

DECEMBER 1968



28th

annual report

TEACHERS' RETIREMENT SYSTEM

**STATE OF KENTUCKY
1967-1968**



COMMONWEALTH OF KENTUCKY
TEACHERS' RETIREMENT SYSTEM

JAMES L. SUBLETT
EXECUTIVE SECRETARY

309 LEWIS STREET
FRANKFORT

VERA BECKHAM
ASSISTANT SECRETARY

December 1, 1968

Honorable Louie B. Nunn, Governor
Commonwealth of Kentucky
Capitol Building
Frankfort, Kentucky 40601

Dear Governor Nunn:

As provided in Section 161.320 of the Kentucky Revised Statutes we submit herewith the Twenty-Eighth Annual Report of the Teachers' Retirement System of the State of Kentucky.

Included herein are the Auditor's Balance Sheet and Statement of Receipts and Disbursements and the Auditor's certifying letter that were received too late to be included in the Twenty-Seventh Report. The same is true of the Actuary's Summary and Conclusions also reported here.

The Retirement System closed out the fiscal year with assets in excess of 200 million dollars earning an average annual return greater than five percent. This places Kentucky in the top ten percent of retirement programs across the country as measured by rate of return on investments. The action of the last General Assembly increasing the permissible investment in equities to 25 percent of assets will improve our ability to give further financial stability to the retirement program.

The actuarial valuation reveals a sound condition although the period required to fund the existing liabilities is undesirably long. We call particular attention to the actuary's statement regarding further liberalization of benefits.

Viewed in overall perspective Kentucky teachers have perhaps the best retirement program in the nation. We earnestly solicit your help in maintaining this position.

Respectfully yours,

Edna Lindle, Chairman
Board of Trustees

James L. Sublett
Executive Secretary
Teachers' Retirement System
of the State of Kentucky

CONTENTS

	PAGE
BOARD OF TRUSTEES	1
STAFF	1
PART I. FINANCIAL	2
PART II. ACTUARIAL	10
PART III. AUDIT	20
PART IV. INVESTMENTS	29

TEACHERS' RETIREMENT SYSTEM
STATE OF KENTUCKY

BOARD OF TRUSTEES

Elected by members:

Mrs. Edna Lindle, ChairmanHenderson
Mrs. James Sheehan, Vice ChairmanDanville
Ted L. CrosthwaitBardstown
Harold MillerFort Thomas

Ex-Officio

Thelma Stovall, State Treasurer.....Frankfort
John Breckinridge, Attorney General.....Frankfort
Wendell P. Butler, Superintendent of Public Instruction.....Frankfort

STAFF

James L. Sublett, Executive Secretary

Vera Beckham, Assistant Secretary

William Ray Holt, Chief Accountant

Huggins & Company, Actuary

Anna Jean Blackwell

Wilma Gaines

Isabelle Royalty

Joan Burke

Albert Hudson

Martha Sudduth

Polly Casey

Alean McDonald

Elizabeth Tharpe

Betty Cohorn

Amanda Owens

Doris Ward

Anna Mae Connelly

Jean Pulliam

Dorothy L. Wood

Nancy G. Cosby

Frances Wright

PART I. FINANCIAL

As revealed by the Balance Sheet assets of the System as of June 30, 1968, stood at \$204,808,598.93. This amount is slightly more than double the figure of June 30, 1963; five years ago.

We take this opportunity to reiterate that these are trust funds held in large measure to assure retirement and related benefits for present teachers who may be expected to retire in the future or who will at least receive their contributions in the form of a refund.

There is always a tendency, unfortunately on the increase in this country, to treat reserve funds as current income, providing today's benefits with tomorrow's savings.

Such an attitude on the part of certain teachers and political leaders can lead only to a dilution of assets and empty promises for tomorrow's retiring teachers.

BALANCE SHEET
Teachers' Retirement System
June 30, 1968

ASSETS

Cash, All Funds	\$ 3,719,324.64	
Special Reserve Account, Aetna Life Insurance Company	<u>252,928.44</u>	\$ 3,972,253.08
Investments	\$200,144,951.55	
Unamortized Premium on Investments	2,501,797.21	
Accrued Interest Purchases	<u>141,680.39</u>	
Total - Investments plus Deferred Charges	\$202,788,429.15	
Deduct Unamortized Discount on Investments	<u>1,952,083.30</u>	<u>\$200,836,345.85</u>
 TOTAL ASSETS		 <u>\$204,808,598.93</u>

FUND BALANCES

Teachers' Savings Fund	\$ 94,171,068.28	
State Accumulation Fund	92,631,676.54	
Guarantee Fund	10,777,106.67	
Voluntary Contributions, Active Members	686,164.03	
Expense Fund	2,874.95	
Allowance Reserve Fund	2,466,674.41	
Hospital & Medical Insurance Fund	1,998,366.01	
Survivor & Death Benefit Fund	<u>2,074,668.04</u>	
 TOTAL FUND BALANCES		 <u>\$204,808,598.93</u>

STATEMENT OF RECEIPTS AND DISBURSEMENTS
 Teachers' Retirement System
 for the period July 1, 1967 - June 30, 1968

CASH BALANCE, ALL FUNDS JULY 1, 1967

\$ 2,732,699.44

Receipts:

Teachers' Savings	\$16,173,617.90	
Reinstatements	100,611.48	
Voluntary Unmatched Contributions	<u>208,294.44</u>	
Total from Members		\$16,482,523.82

State Contributions:-

"Permanent" - to match Teachers' Savings	14,172,000.00	
Administrative Expense	<u>225,000.00</u>	
		14,397,000.00
Interest Collected, Bonds Redeemed or Sold		24,870,498.75
Benefit checks returned, Aetna recovery, other adjustments		191,660.85
Employer Matching of Teacher Contributions		<u>951,273.29</u>

Total Receipts

56,892,956.71

TOTAL CASH AVAILABLE

\$59,625,656.15

Disbursements:

Administrative Expenses Current Year	\$ 222,125.05	
Liquidation of Prior Year Encumbrances	<u>1,005.26</u>	
		\$ 223,130.31
Refunds for Withdrawal from Membership		2,003,125.66
Premiums for Comprehensive Medical Plan		467,755.84
Benefits for Service & Disability Retirement	\$ 9,497,270.88	
Survivor Payments	179,387.95	
Death Benefits	<u>224,000.00</u>	
		9,900,658.83
Purchase of Investments		<u>43,058,732.43</u>

Total Disbursements

\$55,653,403.07

CASH BALANCE, ALL FUNDS - June 30, 1968

\$ 3,972,253.08

ANALYSIS OF RECEIPTS
 Teachers' Retirement System
 Fiscal Years 1940-41 through 1967-68

Date	Teachers' Savings*	Rein- statements	State Matching Contribution	State Prior Service Contribution	State Contribution for Expenses	Interest and Profit	Total Receipts
7/1/40 - 6/30/44	\$ 2,063,716.64	\$ 675.28	\$ 2,063,636.92	\$ 147,146.21	\$ 89,216.87	\$ 161,182.57	\$ 4,525,574.49
7/1/44 - 6/30/48	3,184,177.52	8,138.74	3,039,017.44	363,594.56	131,388.00	680,795.86	7,407,112.12
7/1/48 - 6/30/52	4,951,457.55	9,880.10	5,090,847.83	3,374,273.81	198,335.00	1,676,157.12	15,300,951.41
1952-53	1,470,569.81	3,887.05	1,460,497.62	640,267.38	59,039.00	610,139.97	4,244,400.83
1953-54	1,509,971.81	6,262.44	1,503,190.97	144,949.03	62,860.00	688,046.72	3,915,280.97
1954-55	1,606,795.76	5,240.32	1,600,512.20	151,231.80	70,000.00	776,485.87	4,210,265.95
1955-56	2,706,333.97	5,730.97	1,929,901.00	---	70,355.00	908,548.21	5,620,869.15
1956-57	3,409,800.55	6,946.98	3,396,749.24	611,125.76	89,000.00	1,802,779.34	8,596,401.87
1957-58	3,533,508.21	4,583.72	3,523,551.57	612,278.43	125,225.00	1,557,061.91	9,356,208.84
1958-59	3,877,031.28	7,026.22	3,858,543.67	479,306.33	129,350.00	1,638,554.23	9,989,811.73
1959-60	4,198,829.94	10,015.71	4,184,427.58	281,225.77	178,146.65	2,045,440.74	10,898,086.39
1960-61	5,826,133.35	391,207.80	5,790,585.89	1,173,039.11	161,375.00	2,537,175.78	15,879,516.93
1961-62	6,344,302.54	120,331.07	6,309,696.04	1,119,118.96	171,185.00	2,902,788.98	16,967,422.59
1962-63	6,795,670.37	110,996.21	6,763,615.18	950,175.82	196,846.00	3,866,534.20	18,683,837.78
1963-64	7,160,866.67	134,357.38	7,074,866.28	696,608.72	220,657.00	4,401,450.78	19,688,806.83
1964-65	7,886,032.37	129,066.14	7,780,017.37	400,782.63	219,200.00	5,391,261.59	21,806,360.10
1965-66	11,948,546.60	77,594.19	10,744,110.00	---	255,890.00	5,217,998.29	28,244,139.08
1966-67	14,318,742.10	152,312.44	12,621,567.00	---	237,063.00	6,786,657.62	34,116,342.16
1967-68	16,381,912.34	100,611.48	14,172,000.00	---	225,000.00	8,116,302.09	38,995,825.91
	<u>\$109,174,399.38</u>	<u>\$1,284,864.27</u>	<u>\$102,907,333.80</u>	<u>\$11,145,124.32</u>	<u>\$2,890,131.52</u>	<u>\$51,045,361.87</u>	<u>\$278,447,215.16</u>

* Includes Voluntary Unmatched Contributions

COMPARISON OF BUDGET REQUESTS
WITH APPROPRIATIONS RECEIVED

July 1, 1940, through June 30, 1968

Biennium	Budget Request	Appropriations	Not Appropriated
1940-42.....	\$ 1,500,000.00	\$ 1,000,000.00	\$ 500,000.00
1942-44.....	1,719,600.00	1,300,000.00	419,600.00
1944-46.....	1,945,250.00	1,622,000.00	323,250.00
1946-48.....	2,340,000.00	1,912,000.00	428,000.00
1948-50.....	5,393,456.64	5,393,456.64	-----
1950-52.....	3,258,540.00	3,270,000.00	(11,460.00)
1952-54.....	4,254,340.00	3,870,804.00	383,536.00
1954-56.....	4,439,605.00	3,822,000.00	617,605.00
1956-58.....	8,356,705.00	8,356,705.00	-----
1958-60.....	9,343,215.00	9,111,000.00	232,215.00
1960-62.....	14,725,000.00	14,725,000.00	-----
1962-64.....	15,902,769.00	15,902,769.00	-----
1964-66.....	20,077,902.00	19,848,090.00	229,812.00
1966-68.....	25,656,256.00	25,655,630.00	626.00
Totals.....	\$118,912,638.64	\$115,789,454.64	\$3,123,184.00

COST OF ADMINISTRATION
 Teachers' Retirement System
 July 1, 1940, through June 30, 1968

Year	Receipts of State Accumulation Fund (for Matching and Prior Service)	Administration Expenses	Percentage of Receipts
1940-41	\$ 476,089.49	\$ 23,669.88	4.97%
1941-42	481,713.03	18,232.93	3.79
1942-43	627,680.61	22,317.03	3.56
1943-44	625,300.00	24,633.20	3.94
1944-45	772,866.80	25,908.68	3.35
1945-46	791,641.32	31,390.43	3.97
1946-47	919,490.57	36,039.67	3.92
1947-48	919,960.33	36,409.41	3.96
1948-49	1,434,834.59	41,059.78	2.90
	2,439,606.64*		
1949-50	1,434,315.22	43,396.76	3.03
1950-51	1,577,988.24	52,324.68	3.32
1951-52	1,580,070.32	58,303.98	3.69
1952-53	2,102,681.02	57,490.72	2.73
1953-54	1,649,688.28	61,165.65	3.71
1954-55	1,753,438.35	68,889.71	3.93
1955-56	2,693,326.38	69,548.14	2.58
1956-57	4,008,681.86	88,407.80	2.21
1957-58	4,261,055.00	111,868.14	2.62
1958-59	4,337,850.00	128,489.00	2.97
1959-60	4,465,653.35	164,768.85	3.68
1960-61	6,963,625.00	170,103.70	2.44
1961-62	7,428,815.00	170,691.00	2.30
1962-63	7,739,140.00	193,366.07	2.49
1963-64	7,771,475.00	207,730.97	2.67
1964-65	8,191,883.41	200,567.87	2.44
1965-66	10,744,110.00	259,448.83	2.41
1966-67	12,621,567.00	220,146.12	1.74
1967-68	15,123,273.29	223,130.31	1.47

* Special appropriation for prior service is not reflected in administrative expense computations.

REFUNDS
Teachers' Retirement System
July 1, 1940, to June 30, 1968

Date	Withdrawals		Deceased		Special		Total	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount
7/1/40 - 6/30/44	2,654	\$ 106,474.07	148	\$ 11,447.66	21	\$ 231.76	2,823	\$ 118,153.49
7/1/44 - 6/30/48	6,455	415,929.56	205	34,386.65	52	1,184.73	6,712	451,500.94
7/1/48 - 6/30/52	9,079	816,505.87	267	89,957.65	71	1,443.47	9,417	907,906.99
1952-53	2,954	288,013.06	72	24,405.01	4	53.51	3,030	312,471.58
1953-54	2,268	278,483.49	51	32,243.80	9	155.22	2,328	310,882.51
1954-55	2,164	313,019.33	47	37,659.91	13	292.38	2,224	350,971.62
1955-56	2,102	324,571.79	67	53,222.51	13	226.68	2,182	378,020.98
1956-57	1,832	381,015.98	67	63,100.03	10	502.87	1,909	444,618.88
1957-58	2,183	422,166.84	60	63,459.52	11	176.36	2,254	485,802.72
1958-59	2,153	432,917.49	59	66,659.22	198	4,946.17	2,410	504,522.88
1959-60	2,642	599,648.10	69	94,122.66	66	2,053.57	2,777	695,824.33
1960-61	1,672	517,682.44	53	79,564.69	52	2,145.72	1,777	599,392.85
1961-62	2,170	724,240.16	69	113,975.25	42	1,769.95	2,281	839,985.36
1962-63	2,106	826,457.63	66	115,303.28	48	1,718.89	2,220	943,479.80
1963-64	2,310	1,035,242.10	60	144,154.22	26	1,460.21	2,396	1,180,856.53
1964-65	2,380	1,190,715.07	72	156,186.68	39	1,930.17	2,491	1,348,831.92
1965-66	2,417	1,375,728.50	44	90,196.91	23	1,256.68	2,484	1,467,182.09
1966-67	2,512	1,500,846.42	49	143,133.98	29	2,420.61	2,590	1,646,401.01
1967-68	2,766	1,858,115.15	48	138,362.23	16	975.68	2,830	1,997,453.06
	<u>54,819</u>	<u>\$13,407,773.05</u>	<u>1,573</u>	<u>\$1,551,541.86</u>	<u>743</u>	<u>\$24,944.63</u>	<u>57,135</u>	<u>\$14,984,259.54</u>

ANALYSIS OF ACCOUNTS REFUNDED 1967-68

Teachers' Retirement System of the State of Kentucky

<u>REASONS FOR WITHDRAWAL</u>	<u>MALES</u>	<u>FEMALES</u>	<u>TOTAL</u>
Other Teaching Employment:			
State of Ohio	53	97	150
State of Florida	27	25	52
State of Indiana	35	66	101
Other States	176	196	372
Outside Limits of U. S. A.	6	12	18
Kentucky College or school not covered by Teachers' Retirement System	37	43	80
Non-Teaching Employment:			
Entered Business or Industry	143	30	173
Church-Related Profession	25	9	34
Medical Profession	4	5	9
Legal Profession	3	0	3
Military Service	33	1	34
Further Training & Education	107	92	199
Local, State, or Federal Government	41	48	89
Homemaking, Family Duties, Children	0	578	578
Husband Transferred Within Kentucky	0	0	0
Husband Transferred Out of Kentucky	0	147	147
Moved Residence to Another State	32	220	252
Emergency Teacher, Lack of Training, Not Re-employed	33	53	86
Salary Too Low	50	15	65
Needed The Money	3	23	26
Disliked Teaching	10	12	22
Personal Reasons	71	101	172
Illness of Member	13	25	38
Death of Member	15	33	48
Absent from Profession 4 - 6 years	2	1	3
Lost Service Credit, Absent 7 or More Years	17	46	63
TOTALS	<u>936</u>	<u>1,878</u>	<u>2,814</u>

PART II. ACTUARIAL

The pertinent data from the Report of the Actuarial Valuation performed as of June 30, 1966, was not available for inclusion in the Twenty-Seventh Annual Report and thus is included here.

In addition the actuary performed an Experience and Mortality Study on the lives of active and retired teachers for the period 1959 to 1966. These data are largely technical and are not included. Anyone interested may examine the complete report at the Retirement System Office as well as the complete Valuation Report.

Because the Actuarial Valuation is the very life blood of a retirement program we are including in addition to the Balance Sheet, the actuary's remarks on the sufficiency of the present contribution rate and a summary of his conclusions.

We would make only two comments:

(1) While the current rate is sufficient to underwrite the liabilities assuming continued salary growth the funding period is undesirably long.

(2) We agree with the actuary that no additional liberalizations are possible within the present financial structure and that substantial state appropriations for prior service liability should be made.

GEORGE A. HUGGINS
(1911-1959)
WILLIAM M. HUGGINS
(1934-1958)

HUGGINS & COMPANY, INC.

CONSULTING ACTUARIES • EMPLOYEE BENEFIT PLAN CONSULTANTS

1401 WALNUT STREET PHILADELPHIA 19102

LOCUST 4-1122
AREA CODE 215

KENNETH H. ROSS
CHARLES L. BURRALL, JR.
M. ROSSMAN WERT
BERNHARDT K. STABERT
DAVID L. HEWITT
MICHAEL MUDRY
ROBERT H. SMITH
JOHN E. HEARST
PHILLIP A. TURBERG
E. HOWARD HILL
JOHN D. HUTCHESON
MILTON H. WOLLMAN
WILLIAM A. PORTER
DONALD E. KENNEDY
JOSEPH T. BROPHY
RAY M. ELY
WILLIAM E. MOODY
MARY BAUSH
FRANCES S. MOFFETT
EDWARD A. KANE

December 30, 1967

Members of the Board of Trustees
Teachers' Retirement System of the
State of Kentucky
309 Lewis Street
Frankfort, Kentucky

ACTUARIAL VALUATION as of JULY 1, 1966

Gentlemen:

On December 18, 1967, we submitted our report on the actuarial investigation of the Teachers' Retirement System of the State of Kentucky for the period from July 1, 1959 to June 30, 1966. Using the various service tables and salary scales developed as a result of that investigation, we have completed a valuation in which the present and prospective assets and the liabilities of the System as of July 1, 1966 were determined. Presented herein is our report on this valuation, subdivided as follows:

	<u>Page</u>
<u>PART I</u> - Valuation as of July 1, 1966-----	1
<u>PART II</u> - Sufficiency of Contribution Rates-----	7
<u>PART III</u> - Summary and Recommendations-----	11
<u>SCHEDULES 1 through 8</u> -----	13
<u>APPENDIX A</u> - Actuarial Assumptions-----	23
<u>APPENDIX B</u> - Summary of Benefit Provisions-----	24

We wish to again express our appreciation for the very fine cooperation which we received from Mr. Sublett, Mr. Holt and the other members of the staff.

Respectfully submitted,

HUGGINS & COMPANY, INC.

By *Kenneth H. Ross*

KHR:hsw
MM

ACTUARIAL BALANCE SHEET SHOWING PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES AS OF JULY 1, 1966

<u>A S S E T S</u>	:	<u>L I A B I L I T I E S</u>
<u>Present assets:</u>	:	<u>Present value of benefits payable</u>
	:	<u>to present annuitants:</u>
Teachers' Savings Fund---\$ 69,022,593*	:	Prior service benefits-----\$ 23,828,622
State Accumulation Fund- 69,022,593*	:	Service retirement benefits--- 54,266,207
Guarantee Fund----- 5,934,826	:	Disability retirement benefits 5,874,468
Voluntary Contributions -	:	Present and future death and
Active Members----- 338,006*	:	survivor benefits----- 6,066,092 \$ 90,035,389
Allowance Reserve Fund-- -7,277,561*	:	
Hospital and Medical	:	<u>Present value of benefits payable</u>
Insurance Fund----- 339,158	:	<u>to active and inactive members:</u>
Survivor and Death Bene-	:	Prior service benefits-----\$ 21,251,287
fit Fund----- 654,499	:	Subsequent and future service
Expense Fund----- 11,039 \$152,600,275**	:	retirement benefits----- 442,493,109
	:	Disability retirement benefits 25,869,356
	:	Refunds of contributions----- 59,933,342
<u>Future assets:</u>	:	Death and survivor benefits- 31,072,699 580,619,793
Present value of prospec-	:	
tive member 6.75% contri-	:	<u>Special reserves:</u>
butions-----\$128,771,296	:	Voluntary Contributions -
Present value of prospec-	:	Active Members----- \$ 338,006
tive State 6.75% contri-	:	Hospital and Medical
butions-----128,771,296	:	Insurance Fund----- 339,158
Deficiency in reserves	:	Expense Fund----- 11,039 688,203
for present members to	:	
be financed in the	:	
future-----261,200,518 518,743,110	:	
TOTAL ASSETS----- \$671,343,385	:	TOTAL LIABILITIES-----\$671,343,385

* Adjusted on account of pending transfers as of June 30, 1966 which were made after that date.

**Total present assets distributed as follows:

Cash-----	\$ 2,176,194
U.S. Treasury and Treasury-secured obligations-----	14,551,000
Mortgages and Mortgage Participation Certificates-----	43,125,830
Corporate Bonds-----	72,669,889
School and Municipal Bonds-----	2,571,000
Stocks-----	15,554,981
Other Investments-----	784,484
Accrued Interest and Adjustments for Premium and Discount-----	1,166,897

TOTAL-----\$152,600,275

It will be noted that the assets in the balance sheet are broken down into the two main categories of (1) the present assets and (2) future assets represented by prospective member and State contributions. The various fund balances included in the total present assets of \$152,600,275 are shown in the balance sheet and the actual distribution of these present assets according to type is shown in a footnote.

In the future asset category, the present values of members' and State's contributions were each computed at a rate of 6.75% of salaries. While the actual rate for each is 7% of salaries, 1/4% of this rate is paid to the Hospital and Medical Insurance Fund. Since this Fund is considered to be self-supporting, both the assets and liabilities for benefits from the Fund were eliminated from our valuation. Therefore, the future assets reflect a present value of only a 6.75% rate for each of the members' and State's contributions, while no liability at all is shown for hospital and medical benefits. Both of these present values relate only to contributions by and on behalf of present members. The other item in this future asset category refers to a deficiency in reserves on the basis of this valuation totalling \$261,200,518 which will be discussed in Part II of this report.

On the liability side of the balance sheet, there are two main divisions of the liability; the first relates to the present annuitants and the second to the present active and inactive members. It will be noted that the total liability on account of benefits payable in the future to annuitants is \$90,035,389; the liability on account of benefits payable in the future to active and inactive members amounts to \$580,619,793; and, finally, there are special reserve items of \$688,203 representing the balances in the account for Voluntary Contributions and in the Hospital and Medical Insurance Fund and the Expense Fund.

Sufficiency of Contribution Rates Under the Law in Effect as of July 1, 1966

In this part of the report, we would like to discuss the sufficiency of the present contribution rates of 6.75% by the member and 6.75% by the State under the System as in effect as of July 1, 1966. The rates used are the amounts which are available for retirement and death benefits; ie., the 14% exclusive of amounts contributed by the members and matched by the State for hospital and medical insurance.

In order to study the adequacy of the contribution rate of the System as in effect on July 1, 1966, we must turn to the balance sheet shown on page 2. While most of the following comments are related to the asset side of the actuarial balance sheet, and in particular to the value of prospective future contributions on account of present members, it should be made clear that our calculation of the liability side of the actuarial balance sheet took into account the number of members who may be expected to withdraw from the Retirement System prior to eligibility for deferred vested benefits, including as liability only the amount of their accumulated contributions at the time of withdrawal. In other words, we have assumed that some of the present members will be paid retirement annuities, some will be paid disability benefits, the beneficiaries of some will be paid death or survivor benefits after the death of the member in service, and some will leave employment in the public schools and receive no more than their accumulated deposits. Our liability side of the balance sheet includes an estimated value for each of these types of payments.

It will be noted in the balance sheet that, as compared with the total liability of \$671,343,385 to provide all present and future benefits as of July 1, 1966, there were assets on hand of \$152,600,275. This means that the assets to be received in the future to balance the liabilities are in the amount of \$518,743,110.

Of these future assets, it is seen from the balance sheet that \$128,771,296 represents the present value of the members' effective 6.75% contributions in the future and the same figure of \$128,771,296, the corresponding value of the State's effective 6.75% contributions in the future. When the total of these amounts is deducted from \$518,743,110, we arrive at the over-all deficiency in reserve for the present members to be financed in the future and this figure is \$261,200,518.

As can be seen from the liability side of the balance sheet, the amounts of \$23,828,622 and \$21,251,287 represent the liabilities for prior service benefits payable, respectively, to annuitants and to active and inactive members, or a total prior service liability of \$45,079,909. The Kentucky Teachers' Retirement Law (Section 161.550) provides for supplemental appropriations by the State to discharge this prior service obligation, so that the deficiency remaining to be funded from "permanent" State contributions is \$261,200,518 minus \$45,079,909, or \$216,120,609.

A question arises as to the period over which the current deficiency of \$216,120,609 can be funded with the present contribution rate. In order to answer this question, we must first determine what portion of the 13½% net contribution rate is available to fund the deficiency.

The procedure involves the determination of an entry age normal cost, which will indicate the total contribution rate required, on the average, to fund the benefits of new entrants as a level percentage of salary during membership. We have made tests and determined that the average required rate of contribution for new entrants is 11.65% of payroll. The effective member contribution of 6.75% means that the State must contribute 4.90% of salary to meet these normal costs. The residual State contribution of 1.85% (6.75% - 4.90%) may be applied toward the deficiency for the present members.

To summarize:

1. Entry age normal cost for new entrants--- 11.65%
2. Rate paid by member----- 6.75
3. Normal cost paid by State----- 4.90%
4. Contribution by State for deficiency----- 1.85
- Total contribution (2)+(3)+(4)----- 13.50%

This means that the present value of the 6.75% State contributions is allocated as follows:

Present value of future normal costs-----4.90%-----	\$ 93,478,422
Additional unfunded accrued liability-----1.85%-----	<u>35,292,874</u>
Total present value of future 6.75% contributions-----	<u>\$128,771,296</u>

The 1.85% contribution by the State must now fund the deficiency of \$216,120,609 and the additional unfunded accrued liability of \$35,292,874 not funded by future normal costs. This is a total of \$251,413,483.

We must now determine how many years will be required for a contribution of 1.85% of total payroll to fund the total unfunded accrued liability of \$251,413,483 assuming interest accrues on the balance at 4% per annum.

Before making this calculation, we should look at the consistently large increases in total payroll of members in recent years as reflected in the total member contributions. These increases are outlined in the following table:

<u>Year Ending June 30,</u>	<u>Teachers' Contributions</u>	<u>Contribution Rate</u>	<u>Derived Payroll</u>	<u>% Increase</u>
1962	\$ 6,311,472	.05	\$126,229,440	8.9%
1963	6,765,322	.05	135,306,440	7.2
1964	7,075,124	.05	141,502,480	4.6
1965	7,782,226	.05	155,644,520	10.0
1966	11,839,448	.07	169,134,971	8.7

While it is not certain that payrolls will continue to show these rates of percentage increase, which average 7.9% annually, we have made calculations on three different bases as shown on the following page.

1. Assuming that payrolls will continue at the 1965-66 level of approximately \$169,000,000.
2. Assuming that payrolls will increase in the future at the rate of 4% per annum, compounded annually.
3. Assuming that payrolls will increase in the future at the rate of 6% per annum, compounded annually.

Our calculations indicate that, if 1.85% out of the effective contribution of 6.75% by the State is applied to fund the total unfunded accrued liability of \$251,413,483 as of July 1, 1966, the funding periods on the three different assumptions as to future payrolls are as follows:

	<u>Assumptions as to Future Payrolls</u>		
	<u>Level</u>	<u>4% Annual Increase</u>	<u>6% Annual Increase</u>
Period of funding deficiency-----	Never	82.2 years	49.1 years

We, therefore, conclude that a net State contribution rate of 6.75% of payroll along with a net 6.75% contribution rate paid by members is sufficient to fund the normal cost each year and to complete the funding of the deficiency in periods of 82.2 years or 49.1 years depending on the assumption made as to future payroll increases. If it must be assumed that the total payroll would level off at approximately \$169,000,000, the deficiency would never be funded, but would continue to grow.

Summary and Recommendations

This valuation of the Retirement System as of July 1, 1966 has been made using the actuarial tables developed in the actuarial investigation for the period July 1, 1959 to June 30, 1966 as submitted in our report dated December 18, 1967. In conjunction with these actuarial tables, we used an interest assumption of 4% per annum. These actuarial assumptions are summarized in Appendix A and we have also included as Appendix B a summary of the benefit provisions of the Retirement System.

This valuation reveals that the Retirement System is actuarially sound assuming that the total payroll of covered members continues to expand substantially in the future. While it is true that the deficiency of \$216,120,609 in addition to the unfunded prior service liability of \$45,079,909 is very high in relation to the present assets and the prospective contributions, we consider that our assumptions are realistic and that the financial position of the System should gradually improve. The indicated period of funding of the deficiency would range from approximately 82 years, assuming that the total payroll increases at a rate of 4% annually in the future, to approximately 49 years, assuming increases at the rate of 6% annually in the future. These are extremely long funding periods and they reflect the very substantial liberalizations enacted in the 1966 session of the General Assembly, as follows:

1. The normal retirement (no discount) age was reduced from sixty-five to sixty.
2. The percentage factor used in calculating benefits based on contributing service was increased from $1\frac{3}{4}$ percent to 2 percent.
3. Forty dollars per year of service was established as the basis for calculating benefits for prior service.
4. Benefits of those teachers retired prior to July 1, 1966 were increased by 10 percent or to \$45 for each year of service, whichever was larger.

5. Effective July 1, 1967, and annually on July 1 thereafter, provision is made for one percent increases in retired teacher benefits.
6. The consecutive service requirement was removed from the calculation of the salary base. The five highest years average now becomes the base.

With our valuation completed, we can echo the recommendation in Mr.

L. C. Cortright's valuation report as of June 30, 1964, as follows:

"It is recommended that the system rest for the present on its merits and accomplishments. It has attained an enviable position in terms of adequacy of the benefit schedule, financial stability and management. It should be permitted to continue its progress and development".

Our conclusion is that there is no room within the present financial structure of the System for liberalization of benefits and further that the State should resume direct appropriations as soon as possible in order to reduce the unfunded liability for prior service.

PART III. AUDIT

The Board of Trustees has for several years employed an independent CPA firm to conduct a biennial audit of the financial condition of the Retirement System. It is the feeling of the members of the Board that the independence of such a firm is of value to them and to the members of the System.

The audit of the fiscal years ending June 30, 1966, and June 30, 1967, was received too late to be included in the Twenty-Seventh Annual Report. Therefore, the balance sheets, statements of receipts and disbursements, certifying letter and certain notes are included herein.

It will be noted that the Auditor has taken exception to the treatment of losses adopted by the Board in connection with certain exchanges which have served to increase materially the overall return to the System. The exception, of course, is a matter of opinion. In any event, however, the whole matter of accounting for losses has been considered by the National Council on Teacher Retirement of the National Education Association and a resolution was adopted recently by that organization asking the American Institute of Certified Public Accountants to review its principles on this matter with the view of revising them insofar as tax exempt public pension funds are concerned.

CHARLES T. MITCHELL COMPANY
CERTIFIED PUBLIC ACCOUNTANTS
TAYLOR BUILDING
FRANKFORT, KENTUCKY
TELEPHONE 227-7395

CHARLES T. MITCHELL, C.P.A.
DON C. GILES, C.P.A.

December 6, 1967

MEMBERS
KY. SOC. C.P.A.
AMER. INST. C.P.A.

Board of Trustees,
Teachers Retirement System of the
Commonwealth of Kentucky
Commissioner of Finance
Commonwealth of Kentucky
Frankfort, Kentucky

Gentlemen:

We have examined the balance sheets and related statements of cash receipts and disbursements of the Teachers Retirement System of the Commonwealth of Kentucky for the fiscal years ended June 30, 1966 and June 30, 1967. Our examination was conducted in accordance with generally accepted auditing procedures and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

During the period under audit the System treated some of the sales on bonds as exchanges or trades, when actually according to generally accepted accounting principles these transactions would have been treated as loss on sale of bonds. The effect of this treatment is to overstate the investment cost, the guarantee fund balance, and understate the loss on sale of investments. The losses which were treated as additional cost of investments were of \$1,710,448.59 and \$511,069.32 for the fiscal years ended June 30, 1966 and 1967 respectively. The losses referred to above are being amortized over the life of the bonds purchased. This in effect spreads the loss over the life of the purchase by reducing interest income in that period. The net result of these transactions is to increase the effective yield on the investment portfolio.

With the exception of the above paragraph, in our opinion, the accompanying balance sheets and related statements of cash receipts and disbursements present fairly the financial position of the Teachers Retirement System of the Commonwealth of Kentucky at June 30, 1966 and June 30, 1967 and the results of operations for the years then ended, in conformity with generally accepted governmental accounting principles applied on basis consistent with that of the preceding years.

Respectfully,

Charles T. Mitchell Company

CHARLES T. MITCHELL COMPANY

CHARLES T. MITCHELL COMPANY
CERTIFIED PUBLIC ACCOUNTANTS
TAYLOR BUILDING
FRANKFORT, KENTUCKY
TELEPHONE 227-7395

January 2, 1968

CHARLES T. MITCHELL, C.P.A.
DON C. GILES, C.P.A.

MEMBERS
KY. SOC. C.P.A.
AMER. INST. C.P.A.

Mr. James L. Sublett
Executive Secretary
Teachers' Retirement System
309 Lewis Street
Frankfort, Kentucky

Dear Mr. Sublett:

It would seem that the best way to answer your inquiry of December 21, 1967, would be to restate the circumstances and to explain our position in specifying an exception to our auditor's certificate for the fiscal years June 30, 1967, and June 30, 1966.

During this two year period under audit, a rather unusual economic situation has developed in the rising interest market. New bond issues have consistently carried a higher interest or coupon rate. To take advantage of a higher overall yield in future years, the Investment Committee of the Teachers' Retirement System has sold lower yield issues at less than cost and reinvested the proceeds in a newer, higher yield issue of apparently similar stability. The overall effect of these transactions is to produce a substantial net increase in income from investments over the ensuing years of the newly purchased issues.

The amount by which cost exceeded sales price, or "loss", on disposal of the old issue has been added to the cost of the newly purchased issue for amortization over the life terms of the new issue. Such a procedure therefore takes this "loss" figure into account over the years and does not establish it as a loss in the year of sale.

Normally, the purchase and sale of a security constitutes a completed transaction resulting in a profit or loss. This is the general conception of the investing public and of any lay reader of your annual report. For this reason we felt compelled to set out the transaction by exception in our certificate.

It is definitely not our opinion that your treatment of the loss is completely wrong accounting wise, nor do we take issue with the fact that such losses occurred. In fact, these were apparently very wise investment changes. We do feel however, that the deferral of some thing over two million dollars of what the average reader would call a loss is unusual enough to warrant our setting out the presentation for separate consideration.

Yours truly,

Charles T. Mitchell

GENERAL COMMENTS

INTERNAL CONTROL

We have reviewed the internal control and accounting system of the Teachers Retirement System. The internal control is found to be excellent in view of the large volume of individual teachers' contributions which must be collected and processed. The accounting system is adequate, but not excessive since individual records must be maintained for each contributing member and each member receiving benefits.

REMITTANCES FROM SCHOOL BOARDS

The accounting system, in regard to remittances from school boards has been changed. The schools boards remit the teachers withholding monthly, however the teachers individual breakdown of withholding is submitted only at year end. At our audit date there were several school boards that had not submitted the individual breakdown of teachers' withholding therefore the individual cards in the teachers savings fund had not been posted for the year ended June 30, 1967. We could not tie the individual teachers cards to the control for teachers' savings. However we did satisfy ourselves by other means.

STATE MATCHING FUNDS

Permanent contributions made by the state to match teachers contributions were the exact amounts set up in the state budget for the two year period under audit. However, for the year ended June 30, 1966 and June 30, 1967, the state contributions lacked \$935,975.38 and \$578,476.96 respectively, matching teachers contributions for these periods. The state made no contributions toward retirement of the prior service obligation for the two year period.

TEACHERS RETIREMENT SYSTEM
BALANCE SHEET
JUNE 30, 1967

ASSETS

Cash-Unencumbered All Funds	\$2 536 951 18	
Cash-Encumbered	<u>1 005 26</u>	\$ 2 537 956 44
Special Reserve Account, Aetna Life Ins Co		194 743 00
Investments (Note 1)		173 433 945 62
Deferred Charges		
Unamortized Premium on Investments	2 657 503 51	
Accrued Interest Purchased	47 722 76	
Sub-Total	<u>\$ 2 705 226 27</u>	
Less: Unamortized Discount on Investments	<u>1 526 548 70</u>	<u>1 178 677 57</u>
TOTAL ASSETS		\$177 345 322 63

LIABILITIES AND FUND BALANCES

LIABILITIES

 Expense Fund Encumbrances \$ 1 005 26

FUND BALANCES (NOTE 2)

Teachers' Savings Fund	\$ 81 678 456 25
State Accumulation Fund	81 120 499 61
Guarantee Fund	10 813 209 30
Voluntary Contributions Fund	499 589 29
Allowance Reserve Fund (Note 3)	782 819 52
Hospital and Medical Insurance Fund	1 150 887 32
Survivor and Death Benefits Fund	<u>1 298 856 08</u>

TOTAL FUND BALANCES 177 344 317 37

TOTAL LIABILITIES AND FUND BALANCES \$177 345 322 63

TEACHERS RETIREMENT SYSTEM
BALANCE SHEET
JUNE 30, 1966

ASSETS

Cash-Unencumbered All Funds	\$ 2 178 262 30	
Cash-Encumbered	<u>7 556 49</u>	\$ 2 185 818 79
Special Reserve Account, Aetna Life Ins Co		125 000 00
Employer Remittances		4 702 15
Investments (Note 1)		149 257 183 61
Deferred Charges		
Unamortized Premium on Investments	\$ 2 285 146 71	
Accrued Interest Purchased	68 783 41	
Sub-Total	<u>\$ 2 353 930 12</u>	
Less: Unamortized Discount on Investment	<u>1 187 032 96</u>	<u>1 166 897 16</u>
 TOTAL ASSETS		 \$152 739 601 71

LIABILITIES AND FUND BALANCES

LIABILITIES		
Expense Fund Encumbrances		\$ 7 556 49
FUND BALANCES (NOTE 2)		
Teachers' Savings Fund	\$ 70 652 559 18	
State Accumulation Fund	70 644 995 49	
Guarantee Fund	6 528 154 73	
Voluntary Contributions Fund	364 764 20	
Allowance Reserve Fund (Note 3)	3 421 420 63	
Hospital and Medical Insurance Fund	464 158 09	
Survivor and Death Benefit Fund	<u>655 992 90</u>	
 TOTAL FUND BALANCES		 <u>152 732 045 22</u>
 TOTAL LIABILITIES AND FUND BALANCES		 \$152 739 601 71

NOTES TO THE BALANCE SHEET

- NOTE 1: Bonds and mortgages are carried in this account at maturity value. Difference between the purchase price and maturity value of bonds are entered as either the "Unamortized Premium" account or the "Unamortized Discount" account, as appropriate. Premiums are amortized to the earliest date of call without penalty; discounts are amortized to the maturity date of the bond. Stocks are carried in the "Investment Account" at cost.
- NOTE 2: Our audit included adjustments of several fund balances to compensate for correcting entries made after the close of the fiscal year under examination. We also included the reserve balance with Aetna Life Insurance Co. as an asset. The preceding statements explain the differences between the fund balances shown in our report and the fund balances shown by the Teachers Retirement System.
- NOTE 3: All benefits paid to retired teachers are channeled through this fund. The Commonwealth of Kentucky is obligated for teachers' service prior to the establishment of the Retirement System. This obligation has been handed in past years by allocation to the System funds sufficient to meet current benefit payments which have not been provided by teachers' savings and matching State Funds, however during the period under audit no state funds were allocated to the System for this obligation. Since the State is supposed to be liquidating this liability on a current basis, the present value of the actuarially computed annuities necessary for payment of benefits to retired teachers is only partially reflected in the Allowance Reserve Fund Balance.

TEACHERS RETIREMENT SYSTEM
STATEMENT OF RECEIPTS AND DISBURSEMENTS
FOR THE FISCAL YEAR ENDED JUNE 30, 1966

CASH BALANCES - ALL FUNDS - JULY 1, 1965 \$ 889 873 84

RECEIPTS

MEMBER CONTRIBUTIONS

Teachers Savings	\$ 11 839 447 87	
Reinstatements	77 594 19	
Voluntary unmatched contributions	<u>109 098 73</u>	
Total from Members		\$ 12 026 140 79

STATE CONTRIBUTIONS

"Permanent" - To Match Teachers'		
Savings	\$ 10 744 110 00	
Administrative Expense	<u>255 890 00</u>	
Total State Contributions		\$ 11 000 000 00
Employer Matching of Teachers Contributions		147 969 24

INVESTMENT INCOME

Interest Income	\$ 5 919 561 04	
Less: Loss on Sale of Investments	<u>(705 241 11)</u>	5 214 319 93

Receipts from Sale on Redemption of Bonds Purchased Interest, and Amortization of Premium		\$ 21 717 771 45
Annuity Checks Returned & Benefit Adjustments		<u>51 623 57</u>
Total Receipts		<u>\$ 50 157 824 98</u>

TOTAL CASH AVAILABLE \$ 51 047 698 82

DISBURSEMENTS

Administrative Expenses - Current Year	235 226 47	
Liquidation of Prior Year Encumbrances	<u>24 222 36</u>	\$ 259 448 83
Refunds for Withdrawal from Membership		1 468 836 40
Premiums for Medical Plan		528 323 07
Retirement Allowance Payments		
Benefits for Service and Disability Retirement	\$ 5 992 847 26	
Voluntary and Survivor Benefit Payments	163 428 14	
Death Benefit	<u>219 500 00</u>	6 375 775 40
Purchase of Investment		<u>40 229 496 33</u>
Total Disbursements		<u>48 861 880 03</u>

CASH BALANCE - ALL FUNDS - JUNE 30, 1966 \$ 2 185 818 79

TEACHERS RETIREMENT SYSTEM
STATEMENT OF RECEIPTS AND DISBURSEMENTS
FOR THE FISCAL YEAR ENDED JUNE 30, 1967

CASH BALANCE - ALL FUNDS - JULY 1, 1966 \$ 2 185 818 79

RECEIPTS

Member Contributions

Teachers Savings	\$ 14 163 257 71	
Reinstatements	152 312 44	
Voluntary unmatched Contributions	<u>155 484 39</u>	
Total Member Contributions		\$ 14 471 054 54

State Contributions

"Permanent" - To match teachers savings	\$ 12 621 657 00	
Administrative Expenses	<u>237 063 00</u>	
Total State Contributions		\$ 12 858 630 00

Employer Matching of Teachers Contributions		942 771 10
---	--	------------

Investment Income		
Interest Income	\$ 6 858 113 36	
Less: Loss on Sale of Investments	<u>(87 035 38)</u>	6 771 077 98

Receipts from Sale or Redemption of Bonds Purchased Interest, and Amortization of Premium		\$ 13 083 798 53
---	--	------------------

Annuity checks returned and benefit adjustments		<u>30 929 31</u>
Total Receipts		<u>\$ 48 158 261 46</u>

TOTAL CASH AVAILABLE \$ 50 344 080 25

DISBURSEMENTS

Administrative Expenses - Current Year	\$ 212 589 63	
--	---------------	--

Liquidation of Prior Year Encumbrances	<u>7 556 49</u>	\$ 220 146 12
--	-----------------	---------------

Refunds for Withdrawal from membership		1 656 926 14
--	--	--------------

Premiums for Comprehensive Medical Plan		387 433 51
---	--	------------

Retirement Allowance Payments		
Benefits for Service & Disability		
Retirement	\$ 7 859 066 40	
Survivor Payments	218 775 38	
Death Benefits	<u>189 000 00</u>	8 266 841 79

Purchase of Investments		<u>37 274 776 26</u>
-------------------------	--	----------------------

Total Disbursements		<u>\$ 47 806 123 81</u>
---------------------	--	-------------------------

CASH BALANCE - ALL FUNDS - JUNE 30, 1967 \$ 2 537 956 44

PART IV. INVESTMENTS

The performance of the Retirement System's investment portfolio continues in a most excellent manner. The yield on the "fixed dollar" portion of the portfolio on June 30, 1968, was 5.065 percent. Few systems in the nation can equal or exceed this rate of return.

If fifty percent of the unrealized capital appreciation on the stock portfolio is included in the computation of yield along with the indicated dividend rate then the overall yield is 5.49 percent. Incidentally this method of reflecting the effect of the stock portfolio on yield is considered a conservative one by most experts in the field.

The excellent investment experience of the System has been an important factor in keeping the System sound and in improving benefits. However, it cannot continue to substitute forever for lack of adequate state financing, particularly financing the liability for prior service.

Such appropriation would permit the use of monies resulting from wise investment management for the welfare of present and future retirants rather than their being used to underwrite existing liabilities.

ANALYSIS OF INVESTMENTS HELD AT JUNE 30, 1968
to show annual yield rate
Teachers' Retirement System of the State of Kentucky

	Percentage of Total	Par Value	Interest Income/Year	Annual Yield
U. S. Treasury Bills & Bonds	1.29%	\$ 2,587,000.00	\$ 109,374.12	4.228%
Obligations Secured by U. S. Treasury	2.31%	4,629,830.38	241,636.25	5.219%
Federal Agencies	2.65%	5,294,000.00	214,970.60	4.061%
FHA & VA Mortgages	20.99%	42,008,330.69	2,151,148.13	5.121%
Other Guaranteed Mortgages	3.30%	6,609,461.32	342,271.72	5.179%
Corporate Bonds	58.48%	117,050,159.51	5,972,679.93	5.103%
School & Municipal Bonds	.31%	620,000.00	25,631.20	4.134%
Kentucky Industrial Development Finance Authority	.73%	1,450,000.00	72,250.00	4.983%
Sub-Total	90.06%	\$ 180,248,781.90	\$ 9,129,961.95	

NET YIELD RATE:

$$\$9,129,961.95 \div \$180,248,781.90 = 5.065\%$$

Not Included Above:

431,477 Shares Common Stocks	9.82%	19,654,403.36
25,000 Shares Preferred Stocks	.12%	241,766.29

TOTAL INVESTMENTS	100.00%	\$ 200,144,951.55
-------------------	---------	-------------------