KENTUCKY RETIREMENT SYSTEMS

ANNUAL REPORT
FISCAL YEAR ENDING
JUNE 30, 1990

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

TABLE OF CONTENTS

KENTUCKY RETIREMENT SYSTEMS
Perimeter Park West
1260 Louisville Road
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Kentucky Employees Retirement System
County Employees Retirement System
State Police Retirement System

Pamala S. Johnson
General Manager
Phone 502-564-4646
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MEMORANDUM

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

FROM: Pamala S. Johnson, General Manager

DATE: November 15, 1990

SUBJECT: **Annual Report for Fiscal Year Ending June 30, 1990**

As directed by KRS 61.645, I am pleased to present the Annual Report for the fiscal year ended June 30, 1990. 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
Pamala S. Johnson
General Manager

INTRODUCTION

by

Pamala S. Johnson, General Manager

Members of the Retirement Systems,

This report represents a full and complete disclosure of the financial and actuarial status of the Kentucky Employees Retirement System, County Employees 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 third section consists of copies of the significant pages of the actuarial report compiled by the firm of William M. Mercer, Inc., containing 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 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 1989-90 fiscal year. The following statistical tables present a summary of the actuarial and financial sections. These tables provide a snapshot of the systems. The final table shows administrative expenses.

INVESTMENTS

During the 1989-90 Fiscal Year, the Board of Trustees began the implementation of a revised asset allocation for the retirement systems.

New investment adivsors were selected, diversifying the assets, and the process of transferring assets and funds to these advisors was initiated.

LEGISLATION

The 1990 General Assembly enacted a broad range of retirement legislation, ranging from raises for recipients to changes in administrative procedures. The following are the more significant measures enacted which became effective in the 1990-91 fiscal year.

<u>Raise to Recipients</u>--Each recipient received a 4.5% increase effective August 1, 1990. A raise of 4.5% will also be given to recipients in July of 1991. In addition, a special raise was given in August to retirees or their beneficiaries who began receiving benefits prior to 1982. These recipients received a $2.50 raise on their monthly checks for each year they have drawn benefits.

<u>Benefit Formula Factors</u>--Benefit formula factors were increased for nonhazardous members of the KERS and CERS and for members of SPRS. The KERS benefit factor was increased from 1.91% to 1.97%. The CERS benefit factor was increased from 2.0% to 2.2% and the SPRS benefit factor was increased from 2.41% to 2.50%.

<u>Early Retirement</u>--Nonhazardous members of KERS and CERS saw a reduction in the number of years required for unreduced benefits. These members may now retire at any age without a reduction after 27 years of service.

<u>Sick Leave</u>--KERS members are now permitted to receive retirement credit for all unused sick leave at the time of retirement.

<u>School Employees</u>--Cafeteria workers, secretaries, teachers aides and custodians are now covered by retirement if their employment averages 80 hours per month over the school year. These employees may also purchase credit for prior years that meet the hourly requirement.

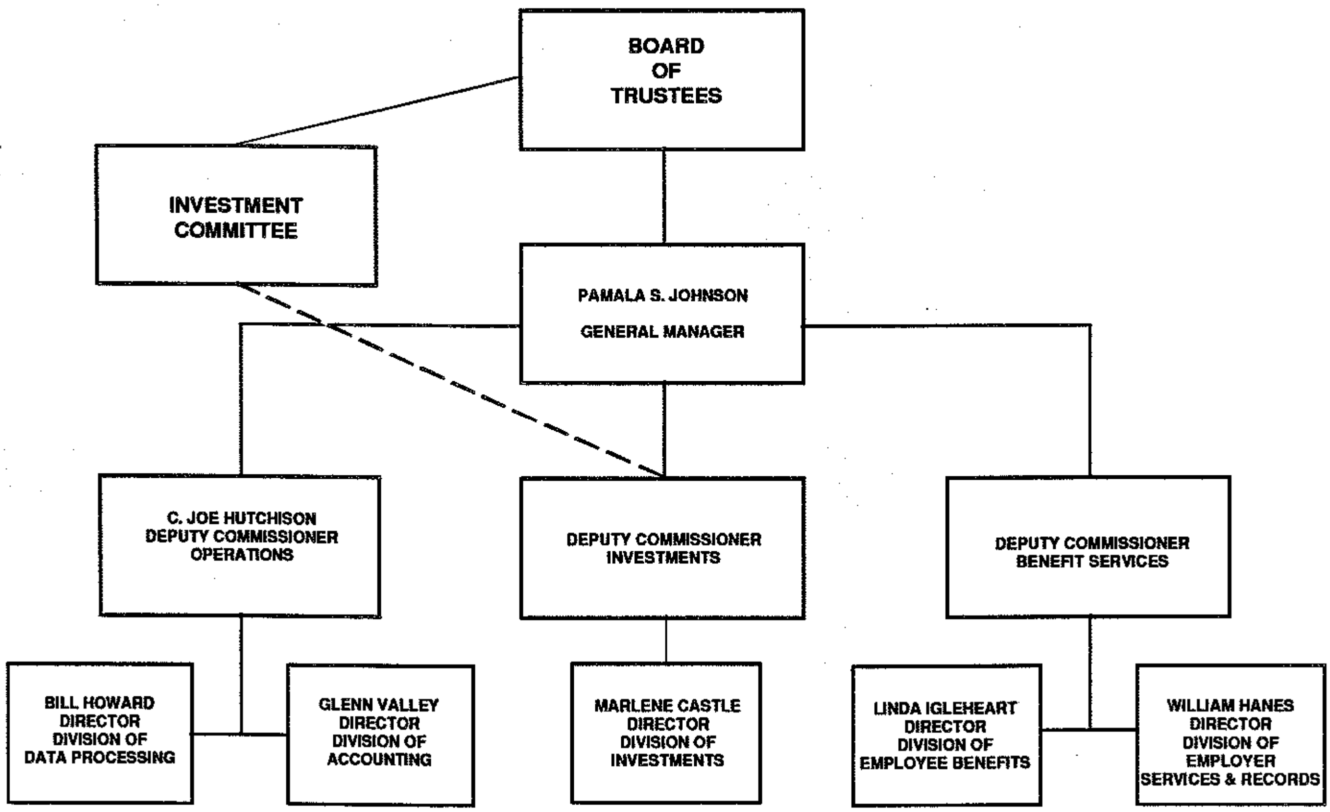
<u>Correctional Employees</u>--Employees working in state correctional institutions were extended coverage under the hazardous retirement provisions effective July 1990.

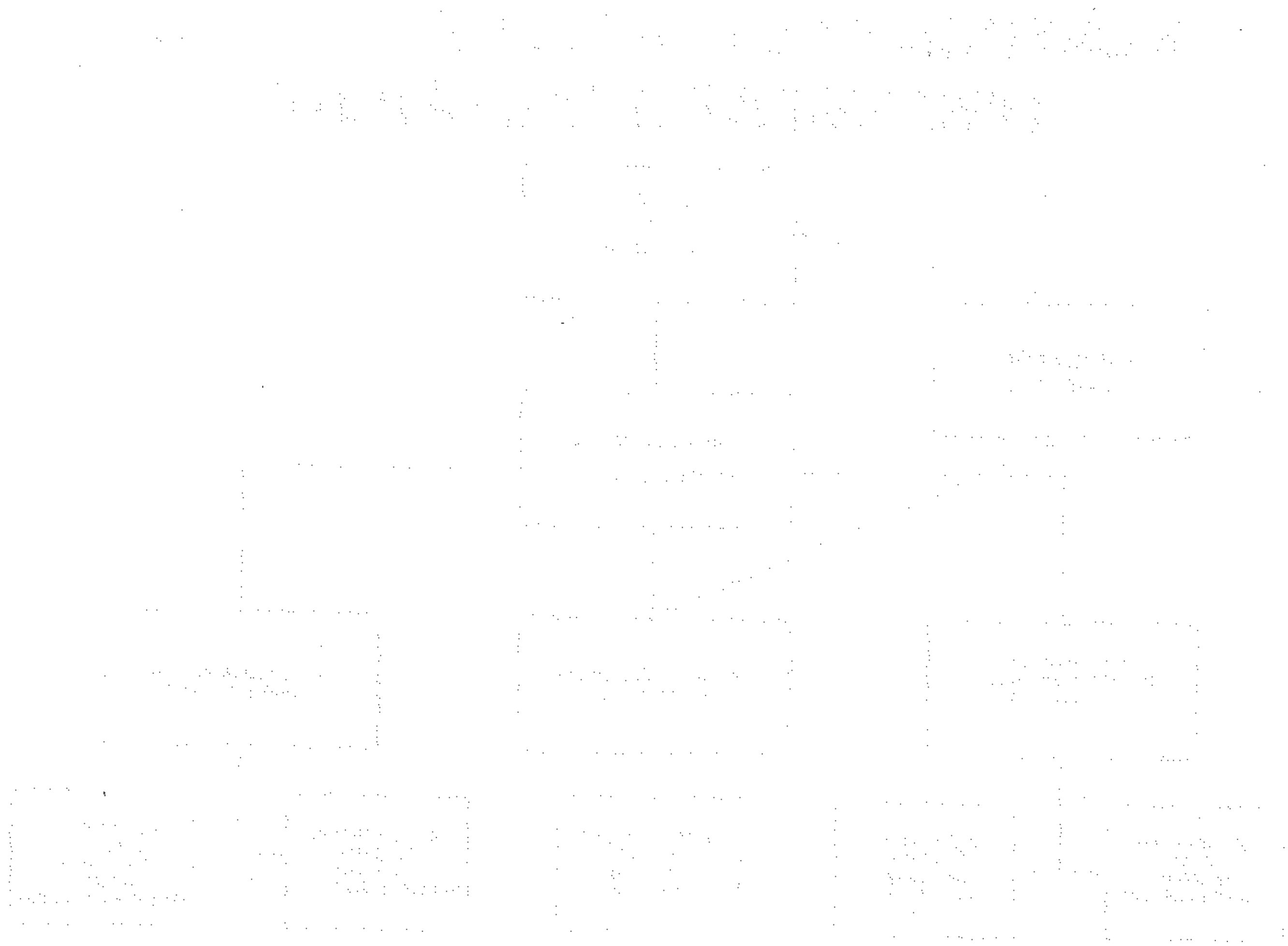
<u>Administration</u>--A formal admistrative hearing procedure was created for members appealing denial of disability benefits.

Investment expenses, as well as the administrative expenses of the systems, will now be subject to the biennial budget process, requiring legislative approval.

BOARD OF TRUSTEES

KENTUCKY RETIREMENT SYSTEMS ORGANIZATIONAL CHART





CONTRACTUAL ARRANGEMENTS

ACTUARIAL SERVICES:
William M. Mercer
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
326 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 Asset Planning, Inc.
10 South Wacker Drive
Chicago, IL 60606

INVESTMENT COUNSELORS:
Heitman Advisory Corp.
180 North LaSalle Street
Suite 3600
Chicago, IL 60601

Investment Counselors of Maryland
803 Cathedral Street
Baltimore, MD 21201

Investment Advisors, Inc.
1100 Dain Tower
P.O. Box 357
Minneapolis, MN 55440

T. Rowe Price Associates, Inc.
100 East Pratt Street
Baltimore, MD 21202

National Asset Management Corp.
101 South Fifth Street
Louisville, KY 40202

The Yarmouth Group, Inc.
Swiss Bank Tower
10 East 50th Street
New York, NY 10022

TCW Realty Advisors
400 South Hope Street
Los Angeles, CA 90071

FINANCIAL SECTION

REVENUES:
Employer Contributions
Investment Income
Investment Gain
Balances Transferred
TOTAL REVENUES

EXPENSES:
Retirement Benefits
Insurance Payments
Interest Credited on Accounts
Administrative Expense
Investment Expenses
TOTAL EXPENSES

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 $3.2 billion as of June 30, 1990, an increase of 14% 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, 1990, 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 EMPLOYEES RETIREMENT SYSTEM
COUNTY EMPLOYEES RETIREMENT SYSTEM
STATE POLICE RETIREMENT SYSTEM
KENTUCKY RETIREMENT SYSTEMS INSURANCE FUND

AUDITED FINANCIAL STATEMENTS
YEARS ENDED JUNE 30, 1990 AND 1989

Eskew&Gresham

Board of Trustees
Kentucky Retirement Systems
Frankfort, Kentucky

We have audited the balance sheets of the Kentucky Employees Retirement System, County Employees Retirement System, State Police Retirement System and Kentucky Retirement Systems Insurance Fund as of June 30, 1990 and 1989, and the related statements of revenues, expenses and changes in members' contribution account and retirement allowance account of the Kentucky Employees Retirement System, County Employees Retirement System and the State Police Retirement System and the statements of revenues, expenses and changes in fund balance 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 audits to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Kentucky Employees Retirement System, County Employees Retirement System, State Police Retirement System and Kentucky Retirement Systems Insurance Fund at June 30, 1990 and 1989, and the results of their operations, the changes in members' contribution account and retirement allowance account of the Kentucky Employees Retirement System, County Employees Retirement System and State Police Retirement System, and the changes in fund balance of the Kentucky Retirement Systems Insurance Fund for the years then ended, in conformity with generally accepted accounting principles.

September 21, 1990

Eskew & Gresham, PSC

Eskew & Gresham, PSC Certified Public Accountants 2500 Meidinger Tower Louisville, Kentucky 40202 (502) 584-2500

KENTUCKY EMPLOYEES RETIREMENT SYSTEM
BALANCE SHEETS

	June 30 1990	June 30 1989
ASSETS		
Investments (Note 7):		
United States Government securities	$ 304,656,052	$ 237,792,242
Government National Mortgage Association and similar securities	143,146,743	242,736,631
Corporate bonds and notes	142,128,569	165,192,698
Convertible bonds	941,922	871,569
Common stocks	724,097,226	457,738,176
First mortgage real estate loans	2,441,842	3,109,624
Real estate investment trust	69,574,505	46,878,860
Securities purchased under agreement to resell	389,922,931	416,152,906
	$1,776,909,790	$1,570,472,706
Cash on deposit with State Treasurer	86,608	239,568
Member and employer contributions receivable	10,757,325	8,356,547
Accrued investment income	15,282,493	14,832,185
Other assets	15,287	12,505
	$1,803,051,503	$1,593,913,511
LIABILITIES AND FUND BALANCE		
Member refunds, insurance fund transfers and investment expenses payable	$ 3,729,765	$ 5,304,413
Fund balance:		
Members' Contribution Account	$ 361,738,121	$ 318,369,041
Retirement Allowance Account	1,437,583,617	1,270,240,057
	$1,799,321,738	$1,588,609,098
	$1,803,051,503	$1,593,913,511

See notes to financial statements.

KENTUCKY EMPLOYEES RETIREMENT SYSTEM
STATEMENTS OF REVENUES, EXPENSES AND CHANGES
IN MEMBERS' CONTRIBUTION ACCOUNT

	Year Ended June 30 1990	1989
Revenues:		
Member contributions	$ 45,270,305	$ 43,642,903
Interest credited to members' balances transferred from Retirement Allowance Account	12,286,706	10,721,503
Total revenues	$ 57,557,011	$ 54,364,406
Expenses:		
Refunds to former members	$ 5,896,851	$ 7,145,907
Retired members' balances transferred to Retirement Allowance Account	8,291,080	38,032,141
Total expenses	$ 14,187,931	$ 45,178,048
Excess of revenues over expenses	$ 43,369,080	$ 9,186,358
Members' Contribution Account at beginning of year	318,369,041	309,182,683
Members' Contribution Account at end of year	$361,738,121	$318,369,041

See notes to financial statements.

KENTUCKY EMPLOYEES RETIREMENT SYSTEM
STATEMENTS OF REVENUES, EXPENSES AND CHANGES
IN RETIREMENT ALLOWANCE ACCOUNT

	Year Ended June 30 1990	1989
Revenues:		
Employer contributions	$ 68,593,246	$ 78,673,797
Investment income	126,895,778	120,760,531
Net realized gain on disposal of investments	82,681,267	20,922,372
Retirement members' balances transferred from Members' Contribution Account	8,291,080	38,032,141
Total revenues	$ 286,461,371	$ 258,388,841
Expenses:		
Retirement benefits for members	$ 90,420,645	$ 80,377,963
Contributions transferred to the Kentucky Retirement Systems Insurance Fund	14,510,920	12,261,924
Interest credited to members' balances transferred to Members' Contribution Account	12,286,706	10,721,503
Administrative expenses	1,459,398	1,345,174
Investment expenses	440,142	315,939
Total expenses	$ 119,117,811	$ 105,022,503
Excess of revenues over expenses	$ 167,343,560	$ 153,366,338
Retirement Allowance Account at beginning of year	1,270,240,057	1,116,873,719
Retirement Allowance Account at end of year	$1,437,583,617	$1,270,240,057

See notes to financial statements.

KENTUCKY EMPLOYES RETIREMENT SYSTEM
NOTES TO FINANCIAL STATEMENTS
YEARS ENDED JUNE 30, 1990 AND 1989

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

A. Basis of Presentation - The financial statements of Kentucky 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.

D. Expense Allocation - The System, County 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.

NOTE 2 - DESCRIPTION OF THE PLAN

The Kentucky Employees 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 283 at June 30, 1990.

NOTE 2 - DESCRIPTION OF THE PLAN (CONTINUED)

For the years ended June 30, 1990 and 1989, 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:

	1990	1989
Retirees and beneficiaries currently receiving benefits and terminated employees entitled to benefits but not yet receiving them:		
Non-hazardous positions	25,622	25,012
Hazardous positions	280	243
Total	25,902	25,255
Current employees:		
Vested:		
Non-hazardous positions	27,622	26,587
Hazardous positions	326	622
Nonvested:		
Non-hazardous positions	17,229	17,153
Hazardous positions	275	1
Total	45,452	44,363

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.

	1990	1989
Vested benefits:		
Participants currently receiving payments	$ 852,732,707	$ 729,486,545
Other participants	429,028,918	324,210,074
	$1,281,761,625	$1,053,696,619
Non-vested benefits	127,433,860	94,169,162
Total accumulated plan benefits	$1,409,195,485	$1,147,865,781

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	-	1983 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 1989 experience study

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	- 6 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 1990 and 1989 was determined as part of an actuarial valuation at June 30, 1990 and 1989, respectively. The significant actuarial assumptions are the same as those used for the accumulated plan benefits computations for those years.

The unfunded (funds in excess of) pension benefit obligation were $70,061,661 and $(21,685,920) at June 30, 1990 and 1989, respectively.

	1990	1989
Pension benefit obligation:		
Retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	$ 852,732,707	$ 729,486,545
Current members -		
Accumulated employee contributions and credited interest	341,194,364	301,612,058
Employer-financed vested	647,452,102	511,218,737
Employer-financed nonvested	28,004,226	24,605,838
Total pension benefit obligation	$1,869,383,399	$1,566,923,178
Net assets available for benefits, at cost	1,799,321,738	1,588,609,098
Unfunded (funds in excess of) pension benefit obligation	$ 70,061,661	$ (21,685,920)

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 $97,719,240 ($56,519,868 employer and $41,199,372 employee) for the years ended June 30, 1990 and $93,257,787 ($53,053,294 employer and $40,204,493 employee) for the year ended June 30, 1989 were determined through an actuarial valuation performed at June 30, 1989 and 1988, respectively. These contributions were to consist of: (a) $69,467,953 for 1990 and $67,588,428 for 1989 normal cost; (b) $13,139,894 for 1990 and $12,211,861 for 1989 amortization of the unfunded actuarial accrued liability; (c) $1,523,808 for 1990 and $1,459,536 for 1989 administrative expenses; and (d) $13,587,585 for 1990 and $11,997,962 for 1989 group hospital and medical insurance premiums. For 1990, contributions received totaled $113,863,551 of which the employer portion was $68,593,246 (7.45% of the covered payroll for non-hazardous positions and 14% for hazardous positions) and the employee portion was $45,270,305 (5% of the covered payroll for non-hazardous positions and 7% for hazardous positions). 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 employee portion was $43,642,903 (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 was effected by returning a portion of employer contributions and the Commonwealth's General Fund. The amount of the reduction was allocated between the Kentucky Employees Retirement System and the State Police Retirement System based upon each system's relative percentage of covered payroll. This resulted in the Kentucky Employees Retirement System returning $1,394,375 and $1,743,000 of employer contributions to the General Fund of the Commonwealth of Kentucky for the years ended June 30, 1990 and 1989, respectively.

The Appropriations Act of 1990 enacted by the 1990 General Assembly reversed the 1988 General Assembly by acting to return the funds appropriated from the systems with interest added thereon. Effective June 30, 1990, the System received $3,543,708 of the appropriations which had been withheld over the past two years.

NOTE 6 - SEVEN-YEAR HISTORICAL TREND INFORMATION

Seven-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) Unfunded (Funds in Excess of) Pension Benefit Obligation (2) - (1)	(5) Annual Covered Payroll	(6) 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)	757,822,116	N/A
1988	1,426,056,402	1,400,013,802	101.9	(26,042,600)	803,594,136	N/A
1989	1,588,609,098	1,566,923,178	101.4	(21,685,920)	822,362,508	N/A
1990	1,799,321,738	1,869,383,399	96.3	70,061,661	869,109,220	8.1

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: Employee Contributions	Employer Contributions	Investment Income	Other Income	Total
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
1990	45,270,305	68,593,246	126,895,778	82,681,267	323,440,596

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

	Expenses by Type					
Fiscal Year	Benefit Payments	Administrative Expenses	Refunds	Other Expenses	Contributions Transferred to Insurance Fund	Total
1984	$35,467,174	$ 623,177	$4,686,153	$197,994	$ 1,880,023	$ 42,854,52[illegible]
1985	39,225,080	722,085	5,171,940	249,975	3,122,176	48,491,25[illegible]
1986	43,962,495	838,804	5,105,361	279,607	3,477,505	53,663,77[illegible]
1987	52,414,394	1,235,905	5,061,156	272,111	9,644,592	68,628,15[illegible]
1988	60,060,355	1,122,416	5,860,974	334,270	10,911,143	78,289,15[illegible]
1989	80,377,963	1,345,174	7,145,907	315,939	12,261,924	101,446,90[illegible]
1990	90,420,645	1,459,398	5,896,851	440,142	14,510,920	112,727,95[illegible]

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 Revised 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 issued 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.

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, 1990. 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, 1990				June 30, 1989
	Category		Carrying	Market	Market
	1	2	Amount	Value	Value
United States Government securities	$ 4,302,764	$ 300,353,288	$ 304,656,052	$ 308,596,000	$ 245,518,000
Government National Mortgage Association and similar securities	33,105,442	110,041,301	143,146,743	148,096,000	245,145,000
Corporate bonds and notes	26,087,214	116,041,355	142,128,569	143,430,000	170,340,000
Common stocks	-	724,097,226	724,097,226	884,678,000	630,927,000
Securities purchased under agreement to resell	-	389,922,931	389,922,931	389,923,000	416,153,000
	$63,495,420	$1,640,456,101	$1,703,951,521	$1,874,723,000	$1,708,083,000
Convertible bonds			941,922	912,000	836,000
First mortgage real estate loans			2,441,842	2,412,000	2,912,000
Real estate investment trust			69,574,505	80,475,000	56,489,000
Total Investments			$1,776,909,790	$1,958,522,000	$1,768,320,000

Investments at June 30, 1990, 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 Kentucky Employes 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 Employes Retirement System was 1.59% and 1.44% for non-hazardous and 5.74% and 5.31% for hazardous positions for the years ended June 30, 1990 and 1989, respectively.

NOTE 10 - RISKS OF LOSS

The System is exposed to various risks of loss related to torts; thefts of, damage to, and destruction of assets; errors and omissions; injuries to employees; and natural disasters. Under the provisions of the Kentucky Revised Statutes, the Kentucky Board of Claims is vested with full power and authority to investigate, hear proof, and to compensate persons for damages sustained to either person or property as a result of negligence of the agency or any of its employees. Awards are limited to $100,000 for a single claim and $250,000 in aggregate per occurrence. Awards and a pro rata share of the operating cost of the Board of Claims are paid from the fund of the agency having a claim or claims before the Board.

Claims made against the Board of Trustees of Kentucky Retirement Systems or any of its staff as a result of actual or alleged breach of fiduciary duty are insured with a commercial insurance policy. Coverage provided is limited to $3,000,000 per policy with a deductible amount of $25,000. Defense costs incurred in defending such claims will be paid by the insurance company. However, the total defense cost and claims paid shall not exceed the total aggregate coverage of the policy.

Loss of office furniture and equipment other than computer equipment is insured through the State Fire and Tornado Insurance Fund. That fund provides fire, extended coverage, vandalism, and malicious mischief protection. Coverage is written for 100% of the actual cash value of scheduled equipment less a deductible in the amount of $250. Losses sustained from causes other than those covered by the State Fire and Tornado Insurance Fund are insured under an inland marine policy purchased from a commercial insurance company.

NOTE 10 - RISKS OF LOSS (CONTINUED)

Scheduled computer equipment and magnetic media is insured by a commercial insurance policy. This is an all-risk policy written on a replacement cost basis. It covers the perils of flood, earthquake, and mechanical breakdown in addition to other risks that could result in the loss of this equipment.

Claims for job-related illnesses or injuries to employees are insured by the state's self-insured workers' compensation program. Payments approved by the program are not subject to maximum limitations. A claimant may receive reimbursement of all medical expenses related to the illness or injury and up to sixty-six and two-thirds percent (66 2/3%) of wages for temporary disability. Each agency pays premiums based on three years' claims experience and number of covered employees. Claims experience is weighted seventy percent (70%) and number of employees is weighted thirty percent (30%). Expectations of current and future obligations are also factored into the premium calculation.

Only claims pertaining to workers' compensation have been filed during the past three fiscal years. All major claims have been denied. There were seven claims which were appealed to the Kentucky Workers' Compensation Board which were settled during the year with no liability accruing to the System.

COUNTY EMPLOYEES RETIREMENT SYSTEM

COUNTY EMPLOYEES RETIREMENT SYSTEM
BALANCE SHEETS

	June 30 1990	June 30 1989
ASSETS		
Investments (Note 7):		
United States Government securities	$ 202,647,085	$ 140,834,335
Government National Mortgage Association and similar securities	82,534,737	137,569,093
Corporate bonds and notes	74,294,842	85,533,897
Convertible bonds	456,244	422,166
Common stocks	516,084,853	265,349,082
First mortgage real estate loans	292,029	349,041
Real estate investment trust	44,554,750	29,379,594
Securities purchased under agreement to resell	274,717,537	337,406,104
	$1,195,582,077	$ 996,843,312
Cash on deposit with State Treasurer	91,948	254,486
Member and employer contributions receivable	10,698,258	13,433,230
Past service credit contribution receivable	58,189,845	66,533,639
Accrued investment income	9,484,087	8,826,881
Other assets	17,647	13,286
	$1,274,063,862	$1,085,904,834
LIABILITIES AND FUND BALANCE		
Member refunds, insurance fund transfers and investment expenses payable	$ 3,997,595	$ 7,852,198
Fund balance:		
Members' Contribution Account	$ 254,282,752	$ 225,193,010
Retirement Allowance Account	1,015,783,515	852,859,626
	$1,270,066,267	$1,078,052,636
	$1,274,063,862	$1,085,904,834

See notes to financial statements.

COUNTY EMPLOYEES RETIREMENT SYSTEM
STATEMENTS OF REVENUES, EXPENSES AND CHANGES
IN MEMBERS' CONTRIBUTION ACCOUNT

	Year Ended June 30 1990	1989
Revenues:		
Member contributions	$ 41,650,282	$ 63,609,817
Interest credited to members' balances transferred from Retirement Allowance Account	8,279,504	6,668,871
Total revenues	$ 49,929,786	$ 70,278,688
Expenses:		
Refunds to former members	$ 6,346,247	$ 5,208,722
Retired members' balances transferred to Retirement Allowance Account	14,493,797	17,403,017
Total expenses	$ 20,840,044	$ 22,611,739
Excess of revenues over expenses	$ 29,089,742	$ 47,666,949
Members' Contribution Account at beginning of year	225,193,010	177,526,061
Members' Contribution Account at end of year	$254,282,752	$225,193,010

See notes to financial statements.

COUNTY EMPLOYEES RETIREMENT SYSTEM
STATEMENTS OF REVENUES, EXPENSES AND CHANGES
IN RETIREMENT ALLOWANCE ACCOUNT

	Year Ended June 30 1990	1989
Revenues:		
Employer contributions	$ 80,658,140	$140,659,744
Investment income	86,852,951	76,400,250
Net realized gain on disposal of investments	45,450,457	6,466,883
Retirement members' balances transferred from Members' Contribution Account	14,493,797	17,403,017
Total revenues	$ 227,455,345	$240,929,894
Expenses:		
Retirement benefits for members	$ 41,158,196	$ 31,719,667
Contributions transferred to the Kentucky Retirement Systems Insurance Fund	13,054,106	10,131,427
Interest credited to members' balances transferred to Members' Contribution Account	8,279,504	6,668,871
Administrative expenses	1,551,164	1,420,006
Investment expenses	488,486	183,132
Total expenses	$ 64,531,456	$ 50,123,103
Excess of revenues over expenses	$ 162,923,889	$190,806,791
Retirement Allowance Account at beginning of year	852,859,626	662,052,835
Retirement Allowance Account at end of year	$1,015,783,515	$852,859,626

See notes to financial statements.

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.

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, 1990, the number of participating local government employers was:

Boards of Education	176
County agencies	180
City agencies	138
Libraries	69
Other	267
Total	830

For the years ended June 30, 1990 and 1989, 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, 1989. 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:

	1990	1989
Retirees and beneficiaries currently receiving benefits and terminated employees entitled to benefits but not yet receiving them:		
Non-hazardous positions	21,295	19,667
Hazardous positions	929	697
Total	22,224	20,364

NOTE 2 - DESCRIPTION OF THE PLAN (CONTINUED)

	1990	1989
Current employees:		
Vested:		
Non-hazardous positions	24,756	24,054
Hazardous positions	2,592	2,441
Nonvested:		
Non-hazardous positions	23,814	23,149
Hazardous positions	1,866	1,461
Total	53,028	51,105

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.

NOTE 3 - ACCUMULATED BENEFITS (CONTINUED)

Accumulated plan benefit information follows:

	June 30 1990	June 30 1989
Vested benefits:		
Participants currently receiving payments	$435,942,284	$320,814,106
Other participants	379,941,521	283,117,906
	$815,883,805	$603,932,012
Non-vested benefits	131,999,165	104,013,480
Total accumulated plan benefits	$947,882,970	$707,945,492

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	- 1983 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 1989 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	- 6 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.

NOTE 4 - FUNDING STATUS AND PROGRESS (CONTINUED)

The pension benefit obligation for 1990 and 1989 was determined as part of an actuarial valuation at June 30, 1990 and 1989, respectively. The significant actuarial assumptions are the same as those used for the accumulated plan benefits computations for those years.

The unfunded (funds in excess of) pension benefit obligation were \$29,153,595 and \$(69,210,146) at June 30, 1990 and 1989, respectively.

	1990	1989
Pension benefit obligation:		
Retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	\$ 435,942,284	\$ 320,814,106
Current members -		
Accumulated employee contributions and credited interest	242,006,912	216,056,348
Employer-financed vested	571,893,807	435,891,838
Employer-financed nonvested	49,376,859	36,080,197
Total pension benefit obligation	\$1,299,219,862	\$1,008,842,489
Net assets available for benefits, at cost	1,270,066,267	1,078,052,635
Unfunded (funds in excess of) pension benefit obligation	\$ 29,153,595	\$ (69,210,146)

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.

NOTE 5 - CONTRIBUTIONS REQUIRED AND CONTRIBUTIONS MADE (CONTINUED)

Actuarially determined contribution requirements of $90,206,215 ($56,902,021 employer and $33,304,194 employee) for the years ended June 30, 1990 and $67,410,275 ($40,350,685 employer and $27,059,590 employee) for the year ended June 30, 1989 were determined through an actuarial valuation performed at June 30, 1989 and 1988, respectively. These contributions were to consist of: (a) $73,047,371 for 1990 and $58,850,265 for 1989 normal cost; (b) $3,223,433 for 1990 and $(920,931) for 1989 amortization of the unfunded actuarial accrued liability; (c) $1,619,046 for 1990 and $1,550,757 for 1989 administrative expenses; and (d) $12,316,365 for 1990 and $7,930,184 for 1989 group hospital and medical insurance premiums. For 1990, contributions received totaled $122,308,422 of which the employer portion was $80,658,140 (6.35% of the covered payroll for non-hazardous positions and 14% for hazardous positions) and the employee portion was $41,650,282 (4.25% of the covered payroll for non-hazardous positions and 7% for hazardous positions). 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).

NOTE 6 - SEVEN-YEAR HISTORICAL TREND INFORMATION

Seven-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) Unfunded (Funds in Excess of) Pension Benefit Obligation (2) - (1)	(5) Annual Covered Payroll	(6) 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
1990	1,270,066,267	1,299,219,862	97.8	29,153,595	790,407,492	3.7%

NOTE 6 - SEVEN-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.

	Revenues by Source				
Fiscal Year	Employee Contributions	Employer Contributions	Investment Income	Other Income	Total
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
1990	41,650,282	80,658,140	86,852,951	45,450,457	254,611,830

	Expenses by Type					
Fiscal Year	Benefit Payments	Administrative Expenses	Refunds	Other Expenses	Contributions Transferred to Insurance Fund	Total
1984	$13,066,260	$ 561,747	$3,331,153	$ 96,104	$ 667,073	$17,722,[illegible]
1985	14,843,697	650,073	3,570,707	124,145	1,297,765	20,486,[illegible]
1986	17,329,099	750,409	4,974,503	141,858	1,541,564	24,737,[illegible]
1987	18,065,794	1,116,914	4,382,655	148,337	5,285,103	28,998,[illegible]
1988	26,982,299	1,135,267	4,451,755	189,618	6,441,538	39,200,[illegible]
1989	31,719,667	1,420,006	5,208,722	183,132	10,131,427	48,662,[illegible]
1990	41,158,196	1,551,164	6,346,247	488,486	13,054,106	62,598,[illegible]

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 Revised 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 issued 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.

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, 1990. 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, 1990				June 30, 1989
	Category 1	Category 2	Carrying Amount	Market Value	Market Value
United States Government securities	$ 1,926,611	$ 200,720,474	$ 202,647,085	$ 204,445,000	$ 145,140,000
Government National Mortgage Association and similar securities	23,527,835	59,006,902	82,534,737	85,994,000	139,804,000
Corporate bonds and notes	10,350,139	63,944,703	74,294,842	74,451,000	87,781,000
Common stocks	-	516,084,853	516,084,853	600,305,000	352,471,000
Securities purchased under agreement to resell	-	274,717,537	274,717,537	274,718,000	337,406,000
	$35,804,585	$1,114,474,469	$1,150,279,054	$1,239,913,000	$1,062,602,000
Convertible bonds			456,244	442,000	405,000
First mortgage real estate loans			292,029	288,000	331,000
Real estate investment trust			44,554,750	51,065,000	35,098,000
Total Investments			$1,195,582,077	$1,291,708,000	$1,098,436,000

Investments at June 30, 1990, 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 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 1.21% and 1.07% for non-hazardous and 4.65% and 4.21% for hazardous positions for the years ended June 30, 1990 and 1989, respectively.

NOTE 10 - RISKS OF LOSS

The System is exposed to various risks of loss related to torts; thefts of, damage to, and destruction of assets; errors and omissions; injuries to employees; and natural disasters. Under the provisions of the Kentucky Revised Statutes, the Kentucky Board of Claims is vested with full power and authority to investigate, hear proof, and to compensate persons for damages sustained to either person or property as a result of negligence of the agency or any of its employees. Awards are limited to $100,000 for a single claim and $250,000 in aggregate per occurrence. Awards and a pro rata share of the operating cost of the Board of Claims are paid from the fund of the agency having a claim or claims before the Board.

Claims made against the Board of Trustees of Kentucky Retirement Systems or any of its staff as a result of actual or alleged breach of fiduciary duty are insured with a commercial insurance policy. Coverage provided is limited to $3,000,000 per policy with a deductible amount of $25,000. Defense costs incurred in defending such claims will be paid by the insurance company. However, the total defense cost and claims paid shall not exceed the total aggregate coverage of the policy.

Loss of office furniture and equipment other than computer equipment is insured through the State Fire and Tornado Insurance Fund. That fund provides fire, extended coverage, vandalism, and malicious mischief protection. Coverage is written for 100% of the actual cash value of scheduled equipment less a deductible in the amount of $250. Losses sustained from causes other than those covered by the State Fire and Tornado Insurance Fund are insured under an inland marine policy purchased from a commercial insurance company.

Scheduled computer equipment and magnetic media is insured by a commercial insurance policy. This is an all-risk policy written on a replacement cost basis. It covers the perils of flood, earthquake, and mechanical breakdown in addition to other risks that could result in the loss of this equipment.

Claims for job-related illnesses or injuries to employees are insured by the state's self-insured workers' compensation program. Payments approved by the program are not subject to maximum limitations. A claimant may receive reimbursement of all medical expenses related to the illness or injury and up to sixty-six and two-thirds percent (66 2/3%) of wages for temporary disability. Each agency pays premiums based on three years' claims experience and number of covered employees. Claims experience is weighted seventy percent (70%) and number of employees is weighted thirty percent (30%). Expectations of current and future obligations are also factored into the premium calculation.

NOTE 10 - RISKS OF LOSS (CONTINUED)

Only claims pertaining to workers' compensation have been filed during the past three fiscal years. All major claims have been denied. There were seven claims which were appealed to the Kentucky Workers' Compensation Board which were settled during the year with no liability accruing to the System.

STATE POLICE RETIREMENT SYSTEM

STATE POLICE RETIREMENT SYSTEM
BALANCE SHEETS

	June 30 1990	1989
ASSETS		
Investments (Note 7):		
United States Government securities	$ 27,831,082	$ 22,842,485
Government National Mortgage Association and similar securities	12,230,618	20,208,538
Corporate bonds and notes	12,992,482	14,428,943
Convertible bonds	73,588	68,091
Common stocks	53,771,820	38,522,050
First mortgage real estate loans	130,419	183,447
Real estate investment trust	5,670,665	3,822,085
Securities purchased under agreement to resell	30,942,492	30,041,994
	$143,643,166	$130,117,633
Cash on deposit with State Treasurer	1,803	4,990
Member and employer contributions receivable	350,482	258,392
Accrued investment income	1,317,561	1,189,592
Other assets	299	260
	$145,313,311	$131,570,867
LIABILITIES AND FUND BALANCE		
Member refunds, insurance fund transfers and investment expenses payable	$ 287,760	$ 220,314
Fund balance:		
Members' Contribution Account	$ 21,695,121	$ 19,496,659
Retirement Allowance Account	123,330,430	111,853,894
	$145,025,551	$131,350,553
	$145,313,311	$131,570,867

See notes to financial statements.

STATE POLICE RETIREMENT SYSTEM
STATEMENTS OF REVENUES, EXPENSES AND CHANGES
IN MEMBERS' CONTRIBUTION ACCOUNT

	Year Ended June 30 1990	1989
Revenues:		
Member contributions	$ 2,040,017	$ 1,994,453
Interest credited to members' balances transferred from Retirement Allowance Account	761,728	683,200
Total revenues	$ 2,801,745	$ 2,677,653
Expenses:		
Refunds to former members	$ 69,128	$ 42,926
Retired members' balances transferred to Retirement Allowance Account	534,155	4,532,435
Total expenses	$ 603,283	$ 4,575,361
Excess (deficiency) of revenues over expenses	$ 2,198,462	$(1,897,708)
Members' Contribution Account at beginning of year	19,496,659	21,394,367
Members' Contribution Account at end of year	$21,695,121	$19,496,659

See notes to financial statements.

STATE POLICE RETIREMENT SYSTEM
STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN RETIREMENT ALLOWANCE ACCOUNT

	Year Ended June 30 1990	1989
Revenues:		
Employer contributions	$ 4,655,297	$ 6,596,928
Investment income	10,411,631	10,164,070
Net realized gain on disposal of investments	7,498,946	1,550,779
Retirement members' balances transferred from Members' Contribution Account	534,155	4,532,435
Total revenues	$ 23,100,029	$ 22,844,212
Expenses:		
Retirement benefits for members	$ 8,504,914	$ 7,742,826
Contributions transferred to the Kentucky Retirement Systems Insurance Fund	2,303,306	2,113,127
Interest credited to members' balances transferred to Members' Contribution Account	761,728	683,200
Administrative expenses	30,397	28,418
Investment expenses	23,148	26,929
Total expenses	$ 11,623,493	$ 10,594,500
Excess of revenues over expenses	$ 11,476,536	$ 12,249,712
Retirement Allowance Account at beginning of year	111,853,894	99,604,182
Retirement Allowance Account at end of year	$123,330,430	$111,853,894

See notes to financial statements.

STATE POLICE RETIREMENT SYSTEM
NOTES TO FINANCIAL STATEMENTS
YEARS ENDED JUNE 30, 1990 AND 1989

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 Employees Retirement System, and County Employees 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, 1990 and 1989, the employer contributed 18.25% of members' compensation.

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:

	1990	1989
Retirees and beneficiaries currently receiving benefits and terminated employees entitled to benefits but not yet receiving them	512	486
Current employees:		
Vested	734	688
Nonvested	230	204
Total	964	892

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, 1990 AND 1989
(CONTINUED)

NOTE 3 - ACCUMULATED BENEFITS (CONTINUED)

Accumulated plan benefit information follows:

	June 30 1990	1989
Vested benefits:		
Participants currently receiving payments	$ 79,650,994	$ 70,425,803
Other participants	28,149,029	21,293,699
	$107,800,023	$ 91,719,502
Non-vested benefits	16,059,534	12,762,619
Total accumulated plan benefits	$123,859,557	$104,482,121

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	- 1983 Group Annuity Mortality Table, plus a pre-retirement duty death rate of .0005 per year
Employee turnover	- Graduated rates based on 1989 experience study
Retirement age	- 50% will retire as soon as eligible for unreduced benefits and balance will continue to age 55
Salary increase	- 6 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.

NOTE 4 - FUNDING STATUS AND PROGRESS (CONTINUED)

The pension benefit obligation for 1990 and 1989 was determined as part of an actuarial valuation at June 30, 1990 and 1989, respectively. The significant actuarial assumptions are the same as those used for the accumulated plan benefits computations for those years.

The unfunded (funds in excess of) pension benefit obligation were $2,732,886 and $(1,256,732) at June 30, 1990 and 1989, respectively.

	1990	1989
Pension benefit obligation:		
Retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	$ 79,650,994	$ 70,425,803
Current members:		
Accumulated employee contributions and credited interest	21,418,665	19,183,040
Employer-financed vested	45,866,755	39,414,309
Employer-financed nonvested	822,023	1,070,669
Total pension benefit obligation	$147,758,437	$130,093,821
Net assets available for benefits, at cost	145,025,551	131,350,553
Unfunded (funds in excess of) pension benefit obligation	$ 2,732,886	$ (1,256,732)

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.

NOTE 5 - CONTRIBUTIONS REQUIRED AND CONTRIBUTIONS MADE (CONTINUED)

Actuarially determined contribution requirements of $6,270,192 ($4,570,437 employer and $1,699,755 employee) for the year ended June 30, 1990 and $5,673,069 ($4,000,017 employer and $1,673,052 employee) for the year ended June 30, 1989 were determined through an actuarial valuation performed at June 30, 1990 and 1989, respectively. These contributions were to consist of: (a) $3,784,452 for 1990 and $3,722,973 for 1989 normal cost; (b) $288,020 for 1990 and $(78,315) for 1989 amortization of the unfunded actuarial accrued liability; (c) $31,746 for 1990 and $30,407 for 1989 administrative expenses; and (d) $2,165,974 for 1990 and $1,998,004 for 1989 group hospital and medical insurance premiums. For 1990, contributions received totaled $6,695,314 of which the employer portion was $4,655,297 (18.25% of the covered payroll) and the employee portion was $2,040,017 (7% of the covered payroll). For 1989, contributions received totaled $8,591,381 of which the employer portion was $6,596,928 (18.25% of the covered payroll) and employee portion was $1,994,453 (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 was effected by returning a portion of employer contributions to the Commonwealth's General Fund. The amount of the reduction was allocated between the Kentucky Employes Retirement System and the State Police Retirement System based upon each system's relative percentage of covered payroll. This resulted in the State Police Retirement System returning $43,125 and $57,000 of employer contributions to the General Fund of the Commonwealth of Kentucky for the years ended June 30, 1990 and 1989, respectively.

The Appropriations Act of 1990 enacted by the 1990 General Assembly reversed the 1988 General Assembly by acting to return the funds appropriated from the systems with interest added thereon. Effective June 30, 1990, the System received $112,992 of the appropriations which had been withheld over the past two years.

NOTE 6 - SEVEN-YEAR HISTORICAL TREND INFORMATION

Seven-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) Unfunded (Funds in Excess of) Pension Benefit Obligation (2) - (1)	(5) Annual Covered Payroll	(6) 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
1990	145,025,551	147,758,437	98.2	2,732,886	25,971,132	10.5

NOTE 6 - SEVEN-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				
	Employee Contributions	Employer Contributions	Investment Income	Other Income	Total
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
1990	2,040,017	4,655,297	10,411,631	7,498,946	24,605,891

Fiscal Year	Expenses by Type					
	Benefit Payments	Administrative Expenses	Refunds	Other Expenses	Contributions Transferred to Insurance Fund	Total
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
1990	8,504,914	30,397	69,128	23,148	2,303,306	10,930,893

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 Revised Statutes:

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 issued 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, 1990 AND 1989
(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, 1990. 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, 1990				June 30, 1989
	Category 1	Category 2	Carrying Amount	Market Value	Market Value
United States Government securities	$ 192,919	$ 27,638,163	$ 27,831,082	$ 28,197,000	$ 23,674,000
Government National Mortgage Association and similar securities	2,660,101	9,570,517	12,230,618	12,513,000	20,214,000
Corporate bonds and notes	2,059,499	10,932,983	12,992,482	13,037,000	14,810,000
Common stocks	-	53,771,820	53,771,820	67,440,000	53,917,000
Securities purchased under agreement to resell	-	30,942,492	30,942,492	30,942,000	30,036,000
	$4,912,519	$132,855,975	$137,768,494	$152,129,000	$142,651,000
Convertible bonds			73,588	71,000	65,000
First mortgage real estate loans			130,419	129,000	173,000
Real estate investment trust			5,670,665	6,584,000	4,626,000
Total Investments			$143,643,166	$158,913,000	$147,515,000

Investments at June 30, 1990, 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 8.92% for the year ended June 30, 1990 and 8.32% for the year ended June 30, 1989.

NOTE 10 - RISKS OF LOSS

The System is exposed to various risks of loss related to torts; thefts of, damage to, and destruction of assets; errors and omissions; injuries to employees; and natural disasters. Under the provisions of the Kentucky Revised Statutes, the Kentucky Board of Claims is vested with full power and authority to investigate, hear proof, and to compensate persons for damages sustained to either person or property as a result of negligence of the agency or any of its employees. Awards are limited to $100,000 for a single claim and $250,000 in aggregate per occurrence. Awards and a pro rata share of the operating cost of the Board of Claims are paid from the fund of the agency having a claim or claims before the Board.

Claims made against the Board of Trustees of Kentucky Retirement Systems or any of its staff as a result of actual or alleged breach of fiduciary duty are insured with a commercial insurance policy. Coverage provided is limited to $3,000,000 per policy with a deductible amount of $25,000. Defense costs incurred in defending such claims will be paid by the insurance company. However, the total defense cost and claims paid shall not exceed the total aggregate coverage of the policy.

Loss of office furniture and equipment other than computer equipment is insured through the State Fire and Tornado Insurance Fund. That fund provides fire, extended coverage, vandalism, and malicious mischief protection. Coverage is written for 100% of the actual cash value of scheduled equipment less a deductible in the amount of $250. Losses sustained from causes other than those covered by the State Fire and Tornado Insurance Fund are insured under an inland marine policy purchased from a commercial insurance company.

Scheduled computer equipment and magnetic media is insured by a commercial insurance policy. This is an all-risk policy written on a replacement cost basis. It covers the perils of flood, earthquake, and mechanical breakdown in addition to other risks that could result in the loss of this equipment.

Claims for job-related illnesses or injuries to employees are insured by the state's self-insured workers' compensation program. Payments approved by the program are not subject to maximum limitations. A claimant may receive reimbursement of all medical expenses related to the illness or injury and up to sixty-six and two-thirds percent (66 2/3%) of wages for temporary disability. Each agency pays premiums based on three years' claims experience and number of covered employees. Claims experience is weighted seventy percent (70%) and number of employees is weighted thirty percent (30%). Expectations of current and future obligations are also factored into the premium calculation.

NOTE 10 - RISKS OF LOSS (CONTINUED)

Only claims pertaining to workers' compensation have been filed during the past three fiscal years. All major claims have been denied. There were seven claims which were appealed to the Kentucky Workers' Compensation Board which were settled during the year with no liability accruing to the System.

KENTUCKY RETIREMENT SYSTEMS INSURANCE FUND

KENTUCKY RETIREMENT SYSTEMS INSURANCE FUND
BALANCE SHEETS

	June 30 1990	June 30 1989
ASSETS		
Investments (Note 2):		
United States Government securities	$30,903,886	$24,889,977
Government National Mortgage Association and similar securities	8,154,491	4,961,874
Corporate bonds and notes	7,716,216	7,958,215
Securities purchased under agreement to resell	17,751,815	6,047,996
	$64,526,408	$43,858,062
Employer contributions receivable	2,720,419	2,209,507
Accrued investment income	924,545	742,808
Other assets	500,000	500,000
	$68,671,372	$47,310,377
LIABILITIES AND FUND BALANCE		
Payable to Kentucky Retirement Systems	$ 987	$ 5,460
Fund Balance allocated to:		
Kentucky Employees Retirement System	$32,722,932	$23,707,318
County Employees Retirement System	29,430,936	19,013,566
State Police Retirement System	6,516,517	4,584,033
	$68,670,385	$47,304,917
	$68,671,372	$47,310,377

See notes to financial statements.

KENTUCKY RETIREMENT SYSTEMS INSURANCE FUND
STATEMENTS OF REVENUES, EXPENSES
AND CHANGES IN FUND BALANCE

	Year Ended June 30 1990	1989
ALLOCATED TO KENTUCKY EMPLOYES RETIREMENT SYSTEM		
Revenues:		
Employer contributions transferred from Kentucky Employees Retirement System	$14,510,920	$12,261,924
Investment income	2,272,331	1,588,498
Net realized gain on disposal of investments	25,099	1,472
Total revenues	$16,808,350	$13,851,894
Expenses:		
Insurance premium payments	$ 7,792,736	$ 6,398,121
Excess of revenues over expenses	$ 9,015,614	$ 7,453,773
Fund balance at beginning of year	23,707,318	16,253,545
Fund balance at end of year	$32,722,932	$23,707,318
ALLOCATED TO COUNTY EMPLOYES RETIREMENT SYSTEM		
Revenues:		
Employer contributions transferred from County Employees Retirement System	$13,054,106	$10,131,427
Investment income	1,933,662	1,174,462
Net realized gain on disposal of investments	14,660	767
Total revenues	$15,002,428	$11,306,656
Expenses:		
Insurance premium payments	$ 4,585,058	$ 3,201,859
Excess of revenues over expenses	$10,417,370	$ 8,104,797
Fund balance at beginning of year	19,013,566	10,908,769
Fund balance at end of year	$29,430,936	$19,013,566
ALLOCATED TO STATE POLICE RETIREMENT SYSTEMS		
Revenues:		
Employer contributions transferred from State Police Retirement System	$ 2,303,306	$ 2,113,127
Investment income	460,714	320,810
Net realized gain on disposal of investments	3,470	295
Total revenues	$ 2,767,490	$ 2,434,232
Expenses:		
Insurance premium payments	$ 835,006	$ 704,020
Excess of revenues over expenses	$ 1,932,484	$ 1,730,212
Fund balance at beginning of year	4,584,033	2,853,821
Fund balance at end of year	$ 6,516,517	$ 4,584,033

See notes to financial statements.

KENTUCKY RETIREMENT SYSTEMS INSURANCE FUND
NOTES TO FINANCIAL STATEMENTS
YEARS ENDED JUNE 30, 1990 AND 1989

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 under authority of Kentucky Revised Statutes §67.701 to provide accident and health insurance for members receiving benefits from the Kentucky Employees Retirement System, County Employees 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 $5,758,000 and $5,072,000 for the Kentucky Employees Retirement System, $3,602,000 and $2,948,000 for the County Employees Retirement System, and $44,000 and $28,000 for the State Police Retirement System in 1990 and 1989, 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 Fund currently pays benefits for 17,000 retirees. 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:

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

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

	June 30 1990	June 30 1989
Non-Hazardous		
Kentucky Employees Retirement System	1.59%	1.44%
County Employees Retirement System	1.21%	1.07%

NOTE 1 - SIGNIFICANT ACCOUNTING POLICY AND DESCRIPTION OF PLAN (CONTINUED)

Hazardous		
Kentucky Employees Retirement System	5.74%	5.31%
County Employees Retirement System	4.65%	4.21%
State Police Retirement System	8.92%	8.32%

The required and actual contributions to the Fund from the Systems were as follows:

	June 30 1990	June 30 1989
Required Contributions		
Kentucky Employees Retirement System	$13,587,585	$11,997,962
County Employees Retirement System	12,316,365	7,930,184
State Police Retirement System	2,165,974	1,998,004
Total	$28,069,924	$21,926,150
Actual Contributions		
Kentucky Employees Retirement System	$14,510,920	$12,261,924
County Employees Retirement System	13,054,106	10,131,427
State Police Retirement System	2,303,306	2,113,127
Total	$29,868,332	$24,506,478

NOTE 2 - FUNDING STATUS

The amount shown below as "medical benefit obligation" is a measure of the present value of medical benefits adjusted for the effects of health costs inflation, 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 Fund's funding status on a going-concern basis. The medical benefit obligation was determined as part of an actuarial valuation performed as of June 30, 1990. The unfunded medical benefit obligation was $1,290,553,233 at June 30, 1990.

Medical benefit obligation:	
Retirees and beneficiaries	$ 252,729,333
Active Retirement System members	1,231,701,112
Total medical benefit obligation	$1,484,430,445
Net assets available for benefits, at cost	68,670,386
Unfunded medical benefit obligation	$1,415,760,059

NOTE 2 - FUNDING STATUS (CONTINUED)

The more significant assumptions underlying the actuarial computations are as follows:

Assumed rate of return on investments	- 8% per annum
Mortality basis	- 1983 Group Annuity Mortality Table, plus a pre-retirement duty death rate of .0005 per year for hazardous duty employees
Retirement Age	- Based upon experience, with a 20-50%, weight, at age 55-64, to the earliest age at which an employee could retire with 100% of the accrued benefits.
Heath Cost Inflation	- 10% per annum

NOTE 3 - 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	
	1990	1989
United States Government securities	$31,212,000	$25,569,000
Government National Mortgage Association and similar securities	7,953,000	4,650,000
Corporate bonds and notes	7,696,000	7,983,000
Securities purchased under agreement to resell	17,761,000	6,057,000
	$64,622,000	$44,259,000

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, Inc., has performed the actuarial valuations for six fiscal years. The firm also conducted the experience study that was used to provide the current actuarial assumptions. Those assumptions were adopted by the Board in December of 1989. The actuarial assumptions are necessary to project the liabilities of the systems.

The normal costs of the systems are being funded as a percent of payroll, as indicated in the report. The remaining unfunded liabilities are being amortized over a 30-year period. This statutory requirement assures that the systems will remain sound, and that current unfunded liabilities will be fully funded in 30 years.

WILLIAM M.
MERCER
INCORPORATED

November 2, 1990

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

Members of the Board:

The thirty-fourth annual actuarial valuation of the Kentucky Employees Retirement System, the thirty-first annual actuarial valuation of the County Employees Retirement System, and the thirty-second 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, 1990.

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 Employees Retirement System, the County Employees 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.

Respectfully Submitted,
WILLIAM M. MERCER, INCORPORATED

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

/cjh

1500 Meidinger Tower
Louisville KY 40202

502 561 4500

A Marsh & McLennan Company

THIRTY-FOURTH ANNUAL ACTUARIAL VALUATION

JUNE 30, 1990

KENTUCKY EMPLOYEES RETIREMENT SYSTEM

FRANKFORT, KENTUCKY

SECTION I

INTRODUCTION

The results of the thirty-fourth annual actuarial valuation of the Kentucky Employees Retirement System are presented in this report. The actuarial valuation was made on the basis of the data provided by the System as of June 30, 1990.

The purpose of the actuarial valuation is to determine the actuarial condition of the Retirement System and the rate of employer contributions for the ensuing fiscal year required to support the System.

The plan provisions utilized in this valuation are described in the Summary of Principal Plan Provisions beginning on page K-41. The basis of funding, as defined in KRS 61.565, provides that the actuarial valuation method is uniform for all benefits provided by the System. The Entry Age Normal Actuarial cost method has been used for all benefits as explained on page K-2. KRS 61.565 provides that each employer participating in the System shall contribute an amount equal to the Normal Cost contribution rate, and an amount sufficient to amortize the Unfunded Actuarial Accrued Liability over 30 years using the level-percentage-of-payroll method. This is the standard used herein to determine whether the funding of the System is adequate.

The actuarial valuation results are based upon the employee census and asset data supplied by the office of the System, and upon the actuarial assumptions as stated on page K-4.

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 1989 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 1989 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. Except for Table VI, the actuarial value of assets excludes any amounts in the Insurance Fund. Table VI uses only assets in the Insurance Fund, excluding all other amounts.

KENTUCKY EMPLOYEES RETIREMENT SYSTEM

ACTUARIAL ASSUMPTIONS

A. STATEMENT OF ACTUARIAL ASSUMPTIONS

(1) Mortality:

(a) Active & retired lives - 1983 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 1989 experience study.

(3) Termination of employment - Graduated select (non-hazardous only) and ultimate rates based on 1989 experience study.

(4) Retirement - Non-Hazardous:

Age	Retirement Rate
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 50% 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 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 - 6.50% 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:

	7/1/90	Rate Increase	
Plan Type	Rate	Date	Rate
Single	$102.96*	11/1/90	$124.27*
Family	241.66*	11/1/90	261.97*
Medicare	56.35*	1/1/91	61.99**
High Option	84.40*	1/1/91	92.84**

*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:

	Active Mortality		Disabled Mortality	
Age	Males	Females	Males	Females
25	0.05%	0.03%	4.83%	2.63%
30	0.06	0.03	3.62	2.37
40	0.12	0.07	2.82	2.09
50	0.40	0.16	3.83	2.57
55	0.61	0.25	4.82	2.95
60	0.92	0.42	6.03	3.31

(2) Annual Rates of Decrement:

Age	Disablement	Ultimate Termination
25	0.02%	3.00%
30	0.03	3.00
40	0.07	2.50
50	0.28	2.00
55	0.53	1.50
60	0.93	0.25

(3) Select Rates of Termination:

Years of Service	Select Termination
1	25.0%
2	8.0
3	5.0
4	4.0
5	3.5

(4) Compensation Progression:

Age	Rate of Annual Increase	Compensation at Normal Retirement as Percentage Of Current Annual Compensation
25	6.50%	1,241.6%
30	6.50	906.2
40	6.50	482.8
50	6.50	257.2
55	6.50	187.7
60	6.50	137.0

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

SECTION III

KENTUCKY EMPLOYEES RETIREMENT SYSTEM

RESULTS OF THE 1990 ACTUARIAL VALUATION

Actuarial Balance Sheet

Table I, which follows, is the actuarial balance sheet of the Kentucky Employees Retirement System as of June 30, 1990. 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 30 year amortization of the Unfunded Actuarial Accrued Liability under the level-percentage-of-payroll method, 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, 1990.

The actuarial methods applied to determine the Normal Cost for the year commencing July 1, 1990 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 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 VI contains information needed to comply under GASB Statement No. 12. These calculations reflect the liabilities for the medical premium benefit provided under the system.

TABLE I

KENTUCKY EMPLOYEES RETIREMENT SYSTEM

ACTUARIAL BALANCE SHEET-JUNE 30, 1990

ACTUARIAL ASSETS

Fund Assets at Book Value*		$1,803,051,503
Actuarial Present Value of Future Member Contributions		559,901,156
Actuarial Present Value of Future Employer Contributions		
For Normal Costs	$ 448,014,732	
For Unfunded Actuarial Accrued Liability	256,167,674	
Total		$ 704,182,406
Total Actuarial Assets		$3,067,135,065

ACTUARIAL LIABILITIES

Actuarial Present Value of Future Benefits		
Inactive Members:		
Retired Members and Beneficiaries	$ 827,243,746	
Vested Retirement	20,291,340	
Vested Membership	5,197,621	
Total - Inactive		$ 852,732,707
Active Members:		
Retirement Benefits	$1,833,800,491	
Disability Benefits	109,664,456	
Withdrawal Benefits (Vested and Refund of Contributions)	152,390,971	
Survivor Benefits	114,816,675	
Total - Active		$2,210,672,593
Refunds and Expenses Payable		$ 3,729,765
Total Actuarial Liabilities		$3,067,135,065

ACCRUED BENEFIT LIABILITY **

Vested Benefits	$1,246,686,693
Non-Vested Benefits	$ 51,676,216

* The approximate market value of assets as of June 30, 1990 is $1,989,214,997 (1,954,895,264 for Non-Hazardous and $34,319,733 for Hazardous).
The actuarial value of assets as of June 30, 1990 is $1,799,321,738 (book value of assets less refunds and expenses payable).
The Members' Contribution Account as of June 30, 1990 is $361,738,121.

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

TABLE II

KENTUCKY EMPLOYEES RETIREMENT SYSTEM

DETERMINATION OF CONTRIBUTION RATE-JUNE 30, 1990

UNFUNDED ACTUARIAL ACCRUED LIABILITY		PERCENT*
Total Actuarial Accrued Liability	$2,055,489,412	236.51%
Assets at Actuarial Value	1,799,321,738	207.03%
Unfunded Actuarial Accrued Liability	$ 256,167,674	29.48%
Contribution - Payment on Unfunded Actuarial Accrued Liability	$ 12,475,110	1.44%
NORMAL COST		
Retirement Benefits	$ 63,532,406	7.31%
Disability Benefits	4,632,244	.53%
Withdrawal Benefits (Vested and Refund of Contributions)	7,888,893	.91%
Survivor Benefits	4,050,875	.47%
Total Normal Cost	$ 80,104,418	9.22%
Less: Employee Contributions	43,533,350	5.01%
Normal Cost - State	$ 36,571,068	4.21%
TOTAL ANNUAL EMPLOYER COST		
Non-Hazardous Duty Cost		
Normal Cost	$ 35,419,214	4.14%**
Payment on Unfunded Actuarial Accrued Liability	12,492,971	1.46%**
Administrative Expenses	3,375,900	.39%**
Group Hospital and Medical Insurance Premiums	15,152,765	1.77%**
Total Annual Cost	$ 66,440,850	7.76%**
Hazardous Duty Cost		
Normal Cost	$ 1,151,854	8.85%***
Payment on Unfunded Actuarial Accrued Liability	(17,861)	(.14%)***
Administrative Expenses	45,012	.35%***
Group Hospital and Medical Insurance Premiums	803,384	6.17%***
Total Annual Cost	$ 1,982,389	15.23%***

*Based on estimated annual salaries of $869,109,220.
**Based on estimated annual salaries of $856,088,404 for Non-Hazardous Position Employees.
***Based on estimated annual salaries of $13,020,816 for Hazardous Position Employees.

TABLE III

KENTUCKY EMPLOYEES RETIREMENT SYSTEM

CLASSIFICATION OF ACTUARIAL LIABILITIES AND COSTS-JUNE 30, 1990

	Non-Hazardous Position Employees	Hazardous Position Employees	Total
ACTUARIAL ACCRUED LIABILITY			
Active Members			
Retirement Benefits	$1,022,665,196	$15,597,179	$1,038,262,375
Disability Benefits	50,780,757	877,488	51,658,245
Withdrawal Benefits (Vested and Refund of Contributions)	48,380,278	61,332	48,441,610
Survivor Benefits	63,773,830	620,645	64,394,475
Actuarial Accrued Liability - Actives	$1,185,600,061	$17,156,644	$1,202,756,705
Inactive Members			
Retired Members and Beneficiaries	$ 814,601,945	$12,641,801	$ 827,243,746
Vested Retirement	20,116,189	175,151	20,291,340
Vested Membership	4,940,609	257,012	5,197,621
Actuarial Accrued Liability - Inactives	$ 839,658,743	$13,073,964	$ 852,732,707
Total Actuarial Accrued Liability	$2,025,258,804	$30,230,608	$2,055,489,412
UNFUNDED ACTUARIAL ACCRUED LIABILITY			
Total Actuarial Accrued Liability	$2,025,258,804	$30,230,608	$2,055,489,412
Less Actuarial Value of Assets	1,768,724,348	30,597,390	1,799,321,738
Unfunded Actuarial Accrued Liability	$ 256,534,456	$ (366,782)	$ 256,167,674
NORMAL COST			
Retirement Benefits	$ 61,814,120	$ 1,718,286	$ 63,532,406
Disability Benefits	4,507,818	124,426	4,632,244
Withdrawal Benefits (Vested and Refund of Contributions)	7,801,699	87,194	7,888,893
Survivor Benefits	3,946,825	104,050	4,050,875
Total Normal Cost	$ 78,070,462	$ 2,033,956	$ 80,104,418
Less Employee Contributions	42,651,248	882,102	43,533,350
Total Normal Cost - State	$ 35,419,214	$ 1,151,854	$ 36,571,068
ACCRUED BENEFIT LIABILITY*			
Vested Benefits	$1,225,397,966	$21,288,727	$1,246,686,693
Non-Vested Benefits	43,088,750	8,587,466	51,676,216

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

TABLE IV

KENTUCKY EMPLOYEES RETIREMENT SYSTEM

ACCOUNTANT'S INFORMATION - JUNE 30, 1990

INFORMATION REQUIRED UNDER FASB STATEMENT NO. 35

	Non-Hazardous Position Employees	Hazardous Position Employees	Total
ACTUARIAL PRESENT VALUE OF VESTED ACCUMULATED BENEFITS			
Active Members			
Retirement Benefits	$ 362,759,401	$ 5,039,975	$ 367,799,376
Disability Benefits	9,956,089	384,873	10,340,962
Withdrawal Benefits (Vested and Refund of Contributions)	50,450,877	437,703	50,888,580
Survivor Benefits	0	0	0
Total Active Members	$ 423,166,367	$ 5,862,551	$ 429,028,918
Inactive Members			
Retired Members and Beneficiaries	$ 814,601,945	$12,641,801	$ 827,243,746
Vested Retirement	20,116,189	175,151	20,291,340
Vested Membership	4,940,609	257,012	5,197,621
Total-Inactive Members	$ 839,658,743	$13,073,964	$ 852,732,707
Total Actuarial Present Value of Vested Accumulated Benefits	$1,262,825,110	$18,936,515	$1,281,761,625
ACTUARIAL PRESENT VALUE OF NON-VESTED ACCUMULATED BENEFITS			
Active Members			
Retirement Benefits	$ 63,291,770	$ 2,380,609	$ 65,672,379
Disability Benefits	28,663,586	519,184	29,182,770
Withdrawal Benefits (Vested and Refund of Contributions)	1,819,110	66,044	1,885,154
Survivor Benefits	30,148,470	545,087	30,693,557
Total - Active Members	$ 123,922,936	$ 3,510,924	$ 127,433,860
Inactive Members	$ 0	$ 0	$ 0
Total Actuarial Present Value of Non-Vested Accumulated Benefits	$ 123,922,936	$ 3,510,924	$ 127,433,860

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

TABLE V

KENTUCKY EMPLOYEES RETIREMENT SYSTEM

ACCOUNTANT'S INFORMATION - JUNE 30, 1990

INFORMATION REQUIRED UNDER GASB STATEMENT NO. 5

	Non-Hazardous Position Employees	Hazardous Position Employees	Total
A. NUMBER OF MEMBERS			
Inactive Members			
Retired Members and Beneficiaries	15,927	118	16,045
Vested Retirements	1,970	16	1,986
Vested Membership	7,725	146	7,871
Total Inactive Members	25,622	280	25,902
Active Members			
Vested Members	27,622	326	27,948
Nonvested Members	17,229	275	17,504
Total Active Members	44,851	601	45,452
Total Members	70,473	881	71,354
B. UNFUNDED PENSION BENEFIT OBLIGATION			
Pension Benefit Obligation			
Retirees and Beneficiaries Currently Receiving Benefits and Terminated Members Not Yet Receiving Benefits	$ 839,658,743	$13,073,964	$ 852,732,707
Current Members			
Accumulated Employee Contributions and Credited Interest	333,514,828	7,679,536	341,194,364
Employer Financed - Vested	640,354,896	7,097,206	647,452,102
Employer Financed - Nonvested	26,965,211	1,039,015	28,004,226
Total Pension Benefit Obligation	1,840,493,678	28,889,721	1,869,383,399
Net Assets at Cost Value	$1,768,724,348	$30,597,390	$1,799,321,738
Unfunded Pension Benefit Obligation	71,769,330	(1,707,669)	70,061,661

TABLE VI

KENTUCKY EMPLOYEES RETIREMENT SYSTEM

ACCOUNTANT'S INFORMATION - JUNE 30, 1990

INFORMATION REQUIRED UNDER GASB STATEMENT NO. 12

		Non-Hazardous Position Employees	Hazardous Position Employees	Total
A. NUMBER OF MEMBERS				
Inactive Members				
Contracts in Force - Retirees and Dependents				
(1) Single; Pre-Medicare	- 100% Paid	775	8	783
	- 75% Paid	665	16	681
	- 50% Paid	280	4	284
	- 25% Paid	226	2	228
	- 0% Paid	736	0	736
(2) Family; Pre-Medicare	- 100% Paid	1	19	20
	- 75% Paid	0	17	17
	- 50% Paid	0	2	2
	- 25% Paid	476	1	477
	- 0% Paid	28	0	28
(3) Medicare Regular	- 100% Paid	64	1	65
	- 75% Paid	258	2	260
	- 50% Paid	424	2	426
	- 25% Paid	437	0	437
	- 0% Paid	635	0	635
(4) Medicare High Option	- 100% Paid	3,176	52	3,228
	- 75% Paid	1,293	11	1,304
	- 50% Paid	1,235	0	1,235
	- 25% Paid	756	1	757
	- 0% Paid	1,312	0	1,312
Vested Retirements		1,970	16	1,986
Vested Membership		7,725	146	7,871
Active Members		44,851	601	45,452
B. UNFUNDED MEDICAL BENEFIT OBLIGATION				
Medical Benefit Obligation				
Retirees and Beneficiaries		$143,519,000	$ 4,247,943	$147,766,943
Active Members		559,352,611	12,374,252	571,726,863
Total Medical Benefit Obligation		702,871,611	16,622,195	719,493,806
Net Assets at Cost Value		$ 31,462,031	$ 1,260,901	$ 32,722,932
Unfunded Medical Benefit Obligation		671,409,580	15,361,294	686,770,874

SECTION IV

COMMENTS AND CERTIFICATION

Comments

The total Actuarial Accrued Liability has increased from $1,734,607,903 on June 30, 1989 to $2,055,489,412 on June 30, 1990. The Unfunded Actuarial Accrued Liability has increased from $145,998,805 to $256,167,674. Total actuarial value of assets as of June 30, 1990 was equal to $1,799,321,738.

The Unfunded Actuarial Accrued Liability increased from 17.75% to 29.48% as a percentage of annual payroll and increased from 8.4% to 12.5% as a percentage of the Actuarial Accrued Liability in the year ended June 30, 1990.

The change in contribution rate between the 1989 and 1990 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:

	Non-Hazardous Position Employees	Hazardous Position Employees
June 30, 1989 Contribution Rate	6.76%	14.67%
Expected Change in Unfunded Actuarial Accrued Liability Payment Due to Increasing Covered Payroll	(0.09%)	0.03%
Change Due to Revision in Actuarial Assumptions	1.03%	(0.15%)
Change Due to Adoption of Level-Percentage-of-Payroll Method of Amortizing Unfunded Actuarial Liability	(1.08%)	0.07%
Increase Expected Due to Legislated Benefit Improvements		
• Increase in Benefit Rate	0.46%	-
• "27 and Out" Benefit	0.34%	-
• Retiree COLA	0.56%	0.46%
Investment Return	(0.43%)	(0.66%)
Salary Increases	(0.09%)	(0.45%)
Decrements Experience*	(0.08%)	0.55%
Change in Group Hospital and Medical Premium Rate	0.18%	0.43%

Change in Administrative Expense Rate	0.20%	0.28%
June 30, 1990 Contribution Rate	7.76%	15.23%

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

The annual State contribution rate required to provide the Normal Cost, 30 year amortization of the Unfunded Actuarial Accrued Liability under the level-percentage-of-payroll method, and pay administrative expenses for Non-Hazardous position employees was determined at 5.99%. An additional 1.77% is required to fund medical insurance for retirees, bringing the total required contribution to 7.76%. This exceeds the current 7.45% budgeted contribution rate. As a result of House Bill 799, the General Assembly appropriated $3,656,700 in funds to be made as an additional contribution to the KERS Non-Hazardous, KERS Hazardous and State Police Retirement Systems. This amount makes up for the budgeted reduction in State funding (plus interest) during the 1988-90 biennium. This additional contribution is to be used to eliminate, if possible, or otherwise reduce the amount of any recommended increase in the contribution rate. The portion of the additional contribution attributable to KERS Non-Hazardous is $3,487,029. This amount was received by the retirement system on July 2, 1990. During the 1990-91 plan year, $2,644,377 of the additional amount is needed to make up the difference between the 7.76% contribution rate and the actual amount contributed of 7.45%. With interest adjustment at 8% per annum, this leaves . $1,019,908 at June 30, 1991 to be used to reduce the 1991-92 contribution recommendation. Based on projected payroll on June 30, 1991, this allows a 0.11% reduction in the 1991-92 rate. Reducing the 7.76% valuation rate by 0.11% results in a 7.65% rate. Therefore, it is our opinion that the contribution rate beginning July 1, 1991 should be increased from the current 7.45% level to 7.65%, and we so recommend.

The annual State contribution rate required to provide the Normal Cost, 30 year amortization of the Unfunded Actuarial Accrued Liability under the level-percentage-of-payroll method, and pay administrative expenses for Hazardous position employees was determined at 9.06%. An additional 6.17% is required to fund medical insurance for retirees, bringing the total required contribution to 15.23%. This exceeds the current 15.05% budgeted contribution rate. As noted above, the General Assembly appropriated $3,656,700 in funds to be made as an additional contribution to the KERS Non-Hazardous, KERS Hazardous and State Police Retirement Systems, such amount to be used to eliminate, if possible, or otherwise reduce the amount of any recommended increase in the contribution rate. The portion of the additional contribution attributable to KERS Hazardous is $56,679. This amount was received by the retirement system on July 2, 1990. During the 1990-91 plan year, $22,683 of the additional amount is needed to make up the difference between the 15.23% contribution rate and the actual amount contributed of 15.05%. With interest adjustment at 8% per annum, this leaves $37,657 at June 30, 1991 to be used to reduce the 1991-92 contribution recommendation. Based on projected payroll on June 30, 1991, this is more than sufficient to allow a 0.18% reduction in the 1991-92 rate. Therefore, it is our opinion that the contribution rate beginning July 1, 1991 should remain at the current 15.05% level, and we so recommend.

The recommended contribution rates are based on current statutory benefits. The budgeted contribution rates will again be reviewed in the June 30, 1991 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 EMPLOYEES 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
1990	2,055,489,412	256,167,674	12.5%	1,799,321,738	210,712,640

*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 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

Stephen A. Gagel, F.S.A.

November 1, 1990

Date

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

SECTION VI

SUMMARY OF PRINCIPAL PLAN PROVISIONS

Effective Date

The state of Kentucky established the Kentucky Employees Retirement System in July, 1956. The plan benefits have been improved several times, most recently as of August 1, 1990.

Plan Year

A plan year is a twelve month period beginning on July 1.

Final Compensation

Final compensation is the average salary during the five highest paid fiscal years. If the months of service credit during the highest five year period is less than forty-eight, one or more additional fiscal years shall be used.

Service

Service means the sum of prior service and current service as defined below:

(a) Prior service is credited for regular full-time employment of at least 100 hours of work per month with a participating agency before July 1, 1956. In some instances prior service credit is granted for time spent in the military.

(b) Current service is obtained for regular full-time employment which averages at least 100 hours of work per month with participating agencies after July 1, 1956. Current service credit may be granted for military service and educational leaves if special criteria are met.

(c) Service is increased by unused sick leave, up to a maximum of six months, for purposes of computing eligibility and the amount of benefits.

Eligibility

Any state department, board, or agency shall participate in the System when directed to do so by the Executive Order of the Governor. Membership in the system consists of:

(a) all persons who become employees of a department after such department first participates,

(b) all persons who are employees on the date a department first participates and who elect within thirty days to become members and make contributions,

(c) all persons who are employees of any credit union whose membership is limited to state government employees,

(d) all persons who were professional staff employees of the Council on Public Higher Education or the Higher Education Assistance Authority and were making contributions to the system on the effective date of their respective Executive Order and filed a written election to continue in the System,

(e) all persons who were professional staff employees of the Kentucky Authority for Educational Television on or after July 1, 1974,

(f) members of the General Assembly and Constitutional officers of the General Assembly serving during the January, 1960 session or thereafter, and

(g) officers and employees of the General Assembly and their assistants if employed by the General Assembly during the January, 1960 session and thereafter, but only after serving during six sessions of the General Assembly.

Normal Retirement Date

A member may elect to retire upon: (1) attaining age 65 for non-hazardous positions, or attaining age 55 for hazardous positions, and (2) having contributed to the System. Upon completion of 27 years of service credit, 15 of which are current service for non-hazardous positions, or completion of 20 years of service credit for hazardous positions, a member may elect to retire with an unreduced benefit.

Early Retirement Date

A member may elect to retire before the normal retirement date at any time after: (1) for non-hazardous positions, attainment of age 55 and completion of 60 months of service credit at least 12 of which are current, or at any age after 25 years of service, or (2) for hazardous positions, attainment of age 50 and completion of 15 years of service credit.

Normal Retirement Benefits

For non-hazardous positions, upon attainment of age 65 and completion of 48 months of service, of which 12 months are current service, a monthly benefit equal to 1.97% of the member's final compensation multiplied by his service will be payable. For hazardous positions, a monthly benefit equal to 2.49% of the member's final compensation multiplied by his service will be payable upon attainment of age 55 and completion of 60 months of service of which 12 months are current service. A member, with less than 48 months for non-hazardous positions or 60 months for hazardous positions, who retires on or after the normal retirement date is entitled to a retirement allowance which pays the actuarial equivalent of twice the member's accumulated contributions for life.

Early Retirement Benefits

A member who elects early retirement is entitled to a monthly benefit reduced for each month by which the early retirement date precedes the first date on which the member would qualify for an unreduced benefit. If a non-hazardous position employee has 27 or more years of service credit, 15 of which are current, or a hazardous position employee has 20 or more years of service credit, an unreduced benefit is payable.

Minimum Benefit

The normal retirement benefit for members with 10 or more years of service, at least one of which is current service, shall not be less than $512 per year.

Disability Benefits

A member with 60 months of service, 12 of which must be current service, is entitled to a retirement allowance computed in the same manner as the normal retirement benefit with service and final compensation determined as of the disability date. Service credit shall be added on to total service for the period from the last day of paid employment to the 65th birthday (55th for members in a hazardous position) up to a maximum of service credited to the last day of paid employment. Except for members with 25 or more (20 or more for hazardous) years of service on the last day of paid employment, the maximum combined service credit (total service and added service) shall not exceed 25 years (20 years for hazardous members). For non-hazardous position employees with 25 or more years of service credit, additional years of service credit will be added up to a maximum combined limit of 30, or actual service if greater. For hazardous position employees with 20 or more years of service credit, actual service will be used.

A member in a hazardous position who is disabled in the line of duty is entitled to a retirement benefit of not less than 25% of the member's final monthly rate of pay plus 10% of his final monthly rate of pay for each dependent child. The maximum dependent child's benefit is 40% of the member's final monthly rate of pay. A partial disability benefit may be payable to hazardous employees if the disability is not total and permanent. The disability will be reduced to a rate determined by the Board.

Death Benefits

If a member dies prior to retirement, but after 60 months of service, 12 of which are current and who is a contributing member, or after 12 years of service, one of which is current and who is not a contributing member, or after 48 months service if the member is age 65 or over, a benefit will be payable to the beneficiary based on the member's age, years of service and final compensation at the date of death. The benefit will be equal to the amount payable had the employee retired and elected a joint and 100% survivorship payment form.

If a member in a hazardous position dies in the line of duty and has a spouse as beneficiary, a $5,000 lump sum payment will be made and a benefit of 25% of the member's final monthly rate of pay will be payable until death or remarriage. If the member in a hazardous position dies in the line of duty and has a dependent as beneficiary, a lump sum payment of $10,000 will be made. Monthly payments shall be made for each dependent child equal to 10% of the member's final monthly rate of pay, but not greater than 40% of the member's final monthly rate of pay. The beneficiary of a hazardous duty member with 5 or more years of service, one of which is current, may elect a death benefit computed in the same manner as a non-hazardous employee using 2.49% rather than 1.97%.

Upon the death of a retired member, who had a minimum of 48 months of service credit, a death benefit of $2,500 is payable.

Optional Forms of Payment

Joint and survivor annuities which provide a reduced benefit for the life of the member, with the benefit at the same or at a further reduced rate continuing after the member's death until the death of the designated beneficiary may be elected by the member prior to retirement. Other optional forms include a life annuity with 10, 15 or 20 years of payments guaranteed and a Social Security adjustment with or without survivor rights.

Contributions

Members contribute 5% of gross compensation (7% for hazardous positions). On each June 30, interest is credited at the rate to be determined by the Board on the accumulated contributions the member had in his account on the previous June 30. Upon termination a member may withdraw the contributions with interest, but will be entitled to no benefit payments.

Medical Insurance

Recipients of a retirement benefit may elect to participate in a voluntary hospital/medical group insurance plan for themselves as well as any beneficiaries or dependents. The cost of participation for any beneficiaries or dependents is borne by the retiree (except that dependents of hazardous position employees and legislators will have the same percentage paid by the system as the member). The retirement system will pay a portion of the cost of participation for the retiree based on years of service credit as follows:

Less than 4 years	0%
4 - 9 years	25%
10 - 14 years	50%
15 - 19 years	75%
20 or more years	100%

If a hazardous member is disabled in the line of duty, the retirement system will pay 100% of the cost of the member, spouse and eligible dependents. If a hazardous member is killed in the line of duty, the retirement system will pay 100% of the cost of the beneficiary and eligible dependents as long as they remain eligible for a monthly benefit payment.

THIRTY-FIRST ANNUAL ACTUARIAL VALUATION

JUNE 30, 1990

COUNTY EMPLOYEES RETIREMENT SYSTEM

FRANKFORT, KENTUCKY

SECTION I

INTRODUCTION

The results of the thirty-first annual actuarial valuation of the County Employees Retirement System are presented in this report. The actuarial valuation was made on the basis of the data provided by the System as of June 30, 1990.

The purpose of the actuarial valuation is to determine the actuarial condition of the Retirement System and the rate of employer contribution for the ensuing fiscal year as required to support the System.

The plan provisions utilized in this valuation are described in the Summary of Principal Plan Provisions beginning on page C-41. The basis of funding is defined in KRS 61.565 and provides that the actuarial valuation method would be uniform for all benefits provided by the System. The Entry Age Normal Actuarial cost method has been used for all benefits. KRS 61.565 provides that each employer participating in the System shall contribute an amount equal to the Normal Cost contribution rate, and an amount sufficient to amortize the Unfunded Actuarial Accrued Liability over 30 years using the level-percentage-of-payroll method, and annual interest at the assumed rate on the Unfunded Actuarial Accrued Liability. This is the standard used herein to determine whether the funding of the System is adequate.

The actuarial valuation results are based upon the employee census and asset data supplied by the office of the System, and upon the actuarial assumptions as stated on page C-4.

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 1989 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 1989 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. Except for Table VI, the actuarial value of assets excludes any amounts in the Insurance Fund. Table VI uses only assets in the Insurance Fund, excluding all other amounts.

COUNTY EMPLOYEES RETIREMENT SYSTEM

ACTUARIAL ASSUMPTIONS

A. STATEMENT OF ACTUARIAL ASSUMPTIONS

(1) Mortality:

(a) Active & retired lives - 1983 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 1989 experience study.

(3) Termination of employment - Graduated select (non-hazardous only) and ultimate rates based on 1989 experience study.

(4) Retirement - Non-Hazardous:

Age	Retirement Rate
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 - 6.50% 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	7/1/90 Rate	Rate Increase Date	Rate Increase Rate
Single	$102.96*	11/1/90	$124.27*
Family	241.66*	11/1/90	261.97*
Medicare	56.35*	1/1/91	61.99**
High Option	84.40*	1/1/91	92.84**

*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:

	Active Mortality		Disabled Mortality	
Age	Males	Females	Males	Females
25	0.05%	0.03%	4.83%	2.63%
30	0.06	0.03	3.62	2.37
40	0.12	0.07	2.82	2.09
50	0.40	0.16	3.83	2.57
55	0.61	0.25	4.82	2.95
60	0.92	0.42	6.03	3.31

(2) Annual Rates of Decrement:

Age	Disablement	Ultimate Termination
25	0.02%	3.00%
30	0.03	3.00
40	0.07	2.50
50	0.28	2.00
55	0.53	1.50
60	0.93	0.25

(3) Select Rates of Termination:

Years of Service	Select Termination
1	25.0%
2	8.0
3	5.0
4	4.0
5	3.5

(4) Compensation Progression:

Age	Rate of Annual Increase	Compensation at Normal Retirement as Percentage Of Current Annual Compensation
25	6.50%	1,241.6%
30	6.50	906.2
40	6.50	482.8
50	6.50	257.2
55	6.50	187.7
60	6.50	137.0

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

SECTION III

COUNTY EMPLOYEES RETIREMENT SYSTEM

RESULTS OF THE 1990 ACTUARIAL VALUATION

Actuarial Balance Sheet

Table I, which follows, is the actuarial balance sheet of the County Employees Retirement System as of June 30, 1990. 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 30 year amortization of the Unfunded Actuarial Accrued Liability under the level-percentage-of-payroll method, 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, 1990.

The actuarial methods applied to determine the Normal Cost for the year commencing July 1, 1990 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 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 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 VI contains information needed to comply under GASB Statement No. 12. These calculations reflect the liabilities for the medical premium benefit provided under the system.

TABLE I

COUNTY EMPLOYEES RETIREMENT SYSTEM

ACTUARIAL BALANCE SHEET-JUNE 30, 1990

ACTUARIAL ASSETS		
Fund Assets at Book Value*		$1,274,063,862
Actuarial Present Value of Future Member Contributions		504,155,580
Actuarial Present Value of Future Employer Contributions		
For Normal Costs	$ 552,040,092	
For Unfunded Actuarial Accrued Liability	162,257,399	
Total		$ 714,297,491
Total Actuarial Assets		$2,492,516,933
ACTUARIAL LIABILITIES		
Actuarial Present Value of Future Benefits		
Inactive Members:		
Retired Members and Beneficiaries	$ 414,437,109	
Vested Retirement	16,002,986	
Vested Membership	5,502,190	
Total - Inactive		$ 435,942,285
Active Members:		
Retirement Benefits	$1,736,704,143	
Disability Benefits	96,927,050	
Withdrawal Benefits (Vested and Refund of Contributions)	124,176,511	
Survivor Benefits	94,769,349	
Total - Active		$2,052,577,053
Refunds and Expenses Payable		$ 3,997,595
Total Actuarial Liabilities		$2,492,516,933
ACCRUED BENEFIT LIABILITY **		
Vested Benefits		$ 802,567,660
Non-Vested Benefits		$ 104,920,584

* The approximate market value of assets as of June 30, 1990 is $1,319,415,509 ($1,034,156,098 for Non-Hazardous and $285,259,411 for Hazardous).
The actuarial value of assets as of June 30, 1990 is $1,270,066,267 (book value of assets less refunds and expenses payable).
The Members' Contribution Account as of June 30, 1990 is $254,282,752.

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

TABLE II

COUNTY EMPLOYEES RETIREMENT SYSTEM

DETERMINATION OF CONTRIBUTION RATE-JUNE 30, 1990

UNFUNDED ACTUARIAL ACCRUED LIABILITY		PERCENT*
Total Actuarial Accrued Liability	$1,432,323,666	181.21%
Assets at Actuarial Value	1,270,066,267	160.68%
Unfunded Actuarial Accrued Liability	$ 162,257,399	20.53%
Contribution - Payment on Unfunded Actuarial Accrued Liability	$ 7,901,773	1.00%
NORMAL COST		
Retirement Benefits	$ 72,631,179	9.19%
Disability Benefits	4,791,894	.61%
Withdrawal Benefits (Vested and Refund of Contributions)	7,223,886	.91%
Survivor Benefits	4,214,022	.53%
Total Normal Cost	$ 88,860,981	11.24%
Less: Employee Contributions	41,252,919	5.22%
Normal Cost - State	$ 47,608,062	6.02%
TOTAL ANNUAL EMPLOYER COST		
Non-Hazardous Duty Cost		
Normal Cost	$ 37,778,675	5.60% **
Payment on Unfunded Actuarial Accrued Liability	4,561,753	.68% **
Administrative Expenses	3,675,980	.54% **
Group Hospital and Medical Insurance Premiums	9,310,875	1.38% **
Total Annual Cost	$ 55,327,283	8.20% **
Hazardous Duty Cost		
Normal Cost	$ 9,829,387	8.50%***
Payment on Unfunded Actuarial Accrued Liability	3,340,020	2.89%***
Administrative Expenses	337,590	.29%***
Group Hospital and Medical Insurance Premiums	5,912,597	5.11%***
Total Annual Cost	$ 19,419,594	16.79%***

*Based on estimated annual salaries of $790,407,492.

**Based on estimated annual salaries of $674,701,092 for Non-Hazardous Position Employees.

***Based on estimated annual salaries of $115,706,400 for Hazardous Position Employees.

TABLE III

COUNTY EMPLOYEES RETIREMENT SYSTEM

CLASSIFICATION OF ACTUARIAL LIABILITIES AND COSTS-JUNE 30, 1990

	Non-Hazardous Position Employees	Hazardous Position Employees	Total
ACTUARIAL ACCRUED LIABILITY			
Active Members			
Retirement Benefits	$ 649,313,705	$233,260,057	$ 882,573,762
Disability Benefits	33,152,489	5,484,044	38,636,533
Withdrawal Benefits (Vested and Refund of Contributions)	28,990,972	2,621,931	31,612,903
Survivor Benefits	38,864,028	4,694,155	43,558,183
Actuarial Accrued Liability - Actives	$ 750,321,194	$246,060,187	$ 996,381,381
Inactive Members			
Retired Members and Beneficiaries	$ 289,425,523	$125,011,586	$ 414,437,109
Vested Retirement	15,118,150	884,836	16,002,986
Vested Membership	5,155,643	346,547	5,502,190
Actuarial Accrued Liability - Inactives	$ 309,699,316	$126,242,969	$ 435,942,285
Total Actuarial Accrued Liability	$1,060,020,510	$372,303,156	$1,432,323,666
UNFUNDED ACTUARIAL ACCRUED LIABILITY			
Total Actuarial Accrued Liability	$1,060,020,510	$372,303,156	$1,432,323,666
Less Actuarial Value of Assets	966,348,089	303,718,178	1,270,066,267
Unfunded Actuarial Accrued Liability	$ 93,672,421	$ 68,584,978	$ 162,257,399
NORMAL COST			
Retirement Benefits	$ 57,359,711	$ 15,271,468	$ 72,631,179
Disability Benefits	4,206,532	585,362	4,791,894
Withdrawal Benefits (Vested and Refund of Contributions)	6,119,288	1,104,598	7,223,886
Survivor Benefits	3,609,843	604,179	4,214,022
Total Normal Cost	$ 71,295,374	$ 17,565,607	$ 88,860,981
Less Employee Contributions	33,516,699	7,736,220	41,252,919
Total Normal Cost - State	$ 37,778,675	$ 9,829,387	$ 47,608,062
ACCRUED BENEFIT LIABILITY*			
Vested Benefits	$ 573,884,094	$228,683,566	$ 802,567,660
Non-Vested Benefits	39,128,246	65,792,338	104,920,584

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

TABLE IV

COUNTY EMPLOYEES RETIREMENT SYSTEM

ACCOUNTANT'S INFORMATION - JUNE 30, 1990

INFORMATION REQUIRED UNDER FASB STATEMENT NO. 35

	Non-Hazardous Position Employees	Hazardous Position Employees	Total
ACTUARIAL PRESENT VALUE OF VESTED ACCUMULATED BENEFITS			
Active Members			
Retirement Benefits	$242,758,019	$ 92,913,145	$335,671,164
Disability Benefits	6,351,355	2,207,447	8,558,802
Withdrawal Benefits (Vested and Refund of Contributions)	29,104,803	6,606,752	35,711,555
Survivor Benefits	0	0	0
Total Active Members	$278,214,177	$101,727,344	$379,941,521
Inactive Members			
Retired Members and Beneficiaries	$289,425,523	$125,011,586	$414,437,109
Vested Retirement	15,118,150	884,836	16,002,986
Vested Membership	5,155,643	346,547	5,502,190
Total-Inactive Members	$309,699,316	$126,242,969	$435,942,285
Total Actuarial Present Value of Vested Accumulated Benefits	$587,913,493	$227,970,313	$815,883,806
ACTUARIAL PRESENT VALUE OF NON-VESTED ACCUMULATED BENEFITS			
Active Members			
Retirement Benefits	$ 39,978,895	$40,707,283	$ 80,686,178
Disability Benefits	21,938,647	2,953,217	24,891,864
Withdrawal Benefits (Vested and Refund of Contributions)	3,991,837	(258,229)	3,733,608
Survivor Benefits	18,369,502	4,318,013	22,687,515
Total - Active Members	$ 84,278,881	$47,720,284	$131,999,165
Inactive Members	$ 0	$ 0	$ 0
Total Actuarial Present Value of Non-Vested Accumulated Benefits	$ 84,278,881	$47,720,284	$131,999,165

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, 1990

INFORMATION REQUIRED UNDER GASB STATEMENT NO. 5

	Non-Hazardous Position Employees	Hazardous Position Employees	Total
A. NUMBER OF MEMBERS			
Inactive Members			
Retired Members and Beneficiaries	10,337	789	11,126
Vested Retirements	1,519	35	1,554
Vested Membership	9,439	105	9,544
Total Inactive Members	21,295	929	22,224
Active Members			
Vested Members	24,756	2,592	27,348
Nonvested Members	23,814	1,866	25,680
Total Active Members	48,570	4,458	53,028
Total Members	69,865	5,387	75,252
B. UNFUNDED PENSION BENEFIT OBLIGATION			
Pension Benefit Obligation			
Retirees and Beneficiaries Currently Receiving Benefits and Terminated Members Not Yet Receiving Benefits	$309,699,316	$126,242,969	$ 435,942,285
Current Members			
Accumulated Employee Contributions and Credited Interest	180,026,861	61,980,051	242,006,912
Employer Financed - Vested	417,202,691	154,691,116	571,893,807
Employer Financed - Nonvested	40,847,288	8,529,571	49,376,859
Total Pension Benefit Obligation	947,776,156	351,443,707	1,299,219,863
Net Assets at Cost Value	$966,348,089	$303,718,178	$1,270,066,267
Unfunded Pension Benefit Obligation	(18,571,933)	47,725,529	29,153,596

TABLE VI

COUNTY EMPLOYEES RETIREMENT SYSTEM

ACCOUNTANT'S INFORMATION - JUNE 30, 1990

INFORMATION REQUIRED UNDER GASB STATEMENT NO. 12

		Non-Hazardous Position Employees	Hazardous Position Employees	Total
A. NUMBER OF MEMBERS				
Inactive Members				
Contracts in Force - Retirees and Dependents				
(1) Single; Pre-Medicare	- 100% Paid	182	92	274
	- 75% Paid	259	54	313
	- 50% Paid	235	10	245
	- 25% Paid	304	0	304
	- 0% Paid	357	0	357
(2) Family; Pre-Medicare	- 100% Paid	1	368	369
	- 75% Paid	4	124	128
	- 50% Paid	0	28	28
	- 25% Paid	219	4	223
	- 0% Paid	28	0	28
(3) Medicare Regular	- 100% Paid	41	1	42
	- 75% Paid	158	1	159
	- 50% Paid	318	2	320
	- 25% Paid	537	0	537
	- 0% Paid	318	0	318
(4) Medicare High Option	- 100% Paid	1,030	49	1,079
	- 75% Paid	611	23	634
	- 50% Paid	838	14	852
	- 25% Paid	767	0	767
	- 0% Paid	616	0	616
Vested Retirements		1,519	35	1,554
Vested Membership		9,439	105	9,544
Active Members		48,570	4,458	53,028
B. UNFUNDED MEDICAL BENEFIT OBLIGATION				
Medical Benefit Obligation				
Retirees and Beneficiaries		$ 61,877,750	$ 26,684,380	$ 88,562,130
Active Members		437,266,555	174,323,153	611,589,708
Total Medical Benefit Obligation		499,144,305	201,007,533	700,151,838
Net Assets at Cost Value		$ 20,483,158	$ 8,947,779	$ 29,430,937
Unfunded Medical Benefit Obligation		478,661,147	192,059,754	670,720,901

SECTION VII

COMMENTS AND CERTIFICATION

Comments

The total Actuarial Accrued Liability has increased from $1,113,868,548 on June 30, 1989 to $1,432,323,666 on June 30, 1990. The Unfunded Actuarial Accrued Liability increased from $35,815,913 to $162,257,399. Total actuarial value of assets as of June 30, 1990 was equal to $1,270,066,267.

The Unfunded Actuarial Accrued Liability increased from 4.92% to 20.53% as a percentage of annual payroll and from 3.2% to 11.3% as a percentage of the Actuarial Accrued Liability in the year ended June 30, 1990.

The change in contribution rate between the 1989 and 1990 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:

	Non-Hazardous Position Employees	Hazardous Position Employees
June 30, 1989 Contribution Rate	5.94%	19.39%
Expected Change in Unfunded Actuarial Accrued Liability Payment Due to Increasing Covered Payroll	0.03%	(0.64%)
Change Due to Revision in Actuarial Assumptions	0.76%	(0.44%)
Change Due to Adoption of Level-Percentage-of-Payroll Method of Amortizing Unfunded Actuarial Liability	(0.04%)	(2.68%)
Increase Expected Due to Legislated Benefit Improvements		
• Increase in Benefit Rate	1.39%	-
• "27 and Out" Benefit	0.37%	-
• Retiree COLA	0.27%	0.43%
• Change in Employee Contribution Rate	(0.60%)	-
Investment Return	(0.23%)	(0.58%)
Salary Increases	(0.09%)	0.33%
Decrements Experience*	(0.06%)	0.29%

Change in Group Hospital and Medical Premium Rate	0.17%	0.46%
Change in Administrative Expense Rate	0.29%	0.23%
June 30, 1990 Contribution Rate	8.20%	16.79%

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

The annual contribution rate required by the participating Agencies to provide the Normal Cost, 30 year amortization of the Unfunded Actuarial Accrued Liability under the level-percentage-of-payroll method, and pay administrative expenses for Non-Hazardous position employees is 6.82%. An additional 1.38% is required to fund medical insurance for retirees, bringing the total required contribution to 8.20%. This exceeds the current 7.68% budgeted contribution rate. The contribution rate was increased substantially for the 1990-91 year as a result of benefit improvements. Another substantial increase on top of that would be necessary to raise the rate to the level developed in this valuation. In lieu of that, it is reasonable to transition to the higher level over the next two years, since there should be no further benefit or assumptions changes to reflect until the June 30, 1992 valuation at the earliest. Accordingly, we have reflected approximately 50% of the increase in our recommended contribution rate in this valuation, with the anticipation that the remaining portion of the increase will be reflected in our June 30, 1991 valuation recommendation. This allows participating agencies to more effectively budget for the increase. Therefore, it is our opinion that the contribution rate beginning July 1, 1991 be increased from the current 7.68% level to 7.95%, and we so recommend.

The annual contribution rate required by the participating Agencies to provide the Normal Cost, 30 year amortization of the Unfunded Actuarial Accrued Liability under the level-percentage-of-payroll method, and pay administrative expenses for Hazardous position employees is 11.68%. An additional 5.11% is required to fund medical insurance for retirees, bringing the total required contribution to 16.79%. This exceeds the current 15.43% budgeted contribution rate. Last year, because of the substantial influx of new plan participants into this system, we recommended transitional adjustments in the contribution rate to allow the system time to absorb all the new entrants, and the contribution rate to settle at the ultimate level. This recommendation is still appropriate in this valuation. In addition, it is reasonable to transition to the higher level over the next two years, since there should be no further benefit or assumptions changes to reflect until the June 30, 1992 valuation at the earliest. Accordingly, we have reflected approximately 50% of the increase in our recommended contribution rate in this valuation, with the anticipation that the remaining portion of the increase will be reflected in our June 30, 1991 valuation recommendation. This allows participating agencies to more effectively budget for the increase. Therefore, it is our opinion that the contribution rate beginning July 1, 1991 be increased from the current 15.43% level to 16.10%, and we so recommend.

The recommended contribution rates are based on current statutory benefits. The budgeted contribution rates will again be reviewed in the June 30, 1991 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 EMPLOYEES RETIREMENT SYSTEM

July 1 of Year Shown	Total Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability	Percent Unfunded	Actuarial Value Of Assets	Increase in Assets
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
1990	1,432,323,666	162,257,399	11.3%	1,270,066,267	192,013,632

*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

Stephen A. Gagel, F.S.A.

November 1, 1990

Date

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

SECTION VI

SUMMARY OF PRINCIPAL PLAN PROVISIONS

Effective Date

The state of Kentucky established the County Employees Retirement System in July, 1958. The plan benefits have been improved several times, most recently as of August 1, 1990.

Plan Year

A plan year is a twelve month period beginning on July 1.

Final Compensation

Final compensation is the average salary during the five highest paid fiscal years. If the months of service credit during the highest five year period is less than forty-eight, one or more additional fiscal years shall be used.

Service

Service means the sum of prior service and current service as defined below:

(a) Prior service is credited for regular full-time employment of at least 100 hours of work per month with a participating agency before July 1, 1958. In some instances prior service credit is granted for time spent in the military.

(b) Current service is obtained for regular full-time employment which averages at least 100 hours of work per month with participating agencies after July 1, 1958. Current service credit may be granted for military service and educational leaves if special criteria are met.

(c) Employers may elect to purchase up to 6 months additional service credit based on an employe's unused sick leave.

Eligibility

Any county or political subdivision or instrumentality, including school boards or urban county government may participate in the System upon approval by the Board. Membership in the system consists of:

(a) all persons who become employees of a county after such county first participates,

(b) all persons who are employees on the date a county first participates and who elect within thirty days to become members and make contributions.

Membership does not include employees of a county who are members of some other state, county, or local retirement system, supported in whole or in part by public funds.

Normal Retirement Date

A member may elect to retire upon: (1) attaining age 65 for non-hazardous positions, or attaining age 55 for hazardous positions, and (2) having contributed to the System. Upon completion of 27 years of service credit, 15 of which are current service for non-hazardous positions, or completion of 20 years of service credit for hazardous positions, a member may elect to retire with an unreduced benefit.

Early Retirement Date

A member may elect to retire before the normal retirement date at any time after: (1) for non-hazardous positions, attainment of age 55 and completion of 60 months of service credit at least 12 of which are current, or at any age after 25 years of service, or (2) for hazardous positions, attainment of age 50 and completion of 15 years of service credit.

Normal Retirement Benefits

For non-hazardous positions, upon attainment of age 65 and completion of 48 months of service, of which 12 months are current service, a monthly benefit equal to 2.20% of the member's final compensation multiplied by his service will be payable. For hazardous positions, a monthly benefit equal to 2.50% of the member's final compensation multiplied by his service will be payable upon attainment of age 55 and completion of 60 months of service of which 12 months are current service. A member, with less than 48 months for non-hazardous positions or 60 months for hazardous positions, who retires on or after the normal retirement date is entitled to a retirement allowance which pays the actuarial equivalent of twice the member's accumulated contributions for life.

Early Retirement Benefits

A member who elects early retirement is entitled to a monthly benefit reduced for each month by which the early retirement date precedes the first date on which the member would qualify for an unreduced benefit. If a non-hazardous position employee has 27 or more years of service credit, 15 of which are current, or a hazardous position employee has 20 or more years of service credit, an unreduced benefit is payable.

Disability Benefits

A member with 60 months of service, 12 of which must be current service, is entitled to a retirement allowance computed in the same manner as the normal retirement benefit with service and final compensation determined as of the disability date. Service credit shall be added on to total service for the period from the last day of paid employment to the 65th birthday (55th for members in a hazardous position) up to a maximum of service credited to the last day of paid employment. Except for members with 25 or more (20 or more for hazardous) years of service on the last day of paid employment, the maximum combined service credit (total service and added service) shall not exceed 25 years (20 years for hazardous members). For non-hazardous position employees with 25 or more years of service, additional years of service credit will be added up to maximum combined limit of 30, or actual service if greater. For hazardous position employees with 20 or more years of service credit, actual service will be used.

A member in a hazardous position who is disabled in the line of duty is entitled to a retirement benefit of not less than 25% of the member's final monthly rate of pay plus 10% of his final monthly rate of pay for each dependent child. The maximum dependent child's benefit is 40% of the member's final monthly rate of pay. A partial disability benefit may be payable to hazardous employees if the disability is not total and permanent. The disability will be reduced to a rate determined by the Board.

Death Benefits

If a member dies prior to retirement, but after 60 months of service, 12 of which are current and who is a contributing member, or after 12 years of service, one of which is current and who is not a contributing member, or after 48 months service if the member is age 65 or over, a benefit will be payable to the beneficiary based on the member's age, years of service and final compensation at the date of death. The benefit will be equal to the amount payable had the employee retired and elected a joint and 100% survivorship payment form.

If a member in a hazardous position dies in the line of duty and has a spouse as beneficiary, a $5,000 lump sum payment will be made and a benefit of 25% of the member's final monthly rate of pay will be payable until death or remarriage. If the member in a hazardous position dies in the line of duty and has a dependent as beneficiary, a lump sum payment of $10,000 will be made. Monthly payments shall be made for each dependent child equal to 10% of the member's final monthly rate of pay, but not greater than 40% of the member's final monthly rate of pay. The beneficiary of a hazardous duty member with 5 or more years of service, one of which is current, may elect a death benefit computed in the same manner as a non-hazardous employee using 2.50% rather than 2.20%.

Upon the death of a retired member, who had a minimum of 48 months of service credit, a death benefit of $2,500 is payable.

Optional Forms of Payment

Joint and survivor annuities which provide a reduced benefit for the life of the member, with the benefit at the same or at a further reduced rate continuing after the member's death until the death of the designated beneficiary may be elected by the member prior to retirement. Other optional forms include a life annuity with 10, 15 or 20 years of payments guaranteed and a Social Security adjustment with or without survivor rights.

Contributions

Members contribute 5% of gross compensation (7% for hazardous positions). On each June 30, interest is credited at the rate to be determined by the Board on the accumulated contributions the member had in his account on the previous June 30. Upon termination a member may withdraw the contributions with interest, but will be entitled to no benefit payments.

Medical Insurance

Recipients of a retirement benefit may elect to participate in a voluntary hospital/medical group insurance plan for themselves as well as any beneficiaries or dependents. The cost of participation for any beneficiaries or dependents is borne by the retiree (except that dependents of hazardous position employees and legislators will have the same percentage paid by the system as the member). The retirement system will pay a portion of the cost of participation for the retiree based on years of service credit as follows:

Less than 4 years	0%
4 - 9 years	25%
10 - 14 years	50%
15 - 19 years	75%
20 or more years	100%

If a hazardous member is disabled in the line of duty, the retirement system will pay 100% of the cost of the member, spouse and eligible dependents. If a hazardous member is killed in the line of duty, the retirement system will pay 100% of the cost of the beneficiary and eligible dependents as long as they remain eligible for a monthly benefit payment.

THIRTY-SECOND ANNUAL ACTUARIAL VALUATION

JUNE 30, 1990

STATE POLICE RETIREMENT SYSTEM

FRANKFORT, KENTUCKY

SECTION I

INTRODUCTION

The results of the thirty-second annual actuarial valuation of the State Police Retirement System are presented in this report. The actuarial valuation was made on the basis of the data provided by the System as of June 30, 1990.

The purpose of the actuarial valuation is to determine the actuarial condition of the Retirement System and the rate of employer contribution for the ensuing fiscal year as required to support the System.

The plan provisions utilized in this valuation are described in the Summary of Principal Plan Provisions beginning on page S-29. The basis of funding is defined in KRS 61.565 and provides that the actuarial valuation method would be uniform for all benefits provided by the System. The Entry Age Normal Actuarial cost method has been used for all benefits. KRS 61.565 provides that each employer participating in the System shall contribute an amount equal to the Normal Cost contribution rate, and an amount sufficient to amortize the Unfunded Actuarial Accrued Liability over 30 years using the level-percentage-of-payroll method. This is the standard used herein to determine whether the funding of the System is adequate.

The actuarial valuation results are based upon the employee census and asset data supplied by the office of the System, and upon the actuarial assumptions as stated on page S-4.

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 1989 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 1989 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. Except for Table V, the actuarial value of assets excludes any amounts in the Insurance Fund. Table V uses only assets in the Insurance Fund, excluding all other amounts.

STATE POLICE RETIREMENT SYSTEM

ACTUARIAL ASSUMPTIONS

A. STATEMENT OF ACTUARIAL ASSUMPTIONS

(1) Mortality:

- (a) Active & retired lives - 1983 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 1989 experience study.

(3) Termination of employment - Graduated rates based on 1989 experience study.

(4) Retirement - 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 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 - 6.50% 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	7/1/90 Rate	Rate Increase Date	Rate Increase Rate
Single	$102.96*	11/1/90	$124.27*
Family	241.66*	11/1/90	261.97*
Medicare	56.35*	1/1/91	61.99**
High Option	84.40*	1/1/91	92.84**

*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:

Age	Active Mortality* Males	Active Mortality* Females	Disabled Mortality Males	Disabled Mortality Females
25	0.05%	0.03%	4.83%	2.63%
30	0.06	0.03	3.62	2.37
40	0.12	0.07	2.82	2.09
50	0.40	0.16	3.83	2.57
55	0.61	0.25	4.82	2.95
60	0.92	0.42	6.03	3.31

*Plus 0.05% duty death rate prior to retirement.

(2) Annual Rates of Decrement:

Age	Disablement	Ultimate Termination
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:

Age	Rate of Annual Increase	Compensation at Normal Retirement as Percentage Of Current Annual Compensation
25	6.50%	661.4%
30	6.50	482.8
40	6.50	257.2
50	6.50	137.0

SECTION III

STATE POLICE RETIREMENT SYSTEM

RESULTS OF THE 1990 ACTUARIAL VALUATION

Actuarial Balance Sheet

Table I, which follows, is the actuarial balance sheet of the State Police Retirement System as of June 30, 1990. 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 30 year amortization of the Unfunded Actuarial Accrued Liability under the level-percentage-of-payroll method, 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, 1990.

The actuarial methods applied to determine the Normal Cost for the year commencing July 1, 1990 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 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 IV 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 V contains information needed to comply under GASB Statement No. 12. These calculations reflect the liabilities for the medical premium benefit provided under the system.

TABLE I

STATE POLICE RETIREMENT SYSTEM

ACTUARIAL BALANCE SHEET-JUNE 30, 1990

ACTUARIAL ASSETS

Fund Assets at Book Value*		$ 145,313,311
Actuarial Present Value of Future Member Contributions		17,431,502
Actuarial Present Value of Future Employer Contributions		
For Normal Costs	$20,315,876	
For Unfunded Actuarial Accrued Liability	8,982,071	
Total		$ 29,297,947
Total Actuarial Assets		$ 192,042,760

ACTUARIAL LIABILITIES

Actuarial Present Value of Future Benefits		
Inactive Members:		
Retired Members and Beneficiaries	$ 79,262,878	
Vested Retirement	252,395	
Vested Membership	135,721	
Total - Inactive		$ 79,650,994
Active Members:		
Retirement Benefits	$102,779,505	
Disability Benefits	2,908,705	
Withdrawal Benefits (Vested and Refund of Contributions)	3,456,074	
Survivor Benefits	2,959,722	
Total - Active		$ 112,104,006
Refunds and Expenses Payable and Payables to other Systems		$ 287,760
Total Actuarial Liabilities		$ 192,042,760

ACCRUED BENEFIT LIABILITY **

Vested Benefits	$ 108,355,098
Non-Vested Benefits	$ 21,680,610

* The approximate market value of assets as of June 30, 1990 is $165,133,597.
The actuarial value of assets as of June 30, 1990 is $145,025,551 (book value of assets less refunds and expenses payable).
The Members' Contribution Account as of June 30, 1990 is $21,695,121

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

TABLE II

STATE POLICE RETIREMENT SYSTEM

DETERMINATION OF CONTRIBUTION RATE-JUNE 30, 1990

ACTUARIAL ACCRUED LIABILITY		PERCENT*
Active Members		
Retirement Benefits	$ 70,471,757	271.35%
Disability Benefits	1,706,077	6.57%
Withdrawal Benefits (Vested and Refund of Contributions)	587,454	2.26%
Survivor Benefits	1,591,340	6.13%
Actuarial Accrued Liability - Active	$ 74,356,628	286.31%
Inactive Members		
Retired Members and Beneficiaries	$ 79,262,878	305.20%
Vested Retirement	252,395	.97%
Vested Membership	135,721	.52%
Actuarial Accrued Liability - Inactives	$ 79,650,994	306.69%
Total Actuarial Accrued Liability	154,007,622	593.00%
UNFUNDED ACTUARIAL ACCRUED LIABILITY		
Total Actuarial Accrued Liability	$154,007,622	593.00%
Assets at Actuarial Value	145,025,551	558.41%
Unfunded Actuarial Accrued Liability	$ 8,982,071	34.59%
Contribution - Payment on Unfunded Actuarial Accrued Liability	$ 437,418	1.68%
NORMAL COST		
Retirement Benefits	$ 3,356,309	12.92%
Disability Benefits	126,929	.49%
Withdrawal Benefits (Vested and Refund of Contributions)	305,989	1.18%
Survivor Benefits	145,135	.56%
Total Normal Cost	$ 3,934,362	15.15%
Less: Employee Contributions	1,817,979	7.00%
Normal Cost - State Police	$ 2,116,383	8.15%

TOTAL ANNUAL EMPLOYER COST - STATE POLICE

Normal Cost	$ 2,116,697	8.15%
Payment of Unfunded Actuarial Accrued Liability	437,418	1.68%
Administrative Expenses	67,518	.26%
Group Hospital and Medical Insurance Premiums	2,462,063	9.48%
Total Annual Cost	$ 5,083,382	19.57%

*Based on estimated annual salaries of $25,971,132.

TABLE III

STATE POLICE RETIREMENT SYSTEM

ACCOUNTANT'S INFORMATION - JUNE 30, 1990

INFORMATION REQUIRED UNDER FASB STATEMENT NO. 35

ACTUARIAL PRESENT VALUE OF VESTED ACCUMULATED BENEFITS	
Active Members	
Retirement Benefits	$ 25,327,508
Disability Benefits	764,742
Withdrawal Benefits (Vested and Refund of Contributions)	2,056,779
Survivor Benefits	0
Total Active Members	$ 28,149,029
Inactive Members	
Retired Members and Beneficiaries	$ 79,262,878
Vested Retirement	252,395
Vested Membership	135,721
Total-Inactive Members	$ 79,650,994
Total Actuarial Present Value of Vested Accumulated Benefits	$107,800,023
ACTUARIAL PRESENT VALUE OF NON-VESTED ACCUMULATED BENEFITS	
Active Members	
Retirement Benefits	$ 14,267,813
Disability Benefits	696,304
Withdrawal Benefits (Vested and Refund of Contributions)	(225,447)
Survivor Benefits	1,320,864
Total - Active Members	$ 16,059,534
Inactive Members	$ 0
Total Actuarial Present Value of Non-Vested Accumulated Benefits	$ 16,059,534

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, 1990

INFORMATION REQUIRED UNDER GASB STATEMENT NO. 5

. NUMBER OF MEMBERS

nactive Members	
Retired Members and Beneficiaries	417
Vested Retirements	15
Vested Membership	80
Total Inactive Members	512
ctive Members	
Vested Members	734
Nonvested Members	230
Total Active Members	964
otal Members	1,476

. UNFUNDED PENSION BENEFIT OBLIGATION

ension Benefit Obligation	
Retirees and Beneficiaries Currently Receiving Benefits and Terminated Members Not Yet Receiving Benefits	$ 79,650,994
Current members	
Accumulated Employee Contributions and Credited Interest	21,418,665
Employer Financed - Vested	45,866,755
Employer Financed - Nonvested	822,023
Total Pension Benefit Obligation	147,758,437
Net Assets at Cost Value	$145,025,551
Unfunded Pension Benefit Obligation	2,732,886

TABLE V

STATE POLICE RETIREMENT SYSTEM

ACCOUNTANT'S INFORMATION - JUNE 30, 1990

INFORMATION REQUIRED UNDER GASB STATEMENT NO. 12

A. NUMBER OF MEMBERS

Inactive Members		
Contracts in Force - Retirees and Dependents		
(1) Single; Pre-Medicare	- 100% Paid	47
	- 75% Paid	46
	- 50% Paid	2
	- 25% Paid	2
	- 0% Paid	0
(2) Family; Pre-Medicare	- 100% Paid	138
	- 75% Paid	97
	- 50% Paid	3
	- 25% Paid	0
	- 0% Paid	0
(3) Medicare Regular	- 100% Paid	0
	- 75% Paid	0
	- 50% Paid	0
	- 25% Paid	0
	- 0% Paid	0
(4) Medicare High Option	- 100% Paid	57
	- 75% Paid	19
	- 50% Paid	2
	- 25% Paid	1
	- 0% Paid	0
Vested Retirements		15
Vested Membership		80
Active Members		964

B. UNFUNDED MEDICAL BENEFIT OBLIGATION

Medical Benefit Obligation	
Retirees and Beneficiaries	$ 16,400,260
Active Members	48,384,541
Total Medical Benefit Obligation	64,784,801
Net Assets at Cost Value	$ 6,516,517
Unfunded Medical Benefit Obligation	58,268,284

SECTION IV

COMMENTS AND CERTIFICATION

Comments

The total Actuarial Accrued Liability increased from $134,550,773 on June 30, 19898 to $154,007,622 on June 30, 1990. The Unfunded Actuarial Accrued Liability has increased from $3,200,220 to $8,982,071. Total actuarial value of assets as of June 30, 1990 was equal to $145,025,551.

The Unfunded Actuarial Accrued Liability increased from 13.18% to 34.59% as a percentage of annual payroll and increased 2.4% to 5.8% as a percentage of the Actuarial Accrued Liability in the year ended June 30, 1990.

The change in contribution rate between the 1989 and 1990 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, 1989 Contribution Rate	18.83%
Expected Change in Unfunded Actuarial Accrued Liability Payment Due to Increasing Covered Payroll	(0.08%)
Change Due to Revision in Actuarial Assumptions	0.06%
Change Due to Adoption of Level-Percentage-of-Payroll Method of Amortizing Unfunded Actuarial Liability	(1.01%)
Increase Expected Due to Legislated Improvements	
• Increase in Benefit Rate	1.04%
• Retiree COLA	1.39%
Investment Return	(1.26%)
Salary Increases	(0.82%)
Other Decrements*	0.73%
Change in Group Hospital and Medical Premium Rate	0.56%
Change in Administrative Expense Rate	0.13%
June 30, 1990 Contribution Rate	19.57%

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

The annual State contribution rate required to provide the Normal Cost, 30 year amortization of the Unfunded Actuarial Accrued Liability under the level-percentage-of-payroll method, and pay administrative expenses is 10.09%. An additional 9.48% is required to fund medical insurance for retirees, bringing the total required contribution to 19.57%. This is less than the current 20.31% budgeted contribution rate. As a result of House Bill 799, the General Assembly appropriated $3,656,700 in funds to be made as an additional contribution to the KERS Non-Hazardous, KERS Hazardous and State Police Retirement Systems. This amount makes up for the budgeted reduction in State funding (plus interest) during the 1988-90 biennium. This additional contribution is to be used to eliminate, if possible, or otherwise reduce the amount of any recommended increase in the contribution rate. The portion of the additional contribution attributable to The State Police Retirement System is $112,992. This amount was received by the retirement system on July 2, 1990. Since the rate developed in this valuation is less than the current budgeted rate, none of these funds are needed to prevent a rate increase. The entire amount can be carried over as a gain to offset anticipated salary experience losses in the June 30, 1991 valuation. Therefore, it is our opinion that the contribution rate beginning July 1, 1991 should be decreased from the current 20.31% level to 19.57%, and we so recommend.

The recommended contribution rates are based on current statutory benefits. The budgeted contribution rates will again be reviewed in the June 30, 1991 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

July 1 of Year Shown	Total Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability	Percent Unfunded	Actuarial Value Of Assets	Increase in Assets
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
1990	154,007,622	8,982,071	5.8%	145,025,551	13,674,998

*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

Stephen A. Gagel, F.S.A.

November 1, 1990

Date

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

SECTION VI

SUMMARY OF PRINCIPAL PLAN PROVISIONS

Effective Date

The state of Kentucky established the State Police Retirement System in July, 1958. The plan benefits have been improved several times, most recently as of August 1, 1990.

Plan Year

A plan year is a twelve month period beginning on July 1.

Final Compensation

Final compensation is the average salary during the five highest paid fiscal years. If the months of service credit during the highest five year period is less than forty-eight, one or more additional fiscal years shall be used.

Service

Service means the sum of prior service and current service as defined below:

(a) Prior service is credited for regular full-time employment of at least 100 hours of work per month with a participating agency before July 1, 1958. In some instances prior service credit is granted for time spent in the military.

(b) Current service is obtained for regular full-time employment which averages at least 100 hours of work per month with participating agencies after July 1, 1958. Current service credit may be granted for military service and educational leaves if special criteria are met.

(c) Service is increased by unused sick leave, up to a maximum of six months, for purposes of computing eligibility and the amount of benefits.

Eligibility

The Bureau of State Police shall participate in the System. Membership in the system consists of:

(a) all regular full-time officers of the Kentucky State Police who are entitled to exercise the powers of police officers,

(b) no person who is age 31 or over shall be eligible to become an employee of the Kentucky State Police.

Normal Retirement Date

A member may elect to retire upon attaining age 55 and having contributed to the System. Upon completion of 20 years of service credit, 15 of which are current service, a member may declare the normal retirement date to be some date prior to age 55.

Early Retirement Date

A member may elect to retire before the normal retirement date at any time after attainment of age 50 and completion of 15 years of service credit.

Normal Retirement Benefits

A monthly benefit equal to 2.50% of the member's final compensation multiplied by his service will be payable upon attainment of age 55 and completion of 60 months of service of which 12 months are current service. A member who retires on or after the normal retirement date with less than 60 months of service is entitled to a retirement allowance which pays the actuarial equivalent of twice the member's accumulated contributions for life.

Early Retirement Benefits

A member who elects early retirement is entitled to a monthly benefit reduced for each month by which the early retirement date precedes the first date on which the member would qualify for an unreduced benefit. If a member has 20 or more years of service credit (15 of which are current), an unreduced benefit is payable.

Disability Benefits

A member with 60 months of service, 12 of which must be current service, is entitled to a retirement allowance computed in the same manner as the normal retirement benefit with service and final compensation determined as of the disability date. Service credit shall be added on to total service for the period from the last day of paid employment to the 55th birthday up to a maximum of service credited to the last day of paid employment. Except for members with 20 or more years of service on the last day of paid employment, the maximum combined service credit (total service and added service) shall not exceed 20 years. For members with 20 or more years of service credit, actual service will be used. The retirement benefit shall not be less than 25% of the member's final monthly rate of pay for those disabled in the line of duty. Ten percent of final monthly rate of pay for each dependent child is also payable if disability occurs in line of duty. The maximum dependent child's benefit is 40% of the member's final monthly rate of pay. A partial disability benefit may be payable if the disability is not total and permanent. The disability will be reduced to a rate determined by the Board.

Death Benefits

If a member dies prior to retirement, but after 60 months of service, 12 of which are current and who is a contributing member, or after 12 years of service, one of which is current and who is not a contributing member, a benefit will be payable to the beneficiary based on the member's age, years of service and final compensation at the date of death. The benefit will be equal to the amount payable had the employee retired and elected a joint and 100% survivorship payment form.

If a member dies in the line of duty and has a spouse as beneficiary, a $5,000 lump sum payment will be made and a benefit of 25% of the member's final monthly rate of pay will be payable until death or remarriage. If the member dies in the line of duty and has a dependent as beneficiary, a lump sum payment of $10,000 will be made. Monthly payments shall be made for each dependent child equal to 10% of the member's final monthly rate of pay, but not greater than 40% of the member's final monthly rate of pay. The beneficiary of a member with 5 or more years of service, one of which is current, may elect a death benefit computed in the same manner as a non-hazardous employee under KERS and CERS, using 2.50% rather than the non-hazardous benefit rate.

Upon the death of a retired member, who had a minimum of 48 months of service credit, a death benefit of $2,500 is payable.

Optional Forms of Payment

Joint and survivor annuities which provide a reduced benefit for the life of the member, with the benefit at the same or at a further reduced rate continuing after the member's death until the death of the designated beneficiary may be elected by the member prior to retirement. Other optional forms include an annuity with 10, 15 or 20 years of payments guaranteed and a Social Security adjustment with or without survivor rights.

Contributions

Members contribute 7% of gross compensation until age 55. On each June 30, interest is credited at the rate to be determined by the Board on the accumulated contributions the member had in his account on the previous June 30. Upon termination a member may withdraw the contributions with interest, but will be entitled to no benefit payments.

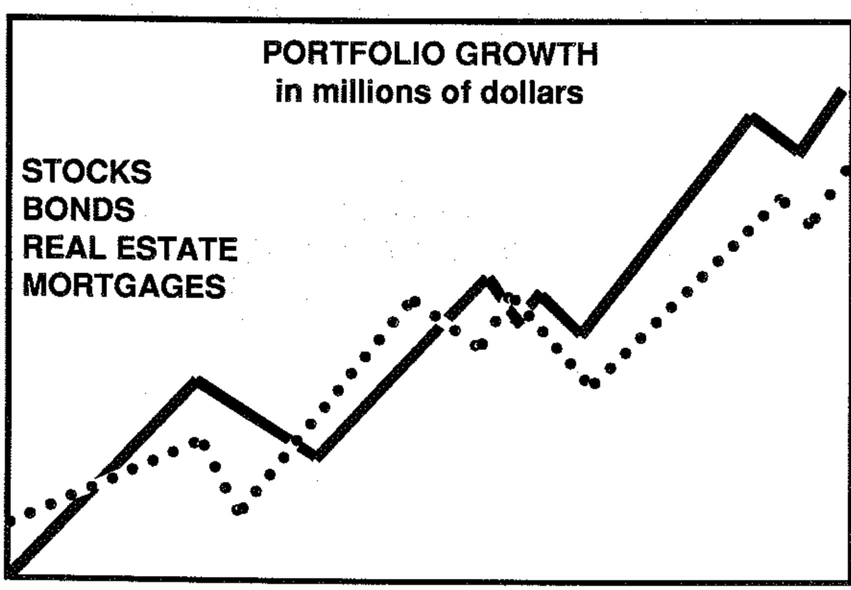
Medical Insurance

Recipients of a retirement benefit may elect to participate in a voluntary hospital/medical group insurance plan for themselves as well as any beneficiaries or dependents. The retirement system will pay a portion of the cost of participation for the retiree and dependents based on years of service credit as follows:

Less than 4 years	0%
4 - 9 years	25%
10 - 14 years	50%
15 - 19 years	75%
20 or more years	100%

If a member is disabled in the line of duty, the retirement system will pay 100% of the cost of the member, spouse and eligible dependents. If a member is killed in the line of duty, the retirement system will pay 100% of the cost of the beneficiary and eligible dependents as long as they remain eligible for a monthly benefit payment.

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.

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.

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.

WILLIAM M.
MERCER
ASSET PLANNING, INC.

VIA FEDERAL EXPRESS

November 16, 1990

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

Members of the Board:

The Fiscal Year ended June 30, 1990 was noteworthy for the invested assets of the Kentucky Retirement Systems in a number of regards. The total assets of the Systems grew significantly to $3.5 Billion from $3.1 Billion at the beginning of the Fiscal Year.

During the Fiscal Year, the capital markets afforded a positive environment for financial assets. In this environment, the Systems' assets produced a rate of return of 11.6%. Negative returns were suffered in only two of twelve months, as both the stock and bond markets generally proceeded on an upward track. While this return is strong in an absolute sense, it was undoubtedly impacted adversely by changes in the investment structure which were being undertaken during the course of the Fiscal Year.

As a comparison to the above, the stock market, as measured by the Standard & Poor's 500 average, returned 16.4% while the bond market, as represented by the Shearson Lehman Government/Corporate Bond Index, grew by 7.1%. In evaluating these comparisons, it should be noted that cash was deliberately raised to facilitate the changes in the Systems' manager structure which were put into place beginning on April 1.

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Chicago IL 60606 7485

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A Marsh & McLennan Company

The Systems' asset allocation structure and managers were significantly altered by a series of decisions during the course of the Fiscal Year. Based upon a study which projected the future liabilities of the Systems and recognized the goals and objectives of the Board, Mercer recommended an asset allocation structure which optimized the probability that future investment returns would be sufficient to meet those goals. The recommendation, which is shown below by asset class and manager role, was accepted by the Board:

	% of Asset Class	% of Portfolio
• **Equities - 55% of Total Assets**		
- S&P 500 Index Fund	50%	27.50
- Large Capitalization Value Equities	20	11.00
- Large Capitalization Growth Equities	20	11.00
- Small Capitalization Value Equities	10	5.50
• **Fixed Income - 25% of Total Assets**		
- Shearson Lehman Aggregate Index Fund	50%	12.50
- Actively Managed Fixed Income	25	6.25
- Actively Managed Short Term	25	6.25

	% of Asset Class	% of Portfolio
• **Real Estate - 10% of Total Assets**		
- Core Real Estate		10.00
• **Cash Reserves - 10% of Total Assets**		10.00
		100.00

In order to implement the asset allocation recommendation, a number of manager searches were conducted to identify appropriate managers for each role. The process began by identifying a large list of candidates and sending each a Request for Proposal. Other candidates were welcome to submit a Proposal as well. The Proposals were analyzed and the candidate list narrowed to a shorter list which was more thoroughly analyzed. Based on this analysis, interviews with the Investment Committee of the Board were held with a small number of finalists for each role. After the interviews, fee negotiations were conducted with the top two or three candidates for each role. The process resulted in the selection of the following managers for each of the roles:

- **Equities**
  - S&P 500 Index Fund - Internally managed
  - Large Capitalization Value Equities - Investment Counselors of Maryland
  - Large Capitalization Growth Equities - Investment Advisers, Inc.
  - Small Capitalization Value Equities - Investment Counselors of Maryland

- **Fixed Income**

  - Shearson Lehman Aggregate Index Fund - T. Rowe Price Associates

  - Actively Managed Fixed Income - National Asset Management

  - Actively Managed Short Term - T. Rowe Price Associates

- **Real Estate**

  - Core Real Estate - Heitman Financial Services (in addition to the existing portfolio), The Yarmouth Group, Trust Company of the West Realty Advisors.

The Board allocated the assets to the managers, in cash and in kind, on April 1, 1990. The portfolios were largely structured in accordance with the managers' styles by the end of the Fiscal Year. Although the period under management for the new structure is insufficient and immaterial for analysis, we are confident that the structure will meet the Systems' needs in the long term.

Respectfully submitted,

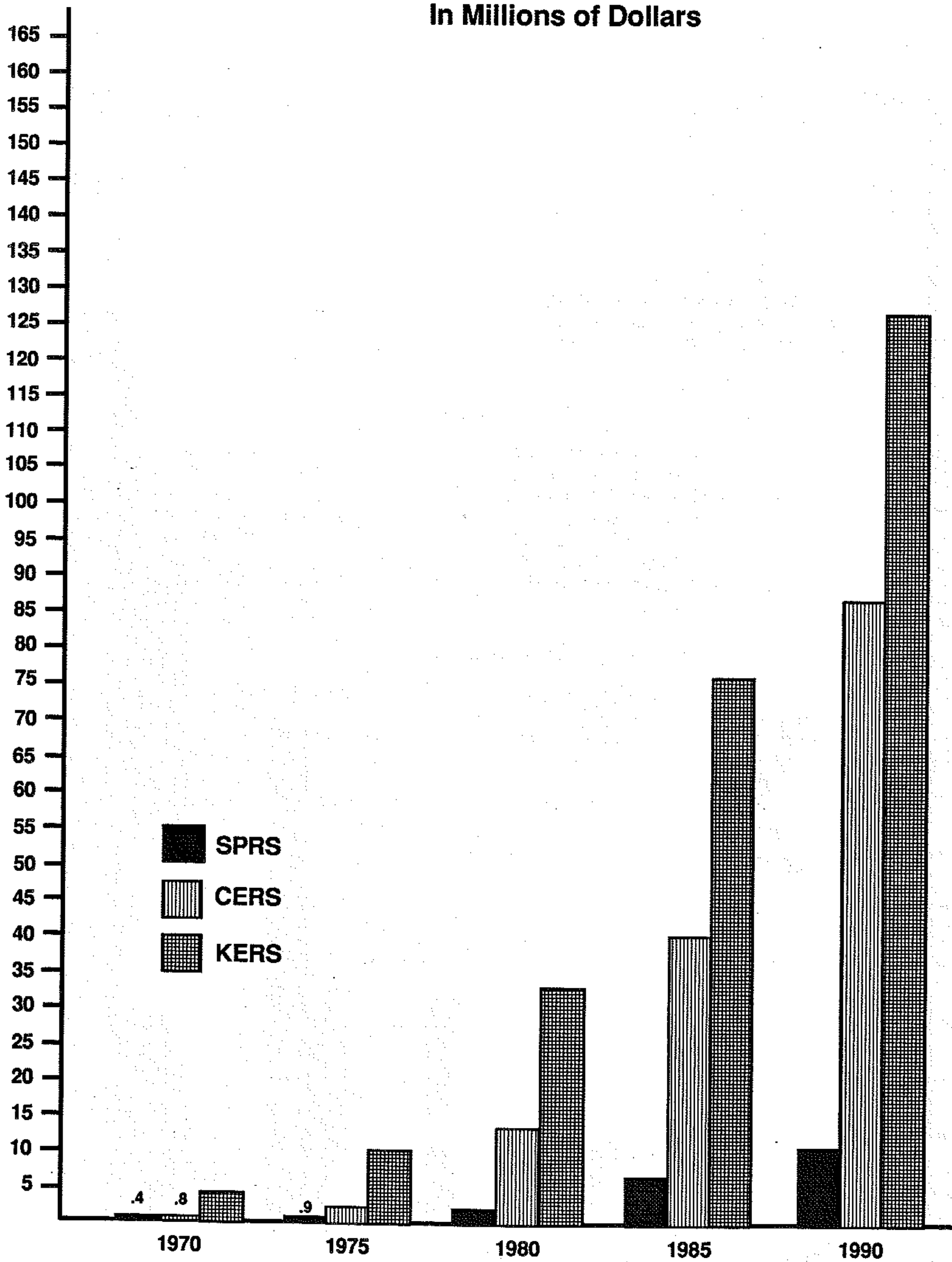
WILLIAM M. MERCER ASSET PLANNING, INCORPORATED

Barbara L. Brightman /lk

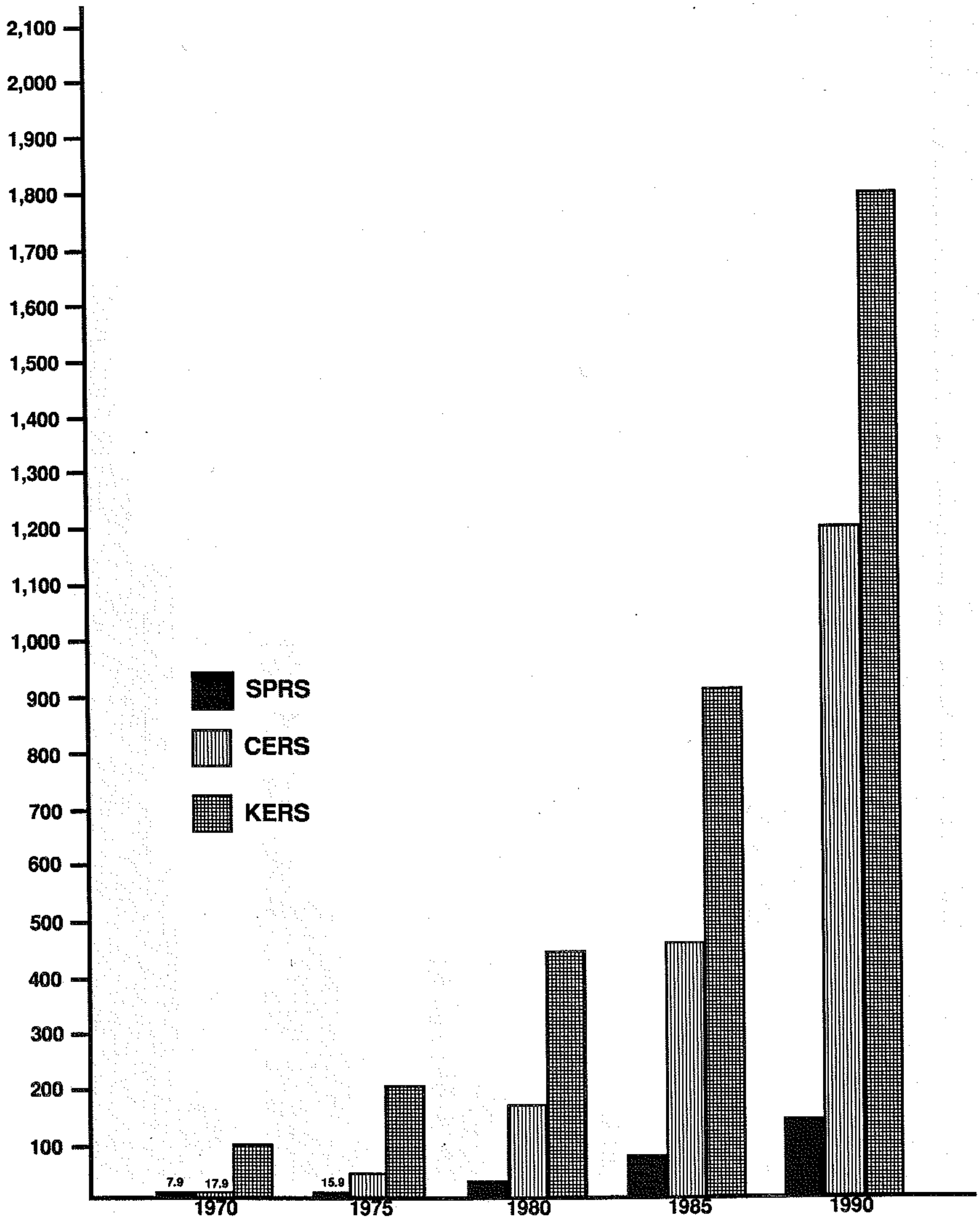
Barbara L. Brightman, C.F.A.
Principal

BLB/lk
C64

PORTFOLIO INCOME GROWTH
(Interest and Dividends)
6/30/70 through 6/30/90
In Millions of Dollars



PORTFOLIO GROWTH
(at book value)
6/30/70 through 6/30/90
In Millions of Dollars



REAL ESTATE INVESTMENTS
OF
KENTUCKY RETIREMENT SYSTEMS

FULLY-OWNED PROPERTIES:

Danville Manor, Danville, KY
Big Sandy Village, Pikeville, KY
Perimeter Park West, Building A, Frankfort, KY

PROPERTIES PARTICIPATED IN:

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

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

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

Genessee Valley Center, Flint, MI
California Land Venture (Residential Land
Development--Various California
Counties)

<u>Heitman Fund I:</u>

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

<u>Heitman Fund II:</u>

MN-TX Business Center, Eden Prarie, 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

<u>Heitman Fund III:</u>

**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

OTHERS:

One O'Hare Center, Rosemont, IL

KENTUCKY RETIREMENT SYSTEMS
PORTFOLIO SUMMARY: 6/30/90
NONHAZARDOUS STATE EMPLOYEES (KERS)

DESCRIPTION	CORPORATES	GOVERNMENTS	MORTGAGES	SHORT TERM	TOTAL
Par Value	$144,960,876.31	$362,986,107.82	$162,313,703.20	$388,900,191.04	$1,059,160,878.37
% of Total Par Value	14%	34%	15%	37%	100%
Book Value	$144,651,537.73	$315,910,510.24	$147,712,955.50	$388,900,191.04	$ 997,175,194.51
% of Total Book Value	15%	31%	15%	39%	100%
Market Value	$145,883,063.90	$319,401,777.17	$152,497,679.40	$388,900,191.04	$1,006,682,711.51
% of Total Market Value	14%	32%	15%	39%	100%
Potential Gain (Or Loss)	$ 1,231,526.17	$ 3,491,266.93	$ 4,784,723.90	.00	$ 9,507,517.00
Indicated Annual Income	$ 14,018,250.47	$ 28,806,780.57	$ 13,257,669.63	$ 31,988,656.22	$ 88,071,356.89
Current Yield — Book Value	9.69	9.12	8.98	8.23	8.83
— Market Value	9.61	9.02	8.69	8.23	8.75
Yield to Maturity — Mkt Value	9.52	8.54	9.16	8.23	8.65
Average Coupon	9.67	7.94	8.17	8.23	8.32
Average Maturity (Years)	13.29	10.42	21.16	.08	8.66

REAL ESTATE

BOOK VALUE/COST	MARKET VALUE	POTENTIAL GAIN (OR LOSS)	INDICATED INCOME	CURRENT YIELD ON COST	CURRENT YIELD ON MARKET
$ 68,391,863.59	$ 79,117,849.37	$ 10,725,985.78	$ 5,174,882.88	7.57	6.54

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
20,712,735	$711,089,158.56	$882,330,057.93	$171,240,899.37	$ 27,307,478.51	3.84	3.09

TOTAL PORTFOLIO

TYPE	BOOK VALUE	PCTAGE OF PORTFOLIO	MARKET VALUE	PCTAGE OF PORTFOLIO	INDICATED INCOME	INDICATED YIELD ON BOOK	INDICATED YIELD ON MARKET
Corporates	$ 144,651,537.73	8%	$ 145,883,063.90	7%	$ 14,018,250.47	9.69	9.61
Governments	$ 315,910,510.24	18%	$ 319,401,777.17	16%	$ 28,806,780.57	9.12	9.02
Mortgages	$ 147,712,955.50	8%	$ 152,497,679.40	8%	$ 13,257,669.63	8.98	8.69
Short Term	$ 388,900,191.04	22%	$ 388,900,191.04	20%	$ 31,988,656.22	8.23	8.23
Real Estate	$ 68,391,863.59	4%	$ 79,117,849.37	4%	$ 5,174,882.88	7.57	6.54
Common Stock	$ 711,089,158.56	40%	$ 882,330,057.93	45%	$ 27,307,478.51	3.84	3.09
Total Portfolio	$1,776,656,216.66	100%	$1,968,130,618.81	100%	$120,553,718.28	6.79	6.13

KENTUCKY RETIREMENT SYSTEMS
PORTFOLIO SUMMARY: 6/30/90
HAZARDOUS STATE EMPLOYEES (KERS-H)

DESCRIPTION	CORPORATES	GOVERNMENTS	MORTGAGES	SHORT TERM	TOTAL
Par Value	$ 2,236,383.83	$ 5,316,183.53	$ 2,136,759.65	$ 8,506,454.92	$ 18,195,781.93
% of Total Par Value	12%	29%	12%	47%	100%
Book Value	$ 2,231,913.50	$ 4,567,596.15	$ 1,966,993.32	$ 8,506,454.92	$ 17,272,957.89
% of Total Book Value	13%	26%	12%	49%	100%
Market Value	$ 2,255,945.91	$ 4,601,361.59	$ 2,015,523.20	$ 8,506,454.92	$ 17,379,285.62
% of Total Market Value	13%	26%	12%	49%	100%
Potential Gain (Or Loss)	$ 24,032.41	$ 33,765.44	$ 48,529.88	.00	$ 106,327.73
Indicated Annual Income	$ 216,977.60	$ 411,254.71	$ 178,654.15	$ 698,914.22	$ 1,505,800.68
Current Yield — Book Value	9.72	9.00	9.08	8.22	8.72
— Market Value	9.62	8.94	8.86	8.22	8.66
Yield to Maturity — Mkt Value	9.54	8.53	9.21	8.22	8.59
Average Coupon	9.70	7.74	8.36	8.22	8.28
Average Maturity (Years)	13.28	10.64	22.75	.08	7.45

REAL ESTATE

BOOK VALUE/COST	MARKET VALUE	POTENTIAL GAIN (OR LOSS)	INDICATED INCOME	CURRENT YIELD ON COST	CURRENT YIELD ON MARKET
$ 1,182,640.96	$ 1,357,156.06	$ 174,515.10	$ 94,718.40	8.01	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
361,887	$13,008,067.25	$ 15,819,330.29	$ 2,811,263.04	$ 489,951.65	3.77	3.10

TOTAL PORTFOLIO

TYPE	BOOK VALUE	PCTAGE OF PORTFOLIO	MARKET VALUE	PCTAGE OF PORTFOLIO	INDICATED INCOME	INDICATED YIELD ON BOOK	INDICATED YIELD ON MARKET
Corporates	$ 2,231,913.50	7%	$ 2,255,945.91	7%	$ 216,977.60	9.72	9.62
Governments	$ 4,567,596.15	15%	$ 4,601,361.59	13%	$ 411,254.71	9.00	8.94
Mortgages	$ 1,966,993.32	6%	$ 2,015,523.20	6%	$ 178,654.15	9.08	8.86
Short Term	$ 8,506,454.92	27%	$ 8,506,454.92	25%	$ 698,914.22	8.22	8.22
Real Estate	$ 1,182,640.96	4%	$ 1,357,156.06	4%	$ 94,718.40	8.01	6.98
Common Stock	$ 13,008,067.25	41%	$ 15,819,330.29	45%	$ 489,951.65	3.77	3.10
Total Portfolio	$ 31,463,666.10	100%	$ 34,555,771.97	100%	$ 2,090,470.73	6.64	6.05

KENTUCKY RETIREMENT SYSTEMS
PORTFOLIO SUMMARY: 6/30/90
NONHAZARDOUS COUNTY EMPLOYEES (CERS)

DESCRIPTION	CORPORATES	GOVERNMENTS	MORTGAGES	SHORT TERM	TOTAL
Par Value	$ 64,082,829.55	$198,744,876.07	$ 77,928,814.19	$214,081,074.95	$554,837,594.76
% of Total Par Value	11%	36%	14%	39%	100%
Book Value	$ 64,051,658.08	$174,494,125.51	$ 70,952,758.38	$214,081,074.95	$523,579,616.92
% of Total Book Value	12%	33%	14%	41%	100%
Market Value	$ 64,152,632.11	$176,167,907.86	$ 73,800,405.77	$214,081,074.95	$528,202,020.69
% of Total Market Value	12%	33%	14%	41%	100%
Potential Gain (Or Loss)	$ 100,974.03	$ 1,673,782.35	$ 2,847,547.39	.00	$ 4,622,403.77
Indicated Annual Income	$ 6,146,434.18	$ 15,822,775.08	$ 6,519,808.95	$ 17,610,944.97	$ 46,099,963.18
Current Yield — Book Value	9.60	9.07	9.19	8.23	8.80
— Market Value	9.58	8.98	8.83	8.23	8.73
Yield to Maturity — Mkt Value	9.51	8.54	9.19	8.23	8.62
Average Coupon	9.59	7.96	8.37	8.23	8.31
Average Maturity (Years)	13.26	10.27	22.26	.08	8.37

REAL ESTATE

BOOK VALUE/COST	MARKET VALUE	POTENTIAL GAIN (OR LOSS)	INDICATED INCOME	CURRENT YIELD ON COST	CURRENT YIELD ON MARKET
$ 36,410,099.77	$ 41,789,036.23	$ 5,378,936.46	$ 2,777,424.97	7.63	6.65

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
11,075,695	$395,049,945.29	$470,763,332.88	$75,713,387.59	$14,648,696.97	3.71	3.11

TOTAL PORTFOLIO

TYPE	BOOK VALUE	PCTAGE OF PORTFOLIO	MARKET VALUE	PCTAGE OF PORTFOLIO	INDICATED INCOME	INDICATED YIELD ON BOOK	INDICATED YIELD ON MARKET
Corporates	$ 64,051,658.08	7%	$ 64,152,632.11	6%	$ 6,146,434.18	9.60	9.58
Governments	$ 174,494,125.51	18%	$ 176,167,907.86	17%	$15,822,775.08	9.07	8.98
Mortgages	$ 70,952,758.38	7%	$ 73,800,405.77	7%	$ 6,519,808.95	9.19	8.83
Short Term	$ 214,081,074.95	22%	$ 214,081,074.95	21%	$17,610,944.97	8.23	8.23
Real Estate	$ 36,410,099.77	4%	$ 41,789,036.23	4%	$ 2,777,424.97	7.63	6.65
Common Stock	$ 395,049,945.29	42%	$ 470,763,332.88	45%	$14,648,696.76	3.71	3.11
Total Portfolio	$ 955,039,661.98	100%	$1,040,754,389.80	100%	$63,526,084.91	6.65	6.10

KENTUCKY RETIREMENT SYSTEMS
PORTFOLIO SUMMARY: 6/30/90
HAZARDOUS COUNTY EMPLOYEES (CERS-H)

DESCRIPTION	CORPORATES	GOVERNMENTS	MORTGAGES	SHORT TERM	TOTAL
Par Value	$ 13,757,275.10	$ 44,618,620.87	$ 16,600,984.05	$69,264,140.73	$144,241,020.75
% of Total Par Value	10%	30%	12%	48%	100%
Book Value	$ 13,745,632.70	$ 40,636,851.44	$ 15,273,989.78	$69,264,140.73	$138,920,614.65
% of Total Book Value	10%	29%	11%	50%	100%
Market Value	$ 13,785,205.96	$ 40,963,697.18	$ 15,830,607.21	$69,264,140.73	$139,843,651.08
% of Total Market Value	10%	29%	11%	50%	100%
Potential Gain (Or Loss)	$ 39,573.26	$ 326,845.74	$ 556,617.43	.00	$ 923,036.43
Indicated Annual Income	$ 1,321,299.10	$ 3,635,417.28	$ 1,412,439.15	$ 5,695,765.19	$ 12,064,920.72
Current Yield — Book Value	9.61	8.95	9.25	8.22	8.68
— Market Value	9.58	8.87	8.92	8.22	8.63
Yield to Maturity — Mkt Value	9.50	8.52	9.20	8.22	8.55
Average Coupon	9.60	8.15	8.51	8.22	8.36
Average Maturity (Years)	12.79	9.68	22.15	.08	6.80

REAL ESTATE

BOOK VALUE/COST	MARKET VALUE	POTENTIAL GAIN (OR LOSS)	INDICATED INCOME	CURRENT YIELD ON COST	CURRENT YIELD ON MARKET
$ 8,144,649.75	$ 9,275,899.73	$1,131,249.98	$ 617,861.91	7.59	6.66

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
3,218,166	$121,034,907.93	$138,098,339.68	$ 17,063,431.75	$ 4,324,619.98	3.57	3.13

TOTAL PORTFOLIO

TYPE	BOOK VALUE	PCTAGE OF PORTFOLIO	MARKET VALUE	PCTAGE OF PORTFOLIO	INDICATED INCOME	INDICATED YIELD ON BOOK	INDICATED YIELD ON MARKET
Corporates	$ 13,745,632.70	5%	$ 13,785,205.96	5%	$ 1,321,299.10	9.61	9.58
Governments	$ 40,636,851.44	15%	$ 40,963,697.18	14%	$ 3,635,417.28	8.95	8.87
Mortgages	$ 15,273,989.78	6%	$ 15,830,607.21	6%	$ 1,412,439.15	9.25	8.92
Short Term	$ 69,264,140.73	26%	$ 69,264,140.73	24%	$ 5,695,765.19	8.22	8.22
Real Estate	$ 8,144,649.75	3%	$ 9,275,899.73	3%	$ 617,861.91	7.59	6.66
Common Stock	$ 121,034,907.93	45%	$ 138,098,339.68	48%	$ 4,324,619.98	3.57	3.13
Total Portfolio	$ 268,100,172.33	100%	$ 287,217,890.49	100%	$17,007,402.61	6.34	5.92

KENTUCKY RETIREMENT SYSTEMS
PORTFOLIO SUMMARY: 6/30/90
STATE POLICE (SPRS)

DESCRIPTION	CORPORATES	GOVERNMENTS	MORTGAGES	SHORT TERM	TOTAL
Par Value	$ 13,971,259.92	$ 35,280,306.71	$ 14,143,525.96	$32,591,938.36	$ 95,987,030.95
% of Total Par Value	14%	37%	15%	34%	100%
Book Value	$ 13,923,120.89	$ 31,000,417.83	$ 12,969,703.31	$32,591,938.36	$ 90,485,180.39
% of Total Book Value	15%	35%	14%	36%	100%
Market Value	$ 13,962,738.45	$ 31,314,636.90	$ 13,241,217.52	$32,591,938.36	$ 91,110,531.23
% of Total Market Value	15%	34%	15%	36%	100%
Potential Gain (Or Loss)	$ 39,617.56	$ 314,219.07	$ 271,514.21	.00	$ 625,350.84
Indicated Annual Income	$ 1,331,919.59	$ 2,815,070.93	$ 1,142,688.99	$ 2,679,700.68	$ 7,969,380.19
Current Yield — Book Value	9.57	9.08	8.81	8.22	8.81
— Market Value	9.54	8.99	8.63	8.22	8.75
Yield to Maturity — Mkt Value	9.50	8.54	9.12	8.22	8.66
Average Coupon	9.53	7.98	8.08	8.22	8.30
Average Maturity (Years)	14.00	9.66	20.51	.08	8.64

REAL ESTATE

BOOK VALUE/COST	MARKET VALUE	POTENTIAL GAIN (OR LOSS)	INDICATED INCOME	CURRENT YIELD ON COST	CURRENT YIELD ON MARKET
$ 5,670,665.22	$ 6,583,519.94	$ 912,854.72	$ 424,080.72	7.48	6.44

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
1,617,519	$ 53,771,819.83	$ 67,439,545.95	$ 14,699,554.74	$ 2,129,053.03	3.96	3.11

TOTAL PORTFOLIO

TYPE	BOOK VALUE	PCTAGE OF PORTFOLIO	MARKET VALUE	PCTAGE OF PORTFOLIO	INDICATED INCOME	INDICATED YIELD ON BOOK	INDICATED YIELD ON MARKET
Corporates	$ 13,923,120.89	9%	$ 13,962,738.45	8%	$ 1,331,919.59	9.57	9.54
Governments	$ 31,000,417.83	21%	$ 31,314,636.90	19%	$ 2,815,070.93	9.08	8.99
Mortgages	$ 12,969,703.31	9%	$ 13,241,217.52	8%	$ 1,142,688.99	8.81	8.63
Short Term	$ 32,591,938.36	22%	$ 32,591,938.36	20%	$ 2,679,700.68	8.22	8.22
Real Estate	$ 5,670,665.22	4%	$ 6,583,519.94	4%	$ 424,080.72	7.48	6.44
Common Stock	$ 53,771,819.83	35%	$ 68,471,374.57	41%	$ 2,129,053.03	3.96	3.11
Total Portfolio	$ 149,927,665.44	100%	$ 166,165,425.74	100%	$10,522,513.94	7.02	6.33

KENTUCKY RETIREMENT SYSTEMS
PORTFOLIO SUMMARY: 6/30/90
INSURANCE FUND PORTFOLIO

DESCRIPTION	CORPORATES	GOVERNMENTS	MORTGAGES	SHORT TERM	TOTAL
Par Value	$7,750,000.00	$31,515,000.00	$8,199,061.03	$17,760,840.24	$65,224,901.27
% of Total Par Value	12%	48%	13%	27%	100%
Book Value	$7,716,215.99	$30,903,886.62	$8,154,529.45	$17,760,840.24	$64,535,472.30
% of Total Book Value	12%	48%	13%	27%	100%
Market Value	$7,696,420.00	$31,211,767.06	$7,952,886.83	$17,760,840.24	$64,621,914.13
% of Total Market Value	12%	48%	11%	27%	100%
Potential Gain (Or Loss)	$ -19,795.99	$ 307,880.44	$ -201,642.62	.00	$ 86,441.83
Indicated Annual Income	$ 691,812.53	$ 2,626,743.76	$ 733,420.19	$ 1,452,836.73	$ 5,504,813.21
Current Yield — Book Value	8.97	8.50	8.99	8.18	8.53
— Market Value	8.99	8.42	9.22	8.18	8.52
Yield to Maturity — Mkt Value	10.07	8.48	9.30	8.18	8.69
Average Coupon	8.93	8.33	8.95	8.18	8.44
Average Maturity (Years)	4.25	6.81	22.73	.08	6.67

TOTAL PORTFOLIO

TYPE	BOOK VALUE	PCTAGE OF PORTFOLIO	MARKET VALUE	PCTAGE OF PORTFOLIO	INDICATED INCOME	INDICATED YIELD ON BOOK	INDICATED YIELD ON MARKET
Corporates	$ 7,716,215.99	12%	$ 7,696,420.00	12%	$ 691,812.53	8.97	8.99
Governments	$30,903,886.62	47%	$31,211,767.06	48%	$2,626,743.76	8.50	8.42
Mortgages	$ 8,154,529.45	13%	$ 7,952,886.83	13%	$ 733,420.19	8.99	9.22
Short Term	$17,760,840.24	28%	$17,760,840.24	27%	$1,452,836.73	8.18	8.18
Total Portfolio	$64,535,472.30	100%	$64,621,914.13	100%	$5,504,813.21	8.53	8.52

KENTUCKY RETIREMENT SYSTEMS
PORTFOLIO SUMMARY: 6/30/90
ALL SYSTEMS COMBINED

DESCRIPTION	CORPORATES	GOVERNMENTS	MORTGAGES	SHORT TERM	TOTAL
Par Value	$239,008,624.71	$646,946,095.00	$273,123,787.05	$713,343,800.00	$1,872,422,306.76
% of Total Par Value	12%	35%	15%	38%	100%
Book Value	$238,603,862.90	$566,609,501.17	$248,876,400.29	$713,343,800.00	$1,767,433,564.36
% of Total Book Value	14%	32%	14%	40%	100%
Market Value	$240,039,586.33	$572,449,380.70	$257,385,433.10	$713,343,800.00	$1,783,218,200.13
% of Total Market Value	13%	32%	14%	40%	100%
Potential Gain (Or Loss)	$ 1,435,723.43	$ 5,839,879.53	$ 8,509,032.81	.00	$ 15,784,635.77
Indicated Annual Income	$ 23,034,880.94	$ 51,491,298.57	$ 22,511,260.87	$ 58,673,981.28	$ 155,711,421.66
Current Yield — Book Value	9.65	9.09	9.05	8.23	8.81
— Market Value	9.60	8.99	8.75	8.23	8.73
Yield to Maturity — Mkt Value	9.52	8.54	9.17	8.23	8.64
Average Coupon	9.64	7.96	8.24	8.23	8.32
Average Maturity (Years)	13.30	10.28	21.51	.08	8.42

REAL ESTATE

BOOK VALUE/COST	MARKET VALUE	POTENTIAL GAIN (OR LOSS)	INDICATED INCOME	CURRENT YIELD ON COST	CURRENT YIELD ON MARKET
$119,799,919.29	$138,123,461.33	$18,323,542.04	$ 9,088,968.88	7.59	6.58

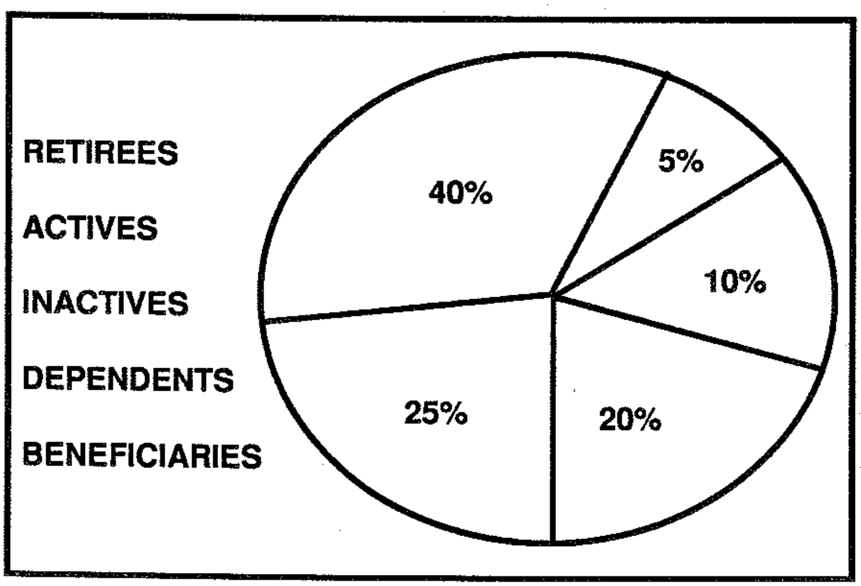
COMMON STOCK

NO. OF SHARES	BOOK VALUE/COST	MARKET VALUE	POTENTIAL GAIN (OR LOSS)	INDICATED DIVIDEND INCOME	CURRENT YIELD ON COST	CURRENT YIELD ON MARKET
36,986,002	$1,293,953,898.86	$1,575,482,435.35	$281,528,536.49	$ 48,899,799.93	3.78	3.10

TOTAL PORTFOLIO

TYPE	BOOK VALUE	PCTAGE OF PORTFOLIO	MARKET VALUE	PCTAGE OF PORTFOLIO	INDICATED INCOME	INDICATED YIELD ON BOOK	INDICATED YIELD ON MARKET
Corporates	$ 238,603,862.90	8%	$ 240,039,586.33	7%	$ 23,034,880.94	9.65	9.60
Governments	$ 566,609,501.17	18%	$ 572,449,380.70	16%	$ 51,491,298.57	9.09	8.99
Mortgages	$ 248,876,400.29	8%	$ 257,385,433.10	7%	$ 22,511,260.87	9.05	8.75
Short Term	$ 713,343,800.00	22%	$ 713,343,800.00	20%	$ 58,673,981.28	8.23	8.23
Real Estate	$ 119,799,919.29	4%	$ 138,123,461.33	4%	$ 9,088,968.88	7.59	6.58
Common Stock	$1,293,953,898.86	40%	$1,575,482,435.35	46%	$ 48,899,799.93	3.78	3.10
Total Portfolio	$3,181,187,382.51	100%	$3,496,824,096.81	100%	$213,700,190.47	6.72	6.11

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, 1990, 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	179	515	3293	3536	2664	2172	1496	1399	746
CERS	235	655	3584	2752	1534	1181	561	363	230
SPRS	11	8	14	13	29	100	146	78	6

The first chart following this introduction shows average monthly benefit payments for these same service ranges. The statistics for those retiring during fiscal year 1989-90 are as follows:

SYSTEM	AVE. FINAL COMP.	AVE. MO. BENE.	% RETIRING WITH YRS. SVC. Under 20	20-25	25-30	30+
KERS	$18,015	$ 404.39	78%	14%	4%	4%
CERS	$15,980	$ 437.03	74%	17%	5%	4%
SPRS	$30,403	$1,135.92	22%	62%	0%	6%

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, 1990:

	ACTIVE	INACTIVE	RETIRED
KERS	45,284	10,513	15,499
KERS-Hazardous	605	183	116
CERS	49,159	11,741	9,670
CERS-Hazardous	4,449	218	789
SPRS	979	105	418

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, 1990

AVERAGE MONTHLY BENEFIT IN DOLLARS PER YEARS OF SERVICE

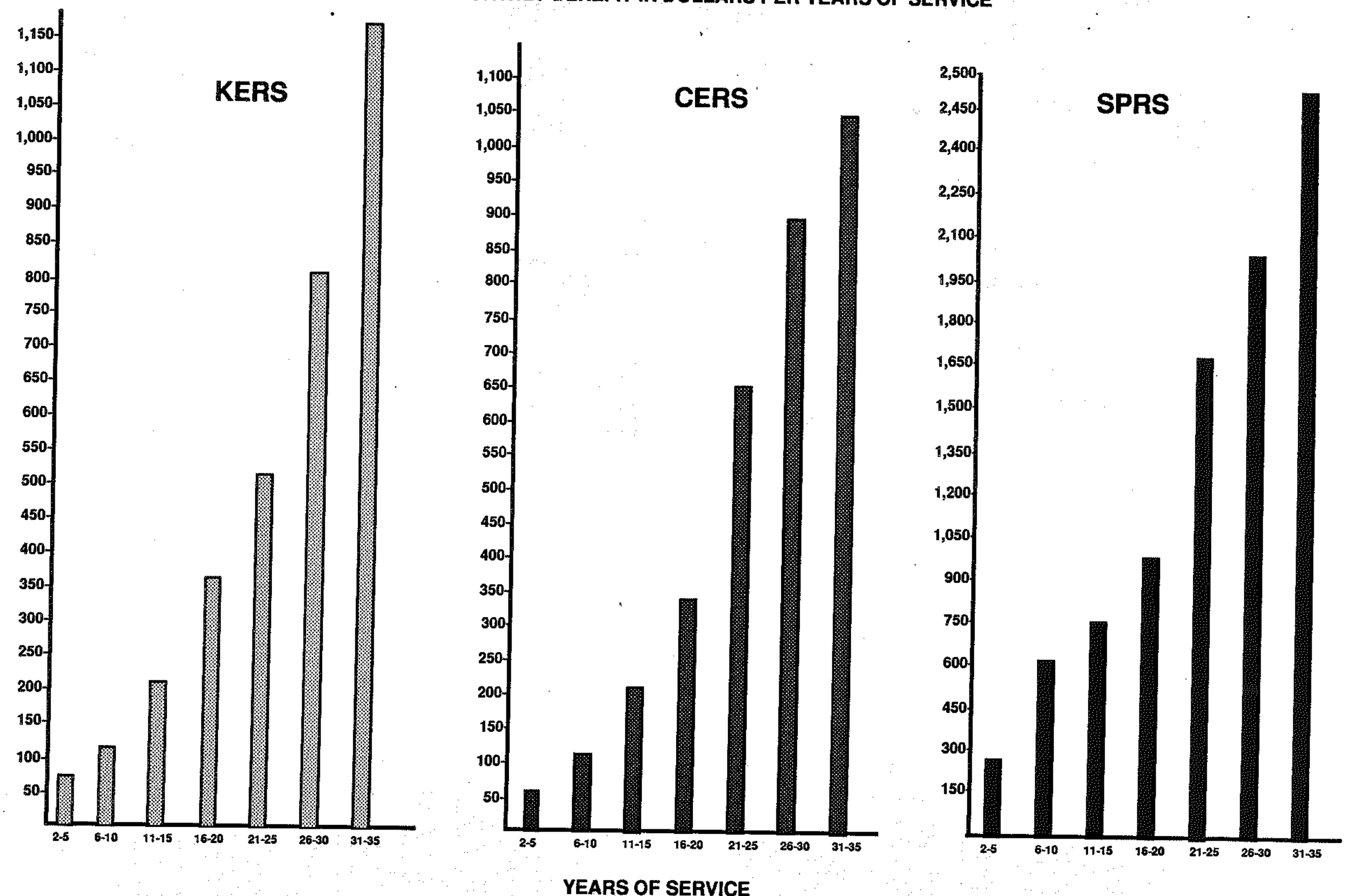


TABLE 2
KENTUCKY EMPLOYEES RETIREMENT SYSTEM
RETIREMENT BENEFITS BY PLAN
FOR THE PERIOD ENDING JUNE 30, 1990

	Number Of Cases	Total	Average	Monthly Benefits Low	High
NORMAL					
Basic	2,276	$ 809,413.07	$ 355.62	$ 1.19	$3,844.00
Straight Life Annuity	3	608.85	202.95	105.83	356.31
Life - 10 Years Certain (Member)	653	225,501.29	345.33	1.30	2,868.03
Life - 10 Years Certain (Beneficiary)	67	20,340.79	303.59	28.62	1,416.95
10 Years Certain (Member)	3	4,309.26	1,436.42	1,299.83	1,518.69
10 Years Certain (Beneficiary)	1	1,108.95	1,108.95	1,108.95	1,108.95
Life - 15 Years Certain (Member)	54	30,800.26	570.37	36.04	3,226.98
Life - 15 Years Certain (Beneficiary)	8	3,503.90	437.98	93.34	1,004.76
Survivorship 100% (Member)	651	209,615.24	321.98	1.81	2,500.74
Survivorship 100% (Beneficiary)	398	82,077.81	206.22	2.17	1,991.26
Pop-Up Option	77	50,197.63	651.91	5.75	2,711.01
Survivorship 66 2/3% (Member)	194	108,117.85	557.30	6.21	2,776.34
Survivorship 66 2/3% (Beneficiary)	40	9,920.30	248.00	24.56	913.51
Survivorship 50% (Member)	368	195,691.75	531.77	2.97	3,773.13
Survivorship 50% (Beneficiary)	180	40,305.25	223.91	19.68	771.89
Soc. Sec. - Basic (Under 62)	3	4,796.53	1,598.84	1,027.10	2,386.28
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	4,980	$1,802,602.03	$ 361.96	$ 1.19	$3,844.00
EARLY					
Basic	3,434	$1,409,450.35	$ 410.43	$ .70	$3,512.77
Life - 10 Years Certain (Member)	1,155	439,933.81	380.89	1.54	2,796.33
Life - 10 Years Certain (Beneficiary)	67	23,974.22	357.82	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)	139	74,447.01	535.59	25.70	2,371.05
Life - 15 Years Certain (Beneficiary)	9	2,372.21	263.57	92.71	848.21
Life - 20 Years Certain (Member)	60	31,518.03	525.30	16.82	2,397.79
Life - 20 Years Certain (Beneficiary)	1	1,777.09	1,777.09	1,777.09	1,777.09
Survivorship 100% (Member)	1,139	457,333.17	401.52	2.43	3,574.00
Survivorship 100% (Beneficiary)	307	81,248.52	264.65	15.26	2,919.57
Pop-Up Option	271	217,305.14	801.86	1.33	3,186.48
Survivorship 66 2/3% (Member)	371	330,088.74	889.72	10.25	3,293.68
Survivorship 66 2/3% (Beneficiary)	58	19,377.73	334.09	9.94	1,267.11
Survivorship 50% (Member)	566	405,625.70	716.65	7.41	3,777.33
Survivorship 50% (Beneficiary)	147	31,577.77	214.81	20.33	948.46
Soc. Sec. - Basic (Under 62)	506	525,009.23	1,037.56	4.72	3,716.58
Soc. Sec. - Survivorship (Under 62)	356	513,613.66	1,442.73	22.67	3,684.01
Soc. Sec. - Survivorship (Over 62)	184	106,677.58	579.76	12.88	2,402.90
TOTALS AND AVERAGES	8,772	$4,674,871.02	$ 532.93	$ .70	$3,777.33
DISABILITY					
Basic	393	$ 156,463.02	$ 398.12	$ 15.46	$2,054.38
Life - 10 Years Certain (Member)	178	68,859.69	386.85	3.33	1,284.90
Life - 10 Years Certain (Beneficiary)	83	36,032.99	434.13	30.73	1,336.23
10 Years Certain (Beneficiary)	1	218.00	218.00	218.00	218.00
Life - 15 Years Certain (Member)	26	12,267.85	471.84	170.42	1,072.44
Life - 15 Years Certain (Beneficiary)	17	10,123.01	595.47	282.64	1,135.42
Life - 20 Years Certain (Member)	18	8,163.68	453.53	206.63	836.06
Life - 20 Years Certain (Beneficiary)	9	5,495.29	610.58	150.77	1,127.64
Survivorship 100% (Member)	190	58,509.28	307.94	5.63	2,446.06
Survivorship 100% (Beneficiary)	268	77,247.42	288.23	9.46	1,130.33
Pop-Up Option	42	23,054.52	548.91	3.84	1,505.87
Survivorship 66 2/3% (Member)	32	15,618.59	488.08	94.16	1,436.15
Survivorship 66 2/3% (Beneficiary)	35	8,281.19	236.60	4.43	818.61
Survivorship 50% (Member)	88	36,749.72	417.61	3.15	1,562.13
Survivorship 50% (Beneficiary)	70	12,194.94	174.21	39.58	633.79
Soc. Sec. - Basic (Under 62)	20	14,317.88	715.89	79.22	1,556.89
Soc. Sec. - Survivorship (Under 62)	8	7,139.49	892.43	468.75	1,616.48
Soc. Sec. - Survivorship (Over 62)	5	2,434.73	486.94	288.92	1,005.00
TOTALS AND AVERAGES	1,483	$ 553,171.29	$ 373.00	$ 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	80	49,201.56	615.01	28.46	2,374.32
10 Years Certain	192	85,514.72	445.38	57.55	2,358.86
Survivorship 100%	442	158,428.04	358.43	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	4,372.85	546.60	95.72	1,299.12
Soc. Sec. - Survivorship (Under 60)	3	2,346.55	782.18	518.38	1,085.36
Soc. Sec. - Survivorship (Over 60)	10	2,262.39	226.23	26.83	759.62
TOTALS AND AVERAGES	738	$ 303,049.23	$ 410.63	$ 1.92	$2,670.87
SYSTEM TOTALS AND AVERAGES	**15,973**	**$7,333,693.57**	**$ 459.13**	**$ .70**	**$3,844.00**

TABLE 3
COUNTY EMPLOYEES RETIREMENT SYSTEM
RETIREMENT BENEFITS BY PLAN
FOR THE PERIOD ENDING JUNE 30, 1990

	Number Of Cases	Total	Monthly Benefits Average	Low	High
NORMAL					
Basic	1,848	$ 392,085.50	$ 212.16	$ .29	$3,522.58
Life - 10 Years Certain (Member)	628	127,743.92	203.41	3.96	3,098.93
Life - 10 Years Certain (Beneficiary)	62	12,516.43	201.87	25.01	1,114.43
10 Years Certain (Member)	15	27,952.90	1,863.52	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)	57	13,399.21	235.07	26.93	1,131.25
Life - 15 Years Certain (Beneficiary)	6	2,391.85	398.64	55.92	1,070.69
Life - 20 Years Certain (Member)	1	1,946.30	1,946.30	1,946.30	1,946.30
Survivorship 100% (Member)	592	126,787.10	214.16	4.38	2,214.97
Survivorship 100% (Beneficiary)	231	37,529.30	162.46	15.26	1,431.81
Pop-Up Option	91	36,227.22	398.10	13.00	1,989.31
Survivorship 66 2/3% (Member)	116	58,156.35	501.34	28.40	2,694.77
Survivorship 66 2/3% (Beneficiary)	29	8,777.71	302.67	27.89	1,142.63
Survivorship 50% (Member)	195	87,290.37	447.64	2.87	3,018.09
Survivorship 50% (Beneficiary)	84	15,088.87	179.62	1.61	1,352.01
Soc. Sec. - Basic (Under 62)	4	7,914.67	1,978.66	1,562.22	2,476.48
Soc. Sec. - Survivorship (Under 62)	16	25,462.84	1,591.42	864.96	2,389.28
Soc. Sec. - Survivorship (Over 62)	13	10,843.22	834.09	542.40	1,493.10
TOTALS AND AVERAGES	3,990	$ 994,740.07	$ 249.30	$ .29	$3,522.58
EARLY					
Basic	2,321	$ 592,624.57	$ 255.33	$ 2.34	$3,145.81
Life - 10 Years Certain (Member)	903	205,698.33	227.79	3.49	2,327.76
Life - 10 Years Certain (Beneficiary	58	11,251.03	193.98	4.16	644.03
10 Years Certain (Member)	13	34,002.50	2,615.57	1,049.16	5,253.84
10 Years Certain (Beneficiary)	1	546.88	546.88	546.88	546.88
Life - 15 Years Certain (Member)	138	45,536.08	329.97	22.57	2,878.78
Life - 15 Years Certain (Beneficiary)	6	2,465.32	410.88	88.86	1,338.76
Life - 20 Years Certain (Member)	69	42,889.30	621.58	25.79	2,560.08
Life - 20 Years Certain (Beneficiary)	1	41.50	41.50	41.50	41.50
Survivorship 100% (Member)	717	184,737.11	257.65	5.48	2,256.27
Survivorship 100% (Beneficiary)	162	35,878.27	221.47	6.16	1,447.55
Pop-Up Option	277	199,849.07	721.47	20.11	2,489.78
Survivorship 66 2/3% (Member)	183	118,939.32	649.94	18.40	2,871.94
Survivorship 66 2/3% (Beneficiary)	17	3,764.25	221.42	30.74	761.85
Survivorship 50% (Member)	287	170,785.79	595.07	8.14	3,112.91
Survivorship 50% (Beneficiary)	48	9,975.26	207.81	3.36	603.95
Soc. Sec. - Basic (Under 62)	139	110,090.97	792.02	6.65	2,409.68
Soc. Sec. - Survivorship (Under 62)	191	235,603.94	1,233.52	20.73	2,557.42
Soc. Sec. - Survivorship (Over 62)	45	14,189.17	315.31	4.88	1,510.14
TOTALS AND AVERAGES	5,576	$2,018,868.66	$ 362.06	$ 2.34	$5,253.84
DISABILITY					
Basic	302	$ 104,776.81	$ 346.94	$ 4.63	$1,942.69
Life - 10 Years Certain (Member)	128	40,859.15	319.21	20.27	1,117.22
Life - 10 Years Certain (Beneficiary)	53	16,916.34	319.17	4.90	898.92
10 Years Certain (Member)	4	5,805.24	1,451.31	1,076.08	1,699.99
Life - 15 Years Certain (Member)	29	10,833.97	373.58	47.69	1,143.47
Life - 15 Years Certain (Beneficiary)	12	4,352.29	362.69	62.14	728.08
Life - 20 Years Certain (Member)	24	8,980.47	374.18	29.69	1,348.10
Life - 20 Years Certain (Beneficiary)	10	4,479.67	447.96	87.47	1,245.28
Survivorship 100% (Member)	134	41,366.26	308.70	22.62	1,120.21
Survivorship 100% (Beneficiary)	108	24,779.98	229.44	27.25	718.55
Pop-Up Option	35	14,707.94	420.22	62.23	1,070.19
Survivorship 66 2/3% (Member)	21	9,811.47	467.21	4.83	1,322.24
Survivorship 66 2/3% (Beneficiary)	10	1,730.13	173.01	53.67	482.57
Survivorship 50% (Member)	52	18,402.26	353.88	71.45	1,104.04
Survivorship 50% (Beneficiary)	30	4,211.96	140.39	37.41	356.46
Soc. Sec. - Basic (Under 62)	10	7,642.05	764.20	113.29	1,566.37
Soc. Sec. - Survivorship (Under 62)	10	6,366.45	636.64	124.60	1,107.77
Dependent Child	38	7,408.09	194.94	154.83	240.61
TOTALS AND AVERAGES	1,010	$ 333,430.51	$ 330.12	$ 4.63	$1,942.69
DEATH BEFORE RETIREMENT					
Basic	1	$ 2,583.32	$2,583.32	$2,583.32	$2,583.32
5 Years Certain	91	29,390.31	322.97	30.46	2,163.49
Life - 10 Years Certain	1	86.04	86.04	86.04	86.04
10 Years Certain	170	46,097.44	271.16	2.69	1,939.50
Survivorship 100%	224	50,193.65	224.08	8.60	1,372.32
Soc. Sec. - Basic (Under 60)	7	4,950.76	707.25	12.00	1,364.85
Soc. Sec. - Survivorship (Over 60)	1	226.24	226.24	226.24	226.24
Dependent Child	2	328.32	164.16	157.76	170.56
TOTALS AND AVERAGES	497	$ 133,856.08	$ 269.32	$ 2.69	$2,583.32
SYSTEM TOTALS AND AVERAGES	**11,073**	**$3,480,895.32**	**$ 314.35**	**$ .29**	**$5,253.84**

TABLE 4
STATE POLICE RETIREMENT SYSTEM
BENEFITS BY PLAN
FOR THE PERIOD ENDING JUNE 30, 1990

	Number Of Cases	Total	Monthly Benefits Average	Low	High
NORMAL					
Basic	10	$ 11,074.59	$1,107.45	$ 62.68	$2,468.45
Life - 10 Years Certain (Member)	8	15,647.56	1,955.94	997.69	3,853.17
10 Years Certain (Member)	12	31,619.19	2,634.93	203.19	4,124.88
Life - 20 Years Certain (Member)	2	4,874.74	2,437.37	2,314.80	2,559.94
Survivorship 100% (Member)	21	28,622.78	1,362.98	114.86	2,796.63
Survivorship 100% (Beneficiary)	5	6,061.07	1,212.21	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	29,027.59	2,418.96	537.76	3,856.35
Soc. Sec. - Survivorship (Over 62)	7	8,671.11	1,238.73	939.52	1,379.73
TOTALS AND AVERAGES	101	$173,730.17	$1,720.10	$ 62.68	$4,124.88
EARLY					
Basic	14	$ 28,412.17	$2,029.44	$ 874.51	$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)	18	50,035.00	2,779.72	1,675.44	3,591.07
Life - 15 Years Certain (Member)	2	4,523.51	2,261.75	1,247.18	3,276.33
Life - 15 Years Certain (Beneficiary)	1	2,000.13	2,000.13	2,000.13	2,000.13
Life - 20 Years Certain (Member)	3	4,783.31	1,594.43	674.04	2,195.21
Survivorship 100% (Member)	33	57,228.92	1,734.20	249.36	3,655.80
Survivorship 100% (Beneficiary)	1	1,811.84	1,811.84	1,811.84	1,811.84
Pop-Up Option	15	23,987.04	1,599.13	1,137.02	3,142.71
Survivorship 66 2/3% (Member)	12	21,182.27	1,765.18	1,081.63	2,981.44
Survivorship 50% (Member)	19	28,377.04	1,493.52	122.14	2,844.67
Soc. Sec. - Basic (Under 62)	16	30,806.43	1,925.40	327.95	2,726.21
Soc. Sec. - Survivorship (Under 62)	103	200,623.27	1,947.79	178.68	3,607.97
Soc. Sec. - Survivorship (Over 62)	2	2,851.46	1,425.73	1,085.73	1,765.73
TOTALS AND AVERAGES	250	$479,537.56	$1,918.15	$ 122.14	$3,655.80
DISABILITY					
Basic	6	$ 4,407.22	$ 734.53	$ 205.65	$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)	8	10,309.93	1,288.74	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
TOTALS AND AVERAGES	25	$ 31,877.95	$1,275.11	$ 205.65	$2,845.92
DEATH BEFORE RETIREMENT					
Basic	2	$ 1,152.89	$ 576.44	$ 223.00	$ 929.89
10 Years Certain	3	5,794.96	1,931.65	858.07	3,580.30
Survivorship 100%	11	10,713.30	973.93	223.99	2,010.54
Dependent Child	2	300.96	150.48	148.23	152.73
TOTALS AND AVERAGES	18	$ 17,962.11	$ 997.89	$ 148.23	$3,580.30
SYSTEM TOTALS AND AVERAGES	**394**	**$703,107.79**	**$1,784.53**	**$ 62.68**	**$4,124.88**

TABLE 5
RETIREMENT PAYMENTS BY COUNTY

County	Payment
Adair	$ 500,908
Allen	$ 321,506
Anderson	$ 1,831,989
Ballard	$ 277,755
Barren	**$ 1,062,190**
Bath	$ 563,712
Bell	$ 584,855
Boone	$ 783,753
Bourbon	$ 825,711
Boyd	**$ 1,359,679**
Boyle	$ 1,572,873
Bracken	$ 153,676
Breathitt	$ 400,300
Breckinridge	$ 300,006
Bullitt	**$ 977,679**
Butler	$ 342,028
Caldwell	$ 661,041
Calloway	$ 1,376,930
Campbell	$ 1,416,580
Carlisle	**$ 133,327**
Carroll	$ 374,960
Carter	$ 642,160
Casey	$ 363,270
Christian	$ 2,572,019
Clark	**$ 612,743**
Clay	$ 544,231
Clinton	$ 174,633
Crittenden	$ 194,521
Cumberland	$ 218,292
Daviess	**$ 2,531,717**
Edmonson	$ 116,042
Elliott	$ 103,090
Estill	$ 371,920
Fayette	$ 6,870,638
Fleming	**$ 501,406**
Floyd	$ 875,833
Franklin	$19,343,358
Fulton	$ 306,021
Gallatin	$ 147,873
Garrard	**$ 474,864**
Grant	$ 867,634
Graves	$ 1,092,673
Grayson	$ 595,843
Green	$ 250,854
Greenup	**$ 382,205**
Hancock	$ 180,322
Hardin	$ 1,643,416
Harlan	$ 708,990
Harrison	$ 485,263
Hart	**$ 404,532**
Henderson	$ 1,347,340
Henry	$ 1,091,204
Hickman	$ 200,640
Hopkins	$ 1,857,737
Jackson	**$ 249,962**
Jefferson	$24,132,288
Jessamine	$ 517,964
Johnson	$ 657,377
Kenton	$ 2,343,857
Knott	**$ 330,970**
Knox	$ 477,337
Larue	$ 563,155
Laurel	$ 1,454,534
Lawrence	$ 324,341
Lee	**$ 319,424**
Leslie	$ 214,833
Letcher	$ 396,436
Lewis	$ 181,762
Lincoln	$ 575,582
Livingston	**$ 444,842**
Logan	$ 756,329
Lyon	$ 504,511
McCracken	$ 2,389,386
McCreary	$ 308,105
McLean	**$ 354,928**
Madison	$ 1,579,954
Magoffin	$ 222,374
Marion	$ 507,227
Marshall	$ 990,509
Martin	**$ 212,424**
Mason	$ 456,627
Meade	$ 367,715
Menifee	$ 211,035
Mercer	$ 1,107,233
Metcalfe	**$ 406,320**
Monroe	$ 161,559
Montgomery	$ 551,401
Morgan	$ 358,245
Muhlenberg	$ 689,126
Nelson	**$ 834,530**
Nicholas	$ 186,094
Ohio	$ 505,388
Oldham	$ 1,418,312
Owen	$ 1,100,415
Owsley	**$ 194,872**
Pendleton	$ 388,906
Perry	$ 536,946
Pike	$ 1,098,674
Powell	$ 268,753
Pulaski	**$ 2,104,373**
Robertson	$ 99,168
Rockcastle	$ 432,670
Rowan	$ 1,166,543
Russell	$ 473,227
Scott	**$ 1,137,455**
Shelby	$ 2,058,490
Simpson	$ 333,211
Spencer	$ 374,226
Taylor	$ 461,991
Todd	**$ 448,540**
Trigg	$ 586,974
Trimble	$ 397,229
Union	$ 517,626
Warren	$ 3,214,616
Washington	**$ 340,689**
Wayne	$ 448,141
Webster	$ 325,349
Whitley	$ 935,295
Wolfe	$ 265,523
Woodford	**$ 1,187,606**

PAYMENTS TO RETIREES LIVING IN OTHER STATES
$5,156,115

TOTAL PAYMENTS FOR FISCAL YEAR ENDING JUNE 30, 1989
$138,212,361

TABLE 6
MEMBERSHIP GROWTH
6/30/70 through 6/30/90

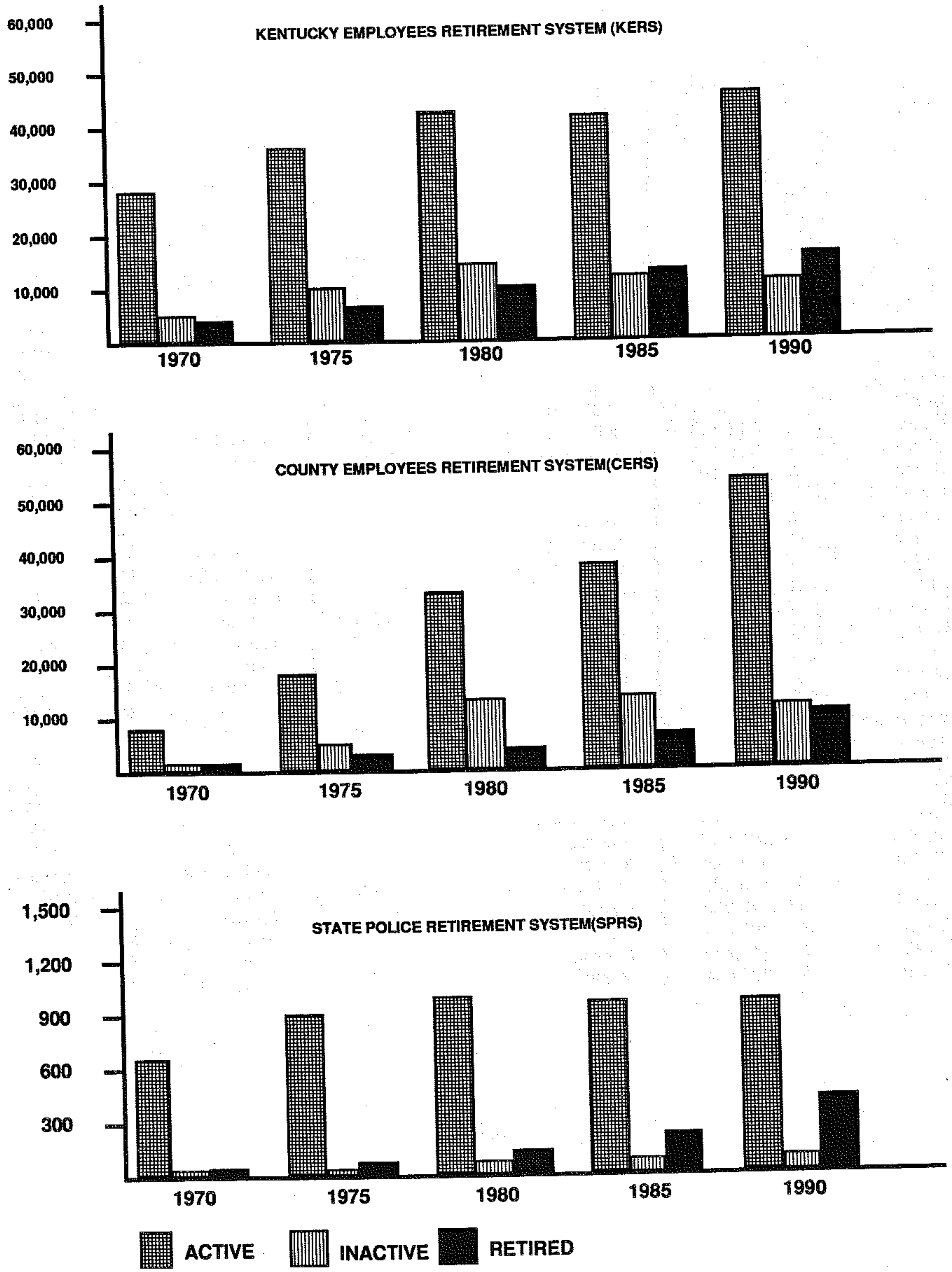


TABLE 7

KENTUCKY EMPLOYEES RETIREMENT SYSTEM
FINANCIAL AND ACTUARIAL STATISTICS

	6/30/86	6/30/87	6/30/88	6/30/89	6/30/90
FINANCIAL STATISTICS					
Total Assets	$1,080,387,371	$1,266,111,911	$1,428,335,169	$1,593,913,511	$1,803,051,503
Investment Income	$ 84,346,598	$ 97,094,173	$ 89,409,521	$ 120,760,531	$ 126,895,778
Total Retirement Payments	$ 43,962495	$ 52,414,394	$ 60,060,355	$ 80,377,963	$ 90,420,645
Total Refund Payments	$ 5,105,361	$ 5,061,156	$ 5,860,974	$ 7,145,907	$ 5,896,851
ACTUARIAL STATISTICS:					
Total Accrued Liability	$1,245,083,143	$1,384,259,808	$1,561,743,738	$1,734,607,903	$2,055,489,412
Unfunded Past Service Liability	$ 166,635,243	$ 120,259,389	$ 135,687,336	$ 145,998,805	$ 256,167,674
Percent Unfunded	13.4%	8.7%	8.7%	8.4%	12.5%
Vested Accrued Benefit Liability	$ 719,695,970	$ 812,932,915	$ 914,976,279	$1,074,546,800	$1,298,362,909
Estimated Annual Salaries	$ 713,878,356	$ 757,822,116	$ 803,594,136	$ 822,362,508	$ 869,109,220
Contribution for Unfunded Past Service Liability	$ 14,997,172	$ 10,823,346	$ 12,211,861	$ 13,139,894	$ 12,475,110
ACTUARIAL COST-NONHAZARDOUS:					
Normal	3.04%	3.05%	3.33%	3.35%	4.14%
Past Service	2.13%	1.47%	1.56%	1.63%	1.46%
Administrative	.12%	.16%	.18%	.19%	*.39%
Hospital/Medical Insurance	1.23%	1.31%	1.44%	1.59%	1.77%
Employee Contributions	4.00%	5.00%	5.00%	5.00%	5.00%
TOTAL COST	10.52%	10.99%	11.51%	11.76%	12.76%
CONTRIBUTION RATES-NONHAZARDOUS:					
Member	4.00%	5.00%	5.00%	5.00%	5.00%
Employer	7.25%	7.45%	7.45%	**7.45%	7.45%
TOTAL RATES	11.25%	12.45%	12.45%	12.45%	12.45%
ACTUARIAL COST-HAZARDOUS:					
Normal	8.68%	8.62%	9.10%	9.38%	8.85%
Past Service	.00%	-1.50%	-1.69%	-.52%	-.14%
Administrative	.10%	.15%	.18%	.07%	*.35%
Hospital/Medical Insurance	4.90%	4.94%	5.31%	5.74%	6.17%
Employee Contributions	7.00%	7.00%	7.00%	7.00%	7.00%
TOTAL COST	20.68%	19.21%	19.90%	21.67%	22.23%
CONTRIBUTION RATES-HAZARDOUS:					
Member	7.00%	7.00%	7.00%	7.00%	7.00%
Employer	14.00%	14.00%	14.00%	**14.00%	***15.05%
TOTAL RATES	21.00%	21.00%	21.00%	21.00%	22.05%

*The rate shown reflects the percentage for budgeted expenses and investment fees as required by legislation enacted by the 1990 General Assembly. Prior years do not include investment fees.

**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.

***Employer rate shown became effective 8/1/90 to reflect legislative changes and new actuarial assumptions.

TABLE 8

COUNTY EMPLOYEES RETIREMENT SYSTEM
FINANCIAL AND ACTUARIAL STATISTICS

FINANCIAL STATISTICS:	6/30/86	6/30/87	6/30/88	6/30/89	6/30/90
Total Assets	$604,622,294	$728,750,892	$840,779,847	$1,085,904,834	$1,274,063,862
Investment Income	$ 44,216,104	$ 54,428,479	$ 52,252,320	$ 76,400,250	$ 86,852,951
Total Retirement Payments	$ 17,329,099	$ 18,065,794	$ 26,982,299	$ 31,719,667	$ 41,158,196
Total Refund Payments	$ 4,974,503	$ 4,382,655	$ 4,451,755	$ 5,208,722	$ 6,346,247
ACTUARIAL STATISTICS:					
Total Accrued Liability	$535,948,094	$678,442,760	$829,346,323	$1,113,868,548	$1,432,323,666
Unfunded Past Service Liability	-0-	-0-	-0-	$ 35,815,913	$ 162,257,399
Percent Unfunded	0%	0%	0%	3.2%	11.3%
Vested Accrued Benefit Liability	$335,463,975	$412,426,510	$492,628,502	$ 728,176,932	$ 907,488,244
Estimated Annual Salaries	$484,796,988	$544,184,376	$615,028,632	$ 686,528,758	$ 790,407,492
Contribution for Unfunded Past Service Liability	-0-	-0-	-0-	$ 3,223,433	$ 7,901,773
ACTUARIAL COST-NONHAZARDOUS:					
Normal	4.23%	4.20%	4.85%	4.83%	5.60%
Past Service	.00%	-.74%	.06%	-.35%	.68%
Administrative	.15%	.18%	.23%	.25%	*.54%
Hospital/Medical Insurance	.92%	.95%	1.07%	1.21%	1.38%
Employee Contributions	4.00%	4.25%	4.25%	4.25%	5.00%
TOTAL COST	9.30%	8.84%	10.46%	10.19%	13.20%
CONTRIBUTION RATES-NONHAZARDOUS:					
Member	4.00%	4.25%	4.25%	4.25%	5.00%
Employer	5.25%	5.75%	5.75%	6.35%	*7.68%
TOTAL RATES	9.25%	10.00%	10.00%	10.60%	12.68%
ACTUARIAL COST-HAZARDOUS:					
Normal	11.15%	8.92%	9.47%	9.34%	8.50%
Past Service	.00%	-1.80%	-2.89%	5.34%	2.89%
Administrative	.24%	.53%	.57%	.06%	*.29%
Hospital/Medical Insurance	2.36%	3.31%	4.21%	4.65%	5.11%
Employee Contributions	7.00%	7.00%	7.00%	7.00%	7.00%
TOTAL COST	20.75%	17.96%	17.36%	26.39%	23.79%
CONTRIBUTION RATES-HAZARDOUS:					
Member	7.00%	7.00%	7.00%	7.00%	7.00%
Employer	14.00%	14.00%	14.00%	14.00%	**15.43%
TOTAL RATES	21.00%	21.00%	21.00%	21.00%	22.43%

*The rate shown reflects the percentage for budgeted expenses and investment fees as required by legislation enacted by the 1990 General Assembly. Prior years do not include investment fees.
**Employer rate shown became effective 8/1/90 to reflect legislative changes and new actuarial assumptions.

TABLE 9

STATE POLICE RETIREMENT SYSTEM
FINANCIAL AND ACTUARIAL STATISTICS

	6/30/86	6/30/87	6/30/88	6/30/89	6/30/90
FINANCIAL STATISTICS:					
Total Assets	$ 96,714,220	$110,356,994	$121,168,785	$131,570,867	$145,313,311
Investment Income	$ 7,453,314	$ 8,763,083	$ 7,520,682	$ 10,164,070	$ 10,411,631
Total Retired Payments	$ 4,356,837	$ 5,107,017	$ 5,693,316	$ 7,742,826	$ 8,504,914
Total Refund Payments	$ 73,447	$ 127,181	$ 108,814	$ 42,926	$ 69,128
ACTUARIAL STATISTICS:					
Total Accrued Liability	$105,559,951	$111,541,989	$120,128,367	$134,550,773	$154,007,622
Unfunded Past Service Liability	$ 8,892,252	$ 1,347,385	-0-	$ 3,200,220	$ 8,982,071
Percent Unfunded	8.4%	1.2%	0%	2.4%	5.8%
Vested Accrued Benefit Liability	$ 84,495,868	$ 91,564,168	$ 98,838,353	$111,757,322	$130,035,708
Estimated Annual Salaries	$ 24,524,652	$ 23,859,024	$ 24,014,472	$ 24,282,216	$ 25,971,132
Contribution for Unfunded Past Service Liability	$ 800,303	$ 121,265	-0-	$ 288,020	$ 437,418
ACTUARIAL COST:					
Normal	8.33%	8.37%	8.54%	8.59%	8.15%
Past Service	3.26%	.51%	-.33%	1.19%	1.68%
Administrative	.06%	.10%	.13%	.13%	*.26%
Hospital/Medical Insurance	6.38%	7.02%	8.32%	8.92%	9.48%
Employee Contributions	7.00%	7.00%	7.00%	7.00%	7.00%
TOTAL COST:	25.03%	23.00%	23.66%	25.83%	26.57%
CONTRIBUTION RATES:					
Member	7.00%	7.00%	7.00%	7.00%	7.00%
Employer	17.50%	18.25%	18.25%	18.25%	***20.31%
TOTAL RATES	24.50%	25.25%	25.25%	**25.25%	27.31%

*The rate shown reflects the percentage for budgeted expenses and investment fees as required by legislation enacted by the 1990 General Assembly. Prior years do not include investment fees.
**Budgetary reduction in the amount contributed by State Government resulted in a decrease of .24% in actual contributions received.
***Employer rate shown became effective 8/1/90 to reflect legislative changes and new actuarial assumptions.

TABLE 10

KENTUCKY RETIREMENT SYSTEMS
STATEMENT OF SOURCE AND USE OF FUNDS
BY SYSTEM SINCE INCEPTION THROUGH JUNE 30, 1990

BREAKDOWN PER DOLLAR						TOTAL AMOUNTS				
KERS	CERS	SPRS	KERS-H	CERS-H	SOURCE OF FUNDS	KERS	CERS	SPRS	KERS-H	CERS-H
$ .23	$ .25	$ .19	$.24	$.22	Member Contributions	$ 596,852,633	$ 313,184,513	$ 38,275,990	$10,325,823	$ 79,996,934
.29	.33	.28	.29	.45	Employer Contributions	759,325,461	411,199,336	58,240,833	12,653,016	163,654,803
.38	.32	.42	.36	.25	Investment Income	972,319,988	404,466,662	86,482,689	15,887,803	93,447,559
.00	.00	.00	.00	.00	Special Appropriation	1,864,578	187,810	506,100	30,318	39,453
.00	.01	.00	.00	.01	Alternate & Term. Participation	230,070	6,767,791	-0-	3,741	5,333,373
.10	.09	.11	.11	.07	Other Receipts	255,752,770	113,314,943	21,455,597	4,867,363	24,423,223
$1.00	$1.00	$1.00	$1.00	$1.00	TOTAL SOURCES	$2,586,345,500	$1,249,121,055	$204,961,209	$43,768,064	$366,895,345
					USE OF FUNDS					
$ .68	$ .77	$ .70	$ .70	$ .82	Invested Assets	$1,759,815,418	$ 957,329,830	$144,083,943	$30,426,924	$302,614,722
.23	.15	.24	.21	.12	Retirement Payments	596,666,310	186,034,058	48,509,813	9,352,201	43,403,048
.04	.04	.02	.04	.03	Refunds	98,216,206	49,564,317	2,337,457	1,586,033	9,253,606
.04	.04	.04	.04	.03	Interest to Members	110,802,192	46,209,194	8,782,997	1,901,508	9,684,216
.01	.00	.00	.01	.00	Administration of Prof. Services	16,862,219	9,949,689	718,584	273,049	1,920,565
.00	.00	.00	.00	.00	Other Disbursements	3,983,155	33,967	528,415	228,349	19,188
$1.00	$1.00	$1.00	$1.00	$1.00	TOTAL USES	$2,586,345,500	$1,249,121,055	$204,961,209	$43,768,064	$366,895,345

KERS-H= Hazardous
CERS-H= Hazardous

TABLE 11
KENTUCKY RETIREMENT SYSTEMS
ADMINISTRATIVE EXPENSE
BY FISCAL YEAR

	1985-86	1986-87	1987-88	1988-89	1989-90
PERSONNEL COSTS:					
Salaries & Fringe Benefits	$1,010,272.87	$1,310,165.87	$1,525,200.00	$1,737,917.88	$1,936,370.13
CONTRACTUAL SERVICES:					
Auditor	20,193.00	16,600.00	18,000.00	19,850.00	20,750.00
Actuary	42,028.33	25,000.00	0.00	0.00	51,733.00
Janitorial Services	3,508.94	11,021.00	0.00	6,745.00	0.00
Legal Services	11,799.63	18,486.23	33,663.10	44,612.46	45,165.21
Medical	21,377.37	34,485.87	42,997.62	47,903.13	52,618.48
Miscellaneous	2,043.63	4,482.89	455.07	1,170.00	750.00
TOTAL	$1,111,223.77	$1,420,241.86	$1,620,315.79	$1,858,198.47	$2,107,386.82
OPERATING EXPENSES:					
Postage & Freight	$ 136,194.68	$ 196,610.61	$ 174,262.18	$ 228,492.66	$ 281,264.93
Utilities	11,484.54	24,729.70	22,718.39	18,883.87	25,853.22
Telephone	25,813.26	21,930.59	33,238.28	50,861.96	32,581.04
Travel	9,457.76	25,866.52	28,982.99	28,331.08	26,514.89
Printing & Duplicating	47,547.03	47,640.86	58,481.56	57,675.17	73,939.58
Maintenance-Equipment	30,721.20	45,604.13	27,592.71	37,145.04	33,649.58
Maintenance-Bldg. & Grnds.	3,360.63	2,192.06	1,060.98	875.81	795.81
Laundry	506.02	536.72	519.59	672.02	319.04
Assessed Car Rental	2,244.08	2,459.61	6,142.87	7,056.87	5,108.84
Supplies-Office	15,574.84	18,231.94	12,739.98	24,925.69	28,268.47
Supplies-Data Processing	14,889.23	31,370.53	24,604.81	26,713.99	36,161.14
Supplies-Janitorial	27.26	63.70	47.40	0.00	0.00
Rental-Building	26,650.00	164,247.96	101,138.68	99,729.05	166,000.00
Rental-Data Processing	23,836.40	.00	2,087.43	6,389.33	6,099.89
Rental-Office Equipment	11,584.89	11,929.50	11,666.45	17,129.34	16,341.37
Insurance	2,906.90	4,347.29	5,255.54	97,101.20	12,709.00
Bonds	677.01	1,776.25	1,776.25	1,776.25	2,704.97
Dues & Subscriptions	3,196.68	7,874.64	4,475.64	3,018.13	3,450.97
Employee Training Expense	1,694.80	2,549.70	4,411.26	6,300.98	7,761.72
Miscellaneous	707.44	2,234.49	5,997.08	8,197.35	5,605.89
Photo Supplies (Micrographics)	.00	36,929.60	3,041.28	1,574.74	8,934.72
Furniture Office Equipment	2,672.17	11,633.02	5,196.58	8,038.86	9,720.71
Lease Purchase Office Equipment	43,649.80	39,394.56	41,590.74	39,342.66	9,264.18
Conference Expenses	1,189.00	550.00	2,195.00	3,270.00	3,479.58
TOTAL	$ 416,585.62	$ 700,703.98	$ 579,223.67	$ 773,502.05	$ 796,529.54
Capital Outlay	$ 49,122.50	$ 262,912.00	$ 46,451.76	$ 96,104.15	$ 97,893.18
TOTAL ADMINISTRATIVE EXPENSE	$1,576,931.89	$2,383,857.84	$2,245,991.22	$2,727,804.67	$3,001,809.54

DISTRIBUTION OF COST BY SYSTEM

	1985-86	1986-87	1987-88	1988-89	1989-90
Kentucky Employes Retirement Syst.	$ 804,235.26	$1,168,090.34	$1,100,535.70	$1,309,346.24	$1,380,832.39
County Employes Retirement Syst.	756,927.31	1,191,928.92	1,122,995.61	1,391,180.38	1,593,960.86
State Police Retirement Syst.	15,769.32	23,838.58	22,459.91	27,278.05	27,016.29
	$1,576,931.89	$2,383,857.84	$2,245,991.22	$2,727,804.67	$3,001,809.54