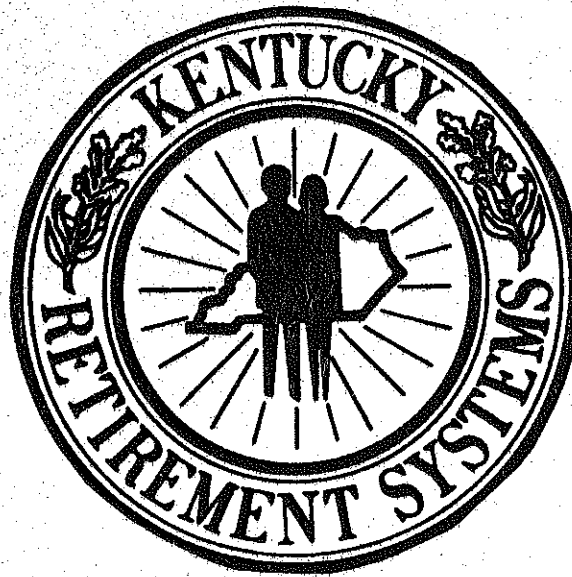


KENTUCKY RETIREMENT SYSTEMS

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



ANNUAL REPORT

JUNE 30, 1980

BOARD OF TRUSTEES  
TERMS OF OFFICE

Matthew J. Amato, Jr., Director  
Personnel Management  
Department for Human Resources

105 Romany Road  
Lexington, Kentucky 40502

Term Expires: March 31, 1980  
Appointed by Governor Carroll

Mrs. Iris R. Barrett, Attorney  
Executive Director of the  
Kentucky Occupational Safety  
& Health Review Commission

711 Bluegrass Avenue  
Frankfort, Kentucky 40601

Term Expires: March 31, 1982  
Elected by KERS Members

Frank W. Burke, Attorney  
Private Practice

509 Briar Hill Road  
Louisville, Kentucky 40206

Term Expires: March 31, 1981  
Elected by CERS Members

John E. Coleman, President  
First National Bank of Pikeville

106 Mt. Martha Drive  
Pikeville, Kentucky 41501

Term Expires: March 31, 1981  
Elected by CERS Members

Billy Joe Hall, President & Chairman  
Of the Board  
Mt. Sterling National Bank

321 North Maysville Street  
Mt. Sterling, Kentucky 40353

Term Expires: March 31, 1982  
Elected by KERS Members

Charles H. Lambert, Vice Chairman  
Energy Regulatory Commission

316 Cold Harbor Drive  
Frankfort, Kentucky 40601

Term Expires: March 31, 1980  
Appointed by Governor Carroll

Vernon C. McGinty, Retired  
Former General Electric Corporate  
& Finance/Accounting Manager  
and Former State Legislator

512 Nottingham Parkway  
Louisville, Kentucky 40222

Term Expires: March 31, 1983  
Appointed by Governor Carroll

John D. Robey, Captain  
Kentucky State Police

216 Whitney Avenue  
Lawrenceburg, Kentucky 40342

Term Expires: March 31, 1983  
Elected by SPRS Members

Dick Robinson, Commissioner  
Department of Personnel

1643 Donelwal Drive  
Lexington, Kentucky 40511

Ex Officio, Commissioner of Personnel



# KENTUCKY RETIREMENT SYSTEMS

226 West Second Street  
Frankfort, Kentucky 40601



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

Mim C. Clark  
General Manager  
Phone 502-564-4646

## M E M O R A N D U M

TO: Members of the Board of Trustees  
Billy Joe Hall, Chairman  
Vernon C. McGinty, Vice Chairman  
Matthew J. Amato, Jr.  
Mrs. Iris R. Barrett  
Frank W. Burke  
John E. Coleman  
Charles H. Lambert  
John D. Robey  
Dick Robinson

FROM: Mim C. Clark

DATE: November 19, 1980

SUBJECT: Annual Report as of June 30, 1980

The financial strength and actuarial soundness of the retirement systems is reflected in the Annual Report for 1980. You will find that our responsibility to provide participants with a complete financial report of their retirement program has been fulfilled.

Our policy of full disclosure is apparent throughout the Annual Report. Financial information, actuarial information, investment information and abundant statistical data is included along with copies of certifications from an Independent Certified Public Accounting Firm and an Independent Actuarial Firm.

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.

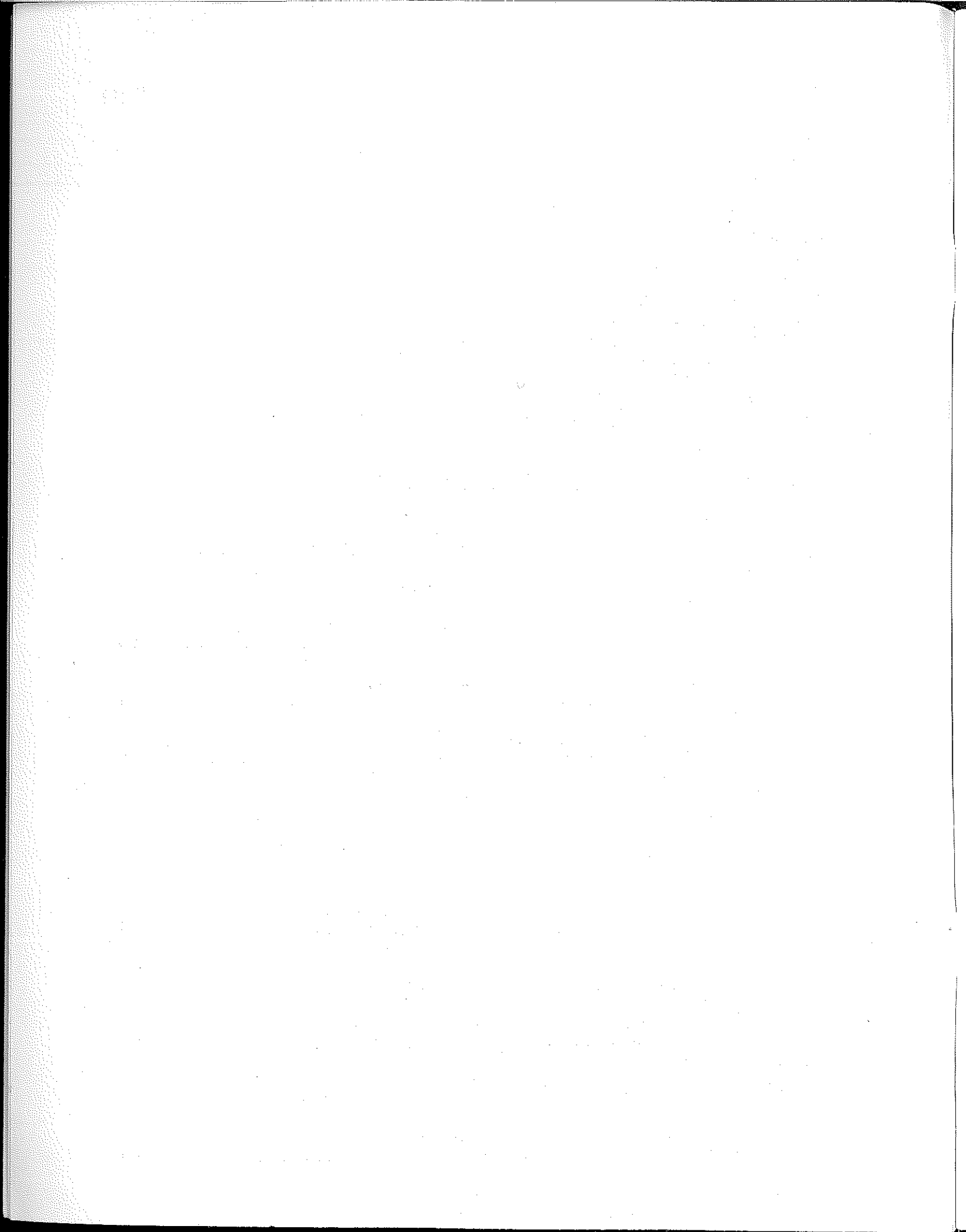
The growth of the three retirement systems is continuing. The combined assets of the trust funds on June 30, 1980, were \$685 million. Growth during the fiscal year totaled \$106 million. The combined membership of the three systems was 117,255 for an increase during the fiscal year of 5,112. The number of employers participating in the systems is 578.

TABLE OF CONTENTS

	<u>Page</u>
Financial Strength.....	1
Actuarial Soundness.....	22
Portfolio Analysis.....	41
Retirement Payments.....	51
Statistical Information.....	57
Contractual Arrangements.....	64

LIST OF TABLES

	<u>Page</u>	
Table 1	Kentucky Employes Retirement System Investment Portfolio as of 6/30/80.....	43
Table 2	County Employes Retirement System Investment Portfolio as of 6/30/80.....	44
Table 3	State Police Retirement System Investment Portfolio as of 6/30/80.....	45
Table 4	Kentucky Retirement Systems Common Stock Portfolio as of 6/30/80.....	46
Table 5	Kentucky Retirement Systems Bond Portfolio as of 6/30/80.....	47
Table 6	Kentucky Employes Retirement System Insurance Fund Portfolio as of 6/30/80.....	48
Table 7	County Employes Retirement System Insurance Fund Portfolio as of 6/30/80.....	49
Table 8	State Police Retirement System Insurance Fund Portfolio as of 6/30/80.....	50
Table 9	Retirement Benefits by Monthly Payment.....	52
Table 10	Kentucky Employes Retirement System Retirement Benefits by Plan.....	53
Table 11	County Employes Retirement System Retirement Benefits by Plan.....	54
Table 12	State Police Retirement System Retirement Benefits by Plan.....	55
Table 13	Geographic Distribution of Annual Retirement Payments.....	56
Table 14	Kentucky Retirement Systems Membership Statistics.....	58
Table 15	Kentucky Employes Retirement System Financial and Actuarial Statistics.....	59
Table 16	County Employes Retirement System Financial and Actuarial Statistics.....	60
Table 17	State Police Retirement System Financial and Actuarial Statistics.....	61
Table 18	Kentucky Retirement Systems Statement of Source and Use of Funds.....	62
Table 19	Kentucky Retirement Systems Administrative Expense.....	63



## FINANCIAL STRENGTH

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 properly stated.

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 Accounting Firm presents to the Board of Trustees their "audit opinion" which is found on the next page. The audited financial statements of the three retirement systems follow the audit opinion.

In addition to the annual audit by a Certified Public Accounting Firm, proper financial controls are established to be sure the funds are safeguarded. For example, each year the CPA firm conducts a surprise audit of the securities held in each fund and there is a surprise audit by the internal auditor of the securities' custodian.

Also, adequate bonding arrangements are in force on 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. 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.

# Eskew & Gresham

Certified Public Accountants  
Semonin Building  
4812 Highway 42  
P.O. Box 22309  
Louisville, Kentucky 40222  
502 426-3700

Board of Trustees  
Kentucky Retirement Systems  
Frankfort, Kentucky

We have examined the statements of financial position of the Kentucky Employees Retirement System, County Employees Retirement System, State Police Retirement System and Kentucky Retirement Systems Insurance Fund as of June 30, 1980 and 1979, and the related statements of changes in members' contribution accounts and retirement allowance accounts of the Retirement Systems and the statement of changes in fund balance of the 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. Investments owned at June 30, 1980 were confirmed to us by the custodian.

In our opinion, the aforementioned financial statements present fairly the financial positions of the Kentucky Employees Retirement System, County Employees Retirement System, State Police Retirement System and the Kentucky Retirement Systems Insurance Fund at June 30, 1980 and 1979, and the changes in members' contribution accounts and retirement allowance accounts of the Retirement Systems and the changes in fund balance of the Insurance Fund for the years then ended, in conformity with the applicable provisions of the Kentucky Revised Statutes applied on a consistent basis.

September 17, 1980

*Eskew & Gresham*



**KENTUCKY EMPLOYES RETIREMENT SYSTEM**

KENTUCKY EMPLOYEES RETIREMENT SYSTEM  
STATEMENT OF FINANCIAL POSITION

ASSETS

	June 30	
	1980	1979
CASH ACCOUNT ON DEPOSIT WITH STATE TREASURER	\$ 219 003	\$ 3 103
RECEIVABLES:		
Member and employer contributions	\$ 1 501 503	\$ 3 742 544
Accrued bond and mortgage interest	5 227 204	5 002 873
	<u>\$ 6 728 707</u>	<u>\$ 8 745 417</u>
INVESTMENTS (Note A):		
Bonds -		
United States Government	\$170 969 959	\$141 644 862
Industrial and miscellaneous	82 904 719	73 411 766
	<u>\$253 874 678</u>	<u>\$215 056 628</u>
Common stocks	116 238 154	91 190 466
First mortgage real estate loans	12 715 791	13 843 407
Short-term investments	65 575 250	60 579 430
	<u>\$448 403 873</u>	<u>\$380 669 931</u>
	\$455 351 583	\$389 418 451

ACCOUNT BALANCES

MEMBERS' CONTRIBUTION ACCOUNT	\$114 687 134	\$100 853 672
RETIREMENT ALLOWANCE ACCOUNT	340 653 526	288 490 495
UNDISTRIBUTED REVENUE	<u>10 823</u>	<u>74 284</u>
	\$455 351 583	\$389 418 451

The accompanying significant accounting policies and notes to financial statements are an integral part of this statement.

KENTUCKY EMPLOYES RETIREMENT SYSTEM  
STATEMENT OF CHANGES IN MEMBERS' CONTRIBUTION ACCOUNT

	Year Ended June 30	
	1980	1979
BALANCE, BEGINNING OF YEAR	\$100 853 672	\$ 87 530 654
ADDITIONS:		
Member contributions	\$ 20 677 053	\$ 18 429 617
Interest credited to members'		
balances transferred from Retirement		
Allowance Account	<u>2 797 257</u>	<u>2 440 330</u>
	\$ 23 474 310	\$ 20 869 947
DEDUCTIONS:		
Refunds to former members	\$ 4 996 158	\$ 4 055 068
Retired members' balances		
transferred to Retirement		
Allowance Account	<u>4 644 690</u>	<u>3 491 861</u>
	\$ 9 640 848	\$ 7 546 929
BALANCE, END OF YEAR	\$114 687 134	\$100 853 672

The accompanying significant accounting policies and notes to financial statements are an integral part of this statement.

KENTUCKY EMPLOYEES RETIREMENT SYSTEM  
STATEMENT OF CHANGES IN RETIREMENT ALLOWANCE ACCOUNT

	Year Ended June 30	
	1980	1979
BALANCE, BEGINNING OF YEAR	\$288 490 495	\$246 287 806
ADDITIONS:		
Employer contributions	\$ 37 265 766	\$ 32 930 311
Military Service Credit		65 977
Interest and dividend income	33 356 149	25 415 903
Net realized gain on sale of investments		655 976
Retired members' balance transferred from Members' Contribution Account	4 644 690	3 491 861
	<u>\$ 75 266 605</u>	<u>\$ 62 560 028</u>
DEDUCTIONS:		
Retirement benefits paid to members	\$ 17 501 338	\$ 15 205 181
Contributions transferred to the Kentucky Retirement Systems Insurance Fund	1 071 987	2 171 982
Interest credited to members' balances transferred to Members' Contribution Account	2 797 257	2 440 330
Net realized loss on sale of investments	1 278 597	
Administrative expenses	395 179	439 516
Investment expenses	59 116	100 330
	<u>\$ 23 103 474</u>	<u>\$ 20 357 339</u>
BALANCE, END OF YEAR	\$340 653 626	\$288 490 495

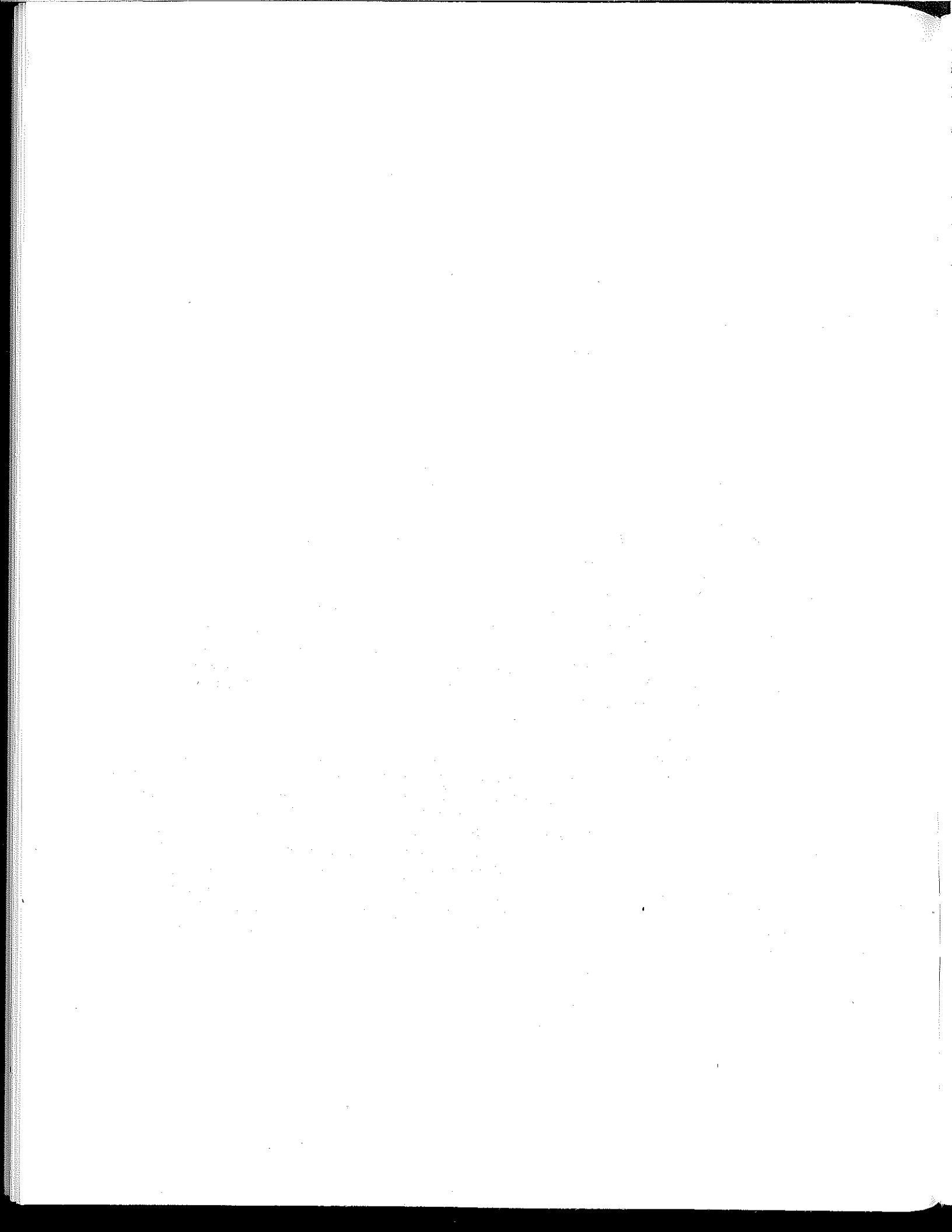
The accompanying significant accounting policies and notes to  
financial statements are an integral part of this statement.

KENTUCKY EMPLOYEES RETIREMENT SYSTEM  
SIGNIFICANT ACCOUNTING POLICIES AND  
NOTES TO FINANCIAL STATEMENTS  
YEARS ENDED JUNE 30, 1980 AND 1979

- A. INVESTMENTS - Bonds and first mortgage real estate loans are stated at amortized cost. Stocks are stated at cost. Realized gains or losses on all securities are recorded at the time of sale. The quoted market of the stocks exceeded the cost basis by approximately \$3 172 000 at June 30, 1980. The cost of stocks exceeded the quoted market by approximately \$4 149 000 at June 30, 1979.
- B. PAST SERVICE LIABILITY - The amount to be paid to this retirement system in future periods by the participating employers to fund the unfunded past service is not included as an asset, nor is the liability for the past service included in these statements. The unfunded past service liability at June 30, 1980, as determined by the System's consulting actuary, was approximately \$249 770 835 and is to be funded at the rate of 1% per annum plus interest at 6%.

At June 30, 1980, participating employes and employers contributed to the System at the rate of 4% and 7 1/4%, respectively, of creditable compensation. For members included in the hazardous position category eligible employes and employers contribute to the System at the rate of 7% and 19 1/4%, respectively, of creditable compensation. Eligibility for coverage is determined by the Board of Trustees.

- C. TRANSFERS TO INSURANCE FUND - A new law, effective July 1, 1978, was enacted to provide a group hospital and medical insurance plan for present and future recipients of a retirement allowance from any of the three retirement systems. The Kentucky Retirement Systems Insurance Fund was established to provide these benefits. The Insurance Fund is to be funded by transfer of a portion of employer contributions from each 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 0.34% for hazardous positions for the year 1980 and 0.48% for non-hazardous and 0.52% for hazardous positions for the year 1979.



COUNTY EMPLOYES RETIREMENT SYSTEM

COUNTY EMPLOYEES RETIREMENT SYSTEM  
STATEMENT OF FINANCIAL POSITION

ASSETS

	June 30	
	1980	1979
CASH ACCOUNT ON DEPOSIT WITH STATE TREASURER	\$ 82 947	\$ 1 643
RECEIVABLES:		
Member and employer contributions	\$ 2 114 439	\$ 2 154 193
Contribution for past service credit (Note C)	3 870 740	4 016 161
Accrued bond and mortgage interest	2 044 739	1 898 588
	<u>\$ 8 029 918</u>	<u>\$ 8 068 942</u>
INVESTMENTS (Note A):		
Bonds -		
United States Government	\$ 64 859 190	\$ 53 738 786
Industrial and miscellaneous	29 429 864	25 857 150
	<u>\$ 94 289 054</u>	<u>\$ 79 595 936</u>
Common stocks	42 025 863	32 314 140
First mortgage real estate loans	2 670 994	2 908 624
Short-term investments	42 154 610	30 202 620
	<u>\$181 140 521</u>	<u>\$145 021 320</u>
	\$189 253 386	\$153 091 905

ACCOUNT BALANCES

MEMBERS' CONTRIBUTION ACCOUNT	\$ 48 833 802	\$ 40 963 162
RETIREMENT ALLOWANCE ACCOUNT	140 362 428	112 092 333
UNDISTRIBUTED REVENUE	<u>57 156</u>	<u>36 410</u>
	\$189 253 386	\$153 091 905

The accompanying significant accounting policies and notes to financial statements are an integral part of this statement.



COUNTY EMPLOYEES RETIREMENT SYSTEM  
STATEMENT OF CHANGES IN MEMBERS' CONTRIBUTION ACCOUNT

	Year Ended June 30	
	1980	1979
BALANCE, BEGINNING OF YEAR	\$40 963 162	\$34 442 202
ADDITIONS:		
Member contributions	\$11 632 927	\$10 461 692
Interest credited to members' balances transferred from Retirement Allowance Account	1 109 788	931 688
	<u>\$12 742 715</u>	<u>\$11 393 380</u>
DEDUCTIONS:		
Refunds to former members	\$ 3 032 440	\$ 3 313 137
Retired members' balances transferred to Retirement Allowance Account	1 839 635	1 559 283
	<u>\$ 4 872 075</u>	<u>\$ 4 872 420</u>
BALANCE, END OF YEAR	\$48 833 802	\$40 963 162

The accompanying significant accounting policies and notes to financial statements are an integral part of this statement.

COUNTY EMPLOYEES RETIREMENT SYSTEM  
STATEMENT OF CHANGES IN RETIREMENT ALLOWANCE ACCOUNT

	Year Ended June 30	
	1980	1979
BALANCE, BEGINNING OF YEAR	\$112 092 333	\$ 89 279 549
<b>ADDITIONS:</b>		
Employer contributions	\$ 21 087 730	\$ 19 039 355
Military Service Credit		740
Interest and dividend income	13 948 084	9 734 995
Net realized gain on sale of investments		210 589
Retired members' balances transferred from Members' Contribution Account	1 839 635	1 559 283
	\$ 36 875 449	\$ 30 544 962
<b>DEDUCTIONS:</b>		
Retirement benefits paid to members	\$ 6 401 655	\$ 5 443 712
Contributions transferred to the Kentucky Retirement Systems Insurance Fund	412 031	1 155 512
Interest credited to members' balances transferred to Members' Contribution Account	1 109 788	931 688
Net realized loss on sale of investments	380 367	
Administrative expenses	278 181	163 863
Investment expenses	23 332	37 403
	\$ 8 605 354	\$ 7 732 178
BALANCE, END OF YEAR	\$140 362 428	\$112 092 333

The accompanying significant accounting policies and notes to financial statements are an integral part of this statement.

COUNTY EMPLOYEES RETIREMENT SYSTEM  
SIGNIFICANT ACCOUNTING POLICIES AND  
NOTES TO FINANCIAL STATEMENTS  
YEARS ENDED JUNE 30, 1980 AND 1979

- A. INVESTMENTS - Bonds and first mortgage real estate loans are stated at amortized cost. Stocks are stated at cost. Realized gains or losses on all securities are recorded at the time of sale. The quoted market of the stocks exceeded the cost basis by approximately \$1 084 000 at June 30, 1980. The cost of stocks exceeded the quoted market by approximately \$1 650 000 at June 30, 1979.
- B. PAST SERVICE LIABILITY - The amount to be paid to this retirement system in future periods by the participating employers to fund the unfunded past service is not included as an asset, nor is the liability for the past service included in these statements. The unfunded past service liability at June 30, 1980, as determined by the System's consulting actuary, was approximately \$75 787 680 and is to be funded at the rate of 1% per annum plus interest at 6%.

At June 30, 1980, participating employees and employers contributed to the System at the rate of 4% and 7 1/4%, respectively, of creditable compensation. For members included in the hazardous position category eligible employees and employers contribute to the System at the rate of 7% and 16%, respectively, of creditable compensation. Eligibility for coverage is determined by the Board of Trustees.

- C. RECEIVABLES ARISING FROM PURCHASE OF PAST SERVICE CREDIT - KRS 78.530 (3) as amended by the 1974 General Assembly permits an employer to purchase, over a period of years with interest, past service credits on behalf of employees electing to participate in the System.
- D. TRANSFERS TO INSURANCE FUND - A new law, effective July 1, 1978, was enacted to provide a group hospital and medical insurance plan for present and future recipients of a retirement allowance from any of the three retirement systems. The Kentucky Retirement Systems Insurance Fund was established to provide these benefits. The Insurance Fund is to be funded by transfer of a portion of employer contributions from each retirement system. The percentage of creditable compensation transferred to the Insurance Fund by the County Employes Retirement System was 0.15% for non-hazardous and 0.13% for hazardous positions for the year 1980 and 0.46% for non-hazardous and 0.52% for hazardous positions for the year 1979.



STATE POLICE RETIREMENT SYSTEM

STATE POLICE RETIREMENT SYSTEM  
STATEMENT OF FINANCIAL POSITION

ASSETS

	June 30	
	1980	1979
CASH ACCOUNT ON DEPOSIT WITH STATE TREASURER	\$ 14 562	\$ 415
RECEIVABLES:		
Member and employer contributions	\$ 209 112	\$ 352 518
Accrued bond and mortgage interest	447 491	438 762
	<u>\$ 656 603</u>	<u>\$ 791 280</u>
INVESTMENTS (Note A):		
Bonds -		
United States Government	\$13 963 007	\$12 180 172
Industrial and miscellaneous	6 726 354	6 211 506
	<u>\$20 689 361</u>	<u>\$18 391 678</u>
Common stocks	8 632 006	7 444 622
First mortgage real estate loans	960 448	1 043 276
Short-term investments	9 564 140	6 231 950
	<u>\$39 845 955</u>	<u>\$33 111 526</u>
	\$40 517 120	\$33 903 221

ACCOUNT BALANCES

MEMBERS' CONTRIBUTION ACCOUNT	\$10 162 814	\$ 9 089 832
RETIREMENT ALLOWANCE ACCOUNT	<u>30 354 306</u>	<u>24 813 389</u>
	\$40 517 120	\$33 903 221

The accompanying significant accounting policies and notes to financial statements are an integral part of this statement.

STATE POLICE RETIREMENT SYSTEM  
STATEMENT OF CHANGES IN MEMBERS' CONTRIBUTION ACCOUNT

	Year Ended June 30	
	1980	1979
BALANCE, BEGINNING OF YEAR	\$ 9 089 832	\$7 906 600
ADDITIONS:		
Member contributions	\$ 1 363 897	\$1 341 772
Interest credited to members' balances transferred from Retirement Allowance Account	257 054	227 523
	<u>\$ 1 620 951</u>	<u>\$1 569 295</u>
DEDUCTIONS:		
Refunds to former members	\$ 68 111	\$ 85 730
Retired members' balances transferred to Retirement Allowance Account	479 858	300 333
	<u>\$ 547 969</u>	<u>\$ 386 063</u>
BALANCE, END OF YEAR	\$10 162 814	\$9 089 832

The accompanying significant accounting policies and notes to financial statements are an integral part of this statement.

STATE POLICE RETIREMENT SYSTEM  
STATEMENT OF CHANGES IN RETIREMENT ALLOWANCE ACCOUNT

	Year Ended June 30	
	1980	1979
BALANCE, BEGINNING OF YEAR	\$24 813 389	\$20 202 500
ADDITIONS:		
Employer contributions	\$ 3 413 281	\$ 3 002 341
Military Service Credit		58 283
Interest and dividend income	3 060 037	2 200 472
Net realized gain on sale of investments		50 183
Retired members' balances transferred from Members' Contribution Account	<u>479 858</u>	<u>300 333</u>
	<u>\$ 6 953 176</u>	<u>\$ 5 611 612</u>
DEDUCTIONS:		
Retirement benefits paid to members	\$ 1 030 786	\$ 683 821
Contributions transferred to the Kentucky Retirement Systems Insurance Fund	23 342	55 517
Interest credited to members' balances transferred to Members' Contribution Account	257 054	227 523
Net realized loss on sale of investments	89 030	
Administrative expenses	6 785	25 210
Investment expenses	<u>5 262</u>	<u>8 652</u>
	<u>\$ 1 412 259</u>	<u>\$ 1 000 723</u>
BALANCE, END OF YEAR	\$30 354 306	\$24 813 389

The accompanying significant accounting policies and notes to financial statements are an integral part of this statement.



STATE POLICE RETIREMENT SYSTEM  
SIGNIFICANT ACCOUNTING POLICIES AND  
NOTES TO FINANCIAL STATEMENTS  
YEARS ENDED JUNE 30, 1980 AND 1979

- A. INVESTMENTS - Bonds and first mortgage real estate loans are stated at amortized cost. Stocks are stated at cost. Realized gains or losses on all securities are recorded at the time of sale. The quoted market of the stocks exceeded the cost basis by approximately \$250 000 at June 30, 1980. The cost of stocks exceeded the quoted market by approximately \$343 000 at June 30, 1979.
- B. PAST SERVICE LIABILITY - The amount to be paid to this retirement system in future periods by the employer to fund the unfunded past service is not included as an asset, nor is the liability for the past service included in these statements. The unfunded past service liability at June 30, 1980, as determined by the System's consulting actuary, was approximately \$26 663 397 and is to be funded at the rate of 1% per annum plus interest at 6%.
- At June 30, 1980, participating employees and employers contributed to the System at the rate of 7% and 17 1/4%, respectively, of creditable compensation.
- C. TRANSFERS TO INSURANCE FUND - A new law, effective July 1, 1978, was enacted to provide a group hospital and medical insurance plan for present and future recipients of a retirement allowance from any of the three retirement systems. The Kentucky Retirement Systems Insurance Fund was established to provide these benefits. The Insurance Fund is to be funded by transfer of a portion of employer contributions from each retirement system. The percentage of creditable compensation transferred to the Insurance Fund by the State Police Retirement System was 0.12% and 0.30% for the years 1980 and 1979, respectively.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the integrity of the financial system and for the ability to detect and prevent fraud. The text notes that without reliable records, it would be difficult to track the flow of funds and identify any irregularities.

2. The second part of the document outlines the specific procedures for recording transactions. It details the steps involved in entering data into the system, including the use of standardized codes and the requirement for double-checking entries. The document also discusses the importance of regular audits and the role of internal controls in ensuring the accuracy of the records.

3. The third part of the document addresses the issue of data security. It highlights the need to protect sensitive information from unauthorized access and to implement robust security measures. The text mentions the use of encryption and secure communication channels to safeguard data during transmission and storage.

4. The fourth part of the document discusses the importance of transparency and accountability in financial reporting. It stresses that stakeholders have a right to know how their money is being managed and that organizations should provide clear and concise reports. The text also mentions the role of external auditors in providing an independent assessment of the financial statements.

5. The fifth part of the document concludes by summarizing the key points discussed and reiterating the commitment to high standards of financial management. It expresses confidence in the system and the dedication of the staff to ensuring its successful operation.

Faint, illegible text, possibly bleed-through from the reverse side of the page.

**KENTUCKY RETIREMENT SYSTEMS INSURANCE FUND**

Faint, illegible text, possibly bleed-through from the reverse side of the page.

Faint, illegible text, possibly bleed-through from the reverse side of the page.

KENTUCKY RETIREMENT SYSTEMS INSURANCE FUND  
STATEMENT OF FINANCIAL POSITION

ASSETS

	June 30	
	1980	1979
CASH ACCOUNT ON DEPOSIT WITH STATE TREASURER	\$ 733	\$ 1 175
RECEIVABLES:		
Employer contributions	179 101	424 129
INVESTMENTS:		
Short-term investments, at cost (approximates market)	<u>3 553 000</u>	<u>2 353 000</u>
	\$3 732 834	\$2 778 304

FUND BALANCE

FUND BALANCE ALLOCATED TO:		
Kentucky Employes Retirement System	\$2 365 074	\$1 724 224
County Employes Retirement System	1 309 270	1 006 849
State Police Retirement System	<u>58 490</u>	<u>47 231</u>
	\$3 732 834	\$2 778 304

The accompanying significant accounting policies and notes to financial statements are an integral part of this statement.

KENTUCKY RETIREMENT SYSTEMS INSURANCE FUND  
STATEMENT OF CHANGES IN FUND BALANCE

	Year Ended June 30	
	1980	1979
<b>ALLOCATED TO KENTUCKY EMPLOYES RETIREMENT SYSTEM:</b>		
Balance, beginning of year	\$1 724 224	\$ -0-
Additions -		
Employer contributions transferred from Kentucky Employes Retirement System	\$1 071 987	\$2 171 982
Interest income	<u>236 628</u>	<u>32 956</u>
	\$1 308 615	\$2 204 938
Deductions -		
Insurance premium payments	667 765	480 714
Balance, end of year	\$2 365 074	\$1 724 224
<b>ALLOCATED TO COUNTY EMPLOYES RETIREMENT SYSTEM:</b>		
Balance, beginning of year	\$1 006 849	\$ -0-
Additions -		
Employer contributions transferred from County Employes Retirement System	\$ 412 031	\$1 155 512
Interest income	<u>133 566</u>	<u>11 709</u>
	\$ 545 597	\$1 167 221
Deductions -		
Insurance premium payments	243 176	160 372
Balance, end of year	\$1 309 270	\$1 006 849
<b>ALLOCATED TO STATE POLICE RETIREMENT SYSTEM:</b>		
Balance, beginning of year	\$ 47 231	\$ -0-
Additions -		
Employer contributions transferred from State Police Retirement System	\$ 23 342	\$ 55 517
Interest income	<u>6 148</u>	<u>1 032</u>
	\$ 29 490	\$ 56 549
Deductions -		
Insurance premium payments	18 231	9 318
Balance, end of year	\$ 58 490	\$ 47 231
<b>TOTAL FUND BALANCE, END OF YEAR</b>	<b>\$3 732 834</b>	<b>\$2 778 304</b>

The accompanying significant accounting policies and notes to  
financial statements are an integral part of this statement.

KENTUCKY RETIREMENT SYSTEMS INSURANCE FUND  
SIGNIFICANT ACCOUNTING POLICIES AND  
NOTES TO FINANCIAL STATEMENTS  
YEARS ENDED JUNE 30, 1980 AND 1979

- A. INSURANCE FUND - A new law, effective July 1, 1978, was enacted by the 1978 General Assembly to provide hospital and medical insurance for recipients of a retirement allowance from any of the three retirement systems; Kentucky Employes Retirement System, County Employes Retirement System, State Police Retirement System. The recipient must be a retired member of one of the systems and the percent of the insurance premium paid by the Fund is based on the years of service with the Kentucky Retirement Systems. Premium payments are based on the following schedule:

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

- B. FUNDING OF THE INSURANCE PROGRAM - Funding is provided by transferring a portion of the employer contribution to each retirement system. The following percentages of creditable compensation were transferred from the respective retirement systems for the years ended June 30, 1980 and 1979.

<u>Non-hazardous</u>	1980	1979
Kentucky Employes Retirement System	0.21%	0.48%
County Employes Retirement System	0.15%	0.46%
 <u>Hazardous</u>		
Kentucky Employes Retirement System	0.34%	0.52%
County Employes Retirement System	0.13%	0.52%
State Police Retirement Ssystem	0.12%	0.30%

The above rates were determined by the Kentucky Retirement Systems' consulting actuary and are based on its estimates of fund requirements.

## ACTUARIAL SOUNDNESS

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 fund to assure the members that adequate funds will be on hand in the future to meet the obligations of the retirement systems.

Often there is confusion as to the difference between the liabilities as found in the financial statements and the liabilities as found in the actuarial balance sheet. The question arises - what are the true liabilities of the systems?

The liabilities as shown in the financial statements are called "Account Balances" and reveal the classification of assets as to ownership and future use. The Members' Contribution Account represents payments by the members and is subject to withdrawal should the member so desire upon termination of employment. The Retirement Allowance Account represents payments by each participating employer plus earnings on the investments. From this account all retirement payments are made. However, these account balances or liabilities do not reveal the projected future cost of retirement benefits to be made from the funds.

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 1980 actuarial valuations as prepared by Tillinghast, Nelson & Warren, Inc., follow. The last item found in this section is the Actuarial Assumptions used for preparation of the valuations.

These reports indicate that every dollar of future liabilities is backed by \$.66 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.

Tillinghast, Nelson & Warren, Inc.  
ACTUARIES • CONSULTANTS

222 South Central Avenue  
St. Louis, Missouri 63105  
(314) 862-7611

ATLANTA • BOSTON • CHICAGO • COLUMBUS • DALLAS • FT. WORTH  
HARTFORD • JACKSONVILLE • KANSAS CITY • LOS ANGELES  
NEW ORLEANS • NEW YORK • SAN ANTONIO • ST. LOUIS

September 24, 1980

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

Gentlemen:

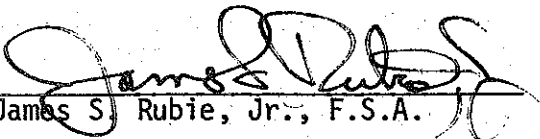
The twenty-fourth annual actuarial valuation of the Kentucky Employees Retirement System, the twenty-first annual actuarial valuation of the County Employees Retirement System, and the twenty-second annual actuarial valuation of the State Police Retirement System have been completed and the reports prepared. The valuations were made on the basis of data provided by the Retirement System as of June 30, 1980.

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

The three Retirement Systems are actuarially sound. The Accrued Liabilities of the Kentucky Employees Retirement System, the County Employees Retirement System and the State Police Retirement System are being funded as required by the Kentucky Revised Statutes.

TILLINGHAST, NELSON & WARREN, INC.

By

  
James S. Rubie, Jr., F.S.A.

JSR/jek



KENTUCKY EMPLOYES RETIREMENT SYSTEM

KENTUCKY EMPLOYES RETIREMENT SYSTEM  
RESULTS OF THE 1980 ACTUARIAL VALUATION

Actuarial Balance Sheet

Table I, which follows, is the actuarial balance sheet of the Kentucky Employees Retirement System as of June 30, 1980. The total Accrued Liabilities are classified according to type of benefit. On the asset side appear the existing assets constituting the Members Contribution and Retirement Allowance accounts, and the balancing item, the Unfunded Accrued Liability. This latter item is an account receivable item and represents the present value of future payments by the State to fully fund the Accrued Liability. A breakdown of the Accrued Liability between Hazardous and Non-Hazardous position employees appears in Table III.

Determination of Contribution Rate

The rate of contribution by the State required to provide 7% of the Unfunded 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, 1980.

The actuarial methods applied to determine the Normal Cost for the year commencing July 1, 1980 are described above. These costs are classified by type of benefit. The Normal Cost contribution rate of the State is determined by reducing the total Normal Cost by the expected employee contributions. A breakdown of costs as between Hazardous and Non-Hazardous position employees appears in Table III.

KENTUCKY EMPLOYES RETIREMENT SYSTEM  
ACTUARIAL BALANCE SHEET JUNE 30, 1980

ASSETS

Members Contribution Account	\$114,687,134	
Retirement Allowance Account	<u>345,668,734</u>	
Total Assets in Trust Fund at Book Value		\$460,355,868*
Unfunded Accrued Liability		<u>\$249,770,835</u>

Total Assets \$710,126,703

ACCRUED LIABILITY

Inactive Members

Retired Members		\$190,434,776
Vested Retirement		13,142,009
Vested Membership		1,952,708
Reciprocities		<u>503,696</u>
Total - Inactive		\$206,033,189

Active Members

Normal Retirement Benefits		\$419,366,985
Disability Benefits		27,015,347
Withdrawal Benefits (Vested and Refund of Contributions)		33,969,754
Survivor Benefits		<u>23,741,428</u>
Total Active		\$504,093,514

Total Accrued Liability \$710,126,703

VESTED ACCRUED BENEFIT LIABILITY \$470,642,643

\* The Market Value of assets as of June 30, 1980 is \$431,740,623.

KENTUCKY EMPLOYES RETIREMENT SYSTEM

DETERMINATION OF CONTRIBUTION RATE JUNE 30, 1980

<u>UNFUNDED ACCRUED LIABILITY</u>		<u>PERCENT*</u>
Total Accrued Liability	\$710,126,703	140.67%
Less: Assets at Book Value	<u>460,355,868</u>	<u>91.19%</u>
Unfunded Accrued Liability	\$249,770,835	49.48%
Contribution - 7% of Unfunded Accrued Liability	\$ 17,483,958	3.46%
 <u>NORMAL COST</u>		
Normal Retirement Benefits	\$ 23,373,210	4.63%
Disability Benefits	2,309,638	0.45%
Withdrawal Benefits (Vested and Refund of Contributions)	9,445,903	1.87%
Survivor Benefits	<u>1,598,368</u>	<u>0.32%</u>
Total Normal Cost	\$ 36,727,119	7.27%
Less: Employe Contributions	<u>20,260,881</u>	<u>4.01%</u>
Normal Cost - State	\$ 16,466,238	3.26%
 <u>TOTAL ANNUAL EMPLOYER COST</u>		
<u>Non-Hazardous Duty Cost</u>		
Normal Cost	\$ 16,292,324	3.24%**
7% of Unfunded Accrued Liability	17,302,524	3.44%**
Administrative Expenses	388,844	0.08%**
Group Hospital and Medical Insurance Premium	<u>1,055,435</u>	<u>0.21%**</u>
Total Annual Cost	\$ 35,039,127	6.97%**
 <u>Hazardous Duty Cost</u>		
Normal Cost	\$ 173,914	7.73%***
7% of Unfunded Accrued Liability	181,434	8.07%***
Administrative Expense	4,680	0.21%***
Group Hospital and Medical Insurance Premium	<u>7,644</u>	<u>0.34%***</u>
Total Annual Cost	\$ 367,672	16.35%***

\* Based on estimated annual salaries of \$504,835,968.

\*\* Based on estimated annual salaries of \$502,587,876 for Non-Hazardous Position Employes.

\*\*\* Based on estimated annual salaries of \$2,248,092 for Hazardous Position Employes.

KENTUCKY EMPLOYES RETIREMENT SYSTEM

CLASSIFICATION OF ACTUARIAL LIABILITIES AND COSTS JUNE 30, 1980

	<u>Non- Hazardous Position Employees</u>	<u>Hazardous Position Employees</u>	<u>Totals</u>
<u>ACCRUED LIABILITY FOR ACTIVE MEMBERS</u>			
Normal Retirement Benefits	\$413,851,612	\$ 5,515,373	\$419,366,985
Disability Benefits	26,792,079	223,268	27,015,347
Withdrawal Benefits (Vested and Refund of Contributions)	33,970,491	737	33,969,754
Survivor Benefits	<u>23,529,290</u>	<u>212,138</u>	<u>23,741,428</u>
Total Accrued Liability (Actives)	\$498,143,472	\$ 5,950,042	\$504,093,514
<u>UNFUNDED ACCRUED LIABILITY</u>			
Total Accrued Liability	\$702,060,431	\$ 8,066,272	\$710,126,703
Less Adjusted Assets	<u>454,881,505</u>	<u>5,474,363</u>	<u>460,355,868</u>
Unfunded Accrued Liability	\$247,178,926	\$ 2,591,909	\$249,770,835
<u>NORMAL COSTS</u>			
Normal Retirement Benefits	\$ 23,116,355	\$ 256,855	\$ 23,373,210
Disability Benefits	2,284,481	25,157	2,309,638
Withdrawal Benefits (Vested and Refund of Contributions)	9,420,640	25,263	9,445,903
Survivor Benefits	<u>1,574,363</u>	<u>24,005</u>	<u>1,598,368</u>
Total Normal Costs	\$ 36,395,839	\$ 331,280	\$ 36,727,119
Less: Employee Contributions	<u>20,103,515</u>	<u>157,366</u>	<u>20,260,881</u>
Total Normal Cost - State	\$ 16,292,324	\$ 173,914	\$ 16,466,238
<u>VESTED ACCRUED BENEFIT LIABILITY</u>	\$463,361,109	\$ 7,281,534	\$470,642,643

KENTUCKY EMPLOYEES RETIREMENT SYSTEM  
ACTUARIAL ASSUMPTIONS

- Interest - 6%.
- Valuation of Assets - Book value except that unrealized appreciation, if sufficient, of investments is capitalized but only to the extent required to result in a total yield of 6% for the year from dividends and capitalized appreciation.
- Mortality - Pre-retirement - 1951 Group Annuity Mortality Tables Projected by Scale C to 1960, without age adjustment for males, set back one year for females.  
  
Post-retirement - Same as pre-retirement. Mortality for members receiving disability allowances, 1965 Disabled Annuitants Mortality Table of Railroad Retirement Board.
- Turnover - First 5 years:
- |                                    | <u>Turnover Rate</u> |
|------------------------------------|----------------------|
| 0 to 1 Year of Service - All Ages  | .350                 |
| 1 to 2 Years of Service - All Ages | .200                 |
| 2 to 3 Years of Service - All Ages | .175                 |
| 3 to 4 Years of Service - All Ages | .125                 |
| 4 to 5 Years of Service - All Ages | .100                 |
- Thereafter, annual turnover rates varying by age, as illustrated below.
- Disability - Annual rates varying by age, as illustrated below.
- Retirement Rates - Early Retirement: Assumed that 50% will retire as soon as eligible for unreduced benefits and balance will continue to: (1) normal retirement age for non-hazardous, and (2) age 60 for hazardous.  
  
Normal Retirement: As soon as eligible.
- Salary Increase - 5% annually to age 30, graduated to 4-1/2% at age 40, and 4-1/2% annually thereafter.

Illustration of Annual Turnover and Disability Rates Assumed

<u>Age</u>	<u>Turnover Rate</u>	<u>Disability Rate</u>	<u>Age</u>	<u>Turnover Rate</u>	<u>Disability Rate</u>
27	.060	.00030	52	.036	.00445
32	.060	.00035	57	.020	.00805
37	.056	.00055	62	.000	.01400
42	.048	.00110	65	.000	.00000
47	.043	.00215			

COUNTY EMPLOYES RETIREMENT SYSTEM

COUNTY EMPLOYEES RETIREMENT SYSTEM  
RESULTS OF THE 1980 ACTUARIAL VALUATION

Actuarial Balance Sheet

Table I, which follows, is the actuarial balance sheet of the County Employees Retirement System as of June 30, 1980. The total Accrued Liabilities are classified according to type of benefit. On the asset side appear the existing assets constituting the Members Contribution and Retirement Allowance accounts, and the balancing item, the Unfunded Accrued Liability. This latter item is an account receivable item and represents the present value of future payments by the participating Agencies to fully fund the Accrued Liability. A breakdown of the Accrued Liability between Hazardous and Non-Hazardous position employees appears in Table III.

Determination of Contribution Rate

The contribution rate of the participating Agencies required to provide 7% of the Unfunded 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, 1980.

The actuarial methods applied to determine the Normal Cost for the year commencing July 1, 1980 are described above. These costs are classified by type of benefit. The Normal Cost contribution rate of the participating Agencies is determined by reducing the total Normal Cost by the expected employee contributions. A breakdown of costs as between Hazardous and Non-Hazardous position employees appears in Table III.



COUNTY EMPLOYEES RETIREMENT SYSTEM  
ACTUARIAL BALANCE SHEET JUNE 30, 1980

ASSETS

Members Contribution Account	\$ 48,833,802	
Retirement Allowance Account	<u>141,397,139</u>	
Total Assets in Trust Fund at Book Value		\$190,230,941*
Unfunded Accrued Liability		<u>\$ 75,787,680</u>
 Total Assets		 \$266,018,621

ACCRUED LIABILITY

Inactive Members		
Retired Members		\$ 67,334,029
Vested Retirement		8,459,269
Vested Membership		1,914,216
Reciprocities		<u>122,828</u>
Total - Inactive		<u>\$ 77,830,342</u>
Active Members		
Normal Retirement Benefits		\$159,757,395
Disability Benefits		10,625,520
Withdrawal Benefits (Vested and Refund of Contributions)		9,484,076
Survivor Benefits		<u>8,321,288</u>
Total - Active		<u>\$188,188,279</u>
 Total Accrued Liability		 \$266,018,621
 <u>VESTED ACCRUED BENEFIT LIABILITY</u>		 \$178,669,194

\* The Market Value of assets as of June 30, 1980 is \$174,810,513.

COUNTY EMPLOYEES RETIREMENT SYSTEM  
DETERMINATION OF CONTRIBUTION RATE JUNE 30, 1980

<u>UNFUNDED ACCRUED LIABILITY</u>		<u>PERCENT*</u>
Total Accrued Liability	\$266,018,621	89.99%
Less: Assets at Book Value	190,230,941	64.35%
Unfunded Accrued Liability	<u>\$ 75,787,680</u>	<u>25.64%</u>
 Contribution - 7% of Unfunded Accrued Liability	 \$ 5,305,138	 1.79%
 <u>NORMAL COST</u>		
Normal Retirement Benefits	\$ 16,570,809	5.61%
Disability Benefits	1,566,464	0.53%
Withdrawal Benefits (Vested and Refund of Contributions)	5,245,419	1.77%
Survivor Benefits	1,047,282	0.35%
Total Normal Cost	<u>\$ 24,429,974</u>	<u>8.26%</u>
Less: Employee Contributions	<u>12,163,797</u>	<u>4.11%</u>
Normal Cost - County	\$ 12,266,177	4.15%
 <u>TOTAL ANNUAL EMPLOYER COST</u>		
<u>Non-Hazardous Duty Cost</u>		
Normal Cost	\$ 11,163,575	3.93%**
7% of Unfunded Accrued Liability	4,820,626	1.69%**
Administrative Expense	247,876	0.09%**
Group Hospital and Medical Insurance Premium	426,437	0.15%**
Total Annual Cost	<u>\$ 16,658,514</u>	<u>5.86%**</u>
 <u>Hazardous Duty Cost</u>		
Normal Cost	\$ 1,102,602	9.74%***
7% of Unfunded Accrued Liability	484,512	4.28%***
Administrative Expense	30,305	0.27%***
Group Hospital and Medical Insurance Premiums	14,711	0.13%***
Total Annual Cost	<u>\$ 1,632,130</u>	<u>14.42%***</u>

\* Based on estimated annual salaries of \$295,607,664.

\*\* Based on estimated annual salaries of \$284,291,304 for Non-Hazardous Position Employees.

\*\*\* Based on estimated annual salaries of \$11,316,360 for Hazardous Position Employees.

COUNTY EMPLOYES RETIREMENT SYSTEM

CLASSIFICATION OF ACTUARIAL LIABILITIES AND COSTS JUNE 30, 1980

	<u>Non- Hazardous Position Employees</u>	<u>Hazardous Position Employees</u>	<u>Total</u>
<u>ACCRUED LIABILITY FOR ACTIVE MEMBERS</u>			
Normal Retirement Benefits	\$138,211,302	\$ 21,546,093	\$159,757,395
Disability Benefits	10,031,104	594,416	10,625,520
Withdrawal Benefits (Vested and Refund of Contributions)	9,116,078	367,998	9,484,076
Survivor Benefits	<u>7,802,272</u>	<u>519,016</u>	<u>8,321,288</u>
Total Accrued Liability (Actives)	\$165,160,756	\$ 23,027,523	\$188,188,279
<u>UNFUNDED ACCRUED LIABILITY</u>			
Total Accrued Liability	\$238,373,062	\$ 27,645,559	\$266,018,621
Less Adjusted Assets	<u>169,506,982</u>	<u>20,723,959</u>	<u>190,230,941</u>
Unfunded Accrued Liability	\$ 68,866,080	\$ 6,921,600	\$ 75,787,680
<u>NORMAL COSTS</u>			
Normal Retirement Benefits	\$ 15,014,788	\$ 1,556,021	\$ 16,570,809
Disability Benefits	1,481,953	84,511	1,566,464
Withdrawal Benefits (Vested and Refund of Contributions)	5,076,581	168,838	5,245,419
Survivor Benefits	<u>961,905</u>	<u>85,377</u>	<u>1,047,282</u>
Total Normal Cost	\$ 22,535,227	\$ 1,894,747	\$ 24,429,974
Less: Employee Contributions	<u>11,371,652</u>	<u>792,145</u>	<u>12,163,797</u>
Total Normal Cost - County	\$ 11,163,575	\$ 1,102,602	\$ 12,266,177
<u>VESTED ACCRUED BENEFIT LIABILITY</u>	\$160,634,872	\$ 18,034,322	\$178,669,194

COUNTY EMPLOYEES RETIREMENT SYSTEM  
ACTUARIAL ASSUMPTIONS

- Interest - 6%.
- Valuation of Assets - Book value except that unrealized appreciation, if sufficient, of investments is capitalized but only to the extent required to result in a total yield of 6% for the year from dividends and capitalized appreciation.
- Mortality - Pre-retirement - 1951 Group Annuity Mortality Table Projected by Scale C to 1960, without age adjustment for males, but set back one year for females.  
  
Post-retirement - same as pre-retirement. Mortality of members receiving disability allowances - 1965 Disabled Annuitants Mortality Table of Railroad Retirement Board.
- Turnover - First 5 years:
- |                                    | <u>Turnover Rate</u> |
|------------------------------------|----------------------|
| 0 to 1 Year of Service - All Ages  | .350                 |
| 1 to 2 Years of Service - All Ages | .200                 |
| 2 to 3 Years of Service - All Ages | .175                 |
| 3 to 4 Years of Service - All Ages | .125                 |
| 4 to 5 Years of Service - All Ages | .100                 |
- Thereafter, annual turnover rates varying by age, as illustrated below.
- Disability - Annual rates varying by age, as illustrated below.
- Retirement Rates - Early Retirement: Assumed 50% will retire as soon as eligible for unreduced benefits and balance would continue to normal retirement age for non-hazardous.  
  
Normal Retirement: As soon as eligible.
- Salary Increase - 5% annually to age 30, graduated to 4-1/2% at age 40, and 4-1/2% annually thereafter.

Illustration of Annual Turnover and Disability Rates Assumed

<u>Age</u>	<u>Turnover Rate</u>	<u>Disability Rate</u>	<u>Age</u>	<u>Turnover Rate</u>	<u>Disability Rate</u>
27	.060	.00030	52	.036	.00445
32	.060	.00035	57	.020	.00805
37	.056	.00055	62	.000	.01400
42	.048	.00110	65	.000	.00000
47	.043	.00215			

STATE POLICE RETIREMENT SYSTEM

The State Police Retirement System is a defined contribution plan established by the State of Michigan. It provides for the accumulation of funds for the retirement of State Police officers. The system is administered by the State Police Retirement Board.

The system is designed to provide a secure and stable retirement income for State Police officers. It is subject to the provisions of the Michigan Retirement Code and the Internal Revenue Code.

**STATE POLICE RETIREMENT SYSTEM**

The system is a defined contribution plan. Contributions are made by the State and the employee. The contributions are invested in a variety of assets to provide for growth and income. The system is subject to the provisions of the Michigan Retirement Code and the Internal Revenue Code.

STATE POLICE RETIREMENT SYSTEM  
RESULTS OF THE 1980 ACTUARIAL VALUATION

Actuarial Balance Sheet

Table I, which follows, is the actuarial balance sheet of the State Police Retirement System as of June 30, 1980. The total Accrued Liabilities are classified according to type of benefit. On the asset side appear the existing assets constituting the Members Contribution and Retirement Allowance Accounts, and the balancing item, the Unfunded Accrued Liability. This latter item is an account receivable item and represents the present value of future payments by the State to fully fund the Accrued Liability.

Determination of Contribution Rate

The rate of contribution by the State required to provide 7% of the unfunded 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 covered payroll as of June 30, 1980.

The actuarial methods applied to determine the Normal Cost for the year commencing July 1, 1980, are described above. 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, 1980

ASSETS

Members Contribution Account	\$ 10,162,814	
Retirement Allowance Account	<u>30,754,351</u>	
Total Assets in Fund: at Book Value		\$ 40,917,165*
Unfunded Accrued Liability		<u>\$ 26,663,397</u>

Total Assets \$ 67,580,562

ACCRUED LIABILITIES

Inactive Members

Retired and Disabled		\$ 10,082,710
Vested Retirements		575,170
Vested Membership		13,954
Reciprocities		<u>147,157</u>
Total Inactive		\$ 10,818,991

Active Members

Normal Retirement Benefits		\$ 54,686,485
Disability Benefits		758,354
Withdrawal Benefits (Vested and Refund of Contributions)		984,052
Survivor Benefits		<u>332,680</u>
Total Active		\$ 56,761,571

Total Accrued Liability \$ 67,580,562

VESTED ACCRUED BENEFIT LIABILITY \$ 43,887,675

\* The Market Value of assets as of June 30, 1980 is \$38,358,739.

STATE POLICE RETIREMENT SYSTEM  
DETERMINATION OF CONTRIBUTION RATE JUNE 30, 1980

<u>UNFUNDED ACCRUED LIABILITY</u>		<u>PERCENT*</u>
Total Accrued Liabilities	\$ 67,580,562	334.89%
Less: Assets at Book Value	<u>40,917,165</u>	<u>202.76%</u>
Unfunded Accrued Liability	\$ 26,663,397	132.13%
 Contribution - 7% of Unfunded Accrued Liability	 \$ 1,866,438	 9.25%
 <u>NORMAL COST</u>		
Normal Retirement Benefits	\$ 2,713,138	13.44%
Disability Benefits	103,880	0.52%
Withdrawal Benefits (Vested and Refund of Contributions)	334,576	1.66%
Survivors Benefits	<u>85,371</u>	<u>0.42%</u>
Total - Normal Cost	\$ 3,236,965	16.04%
Less: Employee Contributions	<u>1,412,610</u>	<u>7.00%</u>
Normal Cost - State	\$ 1,824,355	9.04%
 <u>TOTAL ANNUAL COST - STATE</u>		
Normal Cost	\$ 1,824,355	9.04%
7% of Unfunded Accrued Liability	1,866,438	9.25%
Administrative Expense Allowance	6,785	.03%
Group Hospital and Medical Insurance Premiums	24,216	.12%
Total Annual Cost - State	<u>\$ 3,721,794</u>	<u>18.44%</u>

\* Based on estimated annual salaries of \$20,180,148.



STATE POLICE RETIREMENT SYSTEM

ACTUARIAL ASSUMPTIONS

- Interest - 6%.
- Valuation of Investments - Book value except that unrealized appreciation, if sufficient, of investment is capitalized but only to the extent required to result in a total yield of 6% for the year from dividends and capitalized appreciation.
- Mortality - Pre-retirement - 1951 Group Annuity Mortality Table Projected to 1960, by Scale C, plus a duty death rate of 5 deaths per 10,000 per year.  
 Post-retirement - 1951 Group Annuity Mortality Table Projected to 1960. Mortality of members receiving disability allowances, 1965 Disabled Annuitants Mortality Table of Railroad Retirement Board.
- Turnover - Annual rates varying by age, as illustrated below.
- Disability - Annual rates varying by age, as illustrated below.
- Retirement Rates - 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 Increases - 5% annually to age 30, graduated to 4-1/2% at age 40 and 4-1/2% annually thereafter.

Illustration of Annual Turnover and Disability Rates Assumed

Age	Turnover Rate	Disability Rate	
		Non-Duty	Duty
22	.0405	.00025	.00025
27	.0423	.00030	.00030
32	.0400	.00035	.00035
37	.0275	.00055	.00055
42	.0160	.00110	.00110
47	.0060	.00215	.00215
52	.0000	.00445	.00445

## PORTFOLIO ANALYSIS

The Board contracts with an independent investment advisory firm for economic research, market research and analysis, and security analysis including recommendations as to the purchase, sale and retention of securities by the three funds.

The investment objective of the retirement systems is to maximize long-range return commensurate with the goal of maintaining a high standard of quality in the investment portfolio. The investment portfolio of the retirement systems is diversified between different classes of securities as indicated in Tables 1, 2 and 3 in order to achieve a proper balance of investment opportunities.

The individual common stocks held in the combined systems as of June 30, 1980, are shown in Table 4. About 27% of the assets were invested in high quality common stocks as of June 30, which represents a slight shift in asset mix since last year when 23% of the assets were invested in common stocks.

The individual bonds and notes held by the three retirement systems as of June 30, 1980, are shown in Table 5. The bond portfolio is structured of very high quality securities with intermediate maturity dates. The weighted coupon rate is 8.097% with a weighted maturity of 7.446 years and yield to maturity as of June 30, of 9.382%.

The time-weighted rate of return on the total portfolio during the fiscal year was 7.7%. This return reflects the impact of the stock market increase of about 26 points on the Dow Jones Industrial Averages from 841.98 as of June 30, 1979 to 867.92 on June 30, 1980. Stocks are held for the purpose of participation in economic growth and will experience poor as well as good periods of market performance.

The combined investment portfolio is statistically compared by one of the largest investment underwriting firms with a sample of 400 similar funds divided into four groups of 100 retirement funds, 100 bank commingled funds, 100 mutual funds and 100 bank commingled bond funds. The most recent comparison with these funds is over a five-year period including the calendar years 1975-79.

As a result of this comparative report, we can determine how well the investment portfolio has been managed. Kentucky Retirement Systems investment portfolio ranked ninety-eighth in comparison to the 100 retirement funds.

In conclusion, over the past five-year period, the portfolio return has ranked from sixth to ninety-eighth when compared to other investment funds with similar investment objectives. The letter on the next page reveals the comments of the investment advisor regarding the securities held in the funds as of June 30, 1980, and the manner in which these funds are invested by the Retirement Board.



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

Theodore R. Tonneman  
Vice President

October 1, 1980

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

As investment advisor to the Board since the end of September 1979 we submit the following summary of activities.

Key elements included the build up of cash in the last part of 1979 to almost \$150 million when you were receiving yields well in excess of 10% on buying reserves. In the first half of 1980 substantial funds were committed to stocks and bonds at very attractive levels. The net effect is that the Fund's relative position has improved in spite of the fact that prices for bonds and stocks were lower on June 30th than when we started. This is reflected in better market values as well as higher income.

During the period we purchased \$75 million face value bonds at a cost of \$72 million to yield just under 11%. These bonds have an average life of about 13 years and a AAA rating. The erratic fixed income markets enabled us to not only obtain record high yields but also to maintain high safety through top quality and intermediate maturities.

Also during the period we purchased \$52.5 million in stocks and sold \$16.8 million. The value of the purchases at the end of June was \$54 million. This is quite satisfactory considering the market's slightly lower level at the end of the period.

As of June 30th Cash Equivalents represented 15% of assets at market value, Stocks 27% and Bonds 58%. Overall yield was 8.2%.

Patience and caution in our investment policies worked to your benefit in reducing the effects of declining prices in both the fixed and equity sides of the portfolio. Recent and expected economic developments may not make good reading, but should lay the groundwork for excellent investment opportunities.

CAPITAL SUPERVISORS, INC.

By:

Theodore R. Tonneman  
Vice President

TRT:bs

TABLE 1  
 KENTUCKY EMPLOYEES RETIREMENT SYSTEM INVESTMENT PORTFOLIO AS OF 6/30/80

<u>CLASSIFICATION</u>	<u>BOOK VALUE</u>	<u>PERCENT</u>	<u>MTY YIELD*</u>	<u>MARKET VALUE</u>	<u>PERCENT</u>	<u>CUR YIELD</u>
INDUSTRIAL BONDS	\$ 35,533,764.77	7.924%	10.292%	\$ 32,269,007.96	7.478%	9.024%
PUBLIC UTILITY BONDS	1,140,800.00	.254%	9.400%	1,129,392.00	.262%	8.283%
COMMON STOCK	116,238,153.62	25.923%	5.464%	118,861,213.64	27.545%	5.344%
FHA-VA SINGLE-FAMILY MORTGAGES	12,715,790.96	2.836%	6.630%	12,348,177.21	2.862%	6.046%
PRIVATE PLACEMENTS	45,974,054.43	10.253%	10.669%	40,808,387.83	9.457%	9.467%
U.S. GOVERNMENT & AGENCY BONDS	170,969,959.20	38.129%	9.512%	160,274,091.75	37.142%	8.731%
K.I.D.F.A. NOTES	256,100.00	.057%	5.146%	256,100.00	.059%	5.146%
SHORT TERM INVESTMENTS	65,575,250.00	14.624%	7.940%	65,575,250.00	15.196%	7.940%
TOTAL PORTFOLIO	\$448,403,872.98	100.000%	8.335%	\$431,521,620.39	100.000%	7.689%

\*The yield on bonds is based on the market value as of June 30, 1980, and computed as a level yield to maturity. The yield on common stocks is computed on the formula, annual dividend/book value. The yield on mortgages is based on book value and assumes an average life of 12 years for each mortgage loan.

TABLE 2  
 COUNTY EMPLOYEES RETIREMENT SYSTEM INVESTMENT PORTFOLIO AS OF 6/30/80

<u>CLASSIFICATION</u>	<u>BOOK VALUE</u>	<u>PERCENT</u>	<u>MTY YIELD*</u>	<u>MARKET VALUE</u>	<u>PERCENT</u>	<u>CUR YIELD</u>
INDUSTRIAL BONDS	\$ 11,312,087.52	6.245%	10.339%	\$ 10,238,910.43	5.860%	9.133%
PUBLIC UTILITY BONDS	384,960.00	.213%	9.400%	381,110.40	.218%	8.283%
COMMON STOCK	42,025,863.41	23.201%	5.385%	42,915,590.27	24.561%	5.273%
FHA-VA SINGLE-FAMILY MORTGAGES	2,670,994.17	1.475%	8.203%	2,500,046.69	1.431%	7.554%
PRIVATE PLACEMENTS	17,704,816.57	9.774%	10.639%	15,813,051.72	9.050%	9.513%
U.S. GOVERNMENT & AGENCY BONDS	64,859,189.88	35.806%	9.539%	60,696,246.97	34.738%	8.764%
K.I.D.F.A. NOTES	28,000.00	.015%	5.000%	28,000.00	.016%	5.000%
SHORT TERM INVESTMENTS	42,154,610.00	23.272%	7.935%	42,154,610.00	24.126%	7.935%
TOTAL PORTFOLIO	\$181,140,521.55	100.000%	8.346%	\$174,727,566.48	100.000%	7.777%

\*The yield on bonds is based on the market value as of June 30, 1980, and computed as a level yield to maturity. The yield on common stocks is computed on the formula, annual dividend/book value. The yield on mortgages is based on book value and assumes an average life of 12 years for each mortgage loan.

TABLE 3

## STATE POLICE RETIREMENT SYSTEM INVESTMENT PORTFOLIO AS OF 6/30/80

<u>CLASSIFICATION</u>	<u>BOOK VALUE</u>	<u>PERCENT</u>	<u>MTY YIELD*</u>	<u>MARKET VALUE</u>	<u>PERCENT</u>	<u>CUR YIELD</u>
INDUSTRIAL BONDS	\$ 3,053,903.25	7.664%	10.286%	\$ 2,777,641.56	7.244%	9.011%
PUBLIC UTILITY BONDS	74,240.00	.186%	9.400%	73,497.60	.192%	8.283%
COMMON STOCK	8,632,006.10	21.663%	5.532%	8,842,939.01	23.062%	5.400%
FHA-VA SINGLE-FAMILY MORTGAGES	960,448.06	2.410%	7.104%	921,143.66	2.402%	6.484%
PRIVATE PLACEMENTS	3,584,211.13	8.995%	10.619%	3,165,808.34	8.256%	9.313%
U.S. GOVERNMENT & AGENCY BONDS	13,963,006.74	35.042%	9.512%	12,985,006.40	33.864%	8.692%
K.I.D.F.A. NOTES	14,000.00	.035%	5.000%	14,000.00	.037%	5.000%
SHORT TERM INVESTMENTS	9,564,140.00	24.003%	7.971%	9,564,140.00	24.943%	7.971%
TOTAL PORTFOLIO	\$39,845,955.28	100.000%	8.384%	\$38,344,176.57	100.000%	7.772%

\*The yield on bonds is based on the market value as of June 30, 1980, and computed as a level yield to maturity. The yield on common stocks is computed on the formula, annual dividend/book value. The yield on mortgages is based on book value and assumes an average life of 12 years for each mortgage loan.

TABLE 4

KENTUCKY RETIREMENT SYSTEMS  
COMMON STOCK PORTFOLIO FOR THE PERIOD ENDED 6/30/80

NAME OF SECURITY	SHARES	COST	6/30/80 MARKET	TOTAL MARKET VALUE	POTENTIAL GAIN OR LOSS	EARNINGS PER SHARE		P/E RATIO		YIELD
						1978	1979	79	80	
ACF Industries	100,000	38	33	\$ 3,275,000	\$ 494,526-	\$ 4.72	\$ 5.44	6	5	7.6%
Allied Chemical	96,393	39	48	\$ 4,614,813	\$ 867,450	\$ 4.25	\$ 5.25	9	6	4.6%
American Express	64,000	35	35	\$ 2,231,999	\$ 30,136-	\$ 4.31	\$ 4.83	7	6	5.7%
American Standard	30,000	49	58	\$ 1,732,500	\$ 268,587	\$ 7.23	\$ 9.52	6	5	6.9%
American Tel & Tel	212,775	58	53	\$11,170,687	\$1,092,186-	\$ 7.74	\$ 8.04	6	6	9.5%
Amstar Corp	100,000	18	24	\$ 2,349,999	\$ 505,225	\$ 1.47	\$ 2.38	9	9	5.7%
Atlantic Richfield	20,000	42	47	\$ 935,000	\$ 94,138	\$ 3.30	\$ 4.74	9	8	3.6%
Baxter Travenol Lab	100,000	41	45	\$ 4,450,000	\$ 370,753	\$ 2.73	\$ 3.50	13	11	1.4%
Beatrice Foods	132,600	27	22	\$ 2,917,200	\$ 706,787-	\$ 2.60	\$ 2.60	8	7	5.9%
Bristol Meyers	100,000	34	39	\$ 3,887,500	\$ 455,176	\$ 3.08	\$ 3.50	11	9	4.1%
Coca-Cola Company	93,800	33	33	\$ 3,095,400	\$1,911,634-	\$ 3.03	\$ 3.40	9	8	6.5%
Conoco	154,500	33	53	\$ 8,130,561	\$3,079,627	\$ 4.20	\$ 7.58	6	5	4.2%
Dart Industries	23,600	43	42	\$ 1,000,050	\$ 9,648-	\$ 5.20	\$ 7.04	6	6	4.7%
Dayton Hudson	17,600	37	44	\$ 778,799	\$ 119,277	\$ 4.33	\$ 4.33	10	8	4.1%
Deere & Co	28,000	30	33	\$ 916,999	\$ 88,158	\$ 4.38	\$ 5.12	6	6	5.8%
Disney Products	73,509	37	48	\$ 3,528,432	\$ 824,506	\$ 3.04	\$ 3.51	13	11	1.5%
Dow Chemical	130,000	35	34	\$ 4,371,250	\$ 217,550-	\$ 3.16	\$ 4.33	7	7	4.8%
Eastman Kodak	43,100	101	56	\$ 2,413,600	\$1,929,897-	\$ 5.59	\$ 6.20	9	8	5.2%
Eli Lilly	61,400	42	49	\$ 3,008,600	\$ 403,486	\$ 3.81	\$ 4.52	10	9	4.3%
Exxon Corp	140,000	48	66	\$ 9,274,999	\$2,566,745	\$ 6.20	\$ 9.74	5	5	7.8%
FMC Corporation	100,000	26	44	\$ 2,362,500	\$ 205,438-	\$ 4.22	\$ 4.55	12	10	4.4%
Gannett	73,900	38	26	\$ 3,362,450	\$ 519,180	\$ 5.39	\$ 3.75	8	8	5.8%
General Electric	100,000	52	52	\$ 5,149,999	\$ 7,815-	\$ 2.52	\$ 2.92	9	8	4.8%
General Mills	133,700	33	28	\$ 3,676,749	\$ 670,058-	\$ 2.93	\$ 3.52	9	8	3.9%
General Signal	100,000	33	33	\$ 3,262,500	\$ 78,950-	\$ 4.23	\$ 5.65	5	5	4.9%
Great Northern Nekossa	100,000	34	33	\$ 3,275,000	\$ 98,338-	\$ 4.23	\$ 5.65	5	5	4.9%
Haliburton	45,200	61	110	\$ 4,949,399	\$2,179,686	\$ 6.76	\$ 6.42	17	14	1.8%
Harris Corporation	130,000	34	36	\$ 4,728,750	\$ 298,200	\$ 2.11	\$ 2.45	14	13	2.0%
IC Industries	88,900	27	25	\$ 2,211,386	\$ 165,673-	\$ 4.38	\$ 4.09	6	4	8.0%
Interntl Bus Machines	150,000	62	59	\$ 8,812,500	\$ 548,235-	\$ 5.32	\$ 5.16	11	10	5.9%
Interntl Minerals	60,000	35	34	\$ 2,025,000	\$ 91,913-	\$ 4.41	\$ 4.47	7	6	6.9%
K-Mart	136,200	33	23	\$ 3,081,523	\$1,352,661-	\$ 2.74	\$ 2.74	8	7	4.1%
Marsh & McLennan	45,400	63	62	\$ 2,792,100	\$ 62,465-	\$ 4.91	\$ 5.90	10	9	5.9%
Medtronic	30,000	58	68	\$ 2,040,000	\$ 300,563	\$ 2.29	\$ 3.08	22	13	0.9%
Mobil Oil	72,000	31	71	\$ 5,129,999	\$2,909,255	\$ 5.34	\$ 9.46	7	5	4.8%
Newmont Mining	100,000	51	42	\$ 4,162,500	\$ 918,550-	\$ 1.28	\$ 7.07	5	4	4.6%
Philip Morris	100,600	27	40	\$ 4,049,149	\$1,317,430	\$ 3.38	\$ 4.08	9	8	4.0%
Procter & Gamble	43,000	92	74	\$ 3,171,249	\$ 782,723-	\$ 6.19	\$ 6.99	10	9	4.6%
Public Service Ind	118,375	27	24	\$ 2,781,811	\$ 382,133-	\$ 2.92	\$ 3.79	6	6	10.6%
Sears	127,800	38	17	\$ 2,172,600	\$2,665,212-	\$ 2.86	\$ 2.86	5	6	8.0%
So Natl Resources	1,400	41	53	\$ 74,200	\$ 16,702	\$ 5.14	\$ 5.43	8	8	2.8%
Stanley Works	100,000	18	17	\$ 1,737,500	\$ 65,350-	\$ 1.76	\$ 2.14	9	7	3.9%
Std Oil Indiana	92,200	25	57	\$ 5,278,449	\$2,934,534	\$ 3.68	\$ 5.12	11	10	3.1%
Texas Instruments	25,000	80	92	\$ 2,300,000	\$ 297,500	\$ 6.15	\$ 7.58	12	11	2.2%
Texas Utilities	163,608	20	18	\$ 2,985,846	\$ 285,425-	\$ 2.54	\$ 2.55	7	6	9.6%
Transunion	94,700	35	34	\$ 3,196,124	\$ 146,813-	\$ 4.25	\$ 4.81	7	6	7.0%
Warner Lambert	129,300	29	19	\$ 2,392,050	\$1,403,505-	\$ 2.61	\$ 1.57	11	7	7.1%
Xerox	100,000	57	54	\$ 5,375,000	\$ 368,838-	\$ 5.67	\$ 6.69	8	7	5.2%

TOTAL

4,282,560 \$166,896,023.13 \$170,619,721

\$3,723,719 \$9,092,308

8 7

5.3%





TABLE 6

KENTUCKY EMPLOYEES RETIREMENT SYSTEM INSURANCE FUND PORTFOLIO AS OF 6/30/80

<u>TY CODE PUR#</u>	<u>QUANTITY</u>	<u>SECURITY NAME</u>	<u>COUPON</u>	<u>MATURITY</u>	<u>PAR VALUE</u>	<u>BOOK VALUE</u>	<u>YIELD RATE</u>
H U01 KI060	2,180.0	Repurchase Agreement	7.750	7/10/80	\$2,180,000.00	\$2,180,000.00	7.750
H U01 KI061	87.0	Repurchase Agreement	7.750	7/10/80	\$ 87,900.00	\$ 87,900.00	7.750
	Par Value				\$2,267,900.00		

TABLE 7

COUNTY EMPLOYEES RETIREMENT SYSTEM INSURANCE FUND PORTFOLIO AS OF 6/30/80

<u>TY CODE PUR#</u>	<u>QUANTITY</u>	<u>SECURITY NAME</u>	<u>COUPON</u>	<u>MATURITY</u>	<u>PAR VALUE</u>	<u>BOOK VALUE</u>	<u>YIELD RATE</u>
H U01 KI060	1,194.0	Repurchase Agreement	C 7.750	7/10/80	\$1,194,000.00	\$1,194,000.00	7.750
H U01 KI061	35.1	Repurchase Agreement	C 7.750	7/10/80	\$ 35,100.00	\$ 35,100.00	7.750

Par Value \$1,229,100.00

TABLE 8

STATE POLICE RETIREMENT SYSTEM INSURANCE FUND PORTFOLIO AS OF 6/30/80

<u>TY CODE</u>	<u>PUR#</u>	<u>QUANTITY</u>	<u>SECURITY NAME</u>	<u>COUPON</u>	<u>MATURITY</u>	<u>PAR VALUE</u>	<u>BOOK VALUE</u>	<u>YIELD RATE</u>
H	U01 KI060	54.0	Repurchase Agreement	7.750	7/10/80	\$54,000.00	\$54,000.00	7.750
H	U01 KI061	2.0	Repurchase Agreement	7.750	7/10/80	\$ 2,000.00	\$ 2,000.00	7.750

Par Value \$56,000.00

## RETIREMENT PAYMENTS

The benefit payments as of July 1, 1980, by the three retirement systems are shown statistically in Tables 9 through 12. 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 9 through 12. The payments illustrated in Tables 9 through 12 represent the monthly payments from each retirement system and a recipient receiving a monthly payment from more than one system will appear in each system from which a payment is disbursed.

Tables 10 through 12 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, 1980. If "(Bene)" is shown, the beneficiary is receiving the monthly payment as a result of the death of the retired 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 10, 11 and 12 reveal that about 49% of payment options selected are period certain or survivorship options with the remaining options payable in full during the member's lifetime.

An increase in benefits to retirees in the form of group coverage for hospital and medical/surgical insurance became available July 1, 1978. The 1978 General Assembly created the "Kentucky Retirement System Insurance Fund" for the purpose of providing a comprehensive hospital and medical/surgical program for retired recipients. The Board has contracted with Blue Cross and Blue Shield of Kentucky to provide group health insurance coverage beginning July 1, 1978. Insurance premiums are paid by the Insurance Fund for retired members with 20 or more years of service.

Also, benefit payments increased July 1, 1980, by 6% to all retirees and a \$2,000 death benefit is now provided to retired members with 48 or more months of service credit.

Table 13 reveals the geographic distribution of retirement payments by county.

TABLE 9  
RETIREMENT BENEFITS BY MONTHLY PAYMENT

Monthly Payment	KERS		CERS		SPRS		Totals
	Employee	Survivor	Employee	Survivor	Employee	Survivor	
Under \$10	37	4	68	12	0	0	121
\$10 to \$19	53	23	137	27	0	0	240
\$20 to \$29	210	42	216	29	0	0	497
\$30 to \$39	386	84	250	33	0	0	753
\$40 to \$49	513	97	258	38	1	0	907
Subtotal under \$50	1,199	250	929	139	1	0	2,518
\$50 to \$59	682	92	239	44	0	0	1,057
\$60 to \$69	577	82	225	48	0	0	932
\$70 to \$79	467	77	201	22	0	1	768
\$80 to \$89	452	76	179	30	0	0	737
\$90 to \$99	363	60	167	33	0	0	623
Subtotal under \$100	3,740	637	1,940	316	1	1	6,635
\$100 to \$109	371	48	126	25	0	1	571
\$110 to \$119	307	67	141	28	0	0	543
\$120 to \$129	288	48	124	20	1	0	481
\$130 to \$139	240	50	100	19	1	0	410
\$140 to \$149	227	36	92	19	0	0	374
Subtotal under \$150	5,173	886	2,523	427	3	2	9,014
\$150 to \$159	191	29	79	12	0	0	311
\$160 to \$169	194	33	81	11	2	0	321
\$170 to \$179	172	30	59	7	0	0	268
\$180 to \$189	130	22	52	7	0	0	211
\$190 to \$199	119	22	61	5	0	1	208
Subtotal under \$200	5,979	1,022	2,855	469	5	3	10,333
\$200 to \$249	604	86	234	44	5	0	973
\$250 to \$299	326	44	156	20	3	1	550
\$300 to \$349	295	50	102	9	2	1	459
\$350 to \$399	218	28	73	6	2	2	329
\$400 to \$449	152	19	43	7	1	0	222
\$450 to \$499	117	19	40	8	5	1	190
Subtotal under \$500	7,691	1,268	3,503	563	23	8	13,056
\$500 to \$599	172	30	46	5	7	0	260
\$600 to \$699	112	8	19	2	7	2	150
\$700 to \$799	69	14	18	5	3	3	112
\$800 to \$899	46	4	12	1	8	2	73
\$900 to \$999	34	5	5	0	4	0	48
\$1000 and Above	44	4	9	0	45	1	103
GRAND TOTAL	8,168	1,333	3,612	576	97	16	13,802

TABLE 10

KENTUCKY EMPLOYEES RETIREMENT SYSTEM  
RETIREMENT BENEFITS BY PLAN  
JUNE 30, 1980

	Number Of Cases	Total	Monthly Benefits		
			Average	Low	High
<b>NORMAL</b>					
Basic.....	2,384	\$ 372,680.79	\$156.32	\$ 3.83	\$1,447.81
Life-10 Years Certain (Memb).....	413	68,380.72	165.57	2.02	1,470.12
Life-10 Years Certain (Bene).....	28	3,995.27	142.68	17.90	487.14
10 Years Certain (Memb).....	8	7,574.32	946.79	475.01	1,503.27
10 Years Certain (Bene).....	2	1,351.37	675.68	63.31	1,288.06
Straight Life Annuity.....	37	4,382.34	118.44	58.12	410.86
Survivorship 100% (Memb).....	599	73,484.72	122.67	.45	890.57
Survivorship 100% (Bene).....	203	24,591.96	121.14	12.87	882.22
Survivorship 66 2/3% (Memb).....	69	17,953.06	260.18	3.63	1,046.65
Survivorship 66 2/3% (Bene).....	4	445.23	111.30	63.27	179.97
Survivorship 50% (Memb).....	316	86,643.95	274.18	5.20	1,048.70
Survivorship 50% (Bene).....	99	13,336.14	134.70	9.59	501.13
Totals and Averages.....	4,162	\$ 674,819.87	\$162.13	\$ .45	\$1,503.27
<b>EARLY</b>					
Basic.....	1,985	\$ 318,562.32	\$160.48	\$ .60	\$1,214.48
Life-10 Years Certain (Memb).....	480	82,882.21	172.67	8.52	1,395.19
Life-10 Years Certain (Bene).....	19	1,966.36	103.49	31.07	375.93
10 Years Certain (Memb).....	1	368.60	368.60	368.60	368.60
Straight Life Annuity.....	1	63.08	63.08	63.08	63.08
Survivorship 100% (Memb).....	666	87,118.99	130.80	2.28	1,344.46
Survivorship 100% (Bene).....	128	14,622.76	114.24	11.42	1,745.01
Survivorship 66 2/3% (Memb).....	101	26,681.81	264.17	6.71	1,007.43
Survivorship 66 2/3% (Bene).....	8	787.97	98.49	38.33	226.35
Survivorship 50% (Memb).....	285	81,964.06	287.59	10.64	1,048.73
Survivorship 50% (Bene).....	55	5,487.96	99.78	18.32	373.37
Soc Sec - Basic (Under 62).....	29	16,627.88	573.37	37.08	1,366.12
Soc Sec - Basic (Over 62).....	17	3,919.02	230.53	19.45	1,775.22
Soc Sec - Surv (Under 62).....	56	27,975.46	495.59	90.18	1,704.89
Soc Sec - Surv (Over 62).....	10	1,657.92	165.79	8.14	478.81
Soc Sec - Basic (Over 65).....	1	86.84	86.84	86.84	86.84
Totals and Averages.....	3,842	\$ 670,551.24	\$174.53	\$ .60	\$1,704.89
<b>DISABILITY</b>					
Basic.....	296	\$ 55,080.46	\$186.08	\$ 11.84	\$ 620.37
Life-10 Years Certain (Memb).....	139	23,485.02	168.95	22.33	862.45
Life-10 Years Certain (Bene).....	39	8,309.90	213.07	47.62	557.51
10 Years Certain (Memb).....	2	1,983.20	991.60	569.44	1,413.76
Survivorship 100% (Memb).....	177	26,484.77	149.63	5.87	736.14
Survivorship 100% (Bene).....	142	18,168.72	127.94	35.13	401.89
Survivorship 66 2/3% (Memb).....	21	3,634.42	173.06	41.33	462.36
Survivorship 66 2/3% (Bene).....	4	532.30	133.07	59.83	270.40
Survivorship 50% (Memb).....	70	12,320.70	176.01	42.39	491.55
Survivorship 50% (Bene).....	25	2,519.79	100.79	35.43	214.80
Soc Sec - Basic (Under 62).....	1	598.48	598.48	598.48	598.48
Soc Sec - Basic (Over 62).....	3	417.74	139.24	39.02	330.17
Soc Sec - Surv (Under 62).....	1	510.19	510.19	510.19	510.19
Totals and Averages.....	920	\$ 154,045.69	\$167.44	\$ 5.87	\$1,413.76
<b>DEATH BEFORE RETIREMENT</b>					
10 Years Certain (Memb).....	3	300.33	\$100.11	\$ 93.34	\$ 107.51
10 Years Certain (Bene).....	305	64,512.95	211.51	2.51	1,268.88
Survivorship 100% (Memb).....	249	43,179.96	173.41	14.36	996.55
Survivorship 100% (Bene).....	2	254.75	127.37	109.18	145.57
Soc Sec - Basic (Under 62).....	1	301.97	301.97	124.78	177.19
Dependent Child.....	1	129.17	129.17	129.17	129.17
Soc Sec - Surv (Under 60).....	12	5,058.64	421.55	35.01	868.35
Soc Sec - Surv (Over 60).....	3	589.23	196.41	18.35	492.50
Totals and Averages.....	577	\$ 114,327.00	\$198.14	\$ 2.51	\$1,268.88
<b>GRAND TOTALS AND AVERAGES.....</b>					
	9,501	\$1,613,743.80	\$169.84	\$ .45	\$1,704.89

TABLE 11

COUNTY EMPLOYEES RETIREMENT SYSTEM  
RETIREMENT BENEFITS BY PLAN  
JUNE 30, 1980

	Number Of Cases	Total	Monthly Benefits		High
			Average	Low	
<b>NORMAL</b>					
Basic.....	1,058	\$134,433.01	\$127.60	\$ .49	\$1,071.89
Life-10 Years Certain (Memb).....	240	26,967.73	112.36	7.20	833.53
Life-10 Years Certain (Bene).....	26	2,939.13	113.04	15.36	479.55
10 Years Certain (Memb).....	14	8,623.58	615.97	48.48	1,364.67
Straight Life Annuity.....	5	593.06	118.61	73.01	178.81
Survivorship 100% (Memb).....	364	35,142.41	96.54	.71	554.87
Survivorship 100% (Bene).....	116	11,447.11	98.68	6.68	476.66
Survivorship 66 2/3% (Memb).....	36	6,833.58	189.82	24.65	1,070.81
Survivorship 66 2/3% (Bene).....	2	196.77	98.38	54.41	142.36
Survivorship 50% (Memb).....	132	24,856.55	188.30	1.18	918.06
Survivorship 50% (Bene).....	40	3,372.33	84.30	.29	235.83
Soc Sec - Basic (Over 62).....	1	604.83	604.83	604.83	604.83
Soc Sec - Surv (Under 62).....	5	3,950.93	790.18	646.40	944.07
Soc Sec - Surv (Over 62).....	3	1,149.31	383.10	336.05	441.14
Totals and Averages.....	2,042	\$261,110.33	\$127.86	\$ .29	\$1,364.67
<b>EARLY</b>					
Basic.....	749	\$ 95,695.46	\$127.76	\$ 1.53	\$ 785.78
Life-10 Years Certain (Memb).....	256	33,265.74	129.94	2.48	841.23
Life-10 Years Certain (Bene).....	11	760.89	69.17	15.77	151.76
10 Years Certain (Memb).....	1	195.19	195.19	195.19	195.19
Survivorship 100% (Memb).....	298	34,429.76	115.53	1.94	1,064.59
Survivorship 100% (Bene).....	54	6,700.89	124.09	14.91	512.32
Survivorship 66 2/3% (Memb).....	38	6,983.41	183.77	16.06	722.55
Survivorship 50% (Memb).....	97	22,719.90	234.22	3.19	888.44
Survivorship 50% (Bene).....	10	901.06	90.10	52.63	149.50
Soc Sec - Basic (Under 62).....	8	4,411.82	551.47	88.88	1,164.19
Soc Sec - Basic (Over 62).....	1	30.31	30.31	30.31	30.31
Soc Sec - Surv (Under 62).....	13	4,572.85	351.75	48.18	1,076.78
Soc Sec - Surv (Over 62).....	3	583.65	194.55	27.23	296.96
Soc Sec - Basic (Over 65).....	3	201.63	67.21	47.20	90.82
Totals and Averages.....	1,542	\$211,452.56	\$137.12	\$ 1.53	\$1,164.19
<b>DISABILITY</b>					
Basic.....	113	\$ 22,410.84	\$198.32	\$ 19.95	\$1,170.39
Life-10 Years Certain (Memb).....	68	12,352.03	181.64	8.30	623.05
Life-10 Years Certain (Bene).....	14	1,790.12	127.86	33.10	576.15
10 Years Certain (Memb).....	2	905.75	452.87	343.59	562.16
Survivorship 100% (Memb).....	68	9,739.84	143.23	18.66	707.27
Survivorship 100% (Bene).....	40	5,065.68	126.64	15.77	340.12
Survivorship 66 2/3% (Memb).....	7	1,318.31	188.33	2.69	508.94
Survivorship 66 2/3% (Bene).....	1	75.49	75.49	75.49	75.49
Survivorship 50% (Memb).....	32	6,249.64	195.30	45.42	600.24
Survivorship 50% (Bene).....	11	859.97	78.17	20.89	150.33
Dependent Child.....	2	918.99	459.49	419.80	499.19
Totals and Averages.....	358	\$ 61,686.66	\$172.30	\$ 2.69	\$1,170.39
<b>DEATH BEFORE RETIREMENT</b>					
10 Years Certain (Memb).....	1	\$ 101.26	\$101.26	\$101.26	\$ 101.26
10 Years Certain (Bene).....	140	23,266.20	166.18	5.09	802.52
Survivorship 100% (Bene).....	101	13,415.94	132.83	3.24	751.15
Dependent Child.....	2	1,007.64	503.82	238.60	769.04
Soc Sec - Surv (Under 60).....	2	651.26	325.63	156.98	494.28
Totals and Averages.....	246	\$ 38,442.30	\$156.26	\$ 3.24	\$ 802.52
<b>GRAND TOTALS AND AVERAGES.....</b>					
	4,188	\$572,691.85	\$136.74	\$ .29	\$1,364.67

TABLE 12

STATE POLICE RETIREMENT SYSTEM  
RETIREMENT BENEFITS BY PLAN  
JUNE 30, 1980

	Number Of Cases	Monthly Benefits		
		Total	Average	Low High
<b>NORMAL</b>				
Basic.....	11	\$ 4,495.40	\$ 408.67	\$ 43.57 \$ 906.65
Life-10 Years Certain (Memb).....	4	4,402.64	1,100.66	416.37 1,536.77
10 Years Certain (Memb).....	35	44,387.29	1,268.20	270.96 2,567.30
10 Years Certain (Bene).....	2	2,059.70	1,029.85	694.59 1,365.11
Survivorship 100% (Memb).....	10	4,831.41	483.14	132.21 817.21
Survivorship 100% (Bene).....	1	370.87	370.87	370.87 370.87
Survivorship 66 2/3% (Memb).....	3	3,823.10	1,274.36	795.72 1,529.46
Survivorship 50% (Memb).....	6	5,369.08	894.84	603.17 1,268.52
Soc Sec - Surv (Under 62).....	6	7,633.26	1,272.21	1,016.58 1,356.61
Totals and Averages.....	78	\$ 77,372.75	\$ 991.95	\$ 43.57 \$2,567.30
<b>EARLY</b>				
10 Years Certain (Memb).....	6	\$ 7,414.60	\$1,235.76	\$ 502.21 \$2,773.37
Survivorship 100% (Memb).....	3	2,051.94	683.98	241.88 1,330.12
Survivorship 50% (Memb).....	1	1,167.89	1,167.89	1,167.89 1,167.89
Totals and Averages.....	10	\$ 10,634.43	\$1,063.44	\$ 241.88 \$2,773.37
<b>DISABILITY</b>				
Life-10 Years Certain (Memb).....	1	593.76	593.76	593.76 593.76
10 Years Certain (Memb).....	1	677.30	677.30	677.30 677.30
10 Years Certain (Bene).....	2	1,642.86	821.43	746.52 896.34
Survivorship 100% (Memb).....	2	1,520.21	760.10	501.55 1,018.66
Dependent Child.....	5	906.94	181.38	126.70 233.77
Totals and Averages.....	11	\$ 5,341.07	\$ 485.55	\$ 126.70 \$1,018.66
<b>DEATH BEFORE RETIREMENT</b>				
10 Years Certain (Bene).....	3	1,529.70	509.90	284.76 787.42
Survivorship 100% (Bene).....	4	2,341.69	585.42	338.65 867.10
Dependent Child.....	4	1,027.19	256.79	72.00 655.08
Totals and Averages.....	11	\$ 4,898.58	\$ 445.32	\$ 72.00 \$ 867.10
<b>DEFERRED</b>				
Basic.....	1	526.30	526.30	526.30 526.30
10 Years Certain (Memb).....	2	2,803.04	1,401.52	1,205.41 1,597.63
Survivorship 50% (Memb).....	1	1,481.78	1,481.78	1,481.78 1,481.78
Totals and Averages.....	4	\$ 4,811.12	\$1,202.78	\$ 526.30 \$1,597.63
<b>GRAND TOTALS AND AVERAGES.....</b>	114	\$103,057.95	\$ 904.01	\$ 43.57 \$2,773.37





## STATISTICAL INFORMATION

### Membership Statistics

Membership in the three retirement systems over the past five years has grown at a compounded annual rate as follows:

<u>SYSTEM</u>	<u>ACTIVE</u>	<u>INACTIVE</u>	<u>RETIRED</u>
KERS	3.2%	7.0%	8.3%
CERS	13.4%	23.0%	14.3%
SPRS	1.7%	26.9%	12.8%

The rapid growth in CERS is a result of local governmental agencies and political subdivisions electing to participate in the system, plus action by the 1974 General Assembly requiring school board to include their non-certified employees in CERS by July 1, 1976. Membership in each system as of June 30, of each year since inception is shown in Table 14.

### Financial and Actuarial Statistics

Statistical data for the past seven fiscal years to indicate the financial and actuarial progress attained by the three retirement systems is included in Tables 15 through 17.

The portfolio time-weighted rate of return is computed by measuring the monthly changes in the portfolio including changes in market value of securities. The portfolio yield rate is computed as indicated in the footnotes in pages 43 through 45.

The actuarial cost indicates that in each system as of June 30, 1980, the employee contributions represent about one-half of normal cost with the employer paying the balance of normal cost, plus past service and administrative cost.

### Source and Use of Funds Since Inception

The three statements indicate the value of a funded retirement system. Observe that since inception the employer contributions have provided about 50% of the funds with most of the remainder provided by member contributions and investment income.

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 19. Over the past five years the cost of administration per account has decreased at an annual compounded rate of about 1.7% while over this same period the Consumer Price Index has increased at an annual compounded rate of about 9.1%.

TABLE 14

KENTUCKY RETIREMENT SYSTEMS  
MEMBERSHIP STATISTICS  
JUNE 30, 1980

	KERS				CERS				SPRS			
	Active	Inactive	Retired		Active	Inactive	Retired		Active	Inactive	Retired	
6/30/57	14,999		131									
6/30/58	15,568		441									
6/30/59	17,839		617									
6/30/60	17,374		867									
6/30/61	18,687	674	1,112									
6/30/62	18,916	617	1,271									
6/30/63	19,956	1,435	1,453									
6/30/64	20,403	1,874	1,789									
6/30/65	21,742	2,693	2,264									
6/30/66	23,040	3,423	2,508									
6/30/67	25,249	3,121	2,825									
6/30/68	25,176	4,871	3,454									
6/30/69	26,601	5,831	3,894									
6/30/70	27,699	4,970	4,224									
6/30/71	28,985	5,091	4,512									
6/30/72	30,633	5,771	4,935									
6/30/73	33,590	6,347	5,445									
6/30/74	33,545	8,128	5,934									
6/30/75	36,359	9,672	6,365									
6/30/76	37,912	9,455	6,888									
6/30/77	36,834	10,815	7,672									
6/30/78	39,082	12,529	8,331									
6/30/79	42,411	13,129	8,908									
6/30/80	42,559	13,597	9,469									
					1,841				421			7
				2,461					449			8
				2,731					483			12
				3,129					502			14
				3,234					466			17
				3,437					460			14
				3,680					480			18
				4,088					475			19
				5,731					505			24
				6,139					563			26
				6,638					578			28
				7,750					626			28
				9,629					637			36
				11,014					709			40
				12,238					747			50
				14,300					753			54
				17,655					910			62
				21,088					987			71
				26,335					938			75*
				23,025					965			83*
				28,793					971			95*
				33,073					989			113

\*\*\*\*\*

The Kentucky Employees Retirement System (KERS) was established July 1, 1956, and the first monthly retirement benefits paid in July 1957.

The County Employees Retirement System (CERS) was established July 1, 1958, and the first monthly retirement benefits paid in July 1960.

The State Police Retirement System (SPRS) was established July 1, 1958, and the first monthly retirement benefits paid in January 1959.

\*Includes one retired member who has deferred receipt of his retirement benefits.

TABLE 15

KENTUCKY EMPLOYEES RETIREMENT SYSTEM  
FINANCIAL AND ACTUARIAL STATISTICS

	6/30/74	6/30/75	6/30/76	6/30/77	6/30/78	6/30/79	6/30/80
<u>Financial Statistics:</u>							
Total Assets	\$187,375,398	\$213,904,924	\$251,372,505	\$291,739,621	\$333,822,714	\$389,418,451	\$460,355,868
Investment Income	\$ 9,312,897	\$ 12,032,559	\$ 13,941,411	\$ 16,239,109	\$ 19,307,538	\$ 25,415,903	\$ 33,356,149
Total Retirement Payments	\$ 7,709,065	\$ 8,595,309	\$ 9,506,210	\$ 12,115,318	\$ 13,829,823	\$ 15,205,181	\$ 17,501,338
Average Retirement Payment	\$ 111.86	\$ 115.41	\$ 130.55 <sup>+</sup>	\$ 137.45 <sup>++</sup>	\$ 140.39	\$ 151.22 <sup>+++</sup>	\$ 169.84 <sup>++++</sup>
Total Refund Payments	\$ 2,666,284	\$ 2,316,984	\$ 2,884,355	\$ 3,385,233	\$ 3,893,254	\$ 4,055,068	\$ 4,996,158
Portfolio Time-Weighted							
Rate of Return	-9.36%	7.31%	10.10%	4.95%	-1.51%	7.90%	8.34%
Portfolio Yield Rate	6.60%	6.63%	5.94%	5.99%	7.28%	8.17%	8.36%
<u>Actuarial Statistics:</u>							
Total Accrued Liabilities	\$257,553,891	\$296,343,758	\$387,214,910	\$446,255,236	\$507,324,915	\$592,095,113	\$710,126,703
Unfunded Past Service Liabilities	\$ 65,174,208	\$ 77,434,549	\$130,838,120	\$149,511,331	\$168,497,917	\$202,676,662	\$249,770,835
Percent Unfunded	25.3%	26.1%	33.8%	33.5%	33.2%	34.2%	35.2%
Vested Accrued Benefit Liability	n/a	n/a	n/a	n/a	n/a	\$385,849,203	\$470,642,643
Estimated Annual Salaries	\$237,917,388	\$283,670,722	\$320,222,352	\$343,683,684	\$393,236,856	\$463,439,488	\$504,835,968
Contribution - 7% of Unfunded Past Service Liability	\$ 4,562,195	\$ 5,420,418	\$ 9,158,668	\$ 10,465,793	\$ 11,794,854	\$ 14,187,366	\$ 17,483,958
<u>Actuarial Costs:</u>							
Normal	8.76%	8.61%	7.43%	7.39%	7.40%	7.36%	7.27%
Past Service	1.92%	1.91%	2.86%	3.04%	3.00%	3.06%	3.46%
Administrative	.13%	.12%	.11%	.12%	.11%	.10%	.08%
Group Hospital and Medical Insurance	n/a	n/a	n/a	n/a	n/a	.21%	.21%
Total Cost	*10.81%	n/a	**10.40%	10.55%	10.51%	10.73%	11.02%
<u>Contribution Rates:</u>							
Member	4.02%	4.02%	4.02%	4.02%	4.02%	4.01%	4.01%
Employer	7.29%	7.29%	7.30%	7.22%	7.30%	7.31%	7.30%
Total Rates	11.31%	11.31%	11.32%	11.24%	11.32%	11.32%	11.31%
<u>Rate Margin:</u>							
	.50%	.67%	.92%	.69%	.81%	.59%	.29%

\*Entry age normal cost funding method used to determine cost of all benefits after June 30, 1974.

\*\*Actuarial Assumptions Revised.

+Benefits to retirees increased 7/1/76 by 2% for each year retired but not more than 20%, excluding early retirees not yet age 60.

++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%.

TABLE 16

COUNTY EMPLOYEES RETIREMENT SYSTEM  
FINANCIAL AND ACTUARIAL STATISTICS

	6/30/74	6/30/75	6/30/77	6/30/78	6/30/79	6/30/80
<u>Financial Statistics:</u>						
Total Assets	\$48,172,297	\$ 59,877,077	\$ 99,448,038	\$123,822,400	\$153,091,905	\$190,230,941
Investment Income	\$ 2,310,920	\$ 3,194,597	\$ 5,108,313	\$ 6,806,685	\$ 9,734,995	\$ 13,948,084
Total Retirement Payments	\$ 2,073,993	\$ 2,616,042	\$ 3,852,861	\$ 4,569,674	\$ 5,443,712	\$ 6,401,655
Average Retirement Payment	\$ 103.69	\$ 105.55	\$ 116.73	\$ 120.55	\$ 126.63	\$ 136.74
Total Refund Payments	\$ 1,013,722	\$ 805,875	\$ 1,500,630	\$ 2,254,683	\$ 3,313,137	\$ 3,032,440
Portfolio Time-Weighted						
Rate of Return	-9.14%	7.09%	4.01%	-1.88%	7.78%	8.45%
Portfolio Yield Rate	6.77%	6.76%	5.92%	7.34%	8.33%	8.35%
<u>Actuarial Statistics:</u>						
Total Accrued Liabilities	\$71,740,052	\$ 85,322,085	\$152,900,347	\$175,194,867	\$213,834,377	\$266,018,621
Unfunded Past Service Liabilities	\$22,590,201	\$ 24,467,454	\$ 52,474,756	\$ 50,394,913	\$ 60,742,472	\$ 75,787,680
Percent Unfunded	31.5%	28.7%	34.3%	28.7%	28.4%	28.5%
Vested Accrued Benefit Liability	n/a	n/a	n/a	n/a	\$144,441,025	\$178,669,194
Estimated Annual Salaries	\$89,382,252	\$116,738,055	\$191,802,844	\$191,368,852	\$241,359,696	\$295,607,664
Contribution - 7% of Unfunded Past Service Liability	\$ 1,581,314	\$ 1,712,722	\$ 3,673,232	\$ 3,527,644	\$ 4,251,973	\$ 5,305,138
<u>Actuarial Costs:</u>						
Normal	9.34%	9.18%	8.49%	8.33%	8.40%	8.26%
Past Service	1.77%	1.47%	1.92%	1.84%	1.76%	1.79%
Administrative	.13%	.11%	.08%	.08%	.07%	.09%
Group Hospital and Medical Insurance	n/a	n/a	n/a	n/a	.15%	.15%
Total Cost	*11.24%	n/a	10.49%	10.25%	10.38%	10.29%
<u>Contribution Rates:</u>						
Member	4.18%	4.13%	4.11%	4.14%	4.13%	4.11%
Employer	7.76%	7.62%	7.59%	7.67%	7.62%	7.58%
Total Rates	11.94%	11.75%	11.70%	11.81%	11.75%	11.69%
<u>Rate Margin:</u>						
	.70%	.90%	1.21%	1.56%	1.37%	1.40%

\*Entry age normal cost funding method used to determine cost of all benefits after June 30, 1974.

\*\*Actuarial Assumptions Revised.

+Benefits to retirees increased 7/1/76 by 2% for each year retired but not more than 20%, excluding early retirees not yet age 60.

++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%.

TABLE 17

STATE POLICE RETIREMENT SYSTEM  
FINANCIAL AND ACTUARIAL STATISTICS

	<u>6/30/74</u>	<u>6/30/75</u>	<u>6/30/76</u>	<u>6/30/77</u>	<u>6/30/78</u>	<u>6/30/79</u>	<u>6/30/80</u>
<u>Financial Statistics:</u>							
Total Assets	\$14,157,941	\$16,612,591	\$20,061,717	\$23,725,208	\$28,109,100	\$33,903,221	\$40,917,165
Investment Income	\$ 704,144	\$ 934,492	\$ 1,094,803	\$ 1,307,240	\$ 1,595,816	\$ 2,200,472	\$ 3,060,037
Total Retirement Payments	\$ 261,702	\$ 293,332	\$ 360,823	\$ 469,703	\$ 584,752	\$ 683,821	\$ 1,030,786
Average Retirement Payment	\$ 401.08	\$ 426.25	\$ 473.66+	\$ 584.54++	\$ 599.07	\$ 725.82+++	\$ 904.01++++
Total Refund Payments	\$ 46,680	\$ 55,555	\$ 29,866	\$ 71,562	\$ 116,981	\$ 85,730	\$ 68,111
Portfolio Time-Weighted Rate of Return	-9.50%	7.15%	10.31%	4.82%	-1.58%	7.96%	8.48%
Portfolio Yield Rate	6.60%	6.68%	5.93%	5.98%	7.32%	8.28%	8.38%
<u>Actuarial Statistics:</u>							
Total Accrued Liabilities	\$17,737,434	\$23,182,081	\$28,693,129	\$34,561,413	\$49,950,102	\$55,391,206	\$67,580,562
Unfunded Past Service Liabilities	\$ 3,179,448	\$ 6,169,445	\$ 9,231,367	\$10,436,161	\$21,440,957	\$21,487,985	\$26,663,397
Percent Unfunded	17.9%	26.6%	28.7%	30.2%	42.9%	38.8%	39.5%
Vested Accrued Benefit Liability	n/a	n/a	n/a	n/a	n/a	\$35,945,254	\$43,887,675
Estimated Annual Salaries Contribution - 7% of Unfunded Past Service Liability	\$ 7,916,016	\$11,373,000	\$13,606,104	\$13,519,536	\$18,764,268	\$18,944,220	\$20,180,148
	\$ 222,561	\$ 431,861	\$ 576,196	\$ 730,531	\$ 1,500,867	\$ 1,504,159	\$ 1,866,438
<u>Actuarial Costs:</u>							
Normal	16.12%	16.38%	16.03%	15.85%	15.76%	15.76%	16.04%
Past Service	2.81%	3.80%	4.23%	5.40%	8.00%	7.94%	9.25%
Administrative	.23%	.17%	.16%	.17%	.13%	.13%	.03%
Group Hospital and Medical Insurance	n/a	n/a	n/a	n/a	n/a	.12%	.12%
Total Cost	*19.16%	20.35%	**20.42%	21.42%	23.89%	23.95%	25.44%
<u>Contribution Rates:</u>							
Member	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%
Employer	12.50%	12.50%	13.50%	13.50%	13.50%	16.50%	17.25%
Total Rates	19.50%	19.50%	20.50%	20.50%	20.50%	23.50%	24.25%
<u>Rate Margin:</u>							
	.34%	-.85%	.08%	-.92%	-3.39%	-.45%	-1.19%

\*Entry age normal cost funding method used to determine cost of all benefits after June 30, 1974.

\*\*Actuarial Assumptions Revised.

+Benefits to retirees increased 7/1/76 by 2% for each year retired but not more than 20%, excluding early retirees not yet age 50.

++Benefits to retirees increased 7/1/77 by 1/2 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 5% 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%.

TABLE 18

KENTUCKY RETIREMENT SYSTEMS  
STATEMENT OF SOURCE AND USE OF FUNDS  
BY SYSTEM SINCE INCEPTION THROUGH JUNE 30, 1980

Accounts	Breakdown Per Dollar		Source of Funds		Total Amounts	
	KERS	SPRS	KERS	SPRS	KERS	SPRS
Member Contributions	28.9¢	26.3¢	\$191,599,472	\$12,953,872	\$ 75,713,775	\$12,953,872
Employer Contributions	44.8¢	43.7¢	297,403,026	21,550,065	124,218,851	21,550,065
Investment Income	26.0¢	28.7¢	172,732,328	14,149,309	50,401,712	14,149,309
Special Appropriation	00.3¢	01.0¢	1,894,897	506,100	515,204	506,100
Alternate & Term. Part.	-	-	7,066	-	1,764,592	-
Other Receipts *	-	00.3¢	78,450	179,947	412,244	179,947
Total Sources	\$1.00	\$1.00	\$663,715,239	\$49,339,293	\$253,026,378	\$49,339,293

\* *Int. Receipts*  
*Vendor. fee (not dist to mbrs. & inv.)*

Accounts	Breakdown Per Dollar		Total Amounts	
	KERS	SPRS	KERS	SPRS
Invested Assets	68.6¢	82.1¢	\$455,351,583	\$40,517,120
Retirement Payments	18.6¢	09.3¢	123,699,837	4,573,115
Refunds	06.8¢	02.4¢	44,880,550	1,176,801
Interest to Members	03.0¢	03.5¢	20,129,172	1,741,624
Admin. & Prof. Services	00.9¢	00.7¢	5,954,028	350,129
Other Disbursements *	02.1¢	02.0¢	13,700,069	980,504
Total Uses	\$1.00	\$1.00	\$663,715,239	\$49,339,293

\* *Membr. & Empl. Rec. - 5 mths (forward)*  
*Gain on mbrs.*

TABLE 19

KENTUCKY RETIREMENT SYSTEMS  
ADMINISTRATIVE EXPENSE  
BY FISCAL YEAR

	73-74	74-75	75-76	76-77	77-78	78-79	79-80
<b>Personnel Cost:</b>							
Personal Service	\$265,727.15	\$297,782.81	\$301,306.73	\$336,658.01	\$327,779.92	\$380,501.41	\$440,961.26
Contractual Service							
Auditor	7,300.00	9,800.00	9,300.00	9,000.00	11,275.00	11,500.00	13,800.00
Actuary	8,200.00	11,550.00	9,000.00	16,975.00	14,250.00	14,200.00	14,200.00
Data Processing	.00	3,453.99	1,344.33	1,584.16	4,172.83	.00	.00
Janitorial	.00	.00	.00	229.80	2,775.83	3,817.70	5,052.40
Legal	.00	.00	11.40	.00	.00	1,109.43	281.39
Medical	1,581.26	2,791.10	2,421.00	4,308.92	2,851.40	3,602.00	3,627.20
Miscellaneous	312.49	404.76	1,344.18	898.21	300.00	1,162.38	4,885.17
<b>TOTAL</b>	<b>\$283,120.90</b>	<b>\$325,782.66</b>	<b>\$324,727.64</b>	<b>\$369,654.10</b>	<b>\$363,404.98</b>	<b>\$415,892.92</b>	<b>\$482,807.42</b>
<b>Operating Expenses:</b>							
Post & Freight	\$ 49,218.00	\$ 32,135.20	\$ 55,297.45	\$ 72,186.88	\$ 65,106.02	\$ 40,122.50	\$ 582.31
Utilities	2,683.16	3,397.83	4,133.92	3,972.72	4,286.03	4,526.52	5,299.55
Telephone	3,825.47	6,704.49	7,546.73	7,934.66	8,535.96	9,912.47	16,164.40
Travel	16,621.25	11,664.41	11,227.56	8,662.80	8,995.89	9,612.15	7,222.31
Printing & Duplicating	20,442.99	12,909.02	18,389.80	21,646.69	13,447.60	21,003.95	40,629.09
Maintenance - Equipment	1,714.40	2,532.57	2,990.12	2,841.60	3,850.81	5,177.48	7,155.95
Maintenance - Bldg. & Grds.	.00	333.16	179.42	385.63	1,920.50	536.97	441.39
Laundry	165.73	281.50	343.17	324.52	284.94	257.00	298.02
Assessed Car Rental	.00	.00	.00	1,520.82	1,689.73	1,900.50	1,951.71
Supplies - Office	7,861.76	7,010.24	5,600.80	7,903.37	9,563.19	7,533.02	6,057.00
Supplies - Data Processing	3,685.71	2,729.64	5,528.46	5,621.03	10,335.17	6,017.43	4,260.55
Supplies - Janitorial	338.66	592.14	489.12	460.11	322.13	249.57	261.57
Motor Fuels	202.79	175.70	193.74	193.74	.00	.00	.00
Rental - Building	11,156.78	10,516.24	13,266.24	13,266.24	13,266.24	13,266.24	20,515.78
Rental - Data Processing	26,538.81	54,641.69	53,874.89	58,386.20	29,189.29	59,392.82	46,893.00
Rental - Office Equipment	3,403.88	2,435.40	1,500.00	1,879.51	24,207.16	23,326.47	31,479.37
Insurance	1,312.82	1,223.52	1,371.50	1,397.26	1,323.65	2,315.44	3,360.97
Bonds	1,575.00	1,575.00	1,575.00	1,575.00	1,575.00	2,851.00	.00
Dues	35.00	35.00	35.00	35.00	255.00	140.00	140.00
Subscriptions	123.22	802.90	819.50	827.15	940.21	1,005.06	818.97
Employee Training Expense	1,386.10	863.50	658.00	490.00	956.90	434.50	1,201.95
Miscellaneous	.00	.00	.00	330.60	133.91	141.26	.00
Photo Supplies	.00	.00	.00	.00	56.90	15.90	2.25
Furniture Office Equipment	.00	.00	2,640.28	660.90	1,317.17	1,408.09	462.04
<b>TOTAL</b>	<b>\$152,291.53</b>	<b>\$152,559.15</b>	<b>\$187,660.70</b>	<b>\$212,308.69</b>	<b>\$201,559.40</b>	<b>\$211,146.34</b>	<b>\$195,198.18</b>
Capital Outlay	\$ 10,684.54	\$ 13,853.78	\$ 12,258.39	\$ 3,514.81	\$ 44,589.66	\$ 3,203.86	\$ 484.53
<b>TOTAL ADMINISTRATIVE EXPENSE</b>	<b>\$446,096.97</b>	<b>\$492,195.59</b>	<b>\$524,646.73</b>	<b>\$585,477.60</b>	<b>\$609,554.04</b>	<b>\$630,243.12</b>	<b>\$678,490.13</b>
DISTRIBUTION OF COST BY RETIREMENT SYSTEM							
Kentucky Employees Ret. System	\$312,267.88	\$344,536.91	\$367,252.71	\$409,834.32	\$426,687.83	\$441,170.18	\$393,524.28
County Employees Ret. System	115,985.21	127,970.85	136,408.15	152,224.18	158,484.05	163,863.21	278,180.95
State Police Ret. System	17,843.88	19,687.83	20,985.87	23,419.10	24,382.16	25,209.73	6,784.90
<b>Total Adm. Expense</b>	<b>\$446,096.97</b>	<b>\$492,195.59</b>	<b>\$524,646.73</b>	<b>\$585,477.60</b>	<b>\$609,554.04</b>	<b>\$630,243.12</b>	<b>\$678,490.13</b>
Number of Accounts	68,030	77,892	84,398	93,204	103,860	112,143	117,255
Adm. Expense Per Account	\$ 6.56	\$ 6.32	\$ 6.22	\$ 6.28	\$ 5.87	\$ 5.62	\$ 5.79



## CONTRACTUAL ARRANGEMENTS

The Kentucky Retirement Systems Board of Trustees contracts with the following firms or individuals to perform services that cannot be obtained through the State. Each contract is limited to a period of one fiscal year and has a thirty day cancellation clause.

### Actuary

Tillinghast, Nelson & Warren, Inc.  
222 South Central Avenue  
St. Louis, Missouri 63105

The Board of Trustees has utilized the consulting services of an actuarial firm in accordance with KRS 61.670 since 1965. The firm of Tillinghast, Nelson & Warren, Inc. has been the consulting actuarial firm since July 1, 1980. Proposals were received from eight actuarial firms and the contract was awarded to the lowest bidder.

### Attorney

Ms. Phyllis Sower  
P.O. Box 405  
Frankfort, Kentucky 40602

An attorney is contracted occasionally by the Kentucky Retirement Systems to handle legal matters when the Attorney General directs that an independent attorney should be engaged. The contract is awarded through approval by the Department of Personnel and a Legislative Research Committee.

### Auditor

Eskew & Gresham  
4812 Highway 42  
P.O. Box 22309  
Louisville, Kentucky 40222

Each year the Board of Trustees has engaged a Certified Public Accounting firm for an annual audit of the three retirement systems. It has been the policy of the Board to retain the same firm for a period of no longer than six years. Proposals are taken and the contract is awarded to the lowest bidder.

### Custodian of Securities

Citizens Fidelity Bank & Trust Company  
Citizens Plaza  
P.O. Box 1140  
Louisville, Kentucky 40201

The Board of Trustees contracts with a Securities Custodian to handle the settlement of all investment transactions, registration of securities in nominee name and custodian services including receipt and deposit of interest and dividend payments.

Proposals were received from four firms and the contract was awarded to the lowest bidder.

Investment Counselor

Capital Supervisors, Inc.  
20 North Clark Street  
Suite 700  
Chicago, Illinois 60602

The Board of Trustees has engaged the services of an Investment Counselor since 1956 to provide investment advisory services and make recommendations as to the purchase, sale and retention of investments. Proposals were received from seventeen firms the contract was awarded to Capital Supervisors, Inc., based on their fee and previous experience.

Medical Examiner

The Board of Trustees is required under KRS 61.665 to employ one or more physicians, practicing in this state and not members of the system to pass upon all medical examinations required under the Retirement Acts and to investigate all health and medical statements and certifications made on behalf of any person in connection with payment of monies under the Retirement Acts.

