

KENTUCKY RETIREMENT SYSTEMS

KENTUCKY EMPLOYES RETIREMENT SYSTEM  
COUNTY EMPLOYES RETIREMENT SYSTEM  
STATE POLICE RETIREMENT SYSTEM



ANNUAL REPORT

JUNE 30, 1983

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KENTUCKY RETIREMENT SYSTEMS  
226 West Second Street  
Frankfort, Kentucky 40601



Kentucky Employes Retirement System  
County Employes Retirement System  
State Police Retirement System

Charles L. Bratton  
General Manager  
Phone 502-564-4646

M E M O R A N D U M

TO: Members of the Board of Trustees  
John D. Robey, Chairman  
Vernon C. McGinty, Vice Chairman  
Mrs. Iris R. Barrett  
Frank W. Burke  
Robert L. Doris, Jr.  
John E. King  
Mrs. Dee Maynard  
Ms. Cattie Lou Miller  
Mrs. Nancy L. Ray

FROM: Charles L. Bratton

DATE: November 17, 1983

SUBJECT: Annual Report as of June 30, 1983

As directed by KRS 61.645, I am pleased to present the Annual Report for the fiscal year ended June 30, 1983. 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 from 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 Employes Retirement System, County Employes Retirement System and State Police Retirement System. Copies will also be distributed to appropriate legislative personnel as well as to other interested parties that may request such information.

Noteworthy accomplishments during fiscal 1983 include: (1) Implementation of federal income tax withholding from benefit payments as required by TEFRA; (2) The initiation of a program to upgrade our data processing capabilities and; (3) The engagement of an asset management consultant to provide assistance and guidance in the complete review and restructuring of our investment management practices. I am also pleased to report that the staff reorganization that was implemented in late 1982 has in my opinion significantly strengthened our "services" delivery capabilities.

On behalf of the membership, I would like to thank the Board for its continued diligence in the development and preservation of a responsible retirement program for all of us.

*Charles L. Bratton*

Charles L. Bratton  
General Manager

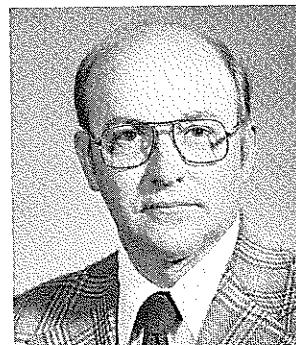
## BOARD OF TRUSTEES



Iris R. Barrett  
Frankfort  
Elected by KERS Members  
Term Expires 3/31/86



Frank W. Burke  
Louisville  
Elected by CERS Members  
Term Expires 3/31/85



Robert L. Doris, Jr.  
Frankfort  
Appointed by the Governor  
Term Expires 3/31/84



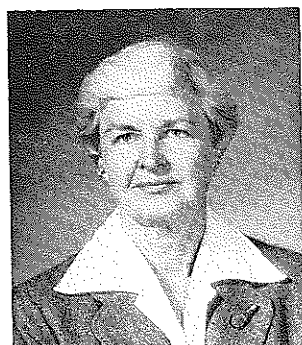
John E. King  
Lexington  
Elected by CERS Members  
Term Expires 3/31/85



Dee Maynard  
Simpsonville  
Ex Officio  
Commissioner of Personnel\*



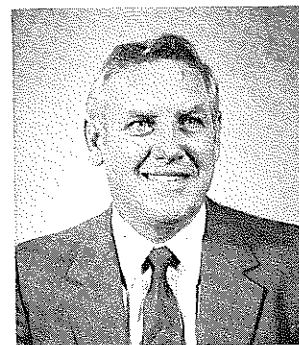
Vernon C. McGinty, Vice Chairman  
Louisville  
Appointed by the Governor  
Term Expires 3/31/87



Cattie Lou Miller  
Frankfort  
Elected by KERS Members  
Term Expires 3/31/86



Nancy L. Ray  
Crestwood  
Appointed by the Governor  
Term Expires 3/31/84



John D. Robey, Chairman  
Lawrenceburg  
Elected by SPRS Members  
Term Expires 3/31/87

\*Appointment was effective July 20, 1981.

FINANCIAL SECTION  
INTRODUCTION

The retirement systems' assets are held in trust for the purpose of paying retirement benefits many years in the future. It is important to the financial security of the members of the system, as well as those receiving retirement benefits that the assets and liabilities of the systems are subject to proper accounting and balancing procedures.

The Board of Trustees contracts for an annual audit by a Certified Public Accounting Firm for the purpose of an independent audit of the assets and liabilities of the systems. The firm of Ernst & Whinney was selected to perform the audit for the fiscal year ended June 30, 1983. The Accounting Firm presents to the Board of Trustees their "audit opinion" which is found on the following page. The audited financial statements of the three retirement systems and the related "Notes to Financial Statements" follow the audit opinion.

The audit and financial statement formats were completed in accordance with the requirements set forth in Statement 1 as adopted by the National Council on Governmental Accounting (NCGA). In summary, this statement requires that financial statements be presented on an "accrual basis" and also stipulates that certain disclosures must be included in the "Notes to Financial Statements" sections of the audit report. You will note that two years of financial data are included in the financial statements which provide the reader the opportunity to compare current year financial activity to the previous year.

In addition to the annual audit by a Certified Public Accounting Firm, other procedures are employed to insure the safety of the systems assets. For example, each year the CPA firm conducts a surprise audit of the securities held in each fund. An audit is also conducted by the internal auditor of the securities' custodian. Adequate bonding arrangements are in force for individuals who have access to securities and the General Manager of the retirement systems is under a special Fidelity bond.

The retirement systems have excellent financial strength as illustrated by the following statements. The combined assets of Kentucky Retirement Systems totalled more than \$1.1 billion at June 30, 1983, an increase of more than 17% over the previous year. Adequate systems of control are in force to assure that these trust funds are safe and the accounts properly reported to the fund participants.

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

# Ernst & Whinney

1900 Meidinger Tower  
Louisville Galleria  
Louisville, Kentucky 40202

502/583-0251

Board of Trustees  
Kentucky Retirement Systems  
Frankfort, Kentucky

We have examined the balance sheets of the Kentucky Employes Retirement System, County Employes Retirement System, State Police Retirement System and Kentucky Retirement Systems Insurance Fund as of June 30, 1983 and 1982, and the related statements of revenues, expenses, and changes in members' contribution account and retirement allowance account and changes in financial position of the Kentucky Employes Retirement System, County Employes Retirement System, and the State Police Retirement System and the statements of revenues, expenses, and changes in fund balance and changes in financial position of the Kentucky Retirement Systems Insurance Fund for the years then ended. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the financial statements referred to above present fairly the financial position of the Kentucky Employes Retirement System, County Employes Retirement System, State Police Retirement System and the Kentucky Retirement Systems Insurance Fund at June 30, 1983 and 1982, and the results of their operations, the changes in members' contribution account and retirement allowance account of the Kentucky Employes Retirement System, County Employes Retirement System, and State Police Retirement System, the changes in fund balance of the Kentucky Retirement Systems Insurance Fund, and the changes in their financial position for the years then ended, in conformity with generally accepted accounting principles applied on a consistent basis.

*Ernst & Whinney*

Louisville, Kentucky  
September 28, 1983

KENTUCKY EMPLOYES RETIREMENT SYSTEM

## BALANCE SHEETS

## KENTUCKY EMPLOYES RETIREMENT SYSTEM

|                                                                 | June 30              |                      |
|-----------------------------------------------------------------|----------------------|----------------------|
|                                                                 | 1983                 | 1982                 |
| <b>ASSETS</b>                                                   |                      |                      |
| Investments--Notes A and D:                                     |                      |                      |
| United States government securities                             | \$180,471,490        | \$196,815,511        |
| Government National Mortgage Association and similar securities | 77,391,586           | 57,599,953           |
| Corporate bonds and notes                                       | 123,002,047          | 88,626,023           |
| Convertible bonds                                               | 7,000,000            |                      |
| Common stocks                                                   | 190,581,114          | 162,310,864          |
| First mortgage real estate loans                                | 7,421,699            | 8,037,061            |
| Securities purchased under agreement to resell                  | <u>109,626,405</u>   | <u>84,837,350</u>    |
|                                                                 | 695,494,341          | 598,226,762          |
| Cash on deposit with State Treasurer                            | 14,936               | 22,808               |
| Member and employer contributions receivable                    | 2,887,515            | 3,978,374            |
| Accrued investment income                                       | 11,871,444           | 9,774,099            |
| Prepaid member retirement benefits                              |                      | 2,444,855            |
| Other assets                                                    | <u>209,269</u>       |                      |
|                                                                 | <u>\$710,477,505</u> | <u>\$614,446,898</u> |
| <br><b>LIABILITIES AND FUND BALANCE</b>                         |                      |                      |
| Member refunds and investment expenses payable                  | \$ 381,627           | \$ 598,581           |
| Fund balance--Note A:                                           |                      |                      |
| Members' contribution account                                   | 164,526,192          | 143,233,633          |
| Retirement allowance account                                    | <u>545,569,686</u>   | <u>470,614,684</u>   |
|                                                                 | 710,095,878          | 613,848,317          |
|                                                                 | <u>\$710,477,505</u> | <u>\$614,446,898</u> |

See notes to financial statements.



STATEMENTS OF REVENUES, EXPENSES, AND CHANGES  
IN MEMBERS' CONTRIBUTION ACCOUNT

KENTUCKY EMPLOYES RETIREMENT SYSTEM

|                                                                                      | Year Ended June 30   |                      |
|--------------------------------------------------------------------------------------|----------------------|----------------------|
|                                                                                      | 1983                 | 1982                 |
| Revenues:                                                                            |                      |                      |
| Member contributions                                                                 | \$ 23,848,003        | \$ 22,603,164        |
| Interest credited to members' balances transferred from Retirement Allowance Account | <u>8,061,659</u>     | <u>6,928,010</u>     |
| TOTAL REVENUES                                                                       | 31,909,662           | 29,531,174           |
| Expenses:                                                                            |                      |                      |
| Refunds to former members                                                            | 3,996,820            | 6,074,280            |
| Retired members' balances transferred to Retirement Allowance Account                | <u>6,620,283</u>     | <u>5,730,873</u>     |
| TOTAL EXPENSES                                                                       | 10,617,103           | 11,805,153           |
| EXCESS OF REVENUES OVER EXPENSES                                                     | 21,292,559           | 17,726,021           |
| Members' contribution account at beginning of year                                   | 143,233,633          | 125,526,817          |
| Transfer of assets to the Legislative Retirement Plan-- Note G                       |                      | (19,205)             |
| MEMBERS' CONTRIBUTION ACCOUNT AT END OF YEAR                                         | <u>\$164,526,192</u> | <u>\$143,233,633</u> |

See notes to financial statements.

STATEMENTS OF REVENUES, EXPENSES, AND CHANGES  
IN RETIREMENT ALLOWANCE ACCOUNT

KENTUCKY EMPLOYES RETIREMENT SYSTEM

|                                                                                           | Year Ended June 30   |                      |
|-------------------------------------------------------------------------------------------|----------------------|----------------------|
|                                                                                           | 1983                 | 1982                 |
| Revenues:                                                                                 |                      |                      |
| Employer contributions                                                                    | \$ 42,808,503        | \$ 40,488,022        |
| Investment income                                                                         | 57,799,616           | 51,929,647           |
| Net realized gain on disposal<br>of investments                                           | 9,070,256            | 4,168,159            |
| Retired members' balances transferred<br>from Members' Contribution Account               | 6,620,283            | 5,730,873            |
| TOTAL REVENUES                                                                            | 116,298,658          | 102,316,701          |
| Expenses:                                                                                 |                      |                      |
| Retirement benefits for<br>members                                                        | 31,396,362           | 26,546,678           |
| Contributions transferred to the<br>Kentucky Retirement Systems<br>Insurance Fund         | 1,249,257            | 1,173,149            |
| Interest credited to members'<br>balances transferred to Members'<br>Contribution Account | 8,061,659            | 6,928,010            |
| Administrative expenses                                                                   | 528,228              | 478,817              |
| Investment expenses                                                                       | 108,150              | 86,481               |
| TOTAL EXPENSES                                                                            | 41,343,656           | 35,213,135           |
| EXCESS OF REVENUES OVER EXPENSES                                                          | 74,955,002           | 67,103,566           |
| Retirement allowance account at<br>beginning of year                                      | 470,614,684          | 403,555,486          |
| Transfer of assets to the<br>Legislative Retirement<br>Plan--Note G                       |                      | (44,368)             |
| RETIREMENT ALLOWANCE<br>ACCOUNT AT END OF YEAR                                            | <u>\$545,569,686</u> | <u>\$470,614,684</u> |

See notes to financial statements.

STATEMENTS OF CHANGES IN FINANCIAL POSITION

KENTUCKY EMPLOYES RETIREMENT SYSTEM

|                                                                                                                                       | Year Ended June 30 |                  |
|---------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------|
|                                                                                                                                       | 1983               | 1982             |
| <b>SOURCE OF FUNDS</b>                                                                                                                |                    |                  |
| Excess of revenues over expenses                                                                                                      | \$96,247,561       | \$ 84,829,587    |
| Deduct amortization of investment discount and premium, net, not providing funds                                                      | <u>881,896</u>     | <u>852,284</u>   |
| FUNDS PROVIDED FROM OPERATIONS                                                                                                        | 95,365,665         | 83,977,303       |
| Proceeds from sale, maturity or exchange of investments, less net gain of \$9,070,256 in 1983 and \$4,168,159 in 1982, included above | 111,766,556        | 51,565,420       |
| Decrease in member and employer contributions receivable                                                                              | 1,090,859          |                  |
| Decrease in receivable from sale of securities                                                                                        |                    | 57,934           |
| Decrease in prepaid member retirement benefits                                                                                        | <u>2,444,855</u>   |                  |
| TOTAL FUNDS PROVIDED                                                                                                                  | 210,667,935        | 135,600,657      |
| <b>APPLICATION OF FUNDS</b>                                                                                                           |                    |                  |
| Investments purchased or exchanged                                                                                                    | 208,152,239        | 129,415,569      |
| Transfer of assets to the Legislative Retirement Plan                                                                                 |                    | 63,573           |
| Increase in member and employer contributions receivable                                                                              |                    | 1,703,719        |
| Increase in accrued investment income                                                                                                 | 2,097,345          | 1,833,959        |
| Increase in prepaid member retirement benefits                                                                                        |                    | 2,444,855        |
| Decrease in member refunds and investment expenses payable                                                                            | 216,954            | 36,274           |
| Other assets                                                                                                                          | <u>209,269</u>     |                  |
| TOTAL FUNDS USED                                                                                                                      | 210,675,807        | 135,497,949      |
| INCREASE (DECREASE) IN CASH                                                                                                           | (7,872)            | 102,708          |
| Cash on deposit with (amount due) State Treasurer at beginning of year                                                                | <u>22,808</u>      | <u>(79,900)</u>  |
| CASH ON DEPOSIT WITH (AMOUNT DUE) STATE TREASURER AT END OF YEAR                                                                      | <u>\$ 14,936</u>   | <u>\$ 22,808</u> |

See notes to financial statements.

NOTES TO FINANCIAL STATEMENTS

KENTUCKY EMPLOYES RETIREMENT SYSTEM

June 30, 1983

NOTE A--SIGNIFICANT ACCOUNTING POLICIES

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's Statement 1.

Investments in bonds and first mortgage real estate loans are stated at amortized cost. Common stocks and securities purchased under agreement to resell are carried at cost. Investments include securities loaned under various lending programs.

Discount and premium are amortized using the straight-line method from the date of acquisition to stated or expected maturity.

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.

Members' Contribution and Retirement Allowance 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 the cumulative excess of revenues over expenses less interest credited to members' contribution accounts.

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 System are allocated in proportion to the number of active members participating in each plan and the carrying value of plan investments, respectively.

NOTE B--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.

NOTES TO FINANCIAL STATEMENTS--CONTINUED

KENTUCKY EMPLOYEES RETIREMENT SYSTEM

NOTE B--DESCRIPTION OF THE PLAN--CONTINUED

Participating employees generally contribute 4% 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. For the year ended June 30, 1983, participating employers contributed at 7-1/4% and 18-1/4% of members' non-hazardous and hazardous compensation, respectively, and for year ended June 30, 1982, 7-1/4% and 19-1/4%, respectively.

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 and 6% thereafter.

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

Legislation enacted by the 1982 Kentucky General Assembly provides for increases (from 1% to 15% effective July 1, 1982 and 1/2% to 9-1/2% effective July 1, 1983) in retirement benefits for all recipients based upon the length of period the recipient has been retired or disabled and an increase, from \$2,000 to \$2,500, in the death benefit paid to the estate of most former members. The change in death benefits became effective on July 15, 1982. In addition, effective July 1, 1982, the employer contribution rate changed to 18-1/4% of compensation for members occupying hazardous positions.

NOTE C--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.

NOTES TO FINANCIAL STATEMENTS--CONTINUED

KENTUCKY EMPLOYES RETIREMENT SYSTEM

NOTE C--ACCUMULATED BENEFITS---CONTINUED

The System's consulting actuaries, Tillinghast, Nelson & Warren, Inc., estimate 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.

Accumulated plan benefit information follows:

|                                           | June 30              |                      |
|-------------------------------------------|----------------------|----------------------|
|                                           | 1983                 | 1982                 |
| Vested benefits:                          |                      |                      |
| Participants currently receiving payments | \$259,584,355        | \$249,296,605        |
| Other participants                        | <u>290,421,806</u>   | <u>271,484,412</u>   |
|                                           | <u>\$550,006,161</u> | <u>\$520,781,017</u> |

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 cost method.                                                                                                                         |
| Assumed rate of return on investments | 7-1/2% per annum.                                                                                                                              |
| Mortality basis                       | 1971 Group Annuity Tables.                                                                                                                     |
| Employee turnover                     | Declining from 35% through five years of service. Annual rates, varying by age, thereafter.                                                    |
| Retirement age                        | Based upon experience, with 25% weight, at age 55-64, to the earliest age at which an employee could retire with 100% of the accrued benefits. |
| Salary increase                       | 7-1/2% per annum.                                                                                                                              |

NOTES TO FINANCIAL STATEMENTS--CONTINUED

KENTUCKY EMPLOYES RETIREMENT SYSTEM

NOTE D--INVESTMENTS

The approximate market value of investments follows:

|                                                                 | June 30              |                      |
|-----------------------------------------------------------------|----------------------|----------------------|
|                                                                 | 1983                 | 1982                 |
| United States government securities                             | \$178,088,000        | \$159,651,000        |
| Government National Mortgage Association and similar securities | 83,685,000           | 53,264,000           |
| Corporate bonds and notes                                       | 118,801,000          | 66,774,000           |
| Convertible bonds                                               | 9,450,000            |                      |
| Common stocks                                                   | 255,293,000          | 152,029,000          |
| First mortgage real estate loans                                | 5,810,000            | 5,576,000            |
| Securities purchased under agreement to resell                  | <u>109,626,000</u>   | <u>84,837,000</u>    |
|                                                                 | <u>\$760,753,000</u> | <u>\$522,131,000</u> |

NOTE E--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 F--TRANSFERS TO INSURANCE FUND

By action of the 1978 General Assembly, the Kentucky Retirement Systems Insurance Fund was established to provide a group hospital and medical insurance plan for recipients of a retirement allowance from the Kentucky Employees Retirement System. The insurance fund is funded by the transfer of a portion of employer contributions to the retirement system. The percentage of creditable compensation transferred to the Insurance Fund by the Kentucky Employees Retirement System was 0.21% for non-hazardous and 0.59% for hazardous positions for the year ended June 30, 1983, and 0.21% and 0.34%, respectively, for the year ended June 30, 1982. 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 members of hazardous positions or employees of hazardous positions killed in the line of duty.

NOTE G--TRANSFER TO LEGISLATIVE RETIREMENT SYSTEM

Effective July 1, 1980, the assets and actuarial liabilities of electing General Assembly members were transferred to a separate Legislative Retirement System.

COUNTY EMPLOYES RETIREMENT SYSTEM



BALANCE SHEETS

COUNTY EMPLOYEES RETIREMENT SYSTEM

|                                                                 | June 30              |                      |
|-----------------------------------------------------------------|----------------------|----------------------|
|                                                                 | 1983                 | 1982                 |
| <b>ASSETS</b>                                                   |                      |                      |
| Investments--Notes A and D:                                     |                      |                      |
| United States government securities                             | \$ 86,001,590        | \$ 82,882,984        |
| Government National Mortgage Association and similar securities | 47,987,287           | 35,561,402           |
| Corporate bonds and notes                                       | 53,235,128           | 37,997,635           |
| Convertible bonds                                               | 1,800,000            |                      |
| Common stocks                                                   | 88,540,069           | 72,624,334           |
| First mortgage real estate loans                                | 812,747              | 887,312              |
| Securities purchased under agreement to resell                  | 52,475,460           | 43,558,200           |
|                                                                 | <u>330,852,281</u>   | <u>273,511,867</u>   |
| Cash on deposit with State Treasurer                            | 11,991               | 13,424               |
| Member and employer contributions receivable                    | 3,279,697            | 3,216,619            |
| Past service credit contribution receivable--Note A             | 3,418,622            | 3,574,795            |
| Accrued investment income                                       | 5,836,568            | 4,355,910            |
| Prepaid member retirement benefits                              |                      | 862,274              |
| Other assets                                                    | 167,416              |                      |
|                                                                 | <u>\$343,566,575</u> | <u>\$285,534,889</u> |
| <b>LIABILITIES AND FUND BALANCE</b>                             |                      |                      |
| Member refunds and investment expenses payable                  | \$ 410,806           | \$ 488,519           |
| Fund balance--Note A:                                           |                      |                      |
| Members' Contribution Account                                   | 79,957,740           | 67,230,899           |
| Retirement Allowance Account                                    | 263,198,029          | 217,815,471          |
|                                                                 | <u>343,155,769</u>   | <u>285,046,370</u>   |
|                                                                 | <u>\$343,566,575</u> | <u>\$285,534,889</u> |

See notes to financial statements.

STATEMENTS OF REVENUES, EXPENSES, AND CHANGES  
IN MEMBERS' CONTRIBUTION ACCOUNT

COUNTY EMPLOYEES RETIREMENT SYSTEM

|                                                                                            | Year Ended June 30  |                     |
|--------------------------------------------------------------------------------------------|---------------------|---------------------|
|                                                                                            | 1983                | 1982                |
| Revenues:                                                                                  |                     |                     |
| Member contributions                                                                       | \$15,032,535        | \$13,674,737        |
| Interest credited to members'<br>balances transferred from<br>Retirement Allowance Account | <u>3,754,156</u>    | <u>3,101,298</u>    |
| TOTAL REVENUES                                                                             | 18,786,691          | 16,776,035          |
| Expenses:                                                                                  |                     |                     |
| Refunds to former members                                                                  | 2,791,345           | 4,238,411           |
| Retired members' balances<br>transferred to Retirement<br>Allowance Account                | <u>3,268,505</u>    | <u>3,187,147</u>    |
| TOTAL EXPENSES                                                                             | 6,059,850           | 7,425,558           |
| EXCESS OF REVENUES OVER EXPENSES                                                           | 12,726,841          | 9,350,477           |
| Members' contribution account<br>at beginning of year                                      | <u>67,230,899</u>   | <u>57,880,422</u>   |
| MEMBERS' CONTRIBUTION<br>ACCOUNT AT END OF YEAR                                            | <u>\$79,957,740</u> | <u>\$67,230,899</u> |

See notes to financial statements.

STATEMENTS OF REVENUES, EXPENSES, AND CHANGES  
IN RETIREMENT ALLOWANCE ACCOUNT

COUNTY EMPLOYEES RETIREMENT SYSTEM

|                                                                                              | Year Ended June 30 |               |
|----------------------------------------------------------------------------------------------|--------------------|---------------|
|                                                                                              | 1983               | 1982          |
| Revenues:                                                                                    |                    |               |
| Employer contributions                                                                       | \$ 23,526,350      | \$ 24,962,508 |
| Investment income                                                                            | 28,254,250         | 25,127,300    |
| Net realized gain on disposal of<br>investments                                              | 6,732,167          | 1,821,477     |
| Retired members' balances transferred<br>from Members' Contribution Account                  | 3,268,505          | 3,187,147     |
| TOTAL REVENUES                                                                               | 61,781,272         | 55,098,432    |
| Expenses:                                                                                    |                    |               |
| Retirement benefits for members                                                              | 11,522,297         | 9,689,924     |
| Contributions transferred to the<br>Kentucky Retirement Systems<br>Insurance Fund            | 594,128            | 488,173       |
| Interest credited to members'<br>balances transferred to<br>Members' Contribution<br>Account | 3,754,156          | 3,101,298     |
| Administrative expenses                                                                      | 477,437            | 383,054       |
| Investment expenses                                                                          | 50,696             | 39,554        |
| TOTAL EXPENSES                                                                               | 16,398,714         | 13,702,003    |
| EXCESS OF REVENUES OVER EXPENSES                                                             | 45,382,558         | 41,396,429    |
| Retirement allowance account at<br>beginning of year                                         | 217,815,471        | 176,419,042   |
| RETIREMENT ALLOWANCE<br>ACCOUNT AT END OF YEAR                                               | \$263,198,029      | \$217,815,471 |

See notes to financial statements.

STATEMENTS OF CHANGES IN FINANCIAL POSITION  
COUNTY EMPLOYES RETIREMENT SYSTEM

|                                                                                                                                       | Year Ended June 30 |                   |
|---------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------|
|                                                                                                                                       | 1983               | 1982              |
| <b>SOURCE OF FUNDS</b>                                                                                                                |                    |                   |
| Excess of revenues over expenses                                                                                                      | \$ 58,109,399      | \$50,746,906      |
| Deduct amortization of investment discount and premium, net, not providing funds                                                      | <u>593,603</u>     | <u>433,998</u>    |
| <b>FUNDS PROVIDED FROM OPERATIONS</b>                                                                                                 | <b>57,515,796</b>  | <b>50,312,908</b> |
| Proceeds from sale, maturity or exchange of investments, less net gain of \$6,732,167 in 1983 and \$1,821,477 in 1982, included above | 52,145,785         | 24,639,433        |
| Decrease in past service credit contribution receivable                                                                               | 156,173            | 95,080            |
| Decrease in receivable from sale of securities                                                                                        |                    | 18,767            |
| Decrease in prepaid member retirement benefits                                                                                        | <u>862,274</u>     |                   |
| <b>TOTAL FUNDS PROVIDED</b>                                                                                                           | <b>110,680,028</b> | <b>75,066,188</b> |
| <b>APPLICATION OF FUNDS</b>                                                                                                           |                    |                   |
| Investments purchased or exchanged                                                                                                    | 108,892,596        | 72,676,074        |
| Increase in member and employer contributions receivable                                                                              | 63,078             | 346,902           |
| Increase in accrued investment income                                                                                                 | 1,480,658          | 1,117,576         |
| Increase in prepaid member retirement benefits                                                                                        |                    | 862,274           |
| Decrease in member refunds and investment expenses payable                                                                            | 77,713             | 77,331            |
| Increase in other assets                                                                                                              | <u>167,416</u>     |                   |
| <b>TOTAL FUNDS USED</b>                                                                                                               | <b>110,681,461</b> | <b>75,080,157</b> |
| <b>DECREASE IN CASH</b>                                                                                                               | <b>1,433</b>       | <b>13,969</b>     |
| Cash on deposit with State Treasurer at beginning of year                                                                             | <u>13,424</u>      | <u>27,393</u>     |
| <b>CASH ON DEPOSIT WITH STATE TREASURER AT END OF YEAR</b>                                                                            | <b>\$ 11,991</b>   | <b>\$ 13,424</b>  |

See notes to financial statements.

NOTES TO FINANCIAL STATEMENTS

COUNTY EMPLOYEES RETIREMENT SYSTEM

June 30, 1983

NOTE A--SIGNIFICANT ACCOUNTING POLICIES

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's Statement 1.

Investments in bonds and first mortgage real estate loans are stated at amortized cost. Common stocks and securities purchased under agreement to resell are carried at cost. Investments include securities loaned under various lending programs.

Discount and premium are amortized using the straight-line method from the date of acquisition to stated or expected maturity.

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.

Members' Contribution and Retirement Allowance 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 the 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.

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 System are allocated in proportion to the number of active members participating in each plan and the carrying value of plan investments, respectively.

NOTE B--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.

NOTES TO FINANCIAL STATEMENTS--CONTINUED

COUNTY EMPLOYEES RETIREMENT SYSTEM

NOTE B--DESCRIPTION OF THE PLAN--CONTINUED

Participating employees generally contribute 4% 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 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. Participating employers contributed at 6-1/4% and 15% of members' non-hazardous and hazardous compensation for the year ended June 30, 1983, and 7-1/4% and 16%, respectively, for the year ended June 30, 1982.

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 and 6% thereafter.

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

Legislation enacted by the 1982 Kentucky General Assembly provides for increases (from 1% to 15% effective July 1, 1982 and 1/2% to 9-1/2% effective July 1, 1983) in retirement benefits for all recipients based upon the length of period the recipient has been retired or disabled and an increase, from \$2,000 to \$2,500, in the death benefit paid to the estate of most former members. The change in death benefits became effective on July 15, 1982. In addition, effective July 1, 1983, the employer contribution rate changed to 6-1/4% and 14% of members' non-hazardous and hazardous compensation, respectively.

NOTE C--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.

NOTES TO FINANCIAL STATEMENTS--CONTINUED

COUNTY EMPLOYEES RETIREMENT SYSTEM

NOTE C--ACCUMULATED BENEFITS--CONTINUED

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 actuaries, Tillinghast, Nelson & Warren, Inc., estimate 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.

Accumulated plan benefit information follows:

|                                           | June 30              |                      |
|-------------------------------------------|----------------------|----------------------|
|                                           | <u>1983</u>          | <u>1982</u>          |
| Vested benefits:                          |                      |                      |
| Participants currently receiving payments | \$ 93,003,343        | \$ 88,834,537        |
| Other participants                        | <u>132,662,402</u>   | <u>118,134,762</u>   |
|                                           | <u>\$225,665,745</u> | <u>\$206,969,299</u> |

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 cost method.                                                                                                                        |
| Assumed rate of return on investments | 7-1/2% per annum.                                                                                                                             |
| Mortality basis                       | 1979 Group Annuity Tables.                                                                                                                    |
| Employee turnover                     | Declining from 35% through five years of service. Annual rates, varying by age, thereafter.                                                   |
| Retirement age                        | Based upon experience with 25% weight, at age 55-64, to the earliest age at which an employee could retire with 100% of the accrued benefits. |
| Salary increase                       | 7-1/2% per annum.                                                                                                                             |

NOTES TO FINANCIAL STATEMENTS--CONTINUED

COUNTY EMPLOYES RETIREMENT SYSTEM

NOTE D--INVESTMENTS

The approximate market value of investments follows:

|                                                                 | June 30              |                      |
|-----------------------------------------------------------------|----------------------|----------------------|
|                                                                 | 1983                 | 1982                 |
| United States government securities                             | \$ 87,366,000        | \$ 68,531,000        |
| Government National Mortgage Association and similar securities | 52,606,000           | 33,449,000           |
| Corporate bonds and notes                                       | 52,123,000           | 29,689,000           |
| Convertible bonds                                               | 2,430,000            |                      |
| Common stocks                                                   | 119,585,000          | 67,707,000           |
| First mortgage real estate loans                                | 639,000              | 617,000              |
| Securities purchased under agreement to resell                  | <u>52,475,000</u>    | <u>43,558,000</u>    |
|                                                                 | <u>\$367,224,000</u> | <u>\$243,551,000</u> |

NOTE E--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 F--TRANSFERS TO INSURANCE FUND

By action of the 1978 General Assembly, the Kentucky Retirement Systems Insurance Fund was established to provide a group hospital and medical insurance plan for recipients of a retirement allowance from the Kentucky Employees Retirement Systems. The insurance plan 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 0.15% for non-hazardous and 0.54% for hazardous positions for the year ended June 30, 1983, and 0.15% and 0.13%, respectively, for the year ended June 30, 1982. 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 members of hazardous positions or employees of hazardous positions killed in the line of duty.



STATE POLICE RETIREMENT SYSTEM

BALANCE SHEETS

STATE POLICE RETIREMENT SYSTEM

|                                                                 | June 30             |                     |
|-----------------------------------------------------------------|---------------------|---------------------|
|                                                                 | 1983                | 1982                |
| ASSETS                                                          |                     |                     |
| Investments--Notes A and D:                                     |                     |                     |
| United States government securities                             | \$13,941,158        | \$14,181,586        |
| Government National Mortgage Association and similar securities | 5,270,523           | 2,252,077           |
| Corporate bonds and notes                                       | 15,105,989          | 6,311,870           |
| Convertible bonds                                               | 1,200,000           |                     |
| Common stocks                                                   | 14,944,951          | 10,088,461          |
| First mortgage real estate loans                                | 440,297             | 487,931             |
| Securities purchased under agreement to resell                  | <u>13,399,407</u>   | <u>22,530,450</u>   |
|                                                                 | 64,302,325          | 55,852,375          |
| <br>                                                            |                     |                     |
| Cash on deposit with State Treasurer                            | 272                 | 5,124               |
| Member and employer contributions receivable                    | 229,876             | 477,724             |
| Accrued investment income                                       | 1,246,091           | 802,178             |
| Prepaid member retirement benefits                              |                     | 192,729             |
| Other assets                                                    | <u>3,805</u>        | <u>          </u>   |
|                                                                 | <u>\$65,782,369</u> | <u>\$57,330,130</u> |
| <br>                                                            |                     |                     |
| LIABILITIES AND FUND BALANCE                                    |                     |                     |
| Member refunds and investment expenses payable                  | \$ 25,283           | \$ 24,271           |
| <br>                                                            |                     |                     |
| Fund balance--Note A:                                           |                     |                     |
| Members' Contribution Account                                   | 13,783,222          | 12,479,299          |
| Retirement Allowance Account                                    | <u>51,973,864</u>   | <u>44,826,560</u>   |
|                                                                 | 65,757,086          | 57,305,859          |
|                                                                 | <u>\$65,782,369</u> | <u>\$57,330,130</u> |

See notes to financial statements.

STATEMENTS OF REVENUES, EXPENSES, AND CHANGES  
IN MEMBERS' CONTRIBUTION ACCOUNT

STATE POLICE RETIREMENT SYSTEM

|                                                                                      | Year Ended June 30  |                     |
|--------------------------------------------------------------------------------------|---------------------|---------------------|
|                                                                                      | 1983                | 1982                |
| Revenues:                                                                            |                     |                     |
| Member contributions                                                                 | \$ 1,585,904        | \$ 1,546,361        |
| Interest credited to members' balances transferred from Retirement Allowance Account | <u>694,200</u>      | <u>622,999</u>      |
| TOTAL REVENUES                                                                       | 2,280,104           | 2,169,360           |
| Expenses:                                                                            |                     |                     |
| Refunds to former members                                                            | 56,809              | 245,402             |
| Retired members' balances transferred to Retirement Allowance Account                | <u>919,372</u>      | <u>601,883</u>      |
| TOTAL EXPENSES                                                                       | 976,181             | 847,285             |
| EXCESS OF REVENUES OVER EXPENSES                                                     | <u>1,303,923</u>    | <u>1,322,075</u>    |
| Members' contribution account at beginning of year                                   | <u>12,479,299</u>   | <u>11,157,224</u>   |
| MEMBERS' CONTRIBUTION ACCOUNT AT END OF YEAR                                         | <u>\$13,783,222</u> | <u>\$12,479,299</u> |

See notes to financial statements.

STATEMENTS OF REVENUES, EXPENSES, AND CHANGES  
IN RETIREMENT ALLOWANCE ACCOUNT

STATE POLICE RETIREMENT SYSTEM

|                                                                                           | Year Ended June 30 |              |
|-------------------------------------------------------------------------------------------|--------------------|--------------|
|                                                                                           | 1983               | 1982         |
| Revenues:                                                                                 |                    |              |
| Employer contributions                                                                    | \$ 4,178,214       | \$ 4,056,874 |
| Investment income                                                                         | 5,438,066          | 5,347,761    |
| Net realized gain on disposal<br>of investments                                           | 154,653            | 241,275      |
| Retired members' balances transferred<br>from Members' Contribution Account               | 919,372            | 601,883      |
| TOTAL REVENUES                                                                            | 10,690,305         | 10,247,793   |
| Expenses:                                                                                 |                    |              |
| Retirement benefits for members                                                           | 2,642,581          | 1,953,405    |
| Contributions transferred to the<br>Kentucky Retirement Systems<br>Insurance Fund         | 185,923            | 26,333       |
| Interest credited to members' balances<br>transferred to Members' Contribution<br>Account | 694,200            | 622,999      |
| Administrative expenses                                                                   | 10,158             | 8,706        |
| Investment expenses                                                                       | 10,139             | 8,045        |
| TOTAL EXPENSES                                                                            | 3,543,001          | 2,619,488    |
| EXCESS OF REVENUES OVER EXPENSES                                                          | 7,147,304          | 7,628,305    |
| Retirement allowance account at<br>beginning of year                                      | 44,826,560         | 37,198,255   |
| RETIREMENT ALLOWANCE<br>ACCOUNT AT END OF YEAR                                            | \$51,973,864       | \$44,826,560 |

See notes to financial statements.

## STATEMENTS OF CHANGES IN FINANCIAL POSITION

## STATE POLICE RETIREMENT SYSTEM

|                                                                                                                                   | Year Ended June 30 |                 |
|-----------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------|
|                                                                                                                                   | 1983               | 1982            |
| SOURCE OF FUNDS                                                                                                                   |                    |                 |
| Excess of revenues over expenses                                                                                                  | \$ 8,451,227       | \$ 8,950,380    |
| Deduct amortization of investment discount and premium, net, not providing funds                                                  | <u>30,753</u>      | <u>39,317</u>   |
| FUNDS PROVIDED FROM OPERATIONS                                                                                                    | 8,420,474          | 8,911,063       |
| Proceeds from sale, maturity or exchange of investments, less net gain of \$154,653 in 1983 and \$241,275 in 1982, included above | 17,841,469         | 4,142,455       |
| Decrease in member and employer contributions receivable                                                                          | 247,848            | 4,987           |
| Decrease in receivable from sale of securities                                                                                    |                    | 4,896           |
| Decrease in prepaid member retirement benefits                                                                                    | 192,729            |                 |
| Increase in members' refunds and investment expenses payable                                                                      | <u>1,012</u>       |                 |
| TOTAL FUNDS PROVIDED                                                                                                              | 26,703,532         | 13,063,401      |
| APPLICATION OF FUNDS                                                                                                              |                    |                 |
| Investments purchased or exchanged                                                                                                | 26,260,666         | 12,740,930      |
| Increase in accrued investment income                                                                                             | 443,913            | 92,375          |
| Increase in prepaid member retirement benefits                                                                                    |                    | 192,729         |
| Decrease in member refunds and investment expenses payable                                                                        |                    | 9,077           |
| Increase in other assets                                                                                                          | <u>3,805</u>       |                 |
| TOTAL FUNDS USED                                                                                                                  | 26,708,384         | 13,035,111      |
| INCREASE (DECREASE) IN CASH                                                                                                       | (4,852)            | 28,290          |
| Cash on deposit with (amount due) State Treasurer at beginning of year                                                            | <u>5,124</u>       | <u>(23,166)</u> |
| CASH ON DEPOSIT WITH (AMOUNT DUE) STATE TREASURER AT END OF YEAR                                                                  | <u>\$ 272</u>      | <u>\$ 5,124</u> |

See notes to financial statements.

NOTES TO FINANCIAL STATEMENTS

STATE POLICE RETIREMENT SYSTEM

June 30, 1983

NOTE A--SIGNIFICANT ACCOUNTING POLICIES

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's Statement 1.

Investments in bonds and first mortgage real estate loans are stated at amortized cost. Common stocks and securities purchased under agreement to resell are carried at cost. Investments include securities loaned under various lending programs.

Discount and premium are amortized using the straight-line method from the date of acquisition to stated or expected maturity.

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.

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

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

NOTE B--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.

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, 1983 and 1982, the employer contributed at 18-1/2% of members' compensation.

NOTES TO FINANCIAL STATEMENTS--CONTINUED

STATE POLICE RETIREMENT SYSTEM

NOTE B--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 and 6% thereafter.

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

Legislation enacted by the 1982 Kentucky General Assembly provides for increases (from 1% to 15% effective July 1, 1982 and 1/2% to 9-1/2% effective July 1, 1983) in retirement benefits for all recipients based upon the length of period the recipient has been retired or disabled and an increase, from \$2,000 to \$2,500, in the death benefit paid to the estate of most former members. The change in death benefits became effective on July 15, 1982.

NOTE C--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 current 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 actuaries, Tillinghast, Nelson & Warren, Inc. estimate 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.

NOTES TO FINANCIAL STATEMENTS--CONTINUED

STATE POLICE RETIREMENT SYSTEM

NOTE C--ACCUMULATED BENEFITS--CONTINUED

Accumulated plan benefit information follows:

|                                           | June 30             |                     |
|-------------------------------------------|---------------------|---------------------|
|                                           | 1983                | 1982                |
| Vested benefits:                          |                     |                     |
| Participants currently receiving payments | \$22,202,772        | \$18,614,789        |
| Other participants                        | <u>29,303,216</u>   | <u>30,239,139</u>   |
|                                           | <u>\$51,505,988</u> | <u>\$48,853,928</u> |

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 increases), are as follows:

|                                       |                                                                                                                                                                     |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Actuarial cost method                 | Entry age cost method.                                                                                                                                              |
| Assumed rate of return on investments | 7-1/2% per annum.                                                                                                                                                   |
| Mortality basis                       | 1971 Group Annuity Tables.                                                                                                                                          |
| Employee turnover                     | Average rates varying by age, based upon experience.                                                                                                                |
| Retirement age                        | 50% retire upon completion of 25 years of service; all others retire upon completion of 25 years of service and attainment of age 50, or upon attainment of age 55. |
| Salary increase                       | 7-1/2% per annum.                                                                                                                                                   |



NOTES TO FINANCIAL STATEMENTS--CONTINUED

STATE POLICE RETIREMENT SYSTEM

NOTE D--INVESTMENTS

The approximate market value of investments follows:

|                                                                 | June 30             |                     |
|-----------------------------------------------------------------|---------------------|---------------------|
|                                                                 | 1983                | 1982                |
| United States government securities                             | \$13,376,000        | \$11,145,000        |
| Government National Mortgage Association and similar securities | 5,483,000           | 1,975,000           |
| Corporate bonds and notes                                       | 14,748,000          | 4,613,000           |
| Convertible bonds                                               | 1,620,000           |                     |
| Common stocks                                                   | 19,088,000          | 9,510,000           |
| First mortgage real estate loans                                | 346,000             | 340,000             |
| Securities purchased under agreement to resell                  | <u>13,399,000</u>   | <u>22,530,000</u>   |
|                                                                 | <u>\$68,060,000</u> | <u>\$50,113,000</u> |

NOTE E--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 F--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 plan 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 0.82% for the year ended June 30, 1983, and 0.12% for the year ended June 30, 1982. 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 members or employees killed in the line of duty.

KENTUCKY RETIREMENT SYSTEMS INSURANCE FUND

BALANCE SHEETS

KENTUCKY RETIREMENT SYSTEMS INSURANCE FUND

|                                                            | June 30            |                    |
|------------------------------------------------------------|--------------------|--------------------|
|                                                            | 1983               | 1982               |
| <b>ASSETS</b>                                              |                    |                    |
| Securities purchased under agreement<br>to resell--at cost | \$4,691,128        | 4,753,000          |
| Cash on deposit with State Treasurer                       | 59                 | 322                |
| Employer contributions receivable                          | 261,934            | 379,472            |
| Prepaid insurance premiums                                 |                    | 179,626            |
|                                                            | <u>\$4,953,121</u> | <u>\$5,312,420</u> |
| <br><b>FUND BALANCE ALLOCATED TO</b>                       |                    |                    |
| Kentucky Employes Retirement System                        | \$2,863,024        | \$3,274,809        |
| County Employes Retirement System                          | 1,983,437          | 1,970,840          |
| State Police Retirement System                             | <u>106,660</u>     | <u>66,771</u>      |
|                                                            | <u>\$4,953,121</u> | <u>\$5,312,420</u> |

See note to financial statements.

STATEMENTS OF REVENUES, EXPENSES, AND  
CHANGES IN FUND BALANCE

KENTUCKY RETIREMENT SYSTEMS INSURANCE FUND

|                                                                                | Year Ended June 30        |                           |
|--------------------------------------------------------------------------------|---------------------------|---------------------------|
|                                                                                | 1983                      | 1982                      |
| <b>ALLOCATED TO KENTUCKY EMPLOYEES RETIREMENT SYSTEM</b>                       |                           |                           |
| Revenues:                                                                      |                           |                           |
| Employer contributions transferred from<br>Kentucky Employes Retirement System | \$1,249,257               | \$1,173,149               |
| Investment income                                                              | <u>268,269</u>            | <u>465,713</u>            |
| TOTAL REVENUES                                                                 | 1,517,526                 | 1,638,862                 |
| Expenses:                                                                      |                           |                           |
| Insurance premium payments                                                     | <u>1,929,311</u>          | <u>1,330,617</u>          |
| EXCESS (DEFICIENCY) OF REVENUES OVER EXPENSES                                  | (411,785)                 | 308,245                   |
| Fund balance at beginning of year                                              | <u>3,274,809</u>          | <u>2,966,564</u>          |
| FUND BALANCE AT END OF YEAR                                                    | <u><u>\$2,863,024</u></u> | <u><u>\$3,274,809</u></u> |
| <b>ALLOCATED TO COUNTY EMPLOYEES RETIREMENT SYSTEM</b>                         |                           |                           |
| Revenues:                                                                      |                           |                           |
| Employer contributions transferred from<br>County Employes Retirement System   | \$ 594,128                | \$ 488,173                |
| Investment income                                                              | <u>174,352</u>            | <u>272,423</u>            |
| TOTAL REVENUES                                                                 | 768,480                   | 760,596                   |
| Expenses:                                                                      |                           |                           |
| Insurance premium payments                                                     | <u>755,883</u>            | <u>467,132</u>            |
| EXCESS OF REVENUES OVER EXPENSES                                               | 12,597                    | 293,464                   |
| Fund balance at beginning of year                                              | <u>1,970,840</u>          | <u>1,677,376</u>          |
| FUND BALANCE AT END OF YEAR                                                    | <u><u>\$1,983,437</u></u> | <u><u>\$1,970,840</u></u> |
| <b>ALLOCATED TO STATE POLICE RETIREMENT SYSTEM</b>                             |                           |                           |
| Revenues:                                                                      |                           |                           |
| Employer contributions transferred from<br>State Police Retirement System      | \$ 185,923                | \$ 26,333                 |
| Investment income                                                              | <u>4,962</u>              | <u>10,324</u>             |
| TOTAL REVENUES                                                                 | 190,885                   | 36,657                    |
| Expenses:                                                                      |                           |                           |
| Insurance premium payments                                                     | <u>150,996</u>            | <u>39,822</u>             |
| EXCESS (DEFICIENCY) OF REVENUES OVER EXPENSES                                  | 39,889                    | (3,165)                   |
| Fund balance at beginning of year                                              | <u>66,771</u>             | <u>69,936</u>             |
| FUND BALANCE AT END OF YEAR                                                    | <u><u>\$ 106,660</u></u>  | <u><u>\$ 66,771</u></u>   |

See note to financial statements.

STATEMENTS OF CHANGES IN FINANCIAL POSITION

KENTUCKY RETIREMENT SYSTEMS INSURANCE FUND

|                                                               | Year Ended June 30 |           |
|---------------------------------------------------------------|--------------------|-----------|
|                                                               | 1983               | 1982      |
| SOURCE OF FUNDS                                               |                    |           |
| Excess of revenues over expenses                              |                    | \$598,544 |
| Decrease in securities purchased<br>under agreement to resell | \$ 61,872          |           |
| Decrease in employer contributions<br>receivable              | 117,538            |           |
| Decrease in prepaid insurance<br>premiums                     | 179,626            |           |
| TOTAL FUNDS PROVIDED                                          | 359,036            | 598,544   |
| APPLICATION OF FUNDS                                          |                    |           |
| Deficit of revenues over expenses                             | 359,299            |           |
| Increase in securities purchased<br>under agreement to resell |                    | 311,000   |
| Increase in employer contributions<br>receivable              |                    | 194,825   |
| Increase in prepaid insurance<br>premiums                     |                    | 179,626   |
| TOTAL FUNDS USED                                              | 359,299            | 685,451   |
| DECREASE IN CASH                                              | 263                | 86,907    |
| Cash on deposit with State Treasurer<br>at beginning of year  | 322                | 87,229    |
| CASH ON DEPOSIT WITH STATE<br>TREASURER AT END OF YEAR        | \$ 59              | \$ 322    |

See note to financial statements.

NOTE TO FINANCIAL STATEMENTS

KENTUCKY EMPLOYES RETIREMENT INSURANCE FUND

June 30, 1983

NOTE A--SIGNIFICANT ACCOUNTING POLICY AND DESCRIPTION OF PLAN

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

The Fund was established in 1978 to provide accident and health insurance for members receiving benefits from the Kentucky Employes Retirement System, County Employes Retirement System, and State Police Retirement System (Systems). The Fund and members receiving benefits pay prescribed portions of the aggregate premiums paid to an insurance company for coverage. Insurance premium payments included in the accompanying financial statements represent that portion of premiums paid by the Fund. Insurance premiums withheld from benefit payments to members of the Systems approximated \$1,816,000 and \$1,267,000 for the Kentucky Employes Retirement System, \$819,000 and \$542,000 for the County Employes Retirement System, and \$6,000 and \$38,000 for the State Police Retirement System in 1983 and 1982, respectively. Effective August 1, 1982, the Retirement System began paying the same proportion of medical insurance premiums for the spouse or beneficiary and dependents of retired hazardous members or hazardous employees killed in the line of duty. The allocation of the insurance premiums paid by the Fund and amounts withheld from members' benefits is based on the years of service with the Systems, as follows:

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

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

| <u>Non-hazardous</u>                | <u>June 30</u> |             |
|-------------------------------------|----------------|-------------|
|                                     | <u>1983</u>    | <u>1982</u> |
| Kentucky Employes Retirement System | 0.21%          | 0.21%       |
| County Employes Retirement System   | 0.15%          | 0.15%       |
| <u>Hazardous</u>                    |                |             |
| Kentucky Employes Retirement System | 0.59%          | 0.34%       |
| County Employes Retirement System   | 0.54%          | 0.13%       |
| State Police Retirement System      | 0.82%          | 0.12%       |

ACTUARIAL SECTION  
INTRODUCTION

Annually an actuarial valuation is prepared for each of the three retirement systems. An actuarial valuation is the mathematical means by which contingent liabilities and contribution rates of a retirement system are determined. It is a means of keeping a check on the financial status of the fund to assure the members that adequate monies will be on hand in the future to meet the obligations of the retirement systems.

The actuarial valuation is prepared for the purpose of determining the present value of the liability or cost of all future benefit payments. This represents the true liability of a retirement system, and this liability is used to determine how much should be paid into the fund each year in order to have sufficient funds available in the future to meet retirement benefit payments.

A reproduction of the certification made by the consulting actuarial firm, Tillinghast, Nelson & Warren, Inc., for each of the three retirement systems is found on the next page. The results of the 1983 actuarial valuations as prepared by Tillinghast, Nelson & Warren, Inc., follow. The last item in each section is the Actuarial Assumptions used for preparation of the valuations. Actuarial Assumptions are modified on a periodic basis to more accurately reflect the actual experience of the separate systems and to recognize changing economic trends. The assumptions used for the 1982-83 actuarial valuation were adopted in August of 1981 following a comprehensive actuarial experience study.

These reports indicate that every dollar of future liabilities is backed by \$.87 or more in assets. The remaining unfunded liabilities are being funded annually in accordance with the statutory requirement of 1% of the outstanding principal and payment of all accrued interest. The Kentucky Retirement Systems are actuarially sound and existing law assures the continuance of an actuarially sound system.

November 1, 1983

Board of Trustees  
Kentucky Retirement Systems  
226 West Second Street  
Frankfort, Kentucky 40601

Gentlemen:

The twenty-seventh annual actuarial valuation of the Kentucky Employes Retirement System, the twenty-fourth annual actuarial valuation of the County Employes Retirement System, and the twenty-fifth 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, 1983.

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 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. The Actuarial Accrued Liabilities of the Kentucky Employes Retirement System, the County Employes Retirement System, and the State Police Retirement System are being funded as required by the Kentucky Revised Statutes.

Respectfully submitted,  
TILLINGHAST, NELSON & WARREN, INC.

By James S. Rubie, Jr.  
James S. Rubie, Jr., F.S.A.  
Vice President

JSR/jjn  
3385:C1:A1.83



KENTUCKY EMPLOYES RETIREMENT SYSTEM  
RESULTS OF THE 1983 ACTUARIAL VALUATION

Actuarial Balance Sheet

Table I, which follows, is the actuarial balance sheet of the Kentucky Employees Retirement System as of June 30, 1983. 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 8 1/2% of the Unfunded Actuarial Accrued Liability, the employer share of the Normal Cost, medical insurance and the expenses of administration, is shown in Table II. The required contribution is expressed both in dollars and as a percentage of the estimated annual State payroll as of June 30, 1983.

The actuarial methods applied to determine the Normal Cost for the year commencing July 1, 1983 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 employe contributions. A breakdown of costs between Hazardous and Non-Hazardous position employes appears in Table III.

**KENTUCKY EMPLOYES RETIREMENT SYSTEM**  
**ACTUARIAL BALANCE SHEET-JUNE 30, 1983**

**ACTUARIAL ASSETS**

|                                                          |                    |                       |
|----------------------------------------------------------|--------------------|-----------------------|
| Fund Assets at Book Value*                               |                    | \$ 710,477,505        |
| Actuarial Present Value of Future Member Contributions   |                    | \$ 268,322,456        |
| Actuarial Present Value of Future Employer Contributions |                    |                       |
| For Normal Costs                                         | \$234,190,869      |                       |
| For Unfunded Actuarial Accrued Liability                 | <u>152,196,081</u> |                       |
| Total                                                    |                    | <u>\$ 386,386,950</u> |
| Total Actuarial Assets                                   |                    | \$1,365,186,911       |

**ACTUARIAL LIABILITIES**

|                                                          |                   |                    |
|----------------------------------------------------------|-------------------|--------------------|
| Actuarial Present Value of Future Benefits               |                   |                    |
| Inactive Members:                                        |                   |                    |
| Retired Members                                          | \$259,584,355     |                    |
| Vested Retirement                                        | 6,454,015         |                    |
| Vested Membership                                        | 2,198,612         |                    |
| Reciprocities                                            | <u>736,040</u>    |                    |
| Total - Inactive                                         |                   | \$ 268,973,022     |
| Active Members:                                          |                   |                    |
| Normal Retirement Benefits                               | \$ 831,750,511    |                    |
| Disability Benefits                                      | 62,087,619        |                    |
| Withdrawal Benefits (Vested and Refund of Contributions) | 149,221,833       |                    |
| Survivor Benefits                                        | <u>52,772,299</u> |                    |
| Total - Active                                           |                   | \$1,095,832,262    |
| Refunds and Expenses Payable                             |                   | <u>\$ 381,627</u>  |
| Total Actuarial Liabilities                              |                   | \$1,365,186,911    |
| <br><b><u>VESTED ACCRUED BENEFIT LIABILITY</u></b>       |                   | <br>\$ 550,006,161 |

\*The market value of assets as of June 30, 1983 is \$775,736,080.  
The actuarial value of assets as of June 30, 1983 is \$710,095,878 (book value of assets less refunds and expenses payable).  
The Members' Contribution Account as of June 30, 1983 is \$164,526,192.

KENTUCKY EMPLOYEES RETIREMENT SYSTEM

DETERMINATION OF CONTRIBUTION RATE--JUNE 30, 1983

| <u>UNFUNDED ACTUARIAL ACCRUED LIABILITY</u>                   |                    | <u>PERCENT*</u> |
|---------------------------------------------------------------|--------------------|-----------------|
| Total Actuarial Accrued Liability                             | \$862,291,959      | 148.29%         |
| Assets at Actuarial Value                                     | <u>710,095,878</u> | <u>122.12%</u>  |
| Unfunded Actuarial Accrued Liability                          | \$152,196,081      | 26.17%          |
| Contribution - 8 1/2% of Unfunded Actuarial Accrued Liability | \$ 12,936,667      | 2.22%           |
| <u>NORMAL COST</u>                                            |                    |                 |
| Normal Retirement Benefits                                    | \$ 30,562,595      | 5.25%           |
| Disability Benefits                                           | 2,858,222          | 0.49%           |
| Withdrawal Benefits (Vested and Refund of Contributions)      | 9,121,755          | 1.57%           |
| Survivor Benefits                                             | <u>2,076,195</u>   | <u>0.36%</u>    |
| Total Normal Cost                                             | \$ 44,618,767      | 7.67%           |
| Less: Employee Contributions                                  | <u>23,264,110</u>  | <u>4.00%</u>    |
| Normal Cost - State                                           | \$ 21,354,657      | 3.67%           |
| <u>TOTAL ANNUAL EMPLOYER COST</u>                             |                    |                 |
| <u>Non-Hazardous Duty Cost</u>                                |                    |                 |
| Normal Cost                                                   | \$ 21,127,037      | 3.65%**         |
| 8 1/2% of Unfunded Actuarial Accrued Liability                | 12,828,149         | 2.22%**         |
| Administrative Expenses                                       | 522,267            | 0.09%**         |
| Group Hospital and Medical Insurance Premiums                 | <u>1,678,471</u>   | <u>0.29%**</u>  |
| Total Annual Cost                                             | \$ 36,155,924      | 6.25%**         |
| <u>Hazardous Duty Cost</u>                                    |                    |                 |
| Normal Cost                                                   | \$ 227,620         | 8.40%***        |
| 8 1/2% of Unfunded Actuarial Accrued Liability                | 108,518            | 4.00%***        |
| Administrative Expenses                                       | 5,961              | 0.22%***        |
| Group Hospital and Medical Insurance Premium                  | <u>21,135</u>      | <u>0.78%***</u> |
| Total Annual Cost                                             | \$ 363,234         | 13.40%***       |

\*Based on estimated annual salaries of \$581,492,676.

\*\*Based on estimated annual salaries of \$578,783,100 for Non-Hazardous Position Employees.

\*\*\*Based on estimated annual salaries of \$2,709,576 for Hazardous Position Employees.

KENTUCKY EMPLOYES RETIREMENT SYSTEM

CLASSIFICATION OF ACTUARIAL LIABILITIES AND COSTS-JUNE 30, 1983

|                                                             | Non-Hazardous<br>Position<br>Employees | Hazardous<br>Position<br>Employees | Total              |
|-------------------------------------------------------------|----------------------------------------|------------------------------------|--------------------|
| <u>ACTUARIAL ACCRUED LIABILITY</u>                          |                                        |                                    |                    |
| <u>Active Members</u>                                       |                                        |                                    |                    |
| Normal Retirement Benefits                                  | \$490,307,163                          | \$ 6,007,380                       | \$496,314,543      |
| Disability Benefits                                         | 29,882,284                             | 266,535                            | 30,148,819         |
| Withdrawal Benefits (Vested<br>and Refund of Contributions) | 37,378,985                             | ( 27,021)                          | 37,351,964         |
| Survivor Benefits                                           | <u>29,274,994</u>                      | <u>228,617</u>                     | <u>29,503,611</u>  |
| Actuarial Accrued Liability -<br>Actives                    | \$586,843,426                          | \$ 6,475,511                       | \$593,318,937      |
| <u>Inactive Members</u>                                     |                                        |                                    |                    |
| Retired Members                                             | \$256,738,262                          | \$ 2,846,093                       | \$259,584,355      |
| Vested Retirement                                           | 6,445,061                              | 8,954                              | 6,454,015          |
| Vested Membership                                           | 2,191,074                              | 7,538                              | 2,198,612          |
| Reciprocities                                               | <u>736,040</u>                         | <u>0</u>                           | <u>736,040</u>     |
| Actuarial Accrued Liability -<br>Inactives                  | \$266,110,437                          | \$ 2,862,585                       | \$268,973,022      |
| Total Actuarial Accrued Liability                           | \$852,953,863                          | \$ 9,338,096                       | \$862,291,959      |
| <u>UNFUNDED ACTUARIAL ACCRUED LIABILITY</u>                 |                                        |                                    |                    |
| Total Actuarial Accrued Liability                           | \$852,953,863                          | \$ 9,338,096                       | \$862,291,959      |
| Less Actuarial Value of Assets                              | <u>702,034,466</u>                     | <u>8,061,412</u>                   | <u>710,095,878</u> |
| Unfunded Actuarial Accrued Liability                        | \$150,919,397                          | \$ 1,276,684                       | \$152,196,081      |
| <u>NORMAL COSTS</u>                                         |                                        |                                    |                    |
| Normal Retirement Benefits                                  | \$ 30,238,224                          | \$ 324,371                         | \$ 30,562,595      |
| Disability Benefits                                         | 2,828,505                              | 29,717                             | 2,858,222          |
| Withdrawal Benefits (Vested and<br>Refund of Contributions) | 9,098,308                              | 23,447                             | 9,121,755          |
| Survivor Benefits                                           | <u>2,050,112</u>                       | <u>26,083</u>                      | <u>2,076,195</u>   |
| Total Normal Cost                                           | \$ 44,215,149                          | \$ 403,618                         | \$ 44,618,767      |
| Less Employee Contributions                                 | <u>23,088,112</u>                      | <u>175,998</u>                     | <u>23,264,110</u>  |
| Total Normal Cost - State                                   | \$ 21,127,037                          | \$ 227,620                         | \$ 21,354,657      |
| <u>VESTED ACCRUED BENEFIT LIABILITY</u>                     | \$542,373,340                          | \$ 7,632,821                       | \$550,006,161      |

KENTUCKY EMPLOYES RETIREMENT SYSTEM

ACTUARIAL ASSUMPTIONS

A. STATEMENT OF ACTUARIAL ASSUMPTIONS

(1) Mortality:

- (a) Active & retired lives - 1971 Group Annuity Mortality Table, plus a duty death rate of .0005 per year for hazardous duty employees.
- (b) Disabled lives - Social Security Administration Disability Mortality Rates - Actuarial Study No. 75.

(2) Disablement

- Graduated rates.

(3) Termination of employment

- Graduated select and ultimate rates.

(4) Retirement

- Non-Hazardous:

| <u>Age</u> | <u>Retirement Rate</u> |
|------------|------------------------|
| 55-61      | .05                    |
| 62         | .25                    |
| 63-64      | .20                    |
| 65         | .70                    |
| 66-67      | .35                    |
| 68         | .45                    |
| 69         | .60                    |
| 70 & Over  | 1.00                   |

At age 55-64 in lieu of the age related rate, 25% 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) Investment return

- 7.50% per year, net of expenses, compounded annually.

(7) Compensation progression

- 7.50% per year, compounded annually.

COUNTY EMPLOYEES RETIREMENT SYSTEM  
RESULTS OF THE 1983 ACTUARIAL VALUATION

Actuarial Balance Sheet

Table I, which follows, is the actuarial balance sheet of the County Employees Retirement System as of June 30, 1983. 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 contribution rate of the participating Agencies required to provide 8 1/2% of the Unfunded Actuarial Accrued Liability, the employer share of the annual Normal Cost, medical insurance and the administrative costs of the System is shown in Table II. The required contribution is expressed both in dollars and as a percentage of the estimated payroll of the participating Agencies as of June 30, 1983.

The actuarial methods applied to determine the Normal Cost for the year commencing July 1, 1983 are described on page C-2. These costs are classified by type of benefit. The Normal Cost contribution rate of the participating Agencies is determined by reducing the total Normal Cost by the expected employe contributions. A breakdown of costs between Hazardous and Non-Hazardous position employes appears in Table III.

COUNTY EMPLOYES RETIREMENT SYSTEM  
ACTUARIAL BALANCE SHEET-JUNE 30, 1983

ACTUARIAL ASSETS

|                                                          |               |                      |
|----------------------------------------------------------|---------------|----------------------|
| Fund Assets at Book Value*                               |               | \$343,566,575        |
| Actuarial Present Value of Future Member Contributions   |               | \$173,481,996        |
| Actuarial Present Value of Future Employer Contributions |               |                      |
| For Normal Costs                                         | \$167,351,884 |                      |
| For Unfunded Actuarial Accrued Liability                 | ( 2,450,006)  |                      |
| Total                                                    |               | <u>\$164,901,878</u> |
| Total Actuarial Assets                                   |               | \$681,950,449        |

ACTUARIAL LIABILITIES

|                                                             |                   |                   |
|-------------------------------------------------------------|-------------------|-------------------|
| Actuarial Present Value of Future Benefits                  |                   |                   |
| Inactive Members:                                           |                   |                   |
| Retired Members                                             | \$ 93,003,343     |                   |
| Vested Retirement                                           | 5,699,522         |                   |
| Vested Membership                                           | 2,312,032         |                   |
| Reciprocities                                               | <u>185,261</u>    |                   |
| Total - Inactive                                            |                   | \$101,200,158     |
| Active Members:                                             |                   |                   |
| Normal Retirement Benefits                                  | \$441,481,478     |                   |
| Disability Benefits                                         | 35,543,159        |                   |
| Withdrawal Benefits (Vested and<br>Refund of Contributions) | 77,103,167        |                   |
| Survivor Benefits                                           | <u>26,211,681</u> |                   |
| Total - Active                                              |                   | \$580,339,485     |
| Refunds and Expenses Payable                                |                   | <u>\$ 410,806</u> |
| Total Actuarial Liabilities                                 |                   | \$681,950,449     |

VESTED ACCRUED BENEFIT LIABILITY \$225,665,745

\*The market value of assets as of June 30, 1983 is \$379,938,058.  
The actuarial value of assets as of June 30, 1983 is \$343,155,769 (book value of assets less refunds and expenses payable).  
The Members' Contribution Account as of June 30, 1983 is \$79,957,740.

COUNTY EMPLOYEES RETIREMENT SYSTEM

DETERMINATION OF CONTRIBUTION RATE-JUNE 30, 1983

| <u>UNFUNDED ACTUARIAL ACCRUED LIABILITY</u>                   |                    | <u>PERCENT*</u> |
|---------------------------------------------------------------|--------------------|-----------------|
| Total Actuarial Accrued Liability                             | \$340,705,763      | 89.56%          |
| Assets at Actuarial Value                                     | <u>343,155,769</u> | <u>90.20%</u>   |
| Unfunded Actuarial Accrued Liability                          | \$ 0               | 0.00%           |
| Contribution - 8 1/2% of Unfunded Actuarial Accrued Liability | \$ 0               | 0.00%           |
| <u>NORMAL COST</u>                                            |                    |                 |
| Normal Retirement Benefits                                    | \$ 22,478,085      | 5.91%           |
| Disability Benefits                                           | 2,028,603          | 0.53%           |
| Withdrawal Benefits (Vested and Refund of Contributions)      | 5,311,894          | 1.40%           |
| Survivor Benefits                                             | <u>1,406,031</u>   | <u>0.37%</u>    |
| Total Normal Cost                                             | \$ 31,224,613      | 8.21%           |
| Less: Employee Contributions                                  | <u>15,526,079</u>  | <u>4.08%</u>    |
| Normal Cost - County                                          | \$ 15,698,534      | 4.13%           |
| <u>TOTAL ANNUAL EMPLOYER COST</u>                             |                    |                 |
| <u>Non-Hazardous Duty Cost</u>                                |                    |                 |
| Normal Cost                                                   | \$ 14,407,858      | 3.93%**         |
| 8 1/2% of Unfunded Actuarial Accrued Liability                | 0                  | 0.00%**         |
| Administrative Expenses                                       | 426,886            | 0.12%**         |
| Group Hospital and Medical Insurance Premiums                 | <u>\$ 550,277</u>  | <u>0.15%**</u>  |
| Total Annual Cost                                             | \$ 15,385,021      | 4.20%**         |
| <u>Hazardous Duty Cost</u>                                    |                    |                 |
| Normal Cost                                                   | \$ 1,290,676       | 9.50%***        |
| 8 1/2% of Unfunded Actuarial Accrued Liability                | 0                  | 0.00%***        |
| Administrative Expenses                                       | 50,551             | 0.37%***        |
| Group Hospital and Medical Insurance Premium                  | <u>105,926</u>     | <u>0.78%***</u> |
| Total Annual Cost                                             | \$ 1,447,153       | 10.65%***       |

\*Based on estimated annual salaries of \$380,431,560.

\*\*Based on estimated annual salaries of \$366,851,340 for Non-Hazardous Position Employees.

\*\*\*Based on estimated annual salaries of \$13,580,220 for Hazardous Position Employees.



**COUNTY EMPLOYES RETIREMENT SYSTEM**

**CLASSIFICATION OF ACTUARIAL LIABILITIES AND COSTS JUNE 30, 1983**

|                                                             | <u>Non-Hazardous<br/>Position<br/>Emploees</u> | <u>Hazardous<br/>Position<br/>Emploees</u> | <u>Total</u>       |
|-------------------------------------------------------------|------------------------------------------------|--------------------------------------------|--------------------|
| <b><u>ACTUARIAL ACCRUED LIABILITY</u></b>                   |                                                |                                            |                    |
| <b><u>Active Members</u></b>                                |                                                |                                            |                    |
| Normal Retirement Benefits                                  | \$176,473,693                                  | \$ 26,949,414                              | \$203,423,107      |
| Disability Benefits                                         | 12,180,216                                     | 740,448                                    | 12,920,664         |
| Withdrawal Benefits (Vested<br>and Refund of Contributions) | 12,506,264                                     | 183,422                                    | 12,689,686         |
| Survivor Benefits                                           | <u>9,847,670</u>                               | <u>624,478</u>                             | <u>10,472,148</u>  |
| Actuarial Accrued Liability -<br>Actives                    | \$211,007,843                                  | \$ 28,497,762                              | \$239,505,605      |
| <b><u>Inactive Members</u></b>                              |                                                |                                            |                    |
| Retired Members                                             | \$ 86,452,354                                  | \$ 6,550,989                               | \$ 93,003,343      |
| Vested Retirement                                           | 5,547,968                                      | 151,554                                    | 5,699,522          |
| Vested Membership                                           | 2,302,356                                      | 9,676                                      | 2,312,032          |
| Reciprocities                                               | <u>185,261</u>                                 | <u>0</u>                                   | <u>185,261</u>     |
| Actuarial Accrued Liability -<br>Inactives                  | \$ 94,487,939                                  | \$ 6,712,219                               | \$101,200,158      |
| Total Actuarial Accrued Liability                           | \$305,495,782                                  | \$ 35,209,981                              | \$340,705,763      |
| <b><u>UNFUNDED ACTUARIAL ACCRUED LIABILITY</u></b>          |                                                |                                            |                    |
| Total Actuarial Accrued Liability                           | \$305,495,782                                  | \$ 35,209,981                              | \$340,705,763      |
| Less Actuarial Value of Assets                              | <u>307,073,348</u>                             | <u>36,082,421</u>                          | <u>343,155,769</u> |
| Unfunded Actuarial Accrued Liability                        | \$ 0                                           | \$ 0                                       | \$ 0               |
| <b><u>NORMAL COSTS</u></b>                                  |                                                |                                            |                    |
| Normal Retirement Benefits                                  | \$ 20,617,946                                  | \$ 1,860,139                               | \$ 22,478,085      |
| Disability Benefits                                         | 1,930,348                                      | 98,255                                     | 2,028,603          |
| Withdrawal Benefits (Vested and<br>Refund of Contributions) | 5,151,850                                      | 160,044                                    | 5,311,894          |
| Survivor Benefits                                           | <u>1,315,408</u>                               | <u>90,623</u>                              | <u>1,406,031</u>   |
| Total Normal Cost                                           | \$ 29,015,552                                  | \$ 2,209,061                               | \$ 31,224,613      |
| Less Employee Contributions                                 | <u>14,607,694</u>                              | <u>918,385</u>                             | <u>15,526,079</u>  |
| Total Normal Cost - County                                  | \$ 14,407,858                                  | \$ 1,290,676                               | \$ 15,698,534      |
| <b><u>VESTED ACCRUED BENEFIT LIABILITY</u></b>              | \$205,028,913                                  | \$ 20,636,832                              | \$225,665,745      |

COUNTY EMPLOYEES RETIREMENT SYSTEM

ACTUARIAL ASSUMPTIONS

A. STATEMENT OF ACTUARIAL ASSUMPTIONS

(1) Mortality:

- (a) Active & retired lives - 1971 Group Annuity Mortality Table, plus a duty death rate of .0005 per year for pre-retirement hazardous duty employes.
- (b) Disabled lives - Social Security Administration Disability Mortality Rates - Actuarial Study No. 75.

(2) Disablement

- Graduated rates.

(3) Termination of employment

- Graduated select and ultimate rates.

(4) Retirement

- Non-Hazardous:

| <u>Age</u> | <u>Retirement Rate</u> |
|------------|------------------------|
| 55-61      | .05                    |
| 62         | .25                    |
| 63-64      | .20                    |
| 65         | .70                    |
| 66-67      | .35                    |
| 68         | .45                    |
| 69         | .60                    |
| 70 & Over  | 1.00                   |

At age 55-64 in lieu of the age related rate, 25% 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) Investment return

- 7.50% per year, net of expenses, compounded annually.

(7) Compensation progression

- 7.50% per year, compounded annually.

## STATE POLICE RETIREMENT SYSTEM

### RESULTS OF THE 1983 ACTUARIAL VALUATION

#### Actuarial Balance Sheet

Table I, which follows, is the actuarial balance sheet of the State Police Retirement System as of June 30, 1983. 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 8 1/2% of the Unfunded Actuarial Accrued Liability, the employer share of the Normal Cost, medical insurance and the administrative costs of the System is shown in Table II. The required contribution is expressed both in dollars and as a percentage of the estimated annual covered payroll as of June 30, 1983.

The actuarial methods applied to determine the Normal Cost for the year commencing July 1, 1983 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 employe contributions.

STATE POLICE RETIREMENT SYSTEM

ACTUARIAL BALANCE SHEET JUNE 30, 1983

ACTUARIAL ASSETS

|                                                          |                   |                      |
|----------------------------------------------------------|-------------------|----------------------|
| Fund Assets at Book Value*                               |                   | \$ 65,782,369        |
| Actuarial Present Value of Future Member Contributions   |                   | 16,130,856           |
| Actuarial Present Value of Future Employer Contributions |                   |                      |
| For Normal Costs                                         | \$23,172,761      |                      |
| For Unfunded Actuarial Accrued Liability                 | <u>16,187,460</u> |                      |
| Total                                                    |                   | <u>\$ 39,360,221</u> |
| Total Actuarial Assets                                   |                   | \$121,273,446        |

ACTUARIAL LIABILITIES

|                                               |                  |                  |
|-----------------------------------------------|------------------|------------------|
| Actuarial Present Value of Future Benefits to |                  |                  |
| Inactive Members:                             |                  |                  |
| Retired Members                               | \$22,202,772     |                  |
| Vested Retirement                             | 379,728          |                  |
| Vested Membership                             | 13,295           |                  |
| Reciprocities                                 | <u>244,467</u>   |                  |
| Total - Inactive                              |                  | \$ 22,840,262    |
| Active Members:                               |                  |                  |
| Normal Retirement Benefits                    | \$90,417,159     |                  |
| Disability Benefits                           | 2,156,806        |                  |
| Withdrawal Benefits (Vested and               |                  |                  |
| Refund of Contributions)                      | 3,913,309        |                  |
| Survivor Benefits                             | <u>1,920,627</u> |                  |
| Total - Active                                |                  | \$ 98,407,901    |
| Refunds and Expenses Payable                  |                  | <u>\$ 25,283</u> |
| Total Actuarial Liabilities                   |                  | \$121,273,446    |
| <u>VESTED ACCRUED BENEFIT LIABILITY</u>       |                  | \$51,505,988     |

\*The market value of assets as of June 30, 1983 is \$69,539,698.  
 The actuarial value of assets as of June 30, 1983 is \$65,757,086 (book value of assets less refunds and expenses payable).  
 The Members' Contribution Account as of June 30, 1983 is \$13,783,222.

STATE POLICE RETIREMENT SYSTEM

DETERMINATION OF CONTRIBUTION RATE JUNE 30, 1983

| <u>UNFUNDED ACTUARIAL ACCRUED LIABILITY</u>                          |                   | <u>PERCENT*</u> |
|----------------------------------------------------------------------|-------------------|-----------------|
| Total Actuarial Accrued Liability                                    | \$81,944,546      | 368.60%         |
| Assets at Actuarial Value                                            | <u>65,757,086</u> | <u>295.79%</u>  |
| Unfunded Actuarial Accrued Liability                                 | \$16,187,460      | 72.81%          |
| <br>Contribution - 8 1/2% of Unfunded<br>Actuarial Accrued Liability | <br>\$ 1,375,934  | <br>6.19%       |
| <br><u>NORMAL COST</u>                                               |                   |                 |
| Normal Retirement Benefits                                           | \$ 3,008,555      | 13.53%          |
| Disability Benefits                                                  | 112,653           | 0.51%           |
| Withdrawal Benefits (Vested and<br>Refund of Contributions)          | 299,896           | 1.35%           |
| Survivor Benefits                                                    | <u>109,644</u>    | <u>0.49%</u>    |
| Total Normal Cost                                                    | \$ 3,530,748      | 15.88%          |
| Less: Employee Contributions                                         | <u>1,556,181</u>  | <u>7.00%</u>    |
| <br>Normal Cost - State Police                                       | <br>\$ 1,974,567  | <br>8.88%       |
| <br><u>TOTAL ANNUAL COST - STATE POLICE</u>                          |                   |                 |
| Normal Cost                                                          | \$ 1,974,567      | 8.88%           |
| 8 1/2% of Unfunded Actuarial<br>Accrued Liability                    | 1,375,934         | 6.19%           |
| Administrative Expenses                                              | 10,158            | 0.05%           |
| Group Hospital and Medical<br>Insurance Premiums                     | <u>215,642</u>    | <u>0.97%</u>    |
| Total Annual Cost - State Police                                     | \$ 3,576,301      | 16.09%          |

\*Based on estimated annual salaries of \$22,231,152.

STATE POLICE RETIREMENT SYSTEM

ACTUARIAL ASSUMPTIONS

A. STATEMENT OF ACTUARIAL ASSUMPTIONS

(1) Mortality:

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

(b) Disabled lives - Social Security Administration Disability Mortality Rates - Actuarial Study No. 75.

(2) Disablement - Graduated rates.

(3) Termination of employment - Graduated rates.

(4) Retirement - 50% retire upon completion of 25 years of service; all others retire upon completion of 25 years of service and attainment of age 50, or upon attainment of age 55.

(5) Marital status

(a) Percentage married - 100%.

(b) Age difference - Males are assumed to be 3 years older than their spouses.

(6) Investment return - 7.50% per year, net of expenses, compounded annually.

(7) Compensation progression - 7.50% per year, compounded annually.

INVESTMENT SECTION  
INTRODUCTION

The Kentucky Revised Statutes provide that the Board of Trustees shall be the trustee and shall have the fiduciary responsibility for the several funds administered by the Kentucky Retirement Systems. Consistent with this provision and because the management of the several funds demands current attention, the Board annually adopts a resolution directing its Chairperson to appoint an Investment Committee with full power to act for the Board in the management of investment activities. The Investment Committee consists of three members of the Board of Trustees and regularly reports its activities to the full Board for review and approval.

In conjunction with the Investment Committee concept, the Board also adopts an "Investment Policy" which defines objectives and guidelines for the operation of the Investment Committee. This policy is reviewed and updated on a periodic basis. At June 30, 1983 the investment philosophy as stated in the "Investment Policy" reads as follows:

"The Board of Trustees of the Kentucky Retirement Systems recognizes its fiduciary duty not only to invest the systems funds in formal compliance with the Prudent Man Rule but also to manage those funds in continued recognition of the basic long term nature of those systems. The Board of Trustees interprets this to mean, in addition to the specific guidelines and restrictions set forth in this document, that the assets of the three Systems shall be actively managed - that is, investment decisions regarding the particular securities to be purchased or sold shall be the result of the conscious exercise of discretion. Further, the Board of Trustees recognizes that, commensurate with its overall objective of maximizing long-range return while maintaining a high standard of portfolio quality and consistency of return, it is necessary that proper diversification of assets be maintained both among and within the classes of securities held. Within this context of active management and the necessity for adherence to proper diversification, the Board of Trustees relies upon appropriate professional advice."

An external investment counseling firm is employed on a contractual basis to provide specific investment advice to the Investment Committee. Since late 1979, this service has been provided by Capital Supervisors, Inc., of Chicago, Illinois. A letter from this firm is included in the following pages which summarize fiscal year 1983 investment activity.

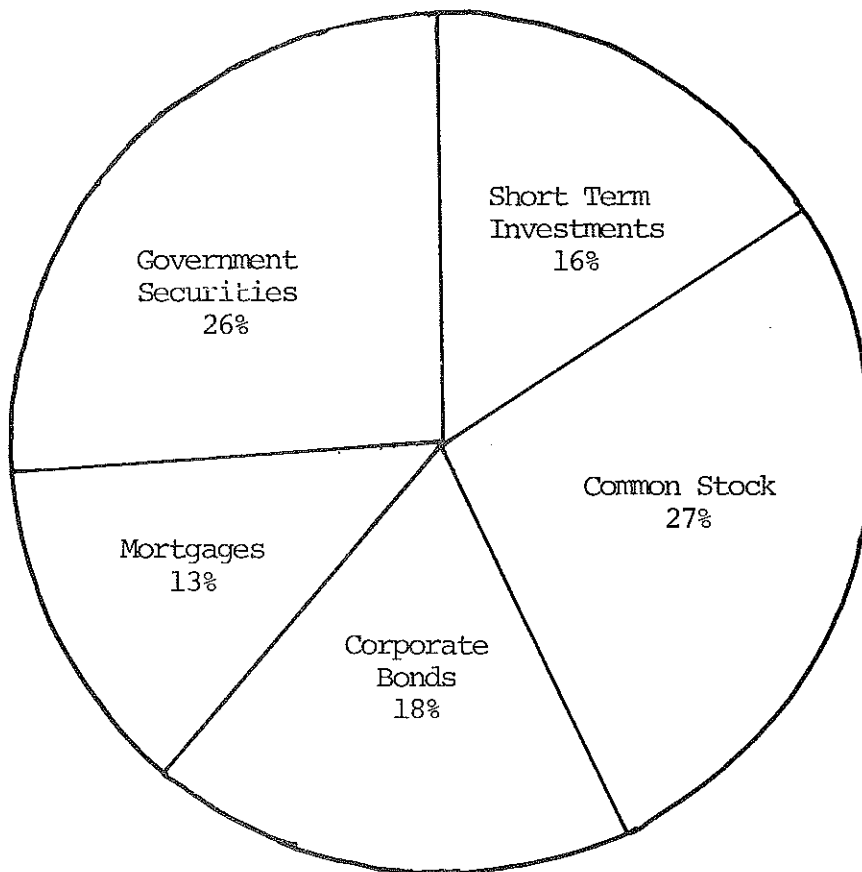
Fiscal year 1983 was a very gratifying year as the combined systems set new highs in both annual income and market value. Both market value and book value of the combined systems are now in excess of \$1 billion. Annual income was more than \$91 million in the year ending 6/30/83, and is expected to exceed that level next year. The "total rate of return"

(which is comprised of income earned plus realized and unrealized capital appreciation or loss) for the total portfolio for the year ended June 30, 1983 was a positive 38.2%. Both stocks and bonds provided excellent returns during fiscal 1983. Fiscal 1984 is also expected to provide favorable returns but it is unlikely that returns will sustain 1983 levels.

More important than the absolute numbers is the pattern of sustained growth. The tables on page 56 confirm this continued progress. The balanced nature of the portfolio with holdings that have different characteristics provides considerable portfolio stability. The positive cash flow and long term nature of the pension obligations also contribute to reduced volatility and risk. Finally, the conservative but progressive policies followed by the Board should produce additional controlled growth.

A separate portfolio summary is provided on pages 57, 58 and 59 for each retirement system and a total portfolio summary of the three systems combined is found on page 60. Following these summaries is a detail listing of the common stock portfolio held by the combined systems (page 61) as of June 30, 1983 and then a detail listing of the bond portfolio held by the combined systems (pages 62-65) at June 30, 1983. The final Table in this section is a detail report of the securities held in the Insurance Fund at June 30, 1983.

At June 30, 1983, the investments of the combined retirement systems were distributed as indicated below.



ASSET DISTRIBUTION  
BASED ON BOOK VALUE





Capital Supervisors, Inc. / 20 North Clark Street, Suite 700, Chicago, Illinois 60602 / Phone (312) 236-8271

A. Lee Thurow

President

September 12, 1983

Board of Trustees  
Kentucky Retirement System  
226 West Second Street  
Frankfort, Kentucky 40601

During fiscal 1983 we purchased \$103.7 million in stocks and sold \$65 million for a net increase of \$38.7 at cost. This was an excellent year for stocks with your portfolio's stock appreciating 60.1%. This compares with 58.7% for the Dow Jones Industrial Average and 61.2% for the Standard & Poor's Stock Index. In a sharply rising market it is difficult to beat a fully invested index where your funds come in during the year and some reserves are appropriate.

On the fixed income side we purchased about \$170 million face value of new bonds at an average yield in excess of 12%. During the same period 22 million bonds matured with an average coupon of less than 8% enabling further improvement in overall yield of the portfolio.

The pace of bond swapping also picked up with about 100 million face value changing hands. In all cases you benefited with a few being direct reversals. Net effect of the above fixed income activity resulted in over one-third of the assets being acquired this fiscal year resulting in very attractive historical yields for the portfolio.

As of June 30, 1983, cash equivalents represented 15% of assets at market value, stocks 33% and bonds 52%, overall yield was 7.9% at market and 8.7% at cost.

The total portfolio had a fine year with appreciation of 38.2%. We do not see how we can maintain that pace in the current fiscal year but anticipate good positive numbers, particularly since the environment is continuing to improve.

Respectfully submitted,

CAPITAL SUPERVISORS, INC.

By: Lee Thurow

Lee Thurow

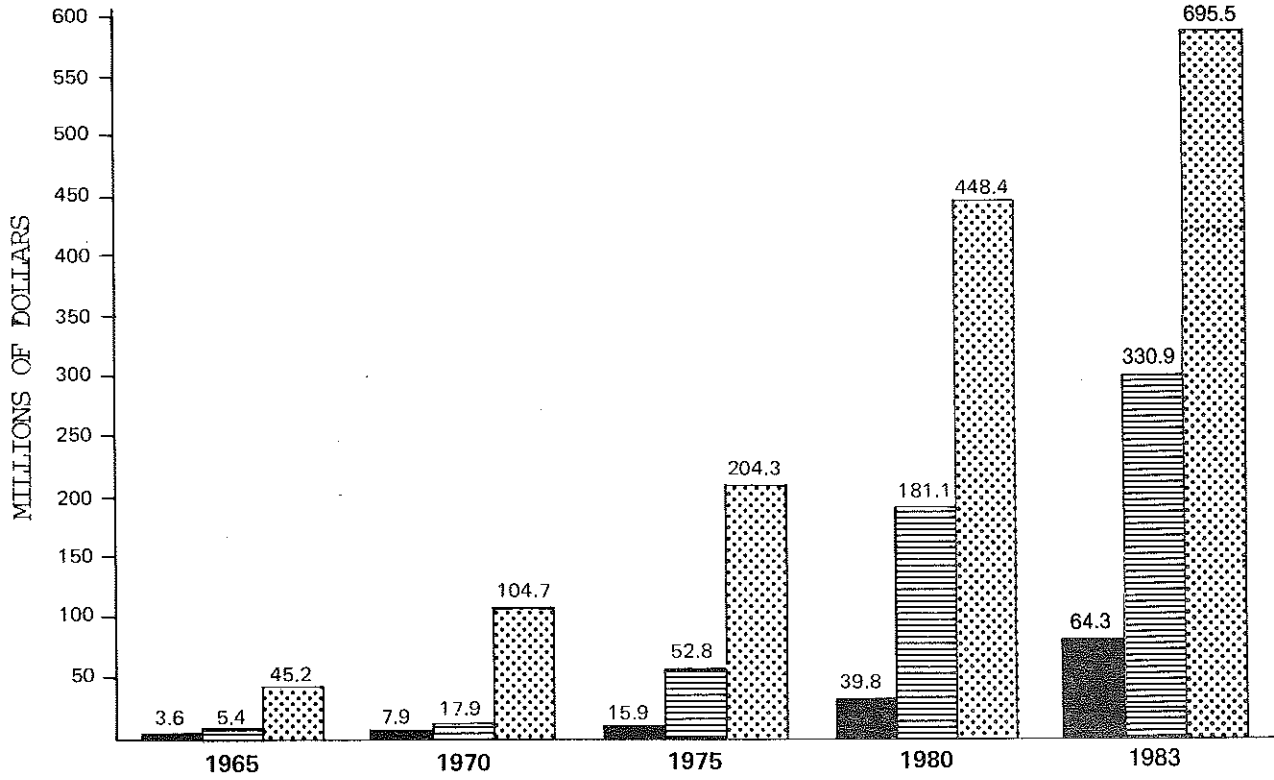
President

Theodore R. Tonneman

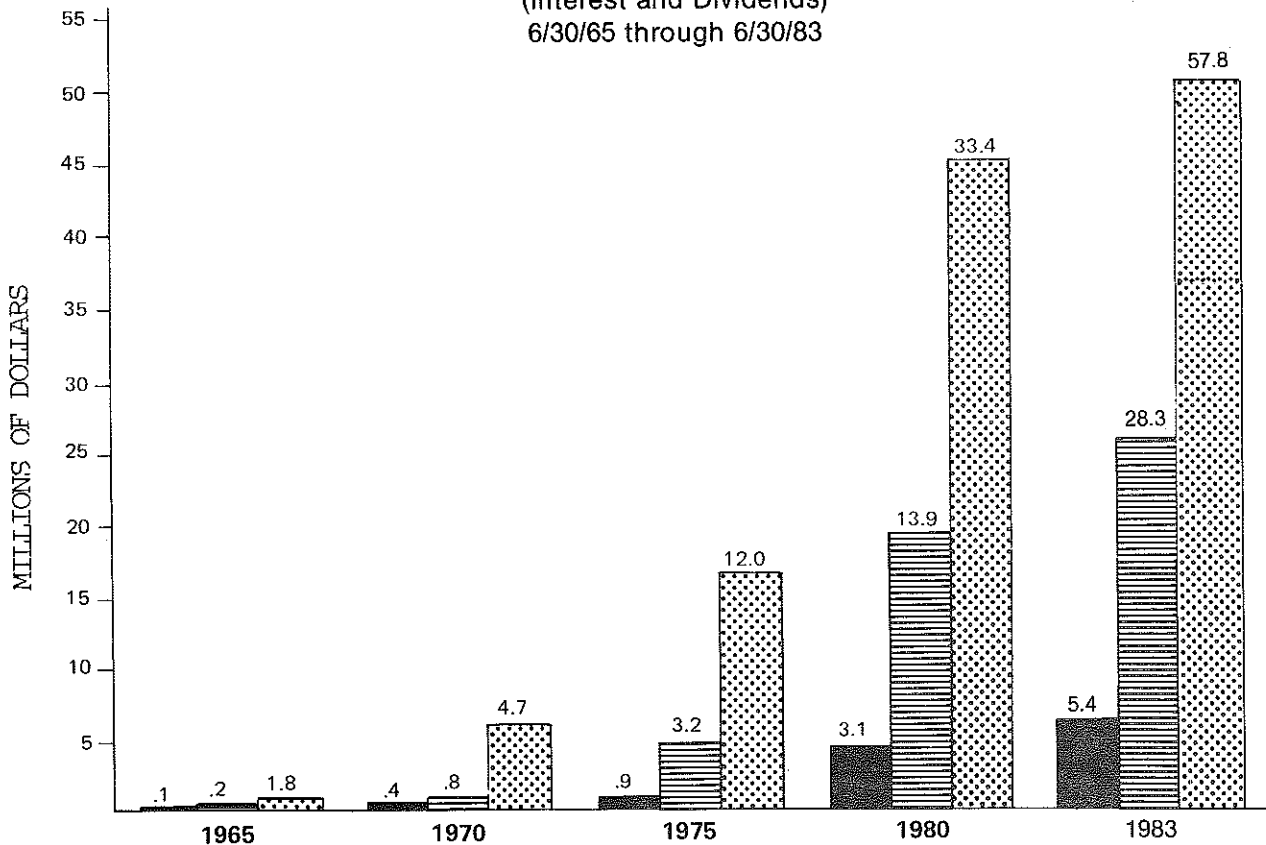
Theodore R. Tonneman

Executive Vice President

PORTFOLIO GROWTH  
(at book value)  
6/30/65 through 6/30/83



PORTFOLIO INCOME GROWTH  
(Interest and Dividends)  
6/30/65 through 6/30/83



SPRS      CERS      KERS

PENNSYLVANIA RETIREMENT SYSTEMS

KENTUCKY RETIREMENT SYSTEMS  
 PORTFOLIO SUMMARY: 06/30/83

STATE EMPLOYEES (KERS)

\*\*\*\*\* FIXED INCOME \*\*\*\*\*

| DESCRIPTION                   | CORPORATES       | GOVERNMENTS      | MORTGAGES       | SHORT TERM       | TOTAL            |
|-------------------------------|------------------|------------------|-----------------|------------------|------------------|
| Par Value                     | \$132,696,968.78 | \$221,877,278.02 | \$98,918,361.71 | \$109,626,404.87 | \$563,119,013.38 |
| % of Total Par Value          | 24%              | 39%              | 18%             | 19%              | 100%             |
| Book Value                    | \$129,857,846.74 | \$180,615,690.30 | \$84,813,284.63 | \$109,626,404.87 | \$504,913,226.54 |
| % of Total Book Value         | 26%              | 36%              | 17%             | 21%              | 100%             |
| Market Value                  | \$128,106,950.30 | \$178,232,586.17 | \$89,493,846.46 | \$109,626,404.87 | \$505,459,787.80 |
| % of Total Market Value       | 25%              | 35%              | 18%             | 22%              | 100%             |
| Potential Gain (Or Loss)      | \$ -1,750,896.44 | \$ -2,383,104.13 | \$ 4,680,561.83 | \$ .00           | \$ 546,561.26    |
| Indicated Annual Income       | \$ 13,476,054.22 | \$ 17,457,589.01 | \$10,143,735.98 | \$ 9,762,558.26  | \$ 50,839,937.47 |
| Current Yield - Book Value    | 10.38            | 9.67             | 11.96           | 8.91             | 10.07            |
| - Market Value                | 10.52            | 9.79             | 11.33           | 8.91             | 10.06            |
| Yield to Maturity - Mkt Value | 11.09            | 10.85            | 11.63           | 8.91             | 10.67            |
| Average Coupon                | 10.16            | 7.87             | 10.25           | 8.91             | 9.03             |
| Average Maturity (Years)      | 16.03            | 7.02             | 24.02           | .11              | 10.79            |

\*\*\*\*\* COMMON STOCK \*\*\*\*\*

| NO. OF SHARES               | BOOK VALUE/COST  | MARKET VALUE     | POTENTIAL GAIN (OR LOSS) | INDICATED DIVIDEND INCOME | -----CURRENT YIELD-----<br>ON COST ON MARKET   |
|-----------------------------|------------------|------------------|--------------------------|---------------------------|------------------------------------------------|
| 5,561,229                   | \$190,581,113.74 | \$255,293,128.02 | \$64,712,014.28          | \$11,950,418.94           | 6.27 4.68                                      |
| ***** TOTAL PORTFOLIO ***** |                  |                  |                          |                           |                                                |
| TYPE                        | BOOK VALUE       | MARKET VALUE     | PCTAGE OF PORTFOLIO      | INDICATED INCOME          | -----INDICATED YIELD-----<br>ON BOOK ON MARKET |
| Corporates                  | \$129,857,846.74 | \$128,106,950.30 | 19%                      | \$13,476,054.22           | 10.38 10.52                                    |
| Government                  | \$180,615,690.30 | \$178,232,586.17 | 23%                      | \$17,457,589.01           | 9.67 9.79                                      |
| Mortgages                   | \$ 84,813,284.63 | \$ 89,493,846.46 | 12%                      | \$10,143,735.98           | 11.96 11.33                                    |
| Short Term                  | \$109,626,404.87 | \$109,626,404.87 | 14%                      | \$ 9,762,558.26           | 8.91 8.91                                      |
| Common Stock                | \$190,581,113.74 | \$255,293,128.02 | 34%                      | \$11,950,418.94           | 6.27 4.68                                      |
| TOTAL PORTFOLIO             | \$695,494,340.28 | \$760,752,915.82 | 100%                     | \$62,790,356.41           | 9.03 8.25                                      |

KENTUCKY RETIREMENT SYSTEMS  
 PORTFOLIO SUMMARY: 06/30/83

COUNTY EMPLOYEES (CERS)

\*\*\*\*\* FIXED INCOME \*\*\*\*\*

| DESCRIPTION                   | CORPORATES      | GOVERNMENTS      | MORTGAGES       | SHORT TERM      | TOTAL            |
|-------------------------------|-----------------|------------------|-----------------|-----------------|------------------|
| Par Value                     | \$57,183,623.29 | \$112,765,451.93 | \$58,517,013.27 | \$52,475,459.80 | \$280,941,548.29 |
| % of Total Par Value          | 20%             | 40%              | 21%             | 19%             | 100%             |
| Book Value                    | \$55,019,127.98 | \$86,017,590.46  | \$48,800,033.83 | \$52,475,459.80 | \$242,312,212.07 |
| % of Total Book Value         | 23%             | 35%              | 20%             | 22%             | 100%             |
| Market Value                  | \$54,537,411.76 | \$87,382,171.58  | \$53,243,328.23 | \$52,475,459.80 | \$247,638,371.37 |
| % of Market Value             | 22%             | 35%              | 22%             | 21%             | 100%             |
| Potential Gain (Or Loss)      | \$ -481,716.22  | \$ 1,364,581.12  | \$ 4,443,294.40 | \$ .00          | \$ 5,326,159.30  |
| Indicated Annual Income       | \$ 5,857,496.39 | \$ 8,805,847.32  | \$ 6,161,336.23 | \$ 4,688,193.72 | \$ 25,512,873.66 |
| Current Yield - Book Value    | 10.65           | 10.24            | 12.63           | 8.93            | 10.53            |
| - Market Value                | 10.74           | 10.08            | 11.57           | 8.93            | 10.30            |
| Yield to Maturity - Mkt Value | 11.25           | 10.95            | 11.75           | 8.93            | 10.80            |
| Average Coupon                | 10.24           | 7.81             | 10.53           | 8.93            | 9.08             |
| Average Maturity (Years)      | 15.66           | 7.37             | 25.36           | .11             | 11.45            |

\*\*\*\*\* COMMON STOCK \*\*\*\*\*

| NO. OF SHARES | BOOK VALUE/COST | MARKET VALUE     | POTENTIAL GAIN (OR LOSS) | INDICATED DIVIDEND INCOME | ON COST | CURRENT YIELD ON MARKET |
|---------------|-----------------|------------------|--------------------------|---------------------------|---------|-------------------------|
| 2,582,448     | \$88,540,068.81 | \$119,585,393.02 | \$31,045,324.21          | \$5,379,329.24            | 6.08    | 4.50                    |

\*\*\*\*\* TOTAL PORTFOLIO \*\*\*\*\*

| TYPE            | BOOK VALUE       | PCTAGE OF PORTFOLIO | MARKET VALUE     | PCTAGE OF PORTFOLIO | INDICATED INCOME | ON BOOK | INDICATED YIELD ON MARKET |
|-----------------|------------------|---------------------|------------------|---------------------|------------------|---------|---------------------------|
| Corporates      | \$ 55,019,127.98 | 16%                 | \$ 54,537,411.76 | 15%                 | \$ 5,857,496.39  | 10.65   | 10.74                     |
| Government      | \$ 86,017,590.46 | 26%                 | \$ 87,382,171.58 | 24%                 | \$ 8,805,847.32  | 10.24   | 10.08                     |
| Mortgages       | \$ 48,800,033.83 | 15%                 | \$ 53,243,328.23 | 14%                 | \$ 6,161,336.23  | 12.63   | 11.57                     |
| Short Term      | \$ 52,475,459.80 | 16%                 | \$ 52,475,459.80 | 14%                 | \$ 4,688,193.72  | 8.93    | 8.93                      |
| Common Stock    | \$ 88,540,068.81 | 27%                 | \$119,585,393.02 | 33%                 | \$ 5,379,329.24  | 6.08    | 4.50                      |
| TOTAL PORTFOLIO | \$330,852,280.88 | 100%                | \$367,223,764.39 | 100%                | \$30,892,202.90  | 9.34    | 8.41                      |

KENTUCKY RETIREMENT SYSTEMS  
 PORTFOLIO SUMMARY: 06/30/83

STATE POLICE (SPRS)

\*\*\*\*\* FIXED INCOME \*\*\*\*\*

| DESCRIPTION                   | CORPORATES      | GOVERNMENTS     | MORTGAGES      | SHORT TERM      | TOTAL           |
|-------------------------------|-----------------|-----------------|----------------|-----------------|-----------------|
| Par Value                     | \$16,342,255.50 | \$17,481,570.05 | \$6,580,109.20 | \$13,399,407.10 | \$53,803,341.85 |
| % of Total Par Value          | 30%             | 33%             | 12%            | 25%             | 100%            |
| Book Value                    | \$16,297,988.98 | \$13,949,157.63 | \$5,710,820.83 | \$13,399,407.10 | \$49,357,374.54 |
| % of Total Book Value         | 33%             | 28%             | 12%            | 27%             | 100%            |
| Market Value                  | \$16,360,428.54 | \$13,383,812.08 | \$5,828,280.51 | \$13,399,407.10 | \$48,971,928.23 |
| % of Total Market Value       | 34%             | 27%             | 12%            | 27%             | 100%            |
| Potential Gain (Or Loss)      | \$ 62,439.56    | \$ -565,345.55  | \$ 117,459.68  | \$ .00          | \$ -385,446.31  |
| Indicated Annual Income       | \$ 1,782,918.89 | \$ 1,273,831.81 | \$ 619,050.52  | \$ 1,187,720.80 | \$ 4,863,522.02 |
| Current Yield - Book Value    | 10.94           | 9.13            | 10.84          | 8.86            | 9.85            |
| - Market Value                | 10.90           | 9.52            | 10.62          | 8.86            | 9.93            |
| Yield to Maturity - Mkt Value | 11.32           | 10.83           | 11.06          | 8.86            | 10.52           |
| Average Coupon                | 10.91           | 7.29            | 9.41           | 8.86            | 9.04            |
| Average Maturity (Years)      | 21.32           | 7.23            | 23.25          | .10             | 11.70           |

\*\*\*\*\* COMMON STOCK \*\*\*\*\*

| NO. OF SHARES               | BOOK VALUE/COST | MARKET VALUE    | POTENTIAL GAIN (OR LOSS) | INDICATED DIVIDEND INCOME | -----CURRENT YIELD-----<br>ON COST   | -----INDICATED YIELD-----<br>ON MARKET |
|-----------------------------|-----------------|-----------------|--------------------------|---------------------------|--------------------------------------|----------------------------------------|
| 426,989                     | \$14,944,950.67 | \$19,087,726.14 | \$4,142,775.47           | \$904,141.46              | 6.05                                 | 4.74                                   |
| ***** TOTAL PORTFOLIO ***** |                 |                 |                          |                           |                                      |                                        |
| TYPE                        | BOOK VALUE      | MARKET VALUE    | PCTAGE OF PORTFOLIO      | INDICATED INCOME          | -----INDICATED YIELD-----<br>ON BOOK | -----INDICATED YIELD-----<br>ON MARKET |
| Corporates                  | \$16,297,988.98 | \$16,360,428.54 | 25%                      | \$1,782,918.89            | 10.94                                | 10.90                                  |
| Government                  | \$13,949,157.63 | \$13,383,812.08 | 22%                      | \$1,273,831.81            | 9.13                                 | 9.52                                   |
| Mortgages                   | \$ 5,710,820.83 | \$ 5,828,280.51 | 9%                       | \$ 619,050.52             | 10.84                                | 10.62                                  |
| Short Term                  | \$13,399,407.10 | \$13,399,407.10 | 21%                      | \$1,187,720.80            | 8.86                                 | 8.86                                   |
| Common Stock                | \$14,944,950.67 | \$19,087,726.14 | 23%                      | \$ 904,141.46             | 6.05                                 | 4.74                                   |
| TOTAL PORTFOLIO             | \$64,302,325.21 | \$68,059,654.37 | 100%                     | \$5,767,663.48            | 8.97                                 | 8.47                                   |

KENTUCKY RETIREMENT SYSTEMS  
 PORTFOLIO SUMMARY: 06/30/83

ALL SYSTEMS COMBINED

\*\*\*\*\* FIXED INCOME \*\*\*\*\*

| DESCRIPTION                   | CORPORATES       | GOVERNMENTS      | MORTGAGES        | SHORT TERM       | TOTAL            |
|-------------------------------|------------------|------------------|------------------|------------------|------------------|
| Par Value                     | \$206,222,847.57 | \$352,124,300.00 | \$164,015,484.18 | \$175,501,271.77 | \$897,863,903.52 |
| % of Total Par Value          | 23%              | 39%              | 18%              | 20%              | 100%             |
| Book Value                    | \$201,174,963.70 | \$280,582,438.39 | \$139,324,139.29 | \$175,501,271.77 | \$796,582,813.15 |
| % of Total Book Value         | 25%              | 35%              | 18%              | 22%              | 100%             |
| Market Value                  | \$199,004,790.60 | \$278,998,569.83 | \$148,565,455.20 | \$175,501,271.77 | \$802,070,087.40 |
| % of Total Market Value       | 25%              | 35%              | 18%              | 22%              | 100%             |
| Potential Gain (Or Loss)      | \$ -2,170,173.10 | \$ -1,583,868.56 | \$ 9,241,315.91  | \$ .00           | \$ 5,487,274.25  |
| Indicated Annual Income       | \$ 21,116,469.50 | \$ 27,537,268.14 | \$ 16,924,122.73 | \$ 15,638,472.78 | \$ 81,216,333.15 |
| Current Yield - Book Value    | 10.50            | 9.81             | 12.15            | 8.91             | 10.20            |
| - Market Value                | 10.61            | 9.87             | 11.39            | 8.91             | 10.13            |
| Yield to Maturity - Mkt Value | 11.15            | 10.88            | 11.65            | 8.91             | 10.70            |
| Average Coupon                | 10.24            | 7.82             | 10.32            | 8.91             | 9.05             |
| Average Maturity (Years)      | 16.35            | 7.15             | 24.47            | .11              | 11.05            |

\*\*\*\*\* COMMON STOCK \*\*\*\*\*

| NO. OF SHARES | BOOK VALUE/COST  | MARKET VALUE     | POTENTIAL GAIN (OR LOSS) | INDICATED DIVIDEND INCOME | INDICATED INCOME | ON COST | CURRENT YIELD ON MARKET |
|---------------|------------------|------------------|--------------------------|---------------------------|------------------|---------|-------------------------|
| 8,570,666     | \$294,066,133.22 | \$393,966,247.18 | \$99,900,113.96          | \$18,233,889.64           | \$18,233,889.64  | 6.20    | 4.63                    |

\*\*\*\*\* TOTAL PORTFOLIO \*\*\*\*\*

| TYPE            | BOOK VALUE         | PCTAGE OF PORTFOLIO | MARKET VALUE       | PCTAGE OF PORTFOLIO | INDICATED INCOME | ON BOOK | INDICATED YIELD ON MARKET |
|-----------------|--------------------|---------------------|--------------------|---------------------|------------------|---------|---------------------------|
| Corporates      | \$ 201,174,963.70  | 18%                 | \$ 199,004,790.60  | 17%                 | \$21,116,469.50  | 10.50   | 10.61                     |
| Governments     | \$ 280,582,438.39  | 26%                 | \$ 278,998,569.83  | 23%                 | \$27,537,268.14  | 9.81    | 9.87                      |
| Mortgages       | \$ 139,324,139.29  | 13%                 | \$ 148,565,455.20  | 12%                 | \$16,924,122.73  | 12.15   | 11.39                     |
| Short Term      | \$ 175,501,271.77  | 16%                 | \$ 175,501,271.77  | 15%                 | \$15,638,472.78  | 8.91    | 8.91                      |
| Common Stock    | \$ 294,066,133.22  | 27%                 | \$ 393,966,247.18  | 33%                 | \$18,233,889.64  | 6.20    | 4.63                      |
| TOTAL PORTFOLIO | \$1,090,648,946.37 | 100%                | \$1,196,036,334.58 | 100%                | \$99,450,222.79  | 9.12    | 8.31                      |



KENTUCKY RETIREMENT SYSTEMS  
 BOND PORTFOLIO FOR THE PERIOD ENDED 6/30/83

| SECURITY NAME       | COUPON  | MATURITY | PAR VALUE (IN \$000's) |       |       | YIELD  | PRICE     | S&P | MOODY      | MARKET    | GAIN-LOSS | ANNUAL INC. |
|---------------------|---------|----------|------------------------|-------|-------|--------|-----------|-----|------------|-----------|-----------|-------------|
|                     |         |          | SHARES                 | SPRS  | TOTAL |        |           |     |            |           |           |             |
| American Tel & Tel  | 7.750%  | 01/97    | 5462                   | 277   | 9250  | 10.240 | \$ 82.000 | AAA | 7,585,000  | 130,346   | 716,875   |             |
| Atlantic Richfield  | 8.750%  | 12/01    | 3701                   | 1677  | 404   | 5783   | \$ 80.750 | AA  | 4,670,512  | 14,460    | 506,092   |             |
| Banks of Cooperativ | 7.750%  | 01/86    | 3727                   | 992   | 280   | 5000   | \$ 95.000 | AAA | 4,750,000  | 274,407   | 387,500   |             |
| Bell Tele Pennsylv  | 15.125% | 04/21    | 2950                   | 1300  | 750   | 5000   | \$117.750 | AAA | 5,887,500  | 76,258    | 756,250   |             |
| Borden Inc          | 8.500%  | 04/04    | 745                    | 199   | 56    | 1000   | \$ 76.125 | AAA | 761,250    | 263,568   | 85,000    |             |
| Borg-Warner CNV     | 4.947%  | 11/02    | 7000                   | 1800  | 1200  | 10000  | \$135.000 | A   | 13,500,000 | 3,500,000 | 494,700   |             |
| Brooklyn Union Gas  | 4.375%  | 05/88    | 186                    | 31    | 248   |        | \$ 72.875 | A   | 180,730    | 67,270    | 10,850    |             |
| Capital Holding Cor | 12.750% | 01/06    | 6002                   | 2152  | 1995  | 10150  | \$102.625 | A   | 10,416,438 | 277,014   | 1,294,125 |             |
| Carolina Power & Li | 11.625% | 12/92    | 3450                   | 1450  | 100   | 5000   | \$ 99.500 | A   | 4,975,000  | 64,276    | 581,250   |             |
| Chrysler Corp       | 10.350% | 06/90    | 7000                   | 2600  | 400   | 10000  | \$ 95.375 | AAA | 9,537,500  | 462,500   | 1,035,000 |             |
| Chrysler Corp       | 11.400% | 07/90    | 9500                   | 4300  | 1200  | 15000  | \$100.000 | AAA | 15,000,000 | 166,210   | 1,710,000 |             |
| Con Rail Corp Ge Gt | 11.000% | 01/99    | 6148                   | 3024  | 907   | 10080  | \$100.000 | AAA | 10,080,000 |           | 1,108,800 |             |
| Continental Oil     | 8.875%  | 06/01    | 715                    | 572   | 13    | 1300   | \$ 79.250 | AA  | 1,030,250  | 135,669   | 115,375   |             |
| Dow Chemical        | 8.500%  | 01/06    | 1320                   | 1080  | 600   | 3000   | \$ 74.000 | A   | 2,220,000  | 79,432    | 255,000   |             |
| Fed Farm Credit Ban | 15.650% | 10/89    | 2750                   | 2200  | 50    | 5000   | \$118.250 | NR  | 5,912,500  | 912,500   | 782,500   |             |
| Fed Home Loan Bank  | 7.850%  | 08/84    | 5736                   | 1800  | 462   | 8000   | \$ 97.250 | AAA | 7,780,000  | 244,723   | 628,000   |             |
| Fed Home Loan CMO   | 11.250% | 12/95    | 6100                   | 3000  | 900   | 10000  | \$ 98.750 | AAA | 9,875,000  | 62,500    | 1,125,000 |             |
| Fed Home Loan GMC   | 8.200%  | 09/07    | 4642                   | 2821  | 1638  | 9102   | \$ 90.250 | AAA | 8,214,736  | 596,115   | 746,380   |             |
| Fed Home Loan GMC   | 9.400%  | 09/08    | 1491                   | 1193  | 27    | 2711   | \$ 91.625 | AAA | 2,484,687  | 250,247   | 254,909   |             |
| Fed Home Loan GMC   | 9.875%  | 03/09    | 1368                   | 1095  | 24    | 2489   | \$ 92.625 | AAA | 2,405,436  | 317,296   | 245,788   |             |
| Fed Home Loan GMC   | 10.250% | 03/09    | 5403                   | 4323  | 98    | 9825   | \$ 93.750 | AAA | 9,210,938  | 1,221,633 | 1,007,062 |             |
| Fed Home Loan GMC   | 10.000% | 09/09    | 13766                  | 11013 | 250   | 25030  | \$ 93.875 | AAA | 23,497,617 | 2,637,701 | 2,503,075 |             |
| Fed Home Loan GMC   | 6.950%  | 01/87    | 7546                   | 2784  | 668   | 11000  | \$ 90.000 | AAA | 9,900,000  | 1,014,443 | 764,500   |             |
| Federal Home Loan   | 7.650%  | 05/87    | 10323                  | 4741  | 935   | 16000  | \$ 89.250 | AAA | 14,280,000 | 1,720,000 | 1,224,000 |             |
| Federal Home Loan   | 7.875%  | 02/97    | 5624                   | 1864  | 510   | 8000   | \$ 77.250 | AAA | 6,180,000  | 1,903,596 | 630,000   |             |
| Federal Home Loan B | 7.375%  | 02/85    | 3422                   | 1210  | 367   | 5000   | \$ 95.250 | AAA | 4,762,500  | 236,562   | 368,750   |             |
| Federal Land Bank   | 7.300%  | 10/83    | 1760                   | 577   | 161   | 2500   | \$ 99.125 | AAA | 2,478,125  | 19,953    | 182,500   |             |
| Federal Land Bank   | 8.100%  | 07/85    | 4368                   | 1293  | 338   | 6000   | \$ 95.250 | AAA | 5,715,000  | 282,776   | 486,000   |             |
| Federal Land Bank   | 7.950%  | 10/85    | 6445                   | 2000  | 554   | 9000   | \$ 94.250 | AAA | 8,482,500  | 564,983   | 715,500   |             |
| Federal Land Bank   | 7.600%  | 04/87    | 2980                   | 1920  | 100   | 5000   | \$ 89.250 | AAA | 4,462,500  | 537,500   | 380,000   |             |
| Federal Land Bank   | 7.250%  | 07/87    | 2559                   | 2139  | 301   | 5000   | \$ 88.750 | AAA | 4,437,500  | 562,500   | 362,500   |             |
| FHA Mortgages       | 4.869%  | 07/90    |                        | 249   | 249   |        | \$ 79.250 | NR  | 198,062    | 53,636    | 12,168    |             |
| FHA Mortgages       | 4.984%  | 07/90    |                        | 387   | 387   |        | \$ 79.250 | NR  | 307,265    | 82,564    | 19,323    |             |
| FHA Mortgages       | 5.016%  | 07/90    | 3645                   |       | 3645  |        | \$ 79.250 | NR  | 2,889,421  | 795,446   | 182,881   |             |
| Ford Motor Credit   | 8.625%  | 06/86    | 3612                   | 1133  | 254   | 5000   | \$ 93.625 | BBB | 4,681,250  | 318,750   | 431,250   |             |
| Ford Motor Credits  | 8.700%  | 04/99    | 1490                   | 398   | 112   | 2000   | \$ 72.375 | BBB | 1,447,500  | 592,599   | 174,000   |             |
| General Elec Credi  | 4.500%  | 03/84    | 563                    | 81    | 6     | 650    | \$ 96.250 | NR  | 625,625    | 8,911     | 29,250    |             |
| GMAC                | 8.125%  | 06/86    | 2640                   | 2112  | 48    | 4800   | \$ 10.880 | AA  | 4,476,000  | 423,896   | 390,000   |             |
| GMAC                | 7.000%  | 05/87    | 1375                   | 1100  | 25    | 2500   | \$ 87.500 | AA  | 2,187,500  | 215,000   | 175,000   |             |
| GMAC                | 8.625%  | 05/88    | 1650                   | 1320  | 30    | 3000   | \$ 91.750 | A   | 2,752,500  | 293,694   | 258,750   |             |
| GMVA 14171          | 7.500%  | 01/07    | 440                    | 199   | 48    | 688    | \$ 73.500 | AAA | 506,077    | 120,505   | 51,640    |             |
| GMVA 15576          | 7.500%  | 05/07    | 410                    | 186   | 44    | 641    | \$ 73.500 | AAA | 471,493    | 117,986   | 48,111    |             |
| GMVA 15775          | 7.500%  | 05/07    | 410                    | 283   | 52    | 746    | \$ 73.500 | AAA | 548,788    | 131,301   | 55,998    |             |
| GMVA 15952          | 7.500%  | 05/07    | 780                    | 539   | 99    | 1419   | \$ 73.500 | AAA | 1,043,085  | 249,558   | 106,437   |             |
| GMVA 16188          | 7.500%  | 04/07    | 529                    | 194   | 54    | 779    | \$ 73.500 | AAA | 572,789    | 133,559   | 58,447    |             |
| GMVA 39313          | 11.500% | 03/10    | 629                    | 233   | 35    | 899    | \$ 93.500 | AAA | 840,581    | 70,625    | 103,386   |             |
| GMVA 39478          | 11.500% | 03/10    | 660                    | 245   | 37    | 943    | \$ 93.500 | AAA | 882,399    | 74,011    | 108,530   |             |
| GMVA 40093          | 13.500% | 05/10    | 507                    | 358   | 8     | 875    | \$102.250 | AAA | 894,961    | 81,817    | 118,161   |             |
| GMVA 40366          | 11.500% | 10/10    | 645                    | 239   | 36    | 922    | \$ 93.500 | AAA | 862,691    | 37,375    | 116,106   |             |
| GMVA 40645          | 11.500% | 10/10    | 591                    | 290   | 56    | 938    | \$ 93.500 | AAA | 877,667    | 68,786    | 107,948   |             |
| GMVA 41401          | 11.500% | 08/10    | 1194                   | 587   | 113   | 1895   | \$ 93.500 | AAA | 1,772,703  | 138,881   | 218,032   |             |
| GMVA 42195          | 11.500% | 10/10    | 1349                   | 501   | 77    | 1928   | \$ 93.500 | AAA | 1,803,176  | 76,537    | 221,780   |             |
| GMVA 42199          | 11.500% | 10/10    | 1361                   | 505   | 77    | 1945   | \$ 93.500 | AAA | 1,818,898  | 77,201    | 223,714   |             |



| SECURITY NAME        | COUPON  | MATURITY | PAR VALUE (IN \$000'S)        | YIELD | PRICE     | SSP | MOODY | MARKET    | GAIN-LOSS | ANNUAL INC. |
|----------------------|---------|----------|-------------------------------|-------|-----------|-----|-------|-----------|-----------|-------------|
|                      |         |          | KERS<br>CEFS<br>SPRS<br>TOTAL |       |           |     |       |           |           |             |
| GNMA 42711           | 11.500% | 10/10    | 1368                          | 508   | \$ 93.500 | AAA | AAA   | 1,827,364 | 37,685    | 224,756     |
| GNMA 42797           | 11.500% | 10/10    | 645                           | 239   | \$ 93.500 | AAA | AAA   | 862,058   | 37,303    | 106,028     |
| GNMA 42994           | 11.500% | 10/10    | 1345                          | 499   | \$ 93.500 | AAA | AAA   | 1,796,634 | 151,346   | 220,976     |
| GNMA 43250           | 11.500% | 10/10    | 631                           | 234   | \$ 93.500 | AAA | AAA   | 843,256   | 17,408    | 103,715     |
| GNMA 43596A          | 11.500% | 10/10    | 1322                          | 491   | \$ 93.500 | AAA | AAA   | 1,766,859 | 36,447    | 217,314     |
| GNMA 43596B          | 11.500% | 10/10    | 2645                          | 982   | \$ 93.500 | AAA | AAA   | 3,533,718 | 186,672   | 434,628     |
| GNMA 43596C          | 11.500% | 10/10    | 496                           | 184   | \$ 93.500 | AAA | AAA   | 662,572   | 34,947    | 81,492      |
| GNMA 43596D          | 11.500% | 10/10    | 165                           | 61    | \$ 93.500 | AAA | AAA   | 220,857   | 11,649    | 27,164      |
| GNMA 43599           | 11.500% | 10/10    | 1338                          | 497   | \$ 93.500 | AAA | AAA   | 1,788,023 | 77,475    | 219,917     |
| GNMA 43761           | 11.500% | 10/10    | 686                           | 255   | \$ 93.500 | AAA | AAA   | 917,233   | 39,514    | 112,814     |
| GNMA 43826           | 11.500% | 10/10    | 600                           | 295   | \$ 93.500 | AAA | AAA   | 890,724   | 69,818    | 109,554     |
| GNMA 44106           | 11.500% | 10/10    | 981                           | 364   | \$ 93.500 | AAA | AAA   | 1,311,525 | 99,383    | 161,310     |
| GNMA 44255           | 11.500% | 10/10    | 576                           | 283   | \$ 93.500 | AAA | AAA   | 855,347   | 67,053    | 105,203     |
| GNMA 44305           | 13.000% | 05/11    | 550                           | 388   | \$101.500 | AAA | AAA   | 962,994   | 109,397   | 123,339     |
| GNMA 44423           | 11.500% | 10/10    | 337                           | 125   | \$ 93.500 | AAA | AAA   | 451,143   | 34,188    | 55,488      |
| GNMA 44880           | 11.500% | 11/10    | 640                           | 237   | \$ 93.500 | AAA | AAA   | 854,863   | 64,787    | 105,143     |
| GNMA 44993 (Mob Hcm) | 13.750% | 05/96    | 263                           | 186   | \$103.000 | AAA | AAA   | 467,700   | 25,656    | 62,435      |
| GNMA 45206           | 14.000% | 06/11    | 502                           | 402   | \$104.000 | AAA | AAA   | 950,541   | 114,095   | 127,957     |
| GNMA 45263           | 14.000% | 06/11    | 505                           | 404   | \$104.000 | AAA | AAA   | 956,039   | 114,742   | 128,697     |
| GNMA 45350           | 11.500% | 10/10    | 1335                          | 496   | \$ 93.500 | AAA | AAA   | 1,783,864 | 135,226   | 219,405     |
| GNMA 45499 (Mob Hcm) | 13.750% | 05/96    | 337                           | 238   | \$103.000 | AAA | AAA   | 599,551   | 54,639    | 80,037      |
| GNMA 45504 (Mob Hcm) | 14.750% | 08/96    | 455                           | 364   | \$104.000 | AAA | AAA   | 860,914   | 68,530    | 122,100     |
| GNMA 45636           | 13.500% | 06/11    | 501                           | 354   | \$103.000 | AAA | AAA   | 890,858   | 77,519    | 116,763     |
| GNMA 45825           | 11.500% | 10/10    | 691                           | 256   | \$ 93.500 | AAA | AAA   | 924,058   | 87,852    | 113,654     |
| GNMA 45943           | 13.000% | 04/11    | 361                           | 255   | \$101.500 | AAA | AAA   | 632,149   | 71,995    | 80,964      |
| GNMA 46119           | 13.000% | 03/11    | 186                           | 132   | \$101.500 | AAA | AAA   | 326,908   | 37,131    | 41,869      |
| GNMA 46120           | 13.500% | 05/11    | 28                            | 20    | \$102.250 | AAA | AAA   | 50,306    | 4,608     | 6,641       |
| GNMA 46332 (Mob Hcm) | 13.750% | 06/96    | 267                           | 188   | \$103.000 | AAA | AAA   | 474,373   | 43,244    | 63,326      |
| GNMA 46332 (Mob Hcm) | 13.750% | 06/96    | 154                           | 109   | \$103.000 | AAA | AAA   | 275,136   | 25,082    | 36,729      |
| GNMA 46332 (Mob Hcm) | 13.750% | 06/96    | 229                           | 162   | \$103.000 | AAA | AAA   | 407,959   | 37,190    | 54,460      |
| GNMA 46332 (Mob Hcm) | 13.750% | 06/96    | 149                           | 105   | \$103.000 | AAA | AAA   | 265,649   | 24,217    | 35,462      |
| GNMA 46387           | 13.000% | 04/11    | 27                            | 19    | \$101.500 | AAA | AAA   | 47,677    | 5,417     | 6,106       |
| GNMA 46435 (Mob Hcm) | 13.750% | 03/96    | 353                           | 249   | \$103.000 | AAA | AAA   | 627,189   | 57,079    | 83,726      |
| GNMA 46438           | 11.500% | 10/10    | 667                           | 247   | \$ 93.500 | AAA | AAA   | 891,228   | 37,500    | 109,616     |
| GNMA 46473 (Mob Hcm) | 13.750% | 06/96    | 524                           | 370   | \$103.000 | AAA | AAA   | 931,998   | 51,161    | 124,417     |
| GNMA 46487 (Mob Hcm) | 14.750% | 08/96    | 995                           | 796   | \$104.000 | AAA | AAA   | 1,881,918 | 149,807   | 266,906     |
| GNMA 46487 (Mob Hcm) | 14.750% | 08/96    | 495                           | 396   | \$104.000 | AAA | AAA   | 936,879   | 74,579    | 132,874     |
| GNMA 46517           | 13.500% | 05/11    | 272                           | 192   | \$102.250 | AAA | AAA   | 480,396   | 44,003    | 63,426      |
| GNMA 46727           | 13.000% | 04/11    | 531                           | 375   | \$101.500 | AAA | AAA   | 930,313   | 105,684   | 119,153     |
| GNMA 46866           | 13.000% | 04/11    | 269                           | 190   | \$101.500 | AAA | AAA   | 471,212   | 53,515    | 60,352      |
| GNMA 47004           | 13.500% | 05/11    | 523                           | 370   | \$102.250 | AAA | AAA   | 923,369   | 84,601    | 121,911     |
| GNMA 47110           | 13.000% | 03/11    | 521                           | 368   | \$101.500 | AAA | AAA   | 913,251   | 103,703   | 116,968     |
| GNMA 47200           | 13.000% | 02/11    | 275                           | 194   | \$101.500 | AAA | AAA   | 482,078   | 54,749    | 61,743      |
| GNMA 47625           | 13.750% | 06/96    | 528                           | 373   | \$103.000 | AAA | AAA   | 939,194   | 51,550    | 125,377     |
| GNMA 47626 (Mob Hcm) | 13.750% | 06/96    | 530                           | 375   | \$103.000 | AAA | AAA   | 942,335   | 51,730    | 125,797     |
| GNMA 47775 (Mob Hcm) | 13.750% | 06/96    | 239                           | 168   | \$103.000 | AAA | AAA   | 424,511   | 23,303    | 56,670      |
| GNMA 47919           | 13.500% | 05/11    | 485                           | 343   | \$102.250 | AAA | AAA   | 856,067   | 78,397    | 113,026     |
| GNMA 48144           | 13.500% | 05/11    | 262                           | 185   | \$102.250 | AAA | AAA   | 462,029   | 42,333    | 61,001      |
| GNMA 48205           | 13.750% | 06/96    | 555                           | 392   | \$103.000 | AAA | AAA   | 987,210   | 90,019    | 131,787     |
| GNMA 48208 (Mob Hcm) | 13.750% | 04/96    | 282                           | 199   | \$103.000 | AAA | AAA   | 501,883   | 45,701    | 66,998      |
| GNMA 48409 (Mob Hcm) | 13.750% | 06/96    | 436                           | 308   | \$103.000 | AAA | AAA   | 775,949   | 42,595    | 103,585     |
| GNMA 48533           | 14.000% | 06/11    | 464                           | 371   | \$104.000 | AAA | AAA   | 877,898   | 105,368   | 118,178     |
| GNMA 48534           | 14.000% | 06/11    | 487                           | 389   | \$104.000 | AAA | AAA   | 921,479   | 110,584   | 124,045     |
| GNMA 48573 (Mob Hcm) | 14.750% | 08/96    | 501                           | 401   | \$104.000 | AAA | AAA   | 948,559   | 75,687    | 134,531     |
| GNMA 48987           | 14.000% | 07/11    | 489                           | 391   | \$104.000 | AAA | AAA   | 925,351   | 124,566   | 142,566     |
| GNMA 49511 (Mob Hcm) | 13.750% | 06/96    | 246                           | 174   | \$103.000 | AAA | AAA   | 437,238   | 39,867    | 58,369      |
| GNMA 50376 (Mob Hcm) | 13.750% | 10/96    | 2620                          | 2105  | \$103.000 | AAA | AAA   | 4,915,641 | 299,536   | 656,214     |
| GNMA 58123 (Mob Hcm) | 10.750% | 01/98    | 320                           | 140   | \$ 94.750 | AAA | AAA   | 473,821   | 23,754-   | 53,758      |



| SECURITY NAME        | COUPON  | MATURITY | PAR VALUE (IN \$000'S) | YIELD | PRICE | S&P   | MOODY  | MARKET    | GAIN-LOSS | ANNUAL INC. |            |            |           |
|----------------------|---------|----------|------------------------|-------|-------|-------|--------|-----------|-----------|-------------|------------|------------|-----------|
|                      |         |          | KERS                   | CERS  | SPRS  | TOTAL |        |           |           |             |            |            |           |
| U S Treasury Coupons |         | 02/93    | 2736                   | 995   | 414   | 4146  | 10.980 | \$ 35.750 | AAA       | AAA         | 1,482,284  | 15,714     | 161,322   |
| U S Treasury Coupons |         | 02/94    | 3411                   | 673   | 403   | 4488  | 11.250 | \$ 31.250 | AAA       | AAA         | 1,402,734  | 34,653-    | 155,237   |
| U S Treasury Coupons |         | 08/94    | 4137                   | 2135  | 400   | 6673  | 11.240 | \$ 29.625 | AAA       | AAA         | 1,977,127  | 21,130     | 209,291   |
| U S Treasury Note    | 9.875%  | 11/83    | 1650                   | 1320  | 30    | 3000  | 9.330  | \$100.125 | AAA       | AAA         | 3,003,750  | 45,000     | 296,250   |
| U S Treasury Note    | 11.750% | 11/85    | 7220                   | 2776  | 404   | 10400 | 10.460 | \$102.125 | AAA       | AAA         | 10,621,000 | 305,801    | 1,222,000 |
| U S Treasury Note    | 8.000%  | 08/86    | 7680                   | 3360  | 960   | 12000 | 10.480 | \$ 93.750 | AAA       | AAA         | 11,250,000 | 131,250-   | 960,000   |
| U S Treasury Note    | 7.625%  | 11/87    | 17872                  | 5717  | 1409  | 25000 | 10.500 | \$ 89.250 | AAA       | AAA         | 22,312,500 | 2,633,115- | 1,906,250 |
| U S Treasury Note    | 15.375% | 10/88    | 1961                   | 858   | 245   | 3065  | 10.770 | \$116.250 | AAA       | AAA         | 3,563,062  | 65,131-    | 471,243   |
| U S Treasury Note    | 14.375% | 04/89    | 3658                   | 1888  | 354   | 5900  | 10.634 | \$113.250 | AAA       | AAA         | 6,681,750  | 162,250-   | 848,125   |
| U S Treasury Note    | 10.750% | 11/89    | 17500                  | 6500  | 1000  | 25000 | 10.990 | \$ 98.250 | AAA       | AAA         | 24,562,500 | 382,336-   | 2,687,500 |
| U S Treasury Note    | 14.875% | 08/91    | 5500                   | 4400  | 100   | 10000 | 11.400 | \$117.250 | AAA       | AAA         | 11,725,000 | 1,760,494  | 1,487,500 |
| U S Treasury Note    | 14.625% | 02/92    | 3927                   | 3141  | 71    | 7140  | 11.370 | \$117.125 | AAA       | AAA         | 8,362,725  | 1,279,220  | 1,044,225 |
| U S Treasury Note    | 13.750% | 05/92    | 8250                   | 6600  | 150   | 15000 | 11.370 | \$112.250 | AAA       | AAA         | 16,837,500 | 2,053,843  | 2,062,500 |
| U S Treasury Strip   |         | 10/88    | 4950                   | 3960  | 90    | 9000  | 11.080 | \$ 56.500 | AAA       | AAA         | 5,085,000  | 646,830    | 461,569   |
| U S Treasury Tiger   |         | 11/90    | 5499                   | 4399  | 99    | 9999  | 11.350 | \$ 44.375 | AAA       | AAA         | 4,437,422  | 710,988    | 395,002   |
| U S Treasury Tiger   |         | 05/91    | 9143                   | 4894  | 2138  | 16176 | 11.303 | \$ 42.125 | AAA       | AAA         | 6,814,168  | 758,797    | 647,924   |
| U S Treasury Tiger   |         | 11/91    | 15214                  | 12171 | 276   | 27663 | 11.300 | \$ 39.750 | AAA       | AAA         | 10,996,062 | 1,556,783  | 1,010,002 |
| Union Carbide Corp   | 7.500%  | 12/06    | 1710                   | 960   | 330   | 3000  | 11.650 | \$ 66.875 | AA        | A           | 2,006,250  | 14,229     | 225,000   |
| Union Tank Car Cert  | 15.875% | 12/96    | 2750                   | 2200  | 50    | 5000  | 13.257 | \$114.250 | A         | A           | 5,712,500  | 712,500    | 793,750   |
| US Gtd-American Cm   | 8.000%  | 08/02    | 3214                   | 1055  | 330   | 4600  | 11.500 | \$105.625 | AAA       | AAA         | 4,858,750  | 258,750    | 368,000   |
| US Gtd-Bell Steamsh  | 8.350%  | 04/01    | 4366                   | 1093  | 323   | 5784  | 10.370 | \$ 83.750 | AAA       | AAA         | 4,844,100  | 996,035-   | 482,964   |
| US Gtd-Bulk Food Ca  | 7.800%  | 06/92    | 1257                   | 634   | 122   | 2014  | 10.750 | \$ 83.250 | AAA       | AAA         | 1,677,026  | 337,420-   | 157,126   |
| US Gtd-Moran Trade   | 8.000%  | 01/98    | 3230                   | 1650  | 311   | 5192  | 11.160 | \$ 77.500 | AAA       | AAA         | 4,023,943  | 1,168,241- | 415,374   |
| US Gtd-Shipco 2296   | 8.100%  | 02/02    | 5847                   | 3003  | 577   | 9428  | 11.500 | \$105.875 | AAA       | AAA         | 9,981,895  | 553,895    | 763,668   |
| US Gtd-Stuyvesant    | 7.950%  | 09/97    | 3601                   | 1286  | 257   | 5144  | 10.900 | \$ 78.875 | AAA       | AAA         | 4,057,753  | 1,086,783- | 408,990   |
| US Gtd-Union Mechli  | 8.000%  | 01/02    | 3166                   | 1495  | 225   | 4887  | 10.630 | \$ 78.875 | AAA       | AAA         | 3,855,237  | 1,032,544- | 391,022   |
| US Gtd-Zapata Marin  | 7.700%  | 09/94    | 1762                   | 1061  | 175   | 3000  | 10.860 | \$ 79.750 | AAA       | AAA         | 2,392,500  | 607,500-   | 231,000   |
| US Gtd-673 Leasing   | 8.125%  | 06/95    | 6826                   | 1840  | 566   | 9234  | 10.900 | \$ 81.750 | AAA       | AAA         | 7,548,795  | 1,759,895- | 750,262   |
| V A Mortgages        | 4.869%  | 07/90    |                        | 186   |       | 186   | 8.920  | \$ 79.250 | NR        | NR          | 147,858    | 40,740-    | 9,084     |
| V A Mortgages        | 4.984%  | 07/90    |                        | 418   |       | 418   | 8.920  | \$ 79.250 | NR        | NR          | 331,352    | 91,566-    | 20,838    |
| V A Mortgages        | 5.016%  | 07/90    | 3685                   |       |       | 3685  | 8.920  | \$ 79.250 | NR        | NR          | 2,920,591  | 816,242-   | 184,854   |
| Weyerhaeuser         | 8.900%  | 11/04    | 745                    | 199   | 56    | 1000  | 11.750 | \$ 77.875 | AA        | AA          | 778,750    | 271,787-   | 89,000    |

| Weighted Rating | Weighted Coupon | Weighted Maturity | Weighted Price | Weighted Yield | Par Value     | Book Value    | Market Value  | Gain or Loss | Annual Income |
|-----------------|-----------------|-------------------|----------------|----------------|---------------|---------------|---------------|--------------|---------------|
| 2.77            | 9.046           | 11.048            | 89.331         | 10.700         | \$897,863,904 | \$796,582,813 | \$802,070,087 | \$5,487,274  | \$81,216,333  |

KENTUCKY RETIREMENT SYSTEMS  
INSURANCE FUND PORTFOLIO FOR THE PERIOD ENDED 6/30/83

Kentucky Employes Retirement System

| <u>Security Name</u> | <u>Coupon</u> | <u>Maturity</u> | <u>Par Value</u> | <u>Market Value</u> | <u>Rating</u> | <u>Yield</u> |
|----------------------|---------------|-----------------|------------------|---------------------|---------------|--------------|
| Repurchase Agreement | 9.51%         | 07/01/83        | \$2,674,510      | \$2,674,510         | AAA           | 9.51         |

County Employes Retirement System

| <u>Security Name</u> | <u>Coupon</u> | <u>Maturity</u> | <u>Par Value</u> | <u>Market Value</u> | <u>Rating</u> | <u>Yield</u> |
|----------------------|---------------|-----------------|------------------|---------------------|---------------|--------------|
| Repurchase Agreement | 9.51%         | 07/01/83        | \$1,925,540      | \$1,925,540         | AAA           | 9.51         |

State Police Retirement System

| <u>Security Name</u> | <u>Coupon</u> | <u>Maturity</u> | <u>Par Value</u> | <u>Market Value</u> | <u>Rating</u> | <u>Yield</u> |
|----------------------|---------------|-----------------|------------------|---------------------|---------------|--------------|
| Repurchase Agreement | 9.51%         | 07/01/83        | \$ 91,078        | \$ 91,078           | AAA           | 9.51         |

TOTAL INSURANCE FUND

\$4,691,128      \$4,691,128      9.51

STATISTICAL SECTION  
INTRODUCTION

Several statistical tables are presented in this section of the report to accommodate the reader that has more than a cursory interest in the operations of the retirement systems. All tables present a data analysis as of June 30, 1983 and in most cases, several years of historical data are available for comparison purposes.

Retirement Payments

The benefit payments as of July 1, 1983, by the three retirement systems are shown statistically in Tables 1 through 4. Legislation enacted in 1974 combined retirement accounts of the Kentucky Employees Retirement System, County Employees Retirement System, State Police Retirement System and Kentucky Teachers' Retirement System for purposes of determining eligibility and amount of benefits. For example, an employee with an account in the Kentucky Employees Retirement System and the County Employees Retirement System will have these accounts consolidated to determine the five high years of earnings and the total combined service, yet each system pays a separate benefit amount based on the period of service under each system and the benefit formula under each system.

This consolidation arrangement results in small payments being disbursed from one or more systems in situations where a worker has only a few months of service in a system. These small benefit allowances are important to total income of a retiree, however, they somewhat distort the statistical data presented in Tables 1 through 4. The payments illustrated by these tables represent the monthly payments from each retirement system and a recipient receiving a monthly payment from more than one system will be counted in each system from which a payment is disbursed.

Table 1 provides a graphic display of the number of recipients by system that receive a monthly benefit within specified amount ranges in \$100 increments.

Tables 2 through 4 reveal the retirement benefits by payment option selected. The data is further broken down for period certain and survivorship plans to reveal whether the recipient is the former worker or his beneficiary. If "(Memb)" is shown, the retired member is receiving the monthly payment as of June 30, 1983. If "(Bene)" is shown, the beneficiary is receiving the monthly payment as a result of the death of the member.

The several options available upon retirement enables the retiring public employee to select a plan which best suits his needs and those of his family after his retirement. Tables 2, 3 and 4 reveal that about 56% of the recipients select period certain or survivorship options with the remaining options payable in full during the recipient's lifetime.

The 1982 General Assembly enacted legislation which provided all recipients benefit increases on July 1, 1982 and July 1, 1983. The 1982 increases ranged from 1% to 15% and 1983 increases ranged from .5% to 9.5% depending on how long the recipient had been receiving benefits.

Table 5 provides a geographic distribution by county of the retirement payments that were made during the 1982-83 fiscal year.

#### Membership Statistics

Table 6 provides a graphic presentation of the membership in the three separate systems. Statistics are presented from 1965 to June 30, 1983 and each membership classification (active; inactive; and retired) is separately identified.

#### Financial and Actuarial Statistics

Statistical data for the last seven fiscal years is presented in Tables 7 through 9 to indicate the financial and actuarial progress attained by the three retirement systems.

The "Portfolio Time Weighted Rate of Return" is comprised of investment income earned plus realized and unrealized changes in the market value of the portfolio. The fluctuations of this measure are largely the result of constantly changing securities values as determined by the various securities markets. In fact, the actual cash income generated by the portfolio continues to increase annually as indicated by the "Portfolio Yield Rate" which is a measure of investment income.

A review of the actuarial data presented in these tables clearly demonstrate that the separate retirement systems remain financially sound. Funding levels are in accord with statutory provisions and all three systems have a positive rate margin.

#### Source and Use of Funds Since Inception

This statement (Table 10) indicates the value of a funded retirement system. Observe that since inception, employer contributions account for approximately 40% of revenues and investment income accounts for more than 30% of revenues.

Investment income has been sufficient to pay retirement payments in all three funds. These reports indicate that assets are being accumulated on behalf of members now earning service credit in order to finance their future benefits without deferring the cost to future generations. This policy of funding benefits provides financial security to members contributing to the system, as well as to retired recipients.

#### Administrative Expense

An itemized report on administrative expenses for the past seven years is shown in Table 11. The lower portion of this table indicates how

administrative expenses were allocated to the three separate retirement systems. Administrative expense per account in 1983 was \$8.58. When considering that the average account has a value of more than \$9,500, the administrative expense per account is less than one-tenth of one percent of the average account value.

#### Contractual Arrangements

As provided in KRS 61.645, the Kentucky Retirement Systems had contracts in place during 1982-83 with the following firms or individuals to provide the services indicated.

|                                      |                                                                                              |
|--------------------------------------|----------------------------------------------------------------------------------------------|
| Actuarial Services                   | - Tillinghast, Nelson & Warren, Inc.<br>34 North Meramec<br>St. Louis, Missouri 63105        |
| Legal Services                       | - Mr. John Ryan<br>309A West Main Street<br>Frankfort, Kentucky 40601                        |
| Auditing Services                    | - Ernst & Whinney<br>1900 Meidinger Tower<br>Louisville, Kentucky 40202                      |
| Investment Counseling Services       | - Capital Supervisors, Inc.<br>20 North Clark Street<br>Suite 700<br>Chicago, Illinois 60602 |
| Custodian of Securities              | - Farmers Bank & Capital Trust Co.<br>Farmers Bank Plaza<br>Frankfort, Kentucky 40601        |
| Asset Management Consulting Services | - William M. Mercer, Inc.<br>400 Renaissance Center<br>Suite 800<br>Detroit, Michigan 48243  |
| Medical Examiners                    | - Provided by private physicians                                                             |

ANALYSIS OF  
MONTHLY RETIREMENT BENEFITS  
as of June 30, 1983

TABLE 1

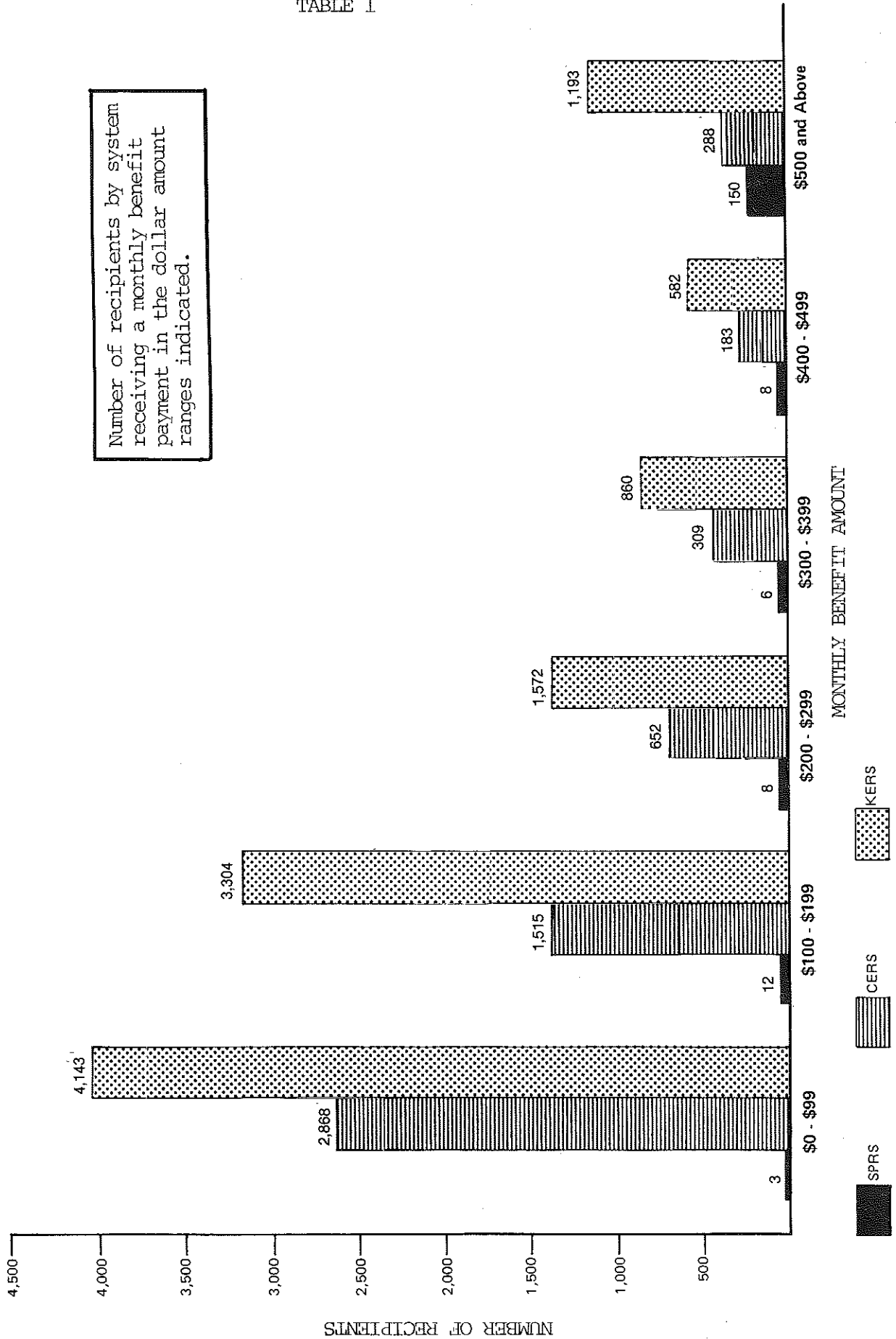




TABLE 2

KENTUCKY EMPLOYEES RETIREMENT SYSTEM  
RETIREMENT BENEFITS BY PLAN  
JUNE 30, 1983

|                                       | Number<br>Of Cases | Total          | Monthly Benefits |          |            |
|---------------------------------------|--------------------|----------------|------------------|----------|------------|
|                                       |                    |                | Average          | Low      | High       |
| <b>NORMAL</b>                         |                    |                |                  |          |            |
| Basic.....                            | 2,414              | \$ 478,577.10  | \$ 198.25        | \$ .01   | \$1,861.03 |
| Life-10 Years Certain (Memb).....     | 579                | 122,334.30     | 211.28           | 1.96     | 1,626.58   |
| Life-10 Years Certain (Bene).....     | 60                 | 10,221.95      | 170.36           | 2.23     | 724.07     |
| 10 Years Certain (Memb).....          | 11                 | 11,775.53      | 1,070.50         | 534.98   | 1,450.12   |
| 10 Years Certain (Bene).....          | 2                  | 1,519.79       | 759.89           | 69.12    | 1,450.67   |
| Straight Life Annuity.....            | 15                 | 2,238.70       | 149.24           | 70.85    | 500.88     |
| Survivorship 100% (Memb).....         | 670                | 108,553.26     | 162.01           | 15.69    | 1,127.28   |
| Survivorship 100% (Bene).....         | 261                | 39,230.62      | 150.30           | 15.69    | 963.20     |
| Survivorship 66 2/3% (Memb).....      | 116                | 35,028.04      | 301.96           | 4.09     | 1,179.59   |
| Survivorship 66 2/3% (Bene).....      | 11                 | 1,812.45       | 164.76           | 27.85    | 487.68     |
| Survivorship 50% (Memb).....          | 365                | 124,549.95     | 341.23           | 5.99     | 1,272.80   |
| Survivorship 50% (Bene).....          | 115                | 19,074.26      | 165.66           | 11.70    | 608.22     |
| Totals and Averages.....              | 4,619              | \$ 954,915.95  | \$ 206.73        | \$.01    | \$1,861.03 |
| <b>EARLY</b>                          |                    |                |                  |          |            |
| Basic.....                            | 2,376              | \$ 490,429.67  | \$ 206.40        | \$.70    | \$1,517.93 |
| Life-10 Years Certain (Memb).....     | 755                | 156,744.21     | 210.25           | 2.94     | 1,456.15   |
| Life-10 Years Certain (Bene).....     | 54                 | 10,844.99      | 200.83           | 29.95    | 1,180.84   |
| 10 Years Certain (Memb).....          | 1                  | 424.91         | 424.91           | 424.91   | 424.91     |
| Survivorship 100% (Memb).....         | 907                | 161,402.11     | 177.95           | 2.60     | 1,329.59   |
| Survivorship 100% (Bene).....         | 171                | 27,998.07      | 163.73           | 13.02    | 1,092.26   |
| Survivorship 66 2/3% (Memb).....      | 198                | 82,498.29      | 416.66           | 7.60     | 1,518.84   |
| Survivorship 66 2/3% (Bene).....      | 16                 | 1,847.13       | 115.44           | 44.19    | 310.37     |
| Survivorship 50% (Memb).....          | 379                | 132,250.33     | 348.94           | 8.81     | 1,271.35   |
| Survivorship 50% (Bene).....          | 81                 | 10,392.44      | 128.30           | 11.82    | 618.65     |
| Soc Sec - Basic (Under 62).....       | 74                 | 56,641.36      | 765.42           | 41.27    | 1,612.33   |
| Soc Sec - Basic (Over 62).....        | 37                 | 9,443.21       | 255.22           | 4.55     | 862.82     |
| Soc Sec - Surv (Under 62).....        | 97                 | 76,369.66      | 787.31           | 27.35    | 1,861.40   |
| Soc Sec - Surv (Over 62).....         | 36                 | 9,531.46       | 264.76           | 9.37     | 1,309.90   |
| Soc Sec - Basic (Over 65).....        | 1                  | 105.86         | 105.86           | 105.86   | 105.86     |
| Totals and Averages.....              | 5,183              | \$1,228,924.70 | \$ 237.10        | \$.70    | \$1,861.40 |
| <b>DISABILITY</b>                     |                    |                |                  |          |            |
| Basic.....                            | 362                | \$ 83,411.67   | \$ 230.41        | \$ 1.06  | \$ 728.75  |
| Life-10 Years Certain (Memb).....     | 178                | 38,173.01      | 214.45           | 8.18     | 950.77     |
| Life-10 Years Certain (Bene).....     | 77                 | 18,069.67      | 234.67           | 24.62    | 801.74     |
| 10 Years Certain (Memb).....          | 1                  | 1,592.25       | 1,592.25         | 1,592.25 | 1,592.25   |
| Survivorship 100% (Memb).....         | 1                  | 167.06         | 167.06           | 167.06   | 167.06     |
| Survivorship 100% (Bene).....         | 205                | 36,789.95      | 179.46           | 6.69     | 952.13     |
| Survivorship 66 2/3% (Memb).....      | 184                | 33,030.17      | 179.51           | 38.73    | 819.33     |
| Survivorship 66 2/3% (Bene).....      | 38                 | 10,475.53      | 275.67           | 4.58     | 1,176.46   |
| Survivorship 50% (Memb).....          | 92                 | 1,216.23       | 135.13           | 67.38    | 298.08     |
| Survivorship 50% (Bene).....          | 40                 | 22,822.27      | 248.06           | 49.22    | 1,019.16   |
| Soc Sec - Basic (Under 62).....       | 3                  | 5,020.57       | 145.51           | 24.16    | 494.19     |
| Soc Sec - Basic (Over 62).....        | 3                  | 1,752.90       | 584.30           | 438.83   | 850.57     |
| Soc Sec - Surv (Over 62).....         | 3                  | 390.64         | 130.21           | 47.56    | 283.90     |
| Soc Sec - Surv (Over 65).....         | 1                  | 262.89         | 262.89           | 262.89   | 262.89     |
| Totals and Averages.....              | 1,194              | \$ 253,174.81  | \$ 212.03        | \$ 1.06  | \$1,592.25 |
| <b>DEATH BEFORE RETIREMENT</b>        |                    |                |                  |          |            |
| Basic.....                            | 305                | \$ 75,922.19   | \$ 248.92        | \$ 2.83  | \$1,844.82 |
| Survivorship 100% (Bene).....         | 328                | 73,681.84      | 224.63           | 17.50    | 1,132.26   |
| Survivorship 50% (Bene).....          | 1                  | 182.02         | 182.02           | 182.02   | 182.02     |
| Soc Sec - Basic (Under 62).....       | 2                  | 329.69         | 164.84           | 193.24   | 193.45     |
| Dependent Child.....                  | 2                  | 150.61         | 75.30            | 75.30    | 75.31      |
| Soc Sec - Surv (Under 60).....        | 12                 | 5,343.60       | 445.30           | 38.59    | 867.22     |
| Soc Sec - Surv (Over 60).....         | 8                  | 1,946.82       | 243.35           | 15.17    | 590.96     |
| Totals and Averages.....              | 658                | \$ 157,536.77  | \$ 239.41        | \$ 2.83  | \$1,844.82 |
| <b>GRAND TOTALS AND AVERAGES.....</b> |                    |                |                  |          |            |
|                                       | 11,654             | \$2,594,552.23 | \$ 222.63        | \$.01    | \$1,861.40 |

TABLE 3

COUNTY EMPLOYEES RETIREMENT SYSTEM  
RETIREMENT BENEFITS BY PLAN  
JUNE 30, 1983

|                                       | Number<br>Of Cases | Total        | Monthly Benefits |          |            |
|---------------------------------------|--------------------|--------------|------------------|----------|------------|
|                                       |                    |              | Average          | Low      | High       |
| <b>NORMAL</b>                         |                    |              |                  |          |            |
| Basic.....                            | 1,235              | \$174,690.00 | \$ 141.44        | \$ .86   | \$1,207.21 |
| Life-10 Years Certain (Memb).....     | 395                | 52,984.01    | 134.13           | 7.86     | 927.72     |
| Life-10 Years Certain (Bene).....     | 54                 | 6,353.07     | 117.64           | 12.03    | 552.80     |
| 10 Years Certain (Memb).....          | 18                 | 14,486.86    | 804.82           | 53.96    | 1,536.96   |
| Straight Life Annuity.....            | 4                  | 568.47       | 142.11           | 89.00    | 217.97     |
| Survivorship 100% (Memb).....         | 460                | 55,363.09    | 120.55           | .80      | 1,162.60   |
| Survivorship 100% (Bene).....         | 137                | 14,555.32    | 106.24           | 8.14     | 555.79     |
| Survivorship 66 2/3% (Memb).....      | 60                 | 13,796.70    | 229.94           | 12.78    | 1,191.81   |
| Survivorship 66 2/3% (Bene).....      | 5                  | 506.48       | 101.29           | 31.65    | 158.45     |
| Survivorship 50% (Memb).....          | 151                | 32,919.10    | 218.00           | 1.36     | 1,070.45   |
| Survivorship 50% (Bene).....          | 51                 | 4,608.37     | 90.36            | .34      | 296.67     |
| Soc Sec - Basic (Over 62).....        | 1                  | 697.22       | 697.22           | 697.22   | 697.22     |
| Soc Sec - Surv (Under 62).....        | 4                  | 4,410.10     | 1,102.52         | 712.59   | 1,666.34   |
| Soc Sec - Surv (Over 62).....         | 7                  | 3,588.38     | 512.62           | 387.38   | 676.40     |
| Totals and Averages.....              | 2,582              | \$379,527.17 | \$ 146.98        | \$ .34   | \$1,666.34 |
| <b>EARLY</b>                          |                    |              |                  |          |            |
| Basic.....                            | 1,045              | \$153,931.77 | \$ 147.30        | \$ .98   | \$1,222.43 |
| Life-10 Years Certain (Memb).....     | 475                | 70,471.74    | 148.36           | 4.64     | 1,497.30   |
| Life-10 Years Certain (Bene).....     | 26                 | 3,583.19     | 137.81           | 2.76     | 792.54     |
| 10 Years Certain (Memb).....          | 2                  | 4,958.60     | 2,479.30         | 857.69   | 4,100.91   |
| Survivorship 100% (Memb).....         | 465                | 63,113.77    | 135.72           | 3.58     | 1,162.32   |
| Survivorship 100% (Bene).....         | 71                 | 9,821.23     | 138.32           | 3.45     | 537.37     |
| Survivorship 66 2/3% (Memb).....      | 78                 | 19,789.39    | 253.71           | 11.00    | 1,020.83   |
| Survivorship 66 2/3% (Bene).....      | 2                  | 191.94       | 95.97            | 62.09    | 129.85     |
| Survivorship 50% (Memb).....          | 131                | 37,751.01    | 288.17           | 5.57     | 986.77     |
| Survivorship 50% (Bene).....          | 20                 | 2,158.45     | 107.92           | 1.79     | 431.58     |
| Soc Sec - Basic (Under 62).....       | 7                  | 5,215.28     | 745.04           | 270.77   | 1,056.95   |
| Soc Sec - Basic (Over 62).....        | 6                  | 796.52       | 132.75           | 34.94    | 270.44     |
| Soc Sec - Surv (Under 62).....        | 24                 | 13,948.06    | 581.16           | 37.74    | 1,410.23   |
| Soc Sec - Surv (Over 62).....         | 10                 | 2,209.94     | 220.99           | 31.39    | 820.35     |
| Soc Sec - Basic (Over 65).....        | 2                  | 135.07       | 67.53            | 57.53    | 77.54      |
| Totals and Averages.....              | 2,364              | \$388,075.96 | \$ 164.16        | \$ .98   | \$4,100.91 |
| <b>DISABILITY</b>                     |                    |              |                  |          |            |
| Basic.....                            | 159                | \$ 33,532.27 | \$ 210.89        | \$ 22.47 | \$ 783.25  |
| Life-10 Years Certain (Memb).....     | 96                 | 18,338.82    | 191.02           | 3.10     | 693.45     |
| Life-10 Years Certain (Bene).....     | 34                 | 5,709.38     | 167.92           | 17.20    | 635.15     |
| 10 Years Certain (Memb).....          | 3                  | 2,176.45     | 725.48           | 375.14   | 1,153.28   |
| Survivorship 100% (Memb).....         | 83                 | 14,042.89    | 169.19           | 16.90    | 1,772.20   |
| Survivorship 100% (Bene).....         | 58                 | 8,851.53     | 152.61           | 18.39    | 561.32     |
| Survivorship 66 2/3% (Memb).....      | 14                 | 2,747.85     | 196.27           | 2.99     | 566.45     |
| Survivorship 66 2/3% (Bene).....      | 13                 | 293.86       | 97.62            | 70.59    | 139.05     |
| Survivorship 50% (Memb).....          | 42                 | 9,528.68     | 226.87           | 50.08    | 668.06     |
| Survivorship 50% (Bene).....          | 14                 | 1,432.60     | 102.32           | 24.35    | 202.86     |
| Soc Sec - Surv (Under 62).....        | 2                  | 929.40       | 464.70           | 215.68   | 713.72     |
| Dependent Child.....                  | 2                  | 1,202.37     | 601.18           | 545.01   | 657.36     |
| Totals and Averages.....              | 510                | \$ 98,795.10 | \$ 193.69        | \$ 2.99  | \$1,153.28 |
| <b>DEATH BEFORE RETIREMENT</b>        |                    |              |                  |          |            |
| Life-10 Years Certain (Memb).....     | 1                  | \$ 40.05     | \$ 40.05         | \$ 40.05 | \$ 40.05   |
| 10 Years Certain (Bene).....          | 198                | 36,938.10    | 186.55           | 1.27     | 893.20     |
| Survivorship 100% (Bene).....         | 150                | 21,332.97    | 142.21           | 3.57     | 848.88     |
| Soc Sec - Basic (Over 62).....        | 1                  | 1.14         | 1.14             | 1.14     | 1.14       |
| Dependent Child.....                  | 6                  | 804.88       | 134.14           | 133.24   | 135.95     |
| Soc Sec - Surv (Under 60).....        | 3                  | 979.43       | 326.47           | 63.00    | 550.14     |
| Totals and Averages.....              | 359                | \$ 60,096.57 | \$ 167.39        | \$ 1.14  | \$ 893.20  |
| <b>GRAND TOTALS AND AVERAGES.....</b> |                    |              |                  |          |            |
|                                       | 5,815              | \$926,484.80 | \$ 159.32        | \$ .34   | \$4,100.91 |

TABLE 4

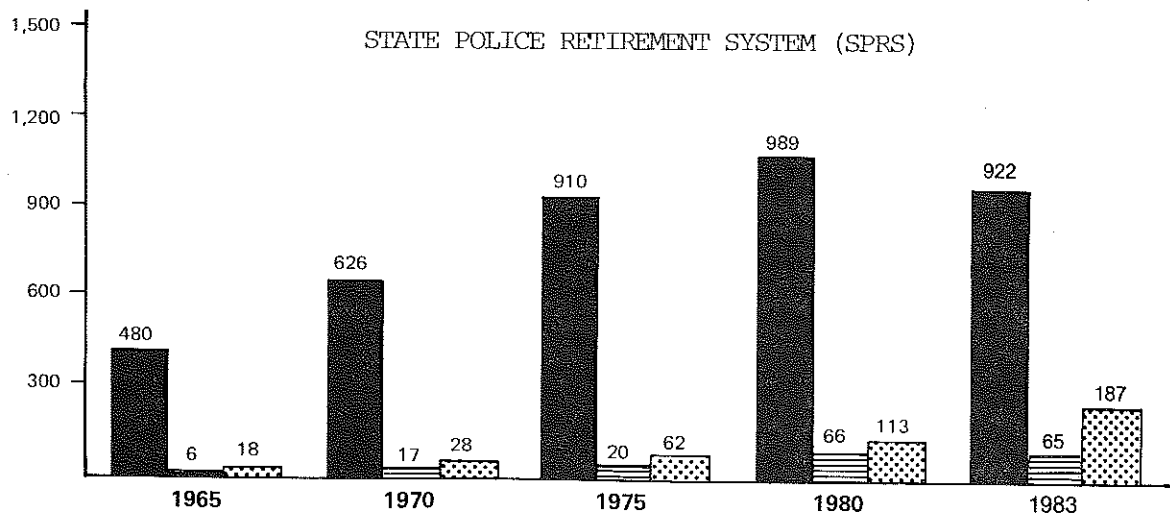
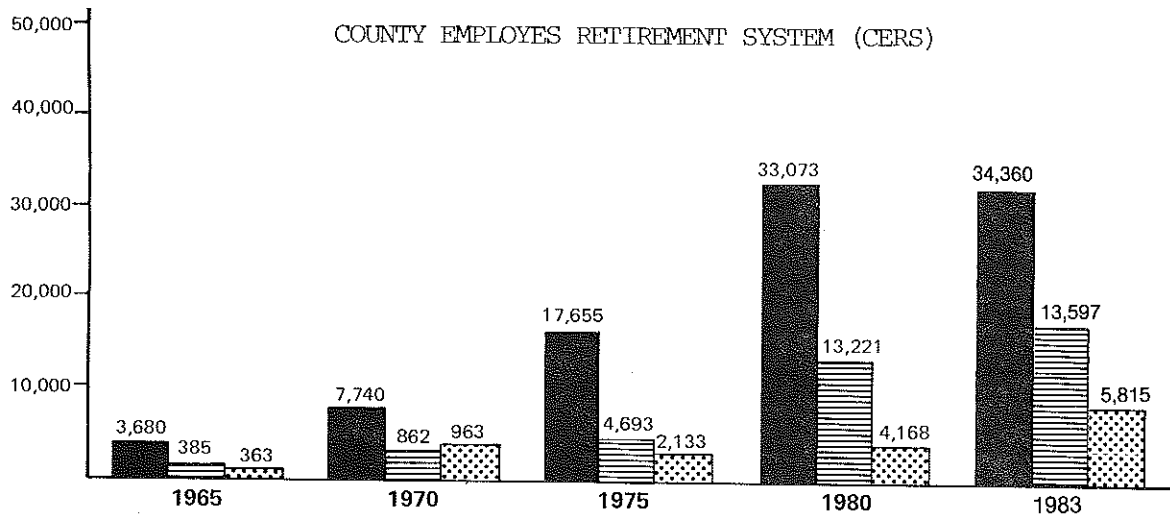
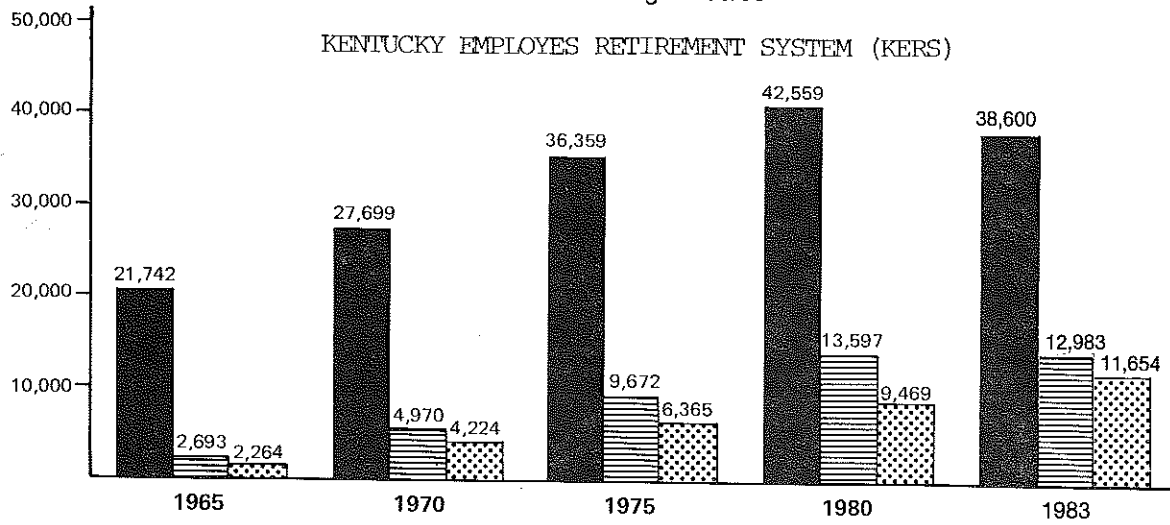
STATE POLICE RETIREMENT SYSTEM  
RETIREMENT BENEFITS BY PLAN  
JUNE 30, 1983

|                                       | Number<br>Of Cases | Monthly Benefits |            |                       |
|---------------------------------------|--------------------|------------------|------------|-----------------------|
|                                       |                    | Total            | Average    | Low High              |
| <b>NORMAL</b>                         |                    |                  |            |                       |
| Basic.....                            | 11                 | \$ 6,993.86      | \$ 635.80  | \$ 48.49 \$2,025.51   |
| Life-10 Years Certain (Memb).....     | 7                  | 9,282.77         | 1,326.11   | 454.59 1,796.73       |
| 10 Years Certain (Memb).....          | 31                 | 56,082.86        | 1,809.12   | 160.43 3,438.11       |
| 10 Years Certain (Bene).....          | 4                  | 8,309.74         | 2,077.43   | 1,414.80 2,835.71     |
| Survivorship 100% (Memb).....         | 12                 | 9,036.06         | 753.00     | 144.91 1,837.87       |
| Survivorship 100% (Bene).....         | 1                  | 452.09           | 452.09     | 452.09 452.09         |
| Survivorship 66 2/3% (Memb).....      | 5                  | 6,857.39         | 1,371.47   | 877.20 1,669.87       |
| Survivorship 50% (Memb).....          | 13                 | 15,445.67        | 1,188.12   | 703.30 1,827.24       |
| Soc Sec - Surv (Under 62).....        | 8                  | 11,332.42        | 1,416.55   | 1,120.67 1,552.87     |
| Totals and Averages.....              | 92                 | \$123,792.86     | \$1,345.57 | \$ 48.49 \$3,438.11   |
| <b>EARLY</b>                          |                    |                  |            |                       |
| Basic.....                            | 2                  | \$ 2,647.77      | \$1,323.88 | \$1,281.03 \$1,366.74 |
| Life-10 Years Certain (Memb).....     | 8                  | 12,758.75        | 1,594.84   | 1,254.18 1,973.22     |
| 10 Years Certain (Memb).....          | 11                 | 23,657.57        | 2,150.68   | 1,058.74 3,027.96     |
| 10 Years Certain (Bene).....          | 1                  | 1,325.82         | 1,325.82   | 1,325.82 1,325.82     |
| Survivorship 100% (Memb).....         | 11                 | 12,200.68        | 1,109.15   | 293.57 1,798.31       |
| Survivorship 66 2/3% (Memb).....      | 4                  | 5,329.10         | 1,332.27   | 1,103.81 1,747.94     |
| Survivorship 50% (Memb).....          | 8                  | 10,268.63        | 1,283.57   | 1,098.40 1,767.17     |
| Soc Sec - Surv (Under 62).....        | 6                  | 7,968.42         | 1,328.07   | 581.71 1,966.68       |
| Totals and Averages.....              | 51                 | \$ 76,156.74     | \$1,493.26 | \$ 293.57 \$3,027.96  |
| <b>DISABILITY</b>                     |                    |                  |            |                       |
| Life-10 Years Certain (Memb).....     | 1                  | \$ 676.59        | \$ 676.59  | \$ 676.59 \$ 676.59   |
| 10 Years Certain (Memb).....          | 4                  | 4,800.72         | 1,200.18   | 717.89 2,354.94       |
| 10 Years Certain (Bene).....          | 2                  | 1,870.05         | 935.02     | 860.55 1,009.50       |
| Survivorship 100% (Memb).....         | 4                  | 4,159.13         | 1,039.78   | 583.86 1,629.97       |
| Survivorship 100% (Bene).....         | 1                  | 571.51           | 571.51     | 571.51 571.51         |
| Survivorship 50% (Memb).....          | 1                  | 1,222.95         | 1,222.95   | 1,222.95 1,222.95     |
| Dependent Child.....                  | 6                  | 1,028.19         | 171.36     | 76.13 260.28          |
| Totals and Averages.....              | 19                 | \$ 14,329.14     | \$ 754.16  | \$ 76.13 \$2,354.94   |
| <b>DEATH BEFORE RETIREMENT</b>        |                    |                  |            |                       |
| 10 Years Certain (Bene).....          | 3                  | \$ 2,330.75      | \$ 776.91  | \$ 332.04 \$1,111.87  |
| Survivorship 100% (Bene).....         | 17                 | 7,383.11         | 434.30     | 172.12 1,242.82       |
| Dependent Child.....                  | 4                  | 1,177.56         | 294.39     | 86.24 737.78          |
| Totals and Averages.....              | 24                 | \$ 10,891.42     | \$ 453.80  | \$ 86.24 \$1,242.82   |
| <b>DEFERRED</b>                       |                    |                  |            |                       |
| Survivorship 50% (Memb).....          | 1                  | \$ 1,617.81      | \$1,617.81 | \$1,617.81 \$1,617.81 |
| Totals and Averages.....              | 1                  | \$ 1,617.81      | \$1,617.81 | \$1,617.81 \$1,617.81 |
| <b>GRAND TOTALS AND AVERAGES.....</b> | 187                | \$226,787.97     | \$1,212.76 | \$ 48.49 \$3,438.11   |



TABLE 6

MEMBERSHIP GROWTH  
6/30/65 through 6/30/83



ACTIVE
  INACTIVE
  RETIRED

TABLE 7

KENTUCKY EMPLOYEES RETIREMENT SYSTEM  
FINANCIAL AND ACTUARIAL STATISTICS

|                                                                                  | 6/30/77       | 6/30/78       | 6/30/79       | 6/30/80       | 6/30/81       | 6/30/82        | 6/30/83        |
|----------------------------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|
| <u>Financial Statistics:</u>                                                     |               |               |               |               |               |                |                |
| Total Assets                                                                     | \$291,739,621 | \$333,822,714 | \$389,418,451 | \$460,355,868 | \$529,797,058 | \$614,446,898  | \$710,477,505  |
| Investment Income                                                                | \$ 16,239,109 | \$ 19,307,538 | \$ 25,415,903 | \$ 33,356,149 | \$ 39,594,168 | \$ 51,929,647  | \$ 57,799,616  |
| Total Retirement Payments                                                        | \$ 12,115,318 | \$ 13,829,823 | \$ 15,205,181 | \$ 17,501,338 | \$ 21,824,083 | \$ 26,564,678  | \$ 31,396,362  |
| Average Retirement Payment                                                       | \$ 137.45*    | \$ 140.39     | \$ 151.22**   | \$ 169.84***  | \$ 194.88**** | \$ 214.60***** | \$ 222.63***** |
| Total Refund Payments                                                            | \$ 3,385,233  | \$ 3,893,254  | \$ 4,055,068  | \$ 4,996,158  | \$ 5,945,209  | \$ 6,074,280   | \$ 3,996,820   |
| Portfolio Time-Weighted<br>Rate of Return                                        | 4.95%         | -1.51%        | 7.90%         | 8.34%         | 2.61%         | 6.80%          | 38.16%         |
| Portfolio Yield Rate                                                             | 5.99%         | 7.28%         | 8.17%         | 8.36%         | 8.83%         | 9.32%          | 9.03%          |
| <u>Actuarial Statistics:</u>                                                     |               |               |               |               |               |                |                |
| Total Accrued Liabilities                                                        | \$446,255,236 | \$507,324,915 | \$592,095,113 | \$710,126,703 | \$692,160,395 | \$810,250,589  | \$862,291,959  |
| Unfunded Past Service<br>Liabilities                                             | \$149,511,331 | \$168,497,917 | \$202,676,662 | \$249,770,835 | \$164,735,129 | \$195,803,691  | \$152,196,081  |
| Percent Unfunded                                                                 | 33.5%         | 33.2%         | 34.2%         | 35.2%         | 23.8%         | 24.2%          | 17.6%          |
| Vested Accrued Benefit<br>Liability                                              | n/a           | n/a           | \$385,849,203 | \$470,642,643 | \$446,613,406 | \$520,781,017  | \$550,006,161  |
| Estimated Annual Salaries<br>Contribution for Unfunded<br>Past Service Liability | \$343,683,684 | \$393,236,856 | \$463,439,488 | \$504,835,968 | \$531,789,552 | \$556,855,896  | \$581,492,676  |
|                                                                                  | \$ 10,465,793 | \$ 11,794,854 | \$ 14,187,366 | \$ 17,483,958 | \$ 14,002,486 | \$ 16,643,313  | \$ 12,936,667  |
| <u>Actuarial Costs:</u>                                                          |               |               |               |               |               |                |                |
| Normal                                                                           | 7.39%         | 7.40%         | 7.36%         | 7.27%         | 7.54%         | 7.69%          | 7.67%          |
| Past Service                                                                     | 3.04%         | 3.00%         | 3.06%         | 3.46%         | 2.63%         | 2.99%          | 2.22%          |
| Administrative                                                                   | .12%          | .11%          | .10%          | .08%          | .09%          | .09%           | .09%           |
| Group Hospital and Medical<br>Insurance                                          | n/a           | n/a           | .21%          | .21%          | .21%          | .21%           | .29%           |
| Total Cost                                                                       | 10.55%        | 10.51%        | 10.73%        | 11.02%        | 10.47%†       | 10.98%         | 10.27%         |
| <u>Contribution Rates:</u>                                                       |               |               |               |               |               |                |                |
| Member                                                                           | 4.02%         | 4.02%         | 4.01%         | 4.01%         | 4.01%         | 4.01%          | 4.01%          |
| Employer                                                                         | 7.22%         | 7.30%         | 7.31%         | 7.30%         | 7.30%         | 7.30%          | 7.30%          |
| Total Rates                                                                      | 11.24%        | 11.32%        | 11.32%        | 11.31%        | 11.31%        | 11.31%         | 11.31%         |
| Rate Margin:                                                                     | .69%          | .81%          | .59%          | .29%          | .84%          | .33%           | 1.04%          |

\*Benefits to retirees increased 7/1/77 by 1/12 of 2% for each month retired but not more than 2%, excluding early retirees not yet age 60.

\*\*Benefits to retirees increased 7/1/79 by 2% for each year retired but not more than 5%, excluding early retirees not yet age 60.

\*\*\*Benefits to retirees increased 7/1/80 by 6%.

\*\*\*\*Benefits to retirees increased 7/1/81 by 6%.

\*\*\*\*\*Benefits to retirees increased 7/1/82 from 1% to 15% depending upon how long the recipient has received benefits.

\*\*\*\*\*Benefits to retirees increased 7/1/83 from 1/2% to 9 1/2% depending upon how long the recipient has received benefits.

†Actuarial assumptions revised.

TABLE 8

COUNTY EMPLOYEES RETIREMENT SYSTEM  
FINANCIAL AND ACTUARIAL STATISTICS

|                                                                                  | <u>6/30/77</u> | <u>6/30/78</u> | <u>6/30/79</u> | <u>6/30/80</u> | <u>6/30/81</u> | <u>6/30/82</u> | <u>6/30/83</u> |
|----------------------------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| <u>Financial Statistics:</u>                                                     |                |                |                |                |                |                |                |
| Total Assets                                                                     | \$ 99,448,038  | \$123,822,400  | \$153,091,905  | \$190,230,941  | \$234,865,314  | \$285,534,889  | \$343,566,575  |
| Investment Income                                                                | \$ 5,108,313   | \$ 6,806,685   | \$ 9,734,995   | \$ 13,948,084  | \$ 18,394,849  | \$ 25,127,300  | \$ 28,254,250  |
| Total Retirement Payments                                                        | \$ 3,852,861   | \$ 4,569,674   | \$ 5,443,712   | \$ 6,401,655   | \$ 7,797,643   | \$ 9,689,924   | \$ 11,522,297  |
| Average Retirement Payment                                                       | \$ 120.28*     | \$ 120.55      | \$ 126.63**    | \$ 136.74***   | \$ 146.90****  | \$ 159.92***** | \$ 159.32***** |
| Total Refund Payments                                                            | \$ 1,500,630   | \$ 2,254,683   | \$ 3,313,137   | \$ 3,032,440   | \$ 3,291,673   | \$ 4,238,411   | \$ 2,791,345   |
| Portfolio Time-Weighted<br>Rate of Return                                        | 4.01%          | -1.88%         | 7.78%          | 8.45%          | 3.80%          | 6.52%          | 39.03%         |
| Portfolio Yield Rate                                                             | 5.92%          | 7.34%          | 8.33%          | 8.35%          | 10.06%         | 9.81%          | 9.34%          |
| <u>Actuarial Statistics:</u>                                                     |                |                |                |                |                |                |                |
| Total Accrued Liabilities                                                        | \$152,900,347  | \$175,194,867  | \$213,834,377  | \$266,018,621  | \$260,872,162  | \$306,087,531  | \$340,705,763  |
| Unfunded Past Service<br>Liabilities                                             | \$ 52,474,756  | \$ 50,394,913  | \$ 60,742,472  | \$ 75,787,680  | \$ 27,101,917  | \$ 20,552,642  | \$ -0-         |
| Percent Unfunded                                                                 | 34.3%          | 28.7%          | 28.4%          | 28.5%          | 10.4%          | 6.7%           | 0.0%           |
| Vested Accrued Benefit<br>Liability                                              | n/a            | n/a            | \$144,441,025  | \$178,669,194  | \$174,261,296  | \$206,969,299  | \$225,665,745  |
| Estimated Annual Salaries<br>Contribution for Unfunded<br>Past Service Liability | \$ 3,673,232   | \$ 3,527,644   | \$ 4,251,973   | \$ 5,305,138   | \$ 2,303,663   | \$ 1,746,975   | \$ -0-         |
| <u>Actuarial Costs:</u>                                                          |                |                |                |                |                |                |                |
| Normal                                                                           | 8.49%          | 8.33%          | 8.40%          | 8.26%          | 8.26%          | 8.27%          | 8.21%          |
| Past Service                                                                     | 1.92%          | 1.84%          | 1.76%          | 1.79%          | .72%           | .51%           | .00%           |
| Administrative                                                                   | .08%           | .08%           | .07%           | .09%           | .10%           | .11%           | .12%           |
| Group Hospital and Medical<br>Insurance                                          | n/a            | n/a            | .15%           | .15%           | .15%           | .16%           | .17%           |
| Total Cost                                                                       | 10.49%         | 10.25%         | 10.38%         | 10.29%         | 9.23%†         | 9.05%          | 8.50%          |
| <u>Contribution Rates:</u>                                                       |                |                |                |                |                |                |                |
| Member                                                                           | 4.11%          | 4.14%          | 4.13%          | 4.11%          | 4.11%          | 4.12%          | 4.10%          |
| Employer                                                                         | 7.59%          | 7.67%          | 7.62%          | 7.58%          | 7.57%          | 7.59%          | 6.52%          |
| Total Rates                                                                      | 11.70%         | 11.81%         | 11.75%         | 11.69%         | 11.68%         | 11.71%         | 10.62%         |
| <u>Rate Margin:</u>                                                              |                |                |                |                |                |                |                |
|                                                                                  | 1.21%          | 1.56%          | 1.37%          | 1.40%          | 2.45%          | 2.66%          | 2.12%          |

\*Benefits to retirees increased 7/1/77 by 1/12 of 2% for each month retired but not more than 2%, excluding early retirees not yet age 60.  
 \*\*Benefits to retirees increased 7/1/79 by 2% for each year retired but not more than 5%, excluding early retirees not yet age 60.  
 \*\*\*Benefits to retirees increased 7/1/80 by 6%.  
 \*\*\*\*Benefits to retirees increased 7/1/81 by 6%.  
 \*\*\*\*\*Benefits to retirees increased 7/1/82 from 1% to 1.5% depending upon how long the recipient has received benefits.  
 \*\*\*\*\*Benefits to retirees increased 7/1/83 from 1/2% to 9 1/2% depending upon how long the recipient has received benefits.  
 †Actuarial assumptions revised.

TABLE 9

STATE POLICE RETIREMENT SYSTEM  
FINANCIAL AND ACTUARIAL STATISTICS

|                                                                                  | 6/30/77      | 6/30/78      | 6/30/79      | 6/30/80      | 6/30/81         | 6/30/82          | 6/30/83          |
|----------------------------------------------------------------------------------|--------------|--------------|--------------|--------------|-----------------|------------------|------------------|
| <u>Financial Statistics:</u>                                                     |              |              |              |              |                 |                  |                  |
| Total Assets                                                                     | \$23,725,208 | \$28,109,100 | \$33,903,221 | \$40,917,165 | \$48,411,993    | \$57,330,130     | \$65,782,369     |
| Investment Income                                                                | \$ 1,307,240 | \$ 1,595,816 | \$ 2,200,472 | \$ 3,060,037 | \$ 3,925,112    | \$ 5,347,761     | \$ 5,438,066     |
| Total Retirement Payments                                                        | \$ 469,703   | \$ 584,752   | \$ 683,821   | \$ 1,030,786 | \$ 1,428,170    | \$ 1,953,405     | \$ 2,642,581     |
| Average Retirement Payment                                                       | \$ 584.54*   | \$ 599.07    | \$ 725.82**  | \$ 904.01*** | \$ 1,092.58**** | \$ 1,229.73***** | \$ 1,212.76***** |
| Total Refund Payments                                                            | \$ 71,562    | \$ 116,981   | \$ 85,730    | \$ 68,111    | \$ 139,305      | \$ 245,402       | \$ 56,809        |
| Portfolio Time-Weighted<br>Rate of Return                                        | 4.82%        | -1.58%       | 7.96%        | 8.48%        | 3.71%           | 9.35%            | 38.11%           |
| Portfolio Yield Rate                                                             | 5.98%        | 7.32%        | 8.28%        | 8.38%        | 10.15%          | 10.24%           | 8.97%            |
| <u>Actuarial Statistics:</u>                                                     |              |              |              |              |                 |                  |                  |
| Total Accrued Liabilities                                                        | \$34,561,413 | \$49,950,102 | \$55,391,206 | \$67,580,562 | \$71,526,728    | \$78,713,172     | \$81,944,546     |
| Unfunded Past Service<br>Liabilities                                             | \$10,436,161 | \$21,440,957 | \$21,487,985 | \$26,663,397 | \$23,296,425    | \$21,383,042     | \$16,187,460     |
| Percent Unfunded                                                                 | 30.2%        | 42.9%        | 38.8%        | 39.5%        | 32.6%           | 27.2%            | 19.7%            |
| Vested Accrued Benefit<br>Liability                                              | n/a          | n/a          | \$35,945,254 | \$43,887,675 | \$41,603,835    | \$48,853,928     | \$51,505,988     |
| Estimated Annual Salaries<br>Contribution for Unfunded<br>Past Service Liability | \$13,519,536 | \$18,764,268 | \$18,944,220 | \$20,180,148 | \$23,297,280    | \$22,757,640     | \$22,231,152     |
|                                                                                  | \$ 730,531   | \$ 1,500,867 | \$ 1,504,159 | \$ 1,866,438 | \$ 1,980,196    | \$ 1,817,559     | \$ 1,375,934     |
| <u>Actuarial Costs:</u>                                                          |              |              |              |              |                 |                  |                  |
| Normal                                                                           | 15.85%       | 15.76%       | 15.76%       | 16.04%       | 15.67%          | 15.65%           | 15.88%           |
| Past Service                                                                     | 5.40%        | 8.00%        | 7.94%        | 9.25%        | 8.50%           | 7.99%            | 6.19%            |
| Administrative                                                                   | .17%         | .13%         | .13%         | .03%         | .04%            | .04%             | .05%             |
| Group Hospital and Medical<br>Insurance                                          | n/a          | n/a          | .12%         | .12%         | .12%            | .82%             | .97%             |
| Total Cost                                                                       | 21.42%       | 23.89%       | 23.95%       | 25.44%       | 24.33%†         | 24.50%           | 23.09%           |
| <u>Contribution Rates:</u>                                                       |              |              |              |              |                 |                  |                  |
| Member                                                                           | 7.00%        | 7.00%        | 7.00%        | 7.00%        | 7.00%           | 7.00%            | 7.00%            |
| Employer                                                                         | 13.50%       | 13.50%       | 16.50%       | 17.25%       | 18.50%          | 18.50%           | 18.50%           |
| Total Rates                                                                      | 20.50%       | 20.50%       | 23.50%       | 24.25%       | 25.50%          | 25.50%           | 25.50%           |
| <u>Rate Margin:</u>                                                              |              |              |              |              |                 |                  |                  |
|                                                                                  | -.92%        | -3.39%       | -.45%        | -1.19%       | 1.17%           | 1.00%            | 2.41%            |

\*Benefits to retirees increased 7/1/77 by 1/12 of 2% for each month retired but not more than 2%, excluding early retirees not yet age 50.  
 \*\*Benefits to retirees increased 7/1/79 by 2% for each year retired but not more than 5%, excluding early retirees not yet age 50.  
 \*\*\*Benefits to retirees increased 7/1/80 by 6%.  
 \*\*\*\*Benefits to retirees increased 7/1/81 by 6%.  
 \*\*\*\*\*Benefits to retirees increased 7/1/82 from 1% to 15% depending upon how long the recipient has received benefits.  
 \*\*\*\*\*Benefits to retirees increased 7/1/83 from 1/2% to 9 1/2% depending upon how long the recipient has received benefits.

†Actuarial assumptions revised.



TABLE 10

KENTUCKY RETIREMENT SYSTEMS  
STATEMENT OF SOURCE AND USE OF FUNDS  
BY SYSTEM SINCE INCEPTION THROUGH JUNE 30, 1983

| Source of Funds<br>Accounts     | Breakdown Per Dollar (Rounded) |             |             | Total Amounts   |               |              |
|---------------------------------|--------------------------------|-------------|-------------|-----------------|---------------|--------------|
|                                 | <u>KERS</u>                    | <u>CERS</u> | <u>SPRS</u> | <u>KERS</u>     | <u>CERS</u>   | <u>SPRS</u>  |
| Member Contributions            | .27¢                           | .28¢        | .23¢        | \$ 277,078,424  | \$125,681,726 | \$19,196,008 |
| Employer Contributions          | .40                            | .43         | .40         | 414,688,933     | 194,779,743   | 33,200,752   |
| Investment Income               | .31                            | .26         | .35         | 320,926,719     | 120,662,389   | 28,816,882   |
| Special Appropriation           | -                              | -           | -           | 1,894,897       | 515,204       | 506,100      |
| Alternate & Term. Participation | -                              | -           | -           | 9,251           | 2,444,878     | -            |
| Other Receipts                  | .02                            | .03         | .02         | 22,710,238      | 11,696,785    | 1,462,186    |
| Total Sources                   | \$1.00                         | \$1.00      | \$1.00      | \$1,037,308,462 | \$455,780,725 | \$83,181,928 |

| Use of Funds<br>Accounts | Breakdown Per Dollar (Rounded) |             |             | Total Amounts   |               |              |
|--------------------------|--------------------------------|-------------|-------------|-----------------|---------------|--------------|
|                          | <u>KERS</u>                    | <u>CERS</u> | <u>SPRS</u> | <u>KERS</u>     | <u>CERS</u>   | <u>SPRS</u>  |
| Invested Assets          | .68¢                           | .75¢        | .79¢        | \$ 707,991,604  | \$341,973,498 | \$65,638,969 |
| Retirement Payments      | .20                            | .14         | .13         | 204,118,784     | 64,925,402    | 10,718,865   |
| Refunds                  | .06                            | .06         | .02         | 60,896,859      | 26,552,180    | 1,617,800    |
| Interest to Members      | .04                            | .03         | .04         | 38,210,150      | 13,840,862    | 3,343,274    |
| Admin. & Prof. Services  | -                              | .01         | -           | 7,730,792       | 3,599,028     | 402,948      |
| Other Disbursements      | .02                            | .01         | .02         | 18,360,273      | 4,889,755     | 1,460,072    |
| Total Uses               | \$1.00                         | \$1.00      | \$1.00      | \$1,037,308,462 | \$455,780,725 | \$83,181,928 |

TABLE 11

KENTUCKY RETIREMENT SYSTEMS  
ADMINISTRATIVE EXPENSE  
BY FISCAL YEAR

|                                           | 76-77        | 77-78        | 78-79        | 79-80        | 80-81        | 81-82        | 82-83          |
|-------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| Personnel Cost:                           |              |              |              |              |              |              |                |
| Personal Service                          | \$336,658.01 | \$327,779.92 | \$380,501.41 | \$440,961.26 | \$472,328.40 | \$547,882.35 | \$ 636,311.03  |
| Contractual Service                       |              |              |              |              |              |              |                |
| Auditor                                   | 9,000.00     | 11,275.00    | 11,500.00    | 13,800.00    | 13,800.00    | 10,000.00    | 13,750.00      |
| Actuary                                   | 16,975.00    | 14,250.00    | 14,200.00    | 14,200.00    | 16,000.00    | 26,500.00    | 25,500.00      |
| Data Processing                           | 1,584.16     | 4,172.83     | .00          | .00          | .00          | .00          | .00            |
| Janitorial                                | 229.80       | 2,775.83     | 3,817.70     | 5,052.40     | 6,631.62     | 5,539.10     | 4,195.90       |
| Legal                                     | .00          | .00          | 1,109.43     | 281.39       | 179.61       | 220.00       | 628.00         |
| Medical                                   | 4,308.92     | 2,851.40     | 3,602.00     | 3,627.20     | 5,628.50     | 4,712.00     | 13,255.75      |
| Miscellaneous                             | 898.21       | 300.00       | 1,162.38     | 4,885.17     | 1,779.03     | 556.26       | 574.60         |
| TOTAL                                     | \$369,654.10 | \$363,404.98 | \$415,892.92 | \$482,807.42 | \$516,347.16 | \$595,409.71 | \$ 694,215.28  |
| Operating Expenses:                       |              |              |              |              |              |              |                |
| Postage & Freight                         | \$ 72,186.88 | \$ 65,106.02 | \$ 40,122.50 | \$ 582.31    | \$ 98,466.96 | \$ 43,558.59 | \$ 88,570.84   |
| Utilities                                 | 3,972.72     | 4,286.03     | 4,526.52     | 5,299.55     | 8,930.67     | 8,689.70     | 11,352.64      |
| Telephone                                 | 7,934.66     | 8,535.96     | 9,912.47     | 16,164.40    | 15,959.03    | 5,247.38     | 21,777.05      |
| Travel                                    | 8,662.80     | 8,995.89     | 9,612.15     | 7,222.31     | 6,371.49     | 7,442.26     | 7,262.84       |
| Printing & Duplicating                    | 21,646.69    | 13,447.60    | 21,003.95    | 40,629.09    | 22,144.38    | 34,581.14    | 34,584.84      |
| Maintenance - Equipment                   | 2,841.60     | 3,850.81     | 5,177.48     | 7,155.95     | 7,807.16     | 15,693.96    | 14,979.45      |
| Maintenance - Bldg. & Grds.               | 385.63       | 1,920.50     | 536.97       | 441.39       | 557.99       | 412.18       | 1,166.82       |
| Laundry                                   | 324.52       | 284.94       | 257.00       | 298.02       | 692.80       | 279.10       | 400.86         |
| Assessed Car Rental                       | 1,520.82     | 1,689.73     | 1,900.50     | 1,951.71     | 2,672.44     | 1,856.19     | 2,992.07       |
| Supplies - Office                         | 7,903.37     | 9,563.19     | 7,533.02     | 6,057.00     | 10,426.60    | 27,525.82    | 7,249.69       |
| Supplies - Data Processing                | 5,621.03     | 10,335.17    | 6,017.43     | 4,260.55     | 4,149.87     | 6,479.99     | 6,302.51       |
| Supplies - Janitorial                     | 460.11       | 322.13       | 249.57       | 261.57       | 308.40       | 311.02       | 243.74         |
| Motor Fuels                               | .00          | .00          | .00          | .00          | .00          | .00          | .00            |
| Rental - Building                         | 13,266.24    | 13,266.24    | 13,266.24    | 20,515.78    | 26,650.01    | 26,650.00    | 26,650.00      |
| Rental - Data Processing                  | 58,386.20    | 29,189.29    | 59,392.82    | 46,893.00    | 60,453.42    | 49,357.67    | 56,844.98      |
| Rental - Office Equipment                 | 1,879.51     | 24,207.16    | 23,326.47    | 31,479.37    | 33,529.22    | 22,193.57    | 17,404.01      |
| Insurance                                 | 1,397.26     | 1,323.65     | 2,315.44     | 3,360.97     | 2,684.36     | 2,934.63     | 4,056.61       |
| Bonds                                     | 1,575.00     | 1,575.00     | 2,851.00     | .00          | 1,750.00     | 1,750.00     | 5.00           |
| Dues                                      | 35.00        | 255.00       | 140.00       | 140.00       | 140.00       | 140.00       | 140.00         |
| Subscriptions                             | 827.15       | 940.21       | 1,005.06     | 818.97       | 1,029.05     | 928.56       | 1,216.62       |
| Employee Training Expense                 | 490.00       | 956.90       | 434.50       | 1,201.95     | 1,113.90     | 696.85       | 726.78         |
| Miscellaneous                             | 330.60       | 133.91       | 141.26       | .00          | 113.61       | 137.15       | 393.32         |
| Photo Supplies                            | .00          | 56.90        | 15.90        | 2.25         | .00          | 219.66       | .00            |
| Furniture Office Equipment                | 660.90       | 1,317.17     | 1,408.09     | 462.04       | 1,005.99     | 1,188.27     | 1,837.18       |
| Computer Payroll Cost                     | .00          | .00          | .00          | .00          | .00          | 287.04       | .00            |
| Files & Court Fees                        | .00          | .00          | .00          | .00          | .00          | 10.00        | .00            |
| Lease Purchase of Off. Equip.             | .00          | .00          | .00          | .00          | .00          | 12,738.73    | 14,355.48      |
| Conference Expenses                       | .00          | .00          | .00          | .00          | .00          | .00          | 300.00         |
| TOTAL                                     | \$212,308.69 | \$201,559.40 | \$211,146.34 | \$195,198.18 | \$306,957.35 | \$271,309.46 | \$ 320,813.33  |
| Capital Outlay                            | \$ 3,514.81  | \$ 44,589.66 | \$ 3,203.86  | \$ 484.53    | \$ 5,532.60  | \$ 3,857.66  | \$ 794.92      |
| TOTAL ADMINISTRATIVE EXPENSE              | \$585,477.60 | \$609,554.04 | \$630,243.12 | \$678,490.13 | \$828,837.11 | \$870,576.83 | \$1,015,823.53 |
| DISTRIBUTION OF COST BY RETIREMENT SYSTEM |              |              |              |              |              |              |                |
| Kentucky Employees Ret. System            | \$409,834.32 | \$426,687.83 | \$441,170.18 | \$393,524.28 | \$480,725.52 | \$478,817.25 | \$ 558,702.94  |
| County Employees Ret. System              | 152,224.18   | 158,484.05   | 163,863.21   | 278,180.95   | 339,823.22   | 383,053.81   | 446,962.35     |
| State Police Ret. System                  | 23,419.10    | 24,382.16    | 25,209.73    | 6,784.90     | 8,288.37     | 8,705.77     | 10,158.24      |
|                                           | \$585,477.60 | \$609,554.04 | \$630,243.12 | \$678,490.13 | \$828,837.11 | \$870,576.83 | \$1,015,823.53 |
| Number of Accounts                        | 93,204       | 103,860      | 112,143      | 117,255      | 117,604      | 116,534      | 118,347        |
| Adm. Expense Per Account                  | \$ 6.28      | \$ 5.87      | \$ 5.62      | \$ 5.79      | \$ 7.05      | \$ 7.47      | \$ 8.58        |

