

KENTUCKY RETIREMENT SYSTEMS

**ANNUAL REPORT
FISCAL YEAR ENDING
JUNE 30, 1989**

**KENTUCKY EMPLOYEES RETIREMENT SYSTEM
COUNTY EMPLOYEES RETIREMENT SYSTEM
STATE POLICE RETIREMENT SYSTEM**

TABLE OF CONTENTS

Letter of Transmittal	1
Introduction	2
Board of Trustees	3
Organizational Chart	4
FINANCIAL SECTION	5
Introduction	6
Auditor's Certification	8
KERS Financial Statements	10
CERS Financial Statements	24
SPRS Financial Statements	38
KRS Insurance Fund Financial Statements	51
ACTUARIAL SECTION	57
Introduction	58
Actuary's Certification	59
KERS Actuarial Valuation	60
CERS Actuarial Valuation	76
SPRS Actuarial Valuation	92
INVESTMENT SECTION	107
Introduction	108
Investment Advisors' Letters	109
Portfolio Summary by System	115
STATISTICAL SECTION	122
Introduction	123
Retirement Analysis	125
Membership Growth	130
Financial & Actuarial Data	131
Administrative Expense	135



KENTUCKY RETIREMENT SYSTEMS
Perimeter Park West
1260 Louisville Road
Frankfort, Kentucky 40601



Kentucky Employees Retirement System
County Employees Retirement System
State Police Retirement System

General Manager
Phone 502-564-4646
FAX# 502-564-7289

MEMORANDUM

TO: Members of the Board of Trustees
John D. Robey, Chairman
Iris R. Barrett, Vice Chairman
Frank W. Burke
William H. Cull
Thomas C. Greenwell
John E. King
Timothy S. Mauntel
Cattie Lou Miller
James R. Ramsey

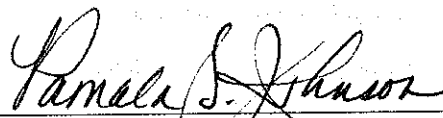
FROM: Pamala S. Johnson, Interim General Manager

DATE: November 16, 1989

SUBJECT: Annual Report for Fiscal Year Ending June 30, 1989

As directed by KRS 61.645, I am pleased to present the Annual Report for the fiscal year ended June 30, 1989. The four sections of the report provide financial information, actuarial information, investment information and other statistical information. Appropriate certifications from an independent accounting firm and an independent actuarial firm are included.

Copies of this report will be made available to Retirement System members by sending copies to each participating employer in the Kentucky Employees Retirement System, County Employees Retirement System and State Police Retirement System. Copies will also be distributed to legislative personnel, state libraries and other interested parties.


Pamala S. Johnson
Interim General Manager

INTRODUCTION

by

Pamala S. Johnson, Interim General Manager

Members of the Retirement Systems,

This report represents a full and complete disclosure of the financial and actuarial status of the Kentucky Employes Retirement System, County Employes Retirement System and State Police Retirement Systems.

CONTENTS

This section and the pages that follow provide an introduction to the Board, management and organization of the retirement systems.

The second section is an exact copy of the audit report prepared by the firm of Eskew & Gresham. This report is included in accordance with Kentucky Revised Statute 61.645(12). The annual audit of the systems by an independent auditing firm assures that the systems remain in compliance with generally accepted accounting procedures.

The third section consists of copies of the significant pages of the actuarial report compiled by the firm of William M. Mercer-Meidinger-Hansen, Inc. For reasons of space and cost, detailed statistical information contained in the report are not included. However, the information necessary to determine the adequacy of funding and the systems' liabilities is included in the same format as presented to the Board.

The fourth section provides you with information on the retirement systems investments. Included are portfolio summaries for the three retirement systems and the Insurance Fund. Also shown are comparisons of portfolio growth and income growth, giving a historical perspective.

The last section provides statistical information on membership, types of payments selected, retirement payments by county and information on retirements during the 1988-89 fiscal year. The following statistical tables present a summary of the actuarial and financial sections. These tables provide a snapshot of the systems and can give you an understanding of the systems' funding without having to examine the entire audit and actuary reports. The final table shows administrative expenses.

INVESTMENTS

The rate of return for the total portfolio was 13.1%. Total assets increased 18% over fiscal year 1988-89.

The Index Equity Fund, managed by the Investment Staff, had a rate of return of 20.8%. Our goal with this fund is to outperform the Standard & Poor 500 Index. This we did. The S&P 500 showed a rate of return of 20.35% for the period.

The retirement systems bond portfolio also outperformed the goal index. The Shearson-Lehman Bond Index showed a rate of return of 12.34% for the fiscal year. The retirement systems bond portfolio had a rate of return of 12.93%.

OPERATIONS

The fiscal year was a difficult one for the retirement office. The new legislation had a tremendous impact on the staff and strained our ability to provide services.

An "Early Retirement Incentive Program" or "Retirement Window" resulted in 1,876 state employees retiring between August 1 and November 1, 1988. The employees received an additional 10% added to their service credit at a total cost to the state of \$20.5 million.

In the six months between April, when the program was announced, and September, the last month for applications, the retirement office received 112,000 phone calls and 5,500 office visitors--a workload equal to that of the previous year. The staff put in more than 11,000 hours of overtime during the period, the equivalent of 5.6 years of full-time employment for a single person.

During this same period, our field staff implemented legislation which mandated participation in the county system for police, fire and utility departments of second through fifth class cities. On August 1, 1988, 29 new agencies joined under this law adding 1,788 members to the county system. In addition, the field staff assisted 59 other agencies which elected to join the county system bringing in 1,466 new members.

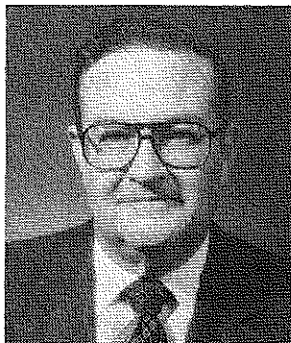
In the last half of the fiscal year, the field staff, with the aid of the benefits counselors, initiated a program to provide one-on-one retirement counseling in various locations throughout the state. This service offered counseling to members who would not have been able to visit the central office.

These services, and the behind-the-scenes services of accounting, investment management and data processing, were performed by the 70 staff members of the retirement systems.

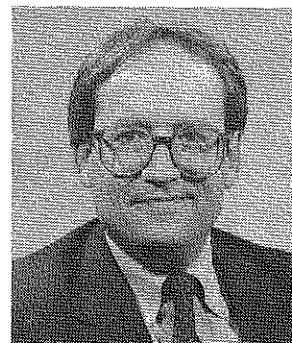
BOARD OF TRUSTEES



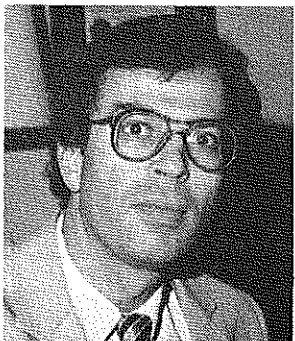
Iris R. Barrett
Frankfort
Elected by KERS Members
Term Expires 3/31/90



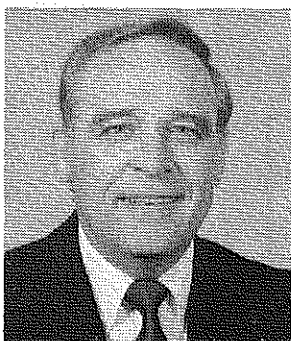
Frank W. Burke
Louisville
Elected by CERS Members
Term Expires 3/31/93



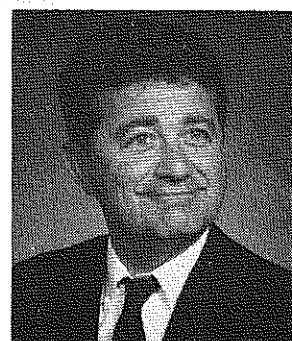
William H. Cull
Frankfort
Appointed by Governor
Term Expires 3/31/92



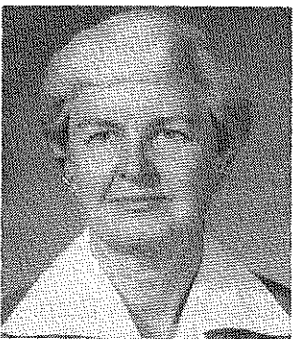
Thomas C. Greenwell
Frankfort
Ex Officio
Commissioner of State
Department of Personnel



John E. King
Lexington
Elected by CERS Members
Term Expires 3/31/93



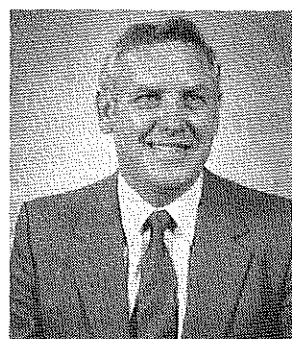
Timothy S. Mauntel
Edgewood
Appointed by Governor
Term Expires 3/31/91



Cattie Lou Miller
Frankfort
Elected by KERS Members
Term Expires 3/31/90

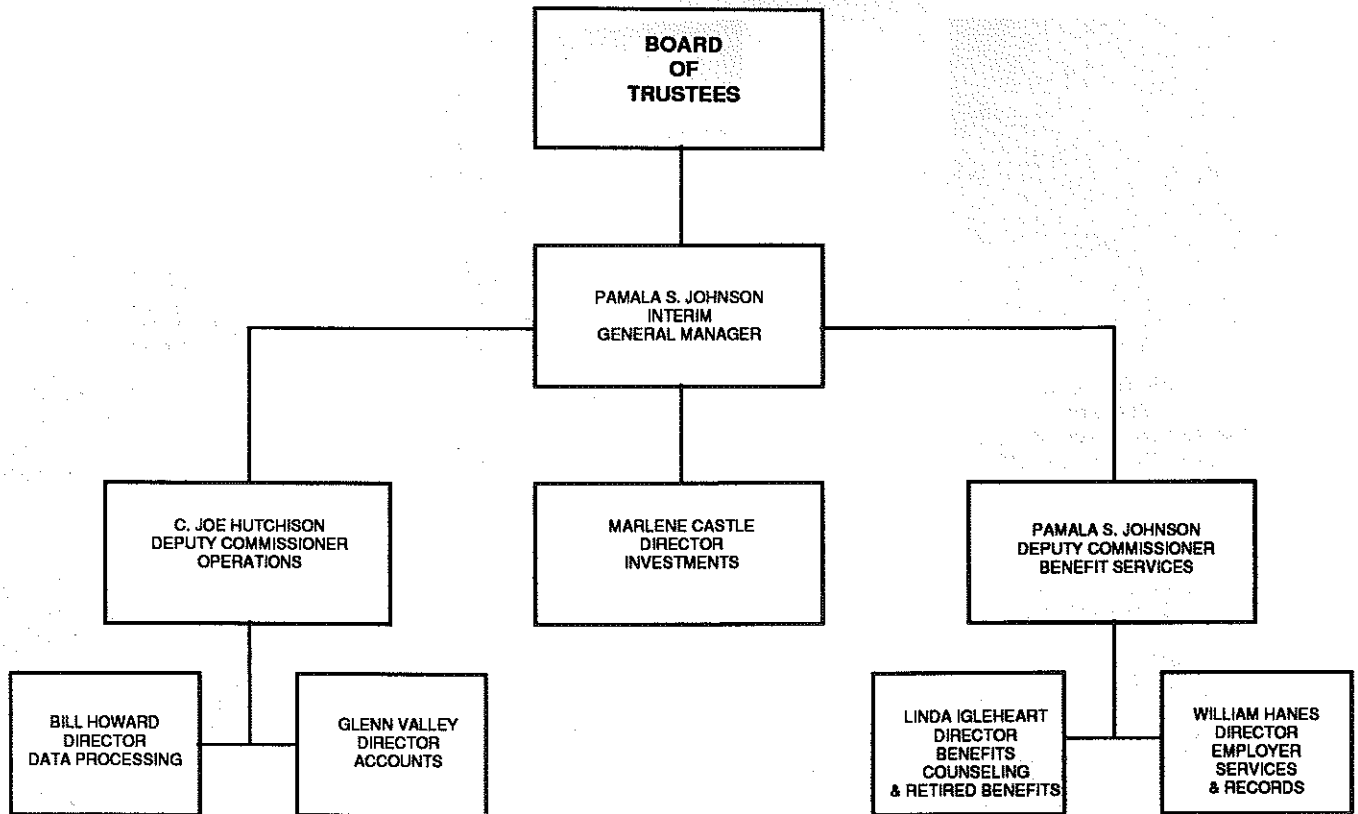


James R. Ramsey
Frankfort
Appointed by Governor
Term Expires 3/31/92



John D. Robey
Chairman
 Elizabethtown
Elected by SPRS Members
Term Expires 3/31/91

KENTUCKY RETIREMENT SYSTEMS ORGANIZATIONAL CHART



CONTRACTUAL ARRANGEMENTS

ACTUARIAL SERVICES:

William M. Mercer-Meidinger-Hansen
1500 Meidinger Tower
Louisville, KY 40202

CUSTODIAN OF SECURITIES:

Farmers Bank & Capital Trust
Farmers Bank Plaza
Frankfort, KY 40601

LEGAL SERVICES:

Johnson & Judy, Stoll Keenon & Park
236 West Main Street
Frankfort, KY 40601

AUDITING SERVICES:

Eskew & Gresham, P.S.C.
2500 Meidinger Tower
Louisville, KY 40202

ASSET MANAGEMENT CONSULTANT:

William M. Mercer-Meidinger-Hansen
Asset Planning, Inc.
10 South Wacker Drive
Chicago, IL 60606

INVESTMENT COUNSELORS:

Capital Supervisors
20 North Clark Street
Suite 700
Chicago, IL 60602

Heitman Advisory Corp.
1800 North LaSalle Street
Suite 3600
Chicago, IL 60601

Munder Capital Management
260 East Brown Street
Suite 100
Birmingham, MI 48011

FINANCIAL SECTION

REVENUES: Employer Contributions Investment Income Investment Gain Balances Transferred <hr/> TOTAL REVENUES	EXPENSES: Retirement Benefits Insurance Payments Interest Credited on Accounts Administrative Expense Investment Expenses <hr/> TOTAL EXPENSES
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INTRODUCTION TO FINANCIAL SECTION

The Retirement Systems' assets are held in trust for the purpose of providing retirement benefits many years in the future. Since these benefits are guaranteed by Kentucky law to each eligible participant, it is the responsibility of the Board of Trustees to see that the systems are soundly funded and that all investments, receipts, payments and expenses are fully accounted for.

The following information shows that the systems have excellent financial strength. The combined assets of the Kentucky Employees Retirement System, County Employees Retirement System and State Police Retirement System totalled over \$2.8 billion as of June 30, 1989, an increase of 18% over the previous fiscal year.

To assure that proper accounting methods are being used, the Board contracts with a private accounting firm to perform an independent audit of the assets and liabilities of the three systems. The audit for the fiscal year ended June 30, 1989, was performed by the firm of Eskew & Gresham, PSC.

In addition to the annual audit by a certified public accounting firm, other procedures are employed to insure the safety of the systems' assets. Each year a surprise audit is conducted by the internal auditor of the securities' custodian. Adequate bonding arrangements are in force for those individuals who have access to securities, and the General Manager is under a special fidelity bond. A plan is in place and tested regularly to ensure that the systems assets are protected and programs can be continued in the event of natural disasters.

There were no party-in-interest transactions, no loans or leases in default and no "reportable" transactions during the fiscal year.

An exact copy of the "audit opinion" of Eskew & Gresham follows along with copies of their audited financial statements and accompanying notes. The financial statements were completed in accordance with the requirements set forth in the National Council on Government Accounting, Statement 1, as adopted in "Statement 1 of the Governmental Accounting Standards Board." This statement requires that financial statements be presented on an accrual basis and stipulates that certain disclosures be included in the notes to financial statements.

KENTUCKY EMPLOYES RETIREMENT SYSTEM
COUNTY EMPLOYES RETIREMENT SYSTEM
STATE POLICE RETIREMENT SYSTEM
KENTUCKY RETIREMENT SYSTEMS INSURANCE FUND

AUDITED FINANCIAL STATEMENTS
YEARS ENDED JUNE 30, 1989 AND 1988



Board of Trustees
Kentucky Retirement Systems
Frankfort, Kentucky

We have audited the balance sheets of the Kentucky Employes Retirement System, County Employes Retirement System, State Police Retirement System and Kentucky Retirement Systems Insurance Fund as of June 30, 1989 and 1988, and the related statements of revenues, expenses and changes in members' contribution account and retirement allowance account and changes in financial position of the Kentucky Employes Retirement System, County Employes Retirement System and the State Police Retirement System and the statements of revenues, expenses and changes in fund balance and changes in financial position of the Kentucky Retirement Systems Insurance Fund 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 generally accepted auditing standards. 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 financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Kentucky Employes Retirement System, County Employes Retirement System, State Police Retirement System and Kentucky Retirement Systems Insurance Fund at June 30, 1989 and 1988, and the results of their operations, the changes in members' contribution account and retirement allowance account of the Kentucky Employes Retirement System, County Employes Retirement System and State Police Retirement System, the changes in fund balance of the Kentucky Retirement Systems Insurance Fund and the changes in their financial position for the years then ended, in conformity with generally accepted accounting principles.

September 15, 1989

Eskew + Gresham, PSC

KENTUCKY EMPLOYES RETIREMENT SYSTEM

KENTUCKY EMPLOYES RETIREMENT SYSTEM
BALANCE SHEETS
JUNE 30, 1989 AND 1988

	1989	1988
ASSETS		
Investments (Note 7):		
United States Government securities	\$ 237,792,242	\$ 250,924,536
Government National Mortgage Association and similar securities	242,736,631	237,019,246
Corporate bonds and notes	165,192,698	160,418,145
Convertible bonds	871,569	806,467
Common stocks	457,738,176	460,439,413
First mortgage real estate loans	3,109,624	3,767,788
Real estate investment trust	46,878,860	46,725,226
Securities purchased under agreement to resell	416,152,906	248,328,843
	<u>\$1,570,472,706</u>	<u>\$1,408,429,664</u>
Cash on deposit with State Treasurer	239,568	25,734
Member and employer contributions receivable	8,356,547	5,698,475
Accrued investment income	14,832,185	14,165,999
Other assets	12,505	15,297
	<u>\$1,593,913,511</u>	<u>\$1,428,335,169</u>
LIABILITIES AND FUND BALANCE		
Member refunds, insurance fund transfers and investment expenses payable	\$ 5,304,413	\$ 2,278,767
Fund balance:		
Members' Contribution Account	\$ 318,369,041	\$ 309,182,683
Retirement Allowance Account	1,270,240,057	1,116,873,719
	<u>\$1,588,609,098</u>	<u>\$1,426,056,402</u>
	\$1,593,913,511	\$1,428,335,169

See notes to financial statements.

KENTUCKY EMPLOYEES RETIREMENT SYSTEM
 STATEMENTS OF REVENUES, EXPENSES AND CHANGES
 IN MEMBERS' CONTRIBUTION ACCOUNT
 FOR THE YEARS ENDED JUNE 30, 1989 AND 1988

	1989	1988
Revenues:		
Member contributions	\$ 43,642,903	\$ 43,065,763
Interest credited to members' balances transferred from Retirement Allowance Account	<u>10,721,503</u>	<u>10,349,211</u>
Total revenues	\$ 54,364,406	\$ 53,414,974
Expenses:		
Refunds to former members	\$ 7,145,907	\$ 5,860,974
Retired members' balances transferred to Retirement Allowance Account	<u>38,032,141</u>	<u>8,703,326</u>
Total expenses	\$ 45,178,048	\$ 14,564,300
Excess of revenues over expenses	\$ 9,186,358	\$ 38,850,674
Members' Contribution Account at beginning of year	<u>309,182,683</u>	<u>270,332,009</u>
Members' Contribution Account at end of year	\$318,369,041	\$309,182,683

See notes to financial statements.

KENTUCKY EMPLOYEES RETIREMENT SYSTEM
 STATEMENTS OF REVENUES, EXPENSES AND CHANGES
 IN RETIREMENT ALLOWANCE ACCOUNT
 FOR THE YEARS ENDED JUNE 30, 1989 AND 1988

	1989	1988
Revenues:		
Employer contributions	\$ 78,673,797	\$ 60,507,339
Investment income	120,760,531	89,409,521
Net realized gain on disposal of investments	20,922,372	47,362,518
Retirement members' balances transferred from Members' Contribution Account	<u>38,032,141</u>	<u>8,703,326</u>
Total revenues	\$ 258,388,841	\$ 205,982,704
Expenses:		
Retirement benefits for members	\$ 80,377,963	\$ 60,060,355
Contributions transferred to the Kentucky Retirement Systems Insurance Fund	12,261,924	10,911,143
Interest credited to members' balances transferred to Members' Contribution Account	10,721,503	10,349,211
Administrative expenses	1,345,174	1,122,416
Investment expenses	<u>315,939</u>	<u>334,270</u>
Total expenses	\$ 105,022,503	\$ 82,777,395
Excess of revenues over expenses	\$ 153,366,338	\$ 123,205,309
Retirement Allowance Account at beginning of year	<u>1,116,873,719</u>	<u>993,668,410</u>
Retirement Allowance Account at end of year	\$1,270,240,057	\$1,116,873,719

See notes to financial statements.

KENTUCKY EMPLOYES RETIREMENT SYSTEM
 STATEMENTS OF CHANGES IN FINANCIAL POSITION
 FOR THE YEARS ENDED JUNE 30, 1989 AND 1988

	1989	1988
Source of funds:		
Excess of revenues over expenses	\$162,552,696	\$162,055,983
Deduct amortization of investment discount and premium, net, not providing funds	<u>9,253,728</u>	<u>2,896,637</u>
Funds provided from operations	\$153,298,968	\$159,159,346
Proceeds from sale, maturity or exchange of investments, less net gain of \$20,922,372 in 1989 and \$47,362,518 in 1988, included above	338,415,962	569,312,303
Decrease in accrued investment income		5,377,667
Decrease in member and employer contributions receivable		667,144
Decrease in other assets	2,792	
Increase in member refunds, insurance fund transfers and investment expenses payable	<u>3,026,390</u>	<u>167,275</u>
Total funds provided	\$494,744,112	\$734,683,735
Application of funds:		
Investments purchased or exchanged	\$491,206,020	\$734,684,720
Increase in member and employer contributions receivable	2,658,072	
Increase in accrued investment income	666,186	
Increase in other assets		<u>2,764</u>
Total funds applied	\$494,530,278	\$734,687,484
Increase (decrease) in cash	\$ 213,834	\$ (3,749)
Cash on deposit with State Treasurer at beginning of year	<u>25,734</u>	<u>29,483</u>
Cash on deposit with State Treasurer at end of year	\$ 239,568	\$ 25,734

See notes to financial statements.

KENTUCKY EMPLOYES RETIREMENT SYSTEM
NOTES TO FINANCIAL STATEMENTS
YEARS ENDED JUNE 30, 1989 AND 1988

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

A. Basis of Presentation - The financial statements of Kentucky Employes Retirement System (the System) are prepared on the accrual basis, and generally conform to the provisions of the National Council on Governmental Accounting Statement 1.

B. Investment Securities - Investments in bonds and first mortgage real estate loans are stated at amortized cost. Discount and premium are amortized using the straight-line method from the date of acquisition to stated or expected maturity. Common stocks, securities purchased under agreement to resell and investment in real estate investment trust are carried at cost.

Net realized gain or loss on investments represents the difference between the proceeds from sale or maturity and the average cost of investments sold or redeemed. Realized gains or losses are also recorded for exchanges of investments, based upon the difference at the time of the exchange between the carrying value and the market value of the investment exchanged.

C. Members' Contribution and Retirement Allowance Accounts - These accounts are funded by contributions and investment income. The Members' Contribution Account represents the accumulation of active members' contributions plus interest credited to members' accounts. The Retirement Allowance Account is comprised of retired members' contribution balances including interest credited thereon and accumulated employer contributions plus cumulative excess of revenues over expenses less interest credited to members' contribution accounts.

D. Expenses Allocation - The System, County Employes Retirement System, and State Police Retirement System are collectively administered by Kentucky Retirement Systems. Administrative and investment expenses of Kentucky Retirement Systems are allocated in proportion to the number of active members participating in each plan and the carrying value of plan investments, respectively.

NOTE 2 - DESCRIPTION OF THE PLAN

The Kentucky Employes Retirement System is a defined benefit plan which covers substantially all regular full-time employees of any state department, board, or agency directed by Executive Order to participate in the System. The Plan provides for retirement, disability and death benefits. The number of participating state employers was 275 at June 30, 1989.

KENTUCKY EMPLOYEES RETIREMENT SYSTEM
 NOTES TO FINANCIAL STATEMENTS
 YEARS ENDED JUNE 30, 1989 AND 1988
 (CONTINUED)

NOTE 2 - DESCRIPTION OF THE PLAN (CONTINUED)

For the years ended June 30, 1989 and 1988, participating employees contributed 5% of creditable compensation to the System. Members occupying hazardous positions, as defined by statute, contribute at the rate of 7% of creditable compensation. Employer contribution rates are intended to fund the System's normal cost on a current basis plus one percent (1%) of unfunded past service costs per annum plus interest at the actuarial assumed rate. Such contribution rates are determined by the Board of Trustees of Kentucky Retirement Systems each biennium. Participating employers contributed 7.45% and 14%, respectively, of members' non-hazardous and hazardous compensation for both years.

Vesting in a retirement benefit begins immediately upon entry into the System. The participant has a fully vested interest after the completion of sixty months of service, twelve of which are current service. At a minimum, terminated employees are refunded their contributions with credited interest at 3% compounded annually through June 30, 1981, 6% thereafter through June 30, 1986 and 4% thereafter.

At June 30, membership in the System consisted of:

	1989	1988
Retirees and beneficiaries currently receiving benefits and terminated employees entitled to benefits but not yet receiving them:		
Non-hazardous positions	25,012	23,068
Hazardous positions	243	142
Total	25,255	23,210
Current employees:		
Vested:		
Non-hazardous positions	26,587	27,190
Hazardous positions	622	258
Nonvested:		
Non-hazardous positions	17,153	16,080
Hazardous positions	1	305
Total	44,363	43,833

Further information regarding the plan agreement and the vesting and benefit provisions is contained in the pamphlet Summary Plan Description. Copies of this pamphlet are available from the office of Kentucky Retirement Systems.

KENTUCKY EMPLOYEES RETIREMENT SYSTEM
 NOTES TO FINANCIAL STATEMENTS
 YEARS ENDED JUNE 30, 1989 AND 1988
 (CONTINUED)

NOTE 3 - ACCUMULATED BENEFITS

Accumulated plan benefits are those future periodic payments, including lump-sum distributions, that are attributable under the Plan's provisions to services rendered by the employees to the valuation date. Accumulated plan benefits include benefits expected to be paid to (a) retired or terminated employees or their beneficiaries, (b) beneficiaries of employees who are deceased, and (c) present employees or their beneficiaries. Benefits under the Plan are based on employees' average compensation during their five highest paid years. Accumulated plan benefits for active employees are based on their compensation as of the valuation date. Benefits payable under all circumstances - retirement, death, and termination of employment - are included to the extent they are deemed attributable to employee service rendered to the valuation date.

The System's consulting actuary, William M. Mercer-Meidinger-Hansen, Inc., estimates the actuarial present value of accumulated plan benefits, which is the amount that results from applying actuarial assumptions to adjust the accumulated plan benefits to reflect the time value of money (through discounts for interest) and the probability of payment (taking into account mortality) between the valuation date and the expected date of payment.

	1989	1988
Vested benefits:		
Participants currently receiving payments	\$ 729,486,545	\$526,710,966
Other participants	<u>324,210,074</u>	<u>365,424,372</u>
	\$1,053,696,619	\$892,135,338
Non-vested benefits	<u>94,169,162</u>	<u>95,619,370</u>
Total accumulated plan benefits	\$1,147,865,781	\$987,754,708

The more significant assumptions underlying the actuarial computations, including those which enter only into the determination of funding levels (cost method, turnover, retirement age, and salary increase), are as follows:

Actuarial cost method	- Entry age normal cost method
Assumed rate of return on investments	- 8% per annum
Mortality basis	- 1971 Group Annuity Mortality Table, plus a pre-retirement duty death rate of .0005 per year for hazardous duty employees
Employee turnover	- Graduated select and ultimate rates based on 1985 experience study

KENTUCKY EMPLOYES RETIREMENT SYSTEM
 NOTES TO FINANCIAL STATEMENTS
 YEARS ENDED JUNE 30, 1989 AND 1988
 (CONTINUED)

NOTE 3 - ACCUMULATED BENEFITS (CONTINUED)

- | | |
|-----------------|---|
| Retirement age | - Based upon experience, with 20% weight, at age 55-64, to the earliest age at which an employee could retire with 100% of the accrued benefits |
| Salary increase | - 7 1/2% per annum |

NOTE 4 - FUNDING STATUS AND PROGRESS

The amount shown below as "pension benefit obligation" is a standardized disclosure measure of the present value of pension benefits, adjusted for the effects of projected salary increases, estimated to be payable in the future as a result of employee service to date. The measure is the actuarial present value of credited projected benefits and is intended to help users assess the System's funding status on a going-concern basis, assess progress made in accumulating sufficient assets to pay benefits when due, and make comparisons among public employee retirement systems (PERS). The measure is independent of the actuarial funding method used to determine contributions to the System.

The pension benefit obligation for 1989 and 1988 was determined as part of an actuarial valuation at June 30, 1989 and 1988, respectively. The significant actuarial assumptions are the same as those used for the accumulated plan benefits computations for those years.

The funds in excess of pension benefit obligation were \$21,685,920 and \$26,042,600 at June 30, 1989 and 1988, respectively.

	1989	1988
Pension benefit obligation:		
Retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	\$ 729,486,545	\$ 526,710,966
Current members -		
Accumulated employee contributions and credited interest	301,612,058	292,377,177
Employer-financed vested	511,218,737	556,968,752
Employer-financed nonvested	<u>24,605,838</u>	<u>23,956,907</u>
Total pension benefit obligation	\$1,566,923,178	\$1,400,013,802
Net assets available for benefits, at cost	<u>1,588,609,098</u>	<u>1,426,056,402</u>
Funds in excess of pension benefit obligation	\$ 21,685,920	\$ 26,042,600

KENTUCKY EMPLOYES RETIREMENT SYSTEM
NOTES TO FINANCIAL STATEMENTS
YEARS ENDED JUNE 30, 1989 AND 1988
(CONTINUED)

NOTE 5 - CONTRIBUTIONS REQUIRED AND CONTRIBUTIONS MADE

The System's funding policy provides for periodic employer contributions at actuarially determined rates that, expressed as percentages of annual covered payroll, are sufficient to accumulate sufficient assets to pay benefits when due. Level percentage of payroll employer contribution rates are determined using the entry age actuarial funding method. The System also uses the level percentage of payroll method to amortize the unfunded liability.

Actuarially determined contribution requirements of \$93,257,787 (\$53,053,294 employer and \$40,204,493 employee) for the years ended June 30, 1989 and \$84,013,089 (\$46,059,104 employer and \$37,953,985 employee) for the year ended June 30, 1988 were determined through an actuarial valuation performed at June 30, 1988 and 1987, respectively. These contributions were to consist of: (a) \$67,588,428 for 1989 and \$61,677,949 for 1988 normal cost; (b) \$12,211,861 for 1989 and \$10,823,346 for 1988 amortization of the unfunded actuarial accrued liability; (c) \$1,459,536 for 1989 and \$1,239,606 for 1988 administrative expenses; and (d) \$11,997,962 for 1989 and \$10,272,188 for 1988 group hospital and medical insurance premiums. For 1989, contributions received totaled \$122,316,700 of which the employer portion was \$78,673,797 (7.45% of the covered payroll for non-hazardous positions and 14% for hazardous positions) and the employee portion was \$43,642,903 (5% of the covered payroll for non-hazardous positions and 7% for hazardous positions). For 1988 contributions received totaled \$103,573,102 of which the employer portion was \$60,507,339 (7.45% of the covered payroll for non-hazardous positions and 14% for hazardous positions) and employee portion was \$43,065,763 (5% of the covered payroll for non-hazardous positions and 7% for hazardous positions).

The 1988 General Assembly acted to reduce contributions to the Retirement Systems by \$1.8 million for the fiscal year ended June 30, 1989 and \$1.5 million for the fiscal year ended June 30, 1990. This reduction is effected by returning a portion of employer contributions to the Commonwealth's General Fund. The amount of the reduction is allocated between the Kentucky Employees Retirement System and the State Police Retirement System based upon each systems relative percentage of covered payroll. This resulted in the Kentucky Employees Retirement System returning \$1,743,000 of employer contributions to the General Fund of the Commonwealth of Kentucky.

KENTUCKY EMPLOYEES RETIREMENT SYSTEM
 NOTES TO FINANCIAL STATEMENTS
 YEARS ENDED JUNE 30, 1989 AND 1988
 (CONTINUED)

NOTE 6 - SIX-YEAR HISTORICAL TREND INFORMATION

Six-year historical trend information designed to provide information about the System's progress in accumulating sufficient assets to pay benefits when due is presented below.

Analysis of Funding Progress

Fiscal Year	(1)	(2)	(3)	(4)	(5)	(6)
	Net Assets Available For Benefits	Pension Benefit Obligation	Percentage Funded (1) ÷ (2)	Unfunded (Funds in Excess of) Pension Benefit Obligation (2) - (1)	Annual Covered Payroll	Unfunded Pension Benefit Obligation as a Percentage of Covered Payroll (4) ÷ (5)
1984	\$ 814,553,823	\$ 900,125,692	90.5%	\$85,571,869	\$627,726,168	13.6%
1985	934,480,773	982,009,399	95.2	47,528,626	676,557,336	7.0
1986	1,079,353,421	1,110,593,823	97.2	31,240,402	713,878,356	4.4
1987	1,264,000,419	1,238,746,096	102.0	(25,254,323)	803,594,136	N/A
1988	1,426,056,402	1,400,013,802	101.9	(26,042,600)	757,822,116	N/A
1989	1,588,609,098	1,566,923,178	101.4	(21,685,920)	822,362,508	N/A

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

Revenues by Source

Fiscal Year	Revenues by Source				Total
	Employee Contributions	Employer Contributions	Investment Income	Other Income	
1984	\$26,075,180	\$46,925,821	\$68,498,499	\$ 5,812,966	\$147,312,466
1985	27,760,271	49,189,066	78,509,704	12,959,165	168,418,206
1986	29,228,638	52,686,054	84,346,598	32,275,130	198,536,420
1987	40,563,400	56,679,470	97,094,173	58,938,113	253,275,156
1988	43,065,763	60,507,339	89,409,521	47,362,518	240,345,141
1989	43,642,903	78,673,797	120,760,531	20,922,372	263,999,603

KENTUCKY EMPLOYES RETIREMENT SYSTEM
 NOTES TO FINANCIAL STATEMENTS
 YEARS ENDED JUNE 30, 1989 AND 1988
 (CONTINUED)

NOTE 6 - SIX-YEAR HISTORICAL TREND INFORMATION (CONTINUED)

Fiscal Year	Expenses by Type					Contributions Transferred to Insurance Fund	Total
	Benefit Payments	Administrative Expenses	Refunds	Other Expenses			
1984	\$35,467,174	\$ 623,177	\$4,686,153	\$197,994	\$ 1,880,023	\$ 42,854,521	
1985	39,225,080	722,085	5,171,940	249,975	3,122,176	48,491,256	
1986	43,962,495	838,804	5,105,361	279,607	3,477,505	53,663,772	
1987	52,414,394	1,235,905	5,061,156	272,111	9,644,592	68,628,158	
1988	60,060,355	1,122,416	5,860,974	334,270	10,911,143	78,289,158	
1989	80,377,963	1,345,174	7,145,907	315,939	12,261,924	101,446,907	

NOTE 7 - INVESTMENTS

The Board of Trustees of the System shall give priority to the investment of funds in obligations considered to improve the industrial development and enhance the economic welfare of the Commonwealth. Appointed investment managers use the following guidelines and restrictions in the selection of securities and timing of transactions as long as the security is not a prohibited investment under Kentucky State Statutes:

Equity Investments - Investments may be made in common stock, securities convertible into common stock and in preferred stock of publicly traded corporations.

Fixed Income Investments - Publicly traded bonds are to be selected and managed to assure an appropriate balance in quality and maturities consistent with current market and economic conditions. Investments may be made in any U.S. Government issued debt instrument or issue by an agency of the U.S. Government with an initial maturity of over one year and which are guaranteed by the U.S. Government.

Mortgages - Investments may be made in real estate mortgages on a direct issue basis or in the form of mortgage pool instruments guaranteed by an agency of the U.S. Government or by the Commonwealth of Kentucky.

Equity Real Estate - Investments may be made for the purpose of creating a diversified portfolio of income-producing properties with moderate to low levels of risk.

Guaranteed Insurance Contracts - Investments may be made in guaranteed contracts issued by legal reserve life insurance companies authorized to do business in the Commonwealth of Kentucky and such other states as may be required.

KENTUCKY EMPLOYEES RETIREMENT SYSTEM
 NOTES TO FINANCIAL STATEMENTS
 YEARS ENDED JUNE 30, 1989 AND 1988
 (CONTINUED)

NOTE 7 - INVESTMENTS (CONTINUED)

Mutual Fund Investments - Investments may be made in mutual funds which hold common stocks or fixed income securities.

Cash Equivalent Securities - The following short-term investment vehicles, with the exception of commercial paper which requires specific purchase approval by the Investment Committee, are considered acceptable:

- Repurchase Agreements -- Repurchase Agreements which are collateralized by United States Government issues.
- U.S. Government Issues -- All obligations of the U.S. Government and its agencies.
- Certificates of Deposit -- Investments may be made in only the 25 largest money center banks in the United States (in terms of total assets) or in banks domiciled in the Commonwealth of Kentucky and having capital and unrestricted surplus of at least \$100 million.

The System's investments are categorized below to give an indication of level of risk assumed by the entity at June 30, 1989. Category 1 includes investments that are insured or registered or for which the collateralized securities are held by the System or its agent in the System's name. Category 2 includes uninsured and unregistered investments for which the collateralized securities are held by the broker's or dealer's trust department or agent in the System's name.

	June 30, 1989		Carrying Amount	Market Value	June 30, 1988 Market Value
	Category 1	Category 2			
United States Government securities	\$ 3,770,274	\$ 234,021,968	\$ 237,792,242	\$ 245,518,000	\$ 251,109,000
Government National Mortgage Association and similar securities	35,240,428	207,496,203	242,736,631	245,145,000	236,923,000
Corporate bonds and notes	25,407,184	139,785,514	165,192,698	170,340,000	160,298,000
Common stocks		457,738,176	457,738,176	630,927,000	582,256,000
Securities purchased under agreement to resell		416,152,906	416,152,906	416,153,000	248,329,000
	<u>\$64,417,886</u>	<u>\$1,455,194,767</u>	<u>\$1,519,612,653</u>	<u>\$1,708,083,000</u>	<u>\$1,478,915,000</u>
Convertible bonds			871,569	836,000	768,000
First mortgage real estate loans			3,109,624	2,912,000	3,463,000
Real estate investment trust.			<u>46,878,860</u>	<u>56,489,000</u>	<u>53,403,000</u>
Total Investments			<u>\$1,570,472,706</u>	<u>\$1,768,320,000</u>	<u>\$1,536,549,000</u>

Investments at June 30, 1989, include securities loaned under various lending programs.

KENTUCKY EMPLOYEES RETIREMENT SYSTEM
NOTES TO FINANCIAL STATEMENTS
YEARS ENDED JUNE 30, 1989 AND 1988
(CONTINUED)

NOTE 8 - INCOME TAX STATUS

The Internal Revenue Service has ruled that the Plan qualifies under Section 401(a) of the Internal Revenue Code and is, therefore, not subject to tax under present income tax law.

NOTE 9 - TRANSFERS TO INSURANCE FUND

By action of the 1978 General Assembly, the Kentucky Retirement Systems Insurance Fund was established to provide a group hospital and medical insurance plan for recipients of a retirement allowance from the Kentucky Employees Retirement System. The Insurance Fund is funded by the transfer of a portion of employer contributions to the retirement system. The percentage of creditable compensation transferred to the Insurance Fund by the Kentucky Employees Retirement System was 1.44% and 1.31% for non-hazardous and 5.31% and 4.94% for hazardous positions for the years ended June 30, 1989 and 1988, respectively.

COUNTY EMPLOYES RETIREMENT SYSTEM

COUNTY EMPLOYES RETIREMENT SYSTEM
BALANCE SHEETS
JUNE 30, 1989 AND 1988

	1989	1988
ASSETS		
Investments (Note 7):		
United States Government securities	\$ 140,834,335	\$149,035,426
Government National Mortgage Association and similar securities	137,569,093	134,456,325
Corporate bonds and notes	85,533,897	80,911,738
Convertible bonds	422,166	390,635
Common stocks	265,349,082	267,495,791
First mortgage real estate loans	349,041	423,056
Real estate investment trust	29,379,594	29,159,364
Securities purchased under agreement to resell	337,406,104	154,182,364
	<u>\$ 996,843,312</u>	<u>\$816,054,699</u>
Cash on deposit with State Treasurer	254,486	26,198
Member and employer contributions receivable	13,433,230	5,231,347
Past service credit contribution receivable	66,533,639	11,479,820
Accrued investment income	8,826,881	7,972,174
Other assets	13,286	15,609
	<u>\$1,085,904,834</u>	<u>\$840,779,847</u>
 LIABILITIES AND FUND BALANCE		
Member refunds, insurance fund transfers and investment expenses payable	\$ 7,852,198	\$ 1,200,951
 Fund balance:		
Members' Contribution Account	\$ 225,193,010	\$177,526,061
Retirement Allowance Account	852,859,626	662,052,835
	<u>\$1,078,052,636</u>	<u>\$839,578,896</u>
	\$1,085,904,834	\$840,779,847

See notes to financial statements.

COUNTY EMPLOYEES RETIREMENT SYSTEM
 STATEMENTS OF REVENUES, EXPENSES AND CHANGES
 IN MEMBERS' CONTRIBUTION ACCOUNT
 FOR THE YEARS ENDED JUNE 30, 1989 AND 1988

	1989	1988
Revenues:		
Member contributions	\$ 63,609,817	\$ 30,401,026
Interest credited to members' balances transferred from Retirement Allowance Account	<u>6,668,871</u>	<u>5,807,768</u>
Total revenues	\$ 70,278,688	\$ 36,208,794
Expenses:		
Refunds to former members	\$ 5,208,722	\$ 4,451,755
Retired members' balances transferred to Retirement Allowance Account	<u>17,403,017</u>	<u>7,609,151</u>
Total expenses	\$ 22,611,739	\$ 12,060,906
Excess of revenues over expenses	\$ 47,666,949	\$ 24,147,888
Members' Contribution Account at beginning of year	<u>177,526,061</u>	<u>153,378,173</u>
Members' Contribution Account at end of year	\$225,193,010	\$177,526,061

See notes to financial statements.

COUNTY EMPLOYES RETIREMENT SYSTEM
 STATEMENTS OF REVENUES, EXPENSES AND CHANGES
 IN RETIREMENT ALLOWANCE ACCOUNT
 FOR THE YEARS ENDED JUNE 30, 1989 AND 1988

	1989	1988
Revenues:		
Employer contributions	\$140,659,744	\$ 44,811,097
Investment income	76,400,250	52,252,320
Net realized gain on disposal of investments	6,466,883	23,584,203
Retirement members' balances transferred from Members' Contribution Account	<u>17,403,017</u>	<u>7,609,151</u>
Total revenues	\$240,929,894	\$128,256,771
Expenses:		
Retirement benefits for members	\$ 31,719,667	\$ 26,982,299
Contributions transferred to the Kentucky Retirement Systems Insurance Fund	10,131,427	6,441,538
Interest credited to members' balances transferred to Members' Contribution Account	6,668,871	5,807,768
Administrative expenses	1,420,006	1,135,267
Investment expenses	<u>183,132</u>	<u>189,618</u>
Total expenses	\$ 50,123,103	\$ 40,556,490
Excess of revenues over expenses	\$190,806,791	\$ 87,700,281
Retirement Allowance Account at beginning of year	<u>662,052,835</u>	<u>574,352,554</u>
Retirement Allowance Account at end of year	\$852,859,626	\$662,052,835

See notes to financial statements.

COUNTY EMPLOYEES RETIREMENT SYSTEM
STATEMENTS OF CHANGES IN FINANCIAL POSITION
FOR THE YEARS ENDED JUNE 30, 1989 AND 1988

	1989	1988
Source of funds:		
Excess of revenues over expenses	\$238,473,740	\$111,848,169
Deduct amortization of investment discount and premium, net, not providing funds	<u>4,030,845</u>	<u>1,922,105</u>
Funds provided from operations	\$234,442,895	\$109,926,064
Proceeds from sale, maturity or exchange of investments, less net gain of \$6,466,883 in 1989 and \$23,584,203 in 1988, included above	199,324,226	323,185,898
Decrease in accrued investment income		2,757,929
Decrease in member and employer contributions receivable		2,700,197
Decrease in past service credit contribution receivable		1,037,970
Decrease in other assets	2,323	
Increase in member refunds, insurance fund transfers and investment expenses payable	<u>6,651,247</u>	<u>180,786</u>
Total funds provided	\$440,420,691	\$439,788,844
Application of funds:		
Investments purchased or exchanged	\$376,081,994	\$439,779,838
Increase in accrued investment income	854,707	
Increase in other assets		9,442
Increase in member and employer contributions receivable	8,201,883	
Increase in past service credit contribution receivable	<u>55,053,819</u>	
Total funds applied	\$440,192,403	\$439,789,280
Increase (decrease) in cash	\$ 228,288	\$ (436)
Cash on deposit with State Treasurer at beginning of year	<u>26,198</u>	<u>26,634</u>
Cash on deposit with State Treasurer at end of year	\$ 254,486	\$ 26,198

See notes to financial statements.

COUNTY EMPLOYEES RETIREMENT SYSTEM
NOTES TO FINANCIAL STATEMENTS
YEARS ENDED JUNE 30, 1989 AND 1988

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

A. Basis of Presentation - The financial statements of County Employees Retirement System (the System) are prepared on the accrual basis, and generally conform to the provisions of the National Council on Governmental Accounting Statement 1.

B. Investment Securities - Investments in bonds and first mortgage real estate loans are stated at amortized cost. Discount and premium are amortized using the straight-line method from the date of acquisition to stated or expected maturity. Common stocks, securities purchased under agreement to resell and investment in real estate investment trust are carried at cost.

Net realized gain or loss on investments represents the difference between the proceeds from sale or maturity and the average cost of investments sold or redeemed. Realized gains or losses are also recorded for exchanges of investments, based upon the difference at the time of the exchange between the carrying value and the market value of the investment exchanged.

C. Members' Contribution and Retirement Allowance Accounts - These accounts are funded by contributions and investment income. The Members' Contribution Account represents the accumulation of active members' contributions plus interest credited to members' accounts. The Retirement Allowance Account is comprised of retired members' contribution balances including interest credited thereon and accumulated employer contributions plus cumulative excess of revenues over expenses less interest credited to members' contribution accounts.

Employees are permitted to purchase credits for member service from the date of plan adoption to the participation date of the employer. Receivables for past service credits are amortized in amounts sufficient to fund the related cost plus interest thereon over a period not to exceed thirty years.

D. Expense Allocation - The System, Kentucky Employees Retirement System, and State Police Retirement System are collectively administered by Kentucky Retirement Systems. Administrative and investment expenses of Kentucky Retirement Systems are allocated in proportion to the number of active members participating in each plan and the carrying value of plan investments, respectively.

COUNTY EMPLOYEES RETIREMENT SYSTEM
 NOTES TO FINANCIAL STATEMENTS
 YEARS ENDED JUNE 30, 1989 AND 1988
 (CONTINUED)

NOTE 2 - DESCRIPTION OF THE PLAN

The County Employees Retirement System is a defined benefit plan which covers substantially all regular full-time employees of each county and school board, and any additional local agencies electing to participate in the System. The Plan provides for retirement, disability and death benefits. At June 30, 1989, the number of participating local government employers was:

Boards of Education	178
County agencies	157
City agencies	120
Libraries	65
Other	<u>185</u>
Total	<u>705</u>

For the years ended June 30, 1989 and 1988, participating employees contributed 4.25% of creditable compensation to the System. Members occupying hazardous positions, as defined by statute, contribute at the rate of 7% of creditable compensation. Employer contribution rates are intended to fund the System's normal cost on a current basis plus one percent (1%) of unfunded past service costs per annum plus interest at the actuarial assumed rate. Such contribution rates are determined by the Board of Trustees of Kentucky Retirement Systems each biennium. Participating employers contributed 5.75% and 14%, respectively, of members' non-hazardous and hazardous compensation through July 31, 1988. Employers' contribution for non-hazardous compensation increased to 6.35% after this date while the contribution percentage for hazardous compensation remained constant.

Vesting in a retirement benefit begins immediately upon entry into the System. The participant has a fully vested interest after the completion of sixty months of service, twelve of which are current service. At a minimum, terminated employees are refunded their contributions with credited interest at 3% compounded annually through June 30, 1981, 6% thereafter through June 30, 1986 and 4% thereafter.

At June 30, membership in the System consisted of:

	1989	1988
Retirees and beneficiaries currently receiving benefits and terminated employees entitled to benefits but not yet receiving them:		
Non-hazardous positions	19,667	18,395
Hazardous positions	<u>697</u>	<u>336</u>
Total	<u>20,364</u>	<u>18,731</u>

COUNTY EMPLOYEES RETIREMENT SYSTEM
 NOTES TO FINANCIAL STATEMENTS
 YEARS ENDED JUNE 30, 1989 AND 1988
 (CONTINUED)

NOTE 2 - DESCRIPTION OF THE PLAN (CONTINUED)

	1989	1988
Current employees:		
Vested:		
Non-hazardous positions	24,054	23,133
Hazardous positions	2,441	1,087
Nonvested:		
Non-hazardous positions	23,149	21,468
Hazardous positions	1,461	641
Total	51,105	46,329

Further information regarding the plan agreement and the vesting and benefit provisions is contained in the pamphlet Summary Plan Description. Copies of this pamphlet are available from the office of Kentucky Retirement Systems.

NOTE 3 - ACCUMULATED BENEFITS

Accumulated plan benefits are those future periodic payments, including lump-sum distributions, that are attributable under the Plan's provisions to services rendered by the employees to the valuation date. Accumulated plan benefits include benefits expected to be paid to (a) retired or terminated employees or their beneficiaries, (b) beneficiaries of employees who are deceased, and (c) present employees or their beneficiaries. Benefits under the Plan are based on employees' average compensation during their five highest paid years. Accumulated plan benefits for active employees are based on their compensation as of the valuation date. Benefits payable under all circumstances - retirement, death, and termination of employment - are included to the extent they are deemed attributable to employee service rendered to the valuation date.

The System's consulting actuary, William M. Mercer-Meidinger-Hansen, Inc., estimates the actuarial present value of accumulated plan benefits, which is the amount that results from applying actuarial assumptions to adjust the accumulated plan benefits to reflect the time value of money (through discounts for interest) and the probability of payment (taking into account mortality) between the valuation date and the expected date of payment.

COUNTY EMPLOYEES RETIREMENT SYSTEM
 NOTES TO FINANCIAL STATEMENTS
 YEARS ENDED JUNE 30, 1989 AND 1988
 (CONTINUED)

NOTE 3 - ACCUMULATED BENEFITS (CONTINUED)

Accumulated plan benefit information follows:

	June 30	
	1989	1988
Vested benefits:		
Participants currently receiving payments	\$320,814,106	\$228,199,648
Other participants	<u>283,117,906</u>	<u>213,842,721</u>
	\$603,932,012	\$442,042,369
Non-vested benefits	<u>104,013,480</u>	<u>71,962,347</u>
Total accumulated plan benefits	\$707,945,492	\$514,004,716

The more significant assumptions underlying the actuarial computations, including those which enter only into the determination of funding levels (cost method, turnover, retirement age, and salary increase), are as follows:

Actuarial cost method	- Entry age normal cost method
Assumed rate of return on investments	- 8% per annum
Mortality basis	- 1971 Group Annuity Mortality Table, plus a pre-retirement duty death rate of .0005 per year for hazardous duty employees
Employee turnover	- Graduated select and ultimate rates based on 1985 experience study
Retirement age	- Based upon experience, with 20% weight, at age 55-64, to the earliest age at which an employee could retire with 100% of the accrued benefits
Salary increase	- 7 1/2% per annum

NOTE 4 - FUNDING STATUS AND PROGRESS

The amount shown below as "pension benefit obligation" is a standardized disclosure measure of the present value of pension benefits, adjusted for the effects of projected salary increases, estimated to be payable in the future as a result of employee service to date. The measure is the actuarial present value of credited projected benefits and is intended to help users assess the System's funding status on a going-concern basis, assess progress made in accumulating sufficient assets to pay benefits when due, and make comparisons among public employee retirement systems (PERS). The measure is independent of the actuarial funding method used to determine contributions to the System.

COUNTY EMPLOYEES RETIREMENT SYSTEM
 NOTES TO FINANCIAL STATEMENTS
 YEARS ENDED JUNE 30, 1989 AND 1988
 (CONTINUED)

NOTE 4 - FUNDING STATUS AND PROGRESS (CONTINUED)

The pension benefit obligation for 1989 and 1988 was determined as part of an actuarial valuation at June 30, 1989 and 1988, respectively. The significant actuarial assumptions are the same as those used for the accumulated plan benefits computations for those years.

The funds in excess of pension benefit obligation were \$69,210,146 and \$97,244,516 at June 30, 1989 and 1988, respectively.

	1989	1988
Pension benefit obligation:		
Retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	\$ 320,814,106	\$228,199,648
Current members -		
Accumulated employee contributions and credited interest	216,056,348	169,444,862
Employer-financed vested	435,891,838	317,872,395
Employer-financed nonvested	<u>36,080,197</u>	<u>26,817,475</u>
Total pension benefit obligation	\$1,008,842,489	\$742,334,380
Net assets available for benefits, at cost	<u>1,078,052,635</u>	<u>839,578,896</u>
Funds in excess of pension benefit obligation	\$ 69,210,146	\$ 97,244,516

NOTE 5 - CONTRIBUTIONS REQUIRED AND CONTRIBUTIONS MADE

The System's funding policy provides for periodic employer contributions at actuarially determined rates that, expressed as percentages of annual covered payroll, are sufficient to accumulate sufficient assets to pay benefits when due. Level percentage of payroll employer contribution rates are determined using the entry age actuarial funding method. The System also uses the level percentage of payroll method to amortize the unfunded liability.

COUNTY EMPLOYEES RETIREMENT SYSTEM
 NOTES TO FINANCIAL STATEMENTS
 YEARS ENDED JUNE 30, 1989 AND 1988
 (CONTINUED)

NOTE 5 - CONTRIBUTIONS REQUIRED AND CONTRIBUTIONS MADE (CONTINUED)

Actuarially determined contribution requirements of \$67,410,275 (\$40,350,685 employer and \$27,059,590 employee) for the years ended June 30, 1989 and \$51,179,829 (\$27,262,741 employer and \$23,917,088 employee) for the year ended June 30, 1988 were determined through an actuarial valuation performed at June 30, 1988 and 1987, respectively. These contributions were to consist of: (a) \$58,850,265 for 1989 and \$48,479,006 for 1988 normal cost; (b) \$(920,931) for 1989 and \$(4,435,915) for 1988 amortization of the unfunded actuarial accrued liability; (c) \$1,550,757 for 1989 and \$1,120,413 for 1988 administrative expenses; and (d) \$7,930,184 for 1989 and \$6,016,325 for 1988 group hospital and medical insurance premiums. For 1989, contributions received totaled \$204,269,561 of which the employer portion was \$140,659,744 (6.35% of the covered payroll for non-hazardous positions and 14% for hazardous positions) and the employee portion was \$63,609,817 (4.25% of the covered payroll for non-hazardous positions and 7% for hazardous positions). For 1988 contributions received totaled \$75,212,123 of which the employer portion was \$44,811,097 (5.75% of the covered payroll for non-hazardous positions and 14% for hazardous positions) and the employee portion was \$30,401,026 (4.25% of the covered payroll for non-hazardous positions and 7% for hazardous positions).

NOTE 6 - SIX-YEAR HISTORICAL TREND INFORMATION

Six-year historical trend information designed to provide information about the System's progress in accumulating sufficient assets to pay benefits when due is presented below.

Analysis of Funding Progress

Fiscal Year	(1) Net Assets Available For Benefits	(2) Pension Benefit Obligation	(3) Percentage Funded (1) ÷ (2)	(4)	(5)	(6)
				Unfunded (Funds in Excess of) Pension Benefit Obligation (2) - (1)	Annual Covered Payroll	Unfunded Pension Benefit Obligation as a Percentage of Covered Payroll (4) ÷ (5)
1984	\$ 406,187,431	\$ 374,960,289	108.3%	\$ (31,227,142)	\$403,461,792	N/A
1985	478,043,221	413,059,045	115.7	(64,984,176)	433,135,800	N/A
1986	603,815,800	479,360,458	126.0	(124,455,342)	484,796,988	N/A
1987	727,730,727	607,890,713	119.7	(119,840,014)	544,184,376	N/A
1988	839,578,896	742,334,380	113.1	(97,244,516)	615,028,632	N/A
1989	1,078,052,635	1,008,842,489	106.9	(69,210,146)	728,176,932	N/A

COUNTY EMPLOYES RETIREMENT SYSTEM
NOTES TO FINANCIAL STATEMENTS
YEARS ENDED JUNE 30, 1989 AND 1988
(CONTINUED)

NOTE 6 - SIX-YEAR HISTORICAL TREND INFORMATION (CONTINUED)

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

Fiscal Year	Revenues by Source				Total
	Employee Contributions	Employer Contributions	Investment Income	Other Income	
1984	\$16,040,197	\$ 25,580,243	\$35,005,604	\$ 4,127,955	\$ 80,753,999
1985	17,487,421	27,131,182	40,147,552	7,576,022	92,342,177
1986	28,187,039	61,400,912	44,216,104	16,705,975	150,510,030
1987	28,071,411	42,060,265	54,428,479	28,353,575	152,913,730
1988	30,401,026	44,811,097	52,252,320	23,584,203	151,048,646
1989	63,609,817	140,659,744	76,400,250	6,466,883	287,136,694

Fiscal Year	Expenses by Type					Total
	Benefit Payments	Administrative Expenses	Refunds	Other Expenses	Contributions Transferred to Insurance Fund	
1984	\$13,066,260	\$ 561,747	\$3,331,153	\$ 96,104	\$ 667,073	\$17,722,337
1985	14,843,697	650,073	3,570,707	124,145	1,297,765	20,486,387
1986	17,329,099	750,409	4,974,503	141,858	1,541,564	24,737,433
1987	18,065,794	1,116,914	4,382,655	148,337	5,285,103	28,998,803
1988	26,982,299	1,135,267	4,451,755	189,618	6,441,538	39,200,477
1989	31,719,667	1,420,006	5,208,722	183,132	10,131,427	48,662,954

COUNTY EMPLOYEES RETIREMENT SYSTEM
NOTES TO FINANCIAL STATEMENTS
YEARS ENDED JUNE 30, 1989 AND 1988
(CONTINUED)

NOTE 7 - INVESTMENTS

The Board of Trustees of the System shall give priority to the investment of funds in obligations considered to improve the industrial development and enhance the economic welfare of the Commonwealth. Appointed investment managers use the following guidelines and restrictions in the selection of securities and timing of transactions as long as the security is not a prohibited investment under Kentucky State Statutes:

Equity Investments - Investments may be made in common stock, securities convertible into common stock and in preferred stock of publicly traded corporations.

Fixed Income Investments - Publicly traded bonds are to be selected and managed to assure an appropriate balance in quality and maturities consistent with current market and economic conditions. Investments may be made in any U.S. Government issued debt instrument or issue by an agency of the U.S. Government with an initial maturity of over one year and which are guaranteed by the U.S. Government.

Mortgages - Investments may be made in real estate mortgages on a direct issue basis or in the form of mortgage pool instruments guaranteed by an agency of the U.S. Government or by the Commonwealth of Kentucky.

Equity Real Estate - Investments may be made for the purpose of creating a diversified portfolio of income-producing properties with moderate to low levels of risk.

Guaranteed Insurance Contracts - Investments may be made in guaranteed contracts issued by legal reserve life insurance companies authorized to do business in the Commonwealth of Kentucky and such other states as may be required.

Mutual Fund Investments - Investments may be made in mutual funds which hold common stocks or fixed income securities.

Cash Equivalent Securities - The following short-term investment vehicles, with the exception of commercial paper which requires specific purchase approval by the Investment Committee, are considered acceptable:

- ° Repurchase Agreements -- Repurchase Agreements which are collateralized by United States Government issues.
- ° U.S. Government Issues -- All obligations of the U.S. Government and its agencies.
- ° Certificates of Deposits -- Investments may be made in only the 25 largest money center banks in the United States (in terms of total assets) or in banks domiciled in the Commonwealth of Kentucky and having capital and unrestricted surplus of at least \$100 million.

COUNTY EMPLOYEES RETIREMENT SYSTEM
NOTES TO FINANCIAL STATEMENTS
YEARS ENDED JUNE 30, 1989 AND 1988
(CONTINUED)

NOTE 7 - INVESTMENTS (CONTINUED)

The System's investments are categorized below to give an indication of level of risk assumed by the entity at June 30, 1989. Category 1 includes investments that are insured or registered or for which the collateralized securities are held by the System or its agent in the System's name. Category 2 includes uninsured and unregistered investments for which the collateralized securities are held by the broker's or dealer's trust department or agent in the System's name.

	June 30, 1989			June 30, 1988	
	Category		Carrying Amount	Market Value	Market Value
	1	2			
United States Government securities	\$ 1,688,182	\$139,146,153	\$140,834,335	\$ 145,140,000	\$148,156,000
Government National Mortgage Association and similar securities	25,272,031	112,297,062	137,569,093	139,804,000	135,162,000
Corporate bonds and notes	10,141,475	75,392,422	85,533,897	87,781,000	80,599,000
Common stocks		265,349,082	265,349,082	352,471,000	321,568,000
Securities purchased under agreement to resell		337,406,104	337,406,104	337,406,000	154,182,000
	<u>\$37,101,688</u>	<u>\$929,590,823</u>	<u>\$966,692,511</u>	<u>\$1,062,602,000</u>	<u>\$839,667,000</u>
Convertible bonds			422,166	405,000	372,000
First mortgage real estate loans			349,041	331,000	393,000
Real estate investment trust			<u>29,379,594</u>	<u>35,098,000</u>	<u>33,077,000</u>
Total Investments			\$996,843,312	\$1,098,436,000	\$873,509,000

NOTE 8 - INCOME TAX STATUS

The Internal Revenue Service has ruled that the Plan qualifies under Section 401(a) of the Internal Revenue Code and is, therefore, not subject to tax under present income tax law.

NOTE 9 - TRANSFERS TO INSURANCE FUND

By action of the 1978 General Assembly, the Kentucky Retirement Systems Insurance Fund was established to provide a group hospital and medical insurance plan for recipients of a retirement allowance from the County Employees Retirement System. The Insurance Fund is funded by the transfer of a portion of employer contributions to the retirement system. The percentage of creditable compensation transferred to the Insurance Fund by the County Employees Retirement System was 1.07% and .95% for non-hazardous and 4.21% and 3.31% for hazardous positions for the years ended June 30, 1989 and 1988, respectively.

STATE POLICE RETIREMENT SYSTEM

STATE POLICE RETIREMENT SYSTEM
BALANCE SHEETS
JUNE 30, 1989 AND 1988

	1989	1988
ASSETS		
Investments (Note 7):		
United States Government securities	\$ 22,842,485	\$ 24,044,787
Government National Mortgage Association and similar securities	20,208,538	19,664,733
Corporate bonds and notes	14,428,943	13,537,814
Convertible bonds	68,091	63,004
Common stocks	38,522,050	39,711,320
First mortgage real estate loans	183,447	223,874
Real estate investment trust	3,822,085	3,816,568
Securities purchased under agreement to resell	30,041,994	18,563,363
	<u>\$130,117,633</u>	<u>\$119,625,463</u>
Cash on deposit with State Treasurer	4,990	524
Member and employer contributions receivable	258,392	349,711
Accrued investment income	1,189,592	1,192,775
Other assets	260	312
	<u>\$131,570,867</u>	<u>\$121,168,785</u>
 LIABILITIES AND FUND BALANCE		
Member refunds, insurance fund transfers and investment expenses payable	\$ 220,314	\$ 170,236
Fund balance:		
Members' Contribution Account	\$ 19,496,659	\$ 21,394,367
Retirement Allowance Account	111,853,894	99,604,182
	<u>\$131,350,553</u>	<u>\$120,998,549</u>
	\$131,570,867	\$121,168,785

See notes to financial statements.

STATE POLICE RETIREMENT SYSTEM
 STATEMENTS OF REVENUES, EXPENSES AND CHANGES
 IN MEMBERS' CONTRIBUTION ACCOUNT
 FOR THE YEARS ENDED JUNE 30, 1989 AND 1988

	1989	1988
Revenues:		
Member contributions	\$ 1,994,453	\$ 2,158,349
Interest credited to members' balances transferred from Retirement Allowance Account	<u>683,200</u>	<u>742,461</u>
Total revenues	\$ 2,677,653	\$ 2,900,810
Expenses:		
Refunds to former members	\$ 42,926	\$ 108,814
Retired members' balances transferred to Retirement Allowance Account	<u>4,532,435</u>	<u>458,519</u>
Total expenses	\$ 4,575,361	\$ 567,333
Excess (deficiency) of revenues over expenses	\$(1,897,708)	\$ 2,333,477
Members' Contribution Account at beginning of year	<u>21,394,367</u>	<u>19,060,890</u>
Members' Contribution Account at end of year	\$19,496,659	\$21,394,367

See notes to financial statements.

STATE POLICE RETIREMENT SYSTEM
 STATEMENTS OF REVENUES, EXPENSES AND CHANGES
 IN RETIREMENT ALLOWANCE ACCOUNT
 FOR THE YEARS ENDED JUNE 30, 1989 AND 1988

	1989	1988
Revenues:		
Employer contributions	\$ 6,596,928	\$ 4,575,097
Investment income	10,164,070	7,520,682
Net realized gain on disposal of investments	1,550,779	4,165,099
Retirement members' balances transferred from Members' Contribution Account	<u>4,532,435</u>	<u>458,519</u>
Total revenues	\$ 22,844,212	\$ 16,719,397
Expenses:		
Retirement benefits for members	\$ 7,742,826	\$ 5,693,316
Contributions transferred to the Kentucky Retirement Systems Insurance Fund	2,113,127	1,760,979
Interest credited to members' balances transferred to Members' Contribution Account	683,200	742,461
Administrative expenses	28,418	23,810
Investment expenses	<u>26,929</u>	<u>28,363</u>
Total expenses	\$ 10,594,500	\$ 8,248,929
Excess of revenues over expenses	\$ 12,249,712	\$ 8,470,468
Retirement Allowance Account at beginning of year	<u>99,604,182</u>	<u>91,133,714</u>
Retirement Allowance Account at end of year	\$111,853,894	\$99,604,182

See notes to financial statements.

STATE POLICE RETIREMENT SYSTEM
STATEMENTS OF CHANGES IN FINANCIAL POSITION
FOR THE YEARS ENDED JUNE 30, 1989 AND 1988

	1989	1988
Source of funds:		
Excess of revenues over expenses	\$10,352,004	\$10,803,945
Deduct amortization of investment discount and premium, net, not providing funds	<u>967,514</u>	<u>242,056</u>
Funds provided from operations	\$ 9,384,490	\$10,561,889
Proceeds from sale, maturity or exchange of investments, less net gain of \$20,922,372 in 1989 and \$4,165,099 in 1988, included above	27,321,569	49,858,352
Decrease in accrued investment income	3,183	538,578
Decrease in member and employer contribution receivable	91,319	96,906
Decrease in other assets	52	882
Increase in member refunds, insurance fund transfers and investment expenses payable	<u>50,078</u>	<u>7,846</u>
Total funds provided	\$36,850,691	\$61,064,453
Application of funds:		
Investments purchased or exchanged	<u>\$36,846,225</u>	<u>\$61,064,496</u>
Total funds applied	\$36,846,225	\$61,064,496
Increase (decrease) in cash	\$ 4,466	\$ (43)
Cash on deposit with State Treasurer at beginning of year	<u>524</u>	<u>567</u>
Cash on deposit with State Treasurer at end of year	\$ 4,990	\$ 524

See notes to financial statements.

STATE POLICE RETIREMENT SYSTEM
NOTES TO FINANCIAL STATEMENTS
YEARS ENDED JUNE 30, 1989 AND 1988

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

A. Basis of Presentation - The financial statements of State Police Retirement System (the System) are prepared on the accrual basis, and generally conform to the provisions of the National Council on Governmental Accounting Statement 1.

B. Investment Securities - Investments in bonds and first mortgage real estate loans are stated at amortized cost. Discount and premium are amortized using the straight-line method from the date of acquisition to stated or expected maturity. Common stocks, securities purchased under agreement to resell and investment in real estate investment trust are carried at cost.

Net realized gain or loss on investments represents the difference between the proceeds from sale or maturity and the average cost of investments sold or redeemed. Realized gains or losses are also recorded for exchanges of investments, based upon the difference at the time of the exchange between the carrying value and the market value of the investment exchanged.

C. Members' Contribution and Retirement Allowance Accounts - These accounts are funded by contributions and investment income. The Members' Contribution Account represents the accumulation of active members' contributions plus interest credited to members' accounts. The Retirement Allowance Account is comprised of retired members' contribution balances including interest credited thereon and accumulated employer contributions plus cumulative excess of revenues over expenses less interest credited to members' contribution accounts.

D. Expense Allocation - The System, Kentucky Employes Retirement System, and County Employes Retirement System are collectively administered by Kentucky Retirement Systems. Administrative and investment expenses of Kentucky Retirement Systems are allocated in proportion to the number of active members participating in each plan and the carrying value of plan investments, respectively.

NOTE 2 - DESCRIPTION OF THE PLAN

The State Police Retirement System is a defined benefit plan which covers substantially all regular full-time officers of the Kentucky State Police. The Plan provides for retirement, disability and death benefits.

Participating employees generally contribute 7% of creditable compensation to the System. Employer contribution rates are intended to fund the System's normal cost on a current basis and one percent (1%) of unfunded past service costs per annum plus interest at the actuarial assumed rate. Such contribution rates are determined by the Board of Trustees of Kentucky Retirement Systems each biennium. For the years ended June 30, 1989 and 1988, the employer contributed 18.25% of members' compensation.

STATE POLICE RETIREMENT SYSTEM
 NOTES TO FINANCIAL STATEMENTS
 YEARS ENDED JUNE 30, 1989 AND 1988
 (CONTINUED)

NOTE 2 - DESCRIPTION OF THE PLAN (CONTINUED)

Vesting in a retirement benefit begins immediately upon entry into the System. The participant has a fully vested interest after the completion of sixty months of service, twelve of which are current service. At a minimum, terminated employees are refunded their contributions with credited interest at 3% compounded annually through June 30, 1981, 6% thereafter through June 30, 1986 and 4% thereafter.

At June 30, membership in the System consisted of:

	1989	1988
Retirees and beneficiaries currently receiving benefits and terminated employees entitled to benefits but not yet receiving them	486	406
Current employees:		
Vested	688	764
Nonvested	204	155
Total	892	919

Further information regarding the plan agreement and the vesting and benefit provisions is contained in the pamphlet Summary Plan Description. Copies of this pamphlet are available from the office of Kentucky Retirement Systems.

NOTE 3 - ACCUMULATED BENEFITS

Accumulated plan benefits are those future periodic payments, including lump-sum distributions, that are attributable under the Plan's provisions to services rendered by the employees to the valuation date. Accumulated plan benefits include benefits expected to be paid to (a) retired or terminated employees or their beneficiaries, (b) beneficiaries of employees who are deceased, and (c) present employees or their beneficiaries. Benefits under the Plan are based on employees' average compensation during their five highest paid years. Accumulated plan benefits for active employees are based on their compensation as of the valuation date. Benefits payable under all circumstances - retirement, death, and termination of employment - are included to the extent they are deemed attributable to employee service rendered to the valuation date.

The System's consulting actuary, William M. Mercer-Meidinger-Hansen, Inc., estimates the actuarial present value of accumulated plan benefits, which is the amount that results from applying actuarial assumptions to adjust the accumulated plan benefits to reflect the time value of money (through discounts for interest) and the probability of payment (taking into account mortality) between the valuation date and the expected date of payment.

STATE POLICE RETIREMENT SYSTEM
 NOTES TO FINANCIAL STATEMENTS
 YEARS ENDED JUNE 30, 1989 AND 1988
 (CONTINUED)

NOTE 3 - ACCUMULATED BENEFITS (CONTINUED)

Accumulated plan benefit information follows:

	June 30	
	1989	1988
Vested benefits:		
Participants currently receiving payments	\$ 70,425,803	\$53,333,416
Other participants	21,293,699	24,700,389
	\$ 91,719,502	\$78,033,805
Non-vested benefits	12,762,619	11,605,546
Total accumulated plan benefits	\$104,482,121	\$89,639,351

The more significant assumptions underlying the actuarial computations, including those which enter only into the determination of funding levels (cost method, turnover, retirement age, and salary increase), are as follows:

Actuarial cost method	- Entry age normal cost method
Assumed rate of return on investments	- 8% per annum
Mortality basis	- 1971 Group Annuity Mortality Table, plus a pre-retirement duty death rate of .0005 per year
Employee turnover	- Graduated rates based on 1985 experience study
Retirement age	- 40% will retire as soon as eligible for unreduced benefits and balance will continue to age 55
Salary increase	- 7 1/2% per annum

NOTE 4 - FUNDING STATUS AND PROGRESS

The amount shown below as "pension benefit obligation" is a standardized disclosure measure of the present value of pension benefits, adjusted for the effects of projected salary increases, estimated to be payable in the future as a result of employee service to date. The measure is the actuarial present value of credited projected benefits and is intended to help users assess the System's funding status on a going-concern basis, assess progress made in accumulating sufficient assets to pay benefits when due, and make comparisons among public employee retirement systems (PERS). The measure is independent of the actuarial funding method used to determine contributions to the System.

STATE POLICE RETIREMENT SYSTEM
 NOTES TO FINANCIAL STATEMENTS
 YEARS ENDED JUNE 30, 1989 AND 1988
 (CONTINUED)

NOTE 4 - FUNDING STATUS AND PROGRESS (CONTINUED)

The pension benefit obligation for 1989 and 1988 was determined as part of an actuarial valuation at June 30, 1989 and 1988, respectively. The significant actuarial assumptions are the same as those used for the accumulated plan benefits computations for those years.

The funds in excess of pension benefit obligation were \$1,256,732 and \$5,383,234 at June 30, 1989 and 1988, respectively.

	1989	1988
Pension benefit obligation:		
Retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	\$ 70,425,803	\$ 53,333,416
Current members:		
Accumulated employee contributions and credited interest	19,183,040	20,051,509
Employer-financed vested	39,414,309	41,558,492
Employer-financed nonvested	<u>1,070,669</u>	<u>671,898</u>
Total pension benefit obligation	\$130,093,821	\$115,615,315
Net assets available for benefits, at cost	<u>\$131,350,553</u>	<u>120,998,549</u>
Funds in excess of pension benefit obligation	\$ 1,256,732	\$ 5,383,234

NOTE 5 - CONTRIBUTIONS REQUIRED AND CONTRIBUTIONS MADE

The System's funding policy provides for periodic employer contributions at actuarially determined rates that, expressed as percentages of annual covered payroll, are sufficient to accumulate sufficient assets to pay benefits when due. Level percentage of payroll employer contribution rates are determined using the entry age actuarial funding method. The System also uses the level percentage of payroll method to amortize the unfunded liability.

STATE POLICE RETIREMENT SYSTEM
 NOTES TO FINANCIAL STATEMENTS
 YEARS ENDED JUNE 30, 1989 AND 1988
 (CONTINUED)

NOTE 5 - CONTRIBUTIONS REQUIRED AND CONTRIBUTIONS MADE (CONTINUED)

Actuarially determined contribution requirements of \$5,673,069 (\$4,000,017 employer and \$1,673,052 employee) for the year ended June 30, 1989 and \$5,483,603 (\$3,816,995 employer and \$1,666,608 employee) for the year ended June 30, 1988 were determined through an actuarial valuation performed at June 30, 1988 and 1987, respectively. These contributions were to consist of: (a) \$3,722,973 for 1989 and \$3,663,561 for 1988 normal cost; (b) \$(78,315) for 1989 and \$121,265 for 1988 amortization of the unfunded actuarial accrued liability; (c) \$30,407 for 1989 and \$23,839 for 1988 administrative expenses; and (d) \$1,998,004 for 1989 and \$1,674,938 for 1988 group hospital and medical insurance premiums. For 1989, contributions received totaled \$8,591,381 of which the employer portion was \$6,596,928 (18.75% of the covered payroll) and the employee portion was \$1,994,453 (7% of the covered payroll). For 1988, contributions received totaled \$6,733,446 of which the employer portion was \$4,575,097 (18.25% of the covered payroll) and employee portion was \$2,158,349 (7% of the covered payroll).

The 1988 General Assembly acted to reduce contributions to the Retirement Systems by \$1.8 million for the fiscal year ended June 30, 1989 and \$1.5 million for the fiscal year ended June 30, 1990. This reduction is effected by returning a portion of employer contributions to the Commonwealth's General Fund. The amount of the reduction is allocated between the Kentucky Employees Retirement System and the State Police Retirement System based upon each systems relative percentage of covered payroll. This resulted in the State Police Retirement System returning \$57,000 of employer contributions to the General Fund of the Commonwealth of Kentucky.

NOTE 6 - SIX-YEAR HISTORICAL TREND INFORMATION

Six-year historical trend information designed to provide information about the System's progress in accumulating sufficient assets to pay benefits when due is presented below.

Analysis of Funding Progress

Fiscal Year	(1)	(2)	(3)	(4)	(5)	(6)
	Net Assets Available For Benefits	Pension Benefit Obligation	Percentage Funded (1) ÷ (2)	Unfunded (Funds in Excess of) Pension Benefit Obligation (2) - (1)	Annual Covered Payroll	Unfunded Pension Benefit Obligation as a Percentage of Covered Payroll (4) ÷ (5)
1984	\$ 74,980,517	\$ 86,051,927	87.1%	\$11,071,410	\$23,718,048	46.7%
1985	85,016,242	94,143,453	90.3	9,127,211	23,383,018	39.0
1986	96,667,699	100,048,563	96.6	3,380,864	24,524,652	13.8
1987	110,194,604	106,252,354	103.7	(3,942,250)	23,859,024	N/A
1988	120,998,549	115,615,315	104.7	(5,383,234)	24,014,472	N/A
1989	131,350,553	130,093,821	101.0	(1,256,732)	24,282,216	N/A

STATE POLICE RETIREMENT SYSTEM
 NOTES TO FINANCIAL STATEMENTS
 YEARS ENDED JUNE 30, 1989 AND 1988
 (CONTINUED)

NOTE 6 - SIX-YEAR HISTORICAL TREND INFORMATION (CONTINUED)

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

Fiscal Year	Revenues by Source				Total
	Employee Contributions	Employer Contributions	Investment Income	Other Income	
1984	\$1,695,919	\$4,446,090	\$ 6,260,996	\$ 91,813	\$12,494,818
1985	1,861,882	4,483,240	6,993,220	652,568	13,990,910
1986	1,944,859	4,380,911	7,453,314	2,698,426	16,477,510
1987	1,944,780	4,481,033	8,763,083	5,188,413	20,377,309
1988	2,158,349	4,575,097	7,520,682	4,165,099	18,419,227
1989	1,994,453	6,596,928	10,164,070	1,550,779	20,306,230

Fiscal Year	Expenses by Type					Total
	Benefit Payments	Administrative Expenses	Refunds	Other Expenses	Contributions Transferred to Insurance Fund	
1984	\$2,890,091	\$11,969	\$117,414	\$18,773	\$ 233,140	\$3,271,387
1985	3,496,109	14,363	180,746	23,880	240,087	3,955,185
1986	4,356,837	17,560	73,447	25,716	352,493	4,826,053
1987	5,107,017	23,379	127,181	23,752	1,569,076	6,850,405
1988	5,693,316	23,810	108,814	28,363	1,760,979	7,615,282
1989	7,742,826	28,418	42,926	26,929	2,113,127	9,954,226

NOTE 7 - INVESTMENTS

The Board of Trustees of the System shall give priority to the investment of funds in obligations considered to improve the industrial development and enhance the economic welfare of the Commonwealth. Appointed investment managers use the following guidelines and restrictions in the selection of securities and timing of transactions as long as the security is not a prohibited investment under Kentucky State Statutes:

STATE POLICE RETIREMENT SYSTEM
NOTES TO FINANCIAL STATEMENTS
YEARS ENDED JUNE 30, 1989 AND 1988
(CONTINUED)

NOTE 7 - INVESTMENTS (CONTINUED)

Equity Investments - Investments may be made in common stock, securities convertible into common stock and in preferred stock of publicly traded corporations.

Fixed Income Investments - Publicly traded bonds are to be selected and managed to assure an appropriate balance in quality and maturities consistent with current market and economic conditions. Investments may be made in any U.S. Government issued debt instrument or issue by an agency of the U.S. Government with an initial maturity of over one year and which are guaranteed by the U.S. Government.

Mortgages - Investments may be made in real estate mortgages on a direct issue basis or in the form of mortgage pool instruments guaranteed by an agency of the U.S. Government or by the Commonwealth of Kentucky.

Equity Real Estate - Investments may be made for the purpose of creating a diversified portfolio of income-producing properties with moderate to low levels of risk.

Guaranteed Insurance Contracts - Investments may be made in guaranteed contracts issued by legal reserve life insurance companies authorized to do business in the Commonwealth of Kentucky and such other states as may be required.

Mutual Fund Investments - Investments may be made in mutual funds which hold common stocks or fixed income securities.

Cash Equivalent Securities - The following short-term investment vehicles, with the exception of commercial paper which requires specific purchase approval by the Investment Committee, are considered acceptable:

- Repurchase Agreements -- Repurchase Agreements which are collateralized by United States Government issues.
- U.S. Government Issues -- All obligations of the U.S. Government and its agencies.
- Certificates of Deposits -- Investments may be made in only the 25 largest money center banks in the United States (in terms of total assets) or in banks domiciled in the Commonwealth of Kentucky and having capital and unrestricted surplus of at least \$100 million.

STATE POLICE RETIREMENT SYSTEM
 NOTES TO FINANCIAL STATEMENTS
 YEARS ENDED JUNE 30, 1989 AND 1988
 (CONTINUED)

NOTE 7 - INVESTMENTS (CONTINUED)

The System's investments are categorized below to give an indication of level of risk assumed by the entity at June 30, 1989. Category 1 includes investments that are insured or registered or for which the collateralized securities are held by the System or its agent in the System's name. Category 2 includes uninsured and unregistered investments for which the collateralized securities are held by the broker's or dealer's trust department or agent in the System's name.

	June 30, 1989		Carrying Amount	Market Value	June 30, 1988
	Category 1	2			Market Value
United States Government securities	\$ 168,943	\$ 22,673,542	\$ 22,842,485	\$ 23,674,000	\$ 24,253,000
Government National Mortgage Association and similar securities	2,287,775	17,920,763	20,208,538	20,214,000	19,470,000
Corporate bonds and notes	2,003,156	12,425,787	14,428,943	14,810,000	13,512,000
Common stocks		38,522,050	38,522,050	53,917,000	50,325,000
Securities purchased under agreement to resell		30,041,994	30,041,994	30,036,000	18,563,000
	<u>\$4,459,874</u>	<u>\$121,584,136</u>	<u>\$126,044,010</u>	<u>\$142,651,000</u>	<u>\$126,123,000</u>
Convertible bonds			68,091	65,000	60,000
First mortgage real estate loans			183,447	173,000	208,000
Real estate investment trust			<u>3,822,085</u>	<u>4,626,000</u>	<u>4,380,000</u>
Total Investments			\$130,117,633	\$147,515,000	\$130,771,000

Investments at June 30, 1989, include securities loaned under various lending programs.

NOTE 8 - INCOME TAX STATUS

The Internal Revenue Service has ruled that the Plan qualifies under Section 401(a) of the Internal Revenue Code and is, therefore, not subject to tax under present income tax law.

NOTE 9 - TRANSFERS TO INSURANCE FUND

By action of the 1978 General Assembly, the Kentucky Retirement Systems Insurance Fund was established to provide a group hospital and medical insurance plan for recipients of a retirement allowance from the State Police Retirement System. The Insurance Fund is funded by the transfer of a portion of employer contributions to the retirement system. The percentage of creditable compensation transferred to the Insurance Fund by the State Police Retirement System was 8.32% for the year ended June 30, 1989 and 7.02% for the year ended June 30, 1988.

KENTUCKY RETIREMENT SYSTEMS INSURANCE FUND

KENTUCKY RETIREMENT SYSTEMS INSURANCE FUND
BALANCE SHEETS
JUNE 30, 1989 AND 1988

ASSETS	1989	1988
Investments (Note 2):		
United States Government securities	\$24,889,977	\$17,074,057
Government National Mortgage Association and similar securities	4,961,874	4,252,828
Corporate bonds and notes	7,958,215	4,467,990
Securities purchased under agreement to resell	6,047,996	2,030,330
	<u>\$43,858,062</u>	<u>\$27,825,205</u>
Employer contributions receivable	2,209,507	1,679,136
Accrued investment income	742,808	512,242
Other assets	<u>500,000</u>	<u> </u>
	\$47,310,377	\$30,016,583
LIABILITIES AND FUND BALANCE		
Payable to Kentucky Retirement Systems	\$ 5,460	\$ 448
Fund Balance allocated to:		
Kentucky Employes Retirement System	23,707,318	16,253,545
County Employes Retirement System	19,013,566	10,908,769
State Police Retirement System	4,584,033	2,853,821
	<u>\$47,304,917</u>	<u>\$30,016,135</u>
	\$47,310,377	\$30,016,583

See notes to financial statements.

KENTUCKY RETIREMENT SYSTEMS INSURANCE FUND
STATEMENTS OF REVENUES, EXPENSES
AND CHANGES IN FUND BALANCE
FOR THE YEARS ENDED JUNE 30, 1989 AND 1988

	1989	1988
ALLOCATED TO KENTUCKY EMPLOYES RETIREMENT SYSTEM		
Revenues:		
Employer contributions transferred from Kentucky Employees Retirement System	\$12,261,924	\$10,911,143
Investment income	<u>1,588,498</u>	<u>1,062,671</u>
Total revenues	\$13,850,422	\$11,973,814
Expenses:		
Insurance premium payments	\$ 6,398,121	\$ 4,784,076
(Gain) loss on disposal of investments	<u>(1,472)</u>	<u>194,768</u>
	\$ 6,396,649	\$ 4,978,844
Excess of revenues over expenses	\$ 7,453,773	\$ 6,994,970
Fund balance at beginning of year	<u>16,253,545</u>	<u>9,258,575</u>
Fund balance at end of year	\$23,707,318	\$16,253,545
 ALLOCATED TO COUNTY EMPLOYES RETIREMENT SYSTEM		
Revenues:		
Employer contributions transferred from County Employees Retirement System	\$10,131,427	\$ 6,441,538
Investment income	<u>1,174,462</u>	<u>707,488</u>
Total revenues	\$11,305,889	\$ 7,149,026
Expenses:		
Insurance premium payments	\$ 3,201,859	\$ 2,304,319
(Gain) loss on disposal of investments	<u>(767)</u>	<u>103,890</u>
	\$ 3,201,092	\$ 2,408,209
Excess of revenues over expenses	\$ 8,104,797	\$ 4,740,817
Fund balance at beginning of year	<u>10,908,769</u>	<u>6,167,952</u>
Fund balance at end of year	\$19,013,566	\$10,908,769
 ALLOCATED TO STATE POLICE RETIREMENT SYSTEMS		
Revenues:		
Employer contributions transferred from State Police Retirement System	\$ 2,113,127	\$ 1,760,979
Investment income	<u>320,810</u>	<u>173,397</u>
Total revenues	\$ 2,433,937	\$ 1,934,376
Expenses:		
Insurance premium payments	\$ 704,020	\$ 494,625
(Gain) loss on disposal of investments	<u>(295)</u>	<u>14,774</u>
	\$ 703,725	\$ 509,399
Excess of revenues over expenses	\$ 1,730,212	\$ 1,424,977
Fund balance at beginning of year	<u>2,853,821</u>	<u>1,428,844</u>
Fund balance at end of year	\$ 4,584,033	\$ 2,853,821

See notes to financial statements.

KENTUCKY RETIREMENT SYSTEMS INSURANCE FUND
STATEMENTS OF CHANGES IN FINANCIAL POSITION
FOR THE YEARS ENDED JUNE 30, 1989 AND 1988

	1989	1988
Source of funds:		
Excess of revenues over expenses	\$17,288,782	\$13,160,764
Deduct amortization of investment discount and premium, net, not providing funds	<u>92,694</u>	<u>51,768</u>
Funds provided from operations	\$17,196,088	\$13,108,996
Proceeds from sale, maturity or exchange of investments, less net gain of \$2,534 in 1989 and plus net loss of \$313,432 in 1988 included above	713,302	10,584,375
Increase in payable to Kentucky Retirement Systems	<u>5,012</u>	<u> </u>
Total funds provided	\$17,914,402	\$23,693,371
Application of funds:		
Investments purchased or exchanged	16,653,465	20,983,372
Increase in employer contributions receivable	530,371	245,969
Increase in accrued investment income	230,566	447,222
Increase in other assets	500,000	
Decrease in payable to Kentucky Retirement Systems	<u> </u>	<u>2,016,808</u>
Total funds applied	\$17,914,402	\$23,693,371
Increase (decrease) in cash	\$ -0-	\$ -0-
Cash on deposit with State Treasurer at beginning of year	<u>-0-</u>	<u>-0-</u>
Cash on deposit with State Treasurer at end of year	\$ -0-	\$ -0-

See notes to financial statements.

KENTUCKY RETIREMENT SYSTEMS INSURANCE FUND
 NOTES TO FINANCIAL STATEMENTS
 YEARS ENDED JUNE 30, 1989 AND 1988

NOTE 1 - SIGNIFICANT ACCOUNTING POLICY AND DESCRIPTION OF PLAN

The financial statements of the Fund are prepared on the accrual basis.

The Fund was established in 1978 to provide accident and health insurance for members receiving benefits from the Kentucky Employes Retirement System, County Employes Retirement System, and State Police Retirement System (Systems). The Fund and members receiving benefits pay prescribed portions of the aggregate premiums paid to an insurance company for coverage. Insurance premium payments included in the accompanying financial statements represent that portion of premiums paid by the Fund. Insurance premiums withheld from benefit payments to members of the Systems approximated \$5,072,000 and \$4,157,000 for the Kentucky Employes Retirement System, \$2,948,000 and \$2,427,000 for the County Employes Retirement System, and \$28,000 and \$6,000 for the State Police Retirement System in 1989 and 1988, respectively. Effective August 1, 1982, the Retirement System began paying the same proportion of medical insurance premiums for the spouse or beneficiary and dependents of retired hazardous members or hazardous employees killed in the line of duty. The allocation of the insurance premiums paid by the Fund and amounts withheld from members' benefits is based on the years of service with the Systems, as follows:

<u>Years of Service</u>	<u>Percent Paid by Insurance Fund</u>	<u>Percent Paid by Member through Payroll Deduction</u>
20	100%	0%
15	75%	25%
10	50%	50%
4	25%	75%
Less than 4	0%	100%

The percentages of employer contributions to the Systems which are in turn transferred to the Fund are as follows:

	June 30	
	1989	1988
<u>Non-Hazardous</u>		
Kentucky Employes Retirement System	1.44%	1.31%
County Employes Retirement System	1.07%	.95%
<u>Hazardous</u>		
Kentucky Employes Retirement System	5.31%	4.94%
County Employes Retirement System	4.21%	3.31%
State Police Retirement System	8.32%	7.02%

KENTUCKY RETIREMENT SYSTEMS INSURANCE FUND
 NOTES TO FINANCIAL STATEMENTS
 YEARS ENDED JUNE 30, 1989 AND 1988
 (CONTINUED)

NOTE 2 - INVESTMENTS

The Fund has uninsured and unregistered investments for which the securities are held by the broker's or dealer's trust department or agent in Kentucky Retirement System's name. The approximate market value of investments follows:

	June 30	
	1989	1988
United States Government securities	\$25,569,283	\$17,083,000
Government National Mortgage Association and similar securities	4,650,283	3,817,000
Corporate bonds and notes	7,982,463	4,394,000
Securities purchased under agreement to resell	6,056,541	2,030,000
	\$44,258,570	\$27,324,000

ACTUARIAL SECTION

UNFUNDED ACCRUED LIABILITIES
NORMAL COST ACCRUED BENEFIT LIABILITY
EMPLOYER CONTRIBUTION RATE
ACTUARIAL ASSETS
VESTED ACCRUED BENEFIT LIABILITY
NON-VESTED BENEFITS

INTRODUCTION TO ACTUARIAL SECTION

An actuarial valuation is a mathematical means of determining liabilities (the cost of benefits guaranteed each member) and the adequateness of the assets and income of the systems. It is a way of looking into the future, based on past experience, to determine if the contributions being paid by the employee and employer, combined with projected investment income, are sufficient to guarantee those benefits to those who are currently members and those who will become members.

Because pension plans, such as those administered by Kentucky Retirement Systems, must necessarily be oriented toward long-range goals, rather than short term receipts and expenses, the actuarial valuation provides the information that the Board of Trustees needs to make sound judgements on investments and benefit improvements. Their decisions can affect the systems' ability to provide not only continuing payments to those currently drawing benefits, but also to provide the necessary assets to guarantee benefit payments to future generations.

The Board's actuarial consultant, the firm of William M. Mercer-Meidinger-Hansen, Inc., has performed the actuarial valuations for five fiscal years. The firm also conducted the five-year experience study that was used to provide the current actuarial assumptions. Those assumptions were adopted by the Board in May of 1986. The actuarial assumptions are necessary to project the liabilities of the systems.

The following reports, duplicated from the originals, indicate that every dollar of future liabilities is backed by \$.94 in assets. The remaining unfunded liabilities are being funded annually in accordance with the statutory requirement of 1% of the outstanding principal and payment of all accrued interest. This statutory requirement assures that the systems will remain sound.

MERCER MEIDINGER HANSEN

November 3, 1989

Board of Trustees
Kentucky Retirement Systems
Perimeter Park West
1260 Louisville Road
Frankfort, Kentucky 40601

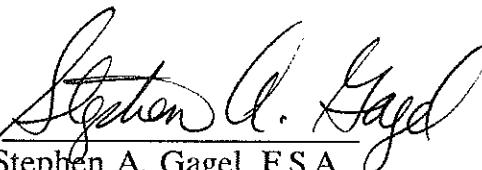
Members of the Board:

The thirty-third annual actuarial valuation of the Kentucky Employes Retirement System, the thirtieth annual actuarial valuation of the County Employes Retirement System, and the thirty-first annual actuarial valuation of the State Police Retirement System have been completed and the reports prepared. The valuations were made on the basis of data provided by the Retirement System as of June 30, 1989.

On the basis of the assumptions as stated in each report and the data furnished us by the Administration of the Retirement Systems, it is certified that the valuations have been made by the use of generally accepted actuarial principles and that, if the recommendations of the reports are followed, adequate provision will be made for the funding of future benefits.

The three Retirement Systems are actuarially sound. Adequate provision is being made for the funding of the Actuarial Accrued Liabilities of the Kentucky Employes Retirement System, the County Employes Retirement System, and the State Police Retirement System as required by the Kentucky Revised Statutes, as appropriate funding rates have been established by the Board for this purpose. Actual employer contributions made under the Kentucky Employee Retirement System and the State Police Retirement System were \$1,800,000 less than the Board established rates in the 1988-89 year, and will be \$1,500,000 less in the 1989-90 year.

Respectfully Submitted,
WILLIAM M. MERCER-MEIDINGER-HANSEN, INC.

By 
Stephen A. Gagel, F.S.A.
Actuary

/cjh

THIRTY-THIRD ANNUAL ACTUARIAL VALUATION

JUNE 30, 1989

KENTUCKY EMPLOYEES RETIREMENT SYSTEM

FRANKFORT, KENTUCKY

SECTION II

ACTUARIAL CONSIDERATIONS

Description of Actuarial Methods

The actuarial valuation is the means by which the contingent liabilities and contribution rates of a retirement system are evaluated and determined. It provides a guide to the System to the financing required during years of active service to accumulate the funds needed to provide member's benefits. It also makes it possible to estimate beforehand the cost of proposed changes in the System so that action can be taken in the light of the cost consequences.

The methods of valuation are prescribed by KRS 61.565. The Entry Age Normal Actuarial cost method was used to determine costs of all benefits with the exception of the retiree medical insurance benefit. Under this method the employer's contribution to the retirement system consists of Normal Cost, a payment to fund the Unfunded Actuarial Accrued Liability, medical insurance, and administrative expenses. The Normal Cost represents the contribution (as a level percent of payroll) that completely funds benefits at retirement if made from a person's entry into employment until his retirement. The Actuarial Accrued Liability represents the sum of money and investments that would be held in the fund if the retirement system had been in effect since the date each member was first employed.

The medical insurance contribution rate was originally determined in the 1987 valuation as the level percent of payroll necessary to fund projected medical insurance premiums over the next sixteen years (taking into account the level of reserves in the Insurance Fund). Beginning in 1988, this rate is being increased each year by a percentage amount which will result in reaching the Entry Age Normal funding rate within a 20 year period measured from 1987.

The amount of the administrative expense was based on the budgeted amount for the twelve months following the date of the valuation, as allocated between Hazardous position and Non-Hazardous position employees.

Actuarial Assumptions

Since the actuarial valuation involves estimates of benefits payable in the future, it is necessary that assumptions be made as to the interest earnings, rates of mortality, withdrawal, retirement, and disability, and the rate at which salaries will increase. In addition, an assumption must be made relative to increases in medical insurance premium rates in order to value the liability for the medical insurance benefit. It is desirable that the actuarial assumptions be reviewed periodically to see whether past experience and probable future experience justifies the continued use of these actuarial assumptions. Such a study was performed subsequent to the 1985 actuarial valuation and new actuarial assumptions were adopted by the Board for use in the subsequent actuarial valuations, until such time as another experience study is performed. This valuation reflects assumptions based on the 1985

experience study. Actuarial assumptions used for hazardous position employees are similar to actuarial assumptions adopted for the State Police Retirement System (with the exception of the rate of retirement, as indicated on page K-4). The actuarial assumptions applicable to other employees are described on the following page.

Actuarial Value of Assets

The actuarial value of assets is determined using the book value of the assets as of the valuation date, plus accrued investment income and member and employer contributions receivable, less member refunds and investment expenses payable.

KENTUCKY EMPLOYEES RETIREMENT SYSTEM

ACTUARIAL ASSUMPTIONS

A. STATEMENT OF ACTUARIAL ASSUMPTIONS

(1) Mortality:

(a) Active & retired lives - 1971 Group Annuity Mortality Table, plus a pre-retirement duty death rate of .0005 per year for hazardous duty employees.

(b) Disabled lives - Social Security Administration Disability Mortality Rates - Actuarial Study No. 75 (current rates used by PBGC for disabled lives receiving Social Security).

(2) Disablement - Graduated rates based on 1985 experience study.

(3) Termination of employment - Graduated select (non-hazardous only) and ultimate rates based on 1985 experience study.

(4) Retirement - Non-Hazardous:

<u>Age</u>	<u>Retirement Rate</u>
55-57	.03
58-59	.04
60-61	.05
62	.25
63-64	.10
65	.50
66-67	.20
68	.25
69	.40
70 & Over	1.00

At age 55-64 in lieu of the age related rate, 20% are assumed to retire as soon as eligible for unreduced benefits.

Hazardous: Assumed that 40% will retire as soon as eligible for unreduced benefits and balance will continue to age 60.

- (5) Marital status
 - (a) Percentage married - 100%.
 - (b) Age difference - Males are assumed to be 3 years older than their spouses.
- (6) Dependent children - For hazardous position employees under duty related death benefits, it is assumed that the employe is survived by 2 dependent children, each age 6.
- (7) Investment return - 8.00% per year, net of investment related expenses, compounded annually.
- (8) Compensation progression - 7.50% per year, compounded annually.
- (9) Retiree Medical Insurance - It was assumed that future retirees would select medical coverage in the same proportion that current retirees have selected coverage. Monthly premium rates were assumed to be as follows:

Plan Type	7/1/89	Rate Increase	
	Rate	Date	Rate
Single	\$ 89.07*	11/1/89	\$102.96*
Family	213.77*	11/1/89	241.66*
Medicare	42.55*	1/1/90	46.81**
High Option	70.80*	1/1/90	77.88**

*Actual rates
 **Assumed rates

In determining the medical premium funding rate in 1987, medical premiums were assumed to increase at an annual rate of 12%. In determining the target Entry Age Funding rate in valuations subsequent to 1987, it was assumed that medical premiums would grow at an annual rate of 10%. The assumed rate of growth in number of retirees receiving medical insurance was based on assumed retirement and mortality patterns used throughout the valuation.

Reserves in the Insurance Fund were used to offset the liability for premiums.

(10) Missing data

- For those active members with incomplete data, the following assumptions were made:

- . If reported salary was zero or blank, then monthly salary was assumed to be \$556
- . If reported age was blank, then assume current age equal to age 18 plus years of service reported

B. SAMPLE RATES FOR NON-HAZARDOUS POSITION EMPLOYEES*

(1) Annual Rates of Mortality:

<u>Age</u>	<u>Active Mortality</u>		<u>Disabled Mortality</u>	
	<u>Males</u>	<u>Females</u>	<u>Males</u>	<u>Females</u>
25	0.06%	0.03%	4.83%	2.63%
30	0.08	0.05	3.62	2.37
40	0.16	0.09	2.82	2.09
50	0.53	0.22	3.83	2.57
55	0.85	0.33	4.82	2.95
60	1.31	0.55	6.03	3.31

(2) Annual Rates of Decrement:

<u>Age</u>	<u>Disablement</u>	<u>Ultimate Termination</u>
25	0.02%	4.50%
30	0.03	4.50
40	0.07	3.75
50	0.28	3.00
55	0.53	2.25
60	0.93	0.38

(3) Select Rates of Termination:

<u>Years of Service</u>	<u>Select Termination</u>
1	25.0%
2	8.0
3	6.0
4	5.0
5	5.0

(4) Compensation Progression:

<u>Age</u>	<u>Rate of Annual Increase</u>	<u>Compensation at Normal Retirement as Percentage Of Current Annual Compensation</u>
25	7.50%	
30	7.50	1,804.4%
40	7.50	1,256.9
50	7.50	609.8
55	7.50	295.9
60	7.50	206.1
		143.6

*Sample rates for hazardous position employees are included in the State Police Retirement System valuation.

SECTION III

KENTUCKY EMPLOYEES RETIREMENT SYSTEM

RESULTS OF THE 1989 ACTUARIAL VALUATION

Actuarial Balance Sheet

Table I, which follows, is the actuarial balance sheet of the Kentucky Employees Retirement System as of June 30, 1989. The "actuarial balance sheet" of the retirement system displays the fundamental relationship between actual assets, future contributions, and future benefits. The asset side of the balance sheet is comprised of actual fund assets plus the actuarial present value of future contributions on behalf of current members. The actuarial present values of all projected benefit payments to present active and inactive members make up the balance sheet liabilities.

Determination of Contribution Rate

The rate of contribution by the State required to provide 9% of the Unfunded Actuarial Accrued Liability, the employer share of the Normal Cost, medical insurance and the expenses of administration, is shown in Table II. The required contribution is expressed both in dollars and as a percentage of the estimated annual State payroll as of June 30, 1989.

The actuarial methods applied to determine the Normal Cost for the year commencing July 1, 1989 are described on page K-2. These costs are classified by type of benefit. The Normal Cost contribution rate of the State is determined by reducing the total Normal Cost by the expected employee contributions. A breakdown of costs between Hazardous and Non-Hazardous position employees appears in Table III.

Accountant's Information

Table IV contains a calculation of the accumulated value of plan benefits as specified under FASB Statement No. 35. Under this calculation, the present value of future benefits payable and attributable to the employee's present accrued benefit is computed. The probabilities of termination, disability, mortality and retirement are the same for this calculation as those used in the regular valuation calculations. However, future increases in earnings and additional benefit accruals are not projected beyond the current valuation date.

Table V contains information needed to comply under GASB Statement No. 5. These calculations reflect the present value of benefits attributable to current years of service, but based on projected salary levels at the time a member's final benefits are determined.

TABLE I
 KENTUCKY EMPLOYES RETIREMENT SYSTEM
ACTUARIAL BALANCE SHEET-JUNE 30, 1989

ACTUARIAL ASSETS

Fund Assets at Book Value*	\$1,593,913,511
Actuarial Present Value of Future Member Contributions	526,695,743
Actuarial Present Value of Future Employer Contributions	
For Normal Costs	\$ 340,734,189
For Unfunded Actuarial Accrued Liability	<u>145,998,805</u>
Total	\$ 486,732,994
Total Actuarial Assets	\$2,607,342,248

ACTUARIAL LIABILITIES

Actuarial Present Value of Future Benefits		
Inactive Members:		
Retired Members and Beneficiaries	\$ 710,653,462	
Vested Retirement	14,692,222	
Vested Membership	<u>4,140,861</u>	
Total - Inactive		\$ 729,486,545
Active Members:		
Retirement Benefits	\$1,463,453,980	
Disability Benefits	96,482,115	
Withdrawal Benefits (Vested and Refund of Contributions)	184,969,955	
Survivor Benefits	<u>127,645,240</u>	
Total - Active		\$1,872,551,290
Refunds and Expenses Payable		<u>\$ 5,304,413</u>
Total Actuarial Liabilities		\$2,607,342,248

ACCRUED BENEFIT LIABILITY **

Vested Benefits	\$1,029,299,007
Non-Vested Benefits	\$ 45,247,800

- * The approximate market value of assets as of June 30, 1989 is \$1,768,320,146 (1,740,862,513 for Non-Hazardous and \$27,457,633 for Hazardous).
 The actuarial value of assets as of June 30, 1989 is \$1,588,609,098 (book value of assets less refunds and expenses payable).
 The Members' Contribution Account as of June 30, 1989 is \$318,369,041.
- ** Present value of accrued benefit deferred to normal retirement date.

TABLE II
 KENTUCKY EMPLOYES RETIREMENT SYSTEM
 DETERMINATION OF CONTRIBUTION RATE-JUNE 30, 1989

<u>UNFUNDED ACTUARIAL ACCRUED LIABILITY</u>		<u>PERCENT*</u>
Total Actuarial Accrued Liability	\$1,734,607,903	210.93%
Assets at Actuarial Value	<u>1,588,609,098</u>	<u>193.18%</u>
Unfunded Actuarial Accrued Liability	\$ 145,998,805	17.75%
Contribution - 9% of Unfunded Actuarial Accrued Liability	\$ 13,139,894	1.60%
 <u>NORMAL COST</u>		
Retirement Benefits	\$ 51,271,768	6.23%
Disability Benefits	4,085,347	.50%
Withdrawal Benefits (Vested and Refund of Contributions)	9,591,579	1.17%
Survivor Benefits	<u>4,519,259</u>	<u>.55%</u>
Total Normal Cost	\$ 69,467,953	8.45%
Less: Employee Contributions	<u>41,199,372</u>	<u>5.01%</u>
Normal Cost - State	\$ 28,268,581	3.44%
 <u>TOTAL ANNUAL EMPLOYER COST</u>		
<u>Non-Hazardous Duty Cost</u>		
Normal Cost	\$ 27,111,901	3.35%**
9% of Unfunded Actuarial Accrued Liability	13,203,510	1.63%**
Administrative Expenses	1,514,665	.19%**
Group Hospital and Medical Insurance Premiums	<u>12,879,392</u>	<u>1.59%**</u>
Total Annual Cost	\$ 54,709,468	6.76%**
 <u>Hazardous Duty Cost</u>		
Normal Cost	\$ 1,156,680	9.38%***
9% of Unfunded Actuarial Accrued Liability	(63,616)	(.52%***)
Administrative Expenses	9,143	.07%***
Group Hospital and Medical Insurance Premiums	<u>708,193</u>	<u>5.74%***</u>
Total Annual Cost	\$ 1,810,400	14.67%***

*Based on estimated annual salaries of \$822,362,508.

**Based on estimated annual salaries of \$810,024,648 for Non-Hazardous Position Employees.

***Based on estimated annual salaries of \$12,337,860 for Hazardous Position Employees.

TABLE III

KENTUCKY EMPLOYEES RETIREMENT SYSTEM

CLASSIFICATION OF ACTUARIAL LIABILITIES AND COSTS-JUNE 30, 1989

	Non-Hazardous Position Employes	Hazardous Position Employes	Total
<u>ACTUARIAL ACCRUED LIABILITY</u>			
<u>Active Members</u>			
Retirement Benefits	\$ 816,027,408	\$12,144,924	\$ 828,172,332
Disability Benefits	44,476,141	1,002,990	45,479,131
Withdrawal Benefits (Vested and Refund of Contributions)	59,659,373	29,427	59,688,800
Survivor Benefits	<u>71,034,694</u>	<u>746,401</u>	<u>71,781,095</u>
Actuarial Accrued Liability - Actives	\$ 991,197,616	\$13,923,742	\$1,005,121,358
<u>Inactive Members</u>			
Retired Members and Beneficiaries	\$ 699,562,440	\$11,091,022	\$ 710,653,462
Vested Retirement	14,545,832	146,390	14,692,222
Vested Membership	<u>4,028,001</u>	<u>112,860</u>	<u>4,140,861</u>
Actuarial Accrued Liability - Inactives	\$ 718,136,273	\$11,350,272	\$ 729,486,545
Total Actuarial Accrued Liability	\$1,709,333,889	\$25,274,014	\$1,734,607,903
<u>UNFUNDED ACTUARIAL ACCRUED LIABILITY</u>			
Total Actuarial Accrued Liability	\$1,709,333,889	\$25,274,014	\$1,734,607,903
Less Actuarial Value of Assets	<u>1,562,628,227</u>	<u>25,980,871</u>	<u>1,588,609,098</u>
Unfunded Actuarial Accrued Liability	\$ 146,705,662	\$ (706,857)	\$ 145,998,805
<u>NORMAL COST</u>			
Retirement Benefits	\$ 49,649,623	\$ 1,622,145	\$ 51,271,768
Disability Benefits	3,921,904	163,443	4,085,347
Withdrawal Benefits (Vested and Refund of Contributions)	9,514,779	76,800	9,591,579
Survivor Benefits	<u>4,387,427</u>	<u>131,832</u>	<u>4,519,259</u>
Total Normal Cost	\$ 67,473,733	\$ 1,994,220	\$ 69,467,953
Less Employee Contributions	<u>40,361,832</u>	<u>837,540</u>	<u>41,199,372</u>
Total Normal Cost - State	\$ 27,111,901	\$ 1,156,680	\$ 28,268,581
<u>ACCRUED BENEFIT LIABILITY*</u>			
Vested Benefits	\$1,012,035,981	\$17,263,026	\$1,029,299,007
Non-Vested Benefits	37,649,039	7,598,761	45,247,800

*Present value of accrued benefit deferred to normal retirement date.

TABLE IV

KENTUCKY EMPLOYES RETIREMENT SYSTEM

ACCOUNTANT'S INFORMATION - JUNE 30, 1989INFORMATION REQUIRED UNDER FASB STATEMENT NO. 35

	<u>Non-Hazardous Position Employees</u>	<u>Hazardous Position Employees</u>	<u>Total</u>
<u>ACTUARIAL PRESENT VALUE OF VESTED ACCUMULATED BENEFITS</u>			
<u>Active Members</u>			
Retirement Benefits	\$ 256,634,014	\$ 3,391,139	\$ 260,025,153
Disability Benefits	7,622,747	357,586	7,980,333
Withdrawal Benefits (Vested and Refund of Contributions)	55,839,145	365,443	56,204,588
Survivor Benefits	<u>0</u>	<u>0</u>	<u>0</u>
Total Active Members	\$ 320,095,906	\$ 4,114,168	\$ 324,210,074
<u>Inactive Members</u>			
Retired Members and Beneficiaries	\$ 699,562,440	\$11,091,022	\$ 710,653,462
Vested Retirement	14,545,832	146,390	14,692,222
Vested Membership	<u>4,028,001</u>	<u>112,860</u>	<u>4,140,861</u>
Total-Inactive Members	\$ 718,136,273	\$11,350,272	\$ 729,486,545
Total Actuarial Present Value of Vested Accumulated Benefits	\$1,038,232,179	\$15,464,440	\$1,053,696,619
<u>ACTUARIAL PRESENT VALUE OF NON-VESTED ACCUMULATED BENEFITS</u>			
<u>Active Members</u>			
Retirement Benefits	\$ 34,071,019	\$ 1,671,770	\$ 35,742,789
Disability Benefits	23,436,447	620,719	24,057,166
Withdrawal Benefits (Vested and Refund of Contributions)	3,901,806	74,533	3,976,339
Survivor Benefits	<u>29,828,532</u>	<u>564,336</u>	<u>30,392,868</u>
Total - Active Members	\$ 91,237,804	\$ 2,931,358	\$ 94,169,162
<u>Inactive Members</u>	\$ 0	\$ 0	\$ 0
Total Actuarial Present Value of Non-Vested Accumulated Benefits	\$ 91,237,804	\$ 2,931,358	\$ 94,169,162

NOTE: All calculations in this Table IV have been developed as specified under FASB Statement No. 35.

TABLE V
 KENTUCKY EMPLOYES RETIREMENT SYSTEM
ACCOUNTANT'S INFORMATION - JUNE 30, 1989
INFORMATION REQUIRED UNDER GASB STATEMENT NO. 5

	<u>Non-Hazardous Position Employees</u>	<u>Hazardous Position Employees</u>	<u>Total</u>
<u>A. NUMBER OF MEMBERS</u>			
<u>Inactive Members</u>			
Retired Members and Beneficiaries	15,803	115	15,918
Vested Retirements	1,738	15	1,753
Vested Membership	<u>7,471</u>	<u>113</u>	<u>7,584</u>
Total Inactive Members	25,012	243	25,255
<u>Active Members</u>			
Vested Members	26,587	622	27,209
Nonvested Members	<u>17,153</u>	<u>1</u>	<u>17,154</u>
Total Active Members	<u>43,740</u>	<u>623</u>	<u>44,363</u>
<u>Total Members</u>	68,752	866	69,618
<u>B. UNFUNDED PENSION BENEFIT OBLIGATION</u>			
<u>Pension Benefit Obligation</u>			
Retirees and Beneficiaries Currently Receiving Benefits and Terminated Members Not Yet Receiving Benefits	\$ 718,136,273	\$11,350,272	\$ 729,486,545
Current Members Accumulated Employee Contributions and Credited Interest	294,964,107	6,647,951	301,612,058
Employer Financed - Vested	505,806,938	5,411,799	511,218,737
Employer Financed - Nonvested	<u>23,449,892</u>	<u>1,155,946</u>	<u>24,605,838</u>
Total Pension Benefit Obligation	1,542,357,210	24,565,968	1,566,923,178
<u>Net Assets at Cost Value</u>	<u>\$1,562,628,227</u>	<u>\$25,980,871</u>	<u>\$1,588,609,098</u>
<u>Unfunded Pension Benefit Obligation</u>	(20,271,017)	(1,414,903)	(21,685,920)

SECTION IV

COMMENTS AND CERTIFICATION

Comments

The total Actuarial Accrued Liability has increased from \$1,561,743,738 on June 30, 1988 to \$1,734,607,903 on June 30, 1989. The Unfunded Actuarial Accrued Liability has increased from \$135,687,336 to \$145,998,805. Total actuarial value of assets as of June 30, 1989 was equal to \$1,588,609,098.

The Unfunded Actuarial Accrued Liability increased from 16.88% to 17.75% as a percentage of annual payroll and decreased from 8.7% to 8.4% as a percentage of the Actuarial Accrued Liability in the year ended June 30, 1989.

The change in contribution rate between the 1988 and 1989 valuations is a function of actual plan experience. A formal gain and loss analysis would identify the portion of the contribution rate change attributable to each element of plan experience and benefit change. However, undertaking such an analysis would be extremely time consuming and expensive. In lieu of the formal analysis, we have estimated the impact of the various components of gain and loss based on changes in statistical averages of each group. The following table shows the results of this computation:

	<u>Non-Hazardous Position Employees</u>	<u>Hazardous Position Employees</u>
June 30, 1988 Contribution Rate	6.51%	12.90%
Increase Expected Due to Legislated Benefit Improvements	0.00%	0.00%
Expected Change in Unfunded Actuarial Accrued Liability Payment Due to Increasing Covered Payroll	(0.03%)	0.18%
Investment Return	(0.20%)	(0.21%)
Salary Increases	(0.28%)	(0.26%)
Decrements Experience*	0.60%	1.74%
Change in Group Hospital and Medical Premium Rate	0.15%	0.43%
Change in Administrative Expense Rate	0.01%	(0.11%)

June 30, 1989 Contribution Rate

6.76%

14.67%

*Includes mortality, disability, termination of employment and retirement experience. Retirement experience has been affected this year by the early retirement window program offered during the prior year. Although the cost of the extra service credit under the early retirement window was borne in full by the affected agency, the fact that the window resulted in a larger than normal number of retirements has adversely affected the overall decrement experience for the prior year.

The annual State contribution rate required to provide the Normal Cost, 9% of the Unfunded Actuarial Accrued Liability and pay administrative expenses for Non-Hazardous position employees was determined at 5.17%. An additional 1.59% is required to fund medical insurance for retirees, bringing the total required contribution to 6.76%. This is within the 7.45% budget. During the next year, the amount contributed by the State will be reduced by a total of \$1,500,000 split between the KERS Non-Hazardous, KERS Hazardous and State Police systems. This results in an expected decrease of 0.18% of payroll in the overall budgeted contribution to the KERS Non-Hazardous system for the coming year, making the net contribution 7.27%. In our opinion, the continuation of the 7.45% contribution rate (as to be adjusted for the budgeted reduction this year) is justified, and we so recommend.

The annual State contribution rate required to provide the Normal Cost, 9% of the Unfunded Actuarial Accrued Liability, and pay administrative expenses for Hazardous position employees was determined at 8.93%. An additional 5.74% is required to fund medical insurance for retirees, bringing the total required contribution to 14.67%. This exceeds the current 14.00% budgeted contribution rate. As noted above, there is a budgeted reduction in State funding this year. This is estimated to reduce the overall budgeted contribution to the KERS Hazardous system for the coming year by 0.28%, making the net contribution 13.72%. In our opinion, the ongoing contribution rate should be increased from 14.00% to 14.67% (as to be adjusted for the budgeted reduction this year), and we so recommend.

It should be noted that the recommended contribution rates do not include the cost of any automatic COLA which is determined by available "margins" under KERS Non-Hazardous. Over the next biennium, this COLA has been determined to be 1.6% per year. If this COLA is provided over the next two years, then the KERS Hazardous contribution rate should be further increased to 14.94% (to reflect the net COLA cost of 0.27%). The recommended KERS Non-Hazardous contribution rate is sufficient to absorb the cost of this COLA, so no adjustment is needed in that rate.

The recommended contribution rates are based on current statutory benefits. The budgeted contribution rates will again be reviewed in the June 30, 1990 valuation.

The following table shows the total Actuarial Accrued Liability, the Unfunded Actuarial Accrued Liability, percent unfunded and the growth of the invested assets at selected intervals since the inception of the System.

KENTUCKY EMPLOYES RETIREMENT SYSTEM

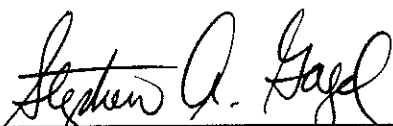
July 1 of Year Shown	Total Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability	Percent Unfunded	Actuarial Value Of Assets	Increase in Assets
1956	\$ 16,200,000	\$ 16,200,000	100.0%	\$ 0	\$ 0
1961	49,201,024	31,670,465	64.4%	17,530,559	4,479,508
1966	127,889,238	72,137,125	56.4%	55,752,113	9,085,814
1971	185,075,453	59,614,477	32.2%	125,460,976*	18,353,116
1975	296,343,758	77,434,549	26.1%	218,909,209*	26,529,526
1976	387,214,910	130,838,120	33.8%	256,376,790*	37,467,581
1977	446,255,236	149,511,331	33.5%	296,743,905*	40,367,115
1978	507,324,915	168,497,917	33.2%	338,826,998*	42,083,093
1979	592,095,113	202,676,662	34.2%	389,418,451*	50,591,453
1980	710,126,703	249,770,835	35.2%	460,355,868*	70,937,417
1981	692,160,395	164,735,129	23.8%	527,425,266	67,069,398
1982	810,250,589	195,803,691	24.2%	614,446,898	87,021,632
1983	862,291,959	152,196,081	17.7%	710,095,878	95,648,980
1984	1,016,088,830	201,535,007	19.8%	814,553,823	104,457,945
1985	1,104,429,988	169,949,215	15.4%	934,480,773	119,926,950
1986	1,245,083,143	166,635,243	13.4%	1,079,353,421	144,872,648
1987	1,384,259,808	120,259,389	8.7%	1,264,000,419	184,646,998
1988	1,561,743,738	135,687,336	8.7%	1,426,056,402	162,055,983
1989	1,734,607,903	145,998,805	8.4%	1,588,609,098	162,552,696

*Includes capitalized appreciation of investments.

Certification

On the basis of the actuarial assumptions given and the data furnished by the General Manager of the Kentucky Employes Retirement System, it is certified that the actuarial valuation has been made by the use of accepted actuarial principles and that adequate provision is being made for the funding of future benefits.

Certified by:


 Stephen A. Gagel, F.S.A.

November 3, 1989
 Date

William M. Mercer-Meidinger-Hansen, Inc.
 1500 Meidinger Tower
 Louisville Galleria
 Louisville, Kentucky 40202
 (502) 561-4500

THIRTIETH ANNUAL ACTUARIAL VALUATION
JUNE 30, 1989
COUNTY EMPLOYEES RETIREMENT SYSTEM
FRANKFORT, KENTUCKY

SECTION II

ACTUARIAL CONSIDERATIONS

Description of Actuarial Methods

The actuarial valuation is the means by which the contingent liabilities and contribution rates of a retirement system are evaluated and determined. It provides a guide to the System to the financing required during years of active service to accumulate the funds needed to provide members' benefits. It also makes it possible to estimate beforehand the cost of proposed changes in the System so that action can be taken in the light of the cost consequences.

The methods of valuation are prescribed by KRS 61.565. The Entry Age Normal Actuarial cost method was used to determine costs of all benefits with the exception of the retiree medical insurance benefit. Under this method the employer's contribution to the retirement system consists of Normal Cost, a payment to fund the Unfunded Actuarial Accrued Liability, medical insurance, and administrative expenses. The Normal Cost represents the contribution (as a level percent of payroll) that completely funds benefits at retirement if made from a person's entry into employment until his retirement. The Actuarial Accrued Liability represents the sum of money and investments that would be held in the fund if the retirement system had been in effect since the date each member was first employed.

The medical insurance contribution rate was originally determined in the 1987 valuation as the level percent of payroll necessary to fund projected medical insurance premiums over the next sixteen years (taking into account the level of reserves in the Insurance Fund). Beginning in 1988, this rate is being increased each year by a percentage amount which will result in reaching the Entry Age Normal funding rate within a 20 year period measured from 1987.

The amount of the administrative expense was based on the budgeted amount for the twelve months following the date of the valuation as allocated between Hazardous position and Non-Hazardous position employees.

Actuarial Assumptions

Since the actuarial valuation involves estimates of benefits payable in the future, it is necessary that assumptions be made as to the interest earnings, rates of mortality, withdrawal, retirement, and disability, and the rate at which salaries will increase. In addition, an assumption must be made relative to increases in medical insurance premium rates in order to value the liability for the medical insurance benefit.

It is desirable that the actuarial assumptions be reviewed periodically to see whether past experience and probable future experience justifies the continued use of these actuarial assumptions. Such a study was performed subsequent to the 1985 actuarial valuation and new actuarial assumptions were adopted by the Board for use in the subsequent actuarial valuations, until such time as another experience study is performed. This valuation reflects assumptions based on the 1985 experience study. Actuarial assumptions used for hazardous position employees are similar to actuarial assumptions adopted for the State Police Retirement System. The actuarial assumptions applicable to other employees are described on page C-4.

Actuarial Value of Assets

The actuarial value of assets is determined as the book value of the assets as of the valuation date, plus accrued investment income and member and employer contribution receivables, less member refunds and investment expenses payable.

COUNTY EMPLOYES RETIREMENT SYSTEM

ACTUARIAL ASSUMPTIONS

A. STATEMENT OF ACTUARIAL ASSUMPTIONS

(1) Mortality:

(a) Active & retired lives - 1971 Group Annuity Mortality Table, plus a pre-retirement duty death rate of .0005 per year for hazardous duty employees.

(b) Disabled lives - Social Security Administration Disability Mortality Rates - Actuarial Study No. 75 (current rates used by PBGC for disabled lives receiving Social Security).

(2) Disablement - Graduated rates based on 1985 experience study.

(3) Termination of employment - Graduated select (non-hazardous only) and ultimate rates based on 1985 experience study.

(4) Retirement - Non-Hazardous:

<u>Age</u>	<u>Retirement Rate</u>
55-57	.03
58-59	.04
60-61	.05
62	.25
63-64	.10
65	.50
66-67	.20
68	.25
69	.40
70 and Over	1.00

At age 55-64 in lieu of the age related rate, 20% are assumed to retire as soon as eligible for unreduced benefits.

Hazardous: Assumed that 50% will retire as soon as eligible for unreduced benefits and balance will continue to age 55.

- (5) Marital status
 - (a) Percentage married - 100%.
 - (b) Age difference - Males are assumed to be 3 years older than their spouses.
- (6) Dependent children - For hazardous position employees under duty related death benefits, it is assumed that the employee is survived by 2 dependent children each age 6.
- (7) Investment return - 8.00% per year, net of investment related expenses, compounded annually.
- (8) Compensation progression - 7.50% per year, compounded annually.
- (9) Retiree Medical Insurance - It was assumed that future retirees would select medical coverage in the same proportion that current retirees have selected coverage. Monthly premium rates were assumed to be as follows:

Plan Type	7/1/89	Rate Increase	
	Rate	Date	Rate
Single	\$ 89.07*	11/1/89	\$102.96*
Family	213.77*	11/1/89	241.66*
Medicare	42.55*	1/1/90	46.81**
High Option	70.80*	1/1/90	77.88**

*Actual rates

**Assumed rates

In determining the medical premium funding rate in 1987, medical premiums were assumed to increase at an annual rate of 12%. In determining the target Entry Age Funding rate in valuations subsequent to 1987, it was assumed that medical premiums would grow at an annual rate of 10%. The assumed rate of growth in number of retirees receiving medical insurance was based on assumed retirement and mortality patterns used throughout the valuation.

Reserves in the Insurance Fund were used to offset the liability for premiums.

(10) Missing data

- For those active members with incomplete data, the following assumptions were made:

- . If reported salary was zero or blank, then monthly salary was assumed to be \$556
- . If reported age was blank, then assume current age equal to age 18 plus years of service reported

B. SAMPLE RATES FOR NON-HAZARDOUS POSITION EMPLOYES*

(1) Annual Rates of Mortality:

<u>Age</u>	<u>Active Mortality</u>		<u>Disabled Mortality</u>	
	<u>Males</u>	<u>Females</u>	<u>Males</u>	<u>Females</u>
25	0.06%	0.03%	4.83%	2.63%
30	0.08	0.05	3.62	2.37
40	0.16	0.09	2.82	2.09
50	0.53	0.22	3.83	2.57
55	0.85	0.33	4.82	2.95
60	1.31	0.55	6.03	3.31

(2) Annual Rates of Decrement:

<u>Age</u>	<u>Disablement</u>	<u>Ultimate Termination</u>
25	0.02%	4.50%
30	0.03	4.50
40	0.07	3.75
50	0.28	4.00
55	0.53	2.25
60	0.93	0.38

(3) Select Rates of Termination:

<u>Years of Service</u>	<u>Select Termination</u>
1	25.0%
2	8.0
3	6.0
4	5.0
5	5.0

(4) Compensation Progression:

<u>Age</u>	<u>Rate of Annual Increase</u>	<u>Compensation at Normal Retirement as Percentage Of Current Annual Compensation</u>
25	7.50%	1,804.4%
30	7.50	1,256.9
40	7.50	609.8
50	7.50	295.9
55	7.50	206.1
60	7.50	143.6

*Sample rates for hazardous position employes are included in the State Police Retirement System valuation.

SECTION III

COUNTY EMPLOYES RETIREMENT SYSTEM

RESULTS OF THE 1989 ACTUARIAL VALUATION

Actuarial Balance Sheet

Table I, which follows, is the actuarial balance sheet of the County Employees Retirement System as of June 30, 1989. The "actuarial balance sheet" of the retirement system displays the fundamental relationship between actual assets, future contributions, and future benefits. The asset side of the balance sheet is comprised of actual fund assets plus the actuarial present value of future contributions on behalf of current members. The actuarial present values of all projected benefit payments to present active and inactive members make up the balance sheet liabilities.

Determination of Contribution Rate

The rate of contribution by the participating Agencies required to provide 9% of the Unfunded Actuarial Accrued Liability, the employer share of the annual Normal Cost, medical insurance and the administrative costs of the System is shown in Table II. The required contribution is expressed both in dollars and as a percentage of the estimated payroll of the participating Agencies as of June 30, 1989.

The actuarial methods applied to determine the Normal Cost for the year commencing July 1, 1989 are described on page C-2. These costs are classified by type of benefit. The Normal Cost contribution rate of the participating Agencies is determined by reducing the total Normal Cost by the expected employe contributions. A breakdown of costs between Hazardous and Non-Hazardous position employes appears in Table III.

Accountant's Information

Table IV contains a calculation of the accumulated value of plan benefits as specified under FASB Statement No. 35. Under this calculation, the present value of future benefits payable and attributable to the employe's present accrued benefit is computed. The probabilities of termination, disability, mortality and retirement are the same for this calculation as those used in the regular valuation calculations. However, future increases in earnings and additional benefit accruals are not projected beyond the current valuation date.

Table V contains information needed to comply under GASB Statement No. 5. These calculations reflect the present value of benefits attributable to current years of service, but based on projected salary levels at the time a member's final benefits are determined.

TABLE I
COUNTY EMPLOYES RETIREMENT SYSTEM
ACTUARIAL BALANCE SHEET-JUNE 30, 1989

ACTUARIAL ASSETS

Fund Assets at Book Value*	\$1,085,904,833
Actuarial Present Value of Future Member Contributions	403,693,188
Actuarial Present Value of Future Employer Contributions	
For Normal Costs	\$2,109,059,526
For Unfunded Actuarial Accrued Liability	<u>35,815,913</u>
Total	<u>\$2,138,224,192</u>
Total Actuarial Assets	\$3,627,822,213

ACTUARIAL LIABILITIES

Actuarial Present Value of Future Benefits		
Inactive Members:		
Retired Members and Beneficiaries	\$ 308,055,491	
Vested Retirement	8,426,629	
Vested Membership	<u>4,331,986</u>	
Total - Inactive		\$ 320,814,106
Active Members:		
Retirement Benefits	\$1,341,136,657	
Disability Benefits	81,670,363	
Withdrawal Benefits (Vested and Refund of Contributions)	132,342,693	
Survivor Benefits	<u>97,753,866</u>	
Total - Active		\$1,652,903,579
Refunds and Expenses Payable		<u>\$ 7,852,198</u>
Total Actuarial Liabilities		\$1,981,569,883

ACCRUED BENEFIT LIABILITY **

Vested Benefits	\$ 597,772,400
Non-Vested Benefits	\$ 88,756,358

- * The approximate market value of assets as of June 30, 1989 is \$1,098,436,050 (\$879,020,241 for Non-Hazardous and \$219,415,109 for Hazardous).
The actuarial value of assets as of June 30, 1989 is \$1,078,052,636 (book value of assets less refunds and expenses payable).
The Members' Contribution Account as of June 30, 1989 is \$225,193,010
- ** Present value of accrued benefit deferred to normal retirement date.

TABLE II

COUNTY EMPLOYEES RETIREMENT SYSTEM

DETERMINATION OF CONTRIBUTION RATE-JUNE 30, 1989

<u>UNFUNDED ACTUARIAL ACCRUED LIABILITY</u>		<u>PERCENT*</u>
Total Actuarial Accrued Liability	\$1,113,868,548	152.97%
Assets at Actuarial Value	<u>1,078,052,635</u>	<u>148.05%</u>
Unfunded Actuarial Accrued Liability	\$ 35,815,913	4.92%
Contribution - 9% of Unfunded Actuarial Accrued Liability	\$ 3,223,433	.44%
<u>NORMAL COST</u>		
Retirement Benefits	\$ 56,774,444	7.80%
Disability Benefits	4,062,339	.56%
Withdrawal Benefits (Vested and Refund of Contributions)	7,809,660	1.07%
Survivor Benefits	<u>4,400,928</u>	<u>.60%</u>
Total Normal Cost	\$ 73,047,371	10.03%
Less: Employee Contributions	<u>33,304,194</u>	<u>4.57%</u>
Normal Cost - State	\$ 39,743,177	5.46%
<u>TOTAL ANNUAL EMPLOYER COST</u>		
<u>Non-Hazardous Duty Cost</u>		
Normal Cost	\$ 30,230,342	4.83% **
9% of Unfunded Actuarial Accrued Liability	(2,213,861)	(.35%)**
Administrative Expenses	1,554,284	.25% **
Group Hospital and Medical Insurance Premiums	<u>7,577,928</u>	<u>1.21% **</u>
Total Annual Cost	\$ 37,148,693	5.94% **
<u>Hazardous Duty Cost</u>		
Normal Cost	\$ 9,512,835	9.34%***
9% of Unfunded Actuarial Accrued Liability	5,437,294	5.34%***
Administrative Expenses	64,762	.06%***
Group Hospital and Medical Insurance Premiums	<u>4,738,437</u>	<u>4.65%***</u>
Total Annual Cost	\$ 19,753,328	19.39%***

*Based on estimated annual salaries of \$728,176,932.

**Based on estimated annual salaries of \$626,275,068 for Non-Hazardous Position Employees.

***Based on estimated annual salaries of \$101,901,864 for Hazardous Position Employees.

TABLE III
COUNTY EMPLOYEES RETIREMENT SYSTEM
CLASSIFICATION OF ACTUARIAL LIABILITIES AND COSTS-JUNE 30, 1989

	<u>Non-Hazardous Position Employes</u>	<u>Hazardous Position Employes</u>	<u>Total</u>
<u>ACTUARIAL ACCRUED LIABILITY</u>			
<u>Active Members</u>			
Retirement Benefits	\$467,696,403	\$214,555,434	\$ 682,251,837
Disability Benefits	26,054,290	6,874,939	32,929,229
Withdrawal Benefits (Vested and Refund of Contributions)	30,751,852	2,047,596	32,799,448
Survivor Benefits	<u>39,063,325</u>	<u>6,010,603</u>	<u>45,073,928</u>
Actuarial Accrued Liability - Actives	\$563,565,870	\$229,488,572	\$ 793,054,442
<u>Inactive Members</u>			
Retired Members and Beneficiaries	\$218,836,888	\$ 89,218,603	\$ 308,055,491
Vested Retirement	7,834,879	591,750	8,426,629
Vested Membership	<u>4,189,208</u>	<u>142,778</u>	<u>4,331,986</u>
Actuarial Accrued Liability - Inactives	\$230,860,975	\$ 89,953,131	\$ 320,814,106
Total Actuarial Accrued Liability	\$794,426,845	\$319,441,703	\$1,113,868,548
<u>UNFUNDED ACTUARIAL ACCRUED LIABILITY</u>			
Total Actuarial Accrued Liability	\$794,426,845	\$319,441,703	\$1,113,868,548
Less Actuarial Value of Assets	<u>819,025,309</u>	<u>259,027,326</u>	<u>1,078,052,635</u>
Unfunded Actuarial Accrued Liability	\$(24,598,464)	\$ 60,414,377	\$ 35,815,913
<u>NORMAL COST</u>			
Retirement Benefits	\$ 42,734,471	\$ 14,039,973	\$ 56,774,444
Disability Benefits	3,361,824	700,515	4,062,339
Withdrawal Benefits (Vested and Refund of Contributions)	6,842,862	966,798	7,809,660
Survivor Benefits	<u>3,733,080</u>	<u>667,848</u>	<u>4,400,928</u>
Total Normal Cost	\$ 56,672,237	\$ 16,375,134	\$ 73,047,371
Less Employee Contributions	<u>26,441,895</u>	<u>6,862,299</u>	<u>33,304,194</u>
Total Normal Cost - State	\$ 30,230,342	\$ 9,512,835	\$ 39,743,177
<u>ACCRUED BENEFIT LIABILITY*</u>			
Vested Benefits	\$417,384,527	\$180,387,873	\$ 597,772,400
Non-Vested Benefits	31,617,386	57,138,972	88,756,358

*Present value of accrued benefit deferred to normal retirement date.

TABLE IV

COUNTY EMPLOYES RETIREMENT SYSTEM

ACCOUNTANT'S INFORMATION - JUNE 30, 1989

INFORMATION REQUIRED UNDER FASB STATEMENT NO. 35

	<u>Non-Hazardous Position Employees</u>	<u>Hazardous Position Employees</u>	<u>Total</u>
<u>ACTUARIAL PRESENT VALUE OF VESTED ACCUMULATED BENEFITS</u>			
<u>Active Members</u>			
Retirement Benefits	\$160,115,315	\$ 81,094,566	\$241,209,881
Disability Benefits	4,519,964	2,704,437	7,224,401
Withdrawal Benefits (Vested and Refund of Contributions)	28,938,440	5,745,184	34,683,624
Survivor Benefits	<u>0</u>	<u>0</u>	<u>0</u>
Total Active Members	\$193,573,719	\$ 89,544,187	\$283,117,906
<u>Inactive Members</u>			
Retired Members and Beneficiaries	\$218,836,888	\$ 89,218,603	\$308,055,491
Vested Retirement	7,834,879	591,750	8,426,629
Vested Membership	<u>4,189,208</u>	<u>142,778</u>	<u>4,331,986</u>
Total-Inactive Members	\$230,860,975	\$ 89,953,131	\$320,814,106
Total Actuarial Present Value of Vested Accumulated Benefits	\$424,434,694	\$179,497,318	\$603,932,012
<u>ACTUARIAL PRESENT VALUE OF NON-VESTED ACCUMULATED BENEFITS</u>			
<u>Active Members</u>			
Retirement Benefits	\$ 21,891,512	\$36,456,788	\$ 58,348,300
Disability Benefits	16,115,583	3,326,950	19,442,533
Withdrawal Benefits (Vested and Refund of Contributions)	5,134,989	(216,373)	4,918,616
Survivor Benefits	<u>16,495,998</u>	<u>4,808,033</u>	<u>21,304,031</u>
Total - Active Members	\$ 59,638,082	\$44,375,398	\$104,013,480
<u>Inactive Members</u>	\$ 0	\$ 0	\$ 0
Total Actuarial Present Value of Non-Vested Accumulated Benefits	\$ 59,638,082	\$44,375,398	\$104,013,480

NOTE: All calculations in this Table IV have been developed as specified under FASB Statement No. 35.

TABLE V
COUNTY EMPLOYEES RETIREMENT SYSTEM
ACCOUNTANT'S INFORMATION - JUNE 30, 1989
INFORMATION REQUIRED UNDER GASB STATEMENT NO. 5

	<u>Non-Hazardous Position Employees</u>	<u>Hazardous Position Employees</u>	<u>Total</u>
<u>A. NUMBER OF MEMBERS</u>			
<u>Inactive Members</u>			
Retired Members and Beneficiaries	9,559	619	10,178
Vested Retirements	1,223	27	1,250
Vested Membership	<u>8,885</u>	<u>51</u>	<u>8,936</u>
Total Inactive Members	19,667	697	20,364
<u>Active Members</u>			
Vested Members	24,054	2,441	26,495
Nonvested Members	<u>23,149</u>	<u>1,461</u>	<u>24,610</u>
Total Active Members	<u>47,203</u>	<u>3,902</u>	<u>51,105</u>
<u>Total Members</u>	66,870	4,599	71,469
<u>B. UNFUNDED PENSION BENEFIT OBLIGATION</u>			
<u>Pension Benefit Obligation</u>			
Retirees and Beneficiaries Currently Receiving Benefits and Terminated Members Not Yet Receiving Benefits	\$230,860,975	\$ 89,953,131	\$ 320,814,106
Current Members Accumulated Employee Contributions and Credited Interest	161,795,076	54,261,272	216,056,348
Employer Financed - Vested	282,306,867	153,584,971	435,891,838
Employer Financed - Nonvested	<u>28,022,510</u>	<u>8,057,687</u>	<u>36,080,197</u>
Total Pension Benefit Obligation	702,985,428	305,857,061	1,008,842,489
<u>Net Assets at Cost Value</u>	<u>\$819,025,309</u>	<u>\$259,027,326</u>	<u>\$1,078,052,635</u>
<u>Unfunded Pension Benefit Obligation</u>	(116,039,881)	46,829,735	(69,210,146)

SECTION IV

COMMENTS AND CERTIFICATION

Comments

The total Actuarial Accrued Liability has increased from \$829,346,323 on June 30, 1988 to \$1,113,868,548 on June 30, 1989. The Unfunded Actuarial Accrued Liability increased from \$0 to \$35,815,913. Total actuarial value of assets as of June 30, 1989 was equal to \$1,078,052,635.

The Unfunded Actuarial Accrued Liability increased from 0.00% to 4.92% as a percentage of annual payroll and from 0.0% to 3.2% as a percentage of the Actuarial Accrued Liability in the year ended June 30, 1989.

The change in contribution rate between the 1988 and 1989 valuations is a function of actual plan experience. A formal gain and loss analysis would identify the portion of the contribution rate change attributable to each element of plan experience and benefit change. However, undertaking such an analysis would be extremely time consuming and expensive. In lieu of the formal analysis, we have estimated the impact of the various components of gain and loss based on changes in statistical averages of each group. Because of the significant impact of new entrants this year, especially in the Hazardous system, this analysis should be viewed as a very rough estimate. The following table shows the results of this computation:

	<u>Non-Hazardous Position Employees</u>	<u>Hazardous Position Employees</u>
June 30, 1988 Contribution Rate	6.21%	11.36%
Increase Expected Due to Legislated Benefit Improvements	0.00%	0.00%
Expected Change in Unfunded Actuarial Accrued Liability Payment Due to Increasing Covered Payroll	(0.01%)	1.81%
Investment Return	(0.09%)	(0.04%)
Salary Increases	0.34%	3.10%**
Decrements Experience*	(0.67%)	3.23%
Change in Group Hospital and Medical Premium Rate	0.14%	0.44%
Change in Administrative Expense Rate	0.02%	(0.51%)

June 30, 1988 Contribution Rate

5.94%

19.39%

*Includes mortality, disability, termination of employment and retirement experience.

**Includes effect of salary increases above assumed rate for new entrants during the year under alternate participation.

The annual contribution rate required by the participating Agencies to provide the Normal Cost, 9% of the Unfunded Actuarial Accrued Liability and pay administrative expenses for Non-Hazardous position employees is 4.73%. An additional 1.21% is required to fund medical insurance for retirees, bringing the total required contribution to 5.94%. This is within the 6.35% budget. In our opinion, the continuation of the 6.35% contribution rate is justified, and we so recommend.

The annual contribution rate required by the participating Agencies to provide the Normal Cost, 9% of the Unfunded Actuarial Accrued Liability, and pay administrative expenses for Hazardous position employees is 14.74%. An additional 4.65% is required to fund medical insurance for retirees, bringing the total required contribution to 19.39%. The present budgeted contribution rate is 14.00%. There have been some major changes in the composition of this covered group between the 1988 and 1989 valuations. In addition, salary increase experience has apparently been affected by some unusual overtime patterns during the prior year. It is important to allow some time to let this system absorb the recent large influx of plan participants, and to let the contribution rate settle to an ultimate level. We recommend that small steps, rather than one large step, be taken to increase the budgeted contribution rate over time as needed. We recommend an increase in this budgeted contribution rate from 14.00% to 15.00% for the next year.

It should be noted that the recommended contribution rates do not include the cost of the automatic COLA which is determined by available "margins" under KERS Non-Hazardous. Over the next biennium, this COLA has been determined to be 1.6% per year. If this COLA is provided over the next two years, then the CERS Hazardous contribution rate should be further increased to 15.25% (to reflect the net COLA cost of 0.25%). The recommended CERS Non-Hazardous contribution rate is sufficient to absorb the cost of this COLA, so no adjustment is needed in that rate.

The recommended contribution rates are based on current statutory benefits. The budgeted contribution rates will again be reviewed in the June 30, 1990 valuation.

The following table shows the total Actuarial Accrued Liability, the Unfunded Actuarial Accrued Liability, percent unfunded and the growth of the invested assets at selected intervals since the inception of the System.

COUNTY EMPLOYES RETIREMENT SYSTEM

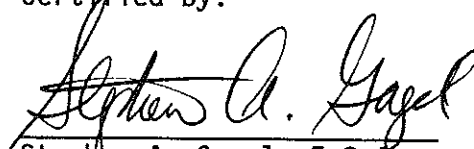
<u>July 1 of Year Shown</u>	<u>Total Actuarial Accrued Liability</u>	<u>Unfunded Actuarial Accrued Liability</u>	<u>Percent Unfunded</u>	<u>Actuarial Value Of Assets</u>	<u>Increase in Assets</u>
1960	\$ 5,602,131	\$ 4,737,680	84.6%	\$ 864,451	\$ 864,451
1965	12,510,487	6,897,273	55.1%	5,613,214	1,255,742
1971	40,305,948	16,885,927	41.9%	23,420,022*	4,850,170
1975	85,322,085	24,467,454	28.7%	60,854,631*	11,704,780
1976	128,824,236	50,089,614	38.9%	78,734,622*	17,879,991
1977	152,900,347	52,474,756	34.3%	100,425,591*	21,690,969
1978	175,194,867	50,394,913	28.8%	124,799,954*	24,374,363
1979	213,834,377	60,742,472	28.4%	153,091,905*	28,291,951
1980	266,018,621	75,787,680	28.5%	190,230,941*	37,139,036
1981	260,872,162	27,101,917	10.4%	233,770,245	43,539,304
1982	306,087,531	20,552,642	6.7%	285,534,889	51,764,644
1983	340,705,763	0	0.0%	343,155,769	57,620,880
1984	421,336,269	15,148,838	3.6%	406,187,431	63,031,662
1985	463,618,532	0	0.0%	478,043,221	71,855,790
1986	535,948,094	0	0.0%	603,815,800	125,772,579
1987	678,442,760	0	0.0%	727,730,727	123,914,927
1988	829,346,323	0	0.0%	839,578,635	111,848,169
1989	1,113,868,548	35,815,913	3.2%	1,078,052,635	238,473,739

*Includes capitalized appreciation of investments.

Certification

On the basis of the actuarial assumptions given and the data furnished by the General Manager of the County Employees Retirement System, it is certified that the actuarial valuation has been made by the use of accepted actuarial principles and that adequate provision is being made for the funding of future benefits.

Certified by:


 Stephen A. Gagel, F.S.A.

November 3, 1989
 Date

William M. Mercer-Meidinger-Hansen, Inc.
 1500 Meidinger Tower
 Louisville Galleria
 Louisville, Kentucky 40202
 (502) 561-4500

THIRTY-FIRST ANNUAL ACTUARIAL VALUATION

JUNE 30, 1989

STATE POLICE RETIREMENT SYSTEM

FRANKFORT, KENTUCKY

SECTION II

ACTUARIAL CONSIDERATIONS

Description of Actuarial Methods

The actuarial valuation is the means by which the contingent liabilities and contribution rates of a retirement system are evaluated and determined. It provides a guide to the System as to the financing required during years of active service to accumulate the funds needed to provide members' benefits. It also makes it possible to estimate beforehand the cost of proposed changes in the System so that action can be taken in the light of the cost consequences.

The methods of valuation are prescribed by KRS 61.565. The Entry Age Normal Actuarial cost method was used to determine costs of all benefits with the exception of the retiree medical insurance benefit. Under this method the employer's contribution to the retirement system consists of Normal Cost, a payment to fund the Unfunded Actuarial Accrued Liability, medical insurance, and administrative expenses. The Normal Cost represents the contribution (as a level percent of payroll) that completely funds benefits at retirement if made from a person's entry into employment until his retirement. The Actuarial Accrued Liability represents the sum of money and investments that would be held in the fund if the retirement system had been in effect since the date each member was first employed.

The medical insurance contribution rate was originally determined in the 1987 valuation as the level percent of payroll necessary to fund projected medical insurance premiums over the next sixteen years (taking into account the level of reserves in the Insurance Fund). Beginning in 1988, this rate is being increased each year by a percentage amount which will result in reaching the Entry Age Normal funding rate within a 20 year period measured from 1987.

The amount of the administrative expense was based on the budgeted amount for the twelve months following the date of the valuation.

Actuarial Assumptions

Since the actuarial valuation involves estimates of benefits payable in the future, it is necessary that assumptions be made as to the interest earnings, rates of mortality, withdrawal, retirement, and disability, and the rate at which salaries will increase. In addition, an assumption must be made relative to increases in medical insurance premium rates in order to value the liability for the medical insurance benefit. It is desirable that the actuarial assumptions be reviewed periodically to see whether past experience and probable future experience justifies the continued use of these actuarial assumptions. Such a study was performed subsequent to the 1985 actuarial valuation and new actuarial assumptions were adopted by the Board for use in the subsequent actuarial valuations, until such time as another experience study is performed. This valuation reflects assumptions based on the 1985 experience study.

Actuarial Value of Assets

The actuarial value of assets is determined as the book value of the assets as of the valuation date, plus accrued investment income and member and employer contributions receivable, less member refunds and investment expenses payable.

STATE POLICE RETIREMENT SYSTEM

ACTUARIAL ASSUMPTIONS

A. STATEMENT OF ACTUARIAL ASSUMPTIONS

- (1) Mortality:
 - (a) Active & retired lives - 1971 Group Annuity Mortality Table, plus a pre-retirement duty death rate of .0005 per year.
 - (b) Disabled lives - Social Security Administration Disability Mortality Rates - Actuarial Study No. 75 (current rates used by PBGC for disabled lives receiving Social Security).
- (2) Disablement - Graduated rates based on 1985 experience study.
- (3) Termination of employment - Graduated rates based on 1985 experience study.
- (4) Retirement - 40% will retire as soon as eligible for unreduced benefits and balance will continue to age 55.
- (5) Marital status
 - (a) Percentage married - 100%.
 - (b) Age difference - Males are assumed to be 3 years older than their spouses.
- (6) Dependent children - For duty related death benefits, it is assumed that the employe is survived by 2 dependent children, each age 6.
- (7) Investment return - 8.00% per year, net of investment related expenses, compounded annually.
- (8) Compensation progression - 7.50% per year, compounded annually.

(9) Retiree Medical Insurance

- It was assumed that future retirees would select medical coverage in the same proportion that current retirees have selected coverage. Monthly premium rates were assumed to be as follows:

<u>Plan Type</u>	<u>7/1/89 Rate</u>	<u>Rate Increase</u>	
		<u>Date</u>	<u>Rate</u>
Single	\$ 89.07*	11/1/89	\$102.96**
Family	213.77*	11/1/89	241.66**
Medicare	42.55*	1/1/90	46.81**
High Option	70.80*	1/1/90	77.88**

*Actual rates
**Assumed rates

In determining the medical premium funding rate in 1987, medical premiums were assumed to increase at an annual rate of 12%. In determining the target Entry Age Funding rate in valuations subsequent to 1987, it was assumed that medical premiums would grow at an annual rate of 10%. The assumed rate of growth in number of retirees receiving medical insurance was based on assumed retirement and mortality patterns used throughout the valuation.

Reserves in the Insurance Fund were used to offset the liability for premiums.

(10) Missing data

- For those active members with incomplete data, the following assumptions were made:

- . If reported salary was zero or blank, then monthly salary was assumed to be \$1,505
- . If reported age was blank, then assume current age equal to age 18 plus years of service reported

B. SAMPLE RATES

(1) Annual Rates of Mortality:

<u>Age</u>	<u>Active Mortality*</u>		<u>Disabled Mortality</u>	
	<u>Males</u>	<u>Females</u>	<u>Males</u>	<u>Females</u>
25	0.06%	0.03%	4.83%	2.63%
30	0.08	0.05	3.62	2.37
40	0.16	0.09	2.82	2.09
50	0.53	0.22	3.83	2.57
55	0.85	0.33	4.82	2.95
60	1.31	0.55	6.03	3.31

*Plus 0.05% duty death rate prior to retirement.

(2) Annual Rates of Decrement:

<u>Age</u>	<u>Disablement</u>	<u>Ultimate Termination</u>
25	0.03%	3.04%
30	0.03	3.38
40	0.09	1.50
50	0.35	0.00
55	0.66	0.00
60	1.16	0.00

(3) Compensation Progression:

<u>Age</u>	<u>Rate of Annual Increase</u>	<u>Compensation at Normal Retirement as Percentage Of Current Annual Compensation</u>
25	7.50%	875.5%
30	7.50	609.8
40	7.50	295.9
50	7.50	143.6

SECTION III

STATE POLICE RETIREMENT SYSTEM

RESULTS OF THE 1989 ACTUARIAL VALUATION

Actuarial Balance Sheet

Table I, which follows, is the actuarial balance sheet of the State Police Retirement System as of June 30, 1989. The "actuarial balance sheet" of the retirement system displays the fundamental relationship between actual assets, future contributions, and future benefits. The asset side of the balance sheet is comprised of actual fund assets plus the actuarial present value of future contributions on behalf of current members. The actuarial present values of all projected benefit payments to present active and inactive members make up the balance sheet liabilities.

Determination of Contribution Rate

The rate of contribution by the State required to provide 9% of the Unfunded Actuarial Accrued Liability, the employer share of the Normal Cost, medical insurance and the administrative costs of the System is shown in Table II. The required contribution is expressed both in dollars and as a percentage of the estimated annual covered payroll as of June 30, 1989.

The actuarial methods applied to determine the Normal Cost for the year commencing July 1, 1989 are described on page S-2. These costs are classified by type of benefit. The Normal Cost contribution rate of the State is determined by reducing the total Normal Cost by the expected employee contributions.

Accountant's Information

Table III contains a calculation of the accumulated value of plan benefits as specified under FASB Statement No. 35. Under this calculation, the present value of future benefits payable and attributable to the employee's present accrued benefit is computed. The probabilities of termination, disability, mortality and retirement are the same for this calculation as those used in the regular valuation calculations. However, future increases in earnings and additional benefit accruals are not projected beyond the current valuation date.

Table V contains information needed to comply under GASB Statement No. 5. These calculations reflect the present value of benefits attributable to current years of service, but based on projected salary levels at the time a member's final benefits are determined.

TABLE I
STATE POLICE RETIREMENT SYSTEM
ACTUARIAL BALANCE SHEET-JUNE 30, 1989

ACTUARIAL ASSETS

Fund Assets at Book Value*	\$ 131,570,867
Actuarial Present Value of Future Member Contributions	18,428,475
Actuarial Present Value of Future Employer Contributions	
For Normal Costs	\$22,554,156
For Unfunded Actuarial Accrued Liability	<u>3,200,220</u>
Total	\$ 25,754,376
Total Actuarial Assets	\$ 175,753,718

ACTUARIAL LIABILITIES

Actuarial Present Value of Future Benefits	
Inactive Members:	
Retired Members and Beneficiaries	\$ 69,951,071
Vested Retirement	381,225
Vested Membership	<u>93,507</u>
Total - Inactive	\$ 70,425,803
Active Members:	
Retirement Benefits	\$ 93,986,179
Disability Benefits	3,936,679
Withdrawal Benefits (Vested and Refund of Contributions)	3,287,996
Survivor Benefits	<u>3,896,747</u>
Total - Active	\$ 105,107,601
Refunds and Expenses Payable and Payables to other Systems	\$ <u>220,314</u>
Total Actuarial Liabilities	\$ 175,753,718

ACCRUED BENEFIT LIABILITY **

Vested Benefits	\$ 92,273,292
Non-Vested Benefits	\$ 19,484,030

* The approximate market value of assets as of June 30, 1989 is \$147,515,370. The actuarial value of assets as of June 30, 1989 is \$131,350,553 (book value of assets less refunds and expenses payable). The Members' Contribution Account as of June 30, 1989 is \$19,496,659

** Present value of accrued benefit deferred to normal retirement date.

TABLE II
STATE POLICE RETIREMENT SYSTEM
DETERMINATION OF CONTRIBUTION RATE-JUNE 30, 1989

<u>ACTUARIAL ACCRUED LIABILITY</u>		<u>PERCENT*</u>
<u>Active Members</u>		
Retirement Benefits	\$ 59,473,720	244.93%
Disability Benefits	2,174,001	8.95%
Withdrawal Benefits (Vested and Refund of Contributions)	447,749	1.84%
Survivor Benefits	<u>2,029,500</u>	<u>8.36%</u>
Actuarial Accrued Liability - Active	\$ 64,124,970	264.08%
<u>Inactive Members</u>		
Retired Members and Beneficiaries	\$ 69,951,071	288.08%
Vested Retirement	381,225	1.57%
Vested Membership	<u>93,507</u>	<u>.39%</u>
Actuarial Accrued Liability - Inactives	\$ 70,425,803	290.04%
Total Actuarial Accrued Liability	134,550,773	554.12%
<u>UNFUNDED ACTUARIAL ACCRUED LIABILITY</u>		
Total Actuarial Accrued Liability	\$134,550,773	554.12%
Assets at Actuarial Value	<u>131,350,553</u>	<u>540.94%</u>
Unfunded Actuarial Accrued Liability	\$ 3,200,220	13.18%
Contribution - 9% of Unfunded Actuarial Accrued Liability	\$ 288,020	1.19%
<u>NORMAL COST</u>		
Retirement Benefits	\$ 3,177,177	13.09%
Disability Benefits	164,203	.68%
Withdrawal Benefits (Vested and Refund of Contributions)	268,296	1.10%
Survivor Benefits	<u>174,776</u>	<u>.72%</u>
Total Normal Cost	\$ 3,784,452	15.59%
Less: Employe Contributions	<u>1,699,755</u>	<u>7.00%</u>
Normal Cost - State Police	\$ 2,084,697	8.59%

TOTAL ANNUAL EMPLOYER COST - STATE POLICE

Normal Cost	\$ 2,084,697	8.59%
9% of Unfunded Actuarial Accrued Liability	288,020	1.19%
Administrative Expenses	31,746	.13%
Group Hospital and Medical Insurance Premiums	<u>2,165,974</u>	<u>8.92%</u>
Total Annual Cost	\$ 4,570,437	18.83%

*Based on estimated annual salaries of \$24,282,216.

TABLE III
STATE POLICE RETIREMENT SYSTEM
ACCOUNTANT'S INFORMATION - JUNE 30, 1989
INFORMATION REQUIRED UNDER FASB STATEMENT NO. 35

ACTUARIAL PRESENT VALUE OF
VESTED ACCUMULATED BENEFITS

<u>Active Members</u>	
Retirement Benefits	\$18,694,379
Disability Benefits	827,251
Withdrawal Benefits (Vested and Refund of Contributions)	1,772,069
Survivor Benefits	<u>0</u>
Total Active Members	\$21,293,699
<u>Inactive Members</u>	
Retired Members and Beneficiaries	\$69,951,071
Vested Retirement	381,225
Vested Membership	<u>93,507</u>
Total-Inactive Members	\$70,425,803
Total Actuarial Present Value of Vested Accumulated Benefits	\$91,719,502

ACTUARIAL PRESENT VALUE OF
NON-VESTED ACCUMULATED BENEFITS

<u>Active Members</u>	
Retirement Benefits	\$10,523,579
Disability Benefits	896,072
Withdrawal Benefits (Vested and Refund of Contributions)	(112,802)
Survivor Benefits	<u>1,455,770</u>
Total - Active Members	\$12,762,619
<u>Inactive Members</u>	\$ 0
Total Actuarial Present Value of Non-Vested Accumulated Benefits	\$12,762,619

NOTE: All calculations in this Table III have been developed as specified under FASB Statement No. 35.

TABLE IV
STATE POLICE RETIREMENT SYSTEM
ACCOUNTANT'S INFORMATION - JUNE 30, 1989
INFORMATION REQUIRED UNDER GASB STATEMENT NO. 5

A. NUMBER OF MEMBERS

Inactive Members

Retired Members and Beneficiaries	399
Vested Retirements	17
Vested Membership	<u>70</u>
Total Inactive Members	486

Active Members

Vested Members	688
Nonvested Members	<u>204</u>
Total Active Members	<u>892</u>

Total Members

1,378

B. UNFUNDED PENSION BENEFIT OBLIGATION

Pension Benefit Obligation

Retirees and Beneficiaries	
Currently Receiving Benefits and Terminated Members Not Yet Receiving Benefits	\$ 70,425,803
Current members	
Accumulated Employee Contributions and Credited Interest	19,183,040
Employer Financed - Vested	39,414,309
Employer Financed - Nonvested	<u>1,070,669</u>

Total Pension Benefit Obligation	130,093,821
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Net Assets at Cost Value

\$131,350,553

Unfunded Pension Benefit Obligation

(1,256,732)

SECTION IV
COMMENTS AND CERTIFICATION

Comments

The total Actuarial Accrued Liability increased from \$120,128,367 on June 30, 1988 to \$134,550,773 on June 30, 1989. The Unfunded Actuarial Accrued Liability has increased from \$0 to \$3,200,220. Total actuarial value of assets as of June 30, 1989 was equal to \$131,350,553.

The Unfunded Actuarial Accrued Liability increased from 0.00% to 13.18% as a percentage of annual payroll and increased 0.0% to 2.4% as a percentage of the Actuarial Accrued Liability in the year ended June 30, 1989.

The change in contribution rate between the 1988 and 1989 valuations is a function of actual plan experience. A formal gain and loss analysis would identify the portion of the contribution rate change attributable to each element of plan experience and benefit change. However, undertaking such an analysis would be extremely time consuming and expensive. In lieu of the formal analysis, we have estimated the impact of the various components of gain and loss based on changes in statistical averages of each group. The following table shows the results of this computation:

June 30, 1988 Contribution Rate	16.66%
Increase Expected Due to Legislated Improvements	0.00%
Expected Change in Unfunded Actuarial Accrued Liability Payment Due to Increasing Covered Payroll	0.00%
Investment Return	(0.72%)
Salary Increases	1.10%
Other Decrements*	1.19%
Change in Group Hospital and Medical Premium Rate	0.60%
Change in Administrative Expense Rate	0.00%
June 30, 1989 Contribution Rate	18.83%

*Includes mortality, disability, termination of employment and retirement experience. Retirement experience has been affected this year by the early retirement window program offered during the prior year. Although the cost of the extra service credit under the early retirement window was borne in full by the affected agency, the fact that the window resulted in a larger than normal number of retirements has adversely affected the overall decrement experience for the prior year.

The annual State contribution rate required to provide the Normal Cost, 9% of the Unfunded Actuarial Accrued Liability and pay administrative expenses is 9.91%. An additional 8.92% is required to fund medical insurance for retirees, bringing the total required contribution to 18.83%. This exceeds the current 18.25% budgeted contribution rate. During the next year, the amount contributed by the State will be reduced by a total of \$1,500,000 split between the KERS Non-Hazardous, KERS Hazardous and the State Police systems. This results in an expected decrease of 0.19% of payroll in the overall budgeted contribution to the State Police system for the coming year, making the net contribution 18.06%. In our opinion, the ongoing contribution rate should be increased from 18.25% to 18.83% (as to be adjusted for the budgeted reduction this year), and we so recommend.

It should be noted that the recommended contribution rates do not include the cost of the automatic COLA which is determined by available "margins" under KERS Non-Hazardous. Over the next biennium, this COLA has been determined to be 1.6% per year. If this COLA is provided over the next two years, then the State Police contribution rate should be further increased to 19.66% (to reflect the net COLA cost of 0.83%).

The recommended contribution rates are based on current statutory benefits. The budgeted contribution rates will again be reviewed in the June 30, 1990 valuation.

The following table shows the total Actuarial Accrued Liability, the Unfunded Actuarial Accrued Liability, percent unfunded and the growth of the invested assets at selected intervals since the inception of the System.

STATE POLICE RETIREMENT SYSTEM

<u>July 1 of Year Shown</u>	<u>Total Actuarial Accrued Liability</u>	<u>Unfunded Actuarial Accrued Liability</u>	<u>Percent Unfunded</u>	<u>Actuarial Value Of Assets</u>	<u>Increase in Assets</u>
1958	\$ 1,450,000	\$ 1,450,000	100.0%	\$ 0	\$ 0
1963	4,553,258	2,008,476	44.1%	2,544,782	619,167
1968	9,079,139	3,288,103	36.2%	5,791,036	789,709
1971	11,828,727	2,441,888	20.6%	9,386,839*	1,339,726
1974	17,737,434	3,179,448	17.9%	14,557,986*	1,935,105
1975	23,182,081	6,169,445	26.6%	17,012,636*	2,454,650
1976	28,693,129	8,231,367	28.7%	20,461,762*	3,449,126
1977	34,561,413	10,436,161	30.2%	24,125,252*	3,663,490
1978	49,950,102	21,440,957	42.9%	28,509,145*	4,383,893
1979	55,391,206	21,487,985	38.8%	33,903,221*	5,394,076
1980	67,580,562	26,663,397	39.5%	40,917,165*	7,013,944
1981	71,526,728	23,296,425	32.6%	48,230,303	7,313,138
1982	78,713,172	21,383,042	27.2%	57,330,130	9,099,827
1983	81,944,546	16,187,460	19.8%	65,757,086	8,426,956
1984	91,180,668	16,200,151	17.8%	74,980,517	9,223,431
1985	99,269,825	14,253,583	14.4%	85,016,242	10,035,725
1986	105,559,951	8,892,252	8.4%	96,667,699	11,651,457
1987	111,541,989	1,347,385	1.2%	110,194,604	13,526,905
1988	120,128,367	0	0.0%	120,998,549	10,803,945
1989	134,550,773	3,200,220	2.4%	131,350,553	10,352,004

*Includes capitalized appreciation of investments.

Certification

On the basis of the actuarial assumptions given and the data furnished by the General Manager of the State Police Retirement System, it is certified that the actuarial valuation has been made by the use of accepted actuarial principles and that adequate provision is being made for the funding of future benefits.

Certified by:



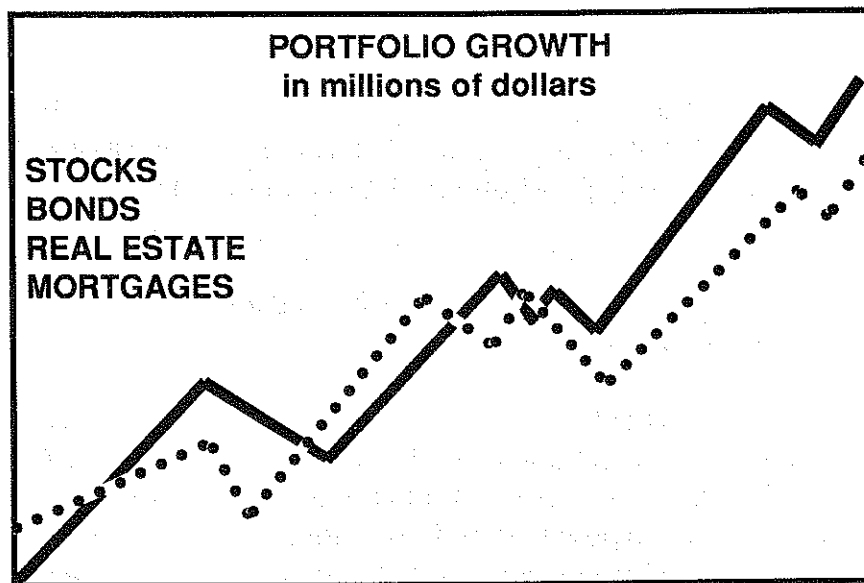
Stephen A. Gagel, F.S.A.

William M. Mercer-Meidinger-Hansen, Inc.
1500 Meidinger Tower
Louisville Galleria
Louisville, Kentucky 40202
(502) 561-4500



Date

INVESTMENT SECTION



INTRODUCTION TO INVESTMENT SECTION

The Kentucky Retirement Systems—Kentucky Employees Retirement System, County Employees Retirement System and State Police Retirement System—were created to provide present and future retirement benefits for the members. Charged with the responsibility of investing the assets to attain this goal, the members of the Board of Trustees follow a policy of preserving capital, while always seeking means of enhancing revenues and protecting against losses in any particular investment area.

The Board continues to invest in such a way that benefits can be paid from the income of those investments and not from contributions or by liquidating the assets themselves. This ensures that the unfunded liabilities will continue to decrease over time and adequate monies should be available for improving benefits without substantial increases in the contribution rates of its members and participating employers.

To accomplish this goal, the Board contracts for the services of professional and experienced investment advisors. Following this introduction are the statements of performance from these advisors.

In addition to these contracted advisors, the Investment Staff of the Retirement Systems, manages an Index Equity fund of selected common stocks. The aim of this fund is to perform as well as or better than the Standard & Poor 500 Stock Index. The S&P 500 Stock Index had a rate of return of 20.35% for the period ending June 30. Under the management of the Investment Staff, the Index Equity Fund had a rate of return of 20.8% for the year—beating the goal by .45%.

The total portfolio had a rate of return for the fiscal year of 13.1%, exceeding the Board's actuarially assumed rate of 8%.

As a result of an asset allocation review, the Board has begun presenting investment information by specific groups within the three retirement systems. Thus, you will see the hazardous groups of the county and state systems presented separately. Because these groups have their own actuarial experience and, therefore, specific financial needs, the Board has invested the assets of those groups into the types of investments most suited to meet those needs.

September 15, 1989

Board of Trustees
Kentucky Employees Retirement
Systems
151 Elkhorn Court
Frankfort, Kentucky 40601

Dear Board Members:

Performance was back on track in fiscal 1989 with the balanced assets we manage for you increasing 14%. This double-digit return is consistent with our results since we started to work together in 1979.

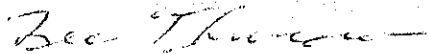
The equity portion of your portfolio advanced 14.5% while bonds had a total return of 13.3%. During this twelve-month period, the Dow Jones increased 18%; Shearson Lehman Government/Corporate Bond Index, 12.3%; and Indata's Public Employees Index median, 13.9%.

We are particularly pleased with last year's results when recognizing that we have taken a more defensive approach to the markets generally and increased fixed income investments to be the largest component of the portfolio. Investment opportunities appear more limited this year in spite of a fast start. Therefore, we are maintaining greater emphasis on preservation of principal than normal.

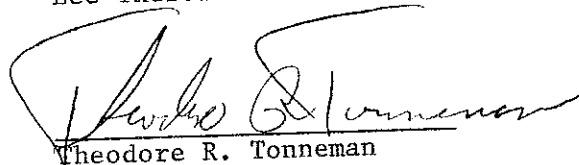
This emphasis on preservation of capital seems particularly appropriate for a pension plan that is at record levels. We undoubtedly will turn more aggressive at a later date as we have in the past, when we believe the risk/reward equation is more favorable.

You can be assured that we will be making every effort to maintain your pattern of significant progress. We value this relationship and appreciate our long and mutually rewarding association.

Respectfully submitted,



Lee Thurow


Theodore R. Tonneman

LT/TRT:cmn

MUNDER CAPITAL MANAGEMENT, INC.

August 2, 1989

Board of Trustees
Kentucky Retirement Systems
151 Elkhorn Court
Frankfort, KY 40601

Dear Trustees:

The fiscal year ended June 30, 1989 marked another year of improving returns in the fixed income markets, and the largest return in 3 years. The Kentucky Retirement Systems' bond portfolio appreciated by 12.3%, which is identical to the 12.3% return of the Shearson Lehman Government/Corporate Bond Index. In absolute terms, the market value of the portfolio increased by approximately \$45 million to end the fiscal year with a market value of \$384,925,073.


In an effort to slow the economy and ease inflationary pressures, the Federal Reserve continued to tighten the money supply during the fiscal year. These efforts drove short term interest rates, as measured by the 3 month Treasury bill, up 1.5% during the year. However, long term interest rates, as measured by the bellwether 30 year U.S. Treasury bond, declined .8% over the same period. The net effect was that the yield curve was inverted (i.e. short rates at 8.3% were yielding more than long rates at 8%) at year end.

During the year we continuously adjusted the portfolio's characteristics to take advantage of market opportunities. The most significant of these adjustments was structuring the portfolio as a "barbell" in order to take advantage of the inversion of the yield curve. As the Federal Reserve begins to loosen the money supply, we will look to reverse this structural change in the portfolio.

As the new fiscal year unfolds, we don't anticipate the Federal Reserve to maintain its firm grip on monetary policy much longer, as this would almost certainly lead to a recession. However, any easing in monetary policy could reaccelerate the economy and refuel inflation concerns. Our outlook is one of optimism, as mounting evidence suggests that the economy is indeed slowing and that inflation pressures have subsided.

Sincerely,

MUNDER CAPITAL MANAGEMENT, INC.


Lee Munder, C.F.A.
President

LM:dag

Heitman Financial

Norman Perlmutter
Chairman of the Board

October 19, 1989

Board of Trustees
Kentucky Retirement Systems
1260 Louisville Road
Frankfort, KY 40601

Dear Trustees:

It is a pleasure to summarize the investment in and performance of the real estate by the Kentucky Retirement Systems through Heitman Advisory Corporation for the fiscal year ended June 30, 1989.

The Kentucky Retirement Systems Separate Account did not fund any new investments during fiscal 1989. However, its commitment to purchase 50% of the Towne Centre, Elizabethtown, remains outstanding. The equity value of the Separate Account grew to \$6,831,000 and the overall return for the year ended June 30, 1989 was 10.04%.

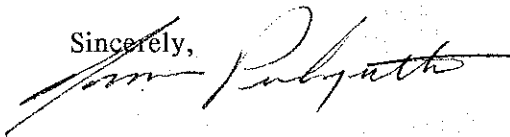
The cash investment in Heitman Real Estate Fund I was reduced to \$38,489,000 resulting from the partial sale of one of the assets. At June 30, the equity value of the Systems' investment was \$48,829,000 with a fiscal year yield of 10.52%. The portfolio consists of three shopping centers, three office buildings, two industrial parks and one primarily retail mixed-use facility.

Heitman Real Estate Fund II, in which the System invested \$20,500,000, completed its first year since becoming fully invested in early 1988. During the 1989 fiscal year, the Systems' equity value increased to \$24,201,000 with a yield of 10.26%. The portfolio consists of five shopping centers, six office buildings, three industrial parks and one primarily retail mixed-use facility.

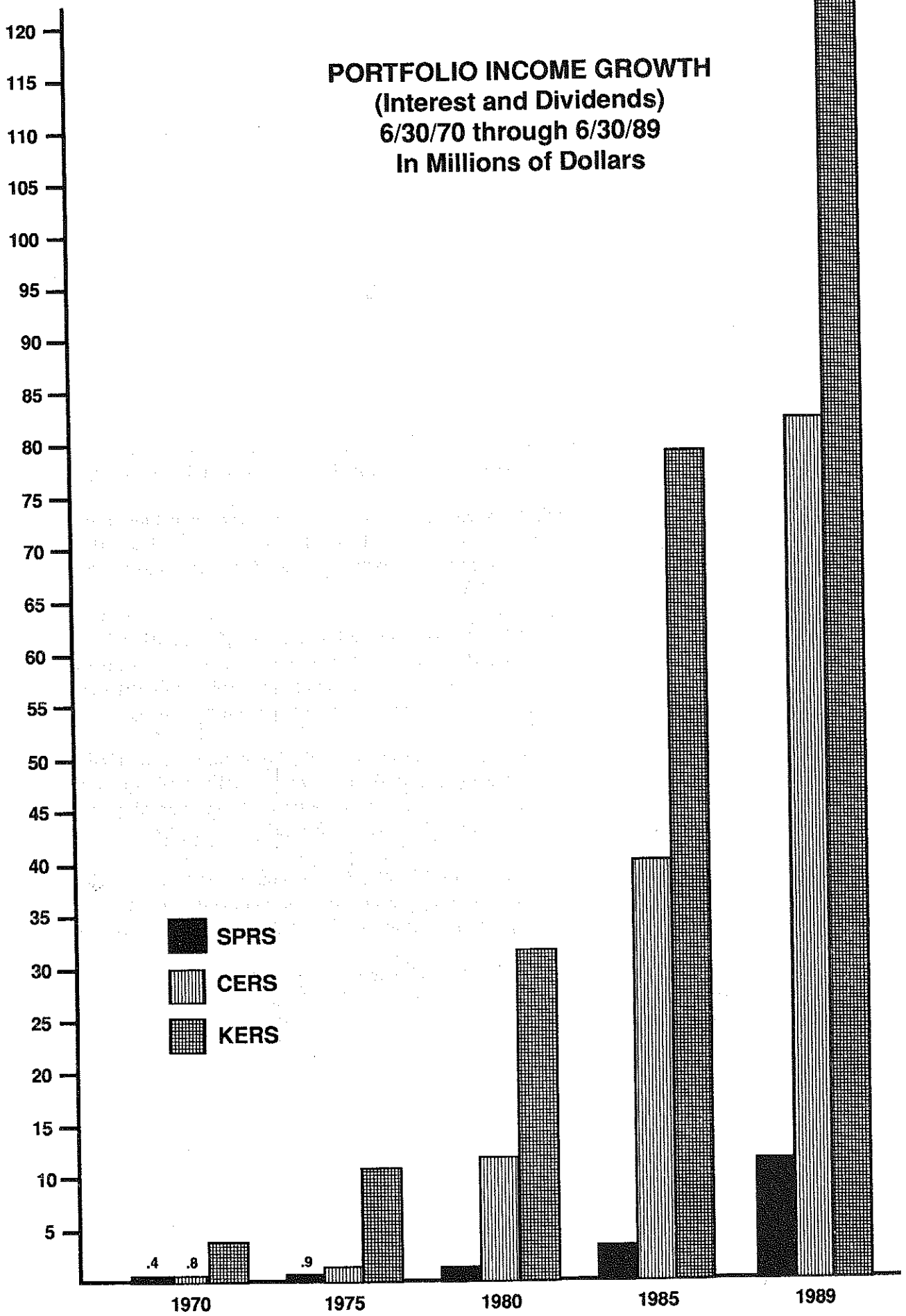
In April 1989, Kentucky Retirement Systems funded \$1,128,536 to complete their \$12,000,000 commitment to Heitman Real Estate Fund III. On May 4, the Fund became fully invested with a portfolio consisting of five shopping centers, six office buildings and three industrial parks.

Heitman Advisory Corporation values its relationship with the Kentucky Retirement Systems and will continue to pursue high grade investments in commercial, income producing properties throughout the coming year.

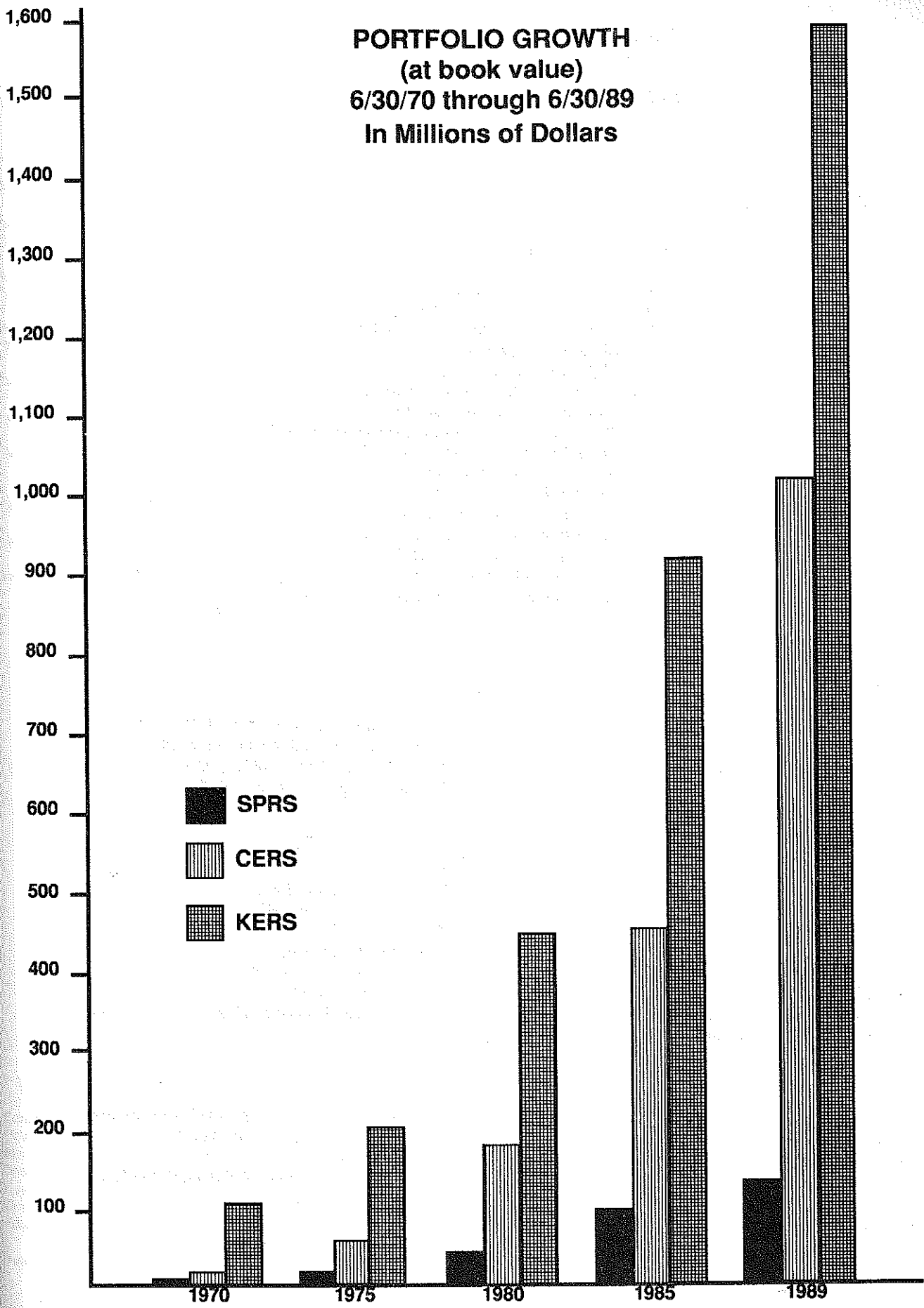
Sincerely,



PORTFOLIO INCOME GROWTH
 (Interest and Dividends)
 6/30/70 through 6/30/89
 In Millions of Dollars



PORTFOLIO GROWTH
(at book value)
6/30/70 through 6/30/89
In Millions of Dollars



REAL ESTATE INVESTMENTS OF KENTUCKY RETIREMENT SYSTEMS

FULLY-OWNED PROPERTIES:

Danville Manor, Danville, KY
Perimeter Park West, Building A, Frankfort, KY
Big Sandy Village, Pikeville, KY
Regency Park Apartments, Louisville, KY
Robinwood Park Apartments, Russellville, KY
Oakwood Apartments, Florence, KY
Riverland Apartments, Hartford, KY
Sycamore Trace Apartments, Carrollton, KY
Mt. Tabor Apartments, Lexington, KY
Hodgenville Landmark Apartments, Hodgenville, KY
Gla Low II Apartments, Ashland, KY
Logan's Trace Apartments, Stanford, KY
Paducah Highland, Paducah, KY
Halley Point Apartments, Harlan, KY
Countyview Apartments, Owensboro, KY
Creekview Apartments, Cloverport, KY
Appalachian Foothills, Glasgow, KY
Watterson Lake View Apartments, Louisville, KY

PROPERTIES PARTICIPATED IN:

Heitman Fund I:

Orlando Industrial Properties, Orlando, FL
Oakwood Mall, Enid, OK
Water Tower Place, Chicago, IL
Towne Mall, Elizabethtown, KY
East Ohio Building, Cleveland, OH

First Bank Place West, Minneapolis, MN
Tri-County Corporate Center, Cincinnati, OH
Villa Marina Center, Marina Del Rey, CA
O'Hare Executive Tower, Rosemont, IL

Heitman Fund II:

ARA Tower, Philadelphia, PA
Rutherford B. Hayes Building, Crystal City, VA
McKinley Mall, Hamburg, NY
Capitol Bank of Commerce, Sacramento, CA
East Towne Mall, Knoxville, TN
Lloyd Center Mall, Portland, OR
Blue Ash Business Properties, Blue Ash, OH
Congressional Place, Long Beach, CA

MN-TX Business Center, Eden Prairie, MN
St. Louis Centre, St. Louis, MO
MIL-HREF Properties, Milwaukee, WI
Valley Bank Building, Reno, NV
Old Capitol Center, Iowa City, IO
Midway Mall, Sherman, TX
MAI Basic Four World Complex Headquarters, Tustin, CA

Heitman Fund III:

Chester A. Arthur Building, Washington, DC
MIW Properties, MN, MI, IL, IN, WI
International Center Phase II, Minneapolis, MN
Officeplex II, Blue Ash, OH
1818 Market Street, Philadelphia, PA
Madison Heights Business Park, Madison Heights/
Troy/Novi, MI

**Towne Square North/Towne Square Mall/University Mall,
Owensboro, KY/Carbondale, IL**
Griffin Towers, Santa Ana, CA
Southern Louisiana Industrial Properties, Baton Rouge/
New Orleans, LA
Columbia Mall, Bloomsburg, PA
Honey Creek Square, Terre Haute, IN

**KENTUCKY RETIREMENT SYSTEMS
PORTFOLIO SUMMARY: 6/30/89
NONHAZARDOUS STATE EMPLOYEES (KERS)**

DESCRIPTION	CORPORATES	GOVERNMENTS	MORTGAGES	SHORT TERM	TOTAL
Par Value	\$167,088,223.74	\$331,771,722.37	\$263,062,630.17	\$411,742,974.58	\$1,173,665,550.86
% of Total Par Value	15%	28%	22%	35%	100%
Book Value	\$167,295,173.26	\$247,580,691.24	\$245,891,402.45	\$411,742,974.58	\$1,072,510,241.53
% of Total Book Value	16%	23%	23%	38%	100%
Market Value	\$172,329,486.47	\$255,712,537.21	\$247,786,550.46	\$411,742,974.58	\$1,087,571,548.72
% of Total Market Value	16%	23%	23%	38%	100%
Potential Gain (Or Loss)	\$ 5,034,313.21	\$ 8,131,845.97	\$ 1,895,148.01	.00	\$ 15,061,307.19
Indicated Annual Income	\$ 16,351,328.69	\$ 22,654,794.06	\$ 22,435,727.05	\$ 39,098,673.45	\$ 100,540,523.25
Current Yield — Book Value	9.77	9.15	9.12	9.50	9.37
— Market Value	9.49	8.86	9.05	9.50	9.24
Yield to Maturity — Mkt Value	8.89	8.30	9.18	9.50	9.00
Average Coupon	9.79	6.83	8.53	9.50	8.57
Average Maturity (Years)	14.75	10.76	21.09	.10	9.91

REAL ESTATE

BOOK VALUE/COST	MARKET VALUE	POTENTIAL GAIN (OR LOSS)	INDICATED INCOME	CURRENT YIELD ON COST	CURRENT YIELD ON MARKET
\$ 46,127,082.40	\$ 55,583,526.30	\$ 9,456,443.90	\$ 3,861,910.36	8.37	6.95

COMMON STOCK

NO. OF SHARES	BOOK VALUE/COST	MARKET VALUE	POTENTIAL GAIN (OR LOSS)	INDICATED DIVIDEND INCOME	CURRENT YIELD ON COST	CURRENT YIELD ON MARKET
13,790,934	\$427,408,957.71	\$593,451,092.44	\$166,042,134.73	\$ 18,729,023.15	4.38	3.16

GROWTH STOCK

NO. OF SHARES	BOOK VALUE/COST	MARKET VALUE	POTENTIAL GAIN (OR LOSS)	INDICATED DIVIDEND INCOME	CURRENT YIELD ON COST	CURRENT YIELD ON MARKET
1,661,034	\$21,627,010.54	\$25,845,689.04	\$4,218,678.50	\$249,155.10	1.15	.96

TOTAL PORTFOLIO

TYPE	BOOK VALUE	PCTAGE OF PORTFOLIO	MARKET VALUE	PCTAGE OF PORTFOLIO	INDICATED INCOME	INDICATED YIELD ON BOOK	INDICATED YIELD ON MARKET
Corporates	\$ 167,295,173.26	11%	\$ 172,329,486.47	10%	\$ 16,351,328.69	9.77	9.49
Governments	\$ 247,580,691.24	16%	\$ 255,712,537.21	15%	\$ 22,654,794.06	9.15	8.86
Mortgages	\$ 245,891,402.45	16%	\$ 247,786,550.46	14%	\$ 22,435,727.05	9.12	9.05
Short Term	\$ 411,742,974.58	28%	\$ 411,742,974.58	23%	\$ 39,098,673.45	9.50	9.50
Real Estate	\$ 46,127,082.40	3%	\$ 55,583,526.30	3%	\$ 3,861,910.36	8.37	6.95
Common Stock	\$ 427,408,957.71	27%	\$ 593,451,092.44	34%	\$ 18,729,023.15	4.38	3.16
Growth Stock	\$ 21,627,010.54	1%	\$ 25,845,689.04	1%	\$ 249,155.10	1.15	.96
Total Portfolio	\$1,567,673,292.18	100%	\$1,762,451,856.50	100%	\$123,380,611.86	7.87	7.00

**KENTUCKY RETIREMENT SYSTEMS
PORTFOLIO SUMMARY: 6/30/89
HAZARDOUS STATE EMPLOYEES (KERS-H)**

DESCRIPTION	CORPORATES	GOVERNMENTS	MORTGAGES	SHORT TERM	TOTAL
Par Value	\$ 2,686,669.41	\$ 4,083,021.56	\$ 2,895,302.08	\$ 6,991,411.58	\$ 16,656,404.63
% of Total Par Value	16%	25%	17%	42%	100%
Book Value	\$ 2,690,541.21	\$ 3,032,666.72	\$ 2,704,669.97	\$ 6,991,411.58	\$ 15,419,289.48
% of Total Book Value	17%	20%	18%	45%	100%
Market Value	\$ 2,771,900.70	\$ 2,972,949.72	\$ 2,727,905.08	\$ 6,991,411.58	\$ 15,464,167.08
% of Total Market Value	18%	19%	18%	45%	100%
Potential Gain (Or Loss)	\$ 81,359.49	\$ -59,717.00	\$ 23,235.11	.00	\$ 44,877.60
Indicated Annual Income	\$ 263,342.03	\$ 277,524.77	\$ 248,526.94	\$ 662,368.00	\$ 1,451,761.74
Current Yield — Book Value	9.79	9.15	9.19	9.47	9.42
— Market Value	9.50	9.33	9.11	9.47	9.39
Yield to Maturity — Mkt Value	8.89	8.28	9.21	9.47	9.04
Average Coupon	9.80	6.80	8.58	9.47	8.72
Average Maturity (Years)	14.76	9.95	21.42	.10	8.59

REAL ESTATE

BOOK VALUE/COST	MARKET VALUE	POTENTIAL GAIN (OR LOSS)	INDICATED INCOME	CURRENT YIELD ON COST	CURRENT YIELD ON MARKET
\$ 751,777.13	\$ 905,623.59	\$ 153,846.46	\$ 62,929.90	8.37	6.95

COMMON STOCK

NO. OF SHARES	BOOK VALUE/COST	MARKET VALUE	POTENTIAL GAIN (OR LOSS)	INDICATED DIVIDEND INCOME	CURRENT YIELD ON COST	CURRENT YIELD ON MARKET
286,435	\$ 8,351,648.71	\$ 11,211,507.02	\$ 2,859,858.31	\$ 277,052.28	3.32	2.47

GROWTH STOCK

NO. OF SHARES	BOOK VALUE/COST	MARKET VALUE	POTENTIAL GAIN (OR LOSS)	INDICATED DIVIDEND INCOME	CURRENT YIELD ON COST	CURRENT YIELD ON MARKET
26,904	\$350,559.33	\$418,626.24	\$ 68,066.91	\$ 4,035.60	1.15	.96

TOTAL PORTFOLIO

TYPE	PCTAGE OF BOOK VALUE PORTFOLIO		PCTAGE OF MARKET VALUE PORTFOLIO		INDICATED INCOME	INDICATED YIELD	
	BOOK VALUE	PORTFOLIO	MARKET VALUE	PORTFOLIO		ON BOOK	ON MARKET
Corporates	\$ 2,690,541.21	11%	\$ 2,771,900.70	10%	\$ 263,342.03	9.79	9.50
Governments	\$ 3,032,666.72	12%	\$ 2,972,949.72	11%	\$ 277,524.77	9.15	9.33
Mortgages	\$ 2,704,669.97	11%	\$ 2,727,905.08	10%	\$ 248,526.94	9.19	9.11
Short Term	\$ 6,991,411.58	28%	\$ 6,991,411.58	25%	\$ 662,368.00	9.47	9.47
Real Estate	\$ 751,777.13	3%	\$ 905,623.59	3%	\$ 62,929.90	8.37	6.95
Common Stock	\$ 8,351,648.71	34%	\$ 11,211,507.02	40%	\$ 277,052.28	3.32	2.47
Growth Stock	\$ 350,559.33	1%	\$ 418,626.24	1%	\$ 4,035.60	1.15	.96
Total Portfolio	\$ 24,873,274.65	100%	\$ 27,999,923.93	100%	\$ 1,795,779.52	7.22	6.41

**KENTUCKY RETIREMENT SYSTEMS
PORTFOLIO SUMMARY: 6/30/89
NONHAZARDOUS COUNTY EMPLOYEES (CERS)**

DESCRIPTION	CORPORATES	GOVERNMENTS	MORTGAGES	SHORT TERM	TOTAL
Par Value	\$ 73,097,208.34	\$171,801,335.44	\$126,119,284.98	\$244,487,302.05	\$615,505,130.81
% of Total Par Value	12%	28%	20%	40%	100%
Book Value	\$ 73,287,493.21	\$129,582,972.43	\$117,873,503.57	\$244,487,302.05	\$565,231,271.26
% of Total Book Value	13%	23%	21%	43%	100%
Market Value	\$ 75,136,562.01	\$133,382,475.43	\$119,637,389.67	\$244,487,302.05	\$572,643,729.16
% of Total Market Value	13%	23%	21%	43%	100%
Potential Gain (Or Loss)	\$ 1,849,068.80	\$ 3,799,503.00	\$ 1,763,886.10	.00	\$ 7,412,457.90
Indicated Annual Income	\$ 7,137,648.47	\$ 11,840,826.30	\$ 10,904,179.88	\$ 23,186,652.22	\$ 53,069,306.87
Current Yield — Book Value	9.74	9.14	9.25	9.48	9.39
— Market Value	9.50	8.88	9.11	9.48	9.27
Yield to Maturity — Mkt Value	8.99	8.30	9.18	9.48	9.03
Average Coupon	9.76	6.89	8.65	9.48	8.62
Average Maturity (Years)	14.83	10.91	21.77	.11	9.31

REAL ESTATE

BOOK VALUE/COST	MARKET VALUE	POTENTIAL GAIN (OR LOSS)	INDICATED INCOME	CURRENT YIELD ON COST	CURRENT YIELD ON MARKET
\$ 24,261,970.93	\$ 28,987,269.70	\$ 4,725,298.77	\$ 2,022,116.13	8.33	6.98

COMMON STOCK

NO. OF SHARES	BOOK VALUE/COST	MARKET VALUE	POTENTIAL GAIN (OR LOSS)	INDICATED DIVIDEND INCOME	CURRENT YIELD ON COST	CURRENT YIELD ON MARKET
6,607,756	\$208,021,550.71	\$277,789,721.70	\$69,768,170.99	\$ 8,599,737.02	4.13	3.10

GROWTH STOCK

NO. OF SHARES	BOOK VALUE/COST	MARKET VALUE	POTENTIAL GAIN (OR LOSS)	INDICATED DIVIDEND INCOME	CURRENT YIELD ON COST	CURRENT YIELD ON MARKET
847,660	\$11,231,172.44	\$13,189,589.60	\$1,958,417.16	\$127,149.00	1.13	.96

TOTAL PORTFOLIO

TYPE	BOOK VALUE	PCTAGE OF PORTFOLIO	MARKET VALUE	PCTAGE OF PORTFOLIO	INDICATED INCOME	INDICATED YIELD ON BOOK	INDICATED YIELD ON MARKET
Corporates	\$ 73,287,493.21	9%	\$ 75,136,562.01	8%	\$ 7,137,648.47	9.74	9.50
Governments	\$ 129,582,972.43	16%	\$ 133,382,475.43	15%	\$11,840,826.30	9.14	8.88
Mortgages	\$ 117,873,503.57	15%	\$ 119,637,389.67	13%	\$10,904,179.88	9.25	9.11
Short Term	\$ 244,487,302.05	30%	\$ 244,487,302.05	27%	\$23,186,652.22	9.48	9.48
Real Estate	\$ 24,261,970.93	3%	\$ 28,987,269.70	3%	\$ 2,022,116.13	8.33	6.98
Common Stock	\$ 208,021,550.71	26%	\$ 277,789,721.70	33%	\$ 8,599,737.02	4.13	3.10
Growth Stock	\$ 11,231,172.44	1%	\$ 13,189,589.60	1%	\$ 127,149.00	1.13	.96
Total Portfolio	\$ 808,745,965.34	100%	\$ 892,610,310.16	100%	\$63,818,309.02	7.89	7.15

**KENTUCKY RETIREMENT SYSTEMS
PORTFOLIO SUMMARY: 6/30/89
HAZARDOUS COUNTY EMPLOYEES (CERS-H)**

DESCRIPTION	CORPORATES	GOVERNMENTS	MORTGAGES	SHORT TERM	TOTAL
Par Value	\$ 15,791,342.41	\$ 28,419,184.58	\$ 23,542,963.88	\$95,833,730.18	\$163,587,221.05
% of Total Par Value	10%	17%	14%	59%	100%
Book Value	\$ 15,827,177.73	\$ 20,832,906.70	\$ 22,003,824.33	\$95,833,730.18	\$154,497,638.94
% of Total Book Value	10%	14%	14%	62%	100%
Market Value	\$ 16,224,261.78	\$ 21,591,818.90	\$ 22,330,866.30	\$95,833,730.18	\$155,980,677.16
% of Total Market Value	10%	14%	14%	62%	100%
Potential Gain (Or Loss)	\$ 397,084.05	\$ 758,912.20	\$ 327,041.97	.00	\$ 1,483,038.22
Indicated Annual Income	\$ 1,540,917.67	\$ 1,902,773.71	\$ 2,037,360.49	\$ 9,073,011.95	\$ 14,554,063.82
Current Yield — Book Value	9.74	9.13	9.26	9.47	9.42
— Market Value	9.50	8.81	9.12	9.47	9.33
Yield to Maturity — Mkt Value	8.99	8.29	9.18	9.47	9.18
Average Coupon	9.76	6.70	8.65	9.47	8.90
Average Maturity (Years)	14.57	11.43	21.82	.09	6.58

REAL ESTATE

BOOK VALUE/COST	MARKET VALUE	POTENTIAL GAIN (OR LOSS)	INDICATED INCOME	CURRENT YIELD ON COST	CURRENT YIELD ON MARKET
\$ 5,117,622.75	\$ 6,111,255.72	\$ 993,632.97	\$ 426,399.91	8.33	6.98

COMMON STOCK

NO. OF SHARES	BOOK VALUE/COST	MARKET VALUE	POTENTIAL GAIN (OR LOSS)	INDICATED DIVIDEND INCOME	CURRENT YIELD ON COST	CURRENT YIELD ON MARKET
1,447,894	\$ 43,365,307.84	\$ 58,333,449.42	\$ 14,968,141.58	\$ 1,627,605.67	3.75	2.79

GROWTH STOCK

NO. OF SHARES	BOOK VALUE/COST	MARKET VALUE	POTENTIAL GAIN (OR LOSS)	INDICATED DIVIDEND INCOME	CURRENT YIELD ON COST	CURRENT YIELD ON MARKET
202,974	\$2,731,050.28	\$3,158,275.44	\$427,225.16	\$30,446.10	1.11	.96

TOTAL PORTFOLIO

TYPE	PCTAGE OF		PCTAGE OF		INDICATED INCOME	INDICATED YIELD	
	BOOK VALUE	PORTFOLIO	MARKET VALUE	PORTFOLIO		ON BOOK	ON MARKET
Corporates	\$ 15,827,177.73	8%	\$ 16,224,261.78	7%	\$ 1,540,917.67	9.74	9.50
Governments	\$ 20,832,906.70	10%	\$ 21,591,818.90	10%	\$ 1,902,773.71	9.13	8.81
Mortgages	\$ 22,003,824.33	11%	\$ 22,330,866.30	10%	\$ 2,037,360.49	9.26	9.12
Short Term	\$ 95,833,730.18	47%	\$ 95,833,730.18	43%	\$ 9,073,011.95	9.47	9.47
Real Estate	\$ 5,117,622.75	2%	\$ 6,111,255.72	3%	\$ 426,399.91	8.33	6.98
Common Stock	\$ 43,365,307.84	21%	\$ 58,333,449.42	26%	\$ 1,627,605.67	3.75	2.79
Growth Stock	\$ 2,731,050.28	1%	\$ 3,158,275.44	1%	\$ 30,446.10	1.11	.96
Total Portfolio	\$ 205,711,619.81	100%	\$ 223,583,657.74	100%	\$16,638,515.50	8.09	7.44

**KENTUCKY RETIREMENT SYSTEMS
PORTFOLIO SUMMARY: 6/30/89
STATE POLICE (SPRS)**

DESCRIPTION	CORPORATES	GOVERNMENTS	MORTGAGES	SHORT TERM	TOTAL
Par Value	\$ 15,325,176.00	\$ 32,315,799.85	\$ 22,168,723.98	\$30,595,881.61	\$100,405,581.44
% of Total Par Value	15%	32%	23%	30%	100%
Book Value	\$ 15,375,194.05	\$ 25,329,801.91	\$ 20,778,582.48	\$30,595,881.61	\$ 92,079,460.05
% of Total Book Value	17%	27%	23%	33%	100%
Market Value	\$ 15,756,699.75	\$ 26,241,374.30	\$ 20,748,009.14	\$30,595,881.61	\$ 93,341,964.80
% of Total Market Value	17%	28%	22%	33%	100%
Potential Gain (Or Loss)	\$ 381,505.70	\$ 911,572.39	\$ -30,573.34	.00	\$ 1,262,504.75
Indicated Annual Income	\$ 1,486,463.21	\$ 2,349,235.44	\$ 1,867,678.45	\$ 2,890,486.96	\$ 8,593,864.06
Current Yield — Book Value	9.67	9.27	8.99	9.45	9.33
— Market Value	9.43	8.95	9.00	9.45	9.21
Yield to Maturity — Mkt Value	9.04	8.27	9.18	9.45	8.95
Average Coupon	9.70	7.27	8.42	9.45	8.56
Average Maturity (Years)	13.49	9.46	20.80	.11	9.73

REAL ESTATE

BOOK VALUE/COST	MARKET VALUE	POTENTIAL GAIN (OR LOSS)	INDICATED INCOME	CURRENT YIELD ON COST	CURRENT YIELD ON MARKET
\$ 3,822,085.08	\$ 4,625,677.35	\$ 803,592.27	\$ 319,846.83	8.37	6.91

COMMON STOCK

NO. OF SHARES	BOOK VALUE/COST	MARKET VALUE	POTENTIAL GAIN (OR LOSS)	INDICATED DIVIDEND INCOME	CURRENT YIELD ON COST	CURRENT YIELD ON MARKET
1,204,088	\$ 36,449,026.94	\$ 51,403,884.04	\$ 14,954,857.10	\$ 1,605,079.47	4.40	3.12

GROWTH STOCK

NO. OF SHARES	BOOK VALUE/COST	MARKET VALUE	POTENTIAL GAIN (OR LOSS)	INDICATED DIVIDEND INCOME	CURRENT YIELD ON COST	CURRENT YIELD ON MARKET
161,491	\$2,073,023.29	\$2,512,799.96	\$439,776.67	\$24,223.65	1.17	.96

TOTAL PORTFOLIO

TYPE	BOOK VALUE	PCTAGE OF PORTFOLIO	MARKET VALUE	PCTAGE OF PORTFOLIO	INDICATED INCOME	INDICATED YIELD ON BOOK	INDICATED YIELD ON MARKET
Corporates	\$ 15,375,194.05	11%	\$ 15,756,699.75	10%	\$ 1,486,463.21	9.67	9.43
Governments	\$ 25,329,801.91	19%	\$ 26,241,374.30	17%	\$ 2,349,235.44	9.27	8.95
Mortgages	\$ 20,778,582.48	15%	\$ 20,748,009.14	14%	\$ 1,867,678.45	8.99	9.00
Short Term	\$ 30,595,881.61	23%	\$ 30,595,881.61	20%	\$ 2,890,486.96	9.45	9.45
Real Estate	\$ 3,822,085.08	3%	\$ 4,625,677.35	3%	\$ 319,846.83	8.37	6.91
Common Stock	\$ 36,449,026.94	27%	\$ 51,403,884.04	34%	\$ 1,605,079.47	4.40	3.12
Growth Stock	\$ 2,073,023.29	2%	\$ 2,512,799.96	2%	\$ 24,223.65	1.17	.96
Total Portfolio	\$ 134,423,595.36	100%	\$ 151,884,326.15	100%	\$10,543,014.01	7.84	6.94

**KENTUCKY RETIREMENT SYSTEMS
PORTFOLIO SUMMARY: 6/30/89
INSURANCE FUND PORTFOLIO**

DESCRIPTION	CORPORATES	GOVERNMENTS	MORTGAGES	SHORT TERM	TOTAL
Par Value	\$8,000,000.00	\$25,515,000.00	\$4,970,855.83	\$6,056,541.33	\$44,542,397.16
% of Total Par Value	18%	57%	11%	14%	100%
Book Value	\$7,958,214.85	\$24,889,976.23	\$4,961,674.11	\$6,056,541.33	\$43,866,406.52
% of Total Book Value	18%	57%	11%	14%	100%
Market Value	\$7,982,462.52	\$25,569,283.05	\$4,650,283.04	\$6,056,541.33	\$44,258,569.94
% of Total Market Value	18%	57%	11%	14%	100%
Potential Gain (Or Loss)	\$ 24,247.67	\$ 679,306.82	\$ -311,391.07	.00	\$ 392,163.42
Indicated Annual Income	\$ 716,812.53	\$ 2,099,243.76	\$ 429,522.74	\$ 578,399.69	\$ 3,823,978.72
Current Yield — Book Value	9.01	8.43	8.66	9.55	8.72
— Market Value	8.98	8.21	9.24	9.55	8.64
Yield to Maturity — Mkt Value	9.23	8.21	9.38	9.55	8.71
Average Coupon	8.96	8.23	8.64	9.55	8.59
Average Maturity (Years)	5.12	6.02	21.53	.08	6.78

TOTAL PORTFOLIO

TYPE	PCTAGE OF BOOK VALUE PORTFOLIO		PCTAGE OF MARKET VALUE PORTFOLIO		INDICATED INCOME	INDICATED YIELD ON BOOK ON MARKET	
	Corporates	\$ 7,958,214.85	18%	\$ 7,982,462.52		18%	\$ 716,812.53
Governments	\$24,889,976.23	57%	\$25,569,283.05	57%	\$2,099,243.76	8.43	8.21
Mortgages	\$ 4,961,674.11	11%	\$ 4,650,283.04	11%	\$ 429,522.74	8.66	9.24
Short Term	\$ 6,056,541.33	14%	\$ 6,056,541.33	14%	\$ 578,399.69	9.55	9.55
Total Portfolio	\$43,866,406.52	100%	\$44,258,569.94	100%	\$3,823,978.72	8.72	8.64

**KENTUCKY RETIREMENT SYSTEMS
PORTFOLIO SUMMARY: 6/30/89
ALL SYSTEMS COMBINED**

DESCRIPTION	CORPORATES	GOVERNMENTS	MORTGAGES	SHORT TERM	TOTAL
Par Value	\$273,988,619.90	\$568,391,063.80	\$437,788,905.09	\$789,651,300.00	\$2,069,819,888.79
% of Total Par Value	13%	27%	22%	38%	100%
Book Value	\$274,475,579.46	\$426,359,039.00	\$409,251,982.80	\$789,651,300.00	\$1,899,737,901.26
% of Total Book Value	14%	22%	22%	42%	100%
Market Value	\$282,218,910.71	\$439,901,155.56	\$413,230,720.65	\$789,651,300.00	\$1,925,002,086.92
% of Total Market Value	15%	23%	21%	41%	100%
Potential Gain (Or Loss)	\$ 7,743,331.25	\$ 13,542,116.56	\$ 3,978,737.85	.00	\$ 25,264,185.66
Indicated Annual Income	\$ 26,779,700.07	\$ 39,025,154.28	\$ 37,493,472.81	\$ 74,911,192.58	\$ 178,209,519.74
Current Yield — Book Value	9.76	9.15	9.16	9.49	9.38
— Market Value	9.49	8.87	9.07	9.49	9.26
Yield to Maturity — Mkt Value	8.93	8.30	9.18	9.49	9.02
Average Coupon	9.77	6.87	8.56	9.49	8.61
Average Maturity (Years)	14.69	10.76	21.32	.10	9.45

REAL ESTATE

BOOK VALUE/COST	MARKET VALUE	POTENTIAL GAIN (OR LOSS)	INDICATED INCOME	CURRENT YIELD ON COST	CURRENT YIELD ON MARKET
\$ 80,080,538.29	\$ 96,213,352.66	\$16,132,814.37	\$ 6,693,203.13	8.36	6.96

COMMON STOCK

NO. OF SHARES	BOOK VALUE/COST	MARKET VALUE	POTENTIAL GAIN (OR LOSS)	INDICATED DIVIDEND INCOME	CURRENT YIELD ON COST	CURRENT YIELD ON MARKET
23,337,107	\$723,596,491.91	\$992,189,654.62	\$268,593,162.71	\$ 30,838,497.59	4.26	3.11

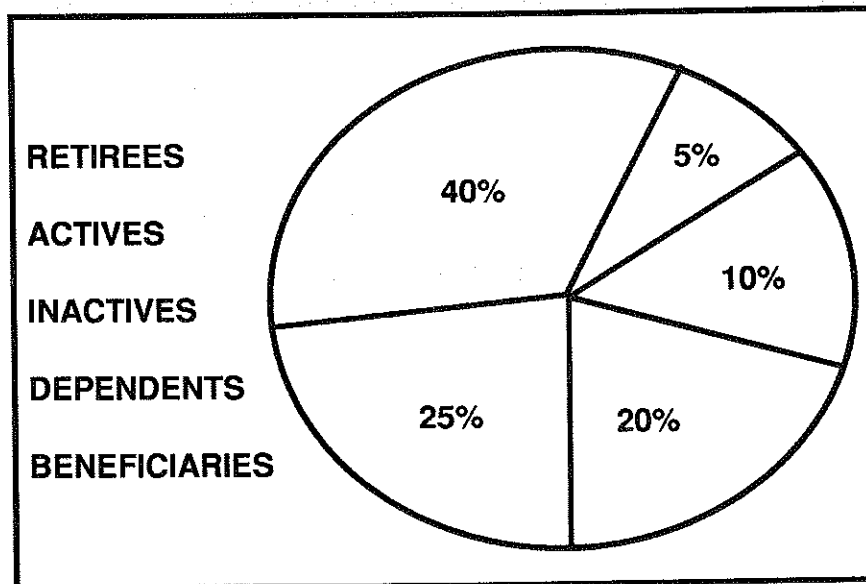
GROWTH STOCK

NO. OF SHARES	BOOK VALUE/COST	MARKET VALUE	POTENTIAL GAIN (OR LOSS)	INDICATED DIVIDEND INCOME	CURRENT YIELD ON COST	CURRENT YIELD ON MARKET
2,900,063	\$38,012,815.88	\$45,124,980.28	\$7,112,164.40	\$435,009.45	1.14	.96

TOTAL PORTFOLIO

TYPE	BOOK VALUE	PCTAGE OF PORTFOLIO	MARKET VALUE	PCTAGE OF PORTFOLIO	INDICATED INCOME	INDICATED YIELD ON BOOK	INDICATED YIELD ON MARKET
Corporates	\$ 274,475,579.46	10%	\$ 282,218,910.71	9%	\$ 26,779,700.07	9.76	9.49
Governments	\$ 426,359,039.00	16%	\$ 439,901,155.56	14%	\$ 39,025,154.28	9.15	8.87
Mortgages	\$ 409,251,982.80	15%	\$ 413,230,720.65	14%	\$ 37,493,472.81	9.16	9.07
Short Term	\$ 789,651,300.00	29%	\$ 789,651,300.00	26%	\$ 74,911,192.58	9.49	9.49
Real Estate	\$ 80,080,538.29	3%	\$ 96,213,352.66	3%	\$ 6,693,203.13	8.36	6.96
Common Stock	\$ 723,596,491.91	26%	\$ 992,189,654.62	33%	\$ 30,838,497.59	4.26	3.11
Growth Stock	\$ 38,012,815.88	1%	\$ 45,124,980.28	1%	\$ 435,009.45	1.14	.96
Total Portfolio	\$2,741,427,747.34	100%	\$3,058,530,074.48	100%	\$216,176,229.91	7.89	7.07

STATISTICAL SECTION



INTRODUCTION TO STATISTICAL SECTION

This section presents statistical information in the form of charts and tables to provide the reader with further data about the Retirement Systems. Some of this information is in the form of charts that graphically illustrate the trends in membership and portfolio growth. All information is presented as of June 30, 1989, though some of the information is inclusive of all activity since the inception of the systems.

RETIREMENT PAYMENTS

The first table shows average monthly benefits being paid based on years of service credit. The next three tables show the benefit payments for each section by the payment option selected by the member or surviving beneficiary. Because of legislation passed in 1974, those members who have accounts in the Kentucky Employees Retirement System, County Employees Retirement System, State Police Retirement System, Legislators Retirement Plan or Kentucky Teachers' Retirement System may have their accounts combined for determining eligibility for benefits and the salary to be used to determine those benefits. However, each system pays a separate benefit based on the service in that system.

For this reason, any particular system may pay only a small amount of the member's total benefit. While these small payments are important to the retiree, they do tend to distort the statistics contained in the tables.

In addition, the monthly benefits shown include all living retirees or beneficiaries who were drawing a payment from the systems. In fact, more than 10,000 recipients are over age 70, and there are hundreds of accounts on which benefits have been paid for more than 20 years. Since benefit factors and salaries were lower years ago, these also contribute to a distortion of the "average" benefit.

The following table shows a comparison by system of the number of retirees and their years of service at the time of retirement.

	SERVICE RANGES IN YEARS/NO. OF RETIREES								
	UNDER 2	2-5	6-10	11-15	16-20	21-25	26-30	31-35	35+
KERS	153	488	3303	3494	2615	2140	1520	1406	755
CGERS	203	608	3363	2354	1326	937	474	309	222
SPRS	10	5	13	13	27	95	148	82	19

The first chart following this introduction shows average monthly benefit payments for these same service ranges. The statistics for those retiring during fiscal year 1988-89 are as follows:

SYSTEM	AVE. FINAL COMP.	AVE. MO. BENE.	% RETIRING WITH YRS. SVC.			
			Under 20	20-25	25-30	30+
KERS	\$24,030	\$1,055.51	35%	19%	19%	29%
CERS	\$17,544	\$ 539.01	66%	19%	9%	6%
SPRS	\$34,670	\$2,020.75	6%	44%	30%	20%

Table 5 presents a county-by-county summary of total retirement payments over the fiscal year. This table gives an indication of the importance of retirees' income to their communities and shows that the majority of our retired members continue to live within the state.

MEMBERSHIP

Table 6 provides a picture of the growth in membership of the three systems. This table clearly shows the continuing growth of the County Employees Retirement System, which has now passed KERS in the numbers of both active and inactive members. Following are the membership totals as of June 30, 1989:

	ACTIVE	INACTIVE	RETIRED
KERS	44,004	9,809	16,530
KERS-Hazardous	587	138	121
CERS	47,592	10,492	9,807
CERS-Hazardous	3,907	129	532
SPRS	912	95	407

FINANCIAL AND ACTUARIAL STATISTICS

Tables 7 through 9 provide a compilation of important information about each system drawn from the financial and actuarial reports. These tables provide a summary of the systems assets and liabilities and show the adequacies of the current contribution rates in funding benefits at current levels.

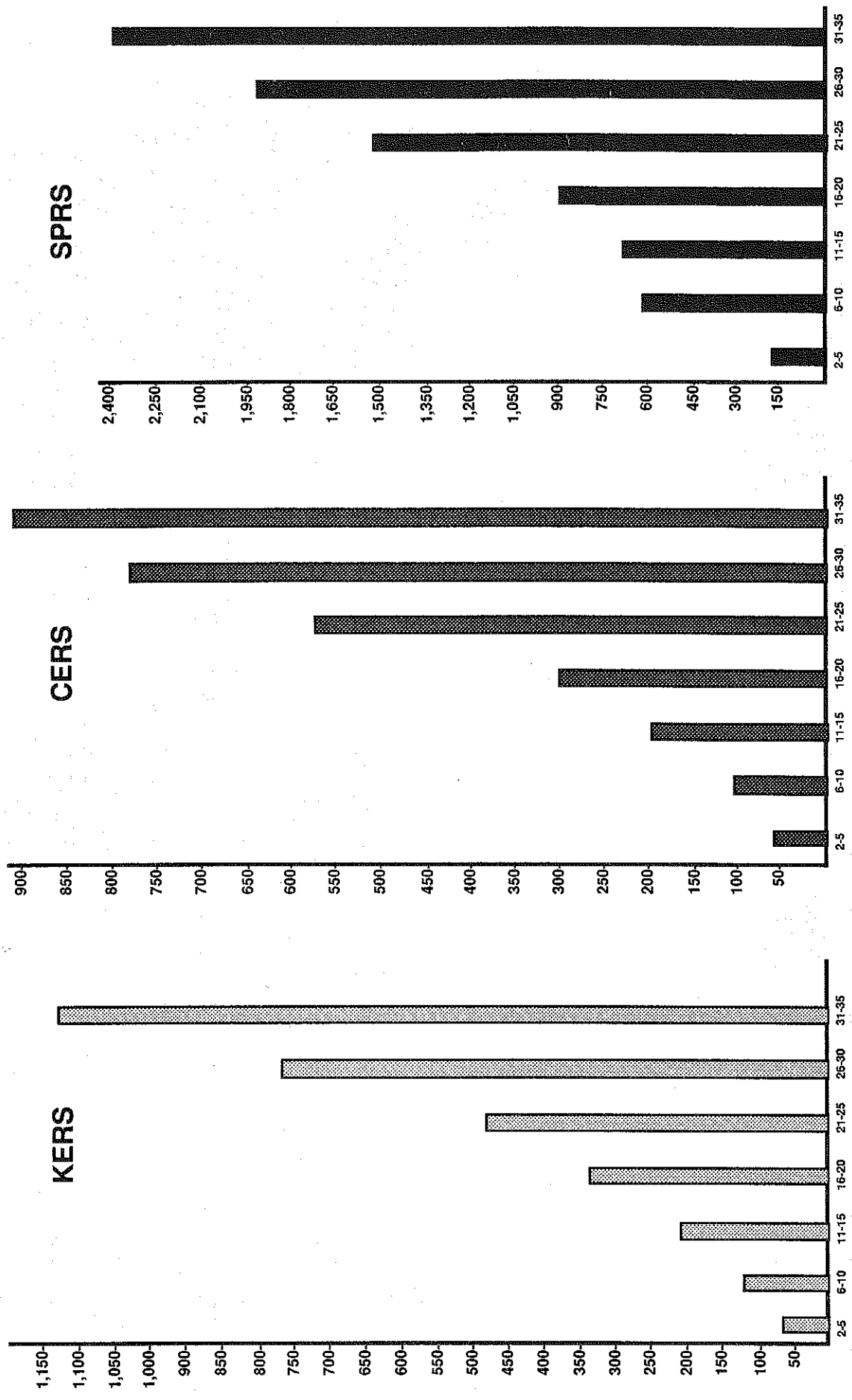
SOURCE AND USE OF FUNDS

Table 10 provides a breakdown of each dollar, its source and where it goes, since the inception of the Retirement Systems.

ADMINISTRATIVE EXPENSE

Finally, Table 11 provides a five-year history of administrative expenses.

TABLE 1
ANALYSIS OF
MONTHLY RETIREMENT BENEFITS
as of June 30, 1989
AVERAGE MONTHLY BENEFIT IN DOLLARS PER YEARS OF SERVICE



YEARS OF SERVICE

TABLE 2
KENTUCKY EMPLOYEES RETIREMENT SYSTEM
RETIREMENT BENEFITS BY PLAN
FOR THE PERIOD ENDING JUNE 30, 1989

	Number Of Cases	Total	Average	Monthly Benefits	
				Low	High
NORMAL					
Basic	2,368	\$ 835,168.85	\$ 352.68	\$ 1.19	\$3,844.00
Straight Life Annuity	3	608.85	202.95	105.83	356.31
Life - 10 Years Certain (Member)	652	224,153.57	343.79	3.50	2,868.03
Life - 10 Years Certain (Beneficiary)	76	22,376.09	294.42	28.62	913.12
10 Years Certain (Member)	4	5,565.54	1,391.38	1,256.28	1,518.69
10 Years Certain (Beneficiary)	3	2,462.63	820.87	91.53	1,262.15
Life - 15 Years Certain (Member)	51	30,440.45	596.87	36.04	3,226.98
Life - 15 Years Certain (Beneficiary)	6	2,324.20	387.36	93.34	546.66
Survivorship 100% (Member)	670	212,446.15	317.08	1.81	2,500.74
Survivorship 100% (Beneficiary)	389	78,811.83	202.60	17.13	1,291.90
Pop-Up Option	65	42,926.23	660.40	69.22	2,711.01
Survivorship 66 2/3% (Member)	192	106,709.60	555.77	6.21	2,776.34
Survivorship 66 2/3% (Beneficiary)	34	8,707.05	256.08	29.26	913.51
Survivorship 50% (Member)	381	202,591.56	531.73	2.97	3,773.13
Survivorship 50% (Beneficiary)	170	37,936.33	222.56	19.68	771.89
Soc. Sec. - Basic (Under 62)	2	2,410.25	1,205.12	1,027.10	1,383.15
Soc. Sec. - Survivorship (Under 62)	2	4,298.06	2,149.03	1,799.56	2,498.50
Soc. Sec. - Survivorship (Over 62)	2	1,995.24	997.62	970.87	1,024.37
TOTALS AND AVERAGES	5,070	\$1,821,832.48	\$ 359.33	\$ 1.19	\$3,844.00
EARLY					
Basic	3,404	\$1,401,623.77	\$ 411.75	\$ 2.05	\$3,512.77
Life - 10 Years Certain (Member)	1,134	429,700.15	378.92	4.68	2,680.65
Life - 10 Years Certain (Beneficiary)	66	25,433.18	385.35	38.73	1,966.46
10 Years Certain (Member)	2	3,541.06	1,770.53	1,559.97	1,981.09
Life - 15 Years Certain (Member)	130	70,456.38	541.97	25.70	2,371.05
Life - 15 Years Certain (Beneficiary)	7	1,612.85	230.40	92.71	848.21
Life - 20 Years Certain (Member)	54	30,411.98	563.18	17.99	2,397.79
Life - 20 Years Certain (Beneficiary)	1	1,777.09	1,777.09	1,777.09	1,777.09
Survivorship 100% (Member)	1,138	450,524.40	395.89	2.43	3,463.16
Survivorship 100% (Beneficiary)	287	75,165.20	261.89	15.26	2,919.57
Pop-Up Option	247	210,911.85	853.89	1.33	3,186.48
Survivorship 66 2/3% (Member)	375	335,107.31	893.61	10.25	3,293.68
Survivorship 66 2/3% (Beneficiary)	48	15,259.96	317.91	9.94	1,267.11
Survivorship 50% (Member)	573	410,147.82	715.79	11.63	3,777.33
Survivorship 50% (Beneficiary)	143	29,641.79	207.28	20.33	948.46
Soc. Sec. - Basic (Under 62)	500	537,414.01	1,074.82	4.72	3,716.58
Soc. Sec. - Survivorship (Under 62)	379	545,643.35	1,439.69	22.67	3,684.01
Soc. Sec. - Survivorship (Over 62)	147	78,379.89	533.19	12.88	1,614.77
Soc. Sec. - Basic (Over 65)	1	172.35	172.35	172.35	172.35
TOTALS AND AVERAGES	8,636	\$4,652,924.39	\$ 538.78	\$ 1.33	\$3,777.33
DISABILITY					
Basic	385	\$ 149,735.36	\$ 388.92	\$ 15.46	\$2,054.38
Life - 10 Years Certain (Member)	173	64,091.26	370.46	10.94	1,255.77
Life - 10 Years Certain (Beneficiary)	86	34,011.19	395.47	30.73	1,336.23
10 Years Certain (Beneficiary)	1	218.00	218.00	218.00	218.00
Life - 15 Years Certain (Member)	20	9,924.29	496.21	171.47	1,072.44
Life - 15 Years Certain (Beneficiary)	12	7,251.02	604.25	282.64	1,135.42
Life - 20 Years Certain (Member)	14	6,026.33	430.45	206.63	836.06
Life - 20 Years Certain (Beneficiary)	7	4,866.14	695.16	258.84	1,127.64
Survivorship 100% (Member)	192	58,609.94	305.26	5.63	2,446.06
Survivorship 100% (Beneficiary)	261	74,272.51	284.56	52.80	1,130.33
Pop-Up Option	26	15,769.25	606.50	15.73	1,505.87
Survivorship 66 2/3% (Member)	33	15,962.31	483.70	94.16	1,436.15
Survivorship 66 2/3% (Beneficiary)	32	7,255.31	226.72	4.43	781.58
Survivorship 50% (Member)	90	34,850.51	387.22	3.15	1,369.95
Survivorship 50% (Beneficiary)	64	11,230.45	175.47	39.58	633.79
Soc. Sec. - Basic (Under 62)	19	14,605.50	768.71	79.22	2,076.07
Soc. Sec. - Survivorship (Under 62)	8	7,214.04	901.75	468.75	1,685.04
Soc. Sec. - Survivorship (Over 62)	5	2,434.73	486.94	289.92	1,005.00
TOTALS AND AVERAGES	1,428	\$ 518,328.14	\$ 362.97	\$ 3.15	\$2,446.06
DEATH BEFORE RETIREMENT					
Basic	1	\$ 330.93	\$ 330.93	\$ 330.93	\$ 330.93
Lump Sum	1	340.24	340.24	340.24	340.24
5 Years Certain	89	54,365.61	610.84	52.73	2,374.32
10 Years Certain	212	92,160.60	434.71	22.04	2,358.86
Survivorship 100%	430	152,449.52	354.53	1.92	2,670.87
Soc. Sec. - Basic (Under 62)	1	251.95	251.95	251.95	251.95
Soc. Sec. - Basic (Over 62)	8	4,871.12	608.89	95.72	1,299.12
Soc. Sec. - Survivorship (Under 60)	5	2,817.84	563.56	53.80	1,085.36
Soc. Sec. - Survivorship (Over 60)	10	2,262.39	226.23	26.83	759.62
TOTALS AND AVERAGES	757	\$ 309,850.20	\$ 409.31	\$ 1.92	\$2,670.87
SYSTEM TOTALS AND AVERAGES	15,891	\$7,302,935.21	\$ 459.56	\$ 1.19	\$3,844.00

TABLE 3
COUNTY EMPLOYEES RETIREMENT SYSTEM
RETIREMENT BENEFITS BY PLAN
FOR THE PERIOD ENDING JUNE 30, 1989

	Number Of Cases	Total	Monthly Benefits		
			Average	Low	High
NORMAL					
Basic	1,761	\$ 360,048.02	\$ 204.45	\$.29	\$3,522.58
Life - 10 Years Certain (Member)	598	121,869.52	203.79	3.96	3,098.93
Life - 10 Years Certain (Beneficiary)	55	11,009.90	200.18	27.76	1,114.43
10 Years Certain (Member)	15	27,680.00	1,845.33	876.45	2,878.75
10 Years Certain (Beneficiary)	2	2,626.31	1,313.15	1,254.44	1,371.87
Life - 15 Years Certain (Member)	44	10,949.10	248.84	26.93	1,070.69
Life - 15 Years Certain (Beneficiary)	5	1,321.16	264.23	55.92	736.32
Life - 20 Years Certain (Member)	1	1,946.30	1,946.30	1,946.30	1,946.30
Survivorship 100% (Member)	582	120,499.95	207.04	4.38	2,214.97
Survivorship 100% (Beneficiary)	215	35,055.88	163.05	15.26	1,431.81
Pop-Up Option	62	26,486.21	427.19	13.00	1,984.02
Survivorship 66 2/3% (Member)	105	51,549.96	490.95	28.40	2,671.01
Survivorship 66 2/3% (Beneficiary)	26	6,476.09	249.08	27.89	597.31
Survivorship 50% (Member)	170	69,652.96	409.72	2.87	2,996.08
Survivorship 50% (Beneficiary)	81	13,013.13	160.65	1.61	746.84
Soc. Sec. - Basic (Under 62)	4	7,984.40	1,996.10	1,548.80	2,569.96
Soc. Sec. - Survivorship (Under 62)	14	23,920.24	1,708.58	1,057.45	2,396.85
Soc. Sec. - Survivorship (Over 62)	12	9,747.57	812.29	542.40	1,493.10
TOTALS AND AVERAGES	3,752	\$ 901,836.70	\$ 240.36	\$.29	\$3,522.58
EARLY					
Basic	2,148	\$ 537,912.59	\$ 250.42	\$ 2.34	\$3,116.59
Life - 10 Years Certain (Member)	832	182,632.79	219.51	3.49	2,327.76
Life - 10 Years Certain (Beneficiary)	54	11,070.03	205.00	4.16	846.87
10 Years Certain (Member)	10	23,413.63	2,341.36	1,049.16	5,253.84
10 Years Certain (Beneficiary)	1	546.88	546.88	546.88	546.88
Life - 15 Years Certain (Member)	105	34,274.57	326.42	28.60	2,854.38
Life - 15 Years Certain (Beneficiary)	4	1,907.36	476.84	130.17	1,338.76
Life - 20 Years Certain (Member)	54	29,470.39	545.74	25.79	2,455.28
Life - 20 Years Certain (Beneficiary)	1	41.50	41.50	41.50	41.50
Survivorship 100% (Member)	677	162,128.67	239.48	5.48	2,137.15
Survivorship 100% (Beneficiary)	147	31,768.74	216.11	6.16	1,447.55
Pop-Up Option	195	137,923.94	707.30	20.11	2,396.70
Survivorship 66 2/3% (Member)	165	104,396.61	632.70	18.40	2,835.56
Survivorship 66 2/3% (Beneficiary)	15	2,528.27	168.55	30.74	707.92
Survivorship 50% (Member)	262	150,607.80	574.83	8.14	2,534.78
Survivorship 50% (Beneficiary)	44	8,768.37	199.28	3.36	603.95
Soc. Sec. - Basic (Under 62)	119	92,785.71	779.71	6.65	2,452.36
Soc. Sec. - Basic (Under 60)	1	262.94	262.94	262.94	262.94
Soc. Sec. - Survivorship (Under 62)	175	212,401.58	1,213.72	20.73	2,557.42
Soc. Sec. - Survivorship (Over 62)	37	11,746.65	317.47	4.88	1,510.14
TOTALS AND AVERAGES	5,046	\$1,736,589.02	\$ 344.15	\$ 2.34	\$5,253.84
DISABILITY					
Basic	256	\$ 83,134.87	\$ 324.74	\$ 4.63	\$1,942.69
Life - 10 Years Certain (Member)	111	32,680.06	294.41	20.27	1,044.36
Life - 10 Years Certain (Beneficiary)	57	15,861.51	278.27	4.90	881.05
10 Years Certain (Member)	1	1,387.60	1,387.60	1,387.60	1,387.60
10 Years Certain (Beneficiary)	1	461.40	461.40	461.40	461.40
Life - 15 Years Certain (Member)	19	6,168.88	324.67	47.69	1,001.70
Life - 15 Years Certain (Beneficiary)	8	2,944.30	368.03	62.14	726.31
Life - 20 Years Certain (Member)	19	5,702.10	300.11	29.69	1,348.10
Life - 20 Years Certain (Beneficiary)	7	4,136.51	590.93	169.09	1,245.28
Survivorship 100% (Member)	126	38,137.42	302.67	22.62	1,120.21
Survivorship 100% (Beneficiary)	106	22,772.03	214.83	27.25	718.55
Pop-Up Option	22	8,840.48	401.84	62.23	1,067.07
Survivorship 66 2/3% (Member)	16	5,319.25	332.45	4.83	1,141.44
Survivorship 66 2/3% (Beneficiary)	9	1,247.56	138.61	53.67	332.37
Survivorship 50% (Member)	43	14,855.51	345.47	71.45	1,104.04
Survivorship 50% (Beneficiary)	27	3,733.41	138.27	37.41	356.46
Soc. Sec. - Basic (Under 62)	3	2,371.84	790.61	600.26	951.91
Soc. Sec. - Survivorship (Under 62)	7	3,910.30	558.61	124.60	880.17
Dependent Child	15	3,545.23	236.34	154.83	684.54
TOTALS AND AVERAGES	853	\$ 257,210.26	\$ 301.53	\$ 4.63	\$1,942.69
DEATH BEFORE RETIREMENT					
5 Years Certain	95	\$ 23,284.78	\$ 245.10	\$ 27.50	\$1,079.26
10 Years Certain	183	45,885.98	250.74	2.89	1,702.91
Survivorship 100%	206	41,737.91	202.61	8.60	1,188.41
Soc. Sec. - Basic (Under 60)	7	4,982.26	708.89	12.00	1,364.85
Soc. Sec. - Survivorship (Over 60)	1	226.24	226.24	226.24	226.24
Dependent Child	2	406.01	203.00	170.56	235.45
TOTALS AND AVERAGES	494	\$ 116,503.18	\$ 235.83	\$ 2.69	\$1,702.91
SYSTEM TOTALS AND AVERAGES	10,145	\$3,012,139.16	\$ 296.90	\$.29	\$5,253.84

TABLE 4
STATE POLICE RETIREMENT SYSTEM
BENEFITS BY PLAN
FOR THE PERIOD ENDING JUNE 30, 1989

	Number Of Cases	Total	Monthly Benefits		
			Average	Low	High
NORMAL					
Basic	11	\$ 11,513.62	\$1,046.69	\$ 62.68	\$2,468.45
Life - 10 Years Certain (Member)	8	15,647.56	1,955.94	997.69	3,853.17
Life - 10 Years Certain (Beneficiary)	1	565.39	565.39	565.39	565.39
10 Years Certain (Member)	16	40,137.42	2,508.58	203.19	4,124.88
10 Years Certain (Beneficiary)	3	8,317.39	2,772.46	1,792.06	3,452.95
Life - 20 Years Certain (Member)	1	2,314.80	2,314.80	2,314.80	2,314.80
Survivorship 100% (Member)	21	29,231.46	1,391.97	139.32	2,796.63
Survivorship 100% (Beneficiary)	4	5,397.53	1,334.38	571.67	2,220.60
Survivorship 66 2/3% (Member)	8	15,594.84	1,949.35	1,092.71	2,673.04
Survivorship 50% (Member)	13	20,721.44	1,593.95	899.03	2,465.08
Survivorship 50% (Beneficiary)	3	1,815.26	605.08	463.57	742.86
Soc. Sec. - Survivorship (Under 62)	12	29,855.19	2,487.93	537.76	3,856.35
Soc. Sec. - Survivorship (Over 62)	6	7,333.65	1,222.27	939.52	1,379.73
TOTALS AND AVERAGES	107	\$188,385.55	\$1,760.61	\$ 62.68	\$4,124.88
EARLY					
Basic	12	\$ 26,250.83	\$2,187.56	\$1,552.54	\$2,880.27
Life - 10 Years Certain (Member)	10	21,064.17	2,106.41	1,519.47	3,106.91
Life - 10 Years Certain (Beneficiary)	1	1,851.00	1,851.00	1,851.00	1,851.00
10 Years Certain (Member)	19	53,719.57	2,827.34	1,675.44	3,684.57
Life - 15 Years Certain (Member)	3	6,523.64	2,174.54	1,247.18	3,276.33
Life - 20 Years Certain (Member)	3	4,783.31	1,594.43	674.04	2,195.21
Survivorship 100% (Member)	31	54,802.27	1,767.81	249.36	3,655.80
Survivorship 100% (Beneficiary)	1	1,811.84	1,811.84	1,811.84	1,811.84
Pop-Up Option	12	19,864.83	1,655.40	1,137.02	3,142.71
Survivorship 66 2/3% (Member)	11	20,100.64	1,827.33	1,340.98	2,981.44
Survivorship 50% (Member)	16	25,871.14	1,616.94	122.14	2,844.67
Soc. Sec. - Basic (Under 62)	16	30,788.60	1,924.28	310.12	2,726.21
Soc. Sec. - Survivorship (Under 62)	103	204,000.49	1,980.58	318.95	3,607.97
TOTALS AND AVERAGES	238	\$471,432.33	\$1,980.80	\$ 122.14	\$3,684.57
DISABILITY					
Basic	4	\$ 3,932.87	\$ 983.21	\$ 753.02	\$1,318.27
Life - 10 Years Certain (Member)	1	1,180.36	1,180.36	1,180.36	1,180.36
10 Years Certain (Member)	4	7,059.21	1,764.80	1,128.62	2,845.92
Life - 15 Years Certain (Member)	1	1,248.45	1,248.45	1,248.45	1,248.45
Life - 20 Years Certain (Member)	2	3,573.01	1,786.50	1,137.99	2,435.02
Survivorship 100% (Member)	7	9,116.08	1,302.29	707.15	2,151.97
Survivorship 100% (Beneficiary)	1	736.62	736.62	736.62	736.62
Survivorship 50% (Member)	1	1,481.21	1,481.21	1,481.21	1,481.21
Soc. Sec. - Survivorship (Under 62)	1	1,881.94	1,881.94	1,881.94	1,881.94
Dependent Child	2	474.35	237.17	205.65	268.70
TOTALS AND AVERAGES	24	\$ 30,684.10	\$1,278.50	\$ 205.65	\$2,845.92
DEATH BEFORE RETIREMENT					
10 Years Certain	3	\$ 5,794.96	\$1,931.65	\$ 858.07	\$3,580.30
Survivorship 100%	11	10,704.77	973.16	215.46	2,010.54
Dependent Child	3	1,301.12	433.70	148.23	929.89
TOTALS AND AVERAGES	17	\$ 17,800.85	\$1,047.10	\$ 148.23	\$3,580.30
DEFERRED	1	\$ 1,015.88	\$1,015.88	\$1,015.88	1,015.88
SYSTEM TOTALS AND AVERAGES	387	\$709,318.71	\$1,832.86	\$ 62.68	\$4,124.88

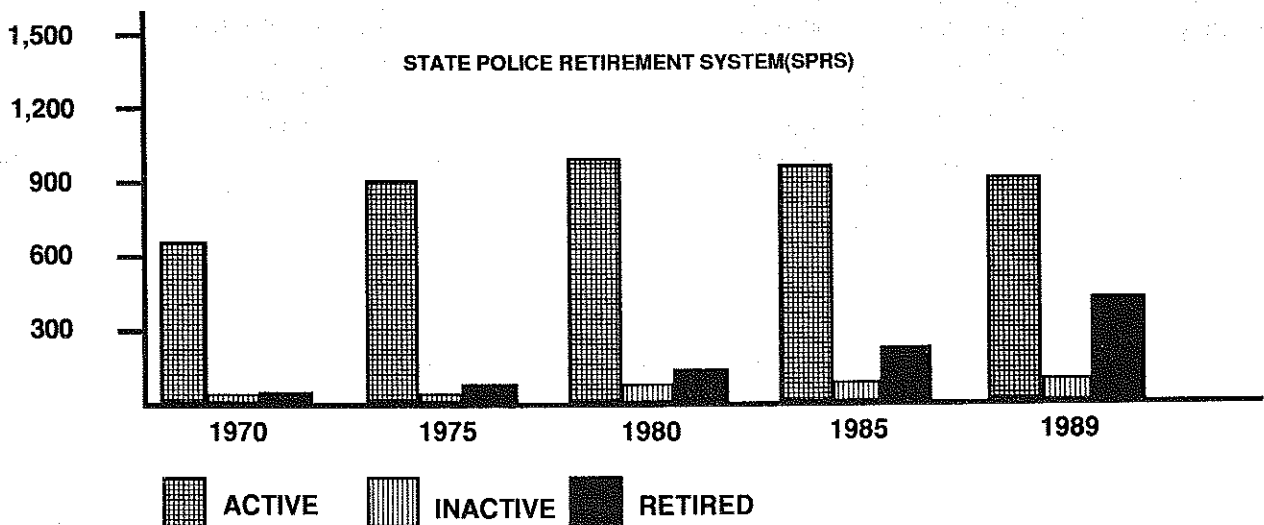
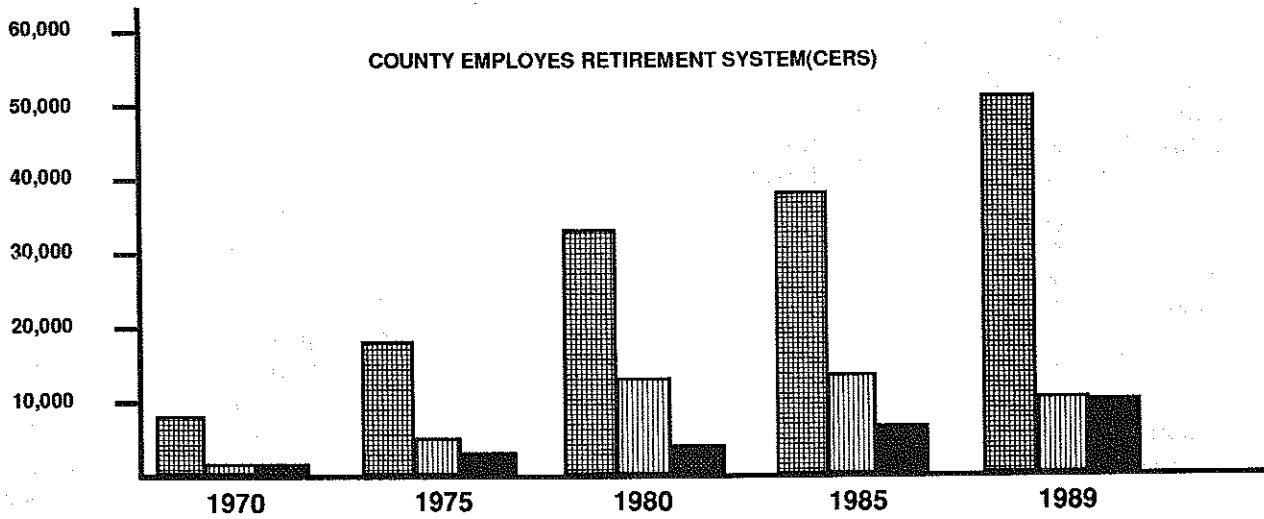
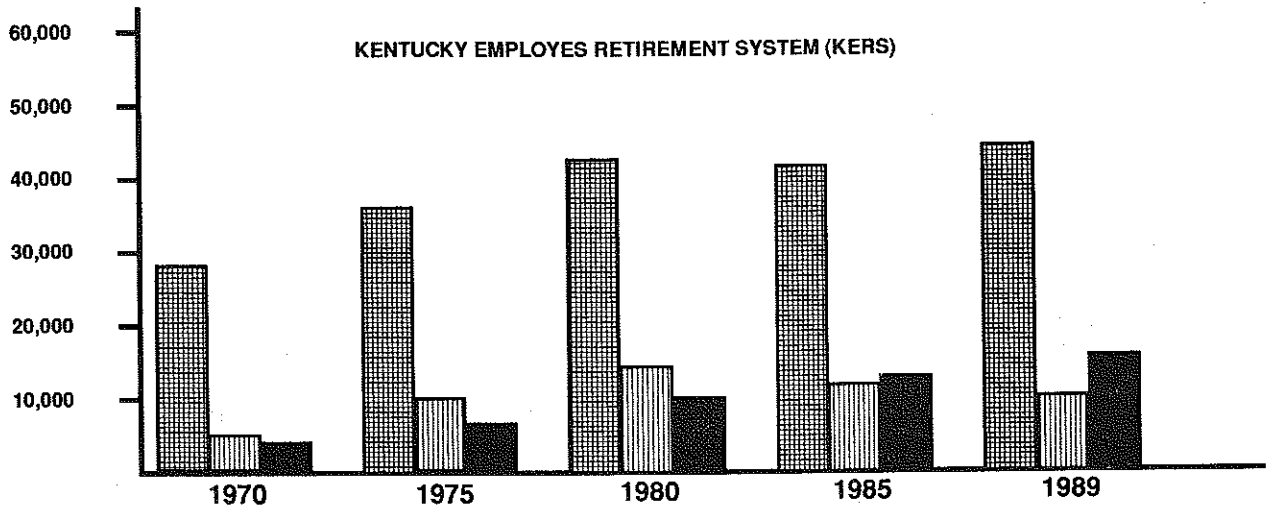
TABLE 5 RETIREMENT PAYMENTS BY COUNTY

Adair	\$ 483,056	Grant	\$ 846,624	Mason	\$ 426,817
Allen	\$ 313,186	Graves	\$ 1,093,661	Meade	\$ 362,772
Anderson	\$ 1,844,497	Grayson	\$ 545,343	Menifee	\$ 199,877
Ballard	\$ 270,950	Green	\$ 279,929	Mercer	\$ 1,100,229
Barren	\$ 1,046,464	Greenup	\$ 372,852	Metcalfe	\$ 391,403
Bath	\$ 547,685	Hancock	\$ 151,161	Monroe	\$ 155,156
Bell	\$ 533,516	Hardin	\$ 1,399,996	Montgomery	\$ 533,544
Boone	\$ 733,736	Harlan	\$ 695,553	Morgan	\$ 366,236
Bourbon	\$ 783,486	Harrison	\$ 515,518	Muhlenberg	\$ 655,182
Boyd	\$ 1,217,909	Hart	\$ 409,059	Nelson	\$ 805,263
Boyle	\$ 1,535,254	Henderson	\$ 1,313,700	Nicholas	\$ 196,152
Bracken	\$ 160,504	Henry	\$ 1,111,963	Ohio	\$ 487,683
Breathitt	\$ 395,890	Hickman	\$ 191,369	Oldham	\$ 1,278,620
Breckinridge	\$ 297,557	Hopkins	\$ 1,827,081	Owen	\$ 1,098,500
Bullitt	\$ 896,070	Jackson	\$ 225,853	Owsley	\$ 188,142
Butler	\$ 316,602	Jefferson	\$22,535,465	Pendleton	\$ 377,113
Caldwell	\$ 621,519	Jessamine	\$ 448,816	Perry	\$ 536,530
Calloway	\$ 1,256,554	Johnson	\$ 626,025	Pike	\$ 1,094,523
Campbell	\$ 1,239,616	Kenton	\$ 2,056,743	Powell	\$ 268,557
Carlisle	\$ 129,788	Knott	\$ 322,714	Pulaski	\$ 2,007,859
Carroll	\$ 324,004	Knox	\$ 447,784	Robertson	\$ 117,045
Carter	\$ 598,648	Larue	\$ 558,433	Rockcastle	\$ 422,015
Casey	\$ 342,980	Laurel	\$ 1,426,076	Rowan	\$ 1,138,426
Christian	\$ 2,510,391	Lawrence	\$ 321,671	Russell	\$ 444,518
Clark	\$ 570,914	Lee	\$ 292,219	Scott	\$ 1,093,593
Clay	\$ 499,510	Leslie	\$ 198,138	Shelby	\$ 2,001,860
Clinton	\$ 179,958	Letcher	\$ 411,148	Simpson	\$ 334,264
Crittenden	\$ 175,616	Lewis	\$ 155,812	Spencer	\$ 375,196
Cumberland	\$ 209,088	Lincoln	\$ 559,798	Taylor	\$ 386,017
Daviess	\$ 2,232,015	Livingston	\$ 423,418	Todd	\$ 458,437
Edmonson	\$ 113,197	Logan	\$ 717,335	Trigg	\$ 537,188
Elliott	\$ 75,598	Lyon	\$ 479,414	Trimble	\$ 385,263
Estill	\$ 359,220	McCracken	\$ 2,293,654	Union	\$ 464,769
Fayette	\$ 6,717,342	McCreary	\$ 261,740	Warren	\$ 3,084,009
Fleming	\$ 511,983	McLean	\$ 342,176	Washington	\$ 332,329
Floyd	\$ 817,992	Madison	\$ 1,443,727	Wayne	\$ 437,453
Franklin	\$19,520,855	Magoffin	\$ 220,706	Webster	\$ 312,274
Fulton	\$ 288,426	Marion	\$ 482,875	Whitley	\$ 897,759
Gallatin	\$ 145,593	Marshall	\$ 975,896	Wolfe	\$ 262,902
Garrard	\$ 445,229	Martin	\$ 176,642	Woodford	\$ 1,163,454

PAYMENTS TO RETIREES LIVING IN OTHER STATES
\$4,693,304

TOTAL PAYMENTS FOR FISCAL YEAR ENDING JUNE 30, 1989
\$132,292,718

TABLE 6
MEMBERSHIP GROWTH
6/30/70 through 6/30/89



ACTIVE
 INACTIVE
 RETIRED

TABLE 7

KENTUCKY EMPLOYEES RETIREMENT SYSTEM
FINANCIAL AND ACTUARIAL STATISTICS

	6/30/85	6/30/86	6/30/87	6/30/88	6/30/89
FINANCIAL STATISTICS					
Total Assets	\$ 935,445,553	\$1,080,387,371	\$1,266,111,911	\$1,428,335,169	\$1,593,913,511
Investment Income	\$ 78,509,704	\$ 84,346,598	\$ 97,094,173	\$ 89,409,521	\$ 120,760,531
Total Retirement Payments	\$ 39,225,080	\$ 43,962,495	\$ 52,414,394	\$ 60,060,355	\$ 80,377,963
Total Refund Payments	\$ 5,171,940	\$ 5,105,361	\$ 5,061,156	\$ 5,860,974	\$ 7,145,907
ACTUARIAL STATISTICS:					
Total Accrued Liability	\$1,104,429,988	\$1,245,083,143	\$1,384,259,808	\$1,561,743,738	\$1,734,607,903
Unfunded Past Service Liability	\$ 169,949,215	\$ 166,635,243	\$ 120,259,389	\$ 135,687,336	\$ 145,998,805
Percent Unfunded	15.4%	13.4%	8.7%	8.7%	8.4%
Vested Accrued Benefit Liability	\$ 639,003,667	\$ 719,695,970	\$ 812,932,915	\$ 914,976,279	\$1,074,546,800
Estimated Annual Salaries	\$ 676,557,336	\$ 713,878,356	\$ 757,822,116	\$ 803,594,136	\$ 822,362,508
Contribution for Unfunded Past Service Liability	\$ 14,445,683	\$ 14,997,172	\$ 10,823,346	\$ 12,211,861	\$ 13,139,894
ACTUARIAL COST-NONHAZARDOUS:					
Normal	3.35%	3.04%	3.05%	3.33%	3.35%
Past Service	2.15%	2.19%	1.47%	1.56%	1.63%
Administrative	.12%	.12%	.16%	.18%	.19%
Hospital/Medical Insurance	.48%	1.23%	1.31%	1.44%	1.59%
Employee Contributions	4.00%	4.00%	5.00%	5.00%	5.00%
TOTAL COST	10.10%	10.52%	10.99%	11.51%	11.76%
CONTRIBUTION RATES-NONHAZARDOUS:					
Member	4.00%	4.00%	5.00%	5.00%	5.00%
Employer	7.25%	7.25%	7.45%	7.45%	*7.45%
TOTAL RATES	11.25%	11.25%	12.45%	12.45%	12.45%
ACTUARIAL COST-HAZARDOUS:					
Normal	9.73%	8.68%	8.62%	9.10%	9.38%
Past Service	.88%	.00%	-1.50%	-1.69%	-5.52%
Administrative	.13%	.10%	.15%	.18%	.07%
Hospital/Medical Insurance	1.09%	4.90%	4.94%	5.31%	5.74%
Employee Contributions	7.00%	7.00%	7.00%	7.00%	7.00%
TOTAL COST	19.11%	20.68%	19.21%	19.90%	21.67%
CONTRIBUTION RATES-HAZARDOUS:					
Member	7.00%	7.00%	7.00%	7.00%	7.00%
Employer	18.25%	14.00%	14.00%	14.00%	*14.00%
TOTAL RATES	25.25%	21.00%	21.00%	21.00%	21.00%

*Budgetary reduction in the amount contributed by State Government resulted in a decrease of .22% in actual contributions received for nonhazardous employees and a decrease of .34% for hazardous employees.

TABLE 8

COUNTY EMPLOYES RETIREMENT SYSTEM
FINANCIAL AND ACTUARIAL STATISTICS

	6/30/85	6/30/86	6/30/87	6/30/88	6/30/89
FINANCIAL STATISTICS:					
Total Assets	\$478,581,183	\$604,622,294	\$728,750,892	\$840,779,847	\$1,085,904,834
Investment Income	\$ 40,147,552	\$ 44,216,104	\$ 54,428,479	\$ 52,252,320	\$ 76,400,250
Total Retirement Payments	\$ 14,843,697	\$ 17,329,099	\$ 18,065,794	\$ 26,982,299	\$ 31,719,667
Total Refund Payments	\$ 3,570,707	\$ 4,974,503	\$ 4,382,655	\$ 4,451,755	\$ 5,208,722
ACTUARIAL STATISTICS:					
Total Accrued Liability	\$463,618,532	\$535,948,094	\$678,442,760	\$829,346,323	\$1,113,868,548
Unfunded Past Service Liability	-0-	-0-	-0-	-0-	\$ 35,815,913
Percent Unfunded	0%	0%	0%	0%	3.2%
Vested Accrued Benefit Liability	\$283,267,091	\$335,463,975	\$412,426,510	\$492,628,502	\$ 728,176,932
Estimated Annual Salaries	\$433,135,800	\$484,796,988	\$544,184,376	\$615,028,632	\$ 686,528,758
Contribution for Unfunded Past Service Liability	-0-	-0-	-0-	-0-	\$ 3,223,433
ACTUARIAL COST-NONHAZARDOUS:					
Normal	3.75%	4.23%	4.20%	4.85%	4.83%
Past Service	.00%	.00%	-.74%	.06%	-.35%
Administrative	.15%	.15%	.18%	.23%	.25%
Hospital/Medical Insurance	.31%	.92%	.95%	1.07%	1.21%
Employee Contributions	4.00%	4.00%	4.25%	4.25%	4.25%
TOTAL COST	8.21%	9.30%	8.84%	10.46%	10.19%
CONTRIBUTION RATES-NONHAZARDOUS:					
Member	4.00%	4.00%	4.25%	4.25%	4.25%
Employer	6.25%	5.25%	5.75%	5.75%	6.35%
TOTAL RATES	10.25%	9.25%	10.00%	10.00%	10.60%
ACTUARIAL COST-HAZARDOUS:					
Normal	9.65%	11.15%	8.92%	9.47%	9.34%
Past Service	.00%	.00%	-1.80%	-2.89%	5.34%
Administrative	.41%	.24%	.53%	.57%	.06%
Hospital/Medical Insurance	.99%	2.36%	3.31%	4.21%	4.65%
Employee Contributions	7.00%	7.00%	7.00%	7.00%	7.00%
TOTAL COST	18.05%	20.75%	17.96%	17.36%	26.39%
CONTRIBUTION RATES-HAZARDOUS:					
Member	7.00%	7.00%	7.00%	7.00%	7.00%
Employer	14.00%	14.00%	14.00%	14.00%	14.00%
TOTAL RATES	21.00%	21.00%	21.00%	21.00%	21.00%

TABLE 9
STATE POLICE RETIREMENT SYSTEM
FINANCIAL AND ACTUARIAL STATISTICS

FINANCIAL STATISTICS:					
Total Assets	6/30/85	6/30/86	6/30/87	6/30/88	6/30/89
Investment Income	\$85,447,410	\$ 96,714,220	\$110,356,994	\$121,168,785	\$131,570,867
Total Retired Payments	\$ 6,993,220	\$ 7,453,314	\$ 8,763,083	\$ 7,520,682	\$ 10,164,070
Total Refund Payments	\$ 3,496,109	\$ 4,366,837	\$ 5,107,017	\$ 5,693,316	\$ 7,742,826
	\$ 180,746	\$ 73,447	\$ 127,181	\$ 108,814	\$ 42,926
ACTUARIAL STATISTICS:					
Total Accrued Liability	\$99,269,825	\$105,559,951	\$111,541,989	\$120,128,367	\$134,550,773
Unfunded Past Service Liability	\$14,253,583	\$ 8,892,252	\$ 1,347,385	-0-	\$ 3,200,220
Percent Unfunded	14.4%	8.4%	1.2%	0%	2.4%
Vested Accrued Benefit Liability	\$76,632,066	\$ 84,495,868	\$ 91,564,168	\$ 98,838,353	\$111,757,322
Estimated Annual Salaries	\$23,393,016	\$ 24,524,652	\$ 23,859,024	\$ 24,014,472	\$ 24,282,216
Contribution for Unfunded Past Service Liability	\$ 1,211,555	\$ 800,303	\$ 121,265	-0-	\$ 288,020
ACTUARIAL COST:					
Normal	9.72%	8.33%	8.37%	8.54%	8.59%
Past Service	5.18%	3.26%	.51%	-.33%	1.19%
Administrative	.07%	.06%	.10%	.13%	.13%
Hospital/Medical Insurance	1.41%	6.38%	7.02%	8.32%	8.92%
Employee Contributions	7.00%	7.00%	7.00%	7.00%	7.00%
TOTAL COST:	23.38%	25.03%	23.00%	23.66%	25.83%
CONTRIBUTION RATES:					
Member	7.00%	7.00%	7.00%	7.00%	7.00%
Employer	18.50%	17.50%	18.25%	18.25%	18.25%
TOTAL RATES	25.50%	24.50%	25.25%	25.25%	*25.25%

*Budgetary reduction in the amount contributed by State Government resulted in a decrease of .24% in actual contributions received.

TABLE 10

KENTUCKY RETIREMENT SYSTEMS
 STATEMENT OF SOURCE AND USE OF FUNDS
 BY SYSTEM SINCE INCEPTION THROUGH JUNE 30, 1989

BREAKDOWN PER DOLLAR				SOURCE OF FUNDS				TOTAL AMOUNTS				
KERS	CERS	SPRS	KERS-H	CERS	KERS	CERS	SPRS	KERS-H	CERS-H	SPRS	KERS-H	CERS-H
\$.24	\$.25	\$.19	\$.24	\$.25	\$ 540,715,029	\$ 275,669,190	\$ 35,474,246	\$ 8,906,415	\$ 67,582,471			
.31	.36	.31	.32	.41	706,325,639	399,850,027	55,889,219	11,589,041	112,263,724			
.37	.31	.42	.38	.27	843,917,973	344,891,619	75,827,038	13,771,764	73,451,937			
.00	.00	.00	.00	.00	1,894,897	187,810	506,100	30,318	39,453			
.00	.01	.00	.00	.02	230,070	5,966,352	-0-	3,741	4,403,697			
.08	.07	.08	.06	.05	183,787,759	75,798,526	14,950,769	2,327,820	13,432,948			
\$1.00	\$1.00	\$1.00	\$1.00	\$1.00	\$2,276,871,367	\$1,102,363,524	\$182,647,372	\$36,629,099	\$271,174,230			
USE OF FUNDS												
.69	.78	.72	.69	.81	\$1,559,260,034	\$ 855,041,966	\$131,054,966	\$25,272,778	\$220,199,024			
.22	.14	.22	.22	.12	507,603,222	155,319,513	40,005,007	7,995,173	32,824,285			
.04	.04	.02	.04	.03	92,416,336	43,698,686	2,268,329	1,489,052	8,772,990			
.04	.04	.04	.04	.03	98,842,060	40,003,402	8,021,270	1,574,935	7,610,503			
.01	.00	.00	.01	.01	15,159,727	8,264,798	668,604	247,507	1,748,586			
.00	.00	.00	.00	.00	3,559,669	35,159	629,196	49,654	18,842			
\$1.00	\$1.00	\$1.00	\$1.00	\$1.00	\$2,276,871,367	\$1,102,363,524	\$182,647,372	\$36,629,099	\$271,174,230			

KERS-H= Hazardous
 CERS-H= Hazardous

TABLE 11
KENTUCKY RETIREMENT SYSTEMS
ADMINISTRATIVE EXPENSE
BY FISCAL YEAR

	1984-85	1985-86	1986-87	1987-88	1988-89
PERSONNEL COSTS:					
Salaries & Fringe Benefits	\$ 839,267.19	\$1,010,272.87	\$1,310,165.87	\$1,525,200.00	\$1,737,917.88
CONTRACTUAL SERVICES:					
Auditor	14,800.00	20,193.00	16,600.00	18,000.00	19,850.00
Actuary	22,000.00	42,028.33	25,000.00	0.00	0.00
Janitorial Services	3,293.88	3,508.94	11,021.00	0.00	6,745.00
Legal Services	6,900.20	11,799.63	18,486.23	33,663.10	44,612.46
Medical	20,532.65	21,377.37	34,485.87	42,997.62	47,903.13
Miscellaneous	5,466.36	2,043.63	4,482.89	455.07	1,170.00
TOTAL	\$ 912,260.28	\$1,111,223.77	\$1,420,241.86	\$1,620,315.79	\$1,856,198.47
OPERATING EXPENSES:					
Postage & Freight	\$ 111,980.93	\$ 136,194.68	\$ 196,610.61	\$ 174,262.18	\$ 228,492.66
Utilities	10,735.85	11,484.54	24,729.70	22,718.39	18,883.87
Telephone	26,120.83	25,813.26	21,930.59	33,238.28	50,861.96
Travel	8,517.41	9,457.76	25,866.52	28,982.99	28,331.08
Printing & Duplicating	50,105.61	47,547.03	47,640.86	58,481.56	57,675.17
Maintenance-Equipment	26,202.58	30,721.20	45,604.13	27,592.71	37,145.04
Maintenance-Bldg. & Grnds.	1,032.15	3,360.63	2,192.06	1,060.98	875.81
Laundry	411.38	506.02	536.72	519.59	672.02
Assessed Car Rental	1,887.86	2,244.08	2,459.61	6,142.87	7,056.87
Supplies-Office	10,879.36	15,574.84	18,231.94	12,739.98	24,925.69
Supplies-Data Processing	19,265.09	14,889.23	31,370.53	24,604.81	26,713.99
Supplies-Janitorial	27.26	27.26	63.70	47.40	0.00
Rental-Building	26,650.00	26,650.00	164,247.96	101,138.68	99,729.05
Rental-Data Processing	45,692.54	23,836.40	.00	2,087.43	6,389.33
Rental-Office Equipment	24,101.20	11,584.89	11,929.50	11,666.45	17,129.34
Insurance	3,004.00	2,906.90	4,347.29	5,255.54	97,101.20
Bonds	1,776.25	677.01	1,776.25	1,776.25	1,776.25
Dues & Subscriptions	3,245.24	3,196.68	7,874.64	4,475.64	3,018.13
Employee Training Expense	1,501.40	1,694.80	2,549.70	4,411.26	6,300.98
Miscellaneous	2,525.99	707.44	2,234.49	5,997.08	8,197.35
Photo Supplies (Micrographics)	.00	.00	36,929.60	3,041.28	1,574.74
Furniture Office Equipment	2,749.82	2,672.17	11,633.02	5,196.58	8,038.86
Lease Purchase Office Equipment	28,263.00	43,649.80	39,394.56	41,590.74	39,342.66
Conference Expenses	675.00	1,189.00	550.00	2,195.00	3,270.00
TOTAL	\$ 407,350.75	\$ 416,585.62	\$ 700,703.98	\$ 579,223.67	\$ 773,502.05
Capital Outlay	\$ 56,962.68	\$ 49,122.50	\$ 262,912.00	\$ 46,451.76	\$ 96,104.15
TOTAL ADMINISTRATIVE EXPENSE	\$1,376,573.71	\$1,576,931.89	\$2,383,857.84	\$2,245,991.22	\$2,727,804.67
DISTRIBUTION OF COST BY SYSTEM					
Kentucky Employees Retirement Syst.	\$ 757,115.54	\$ 804,235.26	\$1,168,090.34	\$1,100,535.70	\$1,309,346.24
County Employees Retirement Syst.	605,692.43	756,927.31	1,191,928.92	1,122,995.61	1,391,180.38
State Police Retirement Syst.	13,765.74	15,769.32	23,838.58	22,459.91	27,278.05
TOTAL	\$1,376,573.71	\$1,576,931.89	\$2,383,857.84	\$2,245,991.22	\$2,727,804.67

