eligible for retirement benefits at age 60 with five years or 60 contributing months of service credit, at age 55 with 25 or more years of service credit, or at any age with 30 or more years of service credit. The annual benefit is based on 2.2% of final average salary, multiplied by the actual years of service for the first 30 years of service credit and 2.5% for years of service in excess of 30 years. Persons retiring before age 65 with less than 30 years of service credit receive a percentage reduction in benefit amounts. Upon reaching minimum retirement age, benefits are vested at the time of eligibility for monthly benefits.
- *Law Enforcement Officers' Benefits* — Effective January 1, 2001, HB 416 divided the OPERS law enforcement program into two separate divisions - Law Enforcement and Public Safety. Both groups of officers, as defined in ORC Chapter 145, are eligible for special retirement options. Law enforcement officers may file an application for retirement benefits at age 48 or older with 25 or more years of credited service. In 2001, those members classified within the public safety group were eligible for retirement at age 52 with 25 or more years of credited service. As of February 1, 2002, only those with service as a Hamilton County Municipal Court Bailiff remain in the public safety group. Annual benefits under both plans are calculated by multiplying 2.5% of final average salary by the actual years of service for the first 25 years of service credit and 2.1% of final average salary for each year of service over 25 years. These options also permit early retirement under qualifying circumstances as early as age 48.
- *Early Retirement Incentive Plan* — Employers under OPERS may establish an early retirement incentive plan using the purchase of service credit. To be eligible, employees must be able to retire under existing plan provisions after the purchase of the additional credit. Electing employers must contribute all such additional costs as are actuarially determined to fund the benefit. Such a plan, if adopted by an employer, must be offered to a minimum of 5% of covered employees and provide for the purchase not to exceed five years credit, limited to a maximum of 20% of total service credit.
- *Disability Benefits* — OPERS administers two disability plans. Members on the rolls as of July 29, 1992 could elect, by April 7, 1993, coverage under either the original plan or the revised plan. All members who entered the System after July 29, 1992 are automatically covered under the revised plan. A member who becomes disabled before age 60 and has completed 60 contributing months is eligible for a disability benefit under the original plan. The revised plan differs in that a member who becomes disabled at any age with 60 contributing months will be eligible for disability benefits until a determined age. After the disability benefit ends, the member has an opportunity to apply for a service retirement benefit, or a refund of

contributions, which are not reduced by the amount of disability benefits received. Law enforcement officers are immediately eligible for disability benefits if disabled by an on-duty illness or injury.

- *Survivor Benefits* — Dependents of deceased members may qualify for survivor benefits if the deceased employee had at least 18 months of service credit with at least three months of credit within the two and one-half years immediately preceding death. ORC Chapter 145 specifies the dependents and the conditions under which they qualify for survivor benefits.
- *Health Care Benefits* — The ORC permits, but does not require, OPERS to offer healthcare benefits. The System currently provides comprehensive health care benefits to retirees with 10 or more years of qualifying service credit and offers coverage to their dependents on a premium deduction basis. Coverage includes hospitalization, medical expenses, prescription drugs, and reimbursement of monthly Medicare premiums. The System determines the amount, if any, of the associated health care costs that will be absorbed by the System. The System attempts to control costs by using managed care, HMOs, case management, disease management, and other programs.
- *Other Benefits* — Once a benefit recipient has received benefits for 12 months, an annual 3% cost-of-living adjustment is provided. A death benefit of \$500-\$2,500, determined by number of years of service credit of the retiree, is paid to the beneficiary of a deceased retiree or disability benefit recipient.
- *Money Purchase Annuity* — OPERS age and service retirees who become re-employed in an OPERS-covered position must contribute to the System. Effective December 2000, Senate Bill 144 simplified the rules for re-employed retirees. This bill requires all re-employed retirees to contribute toward a money purchase annuity. Previously, all re-employed retirees, including elected officials, could choose to either: 1) have their retirement allowance suspended for the re-employment period and contribute toward a formula benefit, or 2) continue to receive their retirement allowance and contribute toward a money purchase annuity. The money purchase annuity is based on the calculation of employee contributions for the period of re-employment plus allowable interest, multiplied by two.
- *Refunds* — New legislation was enacted in December 2000 allowing OPERS to pay refunding members interest and an employer match, if qualified, on contributions made to OPERS. Upon their termination of employment, a member may withdraw their accumulated contributions, interest earned, and any qualifying employer match. The law requires a three-month waiting period after service termination before the refund may be paid. The acceptance of a refund cancels the individual's rights and benefits in OPERS. Employer contributions to OPERS are not refundable.

**c. Contributions** — OPERS' funding policy provides for periodic employer contributions at actuarially determined rates, expressed as a percentage of annual covered payroll, which, along with employee contributions and an actuarially determined rate of investment return, are adequate to accumulate sufficient assets to pay benefits when due. Level percentage of payroll employer contribution rates are determined using the entry age normal actuarial funding method. This formula determines the amount of contributions necessary to fund: (1) the current service cost, which represents the estimated amount necessary to pay for benefits earned by the employees during the current service year; and (2) the prior service cost for service earned prior to plan inception and subsequent benefit increases. These contributions represent the amount necessary to fund accrued liabilities for retirement allowances and survivor benefits over a period of time.



As of December 31, 2001, the date of the last actuarial study, all divisions of OPERS were fully funded.

As of December 31, 2000, both the state and local the state government divisions were fully funded. The necessary funding periods for the public safety and law enforcement divisions were 16 and 19 years, respectively.

	Employee Rate		Employer Rate	
	2002	2001	2002	2001
State group	8.5%	8.5%	13.31%	13.31%
Local government group	8.5%	8.5%	13.55%	13.55%
Law enforcement group	10.1%	10.1%	16.70%	16.70%
Public safety group	9.0%	9.0%	16.70%	16.70%

The rates above fall within the ranges set by the Ohio Revised Code.

A portion of each employer's contribution to OPERS is set aside for the funding of post-retirement healthcare. For 2002 and 2001, the total employer contribution rate for state employers was 13.31% of covered payroll; local employers, 13.55% of covered payroll; and law enforcement and public safety employers, 16.70% of covered payroll.

The percentage of the employer contribution rate used to fund healthcare, for all divisions, was 5% for calendar years 2002 and 2001. ORC Chapter 145 assigns authority to the Board of Trustees to amend the funding policy. As of December 31, 2001 the Board adopted all contribution rates as recommended by the Actuary.

Health care costs have risen in excess of assumed levels over the past several years. These increases, when coupled with three straight years of investment losses, have had a severe negative impact on OPERS' ability to continue to fund health care benefits at historical levels. Modifications to the present plan design and or alternatives in the funding of health care benefits are being considered by the OPERS Board.

**d. Commitments & Contingencies** — OPERS is a party in various litigation relating to plan benefits. While the final outcome cannot be determined at this time, management is of the opinion that the liability, if any, for these legal actions will not have an adverse effect on OPERS' financial position.

OPERS is in the process of liquidating one of its private equity investments. The investment advisor has advised OPERS that one of the sub accounts of this investment with a carrying value of approximately \$28 million cannot be valued at this time. However, management believes that any potential loss on the sale of this investment will not have a material effect on the financial position of OPERS.

## 2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The following are the significant accounting policies followed by OPERS:

**a. Basis of Accounting** — The financial statements are prepared using the accrual basis of accounting under which expenses are recorded when the liability is incurred, revenues are recorded in the accounting period in which they are earned and become measurable. Therefore, both member and employer contributions for the year ended December 31, 2002 include year-end accruals based upon estimates derived from historical payment patterns. This was an enhancement over prior years, 2001 and before, where both member and employer contributions included only contributions due and payable as of the fiscal year end. (Contributions on

members salaries are due 30 days after the month salaries are earned and employer contributions are due 90 days after the calendar quarter in which the associated member salaries were earned.) The change in estimating procedure increased member and employer contributions by an aggregate total of approximately \$126 million when compared with the former estimating procedure. Investment purchases and sales are recorded as of their trade date. Administrative expenses are financed exclusively with investment income.

Pursuant to the GASB Statement No. 20: *Accounting and Financial Reporting for Proprietary Funds and Other Governmental Entities that use Proprietary Fund Accounting*, the System follows GASB guidance as applicable to proprietary funds and Financial Accounting Standards Board Statements and Interpretations, Accounting Principles Board Opinions and Accounting Research Bulletins issued on or before November 30, 1989 that do not conflict with or contradict GASB pronouncements.

The accounting and reporting policies of OPERS conform to generally accepted accounting principles (GAAP). The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

GASB Statement No. 25, *Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans* and Statement No. 26, *Financial Reporting for Post-employment Health Care Plans Administered by Defined Benefit Pension Plans* require that plan assets be split between pension and health care. To meet this requirement, plan assets and liabilities not specifically identifiable to a plan were proportionately allocated to the pension and post-employment health care plans.

**b. Investments** — OPERS is authorized by ORC Chapter 145 to invest under a “prudent person” standard and does so through an investment policy established by the Retirement Board. The prudent person standard requires the Retirement Board “to discharge their duties with respect to the funds solely in the interest of the participants and beneficiaries and defraying reasonable expenses of administering the System; with care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with these matters would use in the conduct of an enterprise of a like character and with like aims; and by diversifying the investments of the system so as to minimize the risk of large losses, unless under the circumstances it is clearly prudent not to do so.”

Plan investments are reported at fair value. Fair value is the amount that a plan can reasonably expect to receive for an investment in a current sale between a willing buyer and a willing seller, that is, other than in a forced or liquidation sale. The value of all investments, with the exception of real estate, and private equity are based on closing market prices or broker quotes. The fair value of real estate investments is based on estimated current values and independent appraisals. Private equities are valued based on September 30th net asset values plus or minus purchases, sales and cash flows from October 1, through December 31, of the reporting year, and considering any known perminate declines in value.

Net appreciation (depreciation) is determined by calculating the change in the fair value of investments between the end of the year and the beginning of the year, less purchases of investments at cost plus sales of investments at fair value. Investment expense consists of those administrative expenses directly related to OPERS’ investment operations and a proportional amount of all other administrative expenses allocated based on a ratio of OPERS’ investment staff to a total OPERS staff.



**c. Securities Lending** — OPERS maintains a securities lending program. The Retirement Board uses its own discretion to determine the type and amount of securities lent under the program. Under this program securities are loaned to brokers. In return, OPERS receives cash collateral and agrees to return the collateral for the same securities in the future. Cash collateral from securities loaned is, simultaneous to the loan, reinvested in repurchase agreements (repos) and short-term securities with a final maturity of one year or less. Securities loaned and repos are collateralized at a minimum of 102% of the market value of loaned securities. Collateral is marked-to-market daily. OPERS does not have the ability to pledge or sell collateral securities absent a broker default. If the market value of the collateral held falls below 102% of the market value of securities loaned, additional collateral is provided. The maturity of the repo is always identical to the maturity of the securities loaned. Further, there is always a positive spread between the cost of funds raised from a securities loan and the income earned from the associated repo. At year end OPERS had no credit risk exposure to borrowers because the fair value of collateral OPERS held exceeded the fair value of securities loaned.

As of December 31, 2002, the fair values of loaned securities and associated collateral (repo agreements and short-term investments) were \$2,258,203,440 and \$2,330,316,293, respectively.

As of December 31, 2001, the fair value of loaned securities and associated collateral (repo agreements and short-term investments) were \$3,113,250,913 and \$3,203,302,149, respectively.

Collateral on loaned securities at year-end 2002 and 2001 consisted of repurchase agreements collateralized by Treasury Bills.

Net security lending income is composed of three components: gross income, broker rebates, and agent fees. Gross income is equal to earnings on cash collateral received in a security lending transaction. A broker rebate is the cost of using that cash collateral. Agent fees represent the fees paid to the agent for administering the lending program. Net security lending income is equal to gross income less broker rebates and agent fees.

Income from Security Lending Activity	2002	2001
Security Lending Gross Income	\$ 31,887,361	\$ 123,663,277
Security Lending Expenses		
Security Lending-Agent Fees	(869,708)	(2,401,923)
Security Lending - Broker Rebates	(25,886,993)	(109,804,680)
Total Expenses	(26,756,701)	(112,206,603)
<b>Net Income from Security Lending Activity</b>	<b>\$ 5,130,660</b>	<b>\$ 11,456,674</b>

**d. Derivatives** — Derivatives are generally defined as contracts whose value depends on, or derives from, the value of an underlying asset, reference rate or index. OPERS has classified the following as derivatives:

- *Mortgage and Asset-Backed Securities* — As of December 31, 2002 and 2001, the System held the following mortgage and asset-backed securities which may be categorized as derivative securities:
  - GNMA, FNMA, and FHLMC pass-throughs with amortization terms of 15 years, 30 years, and 30-year amortization/7-year balloons.

- Collateralized mortgage obligation securities (CMOs) backed by FNMA and FHLMC 15 and 30-year pass throughs.
- Commercial mortgage backed securities (CMBS) backed by commercial mortgages and leases on a variety of property types such as office, retail, hotel, self-storage, warehouse, and industrial.
- Asset-backed securities (ABS) backed by auto loans, credit card receivables, home equity loans, home improvement loans, and electric-utility receivables.

The overall return or yield on mortgage-backed securities depends on the amount of interest collected over the life of the security and the change in the market value. Although the System will receive the full amount of principal, if prepaid, the interest income that would have been collected during the remaining period to maturity, net of any market adjustments, is lost. Accordingly, the yields and maturities of mortgage-backed securities generally depend on when the underlying mortgage loan principal and interest are repaid. If market rates fall below a mortgage loan's contractual rate, it is generally to the borrower's advantage to repay the existing loan and obtain new lower financing. The fair value of mortgage and asset-backed securities was \$3,930,905,540 and \$4,089,146,297 as of December 31, 2002 and December 31, 2001, respectively.

- *Forward Currency Contracts* — The System enters into various forward currency contracts to manage exposure to changes in foreign currency exchange rates on its foreign portfolio holdings. The System may also enter into forward currency exchange contracts to provide a quantity of foreign currency needed at a future time at the current exchange rates, if rates are expected to change dramatically. A forward exchange contract is a commitment to purchase or sell a foreign currency at a future date at a negotiated forward rate. Risk associated with such contracts includes movement in the value of foreign currency relative to the U.S. dollar and the ability of the counterparty to perform. The contracts are valued at forward exchange rates, and the changes in value of open contracts are recognized as net appreciation/depreciation in the statement of changes in fiduciary net assets. The realized gain or loss on forward currency contracts represents the difference between the value of the original contracts and the closing value of such contracts and is included as net appreciation/depreciation in the statement of changes in fiduciary net assets. As of December 31, 2002 and December 31, 2001, the fair values of forward currency contracts held by the System were (\$3,140,610) and \$13,242,314 respectively.

**e. International Investments** — The Board has authorized investment in various instruments including international securities. In November 1994, OPERS executed an investment management agreement to take advantage of expected favorable long-term trends in the global forest products industry by making specialized investment in offshore forest products companies. In fiscal 1996, OPERS began investing in international equity investments using outside money managers. It is the intent of OPERS and the money managers to be fully invested in non-cash equivalent international securities, however, cash and short-term fixed income investments are often held temporarily. OPERS also invests in forward currency contracts (see Note 2d).



The allocation and fair value of international investments held at December 31, 2002 and 2001 are:

	2002	2001
Cash	\$ 39,481,678	\$ 53,344,679
Cash Equivalents	110,412,799	137,357,294
ADR	112,405,069	342,215,621
GDR	33,814,837	60,726,448
Netted Receivable/(Payable) Interest	14,600,810	254,272
Netted Receivable/(Payable) Trades	(10,945,104)	
Netted Receivable/(Payable) Currency Contracts	(3,140,610)	13,242,314
International Stock	3,930,893,746	4,024,722,201
Convertible Bonds		1,879,065
Stock Index Funds	5,280,250,447	6,017,263,184
Private Equity		162,563,417
<b>Total International Investments</b>	<b>\$9,507,773,672</b>	<b>\$10,813,568,495</b>

**f. Fixed Assets** — Fixed assets are recorded at cost. Depreciation is computed using the straight-line method over the estimated useful lives of the related assets. The range of estimated useful lives is as follows:

	Years
Buildings and building improvements	50
Furniture and equipment	3-10

**g. Undistributed Deposits** — Cash receipts are recorded as undistributed deposits until such time as they are allocated to employers' receivables, members' contributions, or investment income.

**h. Federal Income Tax Status** — OPERS is a qualified plan under Section 401(a) of the Internal Revenue Code and is exempt from federal income taxes under Section 501(a).

**i. Funds** — In accordance with state statute, various funds have been established to account for the reserves held for future and current benefit payments. Statutory funds are as follows:

- *The Employees' Savings Fund* represents members' contributions held in trust pending their refund or transfer to a benefit disbursement fund. Upon an employee's refund or retirement, such employee's account is credited with an amount of interest (statutory interest) on the employee's contributions based on a rate of 3-4%. Employees eligible for a refund also receive an employer match, if qualified. The ORC Chapter 145 requires statutory interest to be compounded annually.
- *The Employers' Accumulation Fund* is used to accumulate employers' contributions to be used in providing the reserves required for transfer to the Annuity and Pension Reserve Fund as members retire or become eligible for disability and health care benefits and to the Survivors' Benefit Fund for benefits due dependents of deceased members.

- *The Annuity and Pension Reserve Fund* is the fund from which annuity, disability, and healthcare benefits are paid. This reserve was fully funded according to the latest actuarial study dated December 31, 2001, and so there are sufficient assets available in this fund to pay the vested (pension) benefits of all retirees and beneficiaries as of the valuation date.
- *The Survivors' Benefit Fund* is the fund from which benefits due dependents of deceased members of the System are paid. This fund also was fully funded with relation to vested (pension) as of December 31, 2001.
- *The Income Fund* is the fund which is credited with all investment earnings and miscellaneous income. The balance in this fund is transferred to other funds to aid in the funding of future benefit payments and administrative expenses.
- *The Expense Fund* provides for the payment of administrative expenses with the necessary monies allocated to it from the Income Fund.

**Fund balances at December 31, 2002 and 2001 are as follows:**

	2002	2001
Employees' Savings Fund	\$ 8,513,859,664	\$ 7,991,271,196
Employers' Accumulation Fund	18,979,364,269	27,435,948,587
Annuity & Pension Reserve Fund	19,305,720,320	17,438,484,109
Survivors' Benefit Fund	1,096,358,667	1,027,255,264
Income Fund	86,024,578	77,946,292
Expense Fund	4,969,567	1,824,898
<b>Total Fund Balance</b>	<b>\$47,986,297,065</b>	<b>\$53,972,730,346</b>

**j. Risk Management** — OPERS is exposed to various risks of loss related to theft of, damage to, and destruction of assets; injuries to employees; and court challenges to fiduciary decisions. To cover these risks OPERS maintains commercial insurance and holds fidelity bonds on employees. There were no reductions in coverage nor were there any settlements exceeding insurance coverage for the past three years. As required by state law, OPERS is registered and insured through the Ohio Bureau of Workers' Compensation for injuries to employees. OPERS is self-insured with relation to employee healthcare coverage. The only outstanding liabilities at the end of 2002 and 2001 were related to the employee health care coverage (see Note 8).

### 3. CASH AND INVESTMENTS

As of December 31, 2002 and 2001, the carrying amount of OPERS' cash deposits was \$83,007,017 and \$(806,972) respectively, and the bank balance was \$108,900,397 and \$34,226,597 respectively. Of the bank balance, \$100,000 was insured by the Federal Deposit Insurance Corporation (Category 1 as defined by the Government Accounting Standards Board). The remaining bank balance cash deposits were uninsured and uncollateralized and were held in the name of OPERS' pledging financial institution, as required by the ORC (Category 3).



A summary of short-term securities and investments held at December 31, 2002 and 2001 is as follows:

	2002 Fair Value	2001 Fair Value
Short-Term Securities:		
Commercial Paper	\$ 26,384,606	\$ 344,401,541
U.S. Treasury Obligations:	884,029,935	478,670,990
<b>Total Short-term Securities</b>	<b>\$ 910,414,541</b>	<b>\$ 823,072,531</b>
Other Investments:		
Corporate Bonds:		
Not on securities loan	\$ 3,819,464,755	\$ 4,764,746,998
On securities loan	184,203,613	146,211,502
U.S. Government and Agencies:		
Not on securities loan	1,072,285,743	639,447,079
On securities loan	1,065,096,596	1,314,380,452
Mortgage backed:		
Not on securities loan	3,930,905,540	3,937,066,297
On securities loan		152,080,000
Equities:		
Not on securities loan	21,409,479,605	24,849,998,673
On securities loan	696,504,363	802,129,761
Real Estate:		
Not on securities loan	4,639,006,704	5,168,706,127
On securities loan		52,700,428
Private Equities:	257,932,891	69,834,713
International Securities:		
Not on securities loan	9,195,374,804	10,167,819,725
On securities loan	312,398,868	645,748,770
Collateral on loaned securities	2,330,316,293	3,203,302,149
<b>Total Other Investments</b>	<b>\$48,912,969,775</b>	<b>\$55,914,172,674</b>

a. **Fair Value** — If available, quoted market prices have been used to value investments as of December 31, 2002 and 2001. Securities not having a quoted market price have been valued based on yields currently available on comparable securities of issuers with similar credit ratings. The fair value of real estate is based upon estimated current values and independent appraisals. Private equities are valued based on September 30th net asset values plus or minus purchases, sales and cash flows from October 1, through December 31, of the reporting year.

GASB Statement No. 3, *Deposits with Financial Institutions, Investments, and Reverse Repurchase Agreements*, requires governmental entities to categorize investments to give an indication of the level of risk assumed by the entity at year end. Category 1 includes investments that are insured or registered for which the securities are held by OPERS, or by its agent in the name of OPERS. Category 2 includes uninsured and unregistered investments for which the securities are held by the counterparty's trust department or agent in the name of OPERS. Category 3 includes uninsured and unregistered investments for which the securities are held by the counterparty or by its trust department or agent but not in OPERS' name.

All investments of OPERS meet the criteria of Category 1 except real estate, private equity and securities on loan, which by their nature are not required to be so categorized. Investments are held in the name of OPERS or its nominee by the Treasurer of the state of Ohio as custodian.

#### 4. LEASES

OPERS leases equipment with lease terms of one year or less. Total lease expense was \$538,282 and \$404,348 for the years ended December 31, 2002 and 2001, respectively.

#### 5. VACATION AND SICK LEAVE

As of December 31, 2002 and 2001, \$3,904,953 and \$3,419,751, respectively, were accrued for unused vacation and sick leave for OPERS' employees. Employees who resign or retire are entitled to full compensation for all earned unused vacation. Unused sick leave pay is lost upon termination. However, employees who retire are entitled to receive payment for a percentage of unused sick leave.

#### 6. DEFERRED COMPENSATION PLAN

OPERS does not sponsor a deferred compensation program. OPERS employees are eligible to participate in the Ohio Deferred Compensation Plan, a state-sponsored plan created in accordance with Internal Revenue Code (IRC) Section 457. The plan, available to all OPERS employees, permits them to defer a portion of their salary until future years. Deferred compensation assets are not available to employees until termination, retirement, death or unforeseeable emergency.

IRC Section 457 requires that the amount of compensation assets deferred under a plan, all property and rights, and all income attributable to those amounts, property, or rights be held in trust for the benefit of the participants. This insulates 457 benefits from the claims of an employer's general creditors. Accordingly, OPERS does not include the deferred compensation assets or liabilities of the Ohio Deferred Compensation Plan in its financial statements.



**7. OPERS' SCHEDULE OF REQUIRED CONTRIBUTIONS**

All employees of the System are eligible for membership in OPERS. The System's annual required contributions for the year ended December 31, 2002 and for each of the five preceding years is as follows:

Year Ended December 31	Annual Required Contribution	Percentage Contributed
1997	\$1,537,037	100%
1998	1,700,572	100
1999	1,783,233	100
2000	1,766,772	100
2001	3,078,282	100
2002	4,350,989	100

**8. SELF-INSURED EMPLOYEE HEALTH CARE**

OPERS is self-insured under a professionally administered plan for general health and hospitalization employee benefits. OPERS maintained specific stop loss coverage per employee for medical benefits in the amount of \$250,000 for both 2002 and 2001. OPERS also maintained a lifetime maximum stop loss coverage per employee for medical benefits in the amount of \$1 million for both 2002 and 2001.

The summary of changes in incurred but unreported claims as of December 31, 2002 and 2001 follows:

	General Health Insurance
Claims Liability as of December 31, 2000	\$ 8,898
Claims Incurred	2,539,415
Claims Paid	(2,519,063)
Claims Liability as of December 31, 2001	29,250
Claims Incurred	3,242,573
Claims Paid	(3,227,688)
Claims Liability as of December 31, 2002	\$ 44,135

## Required Supplementary Information

### *Schedule of Funding Progress*<sup>\*\*</sup>

(Dollar Amounts in Millions)

Valuation Year	Actuarial Accrued Liabilities (AAL)	Valuation Assets	Unfunded Actuarial Accrued Liabilities (UAAL)	Ratio of Assets to AAL	Active Member Payroll	UAAL as of % of Active Member Payroll
1992	\$23,961	\$20,364	\$3,597	85%	\$ 6,889	52%
1993	26,056	23,063	2,993	89	7,236	41
1994	28,260	25,066	3,194	89	7,625	42
1995	30,556	27,651	2,905	90	7,973	36
1996	32,631	30,534	2,097	94	8,340	25
1997	34,971	33,846	1,125	97	8,640	13
1998	37,714	38,360	(646)*	102	9,017	(7)*
1999	43,070	43,060	10	100	9,477	0
2000	46,347	46,844	(497)*	101	10,192	(5)*
2001 <sup>#</sup>	47,492	48,748	(1,256)*	103	10,782	(12)*

- \* At December 31, 1998, 2000 and 2001, valuation assets were in excess of Actuarial Accrued Liabilities (AAL).
- \*\* The amounts reported in this schedule do not include assets or liabilities for post-employment health care benefits.
- # Revised actuarial assumptions, see Notes to Required Supplementary Information.

### *Schedule of Employer Contributions*<sup>\*</sup>

Year Ended December 31	Annual Required Contributions	Percentage Contributed
1997	\$ 811,485,028	100%
1998	886,684,170	100
1999	935,426,954	100
2000	718,807,713	100
2001	977,289,237	100
2002	1,109,983,205	100

- The Board has adopted all contribution rates as recommended by the Actuary.
- \* The amounts reported in this schedule do not include contributions for post-employment health care benefits.

See Notes to Required Supplementary Information.



# Notes to Required Supplementary Information

## 1. DESCRIPTION OF SCHEDULE OF FUNDING PROGRESS

Each time a new benefit is added which applies to service already rendered, an "unfunded actuarial accrued liability" is created. Laws governing OPERS require that these additional liabilities be financed systematically over a period of future years. Also, if actual financial experiences are less favorable than assumed financial experiences, the difference is added to unfunded actuarial accrued liability.

In an inflationary economy, the value of the dollar is decreasing. This environment results in employee pay increasing in dollar amounts resulting in unfunded actuarial accrued liabilities increasing in dollar amounts, all at a time when the actual value of these items, in real terms, may be decreasing. Looking at just the dollar amounts of unfunded actuarial accrued liabilities can be misleading. Unfunded actuarial accrued liabilities divided by active employee payroll provides an index which adjusts for the effects of inflation. The smaller the ratio of unfunded actuarial accrued liabilities to active member payroll, the stronger the system. Observation of this relative index over a period of years will give an indication of whether the system is becoming financially stronger or weaker.

## 2. ACTUARIAL ASSUMPTIONS AND METHODS

**Funding Method** — An entry age normal actuarial cost method of valuation is used in determining benefit liabilities and normal cost. Differences between assumed and actual experience (the actuarial gains and losses) become part of unfunded actuarial accrued liabilities. Unfunded actuarial accrued liabilities for pension benefits are amortized over a period of time to produce payments which are level percents of payroll contributions based on an open amortization period.

As of December 31, 2001, the date of the last actuarial study, all divisions were fully funded.

As of December 31, 2000, the state and local government divisions were fully funded. The necessary funding periods for the public safety and law enforcement divisions are 16 years and 19 years, respectively.

**Asset Valuation Method** — For actuarial purposes, assets are valued utilizing a method which recognizes book value plus or minus realized and unrealized investment gains and losses amortized on a straight line basis over a four year period.

Significant actuarial assumptions employed by the actuary for funding purposes as of December 31, 2001, the date of the latest actuarial study, and 2000 include:

**Investment Return** — An investment return rate of 8% and 7.75%, compounded annually, for all members, retirees, and beneficiaries was assumed for the years 2001 and 2000, respectively.

**Salary Scale** — As of December 31, 2001, the date of the latest actuarial valuation, the active member payroll was assumed to increase 4% annually, which is the portion of the individual pay increase assumption attributable to inflation and overall productivity. Also assumed were additional projected salary increases ranging from .50% to 6.30% per year depending on age, attributable to seniority and merit.

As of December 31, 2000, the active member payroll was assumed to increase 4.75% annually, which is the portion of the individual pay increase assumption attributable to inflation and overall productivity. Also assumed were additional projected salary increases ranging from .54% to 5.1% per year depending on age, attributable to seniority and merit.

**Benefit Payments** — Benefit payments are assumed to increase by 3% of the original retirement benefit per year after retirement.

**Multiple Decrement Tables:**

*Mortality* — For retirees, 90% of the rates in the 1971 Group Annuity Mortality Male and Female Tables, projected to 1984 were used to project mortality. The mortality rates for disability allowances were 300% of the rates in the 1983 Group Annuity Mortality Table for Males, and 400% of the rates in the 1983 Group Annuity Mortality Table for Females

*Disability* — Projections for active employees are based on OPERS' experience.

*Withdrawal* — Projections for active employees are based on OPERS' experience.

**Health Care Benefits** — Health care benefits are financed through employer contributions and investment earnings earned on those contributions. Employer contributions, equal to a fixed percent of member covered payroll, are used to fund health care expenses. The contributions allocated to retirees healthcare, along with investment income on allocated assets are expected to be sufficient to sustain the program for 15 years based on the current plan design.

The portion of employer contributions are used to fund health care expenses was 5% and 4.3% of member covered payroll for 2001 and 2000, respectively.

OPERS' actuarial valuation is calculated separately for retirees and beneficiaries and for active and inactive members.

The actuarial present value of benefits to be paid retirees and beneficiaries currently receiving benefits and deferred survivor beneficiaries, whose benefits have been determined, is calculated using the assumptions noted above. The reserves in the Annuity and Pension Reserve Fund and the Survivor's Benefit Fund, together with interest credited from the Income Fund, are compared to the actuarial accrued liability for the remaining lifetimes of the retirees and beneficiaries. Any deficiency is then funded by a transfer from the Employers' Accumulation Fund. Consequently, all such determined benefits are fully funded.

The actuarial accrued liability for active and inactive members is calculated using the entry age normal actuarial cost method. The assets of the Employees' Saving Fund, Employers' Accumulation Fund, and the market value adjustment are compared to the actuarial accrued liability of active and inactive members to arrive at the unfunded actuarial accrued liability or, in cases where assets exceed liabilities, assets in excess of actuarial accrued liability.

The unfunded actuarial liability based upon the two most recent annual actuarial valuations is as follows:

**Unfunded Actuarial Accrued Liability**

				December 31, 2001	December 31, 2000
	State Group	Local Government Group	Law Enforcement Group	Total	Total
Present value of actuarial accrued liability for active and inactive accounts	\$11,351,609,315	\$15,982,583,455	\$ 1,070,817,968	\$ 28,405,010,738	\$28,330,051,319
Less:					
Employers' Accumulation Fund*	6,611,917,926	9,135,318,962	697,294,061	16,444,530,949	16,963,588,806
Employees' Savings Fund	3,129,330,863	4,597,800,498	264,139,835	7,991,271,196	7,447,696,499
Market Value Adjustment	2,121,557,948	2,917,047,836	187,050,330	5,225,656,114	4,415,496,141
<b>Unfunded/(Assets in excess of) actuarial accrued liability**</b>	<b>\$ (511,197,422)</b>	<b>\$(\$667,583,841)</b>	<b>\$ (77,666,258)</b>	<b>\$ (1,256,447,521)</b>	<b>\$ (496,730,127)</b>

\* Amounts shown reflect transfers out of the Employers' Accumulation Fund to fully fund the Annuity and Pension Reserve Fund and Survivors' Benefit Fund.

\*\* At December 31, 2001, and 2000, Valuation Assets were in excess of Unfunded Actuarial Accrued Liabilities.



# Administrative Expenses\*

For The Years Ended December 31, 2002 and 2001

	2002	2001
Personal Services:		
Salaries and Wages	\$ 28,264,628	\$ 24,115,140
Retirement Contributions	\$ 4,026,467	\$ 3,367,921
Employee Insurance	\$ 4,464,750	\$ 3,013,058
Other Personnel Expense	\$ 398,100	\$ 114,678
Other Services and Charges:		
Professional Services:		
Actuarial Services	\$ 2,250,255	\$ 954,492
Audit Services	\$ 598,281	\$ 173,372
Consulting Services	\$ 2,437,616	\$ 501,131
Investment Services	\$ 2,688,665	\$ 3,048,807
Legal and Investigation Services	\$ 549,496	\$ 299,265
Medical Examinations	\$ 1,786,008	\$ 1,305,323
Retirement Study Council	\$ 273,544	\$ 292,793
Banking Fees and Financial Services	\$ 4,215,802	\$ 3,808,841
Communication:		
Postage & Shipping	\$ 2,114,701	\$ 1,971,788
Printing and Publications	\$ 1,353,915	\$ 432,598
Information Technology	\$ 2,732,822	\$ 2,372,622
Office Equipment & Supplies	\$ 1,580,878	\$ 1,326,255
Training and Travel Expense	\$ 1,852,488	\$ 1,568,894
Facility Expenses	\$ 2,014,881	\$ 1,277,267
Child Care Center Expenses	\$ 151,792	\$
Miscellaneous	\$ 164,112	\$ 130,912
	\$ 63,919,201	\$ 50,075,157
Depreciation		
Building Depreciation	\$ 437,897	\$ 435,803
Equipment Depreciation	\$ 10,444,895	\$ 2,742,719
	\$ 10,882,792	\$ 3,178,524
<b>Total Administrative Expenses</b>	<b>\$ 74,801,993</b>	<b>\$ 53,253,680</b>

\* Includes investment-related administrative expenses

## Schedule of Investment Expenses

For the Years Ended December 31, 2002 and 2001

	2002	2001
Investment Services	\$ 4,519,511	\$ 3,048,807
Investment Staff Expense	6,757,043	5,356,144
Investment Legal Services	344,680	20,388
Allocation of Administrative Expenses (See Note 2b)	6,913,584	4,746,993
<b>Total Investment Expenses</b>	<b>\$18,534,818</b>	<b>\$13,172,332</b>

## Schedule of Payments To Consultants

OPERS paid the following investment consultants during 2002:

Capital Market Risk Advisors	\$ 1,828
Cooper Consultants Corp.	75,089
Cost Effectiveness Measurement Inc.	40,000
Ennis Knupp & Associates	530,000
Macroeconomic Advisors, LLC	31,100
McLagan Partners, Inc.	68,882
Mercer Human Resource Consulting	6,847
Pacific Corporate Group	855,556
The Townsend Group	240,000
<b>Total</b>	<b>\$1,849,302</b>

Schedule of Fees and Commission Payments to Brokers presented on page 93.



THE COMPREHENSIVE ANNUAL FINANCIAL REPORT 2002

# *Investment* SECTION





# Investment Report

Dear Members

IT IS A PRIVILEGE to present to you the Investment Section of the Comprehensive Annual Financial Report for the year ending December 31, 2002. Over the last three years, financial markets here and abroad have experienced a downturn the magnitude of which hasn't been witnessed since the seventies. In this letter, I will review recent stock market performance, provide an historical perspective for the market declines we have seen, and describe what we at OPERS are doing to manage through this difficult investment environment.

## OPERS' Investment Characteristics

First, it may be helpful to review some characteristics of OPERS' investment program. Measured by assets, we are the tenth-largest public pension system in the U.S. and the 17th largest defined-benefit retirement plan in the world. Our assets stood at \$47.5 billion at year-end 2002, down from \$53.5 billion at year-end 2001. We experienced a return of a negative 10.7% in 2002, in line with our composite benchmark and commensurate with the return experienced by other large public pension plans, but clearly very disappointing in absolute terms. It was the third consecutive year that annual investment returns have fallen short of OPERS' targeted actuarial rate of return objective of 8% per annum. The next section reviews the performance of the stock market over the last few years.

## Recent Stock Market Performance

The last few years have been extraordinary for financial markets. In the five years ending December 31, 1999, the S&P 500 stock index registered a compound annual return of

approximately 28.2%, an almost unparalleled period of gains. However, in the recent three-year period ending December 31, 2002, the S&P 500 has registered a compound annual return of -14.45%. The recent declines have erased stock market gains stretching back to 1997. Overall, the U.S. stock market has declined about 45% from the peak reached in March of 2000. With such volatile performance, some are questioning whether the worst is over for stocks and whether a strong allocation to equities is appropriate for the long term. The next section provides an historical perspective on stock market performance.

## The Stock Market - An Historical View

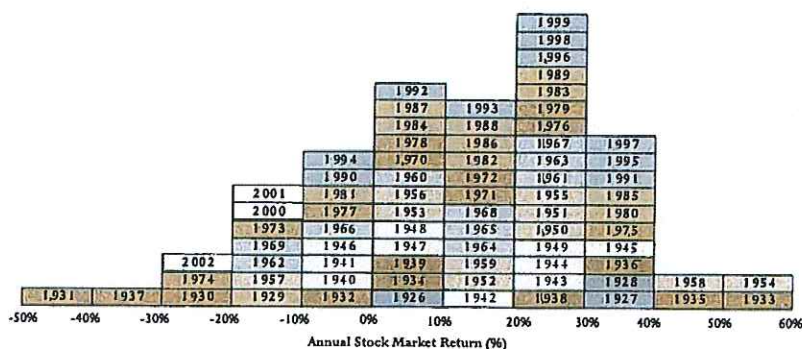
- Stocks have provided an average return of 9.5% per annum during the period 1900-2002.
- The excess return of stocks over bonds (generally referred to as the equity risk premium) has been 4.4% during this period.
- Since 1900, there have been just two decades when stocks have failed to earn a positive risk premium, 1910 through 1919, and the decade of the seventies.
- In any given year, stocks can be very volatile - the worst year was 1931 when stocks recorded a loss of 43.9%, and the best year was 1933 when stocks gained 57.6%.

The following chart, provided to us by our investment advisor Ennis Knupp + Associates, visually displays the annual return on the stock market by grouping each year in a performance "bucket" (the horizontal axis) and shading each year within a decade in a like color.



## Historical Stock Market Returns

1926-2002



From the chart, a few observations can be drawn:

- The stock market generally provides a material positive return.
- It is rare to experience three consecutive years of negative returns.
- Periods of negative returns are often followed by periods of positive return.
- The dispersion of annual returns is quite wide.

The following section describes how we are managing through the current investment environment.

### Managing the Investment Portfolio

Periods of weak investment return tempt investors to abandon a long-term investment focus in order to minimize the "pain" associated with an unrealized loss of capital, particularly during a protracted market slump. The data provided above underscore the importance of retaining a long-term discipline, especially for an institution such as a pension plan that has a very long investment horizon measured in decades.

Last year, I reported to you that we completed a restructuring of the assets in 2001. In the restructuring, we raised our allocation to U.S. stocks to 47% from a previous target of 35%, and reduced our exposure to bonds to 23%

from a previous target of 35% of the asset mix. While 2002 was not a good year for stocks, our decision to increase exposure to stocks was made in the interest of positioning the portfolio for superior returns over the long-term. In 2002, we maintained a disciplined, long-term focus by maintaining our equity exposure in the face of a declining market. During the market lows of August and October, we added to our equity holdings in order to maintain our target allocation to stocks. In both instances, the portfolio benefited from our actions.

As a very large institutional investor, OPERS can expect over the long-term to earn the return on a diversified portfolio of capital market assets, less the costs to manage the assets. Simply put, we can only deliver returns that capital markets provide. What we know about capital markets is that:

- They fluctuate, sometimes wildly, causing market timing to be imprudent for both individual and institutional investors. Proper diversification across and within asset classes is critical.
- They are generally "efficient" in the sense that it is often difficult to beat a market index consistently. So-called passive management (or indexing) is an attractive alternative to active management in efficient public markets.
- Costs matter. The cumulative cost to manage assets has a material impact on long-term returns.

At OPERS, we remain focused on the following disciplines:

- Maintaining a diversified asset mix that over the long-term is expected to provide a rate of investment return that exceeds the growth of the pension liabilities. Our Investment Policy requires us to formally evaluate our asset mix every three years to ensure that it continues to provide an appropriate level of diversification and the required expected return. We will conduct such an evaluation in 2003.

- Striving to earn the market return on each asset class where we invest, and where a reasonable expectation exists, to earn an active management premium on a share of the assets. At OPERS, about 50% of our assets are passively managed (indexed) to a benchmark, allowing us to earn the market return at a low cost in markets where it is difficult to earn excess return. In other markets, such as real estate and in private market transactions, we employ active management in the expectation of earning a premium return.
- Maintaining low investment management costs. We utilize a variety of approaches to control investment management costs. Our professional investment staff manages about two-thirds of the assets internally at a cost that is one-tenth of what would be charged

by external providers. Additionally, as mentioned above, we use low-cost passive management strategies in areas where it has been shown to be difficult to earn an active management premium. At OPERS, our all-in asset management costs are 18 cents per hundred dollars, comparing very favorably to similarly sized pension plans.

The last three years have been difficult for investors, but not unexpected. Markets fluctuate. We will continue to focus on the disciplines outlined above to earn a competitive, long-term return on the asset base and secure the pension promises made to you.



Neil V. Toth  
Director – Investments



## Letter from Investment Consultant

ENNISKNUPP

3.10.03

Board of Trustees  
Public Employees Retirement System of Ohio  
277 East Town Street  
Columbus, OH 43215-4642

As independent investment advisor to the Board of Trustees of the Ohio Public Employees Retirement System ("OPERS"), we comment on the reporting of OPERS investment results, OPERS investment policy and the Board's oversight of System investments.

**Investment Results.** OPERS investment results, as presented in this report, fairly represent, in our opinion, the investment performance of OPERS assets. All measurements and comparisons have been made using standard performance evaluation methods, and results are presented in a manner consistent with the Performance Presentation Standards of the Association for Investment Management and Research.

**Investment Policy.** OPERS assets are managed under well-articulated policies, which, in our opinion, are appropriate to the circumstances of OPERS. Investment policy is progressive, yet prudent. The policies ensure diversification and exhibit attention to risk control generally. Throughout the year the Board, Executive Director and Director of Investments have taken appropriate measures to ensure that investments have conformed with the Board's policies.

**Prudent Oversight.** While delegating day-to-day investment management responsibility to its staff, the Board retains the responsibility to monitor all aspects of investment. In our opinion, the Board has established and executed an appropriately comprehensive process for overseeing the management of assets. Through regular reviews by the Board, quarterly performance appraisals by an independent firm, and the day-to-day oversight activities of the staff, the Board has achieved a high degree of awareness and critical oversight of OPERS investments.

Very truly yours,



Richard M. Ennis, CFA  
Principal

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## 2002 Economic Review

This report was prepared by Dr. Joel L. Prakken, Chairman, Macroeconomic Advisors, L.L.C., for the Ohio Public Employees Retirement System  
March 6, 2003

### *Yesterday, Today, and Tomorrow*

Geopolitical uncertainties will restrain U.S. economic growth to around 2% during the first half of 2003. However, imbalances that plagued us in early 2000, and that ultimately caused the recession of 2001, have been redressed. Hence, following a successful military campaign against Iraq this spring, after which oil prices will recede, financial markets rally, and confidence strengthen, the economy will be poised to accelerate. Stimulus from another round of federal tax cuts will help push growth to 4.5% over the second half of the year. Inflation is not currently a threat, but the economy is close to full employment and short-term interest rates are at an unprecedented low. Therefore, when later this year it concludes the recovery is on solid footing, the Fed will initiate the next round of monetary tightening. With interest rates rising on overall economic strength, stocks will outperform bonds significantly heading into 2004. Interest sensitive consumer sectors - housing and vehicles - that have sustained the economy for the better part of two years, will fade slightly as business capital spending recovers.

#### **Cyclical Recovery versus Post-Bubble Hangover**

Early in 2000, investors made a fundamental re-assessment of the prospective returns to owning or producing hi-tech capital goods. Suddenly, stocks - but especially those hi-tech stocks so recently coveted - seemed overvalued. Just as suddenly, recently acquired computer gear, communication equipment, and software became a "capital overhang". The two-fold result was immediate and dramatic. The U.S. equity market, which had soared to record heights early that year, slumped abruptly; within twelve months, over \$5 trillion of equity wealth was destroyed. Since consumer spending depends importantly on household wealth, the sudden drop in share prices quickly worked to slow consumption. Likewise, business spending on capital goods contracted sharply as corporate

managers looked to shed excess fixed capital; the decline of investment spending likely was exacerbated following the binge of hi-tech investments a year earlier intended to beat the Y2K bug. As the economy slowed, firms cut production to trim inventories that, despite advances in "just-in-time" techniques for managing stocks, were viewed as excessive. By early 2001 the economy had slipped into a recession, the eleventh since World War II.

Each episode is different, but during all economic downturns regular cyclical forces are at work to rectify those imbalances that accumulated in the latter stages of the previous expansion. That ultimately contributed to the ensuing recession. As the imbalances are worked off, the economy gathers new momentum, eventually emerging into recovery and finally expansion. The recession of 2001 was mild and brief in historical perspective, but in 2002 the lingering effects of the "post-bubble hangover" and the normal forces of cyclical recovery fought to a stand-off. The economy choppily grew 2.9% over the four quarters of last year - close to the secular average. The unemployment rate rose but only slightly and, in any case, it remained well below the average peak of earlier recessions and not far from what, only a few years back, most economists considered to be full employment. In essence, it was a year of near-trend growth at close to full employment! This surprises many businesspeople whose perception is that the economy "felt worse" than that. They have a point, too. Uneven growth of 2.9% is poor, and the stock market's recent performance has been uncharacteristically weak for an economy in early recovery. Furthermore, some sectors of the economy and regions of the country continue to struggle with the hangover.

#### **The Weight of Geopolitical Uncertainty**

If nothing else had transpired, today's economy would be more vibrant. However, the terrorist attacks against the United States on September 11 were a meaningful and direct hit on the U.S. economy. More important, they ushered in an era of domestic disquiet as Americans came to



grips with the newly perceived threat of terror. Then, in mid-2002, a spate of revelations over suspect, even fraudulent, accounting practices caused investors to question the advisability of investing in stocks about which they apparently knew less than thought earlier. Later in the year, the growing specter of war with Iraq, compounded by the unexpected confrontation with North Korea over that country's nuclear program, was cause for further anxiety. By early 2003, worries about the potential disruption of middle-eastern oil supplies, a politically inspired strike that crippled Venezuelan exports of crude oil and refined products, and unusually cold winter weather combined to drive up energy prices to the highest level since the Gulf War of 1990-91. No wonder that, paying more at the pump, concerned about personal security, and unsure about the immediate economic future, American consumers and businesspeople have grown reticent about spending, investing, and risk-taking in general. The effect has been to restrain growth to below the economy's sustainable trend of around 3% during the phase of recovery when GDP often is accelerating toward above-trend growth.

#### **Redressing the Imbalances**

The economic onus of geopolitical events has overshadowed the corrective forces quietly at work beneath the economy's choppy surface waters. Indeed, in our estimation, the excesses that characterized the economy in the late 1990s quietly have been worked off - and then some - setting the stage for a healthy economic rebound if, and when, today's uncertainties finally lift.

For example, while experts always will disagree about the appropriate valuation of equities, in retrospect most now acknowledge the market was overvalued in early 2000. Since then, the decline has been truly stunning. In two years the Wilshire 5000 stock price index has plummeted roughly 44%. Valuation models developed and used by Macroeconomic Advisers suggest the decline has gone too far, and that share prices

have become undervalued by anywhere from 10% to 20%. This undervaluation began emerging in the spring of 2002, about the time that early concerns surfaced regarding corporate accounting practices, but it grew larger as the stock market slumped with the escalating tensions surrounding the American confrontation with Iraq. While professional opinion is not unanimous on this score, there are other prominent equity analysts that believe the market has become undervalued. When current uncertainties lift, the market will be poised to recover smartly. As it does, consumer spending will get a lift from the resulting wealth effects, and capital spending will get a boost from the reduction in the cost of equity finance.

What of the capital overhang? Statistical work done by Macroeconomic Advisers suggests that in the late 1990s there was overinvestment in computers and software that left an unwanted "overhang" of hi-tech gear equal to about 5% of the hi-tech capital stock. The ensuing retrenchment in business spending on capital goods, coupled with the very rapid rate of depreciation on hi-tech capital, worked to dissipate this excess. Now, our same work shows that the overhang has given way to a shortfall! Our interpretation of this is that that businesses are delaying capital expenditures as they wait for a resolution of the crises with Iraq. When that resolution comes, the stage will be set for a "catch up" in capital spending.

While inventories were considered excessive in 2001, since then — in many industries — inventories have been pared to the bone. This makes sense in an environment where risks to the economy are perceived as tilted towards the downside, especially when the prices of goods held in inventories are falling. However, so streamlined are inventories now that if final demand for goods and services accelerates, production will have to respond quickly to prevent "stock outs" in some industries. This suggests the turnaround in GDP, when it comes, could prove sharp.

### Oil Prices

Three factors have combined to drive up crude oil prices. The first is seasonal: it's been a long, cold winter. This has put recent upward pressure on the domestic price of natural gas, too. The second factor is the political unrest in Venezuela and the resulting strike against the national oil company there. The strike sharply curtailed Venezuelan production and exports early this year, adding, in our estimate, as much \$6 per barrel to the price of West Texas Intermediate (WTI) crude oil in January and February. The abrupt closure of wells during the strike resulted in the permanent loss of some Venezuelan capacity. Nevertheless, output there now is slowly recovering, and as it does the price of oil should ease. The third factor is, of course, the pending war with Iraq and the possibility that hostilities there will disrupt middle-east oil supplies. Already some "war premium" has crept into global oil prices, and when war starts, prices initially could briefly spike towards \$50 per barrel. Furthermore, the upside risks to price during a war have been exacerbated by the drawdown in global petroleum stocks precipitated by the unexpected crisis in Venezuela.

An increase in oil prices acts like a tax that foreign producers impose on domestic consumers: it slows U.S. consumer spending. In addition, rising oil prices transfer resources from domestic consumers of oil to domestic producers — another negative for consumer spending. Hence, there is no doubt that the rise in oil prices over the last year has worked to slow the economy. If Venezuelan output continues to expand, and the U.S. scores a decisive victory over Iraq (more below) with little damage to middle-east oil supplies, crude oil prices, currently in the mid-30s, should fall to somewhere between \$20 and \$25 per barrel by early next year. This will provide a boost to the U.S. and global economies during the second half of this year and on into 2004.

### Lifting the Uncertainties: War with Iraq [Please note this report was written prior to the commencement of "Operation Iraqi Freedom."]

For the economy to grow faster, the weight of geopolitical uncertainties must lift, allowing financial markets to rally, confidence to rebound, and oil prices to decline. In our view, corporate governance has already faded as a serious issue restraining investor confidence. A credible chairman has been found for the Securities and Exchange Commission, and better oversight of accounting practices has been established. Late last year new legislation toughened accounting standards and strengthened the penalties for corporate malfeasance. The river of revelations reported in last summer's headlines has dried up, some corporate wrongdoers are under prosecution, and since last October the CEO's of major companies must vouch for the veracity of the numbers contained in their corporations' annual reports. In addition, Venezuelan production of crude oil and refined products seems gradually to be recovering.

War with Iraq, and the economic consequences, is conjecturable. However, the specter of war looms so large now, and the possibility of war has so infected recent economic data, that economic forecasters no longer can avoid discussing the implications of war on the outlook or making explicit their assumptions regarding the war and how tensions related to the confrontation with Iraq ultimately are resolved. Our forecast assumes there is a war with Iraq, that it commences late in March, lasts no more than a month, and that a decisive U.S. victory is achieved without significant disruption of middle-east oil production, without stirring social unrest in the region, without inciting terrorist reprisals against the U.S. and with a minimum of casualties. After the war, we assume that U.S. troops peacefully occupy Iraq until a successful civilian government can be established. We anticipate that when the fighting starts, initially the stock market will plunge



another 10%, quality spreads in financial markets will widen by as much as 50 basis points, oil prices will spike towards \$50 per barrel, and consumer confidence will tumble. However, when the outcome of the war becomes clear, we anticipate that stock prices, quality spreads, oil prices, and confidence will improve quickly, heading back not just towards levels immediately prior to the fighting, but to levels prior to the escalation of tensions in the middle of 2002.

### **The Impact of War**

In the press it is sometimes argued that increased defense expenditures during wartime imply that, in a tragic way, war is "good for the economy". This may have been true for World War II, the Korean War, and the Vietnam conflict — all of which lasted years, necessitated prolonged buildups in the defense industry, and began with more slack in the economy than there is today. Yet there are few, if any, parallels between the pending combat in Iraq and those earlier, larger conflicts. A better analogy is to the Gulf War of 1990-91. Like that conflict, the pending war with Iraq probably will be brief and fought mostly with equipment, munitions, and supplies on hand when combat commences. The subsequent expenditures to replenish supplies and rebuild expended munitions and destroyed equipment will be spread over the next few years. They will seem small against the backdrop of our \$10 trillion economy.

More concentrated, and hence more immediately important, will be the adverse economic impacts of sagging stock prices, weakening confidence, and rising oil prices. Estimates prepared by Macroeconomic Advisers suggest that the adverse effects of war with Iraq — even war with the "benign" outcome we assume — are enough to trim about 1/2 percentage point from GDP growth (relative to a "no-war" scenario) during the first half of 2003. This is the principle reason we expect the economy to grow only about 2% over the

first and second quarters of the year. After the war, as financial markets recover quickly and oil prices recede, the effect will be to boost GDP growth by about 1/2 percentage point (again, relative to a "no-war" scenario) over the last two quarters of the year. There also will be a modest stimulus from an increase in defense spending of about \$25 billion per year to cover the costs of first prosecuting the war and then occupying Iraq afterwards. As a consequence, of the extra defense spending, the rebound from the war will add slightly more to economic growth than the prelude to war subtracts.

We want to emphasize that worse outcomes than those assumed here are possible, even probable. In November of 2002, Macroeconomic Advisers, in conjunction with the Center for Strategic and International Studies in Washington, participated in an exhaustive analysis of the impact of war with Iraq on the global economy. The experts participating in the study did consider the benign scenario described above as the most likely outcome. However, "intermediate" and "worse" case scenarios considered at the time suggested the possibility of a growth recession or, in the extreme, an outright global recession with oil prices spiking to \$80 per barrel and remaining elevated for at least a year.

### **Fiscal Policy in the Outlook**

As noted above, defense spending, which already is rising rapidly, likely will increase further to recoup the cost of war with Iraq and the subsequent occupation. In addition, on January 6th President Bush proposed a new round of tax cuts that the Administration argues will provide the economy with a much-needed stimulus. The main elements of the President's plan proposes: (a) to expand the recently created 10% marginal tax bracket retroactive to the beginning of this year, and index the bracket to inflation; (b) to implement effective January 2003 those tax cuts that were pending under the Economic Growth and Tax Relief Reconciliation Act (EGTRRA) of 2002. These

include planned reductions in marginal rates, expanded child credits, and relief from the so-called "marriage penalty"; (c) to eliminate the double-taxation of capital income by exempting dividends from taxation at the personal level and by allowing corporations to designate retained earnings as a reduction in the cost basis of investors' stock.

Reception of the President's proposal has been lukewarm, even among Republicans. Some question the advisability of cutting taxes while the deficit already is deteriorating and when the U.S. also must finance a potentially costly war with Iraq. Democrats object to the distributional aspects of a cut in dividend taxes, which favors the wealthy, and so have countered with their own proposal that would tilt the tax cut towards the lower end of the income distribution and include monies for financially strapped states. On balance, it seems to us the odds of some legislation passing exceed fifty-fifty, so we have included in our forecast another "stimulus package" that combines elements of both the Republican and Democratic agendas. In particular, we assume legislation that includes the expansion of the 10% bracket and its indexation to inflation, as well as the acceleration of provisions of EGTRRA. We expect the push for lower dividend taxes eventually will be abandoned, but the package we assume does include \$15 billion new grants to states. The only lasting, new part of the tax cut is the expansion and indexing of the 10% bracket. The grants are a one-off payment, and the acceleration of provisions of EGTRRA simply brings forward tax cuts that were scheduled for implementation anyway.

We assume this legislation is implemented July 1 retroactive to the beginning of the year, and that to speed the return of money to taxpayers and starting in the third quarter, the Department of the Treasury mails out "advance refund" checks in 2003. In addition, withholding rates are assumed to be adjusted down starting July 1. Nevertheless, we anticipate large refunds next

spring as a consequence of taxpayers over-withholding during the first half of this year. Given the magnitude and timing of the tax cuts, their maximum impact on the growth of GDP occurs during the second half of this year and averages roughly 3/4 of a percentage point. This reinforces the economy's rebound from the adverse consequences of war with Iraq. The combined effect is to boost GDP growth over the third and fourth quarters to around 4 1/2%, bringing growth over the entire year up to 3.3%.

The economy would be even stronger were it not for the fact that fiscal policy at the state and local level is tightening. The budget plights of most states are deteriorating and 37 of them have balanced-budget requirements that will force them either to raise taxes or to pare spending in the next fiscal year. For most states, that begins July 1. The combined projected deficit of just California and New York is roughly equal to the size of the federal tax cut we've assumed for this year. Our forecast anticipates considerable belt-tightening at the state and local level, partly ameliorated by the new grants from the federal government. The result is to put state and local budgets on a track back to regain fiscal balance by the end of 2004.

### Cyclical Role Reversals

Most recessions since World War II have been preceded by a rising threat of inflation, either because aggregate demand was in danger of overheating or because supply-side shocks (like the oil price increases of the 1970s) pushed up costs. In these earlier episodes, tightening monetary policy forced up interest rates, contributing to the ensuing recession. Consequently, the usual cyclical dynamic has been for the most interest-sensitive sectors of the economy to weaken first heading into a recession; only somewhat later would capital spending decelerate. The recession of 2001, however, was investment-led, precipitated by the fundamental re-assessment of the prospective returns to owning and producing hi-tech capital goods. The Fed responded quickly by lowering



interest rates, with the result that vehicles sales and residential construction have been the mainstays of the economy for much of the last two years. Essentially, funds no longer desired to finance capital expansion became available to finance the purchase of new cars and houses.

We do not argue that the unusual cyclical strength of vehicle sales and housing starts has been an unwelcome development, far from it. However, a logical consequence is that as the demand for investment goods revives later this year, resources must be competed away from the household sector back toward the business sector. The conduit for this re-allocation will be a gradual rise of interest rates that will dampen households' appetite for vehicles and houses. Therefore, one should not expect vehicle sales and residential construction to play their usual role as strong, early cyclical drivers of this recovery; they are more likely to fade slightly as the overall economy strengthens. In our forecast, housing starts, which were 1,711 thousand during 2002, slip slightly to 1,702 thousand during 2003. Sales of light vehicles, which were 16.7 million during 2002, are projected to fall to 16.2 million this year. Meanwhile, business spending on equipment and software, which declined 8.8% over 2001, and advanced only 3.4% over 2002, is projected to be growing at double digit rates by the end of this year.

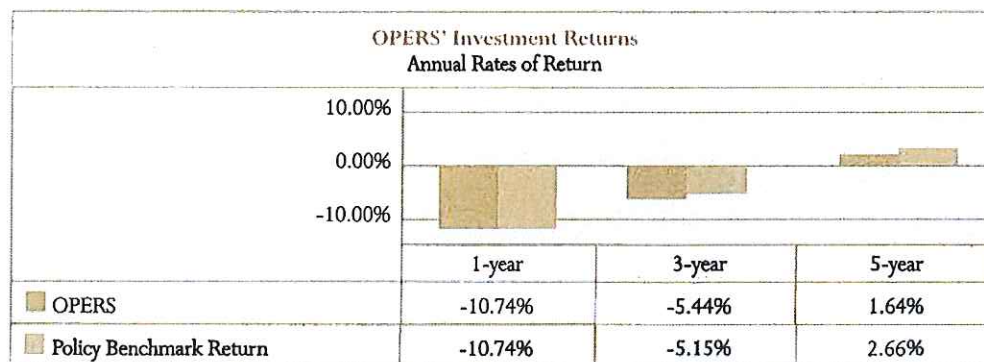
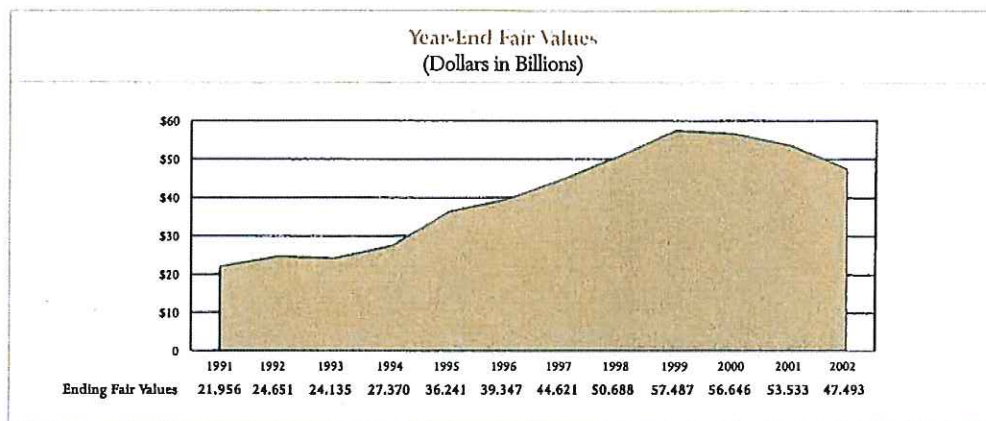
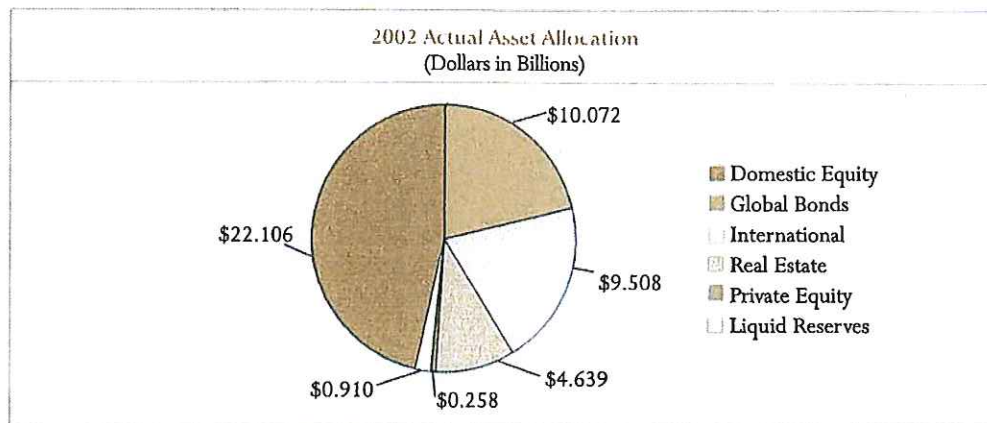
#### **Monetary Policy and Financial Markets**

As the economy weakened after early 2000, the Federal Reserve cut interest rates aggressively; now, the overnight interest rate is at 1 1/4%. This is the lowest on record, and well below the level one might expect in an economy already growing close to its sustainable rate and at an unemployment rate not much above a level

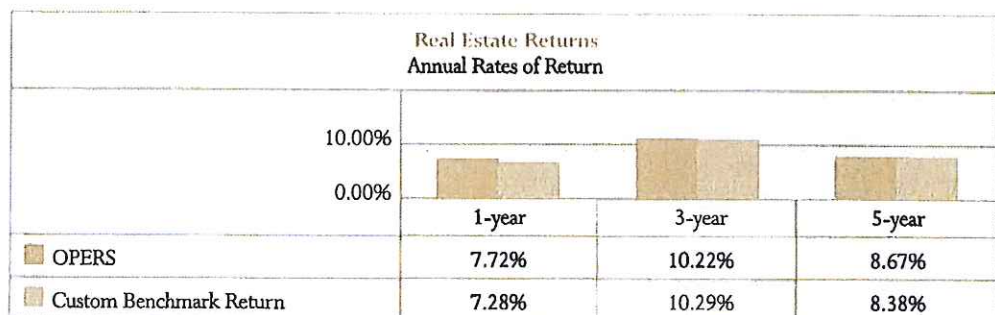
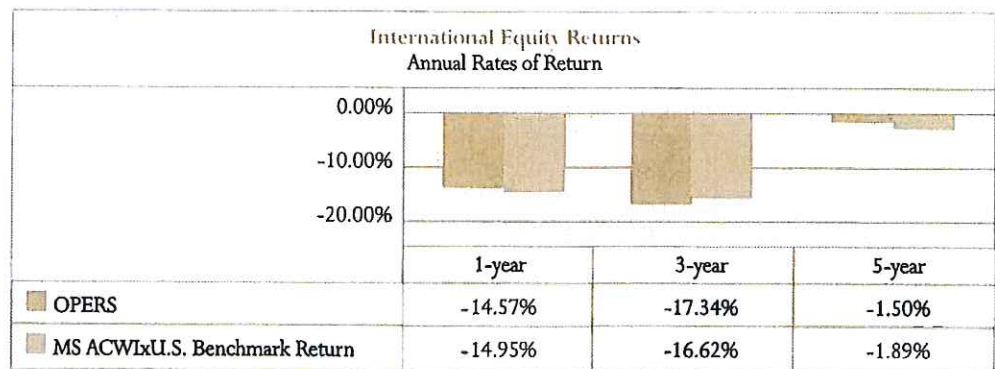
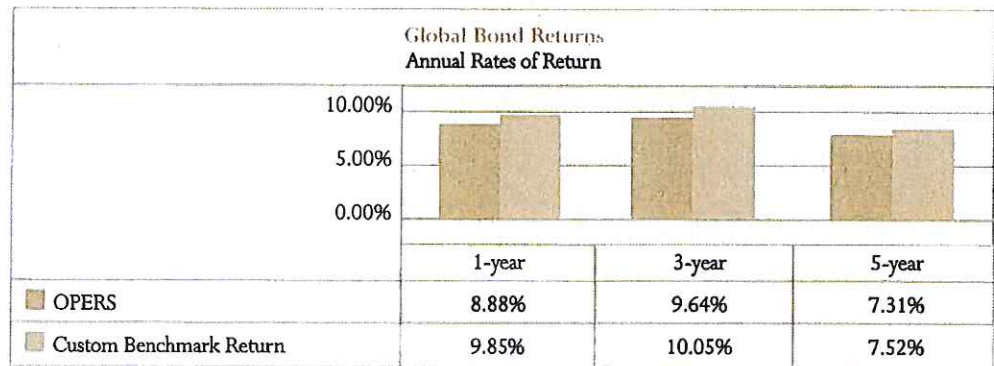
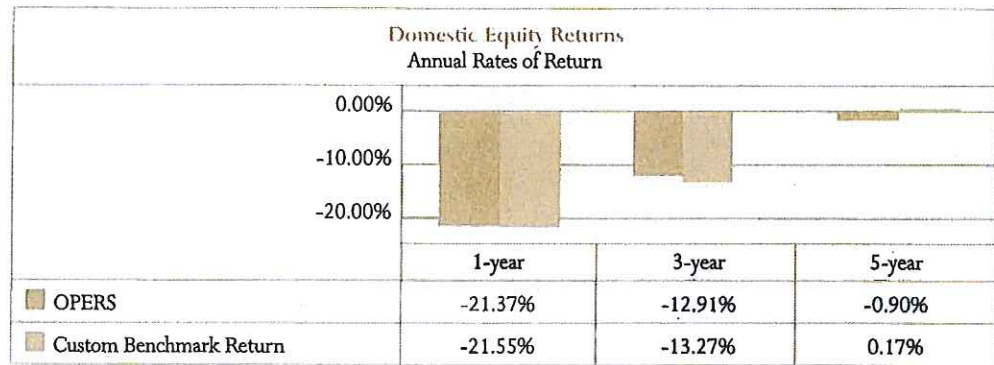
consistent with "full employment". With inflation low and geopolitical events skewing economic risks to the downside, the Fed's current policy stance is appropriate. However, given that already the economy is growing close to its sustainable rate, and that the unemployment rate is not far above the level consistent with "full employment," the Fed cannot afford to let the economy run hard for long before initiating the next round of monetary tightening. We expect that in October, with GDP growing solidly above the sustainable rate and the unemployment rate declining towards 5 1/2%, the Fed will commence tightening, pushing the overnight interest rate up to 1 3/4% by the end of this year, and to 3 1/2% by the end of next year.

As the economy gathers strength, and the Fed tightens monetary policy, long-term interest rates (including mortgage rates) will rise. Currently the 10-year Treasury note is yielding less than 4%. By the end of this year, we expect the 10-year note yield to push up to around 4 1/2% and, by the end of 2004, to above 5%. Only limited by rising long-term interest rates, share prices will climb with the economic recovery as investors willingly re-expose themselves to additional risk. After plunging during the early course of war with Iraq, equity values will rebound sharply by the end of the year to post a 12% gain from the fourth quarter of 2002. Over 2003, we expect equity wealth to rise another 15%. Encouraging as this seems, it would leave total stock market capitalization 29% below the peak achieved in the first quarter of 2000!

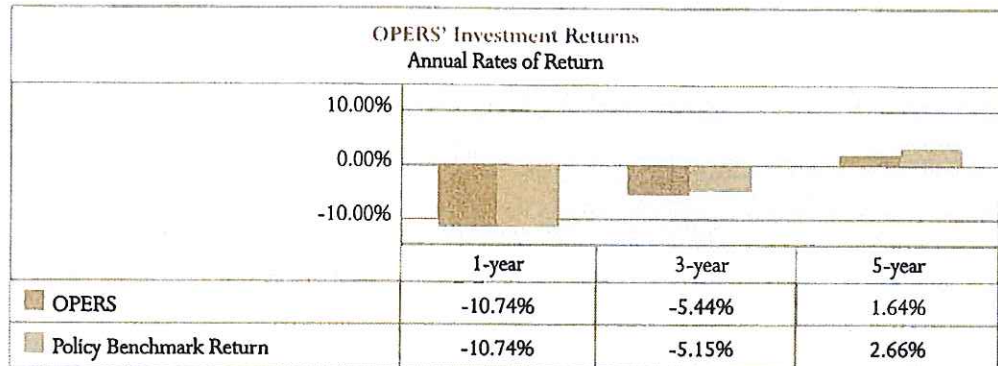
## Facts At A Glance







## Total Fund



### Investment Returns

The OPERS investment portfolio returned a negative 10.74% in 2002. We compare our overall portfolio return to a composite benchmark return that could be achieved by a portfolio that is passively invested in the broad market, with percentage weights allocated to each asset class as specified in OPERS' Statement of Investment Objectives and Policies. The return of the composite benchmark for 2002 was also -10.74%.

The historical returns for the investment portfolio and composite benchmark are shown above.

### Comparative Performance

In addition to measuring the portfolio's performance relative to the composite benchmark, the Board compares the performance of the portfolio over time to the returns achieved by a universe of comparable public pension plan portfolios. The analysis facilitates a percentile ranking of our performance relative to the universe. In this type of analysis, a lower score is more favorable

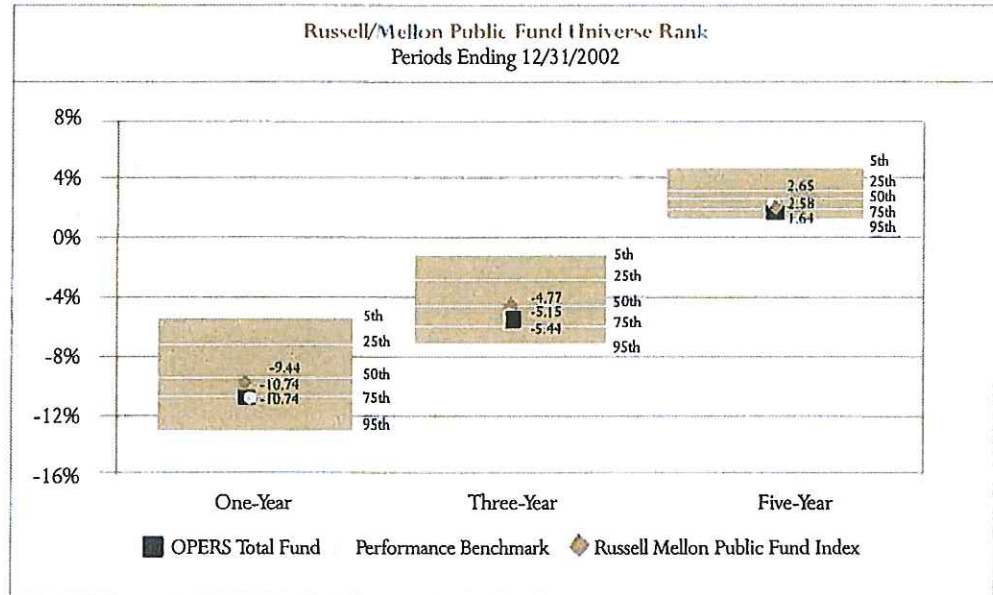
than a higher score. For example, a rank of 25 would indicate that our portfolio outperformed 75% of all the funds contributing to the survey.

In 2002, OPERS' investment performance ranked 83 in a universe of public plans, indicating that our results were better than 17% of the plans contributing to the survey. Our cumulative three-year and five-year results have achieved a ranking of 59 and 93, respectively, indicating that we performed better than 41% and 7% of the plans contributing to the survey over this period.

While our performance ranking last year was disappointing, it reflects our somewhat higher allocation to stocks than our peers. In periods of time when the stock market is falling, as has happened in 2001 and 2002, OPERS' returns will tend to trail the returns earned by funds with lower allocations to stocks. While the near-term results are discouraging, it is important to note that OPERS' decision to have a higher exposure to stocks is a long-term investment decision that is expected to provide superior investment returns over time.

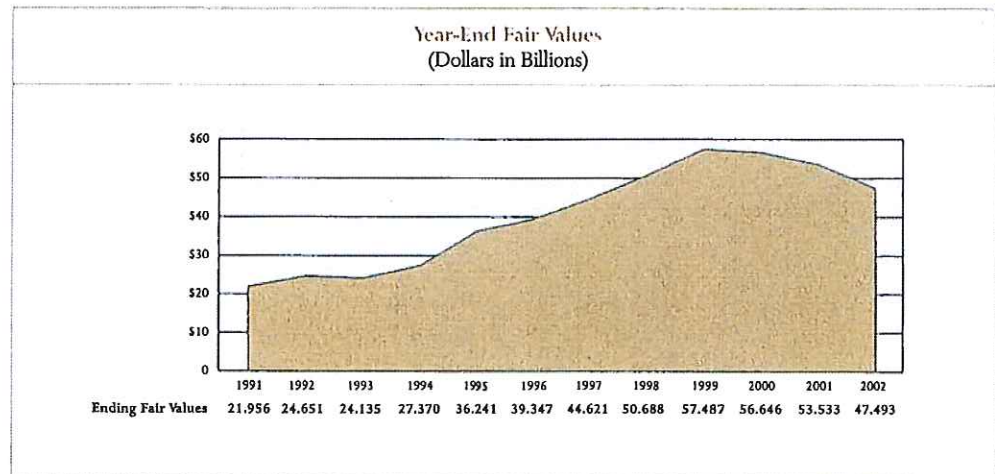


This chart shows our one-year, three-year, and five-year rankings. The bars in the chart represent the performance distribution of funds contributing to the survey, and are divided into quartiles.



### Growth of Portfolio

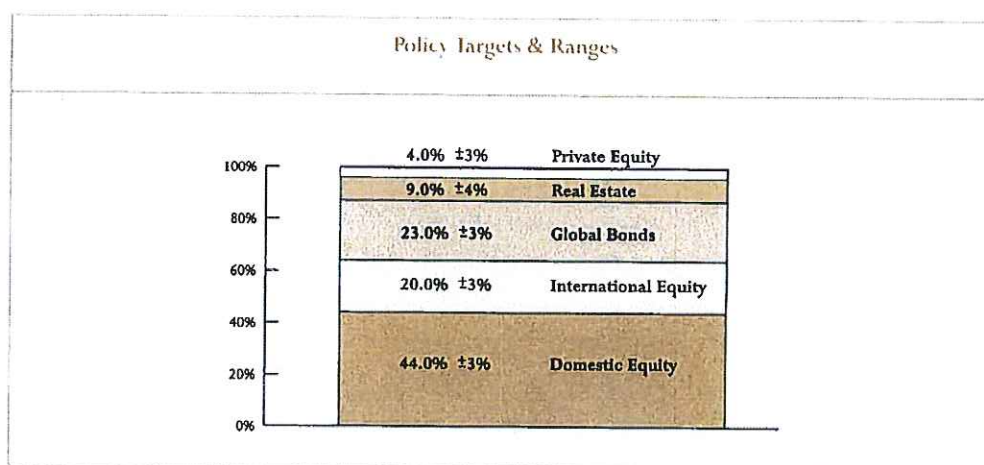
This chart shows the growth of the portfolio since 1991. We ended the year with assets of \$47.493 billion, down from \$53.533 billion at the end of 2001.



**Asset Allocation Policy**

In December of 2000, the Board of Trustees adopted a revised asset allocation policy. The chart below shows the current policy allocation reached in December of 2001, which will be in effect for 2003 and beyond.

Currently, our internal policy allocations for Domestic Equity and Private Equity are 47% and .6%, respectively. Over the next five years, we plan to increase the Private Equity allocation from .6% to 4% while decreasing Domestic Equity accordingly.

**Long Term Assumptions**

The asset allocation policy is arrived at through a formal asset-liability study conducted by our external investment advisor, Ennis Knupp. The study provides probabilities regarding the future funded status of the System under various assumptions involving the growth rate of

liabilities and the return on various asset mixes. A key input into the study is the expected long-term rate of return of major asset classes and the expected rate of inflation. The key investment assumptions used in the asset-liability study are displayed in the accompanying table.

Long-Term Assumptions		
Capital Market Assumptions	Long Term Return Expectations	Risk <sup>1</sup>
Domestic Equity	8.3%	16.7%
Global Bonds	4.5%	7.7%
International Equity	8.3%	18.7%
Real Estate	6.4%	12.1%
Private Equity	11.3%	31.2%
Expected Return on Portfolio	7.34%	12.58%
Price Inflation	2.5%	-

<sup>1</sup>Risk is defined as the standard deviation of expected return. For example, we expect that 2/3rds of the time, the range of outcomes for Domestic Equity will be between -8.4% (8.3% - 16.7%) and 25% (8.3% + 16.7%).



## Asset Class Reviews

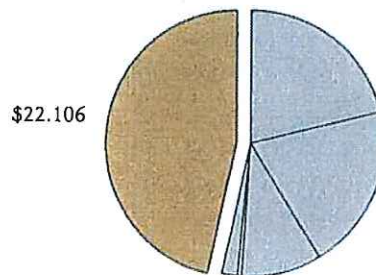
### Domestic Equity

#### Fair Value

As of December 31, 2002, the domestic equity portfolio had a fair value of \$22.106 billion. This represented 46.6% of the total OPERS fund. During the year, the purchases equaled \$4,682,545,534, while sales totaled

\$2,314,133,873. Portfolio turnover was 9.9% versus 18.9% in 2001. The OPERS portfolio generated total dividend income of \$359,124,910 versus \$293,848,771 in 2001.

2002 Domestic Equity Allocation as Share of Total Fund  
(Dollars in Billions)

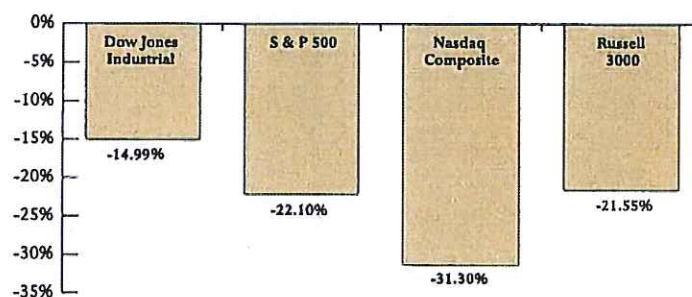


#### Market Overview

Not since the 1939 to 1941 time period, have stocks declined for three consecutive years. The Dow Jones Industrial Average ended 2002 at 8,341, falling 14.99% for the year. The Standard & Poor's 500 stock index (S&P 500) delivered a total return of -22.10%, ending the year at 879. The S&P 500 price decline of

23.37% was the steepest for any year since 1974 when the index fell 29.7%. The NASDAQ Composite Index closed the year at 1335, falling 31.30%, its third worst year since its inception in 1971. A broader stock index measure, the Russell 3000 Index, finished the year with a total return of -21.55%.

2002 U.S. Stock Index Returns

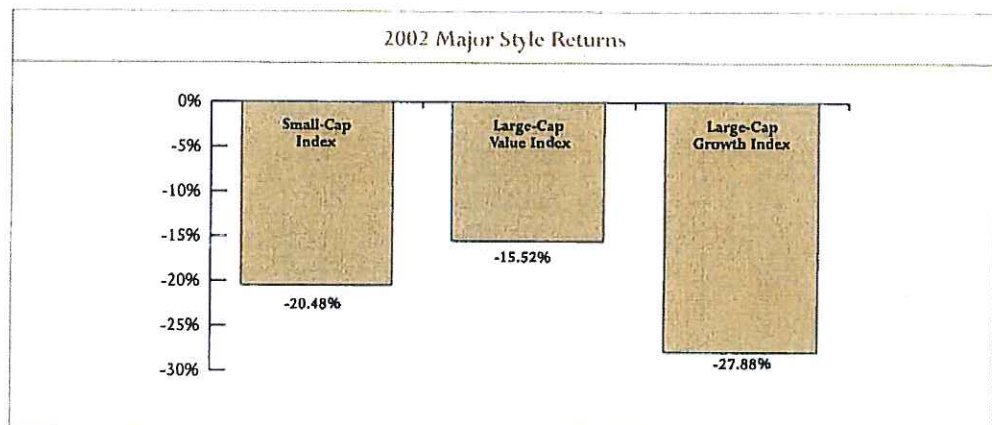


Investors began 2002 on a fairly optimistic note. U.S. stocks had just staged a powerful fourth quarter rally in 2001, following the horror of the September 11th attacks. Economists were predicting a slow, but steady, recovery for the U.S. economy and strategists were looking for double-digit growth in corporate profits. However, these hopes quickly evaporated as the markets had to deal with a new round of accounting scandals at companies such as WorldCom Inc. and Tyco International Inc. Confidence in corporate America began to wane as other companies confessed to using aggressive accounting techniques in order to boost profits.

The equity markets hit a five-year low in early October as investors began to discount the impact of terrorism threats and the threatened conflict in Iraq. These events led to a very

uneven pattern of economic growth during the year and disappointing single-digit growth in corporate earnings. By the end of 2002, investors were worried that terrorism concerns, war talk and a sluggish economy would cause the U.S. equity markets to decline yet again in the new year. The only time in U.S. history that stocks have declined four years consecutively was in the Great Depression days of 1929 to 1932.

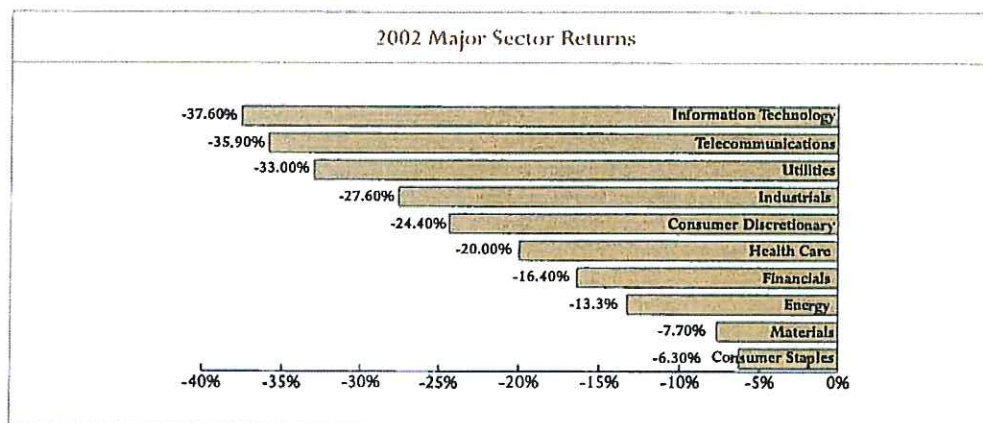
For the third year in a row, small stocks outperformed large cap stocks, and value stocks beat the growth category. The small-cap market, as measured by the Russell 2000 Index, finished 2002 at 383. For the year, the Russell 2000 delivered a total return of -20.48%. The Russell 1000 Value Index was down -15.52%, sharply better than the -27.88% return generated by the Russell 1000 Growth Index.





Every market sector in the S&P 500 declined in 2002. This was the first time that has happened since Standard & Poor's began keeping such records in 1981. The tech stock bubble continued to deflate in 2002 as this sector experienced the worst performance. Accounting scandals and WorldCom's Chapter 11 bankruptcy filing, the largest in U.S. history, caused the telecom stocks to turn in the second-worst sector performance.

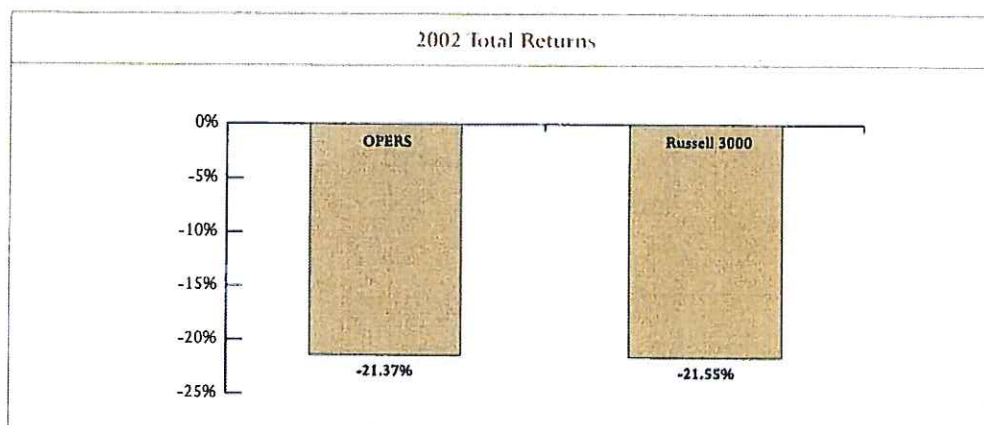
Investors gravitated toward the defensive or safe haven sectors in 2002 for their relative performance. Consumer staples (foods, beverages, household products) turned in the best sector performance by only declining 6.3% in 2002. Materials, led by gold stocks, delivered the second best sector performance and the Energy sector (crude oil prices rose 57% in 2002) finished in third place.



#### OPERS' Results

The total return for the OPERS' domestic equity portfolio in 2002 was -21.37% versus a total return of -21.55% for the Russell 3000 Index (R3000). The portfolio outperformed

its benchmark by 18 basis points in 2002. This marked the third consecutive year that the domestic equity asset class beat its respective benchmark.



## Strategy & Composition

### *Internal Management*

The R3000 Index portfolio is passively managed against a Russell 3000 benchmark. The bulk of its outperformance was attributed to an asset allocation trade completed in July. The R3000 Index portfolio was the recipient of a \$1.2 billion addition to our U.S. equity exposure. The remainder of the portfolio's success was attributed to skillfully optimizing the smaller cap names (Russell 2000 component) during the course of the year.

The Russell 1000 Research portfolio was officially activated on October 10, 2002. This actively managed portfolio was benchmarked against the Russell 1000 Index (R1000). From its inception date, the Russell 1000 Research portfolio trailed the R1000 Index by 21 basis points (9.91% versus 10.12%). When the stock market began its rally off of the October 9 lows, lagging sectors such as technology and telecommunications staged the biggest up moves. The Research portfolio was underweighted in these sectors as they did not rank highly on a fundamental or model basis. During the month of December, the Research portfolio was able to gain back some of its relative underperformance.

Prior to its active status, this portfolio was passively managed against the same benchmark (R1000). During this period of time (January through October 9th), the portfolio outperformed the Russell 1000 Index by approximately 14 basis points. Skillful management of the portfolio during the reconstitution of the Russell indices contributed to the outperformance. For the entire year, the Russell 1000 Research portfolio trailed the Russell 1000 Index by eight basis points (-21.74% versus -21.66%).

### *Passive External Management*

Barclays Global Investors passively manages a portfolio benchmarked against the Russell

3000 Index. During the year, this portfolio marginally outperformed its benchmark (-21.47% versus -21.55%). This was attributed to its ability to optimize against the smaller cap component within the benchmark.

### *Active External Management*

The external active component consisted of five portfolios: two large cap managers and three small cap managers. AllianceBernstein and Wellington Management were the large cap managers benchmarked to the Russell 1000 Index. Capital Guardian, Fidelity Management and Invesco were the small cap managers benchmarked to the Russell 2000 Index.

Both AllianceBernstein and Wellington underperformed their respective benchmark in 2002, primarily from unsuccessful stock selections. AllianceBernstein's underperformance of 41 basis points was attributed to its investments in WorldCom and Tyco International. Wellington's underperformance of 199 basis points was also attributed to inferior stock selections in such names as Tyco International, WorldCom and Adelphia Communications.

Fidelity Management and Invesco both outperformed their respective benchmark, the Russell 2000 Index, in 2002. Fidelity's outperformance of 611 basis points came from the traditional portfolio manager approach, while Invesco's out performance of 323 basis points resulted from its quantitative model approach to selecting their stock candidates. Capital Guardian underperformed the Russell 2000 Index by 423 basis points in 2002 as its portfolio was positioned for an economic recovery that never materialized.

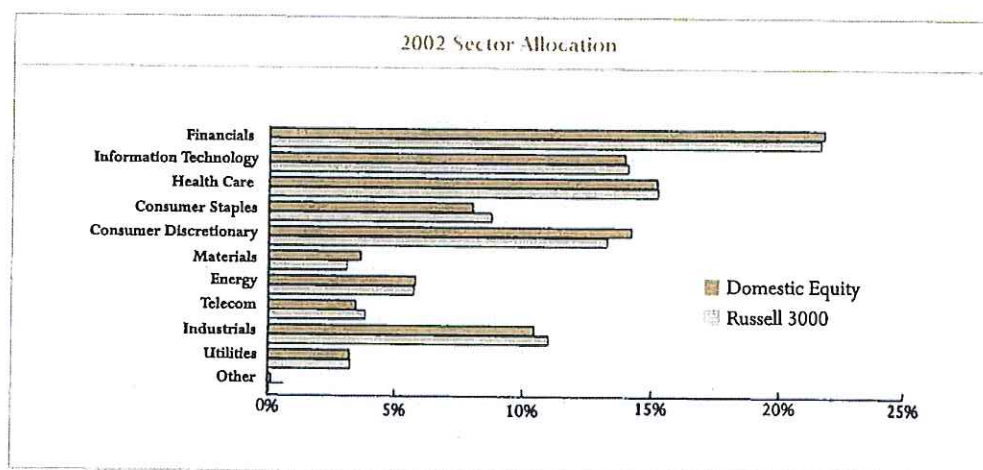
## 2002 Major Initiatives

The most significant milestone in 2002 was a comprehensive review covering all aspects of the domestic equity program. In particular, this focused on developing a new strategic direction for the internal active component. The new investment discipline would combine the quintile ranking features from a quantitative



model along with the fundamental inputs from an analytical research staff. A quantitative ranking system utilizing fundamental and momentum inputs has been shown to deliver positive information content (outperformance) over an extended period of time. Testing on the quintile-ranking based Stock Selection System began in July. New policy documents along with strategy and process manuals, were developed and approved by the Board of Trustees and their investment advisor, EnnisKnupp + Associates in September. As mentioned earlier, the newly named R1000 Research portfolio was activated in early October.

Other major initiatives completed in 2002 focused on enhancing our trading and our Index management capabilities with quantitative techniques. The Trading Department, in conjunction with the Fund Services Group, completed the installation of the Macgregor Order Management System (OMS) in early April. The OMS enhances the entire process of portfolio managers routing trades to our internal trading desk and in turn, allows our traders to electronically send their orders to the trading desks on Wall Street. In addition, the entire back office process of confirming and posting trades to the accounting system has been greatly enhanced.



### Sector Allocation

The allocation of the Russell 3000 index and the OPERS' portfolio to the major sectors of the stock market is shown above. This table focuses on the sector allocations in the active component (including both internal and

external portfolios) of the domestic equity asset class. The largest sector overweight (+94 basis points) was in Consumer Discretionary, while the largest sector underweight (-72 basis points) was in Consumer Staples.

## Schedule of Managers – Domestic Equity Portfolio

As of December 31, 2002

Portfolio/Manager	Assets Under Management <sup>1</sup>	Percent of Domestic Equity	Fees	Benchmark	Mandate
<b>Active Internal</b>					
Research Portfolio	\$ 3,993,708,853	18.07%	\$ 0	Russell 1000	Large Cap Core
<b>Active External</b>					
AllianceBernstein	\$ 791,623,979	3.58%	\$ 1,834,050	Russell 1000	Large Cap Core
Wellington	\$ 766,037,425	3.47%	\$ 1,874,383	Russell 1000	Large Cap Core
Capital Guardian	\$ 132,967,098	0.60%	\$ 477,295	Russell 2000	Small Cap Core
Fidelity	\$ 147,872,851	0.67%	\$ 894,940	Russell 2000	Small Cap Core
Invesco	\$ 144,271,421	0.65%	\$ 716,530	Russell 2000	Small Cap Core
<b>Total Active</b>	\$ 5,976,481,628	27.04%	\$ 5,797,198		
<b>Passive Internal</b>					
Russell 3000 Passive	\$ 15,127,487,978	68.43%	\$ 0	Russell 3000	Index
<b>Passive External</b>					
Barclays	\$ 1,002,014,362	4.53%	\$ 285,005	Russell 3000	Index
<b>Total Passive</b>	\$ 16,129,502,340	72.96%	\$ 285,005		
<b>Total Domestic Equity</b>	\$ 22,105,983,968	100.00%	\$ 6,082,203	Russell 3000	

<sup>1</sup> Market Values do not include accruals.

## Domestic Equity Top Ten Portfolio Holdings

Ten Largest Holdings December 31, 2002	Fair Value	Percent of Total U.S. Equity	Ten Largest Holdings December 31, 2001	Fair Value	Percent of Total U.S. Equity
General Electric	\$ 576,293,861	2.61%	General Electric	\$ 873,859,992	3.41%
Microsoft Corp.	571,135,380	2.58%	Microsoft Corp.	655,331,088	2.55%
Exxon Mobil Co.	550,269,361	2.49%	Citigroup Inc.	602,275,568	2.35%
Pfizer Inc.	484,889,571	2.19%	Exxon Mobil Co.	579,027,650	2.26%
Citigroup Inc.	465,997,558	2.11%	Pfizer Inc.	549,784,986	2.14%
Johnson & Johnson	374,476,486	1.69%	Intel Corp.	449,156,886	1.75%
Wal-Mart Stores	326,311,117	1.48%	IBM Corp.	436,345,661	1.70%
American Int'l Group	324,138,583	1.47%	American Int'l Group	405,081,094	1.58%
IBM Corp.	317,002,668	1.43%	Johnson & Johnson	381,196,655	1.49%
Merck & Co.	270,976,785	1.23%	Wal-Mart Stores	361,953,474	1.41%
<b>Total</b>	<b>\$4,261,491,370</b>	<b>19.28%</b>	<b>Total</b>	<b>\$ 5,294,013,054</b>	<b>20.64%</b>



## Asset Class Reviews

### Global Bonds

#### Fair Value

As of December 31, 2002, the global bond portfolio had a fair value of \$10.072 billion. This represented 21.2% of the total OPERS fund and is comprised of corporate bonds and U.S. government and mortgage backed securities.

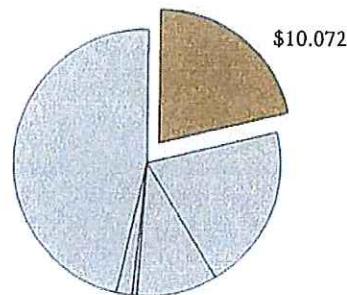
#### Market Overview

In 2002, the U.S. fixed income market faced one of its most challenging environments in history. Heightened accounting and corporate governance concerns, combined with an 8.6% decline in corporate profits, led to weakness in both the equity and the corporate bond markets. The high volatility experienced in the market reflected lackluster economic growth and deteriorating credit trends in major

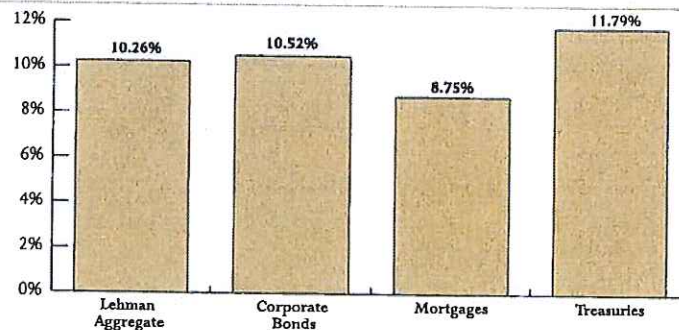
companies. According to Macroeconomic Advisers, GDP growth improved from the slow pace of 0.1% in 2001 to 2.8% for 2002, but remained well below its growth potential.

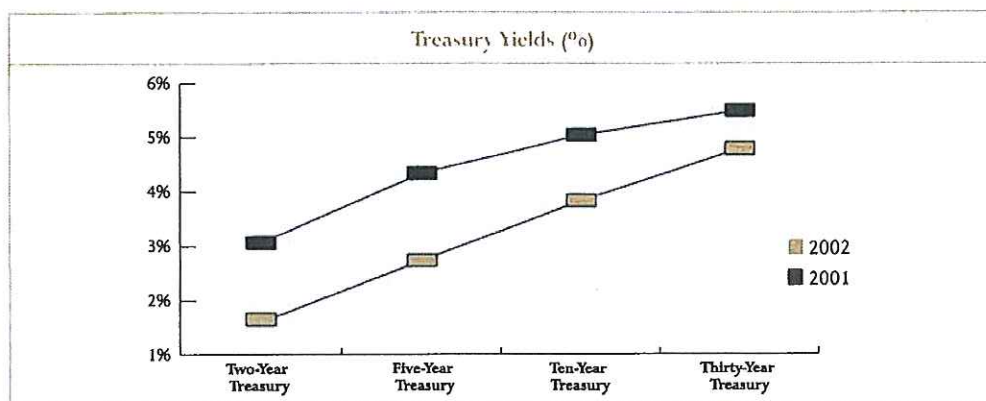
The intense pessimism in the stock market caused investors to seek the safety of U.S. Treasury Bonds, pushing yields to their lowest levels in 40 years, while yield spreads on corporate bonds reached new historic-wide levels. Spreads widened in the corporate bond sector due to record credit rating downgrades, fraudulent revelations at several major companies, and the decline in the equity market. Near the end of the year, concerns of war with Iraq moved to center stage, hampering the rebound in the equity market and keeping interest rates low.

2002 Global Bond Allocations as Share of Total Fund  
(Dollars in Billions)



2002 Global Bond Returns



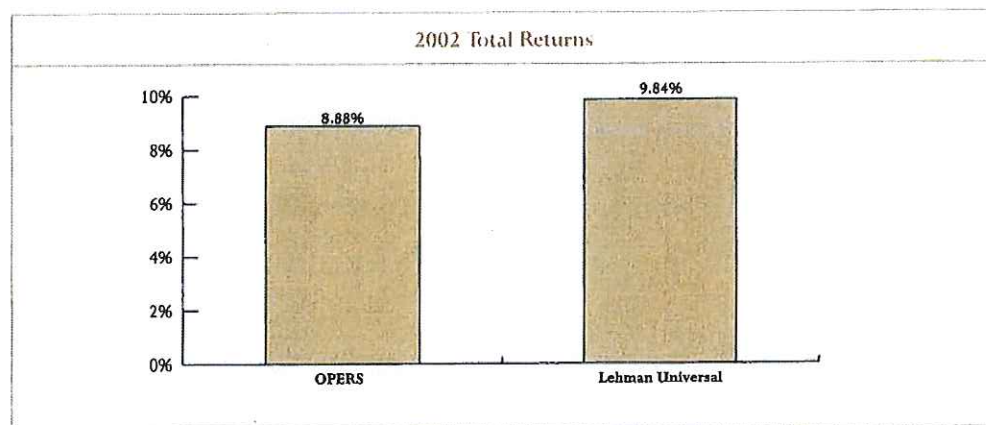


In 2002, interest rates fell precipitously across the yield curve. The U.S Treasury five-year notes declined by 160 basis points during the year. The U.S Treasury two-year and 10-year notes fell by 146 and 121 basis points respectively. The U.S Treasury long bond failed to keep up with the intermediate notes, declining by 69 basis points in yield for the year. Falling interest rates resulted in a stellar performance for the fixed income market with the Lehman Aggregate Index posting a total return of 10.26%. The risk free U.S. Treasury and Agency sectors gained 11.79% and 11.01%, respectively.

Despite the credit challenges experienced in 2002, the investment-grade corporate sector returned an impressive 10.52%. Regardless of

the strong absolute total return performance, widening yield spreads resulted in a poor relative performance for corporate bonds. The corporate bond sector posted a negative excess return, which is return relative to duration-matched treasuries, of 187 basis points.

Mortgage backed securities and asset backed securities both posted positive returns of 8.75% and 8.55%, respectively. The mortgage sector performed relatively well as investors substituted prepayment risk for credit risk. The refinancing activity in the mortgage sector reached an unprecedented level as the 30-year mortgage rate hit a historic low of 5.75%. Despite the refinancing wave, the mortgage sector posted a positive excess return of 173 basis points during the year.





**OPERS' Results**

OPERS' Global Bond holdings returned 8.88% for the year, compared to a return of 9.84% for the Lehman Universal Index. The performance shortfall was attributable to exposures in several underperforming credits in the corporate sector, which included Worldcom. Our holdings in Worldcom bonds, which entered bankruptcy as a result of fraudulent accounting, contributed 90 basis points toward the loss at the asset class level.

**Strategy & Composition**

In 2002, the objective of the Global Bond asset class portfolio was to outperform the Lehman Universal Index by 35 basis points. Global Bond assets are managed through one internally managed investment grade portfolio, and six externally managed portfolios.

**Internal Management**

The internal core portfolio is actively managed against the Lehman Aggregate Index. This portfolio returned 9.30% for the year, compared to a return of 10.26% for the benchmark. The loss was mainly due to an overweight position in telecommunications firms such as Worldcom and Qwest. We began the year with an overweight position in the corporate bond sector based on attractive valuations and our positive economic outlook for the year. These positions proved negative as the market reacted unfavorably to rising financial leverage and growing uncertainty regarding corporate earnings and asset values. We reduced our credit positions mid-year as the increasing risk of the corporate bond market became more apparent.

Throughout the year, we kept the duration of the portfolio neutral to the benchmark. We believe that over time, the additional yield offered by the spread sectors provides a consistent strategy to meet our performance objective. In addition, we strive to add value

to portfolio performance through security selection and sector rotation.

**External Management**

The externally managed component consisted of six portfolios: two core plus managers, two high yield managers, and two emerging market debt managers. The two core plus managers, Morgan Stanley and Metropolitan West, both underperformed their benchmark, the Lehman Universal Index. Metropolitan West posted a return of 1.45% compared to the benchmark return of 9.84%. This considerable underperformance was a result of poor security selection, including concentrated positions in Worldcom, Qwest, Williams, and Consec. Morgan Stanley posted a return of 7.71% for the year and underperformed due to poor security selection as well.

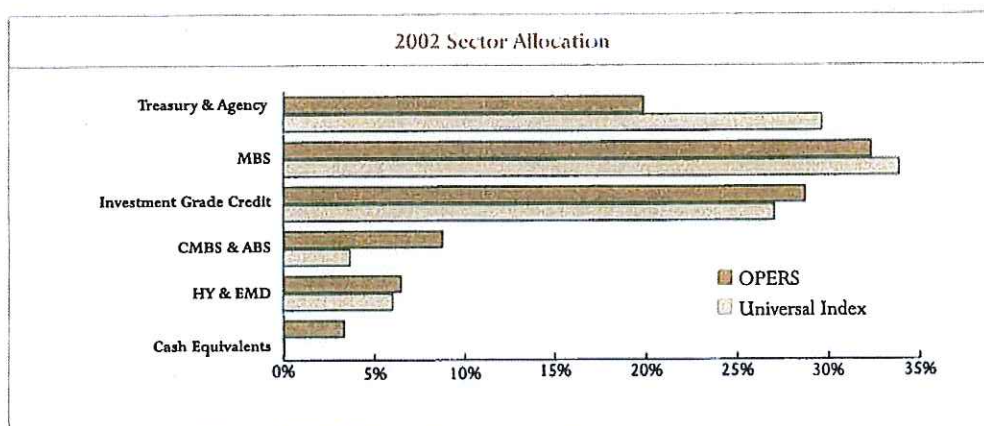
The two high yield managers, Shenkman Capital and W.R. Huff, both performed well during the year with returns of 3.33% and 4.10%, respectively, compared to -1.41% for the Lehman High Yield Index. Both managers' positive performance was due to their focus on the stronger credits within the high yield universe and their ability to avoid much of the credit deterioration that took place over the past year.

The two emerging market debt managers, Capital Guardian and Salomon Asset Management, posted mixed results during the year. Capital Guardian posted an outstanding return of 23.30% compared to 12.25% return for the Lehman Emerging Market Debt index. The strong performance was a result of the manager's overweight position in Russia and Turkey. Salomon Asset Management trailed the index with an 11.03% return for the year. Salomon Asset Management largely avoided the problems in Argentina but was unable to avoid problems in Brazil that came to light mid-year.

**2002 Major Initiatives**

In 2002, the Global Bond Department focused on improving its internal management expertise. Our enhanced investment process includes a more disciplined decision-making process and an increased focus on security selection and risk control. We strengthened our internal investment management capability with three key staff additions.

For 2003, the Global Bond staff will conduct an evaluation of its asset class structure to optimize its portfolio to achieve its performance goal. We will likewise integrate various credit models into our decision making process to avoid potential credit pitfalls. In an effort to enhance trading execution, we will explore electronic trading systems and determine their role in our investment process.

**Sector Allocation**

The allocation of all OPERS Global Bond portfolios and the Lehman Universal Index is displayed in the accompanying table. The portfolio is overweight in the "spread" sectors – corporates, mortgage-backed, asset-backed, and

commercial mortgage backed – and underweight in the lower-yielding U.S. Treasury and agency securities. At year-end 2002, we were market-weighted in the two non-investment grade sectors: high yield and emerging market debt.



## Schedule of Managers – Global Bonds Portfolio

As of December 31, 2002

Portfolio/Manager	Assets Under Management <sup>1</sup>	% of Domestic Bonds	Fees	Benchmark	Mandate
OPERS Internal Staff	\$ 8,267,226,485	82.08%	NA	Lehman Aggregate Index	Core
Morgan Stanley	564,313,747	5.60%	\$ 831,456	Lehman Universal Index	Core Plus
Metropolitan West	449,919,151	4.47%	974,355	Lehman Universal Index	Core Plus
Shenkman Capital	290,989,551	2.89%	1,038,875	Lehman High Yield Index	High Yield
W.R. Huff	170,390,785	1.69%	658,327	Lehman High Yield Index	High Yield
Capital Guardian	190,188,197	1.89%	404,929	Lehman Emerging Market Debt	Emerging Market Debt
Salomon	138,928,331	1.38%	544,442	Lehman Emerging Market Debt	Emerging Market Debt
<b>Total Global Bonds</b>	<b>\$10,071,956,247</b>	<b>100.00%</b>	<b>\$4,452,384</b>		

<sup>1</sup> Market Values do not include accruals.

## Global Bonds Portfolio Top Ten Holdings

Ten Largest Holdings December 31, 2002	Maturity	Coupon	Par Value	Fair Value
U.S. Treasury Principal Strips	8/15/2020	0.00%	\$ 616,500,000	\$ 247,370,625
FNMA Benchmark Notes	5/14/2007	5.00%	200,000,000	209,438,000
U.S. Treasury Notes	1/15/2011	3.50%	164,500,000	188,105,980
FNMA Benchmark Notes	10/2/2007	3.88%	150,000,000	152,437,500
U.S. Treasury Notes	11/30/2004	2.00%	142,400,000	143,601,856
FNMA Single Family 30yr	5/1/2032	6.00%	140,000,000	143,543,751
GNMA Single Family 30yr	2/1/2033	6.00%	135,000,000	139,914,837
U.S. Treasury Principal Strips	5/15/2005	0.00%	131,000,000	125,473,110
U.S. Treasury Notes	1/15/2009	3.88%	100,000,000	123,222,280
U.S. Treasury Notes	8/15/2010	5.75%	100,000,000	114,969,000
<b>Total</b>			<b>\$1,878,400,000</b>	<b>\$1,588,076,939</b>

## Asset Class Reviews

*International Equity***Fair Value**

As of December 31, 2002, the international equity portfolio had a fair value of \$9.508 billion. This represented 20.0% of the total OPERS fund.

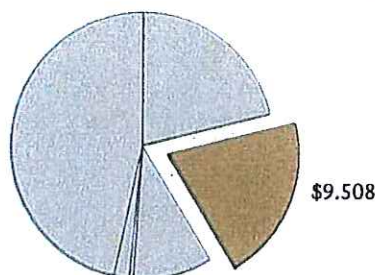
**Market Overview**

International equities posted their third consecutive year of declines, with the broad Morgan Stanley Capital International MSCI All Country World Index Free excluding United States Index (MSCI ACWIF x U.S.) losing -14.95% in U.S. dollar terms<sup>4</sup> and an even more disappointing -23.97% in local currency terms. Without question, currencies were a major factor in 2002, as the dollar fell nearly 18% against the euro and 10% relative to the British pound and Japanese yen. This dramatic decline

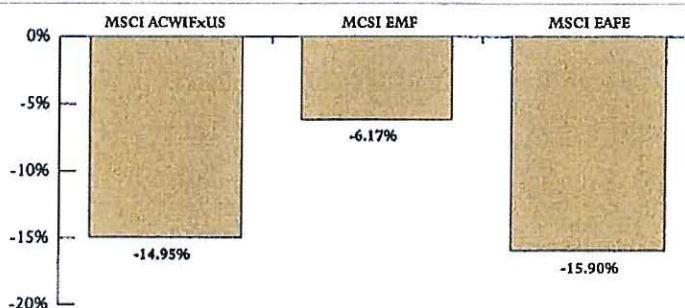
in the dollar enabled the MSCI ACWIFxU.S. Index to exceed the returns of U.S. markets, as measured by the S&P 500, by 12.82%.

In 2002, emerging markets continued for the second consecutive year to represent a bright spot in the world of international investing. The MSCI Emerging Markets Free (EMF) Index returned a -6.17% and outperformed the S&P 500 by 21.6%. Nevertheless, the MSCI EMF Index return concealed substantially volatility within the underlying markets. In particular, Latin America recorded losses of -22.50%<sup>5</sup> in the wake of currency and political woes, while Eastern Europe returned an impressive 16.15%<sup>6</sup> as investors positioned themselves ahead of many of these countries joining the European Union.

2002 International Equity Allocation as Share of Total Fund  
(Dollars in Billions)



2002 Major Index Returns



<sup>4</sup>For the purposes of this report, all returns are based in U.S. dollars terms.

<sup>5</sup>As measured by MSCI EMF Latin America Index.

<sup>6</sup>As measured by MSCI EM Eastern Europe.



Overall, the developed world managed to keep itself out of a recession in 2002, as the largest non-U.S. economies - Japan and the European Union - reported tepid gross domestic product (GDP) growth. But actual economic activity disappointed almost every professional projection. When 2002 began, many expected the European economy to emerge with strength. European companies were thought to have practiced better accounting practices and to have stronger balance sheets than their U.S. peers. Unfortunately, the developed markets of Europe were undermined by: deteriorating profits; balance sheet impairments; credit downgrades; government bailouts and rights offerings. It was such a fractious year in European business that seven of the continent's 30 largest companies replaced their chief executives.

Similar to last year, the European Central Bank (ECB) was slow in cutting interest rates despite ample evidence of a weakening economy. In the fourth quarter of 2002, when the ECB finally eased it was seen as too little stimulus too late. The Eurozone had already slowed considerably and region's two largest economies, Germany (-33.18%)<sup>7</sup> and France (-21.18%)<sup>8</sup>, both reported higher unemployment and falling business confidence. Only the economy of the United Kingdom (-17.77%)<sup>9</sup> remained relatively strong as a vibrant real estate market buoyed consumer spending.

Japan continued to experience weak demand, falling capital spending, historically high

unemployment and deflation. In addition, the country's ruling Liberal Democratic Party remained unwilling to create a viable plan to resolve the large number of non-performing loans weighing down the nation's banking system. At the close of the year, Japan remained poised to move back into recession.

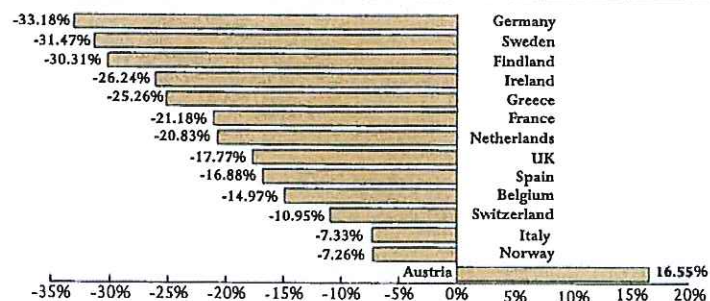
A few bright spots did exist for investors. The economic vibrancy of the Australasian<sup>10</sup> region was in stark contrast to the rest of the developed world. These economies rallied due to their heavy concentration to basic resources and material companies, which benefitted from expanded trade with China.

### Summary of Developed Markets

#### Europe

In developed markets, the MSCI Europe Index declined -18.38%. The best performing European countries were Austria and Norway, which posted returns of 16.55% and -7.26%, respectively. The three worst performing countries in the MSCI Europe Index were Germany (-33.18%), Sweden (-31.47%) and Finland (-30.31%). Germany, the largest economy in the European Union, suffered the greatest market decline as persistently high unemployment and weak consumer demand hurt electronic, auto and financial shares. Sweden's stock exchange returns were impacted by the 82% decline in Ericsson, while Finland's returns continued to be dragged down by Nokia's weak performance. The company's shares declined 37% in 2002.

2002 MSCI Europe Index Return

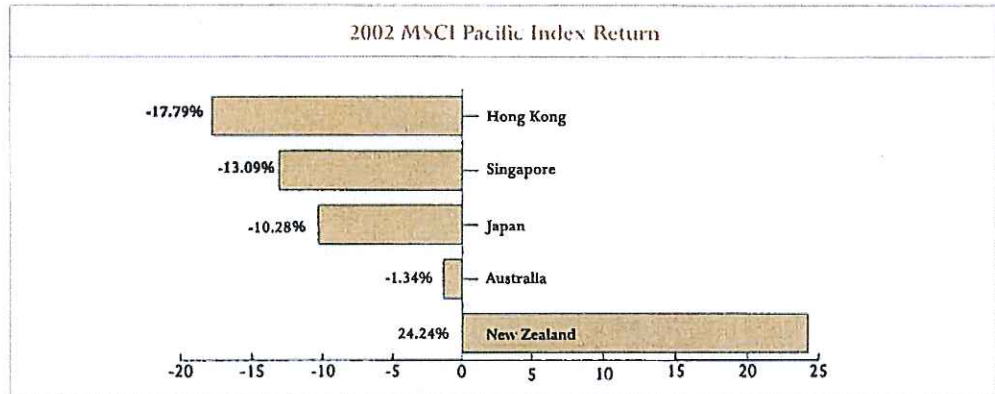


<sup>7</sup>MSCI Germany.

<sup>8</sup>MSCI France.

<sup>9</sup>MSCI United Kingdom.

<sup>10</sup>Australia/New Zealand Region



#### Pacific Region

Overall, developed Pacific<sup>11</sup> markets outperformed developed European markets by 6.65%. Japan started the year posting strong export growth that faded as the year progressed and global demand slowed. Outside of Japan, the economies of New Zealand and Australia continued to buck the global recessionary trend experienced throughout 2002 as demand for commodities and interest in basic materials companies remained strong. The exchange markets of Hong Kong and Singapore were impacted by the technology and telecommunications slump that, in turn, produced higher unemployment and rising bankruptcies in both nations.

#### Summary of Emerging Markets

The MSCI Emerging Market Eastern Europe Index was the best performer, gaining 16.15% for the year as ten eastern European nations were approved to join the European Union in

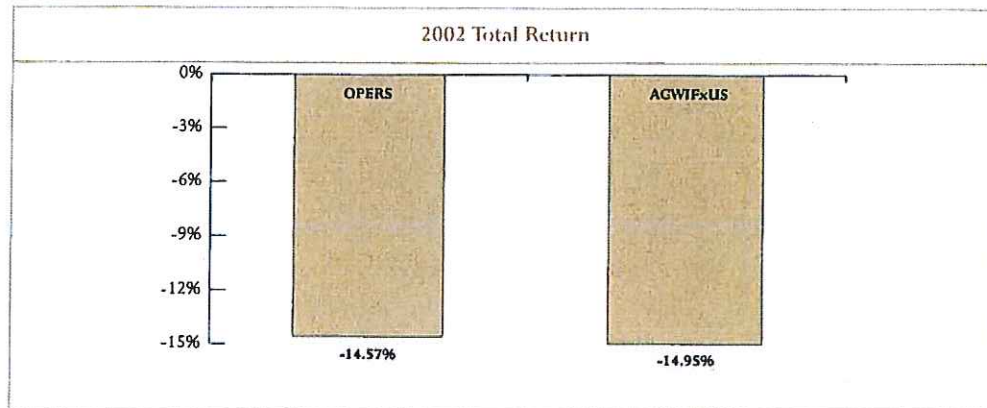
2004. The second best performer, returning 7.32%, was the entire region defined as EMEA, or Europe, Middle East and Africa. Dominating positive performance from this group were Eastern European countries for the reason mentioned above, as well as South Africa. The South African rand's strong appreciation versus the dollar (up 40% in 2002) propelled market returns higher for U.S. based investors. The price of gold and other precious metals were also strong during the year and generated a rally in the resource stocks that dominate this country's exchange. South Africa's returns (27.99%) helped offset the disappointing results of other EMEA members namely Israel (-31.28%) whose economy was impacted by political unrest.

Latin America was the poorest-performing region in the emerging market universe in 2002, declining nearly 25%. Most of the loss was a result of currency weakness in the region's



<sup>11</sup>MSCI Pacific.





largest markets: Argentina (-50.70%) and Brazil (-30.65%). Economic and political uncertainty in these countries produced extreme market volatility that led to an International Monetary Fund stability loan programs for both nations.

#### OPERS' Results

In 2002, OPERS' International Equity portfolio outperformed the asset class MSCI ACWIF x U.S. benchmark. For the year, OPERS' International returned -14.57% versus the benchmark's return of -14.95%. Therefore, we outperformed by 38 basis points.

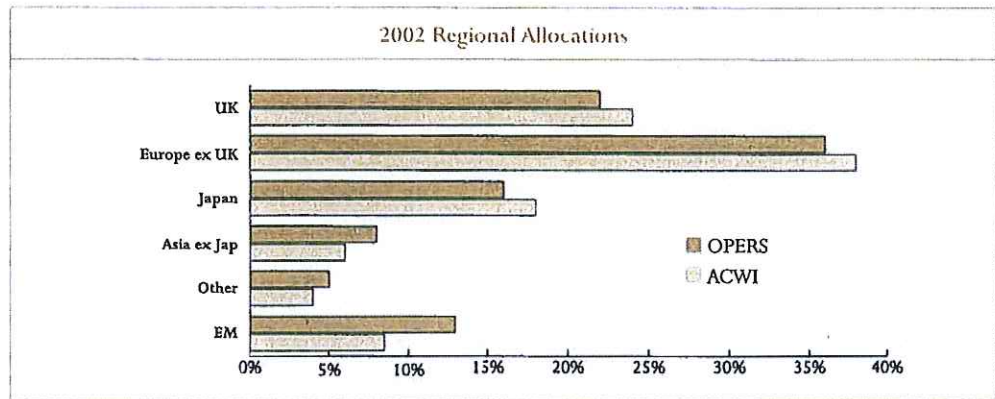
The portfolio's outperformance was due to beneficial country and regional allocations. Specifically, the factors listed below highlight the positive impact geographic allocation had on the international portfolio in 2002:

- The portfolio held an overweight position in **emerging markets** throughout 2002 and finished the year 4.5% over the benchmark index weighting of 8.6%. This overweight position in emerging markets was additive to relative performance as emerging markets outperformed developed markets by 9.77%<sup>12</sup> and lost only 6.17% in dollar terms.
- The portfolio was overweight **Asia excluding Japan** throughout 2002, and finished the year 1.3% above the index weighting of 6.4%. This overweight position added to relative performance as the region fell only 5.57%.
- The portfolio continued to hold a 2.6% underweight position in **Europe excluding the United Kingdom (Europe x U.K.)** versus the benchmark. Underweighting this region was additive to relative performance as Europe x U.K. equities lost 20.18%.
- The portfolio was underweight stocks in the **United Kingdom** throughout the year and finished the year 2.6% under the index weighting of 24%. U.K. equities lost 17.77% in 2002.

OPERS outperformance relative to the benchmark could have been stronger had the portfolio not been positioned the following way:

- The portfolio was underweight **Japan** throughout the year and finished the year 1.7% under the benchmark index weighting of 18.4%. The underweight position was significant, as Japanese equities outperformed the world's other developed markets in 2002. Although returns were still negative, Japan returned -10.28%, exceeding the ACWIF x U.S. Index return of -14.95% by 4.67%.

<sup>12</sup>As measured by MSCI EAFE Index.



### Country Allocation

The allocation of our international equity holdings by country and region is shown in the accompanying table.

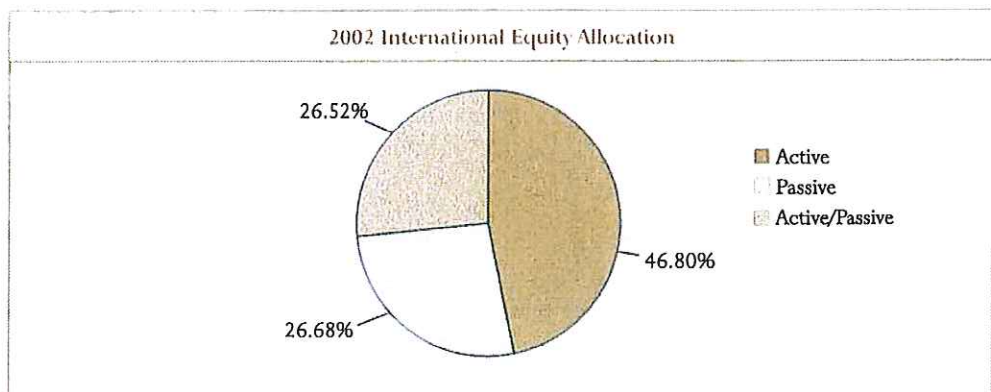
### Strategy & Composition

As of December 31, 2002, the International Equity stock portfolio had a market value of \$9.508 billion, representing approximately 20.05% of the total fund. At year-end, 46.8% of the portfolio was managed on an active basis, 26.52% on an active/passive basis, and 26.68% on a purely passive basis. Approximately 85.9% of the portfolio was allocated among the developed non-U.S. markets, 13.1% to emerging markets, and 1.0% to cash. All portfolios were managed on an external basis throughout the year.

In October of 2002, the OPERS Board adopted a new international equity investment strategy in an effort to achieve higher risk adjusted returns. Highlights from the new *Ohio OPERS*

*International Equity Policy & Strategy* are listed below:

- **Performance Objective:** The International Equity asset class will seek to outperform MSCI ACWIF x U.S. Index by 75 basis points per annum on a rolling three-year basis.
- **Active Risk Objective:** The portfolio will be better controlled to ensure the level of active risk does not exceed the portfolio's targeted tracking error of 175 basis points.
- **Style Neutrality:** The allocation to active growth and value managers will be within the range of plus or minus 5% of the growth and value weights in the portfolio's benchmark.
- **Target Allocation:** The OPERS' International Equity program will allocate a majority of the assets to active management (60%) with the remaining funds invested in passive index (25%) and enhanced index (15%) strategies.





- **Emerging Market Exposure:** The portfolio will seek to have a 5% strategic allocation to emerging markets through the use of dedicated emerging markets investment managers. Maximum exposure to emerging markets will be limited to its allocation in the MSCI ACWIFxU.S. index plus 3%.
  - **Small Cap Exposure:** The portfolio's small cap exposure is targeted to represent 3% of total portfolio assets.
- International staff will work throughout 2003 to bring the current portfolio into conformity with the newly approved policy and strategy.
- 2002 Major Initiatives**  
Several major initiatives were completed during 2002.
- The adoption of a new International Equity Policy & Strategy.
  - Transitioning the custodial responsibility of international assets from JP Morgan Chase to State Street Bank & Trust.
  - Establishing a new international equity securities lending program with State Street Bank & Trust.
  - Dividing the daily oversight of external managers between the two analysts in the department to ensure more aggressive monitoring and oversight of each portfolio.
  - Finalizing a study assessing OPERS' external managers trading effectiveness and continuing research on portfolio internalization and currency overlay.

## Schedule of Managers – International Equity Portfolio

As of December 31, 2002

Portfolio/Manager	Assets Under Management	Percent of Int'l Equity	Fees	Benchmark	Mandate
<b>Active</b>					
Cap Guardian	\$ 833,403,181	8.77%	\$ 3,663,439	MSCI ACWIFxU.S.	EAFE+
Brandes	\$ 707,717,204	7.44%	\$ 3,839,477	ACWIFxU.S.	EAFE+
Marvin & Palmer	\$ 433,199,619	4.56%	\$ 2,580,987	ACWIFxU.S.	EAFE+
Bk of Ireland	\$ 418,515,826	4.40%	\$ 1,476,293	ACWIFxU.S.	EAFE+
TT Int'l.	\$ 346,095,951	3.64%	\$ 626,254	ACWIFxU.S.	EAFE+
Nicholas-App.	\$ 339,837,307	3.57%	\$ 1,689,296	ACWIFxU.S.	EAFE+
Oechsle	\$ 322,641,013	3.39%	\$ 1,592,325	ACWIFxU.S.	EAFE+
JP Morgan	\$ 276,624,532	2.91%	\$ 713,831	MSCI EAFE	EAFE
Driehaus	\$ 248,081,583	2.61%	\$ 1,018,987	ACWIFxU.S.	EAFE+
Lazard	\$ 223,433,464	2.35%	\$ 915,315	MSCI EMF	Emerging Mkts
Scudder	\$ 5,885,186	0.06%	\$ 976,962	MSCI EMF	Emerging Mkts
Boston Company	\$ 145,251,062	1.53%	\$ -	MSCI EMF	Emerging Mkts
First State	\$ 103,381,715	1.09%	\$ 778,999	MSCI EMF	Emerging Mkts
Nicholas-App.	\$ 21,593,576	0.23%	\$ 133,196	MSCI WorldxU.S. Small Cap	Int'l Small Cap
Harris Assoc.	\$ 24,467,114	0.26%	\$ 175,584	MSCI WorldxU.S. Small Cap	Int'l Small Cap
<b>Total Active</b>	<b>\$ 4,450,128,335</b>	<b>46.80%</b>	<b>\$ 20,180,945</b>		
<b>Enhanced</b>					
Barclays Enhcd.	\$ 1,622,253,672	17.07%	\$ 1,702,900	ACWIFxU.S.	EAFE+ Enhanced
Baring	\$ 899,017,845	9.46%	\$ 1,811,435	MSCI ACWIFxU.S.	EAFE+ Enhanced
<b>Total Enhanced</b>	<b>\$ 2,521,271,517</b>	<b>26.52%</b>	<b>\$ 3,514,335</b>		
<b>Passive</b>					
Barclays Index	\$ 2,536,376,514	26.68%	\$ 855,223	ACWIFxU.S.	EAFE+ Index
<b>Total Passive</b>	<b>\$ 2,536,376,514</b>	<b>26.68%</b>	<b>\$ 855,223</b>		
<b>Total Int'l Equity</b>	<b>\$9,507,776,366</b>	<b>100.00%</b>	<b>\$ 24,550,503</b>		

### *International Equity Top Ten Portfolio Holdings*

Ten Largest Holdings December 31, 2002	Fair Value	Percent of Total Int'l Equity	Ten Largest Holdings December 31, 2001	Fair Value	Percent of Total Int'l Equity
Vodafone - U.K.	\$ 61,786,339	0.73%	Vodafone - U.K.	\$ 120,905,843	1.14%
HSBC Holdings - U.K.	\$ 60,144,195	0.13%	Sanofi-Synth. - France	\$ 77,413,869	0.73%
Total Fina - France	\$ 49,747,679	0.59%	Nokia - Finland	\$ 66,018,722	0.62%
ENI - Italy	\$ 47,095,263	0.56%	Total Fina - France	\$ 60,522,605	0.57%
Glaxosmithkline - U.K.	\$ 42,883,326	0.51%	ENI - Italy	\$ 56,485,456	0.53%
Cannon - Japan	\$ 42,451,251	0.50%	Marks & Spencer - U.K.	\$ 53,581,336	0.50%
UBS - Switzerland	\$ 41,583,274	0.49%	UBS - Switzerland	\$ 51,769,150	0.49%
Nokia - Finland	\$ 40,773,366	0.48%	Lloyds TSB - U.K.	\$ 49,605,945	0.47%
Samsung - South Korea	\$ 35,007,936	0.41%	Aventis - France	\$ 47,719,361	0.45%
ING Groep - Netherlands	\$ 30,641,076	0.36%	Glaxosmithkline - U.K.	\$ 43,298,181	0.41%
<b>Total</b>	<b>\$ 452,113,705</b>	<b>5.34%</b>	<b>Total</b>	<b>\$ 627,320,468</b>	<b>5.91%</b>



## Asset Class Reviews

### Real Estate

#### Fair Value

As of December 31, 2002, the real estate portfolio had a fair value of \$4.639 billion. This represented 9.8% of the total OPERS fund.

#### Market Overview

Real estate investors entered 2002 hopeful that the year would bring some relief from the economic uncertainty that hampered 2001. A year later there are few signs that we are closer to the market in equilibrium that existed before the recession and prior to the terrorist attacks in 2001. Most of the sources of anxiety that existed a year ago - terrorism, tensions in the Middle East, and weak domestic and foreign economies - remain firmly in place, and in some case cases have worsened.

Driven by the economic uncertainty, capital flowed to real estate from other asset classes. At the same time, cap rates continued to fall, and property fundamentals such as occupancy and rental rates continued to deteriorate. Not all property types or markets were affected equally. Certain sectors, such as multifamily and retail, had no trouble attracting capital despite weakening market fundamentals, causing cap rates to fall further. Other sectors, like office and hotels, could attract capital only if the asset offered an attractive, safe yield. This left most hotels out of the market but led to unprecedented pricing in some markets for

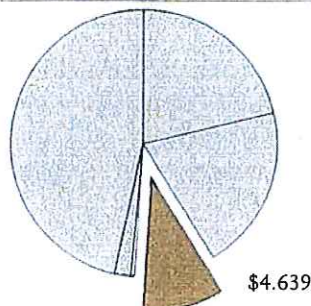
well-leased office properties with credit-quality tenants and long-term leases.

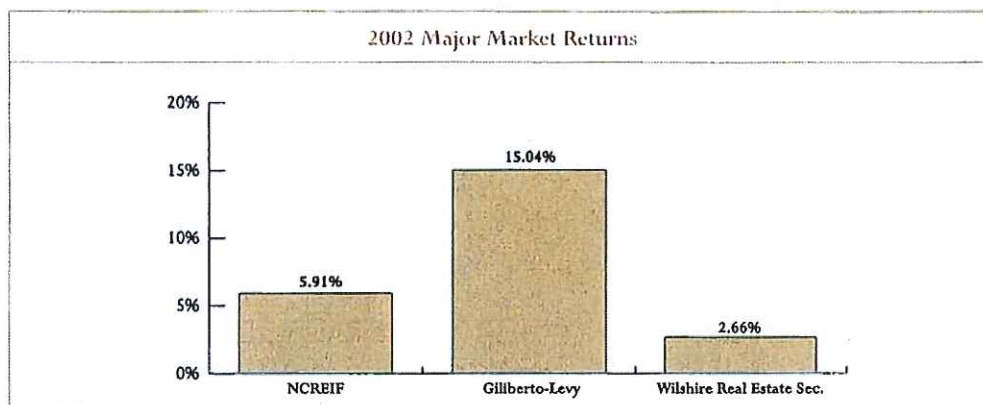
Private buyers continued to dominate the transaction market, taking full advantage of the historically low interest rates to increase returns on equity. Transaction volumes for institutional investors, however, were off by as much as 30% to 50% due in part to increased competition from private buyers. In addition, the "denominator" effect continued to play a significant role. As values in the domestic and international equities market continued to plummet, funds with heavy allocations to equities experienced continued decline in overall fund sizes (the "denominator" in the equation). Many institutional investors continued to be net sellers in 2002, thereby maintaining their asset allocation and also taking advantage of the high levels of liquidity in certain market segments.

The direct equity market (direct ownership of real estate assets), as tracked by the NCREIF Property Index, produced a 5.91% return for 2002, net of fees.

The mortgage market, as measured by the Giliberto-Levy Index, returned a 15.04% net of fees for the year ending December 31, 2002. While the second and third quarters posted unusually high returns of 6.25% and 8.35%,

2002 Real Estate Allocation as Share of Total Fund  
(Dollars in Billions)





respectively, net of fees, fourth quarter returned only 1.03% net of fees. This sudden retreat was due to changes in treasury yields. These changes in the yield curve led to capital gains or losses based on maturity. For the index, which is heavily weighted in long-term issues, the change equated to losses.

Real estate securities, with their attractive dividend yields, outperformed the broader public equities markets for the third consecutive year. The Wilshire Real Estate Securities Index returned 2.66%.

#### OPERS' Results

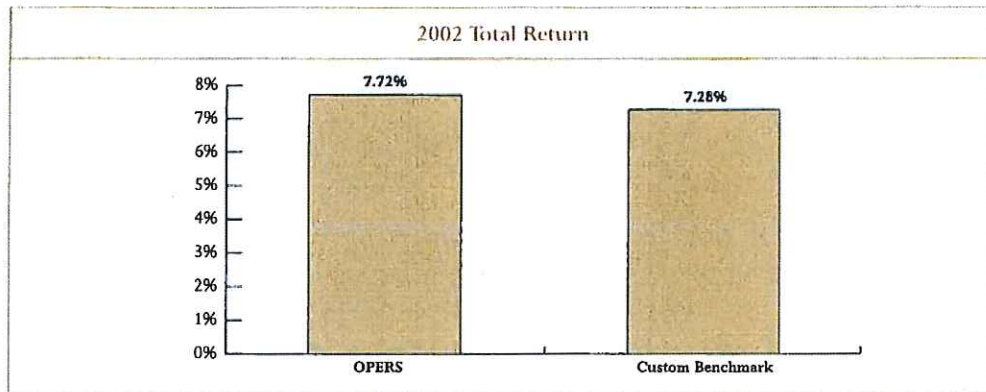
OPERS' real estate portfolio generated positive returns in 2002 due to strong performance by the REIT, direct equity, and the debt portfolios. OPERS' return for 2002 was 7.72%, while the return of the custom benchmark was 7.28%. The OPERS' portfolio return was comprised of the debt portfolio's return of 10.85%, the equity portfolio's return of 7.67%, and the REIT portfolio return of 5.19%. The income component of the return was 5.55%, and appreciation was 2.03% for the entire portfolio.

Although our debt portfolio generated a return of 10.85%, the benchmark returned 15.04%. This resulted in a negative impact on the total real estate return compared to the custom benchmark.

During 2002, we liquidated a portion of our debt portfolio. The Liberty and Huntoon portfolios were down to market values of \$31.6 million and \$3.5 million, respectively. The total return of 10.85% for the debt portfolio was driven primarily by the strong performance of our Five Arrows program managed by Rothschild. Five Arrows had a total return of 13.47%. This was comprised of strong dividend yield, which contributed to its 8.45% income return, and a 4.72% return from appreciation. The AFL-CIO Housing Investment Trust also had strong performance, with a total return of 11.48%. This was due to a strong income return and appreciation of the portfolio.

Our direct equity holdings performed well, returning 7.67% for the year. Our direct equities were driven by the portfolios managed by Lowe, with a total return of 15.25%; Great Point, with a total return of 13.08%; and TGM, with a total return of 7.29%. The office sector had the best performance, benefiting from income returns and the unrealized appreciation in the office properties, with a total return of 16.37%. The hotel sector rebounded from last year's drop with a total return of 15.89%. This return was driven by the unrealized appreciation and the sale of two hotel properties during the year.





The total return on the REIT portfolio for the year ending December 31, 2002 was 5.19%. The REIT portfolio outperformed the Wilshire Real Estate Securities Index by 253 basis points. During 2002, the regional retail sector substantially outperformed other real estate sectors due to the continued strength in consumer spending throughout the year. The performance of the OPERS' real estate securities portfolio was aided by an overweight to this sector.

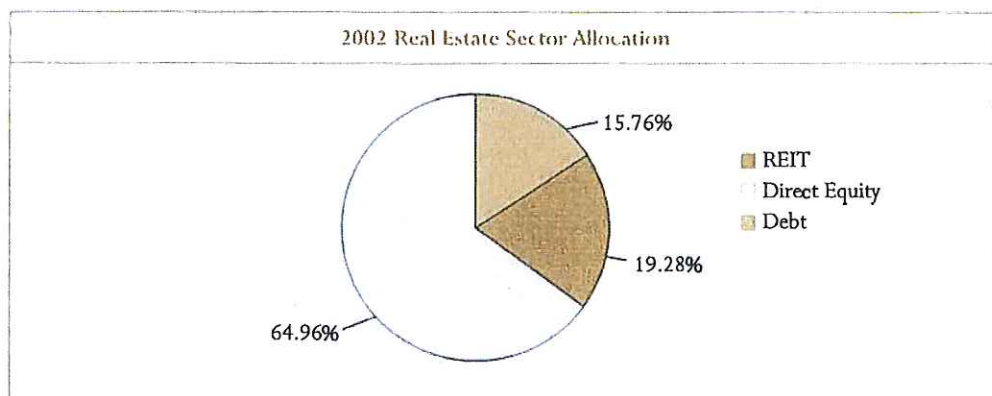
#### Strategy & Composition

At year-end 2002, our real estate portfolio was comprised of 19.28% in REIT investments, 64.96% in direct equity investments, and 15.76% in debt investments. This compares to year-end 2001 figures of 18.61% in REIT investments, 60.71% in direct equity investments, and 20.68% in debt investments.

OPERS manages its REIT investments internally. Fiduciary managers oversee all externally managed assets through separate accounts, with the exception of our investment in the AFL-CIO Housing Investment Trust, which is a commingled fund.

During the year, we invested \$75.97 million, and recouped \$589.99 million through sales and mortgage pay-downs. We ended the year with a portfolio valued at \$4.639 billion. Due to our efforts to reduce our exposure to real estate, and the desire to harvest some profits, we were net sellers in 2002.

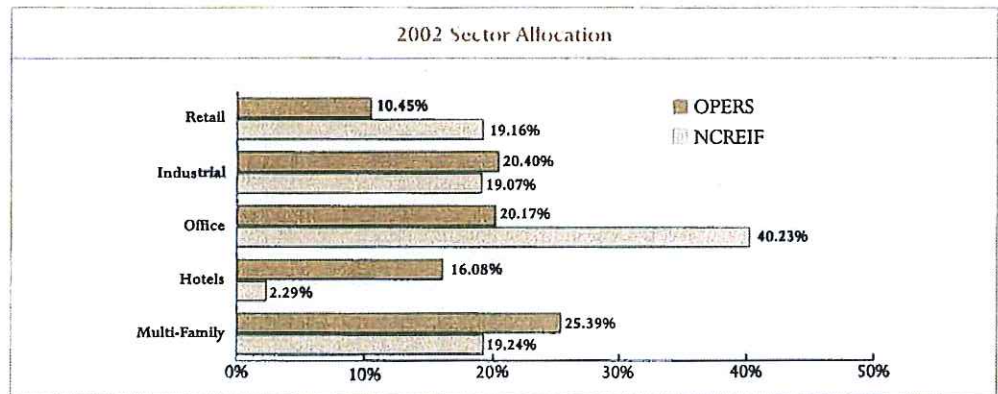
During 2003 we will be implementing our rebalancing plan in order to bring the portfolio into compliance with the policy approved by the Board in December 2002. This rebalancing includes completely liquidating our mortgage portfolio as well as repositioning the portfolio by style and asset types.



### 2002 Major Initiatives

During the year, the Real Estate group focused on several key initiatives.

- We recommended and the Board retained the Townsend Group as the Real Estate Consultant.
- Working with the Townsend Group, we recommended and the Board approved the Real Estate Policy and Strategy, including a new composite benchmark.
- Working with the Townsend Group, we reviewed the real estate policies and procedures.
- Working with the Townsend Group, we reviewed and began to enhance risk control tools.
- We reviewed the constitution of Debt Sector investments.



### Sector Allocation

The allocation of the NCREIF property index and OPERS' portfolio holdings to

major property sectors is shown in the accompanying table.



## Schedule of Managers – Real Estate Portfolio

As of December 31, 2002

Portfolio/Manager	Assets Under Management	Percent of Real Estate	Estimated Fees	Mandate	Sector
REIT	\$ 894,370,234	19.28%	\$ 263,964	REIT	Hotel, Residential, Commercial
AFL-CIO	\$ 77,395,151	1.66%	\$ 277,126	Debt	Residential
Bristol	\$ 706,626,264	15.23%	\$ 3,431,540	Direct Equity	Commercial
Faison	\$ 317,081,909	6.84%	\$ 818,986	Direct Equity	Commercial
Great Point	\$ 60,496,672	1.30%	\$ 317,619	Debt/Direct Equity	Commercial
CBA Huntoon Hastings	\$ 3,531,495	0.08%	\$ 409,965	Debt	Residential
Legg Mason	\$ 55,907,451	1.21%	\$ 268,286	Debt/Direct Equity	Commercial
Liberty	\$ 31,683,863	0.68%	\$ 465,466	Debt	Residential, Commercial
Lowe	\$ 587,591,579	12.67%	\$ 7,325,023	Debt/Direct Equity	Hotel, Commercial
Rothschild	\$ 841,456,133	18.14%	\$ 6,053,347	Debt/Direct Equity	Retail, Commercial
Sentinel	\$ 539,537,148	11.63%	\$ 3,572,649	Direct Equity	Commercial, Residential
TGM	\$ 523,288,272	11.28%	\$ 2,270,420	Direct Equity	Residential
<b>Total Real Estate</b>	<b>\$4,638,966,171</b>	<b>100.00%</b>	<b>\$ 25,474,420</b>		

## Real Estate Top Ten Properties by Current Investment

Property	Property Type	Advisor	Current Investment
Hotel del Coronado	Hotel	Lowe Enterprises	\$ 216,215,020
Argent Hotel	Hotel	Lowe Enterprises	130,859,862
DC Telecom	Industrial	Bristol Group	84,218,751
1055 West Seventh	Office	Bristol Group	67,357,818
Vail Cascade Hotel & Club	Hotel	Lowe Enterprises	59,038,943
Tempe Mission Palms	Hotel	Lowe Enterprises	50,518,765
Riviera Factory Stores	Retail	Rothschild Realty	49,921,178
Seneca	Industrial	Bristol Group	48,194,927
LA Center Studios	Movie Studio	Bristol Group	46,635,085
Myrtle Beach Factory Stores	Retail	Rothschild Realty	46,230,260
<b>Total</b>			<b>\$ 799,190,609</b>

### *Real Estate Top Ten Tenants Exposures*

Tenant	Tenant Industry	Property Occupied	Advisor	Square Feet Occupied
Sanmina Corp	Telecom	Collins Tech Park	Faison	302,000
Bank of America	Financial Services	Interstate Tower	Faison	162,414
Goodsill Anderson Quinn	Professional Services	Alti Place	Bristol	72,732
The GAP, Inc.	Retail	Outlet Malls	Rothschild	184,379
ExxonMobil	Energy Services	Poydras	Faison	194,703
Phillips Van Heusen	Retail	Outlet Malls	Rothschild	142,120
Retail Brand Alliance, Inc.	Retail	Outlet Malls	Rothschild	98,466
Duke Engineering	Energy	Solomon Pond - Land	Faison	116,800
Veridian Engineering	Defense Contracting	Great Mills	Faison	172,743
Focal Communications	Telecom	Hudson	Bristol	45,741
<b>Total</b>				<b>1,492,098</b>

### *REIT Top Ten Portfolio Holdings*

Ten Largest Holdings December 31, 2002	IKR	Cost Basis	Fair Value	Percent of Total REIT's
Equity Office Properties	EOP	\$ 78,762,968	\$ 75,278,379	8.36%
Simon Property Group	SPG	78,602,974	107,969,670	11.99%
Duke Weeks Realty	DRE	50,494,091	58,034,399	6.45%
AMB Property	AMB	47,024,637	57,050,169	6.34%
Camden Properties	CPT	46,462,857	52,524,912	5.83%
Post Properties	PPS	44,473,500	28,329,985	3.15%
Liberty Properties	LBY	40,769,994	51,969,287	5.77%
Home Properties	HME	40,370,376	55,110,285	6.12%
Gables Residential	GBP	39,575,086	36,496,373	4.05%
Colonial Properties	CLP	39,412,565	47,963,736	5.33%
<b>Total</b>		<b>\$505,949,048</b>	<b>\$570,727,194</b>	<b>63.38%</b>



## Asset Class Reviews

### Private Equity

#### Introduction

The private equity program was launched in 2002 targeting a 4% asset allocation exposure by 2008. The asset class will invest in private equity partnerships and discretionary managers that invest in private equity partnerships.

The private equity policy identifies the objective, benchmark, risk management, investable securities and program elements. The targeted portfolio structure is shown below with a brief description of each sub-class.

#### Corporate Finance

Commonly referred to as buyouts, the underlying companies are generally mature with positive cash flows and the ability to borrow significant capital.

#### Venture Capital

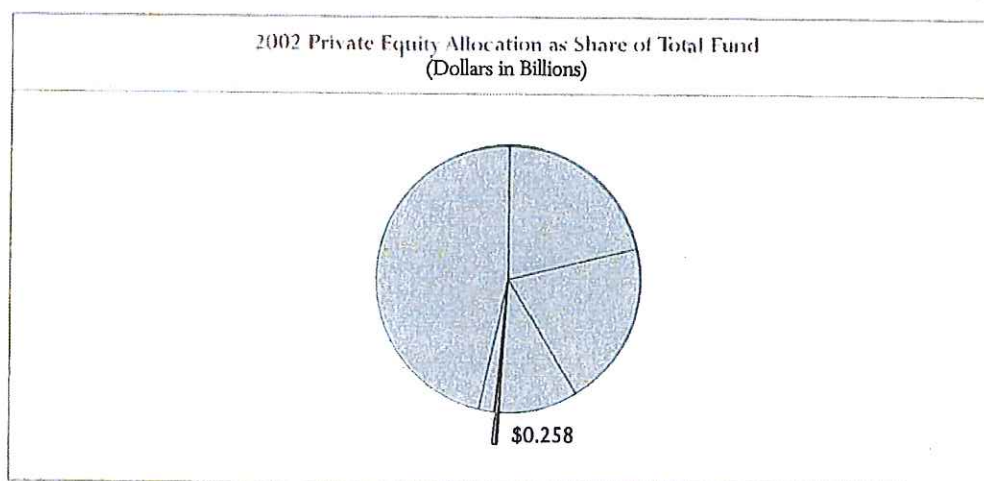
The underlying companies are young, generally focused on technology or life sciences with negative cash flows and the inability to borrow significant capital.

#### Special Situations

These partnerships may invest in a variety of companies including sector specific funds such as energy or healthcare. Investments may also include secondary funds or capital structure funds such as distressed debt or mezzanine.

While the private equity program is committed to a long-term 10.5% return, it will generate negative returns until the investments begin to mature in several years. This effect is commonly referred to as the J-curve.

Sub-Class	Domestic	International	Total
Corporate Finance	40%	15%	55%
Venture Capital	20%	5%	25%
Special Situations	15%	5%	20%
<b>Total</b>	<b>75%</b>	<b>25%</b>	<b>100%</b>



#### Fair Value

As of December 31, 2002, the private equity portfolio had a fair value of \$258 million, representing 0.5% of the total OPERS fund. This is based on adjustments for unrealized gains and losses through September 30, 2002 and cash flows through December 31, 2002.

**Market Overview**

While the December 31 figures are not yet available, estimated returns for the private equity market during 2002 range between -8% and -14%. Investors committed approximately \$58 billion to private equity in 2002 compared to \$164 billion in 2001 and a peak of \$294 billion in 2000. The 2002 commitment level was the lowest since \$51 billion in 1995. The fundraising market experienced a flight to quality with top-tier brand names raising funds at the expense of marginal performers.

**OPERS' Results**

Based on market values at September 30 and cash flows through December 31, the private equity portfolio ended the year with a market value of \$257.9 million. This represents 0.5% of the total OPERS Fund. The international private equity investments managed by Non-U.S. Equity were transferred to Private Equity on December 31, 2001.

Private Equity investments provided a total return of -10.2% for the twelve months ended September 30, 2002. Consistent with industry practice, private equity returns are reported with a one-quarter lag. Private equity returns are inherently volatile in the short-term, affected by factors including the stage of investment, macro and micro-economic conditions, public markets, vintage and geographic exposure. OPERS is a long-term investor and expects that long-term risk-adjusted returns will favorably impact the total Fund returns.

For the twelve months ended December 31, 2002, the OPERS private equity portfolio had \$22.758 million of capital calls and \$1.848 million in distributions with a net cash outflow of \$20.910 million.

**Strategy & Composition**

During 2002, the private equity policy and strategy were approved to achieve the targeted 4% allocation to private equity by 2008. Two new commitments were made in 2002, \$175 million to Blackstone Capital Partners IV and \$75 million to Collier International Partners IV.

**2002 Major Initiatives**

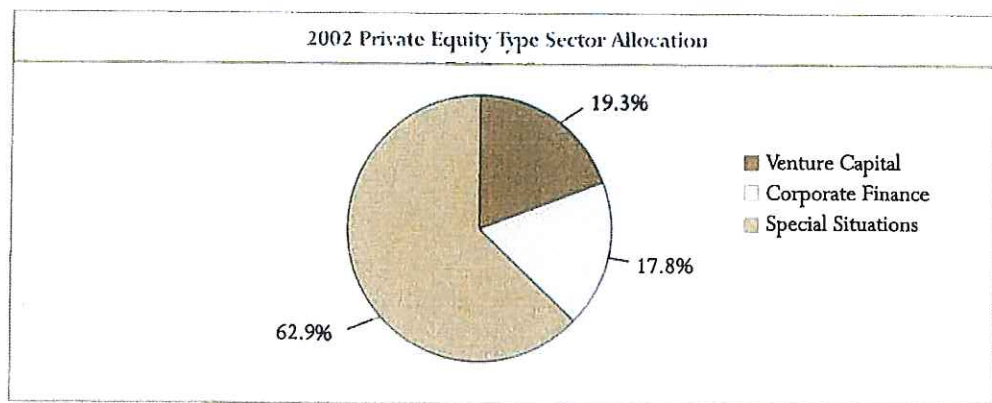
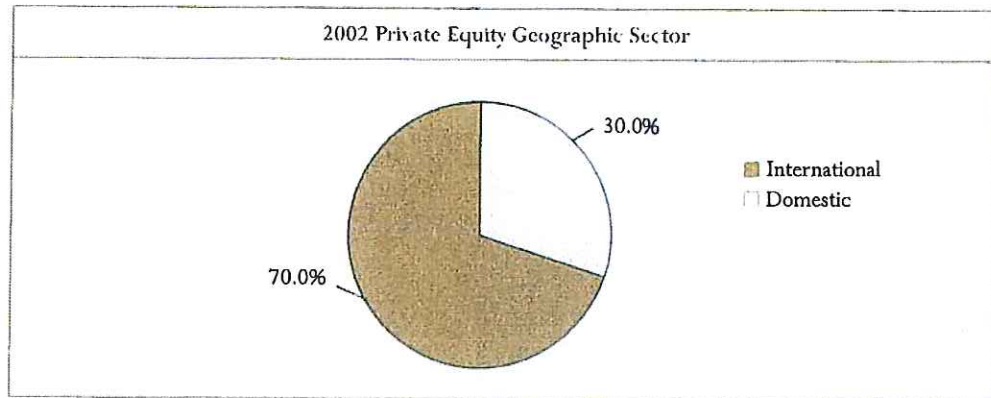
Pacific Corporate Group was engaged as an independent private equity advisor, performing three roles for OPERS: assisting with policy and strategy, portfolio monitoring and non-discretionary due diligence. The private equity policy and strategy were established and new commitments are being made to the asset class.

During 2002, OPERS replaced the management of the Xylem Fund I with UBS Timber Investors. The renamed fund is UBS Timber Fund I.

**Geographic and Sector Allocation**

The allocation of OPERS' private equity investments is shown in the accompanying charts. The top chart displays the allocation between domestic and international investments. The lower chart displays our allocation by type of investment. Presently, OPERS' private market investments are dominated by the holdings in UBS Timber Fund I. As we expand our private equity exposure in the years ahead, the portfolio will gain increased diversification by geography, sector, and investment type.





## Schedule of Managers – Private Equity Portfolio

As of December 31, 2002

(\$ Millions)

Partnership	Type	Geography	Vintage	Market Value*	Commitment	Remaining Commitment	Cash Outflow**	Cash Inflow**	Net IRR***
<b>Legacy</b>									
Primus Capital Fund II	Venture Capital	Domestic	1987	\$0.2	\$10.0	\$0.0	\$0.0	\$0.0	14.0%
Blue Chip Capital I	Venture Capital	Domestic	1992	2.3	15.0	0.0	0.0	0.0	13.5%
Northwest Ohio Venture Fund	Venture Capital	Domestic	1992	0.5	5.0	0.0	0.0	0.0	-18.8%
Primus Capital Fund III	Venture Capital	Domestic	1993	1.7	10.0	0.0	0.0	0.0	23.1%
UBS Timber Fund I ****	Special Situations	International	1994	131.0	234.3	0.0	0.0	0.0	-7.0%
AIG Global Emerging Markets Fund	Corporate Finance	International	1997	17.8	50.0	20.8	4.1	1.7	-10.6%
Blue Chip Capital II	Venture Capital	Domestic	1997	8.7	15.0	0.0	0.0	0.0	10.2%
Primus Capital Fund IV	Venture Capital	Domestic	1997	8.1	15.0	0.4	0.0	0.0	-5.8%
Xylem II	Special Situations	International	1997	27.3	63.7	0.0	0.0	0.0	-19.0%
Linsalata Capital Partners Fund III	Corporate Finance	Domestic	1998	14.6	25.0	0.0	1.0	0.0	0.5%
MCM Capital Partners	Corporate Finance	Domestic	1998	14.3	15.0	3.6	3.2	0.0	13.2%
Blue Chip Capital III	Venture Capital	Domestic	1999	11.2	25.0	1.2	2.5	0.0	-26.3%
Blue Chip Capital IV	Venture Capital	Domestic	2000	5.8	25.0	17.6	3.8	0.0	NMF
Linsalata Capital Partners Fund IV	Corporate Finance	Domestic	2000	7.8	15.0	16.4	3.7	0.0	NMF
Primus Capital Fund V	Venture Capital	Domestic	2000	5.1	25.0	17.1	3.0	0.0	NMF
Sub-Total				\$256.4	\$548.0	\$77.0	\$21.2	\$1.7	
<b>New</b>									
Blackstone Capital Partners IV	Corporate Finance	Domestic	2002	\$0.0	\$175.0	\$175.0	\$0.0	\$0.0	NMF
Collier International Partners IV	Special Situations	International	2002	1.5	75.0	73.4	1.6	0.1	NMF
Sub-Total				\$1.5	\$250.0	\$248.4	\$1.6	\$0.1	
<b>Total Private Equity</b>				<b>\$257.9</b>	<b>\$798.0</b>	<b>\$325.4</b>	<b>\$22.8</b>	<b>\$1.8</b>	<b>-5.6%</b>

\* - Unrealized gains and losses through September 30, 2002 plus cash flows through December 31, 2002.

\*\* - For the twelve months ended December 31, 2002.

\*\*\* - For inception through September 30, 2002. The total includes exited partnerships.

\*\*\*\* - Formerly Xylem Fund I. Data is from inception of Xylem Fund I.



## Corporate Governance

The Board of Trustees of the Ohio Public Employees Retirement System (OPERS or System) believes that common stock proxies are a valuable asset to the fund. In 2002, the OPERS proxy policy was redeveloped as a guide in meeting the fiduciary responsibility of the System. OPERS recognizes that certain proposals, if implemented, may have a substantial impact on the market valuation of portfolio securities. As such, OPERS is obligated to exercise its shareholder rights by voting proxies solely in the economic interests of the System's participants and beneficiaries.

The objective of voting proxies is to enhance the long-term value of OPERS equity investments by:

- Encouraging management to act in the shareholders' best interest;
- Protecting and/or increasing shareholder rights;
- Not overburdening management with issues unrelated to the company's long-term performance;
- Promoting corporate accountability, transparency and responsibility as essential elements of a system of corporate governance designed to increase long-term shareholder value.

The following brief list of policy positions is provided to give the reader a sense of OPERS' general voting positions on some key corporate governance issues.

- OPERS believes that corporate boards should act in the best interests of the shareholders, should enhance/protect shareholder rights, and ensure that all shareholders are treated equally;
- OPERS generally supports compensation plans that provide challenging performance objectives and serve to motivate executives to achieve high performance;

- OPERS evaluates corporate restructurings on an individual, case-by-case basis using economic analysis and votes based on the economic best interests of the participants and beneficiaries;
- OPERS generally opposes takeover defenses because they can be used to entrench management, force a bidder to negotiate directly with the Board, and block an attempt that may be in the best economic interests of the shareholders;
- OPERS generally supports social issues if they either contribute to, or have no adverse effect on, the long-term economic best interests of plan participants and beneficiaries.

During 2002, OPERS voted on a variety of proxy issues, including financial, corporate governance and social issues, casting 17,179 votes on proxy issues of approximately 3,000 corporations whose shares were owned in the Investment Portfolio.

Some of the major issues voted in 2002 are summarized below:

**1. Election of Directors:** OPERS generally votes in favor of directors unless the proxy statement shows circumstances contrary to policy. Examples of such circumstances are: greater than 40% board representation by company executives, potential conflict of interest due to financial or other ties to the company as reported in the proxy statement.

Number of Votes cast:	6,486
For:	2,908
Withhold:	3,578

**2. Selection of Auditors/Accountants:** OPERS generally votes in favor on the independent auditors and accountants recommended by management.

Number of Votes cast:	3,886
For:	1,491
Against:	2,395

**3. Compensation Plans:** (Stock Options, Incentive Stock Options, Employee Stock Purchase Plans, etc.) Corporations provide a variety of compensation plans to retain executives, employees and non-employee directors.

Number of Votes cast:	3,725
For:	1,242
Against:	2,483

**4. Corporate Actions/Corporate**

**Governance Issues:** These are issues related to mergers, acquisitions, stock issuance, stock splits and incorporation. OPERS generally votes in favor of these proposals.

Number of Votes cast:	873
For:	701
Against:	163
Abstain:	9*

**5. Social Issues:** OPERS has a comprehensive proxy policy that addresses recurring social issues that are brought before publicly traded corporations. OPERS votes all social issues in the best financial interests of the System's participants and beneficiaries.

Number of Votes cast:	515
For:	22
Against:	493

\*These issues were voted at the beginning of 2002, before the new policy was approved to not abstain on issues.



## Schedule of Investment Results

	2002	Rolling 3-Year	Rolling 5-Year
<b>Total Portfolio</b>	-10.74	-5.44	1.64
Custom Benchmark	-10.74	-5.15	2.66
<b>Domestic Equity Portfolio</b>	-21.37	-12.91	-0.90
Russel 3000 Stock Index	-21.55	-13.27	0.17
<b>Global Bond Portfolio</b>	8.88	9.64	7.31
Lehman Universal Index	9.85	10.05	7.52
<b>Real Estate Portfolio</b>	7.72	10.22	8.67
Custom Real Estate Index	7.28	10.29	8.38
<b>Private Equity Portfolio</b>	-10.21	-9.56	5.28
Russel 3000 Stock Index + 300 bps	-17.58	-13.51	-2.04
<b>International Equity Portfolio</b>	-14.57	-17.34	-1.50
MSCI ACWIF x US	-14.95	-16.62	-1.89
<b>Short-Term Portfolio</b>	1.70	4.02	4.58
90-day US Treasury Bill	1.79	4.05	4.45

## Footnotes for Schedule of Investment Results

<sup>1</sup> **Customized benchmark** - performance data is calculated based upon the asset allocation targets and implementation schedules as specified by the Investment Policy in effect for each year. The asset allocation targets and associated time intervals these targets were in effect are displayed in the following table:

Asset Class	Full Year 1998	Full Year 1999	Full Year 2000	Full Year 2001	Full Year 2002
Domestic Equity	30.50%	35.00%	35.00%	47.00%	47.00%
Global Bonds	51.00%	35.00%	35.00%	20.00%	20.00%
International	6.00%	18.00%	18.00%	23.00%	23.00%
Real Estate	8.00%	11.00%	11.00%	9.00%	9.00%
Private Equity	N/A	N/A	N/A	0.60%	0.60%
Short-Term Investments	4.50%	1.00%	1.00%	0.40%	0.40%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

To arrive at customized benchmark performance, the asset allocation targets are multiplied by the performance of the corresponding asset class reference indices. The asset class reference indices are specified by the Investment Policy, and are displayed below:

Asset Class	1/1/96 through 9/30/98	10/1/98 through 1/31/01	2/01/01 through 11/30/01	12/31/01	1/1/02 through 12/31/02
Domestic Equity	S&P 500	S&P Supercomposite	S&P 1500/Russell 3000 Blend	Russell 3000	Russell 3000
Global Bonds	SSB BIG Index	SSB BIG Index	Lehman Aggregate	Lehman Universal	Lehman Universal
International	MSCI EAFE	MSCI AWI Free x US	MSCI ACWI Free x U.S.	MSCI ACWI Free x U.S.	MSCI ACWI Free x U.S.
Real Estate	NCREIF	RE Custom Composite	RE Custom Composite	RE Custom Composite	RE Custom Composite
Private Equity*	S&P 500	S&P 500	S&P 500	S&P 500	Russell 3000 + 300 bps
Short-Term Investments	90-day U.S. Treasury Bill	90-day U.S. Treasury Bill	90-day U.S. Treasury Bill	90-day U.S. Treasury Bill	90-day U.S. Treasury Bill

\* Name changed from Venture Capital 12/31/2001; management of International Private Equity moved to Private Equity class.

<sup>2</sup> **Russell 3000 Stock Index** - A capitalization-weighted stock index consisting of the 3,000 largest publicly traded U.S. stocks by capitalization. This index is a broad measure of the performance of the aggregate domestic equity market.

<sup>3</sup> **Lehman Universal Index** - A market value weighted index consisting of the Lehman Brothers Corporate, Government and Mortgage-Backed Indices. This index is the broadest available measure of the aggregate U.S. fixed income market.

<sup>4</sup> **MSCI All Country World Ex-US Index (MSCI ACWIF x US)** - A capitalization-weighted index of stocks representing 47 developed and emerging country markets, excluding the U.S. market.

<sup>5</sup> **OPERS Custom Real Estate Index** - 60% NCREIF (appraisal-based valuations of privately-owned commercial real estate) adjusted for representative fees, plus 20% S&P REIT Index (publicly traded real estate investment trust securities), plus 20% Gliberto-Levy Commercial Mortgage Performance Index (a representative portfolio of institutional grade, fixed-rate/fixed-term, commercial mortgage whole loan), adjusted for representative fees.

<sup>6</sup> **Standard & Poor 500 (S&P 500)** - A capitalization weighted index representing the 500 largest publicly traded U.S. stocks.

<sup>7</sup> **90-day US Treasury Bill** - The 90-day Treasury Bill return as measured by Lehman Brothers.

# Schedule of U.S. Stock Brokerage Commissions Paid

Year Ended December 31, 2002

Brokerage Firm	Shares Traded	Commissions Paid	Average Cents Per Share
Deutsche Bank Securities	24,648,070	\$863,789	3.5
Prudential Securities Incorporated	30,594,692	861,562	2.8
Goldman, Sachs & Co.	23,641,509	633,805	2.7
Morgan Stanley & Co.	20,321,058	622,690	3.1
Merrill Lynch & Co.	19,805,017	620,476	3.1
Saloman Smith Barney	18,199,313	574,495	3.2
Lehman Brothers	12,174,012	397,573	3.3
Bear, Stearns & Co., Inc.	6,803,474	227,975	3.4
J. P. Morgan Securities	4,853,867	142,730	2.9
UBS Warburg Paine Webber	3,291,673	127,900	3.9
Banc of America	3,150,431	120,024	3.8
William Blair & Company	2,631,685	96,987	3.7
A. G. Edwards & Sons, Inc.	2,485,108	90,977	3.7
Cowen & Co.	1,914,830	80,141	4.2
CIBC Oppenheimer & Co., Inc.	2,094,035	79,977	3.8
ISI	1,973,735	67,935	3.4
CS First Boston Corporation	1,824,981	63,560	3.5
Gerard Klauer Mattison & Co.	1,583,187	59,224	3.7
Cantor Fitzgerald	1,472,151	57,046	3.9
McDonald & Company Sec.	1,399,143	56,464	4.0
Washington Research Group	1,824,118	55,665	3.1
Bloomberg Trade Book	3,167,562	55,323	1.7
Legg Mason	1,117,438	39,619	3.5
Bridge Information Systems	1,959,090	38,884	2.0
Jefferies & Co.	850,397	33,388	3.9
Others (Includes 18 Brokerage Firms)	7,998,431	284,518	3.6
<b>TOTAL</b>	<b>201,779,007</b>	<b>\$ 6,352,727</b>	<b>3.1</b>

\* A complete list of brokerage firms used in 2002 by OPERS is available upon request.



## Investment Summary

	2002		2001	
	Fair Value	Percentage of Total Fair Value	Fair Value	Percentage of Total Fair Value
Global Bonds:				
U.S. Government and Agencies	\$ 2,137,382,339	4.50%	\$ 1,953,827,531	3.65%
Corporate Bonds	4,003,668,368	8.43	4,910,958,500	9.17
Mortgage & Mortgage Backed	3,930,905,540	8.28	4,089,146,297	7.64
<b>Total Global Bonds</b>	<b>10,071,956,247</b>	<b>21.21</b>	<b>10,953,932,328</b>	<b>20.46</b>
Common Stock	22,105,983,968	46.54	25,652,128,434	47.92
Real Estate	4,639,006,704	9.77	5,221,406,555	9.75
Venture Capital	257,932,891	0.54	69,834,713	0.13
International	9,507,773,672	20.02	10,813,568,495	20.20
Short-term Investments				
Commercial Paper	26,384,606	0.06	344,401,541	0.64
U.S. Treasury Obligations	884,029,935	1.86	478,670,990	0.90
<b>Total</b>	<b>\$47,493,068,023</b>	<b>100.00%</b>	<b>\$53,533,943,056</b>	<b>100.00%</b>



THE COMPREHENSIVE ANNUAL FINANCIAL REPORT 2002

# Actuarial SECTION





## Report of the Actuary



**GABRIEL, ROEDER, SMITH & COMPANY**  
Consultants & Actuaries

One Towne Square • Suite 800 • Southfield, Michigan 48076 • 248-799-9000 • 800-521-0498 • fax 248-799-9020

March 19, 2003

The Retirement Board  
Public Employees Retirement System of Ohio  
277 East Town Street  
Columbus, Ohio 43215

Dear Board Members:

The basic financial objective of the Ohio Public Employees Retirement System (OPERS) is to establish and receive contributions which:

- when expressed in terms of percents of active member payroll will remain approximately level from generation to generation, and
- when combined with present assets and future investment return will be sufficient to meet the financial obligations of OPERS to present and future retirees and beneficiaries.

The financial objective is addressed within the annual actuarial valuation. The valuation process develops contribution rates that are sufficient to fund the plan's current cost (i.e., the costs assigned by the valuation method to the year of service about to be rendered), as well as to fund unfunded actuarial accrued liabilities as a level percent of active member payroll over a finite period. The most recent valuations were completed based upon population data, asset data, and plan provisions as of December 31, 2001.

The plan administrative staff provides the actuary with data for the actuarial valuation. The actuary relies on the data after reviewing it for internal and year-to-year consistency. The actuary summarizes and tabulates population data in order to analyze longer-term trends. The plan's external auditor also audits the actuarial data annually.

The actuary prepared the following supporting schedules for the Comprehensive Annual Financial Report.

### Actuarial Section

- Summary of Actuarial Assumptions
- Percent Retiring Next Year
- Probabilities of Retirement for Members Eligible to Retire
- Percent Separating Within Next Year
- Individual Employee Pay Increases
- Analysis of Financial Experience

### Financial Section

- Schedule of Funding Progress

Retirement Board

March 19, 2003

Page 2

OPERS Staff prepared the schedules showing the trend of short-term solvency based upon material prepared by the actuary.

Assets are valued on a market related basis that recognizes each year's difference between actual and assumed investment return over a closed four-year period.

Actuarial valuations are based upon assumptions regarding future activity in specific risk areas including the rates of investment return and payroll growth, eligibility for the various classes of benefits, and longevity among retired lives. The Board adopts these assumptions after considering the advice of the actuary and other professionals. The assumptions comply with the requirements of Statement 25 of the Governmental Accounting Standards Board. Each actuarial valuation takes into account all prior differences between actual and assumed experience in each risk area and adjusts the contribution rates as needed. The December 31, 2001 valuations were based upon assumptions that were recommended in connection with a study of experience covering the 1996-2000 period.

Pension experience was mixed during 2001. On a market value basis, investment return was disappointing for OPERS as it was for most other retirement funds across the nation. The actuarial method for recognizing asset gains and losses recognized \$1.6 billion dollars in investment loss this year. The actuarial value of assets now exceeds the market value by \$6.5 billion. Unless the investment markets turn around, the unrecognized \$6.5 billion loss will affect results in future years. Experience in the Retiree Health Plan continues to be cause for concern. Rapidly escalating health care costs, coupled with 3 successive years of disappointing investment results are likely to lead to further restructuring of the plan.

Based upon the results of the December 31, 2001 valuations, we are pleased to report to the Board that with respect to pension benefits, the Public Employees Retirement System of Ohio is meeting its basic financial objective and continues in sound condition in accordance with actuarial principles of level percent of payroll financing. However, a recovery in the investment markets is very important to OPERS and to every other retirement plan in the United States.

Respectfully submitted,

GABRIEL, ROEDER, SMITH & COMPANY



Norman L. Jones, F.S.A., M.A.A.A.



Brian B. Murphy, F.S.A., M.A.A.A.

BBM:lr

GABRIEL, ROEDER, SMITH & COMPANY



## Summary of Assumptions

The following methods and assumptions were adopted by the Retirement Board after consulting with the Actuary. All assumptions have been approved annually by the Board.

**Funding Method:** An entry age normal actuarial cost method of valuation is used in determining benefit liabilities and normal cost. Differences between assumed and actual experience (actuarial gains and losses) become part of unfunded actuarial accrued liabilities. Unfunded actuarial accrued liabilities are amortized to produce payments, which are level percents of payroll contributions.

**Economic Assumptions:** The following economic assumptions are used by the Actuary:

*Investment Return:* 8%, compounded annually, for all members and beneficiaries

**Active Employee Total Payroll:** Increasing 4% annually, compounded annually, which is the inflation portion of the individual pay increase assumption. In effect, this assumes no change in the number of active employees.

*Individual Employee Pay Increases:* An employee's pay is assumed to increase each year, in accordance with a table consisting of a percent increase for each age. For sample ages, the following table describes annual increase percents:

Age	Merit & Seniority			Inflation	Increase Next Year		
	State	Local	Law		State	Local	Law
30	3.00%	3.00%	4.00%	4.00%	7.00%	7.00%	8.00%
40	1.80	1.80	0.85	4.00	5.80	5.80	4.85
50	1.20	1.20	0.50	4.00	5.20	5.20	4.50
60	0.70	0.70	0.50	4.00	4.70	4.70	4.50

**Turnover:** Probabilities of separation from employment before age and service retirement because of death, withdrawal or disability are:

Percent Separating Within Next Year

Sample Ages	Years of Service	Death		Withdrawal					Disability				
				State		Law	Local		State		Local		Law
		Men	Women	Men	Women	Enforcement	Men	Women	Men	Women	Men	Women	Enforcement
	0			38.00%	36.00%	15.00%	34.00%	32.00%					
	1			18.00	19.00	9.00	17.00	18.00					
	2			14.00	15.00	7.00	12.00	13.00					
	3			10.00	12.00	5.00	10.00	10.00					
	4			8.00	9.00	5.00	9.00	9.00					
30	5& over	0.04%	0.02%	5.20	7.00	2.90	5.40	6.90	0.13%	0.14%	0.17%	0.13%	0.37%
40		0.07	0.04	3.50	4.20	1.50	3.20	4.20	0.41	0.36	0.44	0.33	0.95
50		0.23	0.10	2.20	3.10	1.20	2.50	3.00	0.86	0.88	0.90	0.66	2.03
60		0.55	0.25	2.10	2.70	1.20	2.50	2.80	1.86	1.56	1.54	1.35	2.88

**Assets Valuation Method:** For actuarial purposes, assets are valued utilizing a method which recognizes expected return plus or minus a percentage of realized and unrealized investment gains and losses above or below expected returns.

**Valuation Data:** The data about persons now covered and about present assets was furnished by the System's administrative staff. Data is examined for general reasonableness and year-to-year consistency, but is not audited by the Actuary.

**Decrement Assumptions:** The following tables of probabilities for the indicated risk areas are used by the Actuary.

*Mortality.* The tables used in evaluating allowances to be paid were 90% of the 1971 Group Annuity Mortality Male and Female tables, projected to 1984.

*Retirement.* Probabilities of normal age and service retirement applicable to members eligible to retire are:

Percent of Eligible Active Members Retiring Next Year

Retirement Age	State		Local		Law & Public
	Men	Women	Men	Women	Safety
50-54	40%	30%	35%	30%	22%
55-57	25	30	25	30	18
58	25	30	25	30	18
59	25	40	25	40	18
60	30	50	25	50	18
61	25	35	25	30	18
62	25	35	40	30	30
63	30	35	40	30	25
64	40	35	30	30	15
65	50	50	25	25	20
66	25	25	20	25	20
67-69	25	25	20	15	15
70-79	25	20	20	15	100
80	100	100	100	100	100



## Actuarial Valuation Data

Valuation Year	Active Members				Retired Lives		
	Number	Annual Payroll (\$ Millions)	Average Pay	% Increase In Average Pay	Number*	Annual Allowance (\$ Millions)	Average Allowance
1992	333,848	\$ 6,889	\$20,635	(0.82%)	111,779	\$ 896	\$ 8,016
1993	339,190	7,236	21,333	3.38	113,950	965	8,469
1994	343,477	7,625	22,119	3.68	116,001	1,024	8,828
1995	344,632	7,973	23,135	4.59	118,280	1,106	9,351
1996	352,408	8,340	23,666	2.30	121,219	1,216	10,031
1997	352,960	8,640	24,479	3.44	124,258	1,311	10,551
1998	354,431	9,017	25,441	3.93	127,139	1,409	11,082
1999	360,532	9,477	26,286	3.32	129,656	1,625	12,533
2000	366,975	10,192	27,773	5.66	132,603	1,753	13,220
2001	360,313	10,782	29,924	7.74	136,456	1,894	13,884

\* Retired lives number represents an individual count of retirees and beneficiaries.

## Schedule of Retirees and Beneficiaries Added to and Removed from Rolls

Year Ended	Added to Rolls		Removed from Rolls		Rolls at Year-End		Percentage Increase in Annual Allowances	Average Annual Allowances
	Number	Annual Allowances	Number	Annual Allowances	Number*	Annual Allowances		
1997	7,457	\$118,084,211	4,465	\$ 11,278,145	122,788	\$1,298,139,642	8.97%	\$10,572
1998	7,556	116,000,363	4,926	18,222,925	125,418	1,395,917,080	7.53	11,130
1999	7,513	125,218,771	4,933	21,503,909	127,998	1,499,631,942	7.43	11,716
2000	8,459	154,006,435	5,029	3,910,980	131,428	1,649,727,397	10.01	12,552
2001	8,403	323,457,399	5,062	99,438,913	134,769	1,873,745,883	13.58	13,903
2002	10,099	285,426,010	5,203	106,040,402	139,665	2,053,131,491	9.57	14,700

\* This number represents actual number of checks written at year end. One benefit allowance may be issued to multiple beneficiaries.

## Short Term Solvency Test

The OPERS financing objective is to pay for the benefits through contributions that remain approximately level from year to year as a percent of member payroll. In theory, if the contributions to the System are level and soundly invested, the System will *pay all promised benefits when due -- the ultimate test of financial soundness*.

A short-term solvency test is one means of checking a system's progress under its funding program. In a short-term solvency test, the plan's present assets (cash and investments) are compared with: 1) active member contributions on deposit; 2) the liabilities for future benefits to present retired lives; 3) the liabilities for service already rendered by active members.

In a system that has been following the discipline of level percent of payroll financing, (see accompanying table) the liabilities for active member contributions on deposit (1) and the liabilities for future benefits to present retired lives (2) will be fully covered by present assets (except in rare circumstances). In addition, the liabilities for service already rendered by active members (3) will be partially covered by the remainder of present assets. Generally, if the system has been using level cost financing, the funded portion of (3) will increase over time. Column (3) being fully funded is very rare.

## Accrued Liabilities

(\$ Amounts in Millions)

Valuation Year	Aggregate Accrued Liabilities for			Valuation Assets	Portions of Accrued Liabilities Covered by Reported Assets		
	(1) Active Member Contributions	(2) Retirees and Beneficiaries	(3) Active Members (Employer-Financed Portion)		(1)	(2)	(3)
1992	\$4,062	\$ 9,403	\$17,536	\$25,969	100%	100%	71%
1993	4,481	10,010	19,688	29,251	100	100	75
1994	4,895	10,605	20,710	31,771	100	100	79
1995	5,299	11,477	22,378	34,877	100	100	81
1996*	5,681	12,531	14,419	30,534	100	100	85
1997*	6,074	13,587	15,311	33,846	100	100	93
1998*	6,508	14,665	16,541	38,360	100	100	104
1999*	6,945	17,050	19,076	43,060	100	100	100
2000*	7,448	18,017	20,882	46,844	100	100	102
2001*	7,991	19,087	20,414	48,749	100	100	106

\* Does not include assets set aside to pay health care benefits.



## Analysis of Financial Experience

Gains & Losses in Accrued Liabilities Resulting From Differences Between Assumed Experience & Actual Experience

Type of Activity	Gain (or Loss) For Year - \$ Amount - in Millions			
	2001	2000	1999	1998
<b>Age &amp; Service Retirements.</b> If members retire at older ages than assumed, there is a gain. If younger ages, a loss.	\$ (22.8)	\$ 24.3	\$11.1	\$48.6
<b>Disability Retirements.</b> If Disability claims are less than assumed, there is a gain. If more claims, a loss.	1.7	(21.6)	25.3	49.4
<b>Death-In-Service Annuities.</b> If survivor claims are less than assumed, there is a gain. If more claims, a loss.	13.4	12.1	1.9	3.5
<b>Other Separations.</b> If more liabilities are released by other separations than assumed, there is a gain. If smaller releases, a loss.	(147.6)	(235.7)	(258.7)	(143.3)
<b>Pay Increases.</b> If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	525.9	(169.2)	151.7	288.1
<b>Investment Return.</b> If there is greater investment return than assumed, there is a gain. If less return, a loss	(1,456.7)	606.9	1,590.7	1,733.3
<b>Gain (or Loss) During Year from Financial Experience</b>	<b>\$ (1,086.1)</b>	<b>\$ 216.8</b>	<b>\$ 1,522.0</b>	<b>\$ 1,979.6</b>

## Actual vs. Recommended Contribution Rates

The Board adopted all contribution rates as recommended by the Actuary.



THE COMPREHENSIVE ANNUAL FINANCIAL REPORT 2002

# *Statistical* SECTION

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## Disbursements by Category

Year	Benefits					
	Annuities	Disabilities	Other Systems	Survivors	CPI	Post-Retirement Legislative Increase
1993	\$ 620,080,348	\$ 91,337,107	\$ 4,636,808	\$43,855,109	\$151,763,785	\$41,860,355
1994	655,822,239	105,602,623	5,222,468	46,229,029	167,031,125	39,123,353
1995	701,867,702	119,699,694	6,762,310	48,103,168	182,925,717	36,520,590
1996	757,995,460	138,848,062	4,734,682	50,844,206	199,783,533	39,127,634
1997	822,581,843	155,239,567	6,037,460	53,220,591	219,887,499	41,172,682
1998	881,261,294	173,229,819	5,937,875	55,975,704	241,745,889	37,766,500
1999	947,588,558	189,724,304	6,688,026	59,181,847	261,973,594	34,475,613
2000	1,038,847,107	213,894,998	7,767,254	64,975,799	285,195,103	39,119,094
2001	1,162,871,313	243,297,512	6,984,942	79,678,241	323,734,033	57,179,842
2002	1,281,852,146	270,583,859	11,242,369	84,329,145	353,657,726	51,466,246

## Revenues by Source

Year	Members' Contributions	Employers' Contributions	Employers' Contributions as a Percentage of Covered Payroll	Investment Income (Net)	Other	Total
1993	\$ 639,366,718	\$1,012,814,909	13.51%	\$2,683,394,902	\$ 592,395	\$ 4,336,168,924
1994	679,907,661	1,065,570,715	13.51	(134,383,505)	229,502	1,611,324,373
1995	698,987,279	1,107,696,800	13.53	6,134,722,598	263,915	7,941,670,592
1996	737,292,990	1,181,597,072	13.54	2,848,123,681	867,738	4,767,881,481
1997	773,100,594	1,233,637,457	13.54	5,421,861,077	754,023	7,429,353,151
1998	799,281,516	1,266,445,268	13.55	6,045,862,119	237,360	8,111,826,263
1999	839,186,449	1,327,889,681	13.56	6,495,797,615	1,785,346	8,664,659,091
2000	879,844,987	1,171,674,955	13.57	(443,108,186)	884,651	1,609,296,407
2001	931,050,640	1,408,392,987	13.67	(2,717,233,466)	92,291	(377,697,548)
2002	1,094,343,553	1,683,021,503	13.56	(5,684,965,700)	623,421	(2,906,977,223)

			Refunds			
	Health Care	Death Benefits	Separation	Beneficiaries	Other	Total All Payments
	\$ 307,001,902	\$5,203,412	\$ 76,066,042	\$ 5,123,185	\$ 3,895,870	\$1,350,823,923
	327,578,426	5,718,038	86,026,417	5,403,248	1,760,429	1,445,517,395
	353,685,547	6,304,298	100,842,250	5,100,749	2,089,485	1,563,901,510
	369,213,858	5,987,329	102,212,756	5,598,156	2,232,831	1,676,578,507
	389,845,273	6,464,758	131,184,720	5,827,194	2,612,260	1,834,073,847
	440,596,663	6,321,994	116,866,392	5,824,082	2,919,433	1,968,445,645
	523,599,349	6,308,220	101,426,721	4,477,399	14,727,841	2,150,171,472
	559,606,294	6,464,804	69,381,933	2,374,820	10,073,592	2,297,700,798
	693,484,110	6,959,058	231,665,029	22,378,095	8,638,134	2,836,870,309
	776,006,852	6,998,725	159,348,529	15,180,435	12,522,851	3,023,188,883

## Expenses by Type

Year	Benefit Payments	Refunds	Administrative Expenses	Total
1993	\$1,265,738,826	\$ 85,085,097	\$17,029,933	\$1,367,853,856
1994	1,352,327,301	93,190,094	17,212,600	1,462,729,995
1995	1,455,869,026	108,029,484	18,232,175	1,582,130,685
1996	1,566,534,763	110,043,743	18,650,473	1,695,228,979
1997	1,694,449,673	139,624,174	20,107,718	1,854,181,565
1998	1,842,835,738	125,609,907	21,530,875	1,989,976,520
1999	2,029,539,511	120,631,961	24,142,273	2,174,313,745
2000	2,215,870,453	81,830,345	29,642,466	2,327,343,264
2001	2,574,189,051	262,681,258	40,081,348	2,876,951,657
2002	2,836,137,068	187,051,815	56,267,175	3,079,456,058



## Employer Contribution Rates

	Year	Current			Unfunded Liability		Total
		Normal	Health	Survivor Benefits	Past Service	Health	
<b>State</b>	1993	5.49%	3.24%	1.08%	2.45%	1.05%	13.31%
	1994	5.34	3.37	1.07	2.61	0.92	13.31
	1995	5.31	3.39	1.09	2.62	0.90	13.31
	1996	5.57	3.54	1.09	2.36	0.75	13.31
	1997	5.62	3.31	0.59	2.81	0.98	13.31
	1998	5.62	4.20	0.59	2.90	0.00	13.31
	1999	5.62	4.20	0.59	2.90	0.00	13.31
	2000*	4.90	4.30	0.51	0.94	0.00	10.65
	2001	6.96	4.30	0.72	1.33	0.00	13.31
	2002	6.27	5.00	0.72	1.32	0.00	13.31
<b>Local</b>	1993	4.95%	4.20%	1.00%	2.49%	0.91%	13.55%
	1994	4.81	4.29	0.99	2.64	0.82	13.55
	1995	4.85	4.26	1.00	2.59	0.85	13.55
	1996	5.16	4.44	1.00	2.28	0.67	13.55
	1997	5.57	4.29	0.59	2.28	0.82	13.55
	1998	5.57	4.20	0.59	3.19	0.00	13.55
	1999	5.57	4.20	0.58	3.20	0.00	13.55
	2000*	4.92	4.30	0.51	1.11	0.00	10.84
	2001	6.96	4.30	0.72	1.57	0.00	13.55
	2002	6.26	5.00	0.72	1.57	0.00	13.55
<b>Law Enforcement</b>	1993	7.87%	5.06%	1.45%	1.49%	0.13%	16.00%
	1994	8.21	4.93	1.44	1.16	0.96	16.70
	1995	7.97	4.82	1.56	1.28	1.07	16.70
	1996	8.15	4.95	1.56	1.10	0.94	16.70
	1997	9.61	4.70	0.89	0.74	0.76	16.70
	1998	9.61	4.20	0.89	2.00	0.00	16.70
	1999	9.61	4.20	0.88	2.01	0.00	16.70
	2000*	9.76	4.30	0.81	0.83	0.00	15.70
	2001	10.62	4.30	0.88	0.90	0.00	16.70
	2002	10.02	5.00	0.85	0.83	0.00	16.70
<b>Public Safety</b>	2001**	10.90%	4.30%	0.89%	0.61%	0.00%	16.70%
	2002	10.01	5.00	0.98	0.71	0.00	16.70

\* One-time employer contribution rate rollback.

\*\*HB 416 separated the Law Enforcement program into two divisions effective January 1, 2001.

## Schedule of Benefit Recipients by Benefit Type

As of December 2002

Amount of Monthly Benefit	Number of Recipients	Annuities	Disabilities	Survivors
\$1-299	16,760	15,521	477	762
300-499	15,668	12,372	619	2,677
500-999	35,996	26,662	3,589	5,745
1,000-1,499	25,231	18,466	4,811	1,954
1,500-1,999	18,420	13,584	4,162	674
2,000 & Over	27,590	22,960	4,151	479
<b>Totals</b>	<b>139,665</b>	<b>109,565</b>	<b>17,809</b>	<b>12,291</b>

## Schedule of Average Benefit Payments

	Years Credited Service					
	5-9	10-14	15-19	20-24	25-30	30+
<b>Period 1/1/97-12/31/97</b>						
Average Monthly Benefit*	\$ 424.23	\$ 567.57	\$ 892.36	\$ 1,257.11	\$ 1,653.85	\$ 2,559.18
Average Final Average Salary	\$22,122.77	\$25,243.22	\$28,558.70	\$31,114.26	\$33,988.05	\$40,420.16
Number of Active Recipients	518	1,151	921	869	936	2,086
<b>Period 1/1/98-12/31/98</b>						
Average Monthly Benefit*	\$ 410.11	\$ 551.52	\$ 880.87	\$ 1,251.97	\$ 1,637.16	\$ 2,457.59
Average Final Average Salary	\$19,724.14	\$24,434.94	\$28,389.53	\$31,488.84	\$34,447.12	\$40,004.19
Number of Active Recipients	544	1,269	987	941	991	2,110
<b>Period 1/1/99-12/31/99</b>						
Average Monthly Benefit*	\$ 518.68	\$ 595.54	\$ 911.39	\$ 1,289.00	\$ 1,683.10	\$ 2,567.00
Average Final Average Salary	\$22,550.34	\$26,267.14	\$29,675.52	\$33,159.25	\$35,621.00	\$42,570.49
Number of Active Recipients	551	1,196	924	958	1,013	2,230
<b>Period 1/1/00-12/31/00</b>						
Average Monthly Benefit*	\$ 568.65	\$ 580.63	\$ 896.02	\$ 1,269.50	\$ 1,758.88	\$ 2,619.25
Average Final Average Salary	\$22,896.02	\$25,927.52	\$29,719.83	\$32,749.50	\$37,478.97	\$43,856.78
Number of Active Recipients	631	1,338	1,047	1,051	1,096	2,642
<b>Period 1/1/01-12/31/01</b>						
Average Monthly Benefit*	\$ 664.13	\$ 653.42	\$ 976.78	\$ 1,336.85	\$ 1,838.20	\$ 2,637.20
Average Final Average Salary	\$23,931.02	\$28,263.16	\$32,417.38	\$35,116.98	\$39,584.78	\$45,055.73
Number of Active Recipients	636	1,271	977	1,018	1,196	2,800
<b>Period 1/1/02-12/31/02</b>						
Average Monthly Benefit*	\$ 702.63	\$ 610.69	\$ 964.61	\$ 1,289.63	\$ 1,855.10	\$ 2,666.55
Average Final Average Salary	\$25,391.85	\$27,426.29	\$33,170.31	\$34,732.90	\$41,607.13	\$46,882.86
Number of Active Recipients	579	1,295	1,069	1,079	1,393	3,489

\* Average Monthly Benefit includes post retirement and yearly 3% cost-of-living increases.



## Number of Benefit Recipients *by Category*

Year-end	Annuities	Disabilities	Survivors	Total
1993	91,048	9,879	11,256	112,183
1994	92,224	10,758	11,360	114,342
1995	93,718	11,561	11,426	116,705
1996	95,739	12,547	11,510	119,796
1997	97,833	13,335	11,620	122,788
1998	99,619	14,146	11,653	125,418
1999	101,345	14,868	11,785	127,998
2000	103,680	15,811	11,937	131,428
2001	105,876	16,727	12,166	134,769
2002	109,565	17,809	12,291	139,665

## Number of New Benefit Recipients *and Refund Payments*

Year	Annuities	Disabilities	Survivors	Refund
1993	4,463	1,195	537	37,336
1994	4,428	1,327	563	39,457
1995	4,908	1,353	535	39,536
1996	5,394	1,536	567	38,195
1997	5,371	1,470	616	40,806
1998	5,490	1,487	579	38,299
1999	5,387	1,474	652	36,442
2000	6,065	1,739	655	31,157
2001	5,999	1,650	754	40,615
2002	7,600	1,799	700	32,186

## Member Count

Year-end	Active Contributing	Inactive	Total
1993	347,937	96,268	444,205
1994	358,149	110,745	468,894
1995	365,383	127,491	492,874
1996	369,467	148,274	517,741
1997	365,384	175,020	540,404
1998	371,563	192,273	563,836
1999	383,286	207,345	590,631
2000	399,919	220,189	620,108
2001	411,076	224,677	635,753
2002	402,041	255,528	657,569

## Member Contribution Rates

Year	State & Local	Law Enforcement	Public Safety
1993	8.5%	9.0%	N/A
1994	8.5	9.0	N/A
1995	8.5	9.0	N/A
1996	8.5	9.0	N/A
1997	8.5	9.0	N/A
1998	8.5	9.0	N/A
1999	8.5	9.0	N/A
2000	8.5	9.0	N/A
2001	8.5	10.1	9%
2002	8.5	10.1	9%



## Number of Employer Units

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Calendar Year	State	County	Law Enforcement	Municipalities	Villages	Miscellaneous	Libraries	Townships	Totals
1993	280	238	214	338	620	324	257	1,312	3,583
1994	287	238	207	340	634	340	257	1,311	3,614
1995	288	238	208	340	651	354	256	1,310	3,645
1996	289	238	213	339	658	374	256	1,312	3,679
1997	292	236	226	338	666	379	256	1,312	3,705
1998	327	247	233	338	672	400	256	1,312	3,785
1999	332	247	233	337	673	406	257	1,312	3,797
2000	318	243	232	334	673	414	257	1,312	3,783
2001	266	239	255	258	665	442	256	1,309	3,690
2002	263	237	251	256	671	450	256	1,312	3,696



THE COMPREHENSIVE ANNUAL FINANCIAL REPORT 2002

# *Plan* STATEMENT

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## Plan Statement

THE OHIO PUBLIC EMPLOYEES RETIREMENT SYSTEM (OPERS) was created by the Ohio General Assembly to provide retirement, disability, and survivor benefit programs for the public employees of Ohio. This summary outlines the Ohio law which regulates OPERS; however, it cannot and does not change any of the provisions of the Ohio Revised Code.

### *Member Eligibility*

All public employees, except those covered by another state retirement system in Ohio or by the Cincinnati Retirement System, are required to become contributing members of OPERS when they begin public employment unless they may be exempted or excluded.

The law provides for optional membership for elected public officials. Students, not already members, working for the public school, college, or university they are attending may be exempt from contributing to OPERS by filing a request for exemption within the first month of employment.

The following individuals are excluded from membership:

- 1) Inmates of state correctional institutions;
- 2) Patients in hospitals operated by the Department of Retardation and Developmental Disabilities;
- 3) Patient in the Ohio Veterans' Home and residents of county homes;
- 4) Elected officials of public employers who have no employees subject to OPERS coverage;
- 5) Employees of temporary help services who perform services for public employers;
- 6) Individuals serving on a temporary basis in case of fire, storm, snow, earthquake, flood, or other similar emergency;
- 7) Persons employed under the federal Job Training Partnership Act;
- 8) Members of the Motor Vehicle Salvage Dealers Board or the Motor Vehicle's Board;
- 9) Employees of private contractors except public employees transferred with previously publicly-operated functions and performing the same job duties as before;
- 10) Individuals performing services under a contract as an independent contractor;
- 11) Election workers who earn less than \$500 per calendar year;
- 12) Firefighters except those who were members before Aug. 3, 1992 and elected to remain members;
- 13) Board members of city or general health district boards of health whose compensation is established in Section 3709.02 or 3709.05;
- 14) Full-time faculty and administrative state employees in the unclassified civil service of state colleges/universities who choose to participate in an alternate retirement plan (ARP); and
- 15) Board members of a sanitary district established under Chapter 6115.

OPERS provides special retirement coverage for certain law enforcement officers. These individuals, who must have a Peace Officer's Training School Certificate, are covered if they were hired on or after the dates of the enabling legislation. If they were employed before the legislation was enacted, they had the option to be covered; if they did not elect law enforcement coverage, they remained under the regular OPERS schedule of benefits.



Those listed below, whose primary duties are to preserve the peace, to protect life and property, and to enforce the laws of Ohio, are covered if they are:

- 1) Sheriffs and deputies
- 2) Full-time township constables or police officers,
- 3) Criminal bailiffs or court constables who were deputized by a county sheriff and employed under Section 2301.12,
- 4) Full-time state university law enforcement officers under Section 3345.04,
- 5) Full-time bailiffs or deputy bailiffs appointed by the Hamilton County Municipal Court Clerk of Courts under Section 1901.32(A)(3), and
- 6) Full-time county narcotics agents.
- 7) Police employed by the Ohio Veterans' Home under Section 6907.02,
- 8) Special police employed by a state mental health institution under Section 5119.14, and
- 9) Special police employed by a state institution for the mentally retarded and developmentally disabled under Section 5123.13,
- 10) The State House sergeant at arms, assistant house sergeant at arms, regional transit authority police officers, and state highway patrol officers under Section 145.01

The following groups also are eligible for law enforcement coverage:

- 1) Full-time undercover drug agents as defined in Section 107.79,
- 2) Full-time enforcement agents with the Ohio Department of Public Safety under Section 5502.14,
- 3) Full-time park officers under Section 1541.10, forest officers under Section 1503.29, wildlife officers under Section 1531.13, state watercraft officers under Section 1547.521, full-time preserve officers under Section 1517.10, with the Ohio Department of Natural Resources,
- 4) Full-time park district police officers under Section 511.232 or 1545.13,
- 5) Full-time conservancy district officers under Section 6101.75,
- 6) Full-time municipal corporate police officers not covered by the Ohio Police and Fire Pension Fund,

### *Contributions*

Employers are required to make contributions to the System on the basis of a percentage of reportable payroll and at a rate based upon the recommendations of OPERS' actuary. Penalties and interest are added for late payments. The state contribution rate is 13.31%. Local employers contribute 13.55% and employers in the law enforcement division contribute 16.70%.

The current contribution rate for members is 8.5% of earnable salary. Members in the law enforcement division pay 9.0 or 10.1% of earnable salary. Individual accounts for each member of OPERS are maintained and funds contributed by the member are fully refundable at service termination or death. Each year in April, members are sent a statement of their individual account as of the previous December 31. A report disclosing the financial status of the System and describing major developments during the year at OPERS is sent along with the statement of account.



## *Benefits for Contributing Members*

### **Age and Service Retirement**

Members are eligible to retire at age 60 with at least five years of total service credit. They may retire with a reduced benefit as early as age 55 with 25 years of service. With 30 years of credit, there is no age requirement or benefit reduction because of age.

Service credit allowed under Chapter 145 of the ORC includes:

- 1) Service for the state of Ohio or an Ohio political subdivision for which contributions have been paid;
- 2) Certain military service which interrupted contributing public service;
- 3) Any out-of-public service period of three years or less during which the member was receiving an award under Workers' Compensation;
- 4) Previously unreported service in Ohio;
- 5) Service purchased by the member for:
  - a) Other military service not being used for other retirement programs, except Social Security;
  - b) Prisoner-of-war service;
  - c) An authorized leave of absence, which did not exceed one year;
  - d) Comparable public service not being used for other retirement programs, except Social Security, performed outside Ohio or with the federal government or for which contributions were made to an Ohio municipal retirement system;
  - e) Service restored by redeposit which had been cancelled by an earlier refund of OPERS contributions;
  - f) Service in an Ohio police or fire department and covered by the Police and

Firemen's Disability and Pension fund, service in the State Highway Patrol and covered by the Highway Patrol Retirement System, or service covered by the Cincinnati Retirement System, that is not being used for other retirement benefits;

- g) Service which was previously covered by a valid exemption under OPERS;
  - h) Thirty-five percent additional credit on completed terms of full-time contributing elective service or board, commission, or other public body service by members who are appointed by the governor with the advice and consent of the Senate;
- 6) Service purchase by an employer under a retirement incentive plan.

When a member files an application for age and service retirement, a choice of several plans of payment is available. The choices include benefits payable throughout the member's lifetime (Plan B-single life annuity) or in a lesser amount during the individual's life but continuing after their death to a spouse (Plan A) or to a designated beneficiary (Plans C, or D-joint and survivor annuity). A benefit payable under Plan A, C, or D is the actuarial equivalent of Plan B, but the payment to the member is reduced because it is based on the combined life expectancies of the member and the beneficiaries. A fifth payment plan (Plan E-guaranteed period) is also the actuarial equivalent of Plan B, but the payment is reduced to guarantee the period.

Benefit payments vary in amount depending on length of public service, final average salary (FAS), age, and plan of payment selection. FAS is determined by taking the average of the three highest years of earnable salary. In no case can the age and service formula benefit exceed 100% of the FAS or the limits under Internal Revenue Code Section 415.

**Disability Benefits**

OPERS' members are eligible for one of two disability programs, the original plan or the revised plan. Employees who had contributions on deposit with OPERS on July 29, 1993 had a one-time opportunity to select coverage under one of these programs. Those employees hired after July 29, 1992 are covered only under the revised plan. There are a number of features common to both plans.

A member who has at least five years of contributing service credit and becomes permanently disabled for the performance of duty may apply to the Retirement Board for monthly disability benefits. Those members in the law enforcement division do not need five years of service credit to apply for disability if the disabling condition was the result of an on-duty illness or injury, which occurred during or resulted from the performance of duty.

A member must go off the payroll because of a presumably permanent disabling condition, either mental or physical, which prevents performance of their job. No more than two years must have passed since the member's contributing service was terminated unless at the end of the two-year period, the member was disabled and unable to file an application. The member must not be receiving an age and service retirement benefit. If the Retirement Board approves the disability application, the benefit is effective the first day of the month following the member's service termination, provided the member is otherwise eligible. A disability benefit recipient may be required to have a medical examination at least once a year.

A disability benefit terminates under either plan if the member is no longer disabled, returns to public service, chooses to begin receiving an age and service benefit, dies, or requests termination of benefit.

The amount of the disability allowance under the original plan is based on the FAS and years of service with OPERS, plus the length of time between the effective date of disability and age 60. The disability benefit cannot exceed 75%, nor be less than 30% of the member's FAS. The benefit is fully taxable until normal retirement age and then a specified dollar amount each month representing the return of taxed contributions is tax-free. For a law enforcement member disabled due to an on-duty injury or illness, 30% of the benefit payment is excludable from taxable income.

The benefit under the revised plan is based on the FAS and years of service with OPERS with no early retirement reductions, but cannot be less than 45% or exceed 60% of FAS. The benefit is fully taxable as long as it is received. For a law enforcement member disabled due to an on-duty injury or illness, 45% of the benefit payment is excludable from taxable income.

When the disability benefit under the revised plan ends, the member may have the opportunity to apply for a service retirement benefit or apply for a refund of the account, which is not reduced by the amount of disability benefits paid. The benefit amount would be the greater of: a) 2.2% of FAS multiplied by the years of service (contributing and disability) not to exceed 45% of FAS, or b) the regular or law enforcement benefit calculation using only the member's years of contributing service.



**Survivor Benefits**

A member's beneficiary is determined by statutory automatic success unless a specific designation is made in writing on a form provided by OPERS. Listed below is the order of automatic success under Ohio law:

- 1) Spouse,
- 2) Children,
- 3) Dependent parents,
- 4) If none of the above, parents share equally in a refund of the account,
- 5) If none of the foregoing, a refund of the account is paid to the estate.

Qualified beneficiaries will be eligible to receive monthly survivor benefits if, at the time of the member's death, at least one of the following qualifications was met:

- 1) Eighteen full months of Ohio service credit with three of those months within the two and on half years immediately before death, or
- 2) Receiving a disability benefit from OPERS, or
- 3) Eligible for retirement but did not retire and continued to work.

If, at the member's death, none of these requirements were met, a refund of contributions paid into OPERS for the account may be made. The member's beneficiary may choose a refund of the member's account only if there are not children eligible for monthly benefits. If the member dies while receiving a disability benefit under the original plan and eligible survivors are allowed to select a cash refund of the account, the amount is reduced by the amount of disability benefits that had already been paid. There is no reduction in amount if the member dies while receiving a benefit under the revised disability plan or while still working.

**Surviving Spouse** – if the member had at least 10 full years of Ohio service credit, their surviving spouse (with no children eligible for monthly benefits) may receive benefits of \$250 a month, an amount equal to 25% of final average salary, or a percent determined by service credit (if over 20 years), whichever is higher. If the member had less than 10 full years, but at least 18 full months, of Ohio service credit, the surviving spouse (at age 62 or older with no children eligible for monthly benefits) may receive the greater of \$250 per month or 25% of FAS.

These benefits are payable regardless of the age of the surviving spouse adjudged physically or mentally incompetent. Also, a spouse with children eligible for monthly benefits will receive a benefit immediately regardless of the age of the spouse.

As long as the member did not have any children eligible for a monthly benefit, and the member was eligible to retire on a monthly benefit but chooses to stay on the job, a monthly benefit for the spouse at the member's death may be calculated as though the member had retired and taken Plan D. This option provides for the monthly allowance to continue through the spouse's lifetime.

**Child** – A child may qualify for monthly benefits if they have never been married or are a natural or legally adopted child under age 18, (or 22, if a qualified student attending an accredited school) or a child, at any age, who is physically or mentally incompetent at the time of the member's death. Benefits terminate upon the child's first marriage, adoption by someone other than a stepparent, abandonment, death, or during active military service.

Also, survivor benefits will be stopped after a child reaches age 18 unless proof is submitted that the child is attending an institution of learning or training and pursuing a program of

study equivalent to at least two-thirds of the full-time curriculum requirement of the institution. Forms are provided by OPERS for submission of the necessary proof by the surviving spouse or student and by the school.

**Dependent Parent** – A dependent parent is one who received at least one-half support from the member during the 12 months preceding the member's death. A dependent parent may receive survivor benefits if age 65 or older, or at any age if adjudged physically or mentally incompetent at the time of the member's death. Payments to dependent parents stop in the event of a first marriage or death.

#### **Additional Benefits**

**Health Care Coverage** – OPERS provided health care is not a statutorily required benefit.

Currently, when applying for age and service retirement, a member with 10 years of Ohio service credit has OPERS health care plan coverage available. These 10 years may not include out-of-state and/or military service purchased after Jan. 29, 1981, service granted under a retirement incentive plan, or credit purchased after May 4, 1992 for exempt service. Health care coverage for disability recipients and primary survivor recipients is available. Dependents of eligible recipients may be covered through premium deductions. Qualified benefit recipients also may be eligible for alternative health care plans (HMOs), which may require a premium deduction.

Members with less than 10 years of service credit at age and service retirement may obtain access to independent health care coverage offered by our health care administrators. This coverage is neither offered by OPERS nor is it the responsibility of the System. OPERS does not pay premiums, claims, or withhold any premiums for this coverage.

**Medicare Part B Reimbursement** – Recipients who are eligible for health care must enroll in Medicare B (medical) when they become eligible for Medicare B even if they are covered

by health care through their current employer. Proof of enrollment must be submitted and OPERS will then reimburse a recipient for the basic premium cost of the Medicare B premium as long as the recipient is enrolled in Medicare B. The amount is added to the monthly benefit.

**Cost-of-Living Adjustment** – Once a benefit recipient has received benefits for 12 months, an annual 3% cost-of-living adjustment is provided to benefit recipients each year.

**Death Benefit** – Upon the death of an age-and-service or disability-benefit recipient, a lump-sum death benefit is paid to the qualified beneficiary. The benefit, from \$500 to \$2,500, is based on the recipient's years of service credit.

#### **Refunds**

Full recovery of all employee contributions to OPERS is guaranteed. Upon leaving all public employment in Ohio, a member may apply for and receive their accumulated contributions, interest, and a matching amount (if the member has five or more years of service credit).

Before a refund may be issued, the law requires three months must elapse from the date certified by the employer that the member terminated public employment. If a member is also a member of the State Teachers Retirement System or the School Employees Retirement System, an application for refund from the other system(s) must have been filed in order to receive the money from OPERS.

If a refund is taken and the individual later returns to covered employment for at least 18 months, the amount refunded, plus interest, may be redeposited and service credit restored.

### **Coverage and Benefits for Re-Employed Retirees**

After a member retires, re-employment in a job that is covered by OPERS, including service in an elected position, may affect continuing receipt of an age and service retirement benefit.



Retirees begin contributing from the first day of re-employment at a rate of 8.5% of earnable salary. State employers contribute 13.31% for these re-employed retirees and local employers contribute 13.55%.

A retiree should not be re-employed for at least two months after retirement from an OPERS-covered employer. A retiree who returns to work and has not been retired for two months must contribute, but the current retirement allowance for each month in which re-employment occurs during those two months will be forfeited.

All re-employed retirees will continue to receive their retirement allowance and must make contributions toward a money purchase annuity, which is based on the calculation of the sum of employee contributions for the period of re-employment, plus allowable interest, multiplied by two.

A choice of several plans of payment is available. The choices include benefits payable throughout the member's lifetime (Plan B-single life annuity) or in a lesser amount during the individual's life but continuing after their death to a spouse (Plan A) or to a designated beneficiary (Plans C, or D-joint and survivor annuity). A benefit payable under Plan A, C, or D is the actuarial equivalent of Plan B, but the payment to the member is reduced because it is based on the combined life expectancies of the member and the beneficiaries.

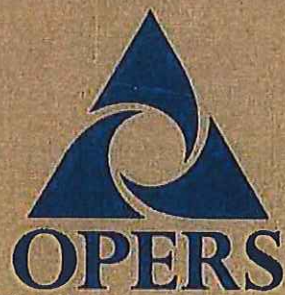
The employer must provide the re-employed retiree's primary health care coverage if it is available to employees in comparable positions. The employer health care coverage cannot be waived by the re-employed retiree. Suspension or forfeiture of the retirement allowance interrupts the retiree's health care coverage.

A person who is retired from OPERS and returns to OPERS-covered employment as an elected official is treated as a re-employed retiree. A person who is retired from another Ohio state retirement system and becomes an OPERS member as an elected official also is treated as a re-employed retiree. However, if an OPERS member is covered for non-elected official service, and also is an elected official contributing to Social Security for the elected position, their elected service has no effect on OPERS re-employed retirees for subsequent elected services.

An OPERS retiree cannot continue to receive benefits and work as an independent contractor under a contract for any period of time for the employer from which they retired.

A disability or age and service benefit recipient from another Ohio system coming into OPERS-covered employment should be retired for at least two months and must begin contributions to OPERS from the first day of employment. These recipients will earn a money purchase annuity based on the calculation of the sum of employee contributions received for the period of re-employment, plus allowable interest, multiplied by two.





Ohio Public Employees Retirement System

## OHIO PUBLIC EMPLOYEES RETIREMENT SYSTEM

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