Twelfth Annual Report

of the

TEACHERS' RETIREMENT SYSTEM

of the

State of Kentucky

1951-52

December, 1952

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FOREWORD

I have the honor of presenting this Foreword for the Twelfth Annual Report of the Teachers' Retirement System. Starting from a very humble beginning your Retirement System has grown and developed into a great service organization, benefiting thousands, and with assets in excess of $22,500,000.

For each 100 active teachers there are six on retirement. Thousands of pupil children have had their aged or disabled teacher replaced by a younger teacher in better health. For the career teacher now retired benefits range from $480 to more than $1,100 and these annuities will increase for others with more years of membership.

Every teacher should realize the value of her prospective equity in this agency, the value of her service credit and the value of her Retirement Certificate. For the middle aged and younger teachers, this equity will range from $15,000 to $25,000; for the older, from $9,000 to $16,000. The answer is, so manage as to not lose your equity in the Retirement System. It is the least expensive and most valuable insurance you can get.

Looking to the future, if Kentucky cannot compete with near states on the matter of teachers' salaries, then it is all the more necessary that it compete on Retirement System benefits. The cost is not prohibitive. The benefits should be doubled and the extra cost met by State and teacher contributions. When the State average for salaries was $895, the maximum retirement benefit provided in the Statutes was $1,000; now the State average for salaries is $2,400 and the maximum retirement benefit is $1,200. Therefore, I suggest that the maximum retirement benefit should be $2,500. With the adoption of a minimum foundation program for education in Kentucky, the benefits of the Retirement System should be greatly increased. In my opinion no system is more efficiently operated or made to serve the teachers more conscientiously.

Do not be led to believe there is a cheap way to provide retirement allowances. Our great insurance companies have found that the reserve plan is the only one that can be depended upon. To meet the obligation of $70,000,000 which will be paid to those of the present State faculty of teachers who continue in the service, there is now in reserve $22,500,000 which means your Retirement System is 32 per cent funded after twelve years of operation. Teachers should give more thought to what their Retirement System means in deferred salaries due after retirement.

This Report was prepared by N. O. Kimbler, Secretary, and Staff. It will be widely read outside of Kentucky; will it be widely read in Kentucky? That depends upon you.

/s/ Wendell P. Butler
WENDELL P. BUTLER
Superintendent of Public Instruction
and Member of the Retirement Board

LETTER OF TRANSMITTAL

COMMONWEALTH OF KENTUCKY

TEACHERS' RETIREMENT SYSTEM

FRANKFORT

Honorable Lawrence Wetherby
Governor of Kentucky
Frankfort, Kentucky
Dear Governor Wetherby:

We have the honor to respectfully submit to you this the Twelfth Annual Report of the Board of Trustees of the Teachers' Retirement System of the State of Kentucky prepared in accordance with KRS 161.320, and covering the period July 1, 1951, to June 30, 1952, the last fiscal year.

The last actuarial valuation of the assets and liabilities, the last balance sheet, accumulated cash and securities of the System, membership, service, withdrawals, deaths, and other pertinent information are all included in this Report in proper form.

The Retirement System is actuarially sound and in excellent financial condition due to your budget recommendations and favorable action by the General Assembly.

Record of the proceedings of the Board of Trustees is maintained in good order, the funds of the System safely invested, and the Law faithfully carried out.

Respectfully yours,
(Signed) Mary J. Maguire
MARY J. MAGUIRE
Chairman, Board of Trustees
(Signed) N. O. Kimbler
N. O. KIMBLER
Secretary, Teachers' Retirement System

TWELFTH ANNUAL REPORT

INTRODUCTION

Each Annual Report covers a new phase of information as well as presents the actuarial and financial condition of the Teachers' Retirement System. Each Report, therefore, should be kept for reference. No retirement system can exist very long unless it is understood by those whom it serves.

Every high school, every administrator's office, every college library in Kentucky, and some others have received a copy of each Annual Report. Teacher groups would do well to study these Reports; not only the current Report but previous issues.

As stated in 161.230, KRS, your Retirement System has the "powers and the privileges of a corporation." The section of the Statutes reads as follows:

"Retirement System; purpose; name.—The teachers' retirement system is established as of July 1, 1940, for the purpose of providing retirement allowances and other benefits for teachers, under the provisions of KRS 161.220 to 161.710. It shall have the powers and privileges of a corporation and shall be known as the "Teachers' Retirement System of the State of Kentucky." Its business shall be transacted, its funds invested, and its cash and securities held in that name."[1]

What does it mean for your Retirement System to have the powers and privileges of a corporation? A little history might help to clear this. In 1914 the New York City Pension Commission was established for the purpose of studying retirement systems (then called pensions) of European countries and England. After the completion of this study the New York City Teachers' Retirement System was established. It was the first in America to require contributions of members and employer to be made on an actuarial reserve basis. Actuarial principles developed in England were followed, but a new idea was added, that of making the retirement system a corporation.

Teachers were very much disturbed because the Brooklyn Retirement System on a pay-as-you-go basis (not reserve) had exhausted its funds. They were, therefore, very anxious that this not happen again; and actuaries and lawyers were trying to find a way that would be secure.

The reasoning was along this line: Suppose a teacher upon accepting her position was required to purchase from a private insurance company an annuity, premium payable monthly, and suppose her employer was required to purchase an annuity of the same amount for her. In such a case the contributions of the teacher and the contributions of her em-

[1] "Board of Education of Louisville v. City of Louisville, et al., 228 Ky. 656. Declares Teachers' Retirement Act constitutional."

ployer (city) would pass monthly into the hands of the private insurance company, which would naturally hold title to funds and securities; out of reach of the city, and out of reach of the legislature. The insurance company would be bound by its contract (policy). The legislature could not take away the money already paid to the insurance company nor dissolve the existing contract made under the Constitution of the United States. This would then provide the ultimate safeguard.

In this way the idea was born to have the legislature establish the retirement system with the powers and privileges of a corporation, and having a Board of Trustees much like that of a corporation. This plan was followed in the establishment of the Kentucky Teachers' Retirement System.

"If the legislature has granted a system the powers and privileges of a corporation so that it is a legal corporate entity and is not a department of the state or of the city, the contributions made by and on account of each teacher which are paid to the corporation in trust to be used for the purpose for which the contributions were made should be kept for that purpose and the teacher and the public have a contractual right to enforce this condition in the courts. If then a teacher and the public have contributed for a period of years and the reserves held on account of the teacher and on account of her fellow teachers happen to be many times greater than the current pension roll, those reserves cannot be used to pay the pensions of any other group nor does the legislature have the right to change the contracts between the teacher and the corporation as far as they relate to contributions made in the past. Of course, the legislature can cut off further contributions and change the benefit based on future service, but it cannot take away the prospective pension benefit of a teacher once she and her employer have purchased it from the corporation."[2]

It cannot too often be said that the full reserve system is not only the least expensive but also the only dependable retirement plan. Too many teachers and other employees do not look beyond the amount of the contribution and the amount of the promised annuity.

A contractural relationship exists between the member (teacher), the Retirement System and the State, and any citizen has recourse in the courts for the full protection of the reserves of the System. The State, through legislative act may at any time modify the retirement law, the value of service credit, and the conditions qualifying for retirement, but it may not destroy the existing rights of individual teachers whether retired or active; neither can a teacher or group of teachers impair the rights of others in the Retirement System. A teacher by the withdrawal of her account can destroy her own rights to prior and other service credit, but she cannot affect the rights of others. The question of "vested" rights is continually being re-defined by the higher courts. Since there are thousands of industrial and public retirement systems the question is of major importance. More and more retirement benefits are

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[2] From a paper prepared by Consulting Actuary George B. Buck, New York City, 1951, and read to the Southern Conference.

being looked upon as **deferred salary**, in both private and public retirement systems. Labor unions negotiate retirement allowances along with wages and it is accepted as a legitimate practice. We say that after thirty years of service in Kentucky a member has a "vested" right to an annuity. A present right of enjoyment or a present right of future enjoyment "vests" in the usual meaning of the word when the right is clearly established. The Retirement Act 161.610 (2) reads as follows:

"Any member who has completed thirty years of service in Kentucky, which service is eligible for credit, and who withdraws from teaching subsequent to July 1, 1950, may refuse to withdraw his deposits and irrespective of age apply for a retirement allowance on July 1 of any scholastic year, but not later than the end of the year in which he attains his sixty-fifth birthday. Such a member shall notify the board of trustees in writing of his intention to withdraw under the provisions of this subsection and shall be deemed to have a vested interest in the retirement funds. The retirement allowance in final amount at age of retirement shall be determined by an actuarial factor equivalent to one at age seventy. Said factors shall be determined by the actuary of the system and approved by the board of trustees. (1950, c. 194; effective June 15, 1950)"

For a half century the courts have been formulating more liberal definitions of what constitutes a vested interest in a retirement plan.

The change is illustrated by two quotations. The first from American Law Reports, annotated, (54 ALR 943) published in 1927 reading as follows:

"The unquestioned rule is that a pension granted by the public authorities is not a contractual obligation, but a gratuitous allowance, in the continuance of which the pensioner has no vested right; and that a pension is accordingly terminable at the will of the grantor."

The second quotation is from 137 ALR 249, published in 1941:

"The traditional rule that a pension granted by public authority, is not a contractual obligation, but a gratuitous allowance, in the continuance of which the pensioner has no vested right, but that it may be terminated at will by the authority bestowing it, is still adhered to, but the number of cases in which its application has been deemed proper has diminished, in comparison with those upholding as vested, at least in a limited sense, rights of beneficiaries under various retirement pay and other plans similar in nature to adjusted compensation and insurance features. The growing number of such cases is, of course, due to the adoption and extension of such systems to greater numbers and groups of employees in all branches of public and semi-public service. It may be observed that the right of a particular employee in a pension must be isolated and determined by scrutiny of the details and provisions of the statute, or plan set up pursuant to statute, under which he claims."

A 1947 decision by the Supreme Court of California, Kern vs. City of Long Beach, (29 Cal. (2d) 848, and 179 Pac. (2d) 799), illustrates the present trend of reasoning on the part of the judiciary. Kern lacked thirty-two days of having twenty years of service credit when the voters of the city abolished the retirement system (Firemens'). The Court acknowledged the right of the city to modify or amend the retirement ordinance but observed that: "It does not follow that an employee may be deprived of all pension benefits by repeal of the statutes without the enactment of a substitute, and no decision has been found holding that an employee's pension rights may be entirely destroyed in this manner."

The implication is, if viewed to its extremity, that any service credit constitutes a vested right, however, this is an extreme view. Here of late courts are applying the "doctrine of promissory estoppel" in many cases arising from repeal or adverse amendment of retirement acts. The Law has long recognized that one who has led another to act in the belief that a certain state of facts exist will not be heard thereafter to assert a different state of facts. A young person coming into the teaching profession and retirement system with the expectation of receiving an annuity at retirement falls into this category. While she does not earn the right to a full annuity, some rights are established when she has rendered substantial service with this belief in mind.

Very few teachers of Teachers' Retirement Systems have found it necessary to defend their rights through the courts, however, it is well for us to have some idea as to how to proceed with such a defense if necessary. For this reason we footnote several cases so that they may be easily found. For these I respectfully acknowledge the assistance of Honorable Robert J. Stahl, Secretary City Employees Retirement System, Los Angeles.[3]

Our great problem is to keep our membership teaching and in good standing. Too many teachers withdraw their accounts and destroy their equity in the Retirement Funds. They do this because they are poorly prepared, feel that they will be dropped from the profession, or because they starve out and must seek employment in some other more lucrative fields. For about 50 per cent of our teachers, teaching is not yet a profession.

STATISTICAL

The experience of a retirement system is reflected in its statistics, and this experience must be considered along with assets in order to determine liability. A mere financial statement does not reveal the true condition.

Table I is a condensation of many additions and losses to the membership.

There are 25,396 active members at this time in age groups as follows: under 25 years of age, 3,555; twenty-five to 39 years of age, 10,412; forty to fifty-four years of age, 8,889; and age fifty-five and older 2,540. There are also 7,478 inactive members who have not taught for three years or more, and an additional 2,256 who have not taught for six years and have lost their service credit. These 2,256 will withdraw their accounts.

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[3] Kern v. City of Long Beach, 29 Cal. (2d) 848, 179 Pac. (2d) 799; Allen v. City of Long Beach, 101 Cal. App. (2d) 15; Allstot v. City of Long Beach, 104 Cal. App. (2d) 441; Hunter v. Sparling, 87 C. A. (2d) 711; American Law Reports, annotated, 137 A.L.R. 249 (1941).

This Table I shows that 24,688 members have received prior service certificates, and 19,926 have received certificates without prior service. Since 1940, 10,775 teachers have taught at least one month but filed no A-1 or A-2 enrollment form. Many of these would have withdrawn their accounts but we have no way to find them since their addresses are unknown until they file the enrollment form or write us. During the year 528 of these filed enrollment forms.

During 1951-52 prior service certificates were issued to 204 members, and 2,262 membership certificates were issued, making a total of 2,466. On a distribution of 1,824 entrants without prior service the average salary was $1,870.90 and the modal age was twenty-one years. Ages from seventeen to sixty-seven are represented. Of the number 30 per cent are men. The average prior service granted was seven years.

Table I shows that 18,011 members have withdrawn their accounts, canceled their service credit during the twelve years. Very few of these ever return to teaching in Kentucky. During 1951-52 only twenty-seven reinstated their accounts and returned to teaching with absence of not more than three years. A study of these withdrawals should be very revealing to the profession.

At this time there are 2,256 members who have been absent for more than six years but who have not withdrawn their accounts. The Retirement Office sends notices to such former members if address is known. The district superintendents have given wonderful cooperation in finding these people. Each month during 1951-52 about 150 such accounts were refunded. In a typical month 161 refunds were made to former members, forty-nine of whom were now living in nineteen states.

TABLE I. MEMBERSHIP 1940-52

	SERVICE RECORDS			Members Without Records Filed	Totals
	With Prior Service	Without Prior Service	Total with Records Filed		
Active Membership	11,681	11,928	23,609	1,787	25,396
Inactice Membership	1,496	1,645	3,141	4,337	7,478
Inactive accounts Membership lost	929	553	1,482	774	2,256
Professional Service Records in force	13,177	13,573	26,750	6,124	32,874
Deceased before Retirement	495	62	557	61	618
Withdrawn	8,465	5,730	14,195	3,816	18,011
Retired	1,622	8	1,630		1,630
	13,177	13,573	26,750	6,124	32,874
	11,511	6,353	17,864	4,651	22,515
Total Accounts Handled 1940-52	24,688	19,926	44,614	10,775	55,389

Table III. Distribution by Ages of 1,824 New Entrants Without Prior Service Who Became Members as of July 1, 1951

Age	Men	S. S. SALARIES Total	S. S. SALARIES Average	Women	S. S. SALARIES Total	S. S. SALARIES Average
17	2	$ 3,144.00	$1,572.00	14	$ 20,579.44	$1,469.96
18	19	27,853.24	1,465.96	69	102,802.41	1,489.89
19	9	13,120.20	1,457.80	116	174,904.80	1,507.80
20	24	40,563.12	1,690.13	113	188,525.81	1,668.37
21	28	56,659.12	2,023.54	176	345,778.40	1,964.65
22	33	68,443.65	2,074.05	116	220,509.20	1,883.70
23	44	89,818.52	2,041.33	59	111,603.22	1,891.58
24	59	125,616.90	2,129.10	46	86,874.68	1,888.58
25	63	130,983.30	2,079.10	35	63,492.10	1,814.06
26	40	83,653.60	2,091.34	24	45,456.96	1,894.04
27	41	87,489.49	2,133.89	22	41,306.32	1,877.56
28	33	68,748.24	2,083.28	19	33,085.84	1,741.36
29	26	55,811.86	2,146.61	20	36,182.80	1,809.14
30	28	70,175.64	2,149.13	27	48,352.68	1,790.84
31	19	40,952.98	2,155.42	29	50,784.51	1,751.19
32	12	25,902.48	2,158.54	23	45,625.79	1,983.73
33	11	21,020.12	1,910.92	25	42,870.00	1,715.20
34	7	15,269.10	2,181.30	17	32,342.67	1,902.51
35	4	7,819.20	1,954.80	13	24,343.67	1,872.59
36	6	12,123.24	2,020.54	27	49,170.78	1,821.14
37	8	17,840.96	2,230.12	35	60,737.60	1,735.36
38	4	8,569.80	2,142.45	32	60,259.52	1,883.11
39	2	4,632.00	2,316.00	24	46,151.76	1,922.99
40	4	7,005.12	1,751.28	24	40,862.40	1,702.60
41	6	13,999.98	2,333.33	16	29,645.76	1,852.86
42	2	4,800.00	2,400.00	23	39,410.50	1,713.50
43	5	10,776.20	2,155.24	19	33,444.56	1,760.24
44	3	6,744.00	2,248.00	13	24,698.57	1,899.89
45	2	3,406.14	1,703.07	14	27,110.68	1,938.62
46	2	3,552.00	1,776.00	11	17,838.92	1,621.72
47	3	5,729.49	1,909.83	8	13,772.96	1,721.62
48	0	00.00	00.00	10	18,021.10	1,802.11
49	2	3,280.00	1,640.00	7	11,833.50	1,690.50
50	1	1,890.00	1,890.00	4	8,600.00	2,150.00
51	1	2,400.00	2,400.00	2	4,684.20	2,340.10
52	0	00.00	00.00	9	18,005.31	2,000.59
53	1	2,048.40	2,048.40	3	5,478.00	1,826.00
54	1	2,400.00	2,400.00	2	3,921.00	1,960.50
55	1	1,575.00	1,575.00	3	5,845.29	1,948.43
56	0	00.00	00.00	2	2,429.04	1,214.52
57	1	1,700.00	1,700.00	2	3,601.80	1,800.90
58	2	2,784.00	1,392.00	4	7,357.00	1,839.25
59	1	1,859.20	1,859.20	0	00.00	00.00
60	0	00.00	00.00	1	1,600.00	1,600.00
61	1	1,075.20	1,075.20	0	00.00	00.00
62	1	1,948.00	1,948.00	1	1,148.00	1,148.00
63	0	00.00	00.00	1	1,929.60	1,929.60
65	1	2,000.00	2,000.00	0	00.00	00.00
67	1	2,375.55	2,375.55	0	00.00	00.00
Totals and Averages	564	$1,159,559.04	$2,055.76	1,260	$2,252,979.15	$1,788.07
	Grand Total—1,824			General Average Salary—$1,870.90		

Table VII. Members Who Have Withdrawn Before Retirement 1940-52

Entrance Age	Members Without Prior Service	Members With Prior Service	PRIOR SERVICE		PRIOR SERVICE SALARY	
			Total	Average	Total	Average
16	10	0	0.0	0.000	$ 000.00	$ 00.00
17	186	5	4.3	.860	2,763.08	552.62
18	691	55	57.0	1.036	29,584.78	537.90
19	755	140	173.4	1.239	74,459.60	531.85
20	737	247	376.6	1.525	146,726.27	594.03
21	948	395	742.0	1.878	258,363.40	654.08
22	746	475	1,060.0	2.232	338,857.64	713.38
23	499	456	1,454.0	3.189	335,339.91	735.39
24	387	570	2,220.7	3.896	417.715.12	732.83
25	382	573	2,521.1	4.400	431,773.54	753.53
26	275	567	2,956.2	5.214	424,995.38	749.55
27	248	551	3,304.2	6.000	428,950.42	778.49
28	194	531	3,500.1	6.592	417,857.13	786.92
29	196	497	3,548.8	7.140	391,100.89	786.92
30	192	529	4,109.5	7.768	441,386.02	834.38
31	145	466	3,718.6	7.980	392,805.34	842.93
32	139	456	3,894.9	8.541	384,288.51	842.74
33	110	401	3,470.7	8.655	337,496.19	841.64
34	117	374	3,493.5	9.341	332,897.55	890.10
35	86	356	3,224.6	9.058	309,655.44	869.82
36	93	284	2,689.1	9.469	267,696.60	942.59
37	77	249	2,427.4	9.749	227,447.32	913.44
38	87	212	1,997.4	9.422	194,968.91	919.66
39	67	189	1,767.6	9.352	163,797.73	866.65
40	69	157	1,566.7	9.979	135,385.98	862.33
41	67	154	1,548.9	10.058	142,473.10	925.15
42	51	135	1,377.1	10.201	116,712.94	864.54
43	40	108	1,150.8	10.656	88,965.84	823.76
44	37	96	979.8	10.206	75,281.49	784.18
45	42	92	1,024.9	11.140	81,611.45	887.08
46	31	81	804.3	9.930	68,131.26	841.12
47	39	63	633.9	10.062	52,173.66	828.15
48	29	59	552.6	9.366	41,275.82	699.59
49	24	63	771.0	12.238	56,189.02	891.89
50	31	66	791.4	11.991	47,138.10	714.21
51	12	48	517.4	10.779	35,233.15	734.02
52	23	42	485.4	11.557	33,262.57	791.96
53	14	40	450.2	11.255	29,657.85	741.44
54	19	27	314.9	11.663	17,858.84	661.43
55	13	39	448.3	11.495	25,307.10	648.90
56	16	29	360.7	12.438	18,879.76	651.02
57	16	34	448.1	13.179	24,553.85	722.17
58	9	18	199.8	11.100	12,972.82	720.71
59	5	18	280.2	15.567	11,962.38	664.57
60	10	19	246.2	12.958	12,545.33	660.28
61	4	14	203.7	14.550	9,624.82	687.48
62	5	14	157.8	11.271	11,613.85	829.56
63	1	12	127.1	10.592	8,002.25	666.85
64	1	5	66.0	13.200	1,934.66	386.93
65	1	8	129.1	16.138	5,644.14	705.51
66	1	0	000.0	00.000	000.00	000.00
67	3	4	90.0	22.500	3,453.84	863.46
68	0	2	45.0	22.500	1,726.92	863.46
69	1	0	00.0	00.000	000.00	000.00
70-74	1	3	98.0	24.500	3,453.84	863.46
Totals and Averages	7,982	10,029	68,581.0	6.838	$7,923,953.40	$790.10

Table VIII. Distribution of 12,480 Members Who Have Prior Service Credit With Attained Age July 1, 1952

Attained Age	Number of Members	PRIOR SERVICE YEARS		PRIOR SERVICE SALARY	
		Years	Average	Total	Average
30	7	6.3	.90	$ 3,265.17	$ 466.45
31	40	47.1	1.18	22,017.00	550.43
32	89	122.6	1.38	49,394.97	555.00
33	149	253.2	1.70	85,910.67	576.58
34	210	454.2	2.16	130,824.53	622.97
35	256	724.3	2.83	165,495.93	646.47
36	289	984.1	3.41	191,483.62	662.57
37	378	1,573.5	4.16	245,684.03	649.96
38	441	2,173.1	4.93	306,543.95	695.11
39	506	2,821.6	5.58	349,178.66	690.08
40	559	3,556.5	6.36	392,764.47	702.62
41	623	4,384.6	7.04	451,019.87	723.95
42	578	4,320.9	7.48	425,496.59	736.15
43	630	5,400.6	8.57	503,950.77	799.92
44	659	6,070.2	9.21	527,223.98	800.04
45	607	5,801.9	9.56	514,527.21	847.66
46	668	6,896.1	10.32	573,197.91	858.08
47	595	6,490.1	10.91	546,509.17	918.50
48	546	6,323.0	11.58	504,471.00	923.94
49	523	6,409.3	12.25	480,446.00	918.63
50	482	6,214.6	12.89	476,152.00	987.87
51	332	4,745.6	14.29	338,237.00	1,018.79
52	366	5,338.0	14.58	379,772.00	1,037.63
53	312	4,570.1	14.65	322,868.00	1,034.83
54	296	4,548.8	15.37	306,593.00	1,035.79
55	230	3,847.6	16.73	226,589.00	985.17
56	235	3,855.4	16.41	248,088.00	1,055.69
57	256	4,454.4	17.40	269,244.00	1,051.73
58	212	3,780.4	17.83	215,564.00	1,016.81
59	204	4,184.3	20.51	233,901.00	1,146.57
60	195	3,670.5	18.82	209,833.00	1,076.07
61	163	3,254.0	19.96	180,608.00	1,108.02
62	139	2,873.8	20.67	157,027.00	1,129.69
63	145	3,055.2	21.07	165,918.00	1,144.26
64	108	2,072.1	19.19	108,843.00	1,007.81
65	88	1,994.6	22.67	96,639.00	1,098.17
66	109	2,387.7	21.91	126,765.00	1,162.98
67	86	1,955.4	22.74	93,297.00	1,084.85
68	70	1,722.3	24.60	77,068.00	1,100.97
69	72	1,808.7	25.12	84,623.00	1,175.32
70	27	648.4	24.01	33,530.00	1,241.85
Totals & Averages	12,480	135,795.1	10.88	$10,820,566.00	$ 867.03

The total loss of membership by withdrawal during 1951-52 was 2,386 members, most of whom had been absent for more than six years.

Our losses by death are not great. Very often there is an absence from teaching during which the member withdraws her account. Deaths before retirement for 1951-52 were sixty-seven members. The causes of death reported by the last physician were: cancer 22, heart disease 21, cerebral hemorrhage 8, kidney disease 3, accidental (auto) 3, ulcers (stomach, duodenum) 2, brain tumors 2, suicide 2, meningitis, peritonitis, pneumonia, leukemia, one each. The number of deaths is typical but the causes may not be typical. There were twenty-one men and forty-six women and the age range from nineteen to seventy, with five the largest number at age forty-one. On the basis of this number of deaths the Retirement Office refunded to beneficiaries approximately $30,000. An annual premium of $3.00 per active member should have provided an additional death benefit of about $1,000 if such a plan had been possible under the present Law.

Table Xb presents the number retired for age and disability, number deceased, and number living on July 1, 1952. There is an increase in total retirements immediately following each change in the Law providing greater benefits. A net of 1,630 members have been retired; an average of slightly over 150 per year. The number retired for disability is above the national average, which is about 10 per cent of the total. Of the whole number retired for disability, approximately 15 per cent are now deceased; of those retired for age, about 20 per cent. Life expectancy for those retiring for disability is so far about the same as for those retiring for age.

Teachers retire from age thirty-nine (disability) to age seventy, a spread of thirty years. This flexibility is needed by the profession and

Table Xb. Annuitants 1942 to 1952 as of July 1, 1952

Year	SUPERANNUATION		DISABILITY			Living at end of year
	Retired	Deceased	Retired	Withdrawn	Deceased	
1942-43	238	16	14	1	1	229
1943-44	96	14	9	0	3	314
1944-45	72	14	6	0	0	377
1945-46	112	33	11	2	1	461
1946-47	142	26	23	1	4	595
1947-48	111	30	16	0	3	689
1948-49	122	26	14	1	2	796
1949-50	126	42	24	1	6	896
1950-51	167	38	35	2	2	1,056
1951-52	129	48	23	2	6	1,152
7-1-52*	131	0	9	0	0	1,292
Totals	1,446	287*	184	10	28	1,292

* Subject to adjustments for notice of death during 1951-52.

is a protection to both pupils and teachers. The average age of retirement is 65.9 years, and the average life expectancy is sixteen years.

Deaths after retirement are slightly higher than the mortality table of the System indicates because of the large number of teachers over seventy retiring in 1942. The oldest retired teacher is about ninety-four;

the youngest, age forty. For a career teacher the retirement allowance ranges from $480 to $1,187. The maximum of $1,200 should be reached by some retiring in 1953-54.

Table VIII is a distribution of all the members having prior service credit. The number and amount of prior service is being reduced annually by withdrawals, deaths, and retirement. Withdrawals have canceled 68,567.6 years of prior service credit and 19,754 years of subsequent service credit. While this relieves the State of a tremendous burden it was anticipated in setting up the System. Every time the General Assembly increases the minimum retirement allowance, the cost of prior service to the State in increased proportionately.

It is not possible to include all significant tables of statistics in any Annual Report. It is suggested that a file of Reports be kept and that the Retirement Office be consulted on recent statistics not given here.

LEGISLATIVE

Social Security, O.A.S.I., has never been a problem for people covered in industrial retirement plans. In the beginning retirement plans were negotiated and the employer provided the financial support. The Bureau of Internal Revenue permits management of industry and commerce (the employer) to take credit for contributions to retirement plans in the same manner as if the expenditure had been for wages and salaries. This reduces income tax and stimulates the building up of reserves for retirement obligations.

With the advent of Social Security, Old Age and Survivors Insurance, the employee was by law required to contribute a percentage of his salary, matched by the employer, to the Federal Government as a tax in support of Social Security. Since this increased the employer's contribution, the employer was naturally interested in making an adjustment which would reduce the contribution formerly paid for the retirement plan. In most cases adjustment was made by subtracting any benefits the employee receives from O.A.S.I. from what he would have received from the industrial retirement plan. This was a fair adjustment, but it did not necessarily increase the benefits to the employee. As the years have passed the impact of full employment and other economic advanvements have made it possible for industrial retirement plans to be improved through negotiation, mainly.

In industrial retirement plans those covered could not hope to gain anything substantial from O.A.S.I.; employees in industry without retirement plans gained a retirement plan and a desirable coverage. There are indeed very few instances in which Social Security was added to the then private retirement plan—in almost every case there was a so called "integration" under which there was an adjustment of benefits in order to reduce the total cost to the employer.

Under state and federal law industrial retirement plans have few controls or restrictions. Representatives of the employer and employees in conference are free to make any changes in the industrial retirement plan that is agreeable to those concerned. They can make no changes in the Social Security Act. If, for example, a certain industrial retirement plan provided for a pension of $100 per month at age sixty-five (before Social Security) after the coming of Social Security it was found the Government would pay the employee $60 per month but that the employer had to pay a tax to the Government for this. So did the employee. In such cases, and there are many of them, it was agreed that the employer would pay for not the full $100 but a reduced amount, taking into consideration the $60 the employee would receive from Social Security.

It was also found that the interest of the employee could be better protected by "joint" contributions toward the industrial retirement plan. This gave the employee a "legal" equity in the reserves and a voice in the management of the industrial retirement plan.

It, therefore, naturally followed that the pension was raised above the original $100 with very little extra cost to the employer. The employees could determine their own pensions by negotiation and a willingness to pay for them. Social Security merely complicated the matter excepting for employees who had no retirement plan or group.

The Federal Government and the leaders of all political parties are committed to a policy of extension of Social Security. The nominee for president in the conservative party is known to favor the extension of O.A.S.I. coverage to an additional 14,000,000 people. Unless the present trend is changed by other than political policy, it is only a matter of time until all citizens of the United States and dependents will be under coverage by Social Security in all its phases. When this comes about, certain health, accident, hospital, unemployment, and other hazards will be added for coverage.

Then the collection of the tax each month can be dispense with and the financial support can come from the U. S. Treasury which will collect the tax as an addition to current income tax.

There wil be further refinements, as for example, varying the benefits according to the purchasing power of the $1.00. The cost of administration of such a Social Security, O.A.S.I., of universal coverage could be greatly reduced; this does not mean the total cost would be reduced.

What are the implications for teachers, Civil Service employees, and others who have coverage under public, state, and municipal retirement systems?

A. First, and of great importance, is the difficulty of integrating a state system with Old Age and Survivors Insurance, under the present laws. If the Kentucky Teachers' Retirement System desired coverage under Social Security, the following procedure would have to be followed: (1) Congress would have to amend the Social Security Act (Public Law 734 as amended) permitting this coverage; (2) The General Assembly of Kentucky would repeal the present Teachers' Retirement Act; (3) The General Assembly and the Court of Appeals would provide a procedure for liquidating the assets of the Teachers' Retirement System to protect, as far as possible, the financial interests and equities of all concerned; (4) The General Assembly would pass enabling legislation and provide for a contract of coverage for the teachers, the contract to be with the Federal Government; (5) A supplemental Teachers' Retirement System would be provided by the General Assembly through legislation.

Compare this hazardous procedure with that of securing O.A.S.I. coverage in a private industrial retirement plan. Congress has power to, and some day will, make it very easy to extend the coverage without disturbing existing systems and their funds. We think all teachers and others with their own public retirement systems should wait until Congress provides a less hazardous way of providing such coverage. Suppose the General Assembly should start on the four (4) steps but become impotent to carry through the program? Present teachers have prospective equities of at least $70,000,000 in their Retirement System. They are not likely to drop or even risk losing this for a chance to gain a coverage of doubtful value to many.

B. Old Age and Survivors Insurance serves a family unit better than a single, unmarried individual. Approximately 80 per cent of our teachers are women and a high percentage of them are unmarried. Those who are married have Social Security coverage by reason of their husband's coverage. Every employed teacher would pay the same tax as though she were the head of a family with a dependent spouse and children. When husband and wife are both employed under Social Security coverage, they each pay the tax, small now but increasing with the years. There is not much incentive for teachers in general to seek coverage under Social Security. There is ample incentive for the married man with children.

C. There is but one retirement age, sixty-five. This arbitrary age for eligibility makes it impractical for the teacher. Many desire to retire earlier or should do so because of physical impairment or disability. Most teachers retirement systems provide for retirement from age thirty-five or forty to age seventy, depending upon the health and circumstances of the teacher. Since July 1, 1950, the Retirement System has retired 522 teachers, 261 of whom could not have retired under O.A.S.I. Seventy-eight were permanently disabled.

D. The contribution put into Social Security would provide better for the teacher if put into her own Retirement System. The cost of providing survivors' benefits, the distinctive feature of O.A.S.I., is not great. It is estimated by the Ohio Teachers' Retirement System that their program of benefits for survivors will cost three-tenths of one per cent even though such benefits are greater than provided by O.A.S.I.

If the Kentucky teachers were under Social Security, the 1952 annual cost at 1½ per cent would be $700,000 for the teachers and $700,000 for the employer. The cost would rise sharply, being twice as great when the contribution tax reaches 3 per cent, although the benefits remain at the present level. When it is remembered that H. B. 93 required only $500,000 from teachers and $500,000 from employer to provide retirement allowances up to $1,800 at age sixty-two, and with retirement privileges with an actuarial equivalent annuity at much earlier ages, the reader should be able to make a fair comparison.

E. Our teachers have been accustomed to think of the reserves guaranteeing the benefits provided after retirement. Old Age and Survivors Insurance is not a reserve system. It has a nice reserve at this time, but there is no policy or law requiring a reserve adequate for more than three years. Teachers will be slow to consent to the dissipation of $22,500,000 now held in reserve in their own Retirement System.

What then should teachers do now with references to their own Retirement System and coverage under Social Security?

1. Build up their own Retirement System through amendments. It will remain flexible, and less expensive than to integrate with Social Security. Become familiar with the present Retirement System and take advantage of all its provisions and options.

2. Do not take the initiative for coverage under Social Security but be prepared to offer a plan of operation, benefits, integration, and management in case the State should decide that teachers should have coverage under O.A.S.I. In Mississippi and in Virginia the State and Boards of Education, as employers, appeared to be more willing to support an integration of their state retirement systems and Social Security. The teachers were permitted to help write the legislation necessary. In this way vested rights were better protected; immediate costs were reduced and the teachers provided with better benefits. In Virginia and in Mississippi the Boards of Education pay the employers' tax on the Social Security coverage.

3. Be smart enough to know where you can get the most for your money. Do not depend upon newspaper releases for scientific information. Do a little investigation and calculating on your own time. The present situation which permits you to retire under Teachers' Retirement and by working six quarters or more under Social Security receive as great a pension as you would receive after years of coverage in Social Security might be better in your case than coverage now, and, also, Old Age Assistance (Welfare) pays as much as O.A.S.I. in Kentucky; twice as well in some states. Retirement systems or annuity plans are all originally individualistic. As such, each member gets the actuarial equivalent of what he and the employer buy by their joint contributions. When survivor and other fringe benefits are added, some will get less than they and the employer pay for. There is nothing unethical about such a plan but at least the member should be wise to it. Originally retirement systems were set up and maintained for the improvement of the service. Teachers' retirement systems were thought to be for the benefit of the pupil children. The idea of welfare was kept in the background, though not lost sight of. Now, with a change of political philosophy "Welfare" has moved into great prominence and the benefits of the retirement system to pupil children are rarely thought of. Our zealousness for "security," the giving of enhanced meanings to catch phrases, a tendency to follow the crowd, a smattering only of information on other retirement plans as well as on one's own particular plan, a feeling that something is being given away and that haste is necessary to get it, lead to confusion and a hysteria which can never serve in the place of sound thinking and considered judgment.

TABLE D, REVISED
(Male and Female Lives)
OPTION I—STRAIGHT LIFE
(Matched and Unmatched; 161.650, 161.705)
AGE, LIFE EXPECTANCY, ANNUITY VALUE, AND DISCOUNT FACTOR, 1937 STANDARD ANNUITY 3% TABLE MODIFIED
Readopted July 1, 1952

Age		Life	Annuity Value	Age
Male	Female	Expectancy	Per $1.00	Factor
	48	30.44	19.03179	.58076
	49	29.61	18.69268	.59130
	50	28.78	18.34964	.60235
	51	27.96	18.00283	.61396
	52	27.15	17.65249	.62614
48	53	26.35	17.29884	.63894
49	54	25.56	16.94204	.65240
50	55	24.78	16.58243	.66655
51	56	24.01	16.22020	.68143
52	57	23.24	15.85566	.69710
53	58	22.49	15.48909	.71360
54	59	21.75	15.12080	.73098
55	60	21.02	14.75107	.74930
56	61	20.30	14.38028	.76862
57	62	19.60	14.00872	.78901
58	63	18.90	13.63677	.81053
59	64	18.22	13.26477	.83326
60	65	17.55	12.89309	.85728
61	66	16.90	12.52211	.88268
62	67	16.25	12.15224	.90954
63	68	15.62	11.78381	.93798
64	69	15.01	11.41726	.96809
65	70	14.40	11.05296	1.00000
66	71	13.81	10.69131	1.03382
67	72	13.24	10.33271	1.06970
68	73	12.68	9.97754	1.10778
69	74	12.14	9.62620	1.14821
70	75	11.60	9.27904	1.19117

The profession, under the leadership of the Department of Education, is exploring the possibilities of a so called Minimum Foundation Program similar to such programs now in effect in several other states. The Retirement Program should be an integral part of any plan for improving teachers' salaries and services in the Public School System. The Retirement System should not be left out of any forward movement. Since on of the alternatives in adding to retirement benefits is Old Age and Survivors Insurance under Social Security, some questions and answers pertinent to the problem are presented. This is by no means a complete coverage of the subject, but additional information can be had from the Retirement Office.

Following the recommendation of the Actuary, the Board of Trustees readopted the basic table of the Retirement System with such modifications as the Actuary's investigation indicated. The Actuary prepared the table in its present form. Ten Options have recently been adopted and appear in the 1952 Handbook, just off the press. This constitutes valuable legislation by your Board of Trustees and is authorized by the Statutes (Retirement Act).

1. Q. Has the Teachers' Retirement System improved during the last ten years?

   A. In 1946 and in 1950 the heart of the Retirement Act was practically rewritten improving the Retirement System. An actuarial study made July 1, 1941, indicated that the then state faculty would become eligible to receive a present worth value of $16,000,000 after retirement; a similar study made July 1, 1951, showed that the then state faculty would become eligible to receive a present worth value of $70,000,000 after retirement. These figures do not include people who will withdraw or die before retirement. They indicate a 400 per cent improvement in benefits. The Assets of the Retirement System amount to $23,000,000 which means that we are building up toward the $70,000,000 at a satisfactory rate and the System is actuarially sound.

2. Q. Where does the Retirement System fit into a Minimum Foundation Program?

   A. Wherever instruction takes place the Retirement System has a direct obligation. Older members of the profession remember that the Retirement System was set up for the purpose of improving instruction and that before we had the Retirement System many teachers continued to teach far past the age of seventy and the age of usefulness.

   Wherever salaries fit into the picture of public school service, the Retirement annuity fits into it also, because the annuity is a deferred salary, provided by the contributions of the teacher, the contributions of the State or employer, plus the interest earned by these two amounts, all of which must be accumulated during the service of the teacher. It is the opinion of your Secretary that teachers should be permitted to write their own Retirement Act, setting the annuity at a level approximating half pay after retirement, and that the teachers should contribute substantially toward the provision of such an annuity and that the State should match their contributions. As the matter now stands, a teacher contributing approximately $1,200 together with his prior service credit is eligible to receive an annuity with a value of approximately $15,000. As the teachers accumulate subsequent service credit and their contributions increase, the proportion will be reduced, but indications are that the proportion should be reduced more than will take place. In some states the teachers contribute as much as 10 per cent to 13½ per cent of salary, limited to $5,000 or $6,000 salary. We believe the teachers of Kentucky would be willing to contribute 6 per cent and have proportionately larger annuities.

Wherever salaries fit into the picture of the Minimum Foundation Program, the teacher annuity should also come in for consideration.

3. Q. What procedure could be followed to tie-up the Retirement Program with the Minimum Foundation Program?

A. Teachers and citizens throughout the State should become more familiar with the Teachers' Retirement System and its costs and benefits. Teachers should formulate the kind of benefits they desire and these should be translated into costs by the Secretary and the Retirement Board.

After the amendment of the Constitutional provisions, which now limit Legislation and appropriations affecting the present school system, Legislation will be required for the purpose of setting up a public school system in the State of Kentucky. In our opinion, this Legislation should include as an integral part of any bill prepared, the improvement of the Teachers' Retirement System so that it might function properly in the field of instruction and supervision.

Legislation should provide a means of financing the Retirement System in such a manner as to make it unnecessary for your Secretary and the Retirement Board to have to secure a direct appropriation every two years. In the matter of securing appropriations we have usually been fortunate, especially since 1948, but we need Legislation which will make it easied for the budgetary needs of the Retirement System to be provided by the General Assembly or by the Commissioner of Finance.

In many states the budgetary needs of the retirement system are not at all made by appropriation, but are approved by the State Treasurer or the Commissioner of Finance. The Teachers' Retirement System is an important part of the educational program of the Commonwealth of Kentucky and it should be treated as such.

4. Q. How may the Retirement System be integrated into the Minimum Foundation Program?

A. (1) By legislation
(2) By providing for the cost of the Retirement annuity along with the cost of each teaching unit, illustrated as follows:
By the State: (These figures are merely assumed)
(a) For the teacher's salary $2,000.00
(b) For her Retirement (6% of $2,400) 144.00

(c) For Building (4% of original cost) 250.00
(d) For transportation (35 pupils) 400.00
(e) For teaching aids 50.00

Total for the unit $2,844.00

By the District:

(a) For the teacher's salary $1,000.00
(b) For her Retirement (6% of $1,000) 60.00
(c) For Buildings (4% of original cost) 250.00
(d) For transportation 300.00
(e) For teaching aids 50.00

Total for the unit $1,660.00

By the Teacher:

(a) For her Retirement (6% of $3,000) ....$ 180.00

These contributions for retirement on the basis of thirty-five years of service and age sixty-five will buy an annuity of $1,836 for women; $2,163 for men. The foregoing may not be practical; it is merely illustrative.

5. Q. Why were all Teachers' Retirement Systems and the Government Civil Service System left out of Social Security when House Bill 6000 was passed?

A. They were left out because people already covered by a Retirement System would find it more satisfactory and less expensive to improve their own Retirement System than to take on the Social Security. In those states (Mississippi and Virginia) where teachers have Social Security, the matching fund is coming from the local Boards of Education or from educational funds provided by the State, and, consequently, the teachers are paying both the contribution tax and the matching fund practically entirely.

Civil Service, one of our oldest and best retirement systems, has opposed going under Social Security all the time, and many of the people who advocate that teachers should come under Social Security, especially those from the Bureau in Washington, are not under Social Security themselves but are under Civil Service.

The money that would be required from the teachers to maintain membership under Social Security would bring better and more flexible benefits if put in their own Retirement System.

The Southern Conference on Teacher Retirement and the National Council on Teacher Retirement strongly recommend that teachers improve their own retirement systems and stay out of Social Security as long as possible. These organizations which have the retired teachers' interests at heart more than any other groups in the United States recommend that if a group of people cannot get anything else, and have no prospect of doing so, they should then try to get under Social Security.

All teachers' retirement systems are set up so as to provide an annuity which is worth what it costs to the individual teacher. Social Security is set up in such a way that unless one has a wife and children he cannot possibly secure in benefits what he pays for in the long run.

Approximately 80 per cent of the teachers in the United States are women and a great many of these are unmarried, and, therefore, would pay into Social Security more than their share. All women teachers who are married have the opportunity to have coverage under Social Security if their husbands work in a job covered by Social Security, and, therefore, could not gain much by being in membership themselves, and the cost to such women would far exceed the benefits they may hope to receive.

Social Security is a welfare proposition and your Teachers' Retirement System is a business proposition. Those who do the best under Social Security do so by luck and not design. The matter of survivors benefits has been greatly propagandized by the Bureau in Washington. It is estimated that such benefits for the teachers of Kentucky would cost not more than three-tenths of one per cent of their salary bases, and, therefore, is a very inexpensive thing. Very few teachers in the past twelve years have died leaving small children, therefore, the cost of such a program would be minor. It is far from sufficient justification for paying Social Security Tax. If there is a need for it, your own Retirement System can provide for the need by amending the Retirement Act and increasing slightly the Retirement dues.

Those teachers who know most about the Social Security Program are the least enthusiastic about it for themselves; those who know the least about the Social Security Program are the most enthusiastic in regard to coverage for teachers. The reason can be stated, but not briefly enough to include here.

6. Q. Through what steps would the Legislature have to go to provid Social Security for the teachers of Kentucky?

A. In the first place the Teachers' Retirement Act would have to be repealed and its present funds distributed so as to, as far as possible, protect the interests of each teacher up to now. This is not a very safe procedure.

After this is done, the Legislature would pass an enabling act authorizing some state official to sign a contract with the Social Security Bureau bringing the teachers under Social Security. This is a very dangerous procedure and only those states in a "desperate" situation will undertake to carry it out. There are not many in a "desperate" situation. In our judgment, not more than eight states will ever bring the teachers' retirement systems under Social Security unless they are forced to do so. It is entirely possible that at some time in the future the Civil Service Retirement System and the teachers' retirement systems will be forced under Social Security because the tax they will pay will be quite considerable, and, especially the teachers, will never be able to receive back in the long run as much as they put into it because many teachers do not represent a family unit with wife and children.

7. Q. What then should teachers do with reference to their own Retirement System and coverage under Social Security?

A. (1) Build up their own Retirement System through amendments. It will remain flexible so that teachers may retire from about age forty to age seventy, and this building up will be less expensive than integration with Social Security. Become familiar with the present Retirement System and take advantage of all its provisions and Options.

(2) Do not take the initiative for coverage under Social Security, but be prepared to offer a plan of operation, benefits, integration, and information in case the State should decide that teachers should have coverage. In Mississippi and in Virginia, the State and Boards of Education as employers appeared to be more willing to support an integration of their state retirement systems with Social Security. The teachers were permitted to help write the Legislation necessary. As it turns out, however, many teachers feel that the funds for matching their contributions are coming out of funds which would otherwise be used for salaries. Many teachers in Virginia are not too happy about the situation; but in Mississippi they did not have much any way and Social Security with a supplemental retirement system is better than what they had.

(3) There is nothing that will take the place of factual knowledge with reference to the operation of your own Retirement System, and factual knowledge with reference to the operation of the Social Security Program. The details of Social Security have never been made available through the Press, nor have any of its provisions which are not laudable. For example, we do not hear about the people who have been paying Social Security since 1938, a period of fourteen years, and upon death have a death benefit of say $120. Or the widow who has a child and who is receiving Social Security, but who finds that she must work, and if her salary is more than $75 per month, her Social Security is stopped. There are a great many items in the plan that should be studied.

An unmarried member under Social Security would from age twenty to age sixty-five have an accumulated account of $6,581 (at present reduced rates and 2½ per cent interest), and in case of death at age sixty-five her estate would receive $232.50 as a death benefit. In your Retirement System her estate would receive $6,581, the accumulated account. Also, this teacher would be eligible for an annuity at age forty if disabled; at age fifty or older if she wanted to retire. Her retirement annuity would be $1,200 at age sixty-four and she could retire and work under Social Security for eighteen months and receive just about as much as if she had been under Social Security for forty-five years. In either case her Social Security benefit would be $930.

8. Q. What is considered an adequate Retirement allowance?

   A. Half pay at time of retirement, age sixty-five to seventy, is considered an adequate Retirement allowance.

9. Q. How many and what Options are available to teachers retiring in Kentucky?

   A. There are five Options under the regular matched program and five Options under the voluntary contribution program available to retiring teachers in Kentucky. This is the most complete set of options available in the United States, and members of the profession should become more acquainted with their provisions.

10. Q. Recently someone said Kentucky has two Retirement Systems for its teachers. Would you explain this statement?

   A. Everyone is more or less familiar with the Kentucky Teachers' Retirement System under which the member's contribution is matched by the State, and the member's prior service is paid for entirely by the State. The State further guarantees to provide the money to pay the annuity in case the member's contribution, the matching fund, and the interest are not sufficient.

   Section 161.705, Kentucky Revised Statutes, provides that any member of the Retirement System may build up a separate reserve, consisting of her contributions, plus 3 per cent compound interest, for the purpose of buying an additional annuity at retirement. Since the contribution of the member under the regular matched program is limited to her percentage on $2,400, this provides an excellent opportunity for the member to pay a percentage on her salary in excess of the $2,400, or upon her gross salary, or any other amount she may desire. The voluntary unmatched phase of the System leaves the initiative to the teacher and leaves her absolutely free to deposit any amount she desires at any time before retirement. Small amounts cannot be accepted, and deposits cannot be deducted on the pay roll for the teachers. Deposits are sent directly to the Retirement System, her account is credited, and receipt is returned. The interest is accumulated at 3 per cent compounded annually.

A Board of Education may also make a contribution for its teachers, and this is to be not less than 2 per cent of the member's annual salary for the purpose of buying additional annuity. Kentucky has the most excellent plan here of any of the states.

A few teachers are taking advantage of it, and it is not unusual to receive a check for $50 to $100, or more, to go into a teacher's unmatched account. Those interested should write the Retirement Office for procedures and estimates.

11. Q. Does Kentucky give credit for service in other states?

A. Kentucky will accept for credit eight years of service performed prior to July 1, 1940, and eight years of service performed after that date, provided the teacher has not destroyed this right by withdrawal or by leaving the profession in Kentucky after July 1, 1946. Those who have served in the public schools and teachers' colleges of other states should write the Retirement Office in regard to having such service accepted for credit.

The State pays the arrearages on the service prior to July 1, 1940, and the teacher pays the arrearages on the service after July 1, 1940, and these arrearages are matched by the State.

12. Q. Is the State giving the Retirement System adequate support?

A. During the preceding four years the State contributed to the Retirement System $8,600,000. During the present biennium the State will contribute to the Retirement System $4,348,220. According to actuarial calculations these contributions are fully adequate. The teachers' contributions for 1952-53 will be about $1,500,000.

13. Q. Is the Retirement System turning any money back to the teachers in refunds and annuities?

A. During the year 1952-53 the Retirement System will pay to withdrawing, deceased, and retired teachers approximately $1,000,000. The average amount paid or refunded by reason of death is at this time about $450; the amount refunded to withdrawing teachers last year was in excess of $275,000. Annuities for career teachers at this time range from $480 to $1,187, and the average for those retiring at age sixty-five or older is approximately $700. This average will increase as members accumulate more subsequent service credit before retirement.

14. Q. What can we say in recruiting young teachers?

A. We have not used the Retirement System as a means of recruitment as we should have done. The young teacher coming into the profession at age twenty-three, and all present teachers under the age of thirty-five, will be eligible to receive an annuity of $1,200 by age sixty-four. Those retiring at that time in a normal length of life will receive from the Retirement System approximately $21,000. This equity will cost the teacher less than one-third of the amount she will receive, interest making up a large part of the cost. In other words, the value of the Retirement System to such teachers is approximately $500 for each year of service credit; for example, if a teacher's salary is $2,400 and the increase of her equity in the Retirement System $500, she is really getting $2,900 a year, less her contribution for retirement. This will apply in every salary range where the final salary will be $2,400.

If we consider that it would take investments of $40,000 in 3 per cent bonds to yield an income of $1,200 a year, we can begin to estimate the value of the Retirement System to the young teacher. The matter of the tax on the annuity is also important as the tax on securities would be quite substantial. There is no state or local tax on a teacher's annuity and on the Federal Income Tax Return the teacher may deduct a sum equal to the total amount she has paid into the Retirement System before applying the Federal Tax factor.

15. Q. When does a teacher have a vested interest in the Retirement System?

A. The courts are more liberal in the matter of protecting the teacher's interests in her retirement system than ever before. The trend is toward protecting the teachers under the assumption that the Retirement System has had some influence in causing her to remain in the teaching profession.

It is well established that if a teacher has thirty years of service credit, that is if a teacher is eligible for an annuity, then this annuity must be paid during her lifetime regardless of any other conditions.

We would say that any teacher who has attained the age of sixty and who has twenty years of service credit has a vested interested in the Retirement System as long as she continues to teach; and, any teacher any age who has thirty years of service credit has a vested interest, with or without further service.

16. Q. What is the difference between a 2½ per cent annuity system and a 3 per cent annuity system?

A. Suppose a teacher enters service at age twenty-five and teaches to age sixty-five. Her deposits and the State's matching fund will receive interest each year. Assuming her average contribution will be $88 per year; under a 2½ per cent system there would be accumulated $11,682.40; under a 3 per cent system there would be accumulated $13,668.16, an increase of $1,805.76. It is obvious $13,668.16 will buy a larger annuity than $11,682.40.

In any annuity system (reserve) the interest should provide approximately one-half the total cost of annuities. That is why it is cheaper than a pay-as-you-go plan. The present annual interest income of your retirement System is $528,000; for the twelve years $2,578,525. This saves the taxpayer and the teacher money. In the long run the cost of an annuity in your System will be borne as follows: ¼ State's contribution; ¼ teacher's contribution, and ½ from interest. That is why we struggle so to build up the reserves.

The Retirement Board and staff are alert to every possibility for improving the Retirement System. Their perspective is broadened by a view of all the teachers, young and old, in the Retirement System and by what is being done in other states. The Mississippi Plan, the Virginia Plan, the Ohio Plan, etc., are well understood in your Retirement Office and guidance can be provided. Decisions will not be made arbitrarily by your servants here, and for that reason much responsibility rests upon the teachers and their leaders.

The alternative to coverage in O.A.S.I. is to strengthen the present Retirement System. It will cost less to strengthen it to approximately half pay than to maintain the Social Security coverage.

ACTUARIAL

In the beginning, 1940, the Actuary recommended that the Retirement System adopt The 1937 Standard Annuity Mortality Tables, which was done. An evaluation of the System was made each year, but after ten years it was thought best to compare the experience of the System with the death, withdrawal, and retirement rates of The 1937 Tables in order to determine whether changes should be made. The Retirement Office provided the Actuary with the following tables of statistics: (1) Active members, entrance age; (2) Active members, attained age; (3) Withdrawals, entrance age; (4) Withdrawals, age at withdrawal; (5) Deceased before retirement, entrance age; (6) Deceased before retirement, age at death; (7) Living retired teachers, entrance age; (8) Living retired teachers; age at retirement; (9) Living retired teachers, present age; (10) Deceased retired teachers, entrance age; (11) Deceased retired teachers, age at retirement (12) Deceased retired teachers, age at death. All tables showing number of men and number of women. Tables were made for those retiring for disability, but they were included with those retiring for age.

The Actuary made a thorough and painstaking study and issued a fifty page report which is on file for the guidance of the Retirement Board. The report cannot be entered in full, but excerpts follow.

ACTUARIAL CONCEPTS

"Prefatory to a discussion of the procedures followed in this study and of the results of this survey, it will be of interest to review the principles governing a retirement system since they involve certain fundamental factors and forces that are interactive and must be thoroughly understood in order to fully evaluate the results of an analysis of the operating experience of the system over the past years.

"The financial condition of a retirement system is fundamentally and basically related to the mortality and separation experience of the active membership thereof, and the mortality experience among those of the membership who have retired. The forces are interactive because a change in the death rates or withdrawal rates while in active service will affect the present value of retirement benefits, provided no other change occurs that will produce counter effect. Cost of pension benefits therefore are basically dependent upon these forces.

"The rate of interest used in calculating the liability for retirement allowances is of basic importance. A dollar invested at 3 per cent will provide more in pension benefits than one invested at a lower rate. Thus, a dollar invested at 3 per cent will pay $2.00 worth of benefits at the end of 23 years and $3.00 worth of benefits at the end of 37 years; whereas at 2 per cent a dollar will pay $2.00 worth of benefits at the end of 35 years and $3.00 worth of benefits at the end of 55 years. The earning power of money, if invested from the time received until used to pay a benefit, is a potent factor in pension calculation. It is important not to underestimate the effect of interest increments, particularly when the time element is of long duration, as is the case in a retirement plan.

"Two other factors appear in a study of a retirement system that are also of basic importance and have significant effects upon its condition; these are age and sex. The age at which a member enters the system is an inherent factor because a young entrant will make many more payments to the fund, or cause them to be made for him, than an older entrant. In addition, since the period of service of a young member from date of entrance to retirement will be greater, contributions by him, or in his behalf, will earn interest over a longer period of time. The age at which retirement becomes effective is important because a lower retirement age will increase the cost of retirement allowancs. It is obvious that a benefit to begin at an advanced age will cost less than the same benefit which begins at a younger age, other conditions being the same.

"The effect of sex on a retirement system is important. Diverse physiological, psychological and economic differences govern actions of the two sexes. Thus, marriage is a contributing factor in the withdrawal rate of young women. That women live longer than men is apparent from a study of mortality tables. Hence, for equal benefits and equivalent ages more money is required to pay such benefits to women than to men. Stated in another way, the same value will provide larger benefits to men than to women. Certain psychological and economic differences produce different retirement rates. Thus, women tend to retire on disability allowances at the middle ages faster than men, and generally beyond age 60, women tend to retire on service retirement allowances faster than men. Men at advanced ages no doubt continue in active service for economic reasons.

"The financial condition of a retirement system is not determined merely by ascertaining the assets built up in the past, the liabilities on account of pensions already granted and the liability to members for their personal contributions in the past. The determination of a retirement system's financial condition relates also to the future, and, in some respects, rather far into the future. Forecasting the future is, therefore, a factor in ascertaining the financial condition of a retirement system, as with insurance companies. Forecasting the future of a retirement system differs materially from that of an insurance company, however. An insurance company relies upon a single decrement mortality table embodying the influence of death among its insured lives. In the case of a retirement system, it is not only a mortality table such as is developed by an insurance company from policyholder experience upon which it must depend. Retirement studies, in contrast to comparable insurance studies, involve the preparation of a multiple decrement Service Table containing factors pertaining not only to the rates of death but also to the rates of withdrawal from active service, the rates of disability, and the rates of retirement.

"In a forecast of the future the actuary relies upon certain well defined analytical processes. These processes consist of, first, a complete census of all members and pensioners, from which a large volume of statistical data is derived. These data are then properly and carefully tabulated in such form or forms as to reveal the effect which certain factors or forces have produced in past operation. As indicated above, these factors are primarily as follows: the rate of death in active service, the rate of death for pensioners, rate of withdrawal from active service, and the rate of superannuation and disability retirement. Assuming that these factors or forces will continue to operate in the future substantially as in the past, the rates for the future are based upon the rates for the past. It is appropriate at this point to refer to the fact that the statutes governing retirement systems require periodic valuations. This requirement introduces safeguards because, under such a policy, revisions can be made in the light of all past experience of the system reflecting changes in economic, financial and social conditions.

" . . . It is immediately apparent that the number of deaths actually experienced by the System has been lower than contemplated under the originally assumed standards and that the female mortality rate currently experienced is decidedly more favorable than the male experience. The currently calculated rates of mortality for females are so favorable, in fact, as to cast a shadow of doubt as to their dependability.

"Therefore the mechanics and circumstances surrounding the reporting of statistics to the System were studied and reviewed to ascertain whether or not they were free from abnormal factors or condtions. The question of whether deaths were as faithfully reported among female

ACTUARY'S TABLE I

Rates of Mortality Among Active Members in Comparison With Assumed Standard

Age	Graduated Rates of Mortality Among Active Members: Male	Graduated Rates of Mortality Among Active Members: Female	Originally Assumed Rates of Mortality: Female	Age	Graduated Rates of Mortality Among Active Members: Male	Graduated Rates of Mortality Among Active Members: Female	Originally Assumed Rates of Mortality: Female
18	.00148	.00020		45	.00279	.00186	.0056
19	.00151	.00022		46	.00287	.00203	.0059
				47	.00298	.00216	.0062
20	.00154	.00027	.0022				
21	.00159	.00032	.0022	48	.00310	.00234	.0065
22	.00161	.00034	.0022	49	.00327	.00250	.0069
23	.00163	.00039	.0023				
24	.00166	.00042	.0024	50	.00342	.00270	.0073
				51	.00367	.00290	.0078
25	.00169	.00044	.0025	52	.00383	.00310	.0083
26	.00172	.00049	.0026	53	.00411	.00337	.0089
27	.00176	.00052	.0027	54	.00443	.00356	.0097
28	.00179	.00058	.0028				
29	.00182	.00066	.0029	55	.00475	.00384	.0106
				56	.00507	.00408	.0116
30	.00186	.00072	.0030	57	.00565	.00435	.0130
31	.00190	.00075	.0031	58	.00621	.00475	.0148
32	.00193	.00079	.0032	59	.00693	.00506	.0169
33	.00197	.00083	.0033				
34	.00202	.00090	.0034	60	.00771	.00556	.0193
				61	.00857	.00615	.0219
35	.00205	.00097	.0035	62	.00968	.00672	.0248
36	.00209	.00101	.0036	63	.01088	.00747	.0280
37	.00213	.00112	.0038	64	.01227	.00826	.0315
38	.00219	.00117	.0040				
39	.00227	.00123	.0042	65	.01352	.00915	.0355
				66	.01599	.01018	.0398
40	.00233	.00132	.0044	67	.01738	.01127	.0446
41	.00240	.00141	.0046	68	.01913	.01257	.0500
42	.00248	.00148	.0048	69	.02110	.01415	.0560
43	.00261	.00160	.0050				
44	.00273	.00172	.0053	70	.02312	.01602	.0633

members as among men was carefully investigated. A trend peculior to the female members of the System seemingly made itself manifest. While deaths were faithfully reported among the active members, there was a marked tendency among female members toward separation by withdrawal just prior to death. This tendency materially affected the death rate among female members so as to make it appear that the mortality rates were more favorable than they would have been except for the privilege of withdrawal. It was concluded, therefore, that the actual deaths were understated and that dependable conclusions could not be reached without due weight being given to the rates of withdrawal and their seeming influence on the female mortality rates.

"It will be noted that at the earlier ages the current withdrawal rate among females has been higher than the corresponding withdrawal rate among males, but as age advances the trend reverses itself. By applying the originally assumed rates to the exposures for the past eleven years, the expected number of withdrawals amounted to 10,366 among females; 3,585 among males. The actual number of withdrawals resulting from the application of the new current withdrawal rates was found to be 11,194 among females and 4,002 among males. The actual withdrawals, therefore, are higher in number than the expected withdrawals according to the original asumptions. As has been pointed out in previous actuarial reports, higher actual withdrawals as compared with the expected withdrawals result in a favorable margin of safety in the operation of the System. It would seem prudent, therefore, that, at least for an additional period of time in the future, this margin of safety be continued . . . "

"Combined Mortality and Withdrawal Rate Comparisons

"The tabulation below shows comparisons indicating the results, in the aggregate, after applying both the originally assumed and current rates of death and rates of withdrawals on a combined basis to the exposures over the past eleven years. The total number of deaths and withdrawals resulting are set out for direct comparison. These comparisons, made separately for males and females, show results strikingly close in the aggregate, and give added credence to the indication that a longer period of operation, logically, should be established before the acceptance of the separate current rates of mortality and withdrawal as a basis for the calculation of Monetary Functions and Actuarial Factors for use in the preparation of financial statements in periodic valuations and cost analyses.

"Combined Deaths and Withdrawals

	By Application of Assumed Rates			By Application of Current Rates		
	Number of Deaths Ages 20 to 70	Number of Withdrawals Ages 20 to 56	Total	Number of Deaths Ages 20 to 70	Number of Withdrawals Ages 20 to 56	Total
Female	1,147	10,366	11,513	322	11,194	11,516
Male	421	3,585	4,006	219	4,002	4,221

ACTUARY'S TABLE II

Rates of Withdrawal Among Active Members in Comparison With Assumed Standard

Age	Graduated Rates of Withdrawal Among Active Members		Originally Assumed Withdrawal Rates
	Male	Female	Female
18	.0095	.0070	
19	.0162	.0100	
20	.0213	.0235	.0765
21	.0272	.0478	.0857
22	.0331	.0634	.0906
23	.0446	.0733	.0934
24	.0463	.0756	.0953
25	.0509	.0764	.0960
26	.0539	.0765	.0960
27	.0573	.0762	.0948
28	.0600	.0747	.0918
29	.0616	.0724	.0878
30	.0625	.0695	.0828
31	.0634	.0657	.0766
32	.0639	.0623	.0698
33	.0641	.0593	.0620
34	.0641	.0568	.0530
35	.0640	.0544	.0427
36	.0636	.0523	.0292
37	.0631	.0503	.0205
38	.0624	.0482	.0154
39	.0617	.0461	.0120
40	.0607	.0443	.0096
41	.0593	.0425	.0081
42	.0563	.0408	.0067
43	.0552	.0393	.0057
44	.0532	.0378	.0048
45	.0509	.0362	.0040
46	.0487	.0350	.0033
47	.0462	.0335	.0027
48	.0439	.0321	.0023
49	.0419	.0309	.0018
50	.0401	.0297	.0015
51	.0379	.0285	.0012
52	.0366	.0276	.0009
53	.0352	.0264	.0007
54	.0339	.0254	.0005
55	.0326	.0245	.0003
56	.0313	.0236	.0002
57	.0298	.0227	
58	.0287	.0219	
59	.0273	.0211	
60	.0262	.0202	
61	.0248	.0195	
62	.0236	.0188	
63	.0223	.0181	
64	.0211	.0173	
65	.0197	.0168	
66	.0182	.0160	
67	.0167	.0154	
68	.0154	.0147	
69	.0141	.0141	

ACTIVE SERVICE TABLES

"The Active Service Tables, set forth in the appendix of this Report as "Table V" for men and Table VI" for women, were constructed by bringing together the graduated mortality rates derived from the experience of the active members; the graduated withdrawal rates; and the graduated rates of superannuation and disability retirement. These various rates of separation from active service were applied to an assumed radix of one million active members, and the group were traced through the age range until the last surviving member was separated from the group by the effects of these separation rates.

. . . "A careful perusal of the current Active Service Tables gives ample assurance that by their extension and use the present value of future benefits and present value fo prospective contributions would result in a Valuation Balance Sheet substantially in agreement with the last previous Actuary's Report on the Valuation of the System as of June 30, 1951, made on the basis of the originally assumed standards adopted by the System in 1941. New Monetary Functions and Actuarial Factors have not, therefore, been prepared as a part of this study.

Comparisons, in the aggregate, of the current mortality, withdrawal and retirement rates with the corresponding rates originally assumed, indicate the wisdom of continuing the use of the Monetary Functions and Actuarial Factors originally prepared for the use of the System until a longer period of time has elapsed to fully and more reliably warrant the preparation of such functions based upon the System's own experience."

. . . "The computed Rates of Mortality among all pensioners retired since the inception of the System are presented in Table IV. In this table are also presented, for comparison, rates of mortality according to the 1937 Standard Annuity Table for male lives, the 1937 Standard Annuity Table for female lives, and the latest published Mortality Table known as "The 1941 Commissioners Standard Ordinary Mortality Table" for male and female lives combined.

"This table, likewise, can be read in terms of the number of deaths per thousand exposed to the risk of death by merely moving the decimal point three places to the right. An analysis of this table shows that the rates of mortality actually experienced among the superannuation and disability pensioners compare favorably with the rates shown in the table in use by the System, namely, the 1937 Standard Annuity Table for female lives.

"Among the retired teachers, the expected deaths according to the standard originally assumed are less than the actual deaths, which is a favorable trend. Where the actual death rates, and the corresponding number of deaths, are larger than the expected according to the assumed standard, the calculated liabilities based upon the assumed standard contain a margin of safety. . . ."

ACTUARY'S TABLE IV

Graduated Rates of Mortality Among Annuitants in Comparison with Standard Annuity Tables

Age	Guaranteed Rates of Mortality Among Annuitants	The 1937 Standard Annuity Table	The 1937 Standard* Annuity Table	The 1941 C.S.O. Mortality Table	Age	Guaranteed Rates of Mortality Among Annuitants	The 1937 Standard Annuity Table	The 1937 Standard* Annuity Table	The 1941 C.S.O. Mortality Table
	Male and Female	Male	Female	Male and Female		Male and Female	Male	Female	Male and Female
50	.02258	.00929	.00636	.01232	75	.05881	.06046	.04176	.08864
51	.02381	.01002	.00686	.01327	76	.06522	.06508	.04498	.09602
52	.02456	.01081	.00740	.01430	77	.07258	.07003	.04844	.10399
53	.02522	.01165	.00798	.01543	78	.07998	.07535	.05217	.11259
54	.02589	.01257	.00861	.01665	79	.08814	.08105	.05617	.12186
55	.02645	.01355	.00929	.01798	80	.09723	.08716	.06046	.13185
56	.02745	.01461	.01002	.01943	81	.10691	.09371	.06508	.14260
57	.02812	.01576	.01081	.02100	82	.12072	.10072	.07003	.15416
58	.02872	.01699	.01165	.02271	83	.13000	.10823	.07535	.16657
59	.02922	.01832	.01257	.02457	84	.14655	.11626	.08105	.17988
60	.03071	.01975	.01355	.02659	85	.15711	.12484	.08716	.19413
61	.03125	.02130	.01461	.02878	86	.17412	.13400	.09371	.20937
62	.03191	.02296	.01576	.03118	87	.19177	.14379	.10072	.22563
63	.03256	.02475	.01699	.03376	88	.21345	.15421	.10823	.24300
64	.03322	.02668	.01832	.03658	89	.25758	.16532	.11626	.26144
65	.03381	.02875	.01975	.03964	90	.33578	.17714	.12484	.28099
66	.03451	.03099	.02130	.04296	91	.50000	.18971	.13400	.30173
67	.03520	.03339	.02296	.04656	92	.61200	.20306	.14379	.32364
68	.03585	.03598	.02475	.05046					
69	.03668	.03876	.02668	.05470	95		.24806	.17714	.39621
					97		.28352	.20306	.54826
70	.03833	.04176	.02875	.05930	98		.30578	.21722	.72467
71	.04071	.04498	.03099	.06427	99		.33184	.23220	1.00000
72	.04382	.04844	.03339	.06966					
73	.04814	.05217	.03598	.07550	102		.43892	.28352	
74	.05352	.05617	.03876	.08181					

* Originally adopted for use by the system for both male and female annuitants.

"SUMMARY AND CONCLUSIONS

"The theoretical approach to the study, as well as the technical and mechanical methods used, were first narrated in the foregoing actuarial analysis and survey, in the hope that the subsequent treatment of the rates of mortality and rates of separation from active service by withdrawal and retirement, and the rates of death among the annuitants on the pension roll, would be more clearly understood. Individual treatment was then given to the multiple decrements that manifest themselves with respect to the active membership of the System. These decrements were the Rates of Mortality, the Rates of Withdrawal from Active Service with refund of contributions, and the Rates of Retirement. The multiple decrements affecting the active membership were then combined into an Active Service Table for men and an Active Service Table for women. Following this treatment of the active members of the System, the experience among annuitants appearing on the pension roll was analyzed. The death rates among pensioners were analyzed and compared with recognized existing standards as well as with the originally adopted table in use by the System.

"The results of the analysis respecting the active membership indicate one conclusion while the survey of the annuitants on the pension roll presents another and quite different conclusion.

"The analysis of each of the individual decrements affecting the active members of the System points to the conclusion that a longer period of experience should be established before the preparation and adoption of new Monetary Functions and Actuarial Factors to replace those heretofore adopted and in use by the System. It is recommended, therefore, that the Rates of Death, Withdrawal, Disability, and Retirement, together with the corresponding Monetary Functions and Actuarial Factors adopted for use by the System in 1941, applicable to female teachers only, be continued in use for an additional period of from three to five years in the periodic valuations of the Assets and Liabilities of the System with respect to the active members. By following this recommendation, the desired margins of safety, to which reference has been made in the body of the Report, will be maintained for the next few crucial years.

"However, the conditions brought to light in the study of superannuation and disability pensioners indicate the advisability of a slight modification in the treatment of annuitants as they appear upon the pension rolls for the next few years. The System has not had a long enough period of operational experience to make it advisable, at this time, to prepare annuity tables based upon the System's own experience. Yet, with respect to the annuitants, it is recommended that the existing differentials by reason of sex be recognized and different values used, both in the calculation of annuities and in the valuation of the pension obligations. This can best be accomplished, at this time, by the adoption of the 1937 Standard Annuity Table applicable to male lives and the continuation of the use of the same table applicable to female lives.

New Annuity Factors and Discount Factors have already been furnished to the System to replace those heretofore in use. They contemplate the adoption of this recommendation.

"It is suggested that this recommendation be continued until the next Actuarial Analysis and Survey is undertaken by the System. Since the amount of a pension is now measured by a fixed formula in the law, geared to years of service and age 70, and has been measured in terms of the 1937 Standard Annuity Table applicable to female lives, the effect of this recommendation will be to increase the annuities payable to male pensioners. While the calculated costs of pensions will not increase by this change, the savings to the System, heretofore enjoyed because male annuitants received the same pensions as female annuitants, will be forfeited.

"Two additional elements, prescribed in the law for investigation, are of basic importance in a study of this kind. They are earnable interest and compensation. Since one of these elements, namely, earnable interest, enters directly into the determination of Monetary Functions and Actuarial Factors, both will be treated in the next actuarial investigation and analysis to be made after further experience has been developed by the System.

"The results herein reported reflect a thorough and painstaking analysis of the operation of the System and a study of the many factors that influence its activities. It is hoped that this Report will be found satisfactory and informative, and will prove helpful to the Board of Trustees in the formulation of its future policies and in furthering an understanding of the System.

"Respectfully submitted,
/s/ L. C. Cortright
L. C. Cortright
Actuary"

VALUATION BALANCE SHEET—July 1, 1952

The assets of the System are divided into two categories; Current Assets, consisting of the cash and securities now held by the System, and Deferred Assets, consisting of a present worth value of the contributions of members and the State made as required by the Statutes.

In the accompanying table Current Assets amounting to $22,808,131.07 were in hand on July 1, 1952. The Deferred Assets represent the future receipts of the System reduced to a present worth value as of July 1, 1951.

The total Liabilities of the System include annuities due retired teachers and those who will retire from the group now in service.

"VALUATION BALANCE SHEET—July 1, 1952

(On basis of assumed retirement at age 65)

ASSETS

Current Assets		
Cash, 6-30-52	$ 399,296.85	$
Accounts Receivable	14.17	
Bond Investments, 6-30-52	22,300,000.00	
Unamortized Premium, less discount, 6-30-52	89,222.16	
Accrued Interest on Bonds Purchased, 6-30-52	312.50	
Office Furniture and Equipment, 6-30-52	19,285.39	
		22,808,131.07
Net Current Assets		$22,808,131.07
Deferred Assets: (Present Value on 3% interest assumption, etc.)		
(1) Present Value Teachers' contributions mandatory by reason of Subsequent Service, 6-30-51 (A')		$17,696,981.63
(2) Present Value State's contributions mandatory by reason of Subsequent Service,, 6-30-51(A")		17,696,981.63
(3) Indicated deficiency from members' future contributions (no covering provisions in Act)		4,798,845.83
Deferred Assets mandatory by reason of Subsequent Service		$40,192,809.09
(4) **Actuarial Reserve Deficiency:**		
Deferred obligations of the Commonwealth of Kentucky. Present Value Accrued obligation mandatory by reason of Prior Service, 6-30-51		
Active Members	$ 5,244,425.68	
Members eligible to retire	1,405,304.12	$ 6,649,729.80

(5) Current Assets Deficiency:		
Present Value of Accrued Prior Service Obligation Due Retired Teachers, 6-30-51	$ 5,548,763.16	
Less: State's P. S. Contributions, 6-30-52	2,370,796.54*	
Net **Allowance Reserve Fund** Deficit		3,177,966.62
Deferred Assets mandatory by reason of Prior Service		$ 9,827,696.42
TOTAL ASSETS		$72,828,636.58

*See discussion of Allowance Reserve Fund.

VALUATION BALANCE SHEET—July 1, 1952

(On basis of assumed retirement at age 65)

LIABILITIES

Current Liabilities		
Accounts Payable, 6-30-52		$ 5,721.35
Reserve for Voluntary Constributions		1,857.13
(1) Expense Fund Balance, 6-30-52		19,298.25
(2) Teachers' Savings Fund Balance Accumulated Contributions by reason of Subsequent Service, 6-30-52		9,571,499.38
(3) State Accumulation Fund Balance Accumulated contributions (State) by reason of Subsequent Service, 6-30-52		9,571,501.38
(4) Allowance Reserve Fund Balance, 6-30-52. Retired teachers' S. S. contributions with accumulated interest	$ 29,198.00	
State S.S. contribution for retired teachers with accumulated interest.	143,379.50	
State's P.S. contribution, Retired teachers with accumulated interest	2,370,796.54*	2,543,374.04
(5) Guarantee Fund Balance, 6-30-52		1,094,879.54
Current Liabilities		$22,808,131.07
Deferred Liabilities: (Present Value on 3% interest assumption, etc.)		
(6) Present Value Benefits mandatory by reason of Subsequent Service Active members, 6-30-51 (B')		39,993,496.00
(7) Present Value Benefits mandatory by reason of S.S., members eligible to retire 6-30-51 (B' ")		199,313.09
Deferred Liabilities mandatory by reason of S.S. (B' plus B' ")		$40,192,809.09

(8) Present Value Benefits mandatory by reason of Prior Service, 6-30-51 Active Members (B)		$ 5,244,425.68
Members eligible to retire (B")		1,405,304.12
(9) Present Value Benefits mandatory by reason of Prior Service—Retired Teachers (B' "') 6-30-51)	$ 5,548,763.16	
Less: State's Prior Service Contribution, 6-30-52	2,370,796.54*	
		3,177,966.62
Deferred Liabilities mandatory by reason of Prior Service		$ 9,827,696.42
TOTAL LIABILITIES		$72,828,636.58

*See discussion of Allowance Reserve Fund.

FINANCIAL

Great effort has been made to build up the several funds of the Retirement System, to invest to the best advantage under the restrictions of the Law, to handle each member's account accurately, and to help each teacher to receive her equity in an annuity when she is eligible to do so.

At the time of the writing of this Report the Assets of the Retirement System exceed $23,000,000 and the prospective assets $72,000,000. This represents an actuarially sound financial condition and a retirement plan which could be of more service to the teachers and children of the State if all the teachers would learn something of the provisions of the Law. Unless the teacher's situation, and condition, are reported to the Retirement Office, her interests cannot be served.

It is the policy of the Retirement Board to make the office a service organization and more than a banking and investment medium. Sixty thousand pieces of mail go out and as much comes in during a year. Much of this carries personal information to the membership. Last year, 1951-52, thirty-three teachers paid contributions while on deferred retirement; 40 while on military leave; 78 under leave granted by the local unit; 27 reinstated withdrawn accounts; seven paid under Section 161.516; 20 paid arrearages on out-of-state service; 47 taught part of the year and paid for a full year; 119 paid direct contributions to correct errors, and 55 sent personal checks with the regular pay roll reports. Many more teachers should have taken advantage of the liberal provisions of the Law to accumulate service credit and keep intact consecutive service.

Excepting for military and out-of-state service, contributions should be paid during the year for which credit is desired. We respectfully urge every Superintendent and college President to help any teacher whose service is interrupted to learn her status and rights under the Retirement Act.

The major Financial Statements are included in this Report.

GENERAL BALANCE SHEET
TEACHERS' RETIREMENT SYSTEM

June 30, 1952

ASSETS

Current			
Cash		$ 399,296.85	
Deposit: U. S. Post Office		12.86	
Underpayments		1.31	
Total			$ 399,311.02
Investments (Schedule I)			
Investments (Par)		22,300,000.00	
Unamortized Premium		171,931.95	
Accrued Interest Purchased		312.50	
Unamortized Discount		—82,709.79	
Total			$22,389,534.66
Fixed			
Office Equipment			19,285.39
Total Assets			$22,808,131.07

LIABILITIES AND FUND BALANCES

Current			
Encumbrances (Schedule V-A)		$ 5,718.04	
Overpayments		3.31	
Total			$ 5,721.35
Fund Balances			
Expense Fund		$ 19,298.25	
Teachers' Savings Fund		9,571,499.38	
State Accumulation Fund		9,571,501.38	
Allowance Reserve Fund			
Teachers Contributions	$ 29,198.00		
State Cont.—Perm.	143,379.50		
State Cont.—Temp.	2,370,796.54		
Total		2,543,374.04	
Guarantee Fund		1,094,879.54	
Voluntary Contributions Fund		1,857.13	
Total			22,802,409.72
Total Liabilities and Balances			$22,808,131.07

GENERAL STATEMENT OF RECEIPTS AND DISBURSEMENTS TEACHERS' RETIREMENT SYSTEM

July 1, 1951, to June 30, 1952

Cash Balance, July 1, 1951			$ 289,354.59
Receipts (Schedule II)			
Teachers Savings	$1,411,231.57		
Reinstatements	4,290.75		
Teachers Voluntary Cont.	1,850.00		
Net Irregular Payments	—4.09		
Total		$1,417,368.23	
State Contributions—Per.	$1,411,227.48		
State Contributions—Temp.	169,104.04		
State Contributions—Exp.	60,220.00		
Special Refunds Adjust.	—551.52		
Total		1,640,000.00	
Net Interest Earned	528,127.92		
Bond Premium Amortized	7,717.22		
Accrued Interest Amort.	19,908.24		
Total		555,753.38	
Expense Fund Balance—1950-51		290.32	
Total Receipts			3,613,411.93
Total Cash			$3,902,766.52
Disbursements			
Administrative Expenses (Sch. V)			
Salaries	$ 44,947.12		
Other Current Expenses	9,624.73		
Payment on Prior Yr. Enc.	807.15		
Transferred to SAF-Temp.	290.32		
Total		55,669.32	
Refunds—Schedule III			
Refunds of Annuitants Deceased	$ 2,803.83		
Refunds—Regular	269,676.52		
Refunds—Special	551.52		
Refunds—Interest	2,474.90		
Total		275,506.77	

Retirement Allowances Paid—Sch. IV.			
Superannuation	$ 513,810.22		
Disability	57,528.38		
Total		571,338.60	
Investments—Sch. I			
Securities (Par)	$2,650,000.00		
Accrued Interest Pur.	18,889.22		
Discounts Received	—67,934.24		
Total		2,600,954.98	
Total Disbursements			3,503,469.67
Cash Balance, June 30, 1952			$ 399,296.85

CONDENSED ANALYSIS OF CHANGES IN FUND BALANCES TEACHERS' RETIREMENT SYSTEM

July 1, 1951, to June 30, 1952

Fund Balances, July 1, 1950			
Expense Fund			$ 19,077.13
Teachers' Savings Fund			8,275,178.73
State Acumulation Fund—Per.			8,275,184.82
Allowance Reserve Fund			2,679,124.97
Guarantee Fund			875,257.97
Voluntary Contributions Fund			.00
Total			$20,123,823.62
Additions—Sch. II			
Teachers Savings	$ 1,411,231.57		
Reinstatements	4,290.75		
Teachers' Voluntary Cont.	1,850.00		
State Cont.—Per.	1,411,227.48		
State Cont.—Temp.	169,104.04		
State Cont.—Exp.	60,220.00		
Net Interest Earned	528,127.92		
Spec. Refunds Adjustments	—51.52		
Total Additions		$ 3,585,500.24	

Deductions			
Administrative Expenses—			
Sch. V, V-A ....$	59,998.88		
Refunds—Sch. III	275,506.77		
Retirement Allowances			
Paid—Sch. IV	571,408.49		
Total Deductions		906,914.14	
Net Addition			2,678,586.10
Total Fund Balances—			
June 30, 1952			$22,802,409.72
Fund Balances, June 30, 1952			
Expense Fund		$ 19,298.25	
Teachers Savings Fund		9,571,499.38	
State Accumulation Fund		9,571,501.38	
Alowance Reserve Fund			
Teachers Cont. ....$	29,198.00		
State Cont.—Per.	143,379.50		
State Cont.—Temp...	2,370,796.54		
Total		2,543,374.04	
Guarantee Fund		1,094,879.54	
Voluntary Contributions Fund		1,857.13	
		$22,802,409.72	$22,802,409.72

SCHEDULE II
RECEIPTS
TEACHERS' RETIREMENT SYSTEM
July 1, 1951, to June 30, 1952

Date	Teachers Savings Regular	Rein-statements	State Cont. Permanent	State Cont. Temporary	State Cont. Expense	Interest and Profit	Total Receipts
1940-42	$ 957,772.20	$ 77.55	$ 957,802.52	$	$ 41,902.81	$ 29,091.52	$ 1,986,646.60
1942-43	559,626.66	105.00	559,672.98	68,007.63	22,317.03	62,976.31	1,272,705.61
1943-44	546,311.99	492.73	546,161.42	79,205.38	24,633.20	79,202.93	1,276,007.65
1944-45	646,738.13	1,532.32	646,559.38	126,531.94	25,908.68	115,572.02	1,562,842.47
1945-46	657,957.16	1,710.26	658,004.24	133,605.33	31,390.43	163,671.56	1,646,338.98
1946-47	867,521.73	2,868.82	867,222.82	52,737.51	36,039.67	180,529.08	2,006,919.63
1947-48	1,010,250.24	2,027.34	867,231.00*	52,359.59	36,409.41	221,023.20	2,189,300.78
1948-49	1,105,134.30	537.41	1,247,770.36	2,626,751.50	41,059.78	318,688.22	5,339,941.57
1949-50	1,181,924.12	1,049.89	1,181,930.62	252,845.26	43,396.76	429,361.89	3,090,508.54
1950-51	1,251,317.46	4,002.05	1,251,314.36	326,763.14	52,324.68	399,979.09	3,285,700.78
1951-52	1,411,231.57	4,290.75	1,411,227.48	169,104.04	60,220.00	528,127.92	3,584,201.76
	$10,195,785.56	$18,694.12	$10,194,897.18	$3,887,911.32	$415,602.45	$2,528,223.74	$27,241,114.37

*Appropriation insufficient to match.

SCHEDULE IV

RETIREMENT ALLOWANCES PAID

TEACHERS RETIREMENT SYSTEM

July 1, 1942, to June 30, 1952

Year	CAUSE OF RETIREMENT		FUNDS FROM WHICH PAID			Per Cent for P.S.	Total
	Super-annuation	Disability	TSF	SC—Per.	SC—Temp.		
1942-43	$ 62,439.36	$ 1,426.56	$ 15,791.10	$ 15,215.22	$ 32,859.60	51.45%	$ 63,865.92
1943-44	80,688.98	2,260.49	9,363.05	8,345.75	65,240.67	78.66%	82,949.47
1944-45	101,452.30	2,862.12	14,120.62	11,527.58	78,666.22	75.41%	104,314.42
1945-46	129,761.78	3,703.69	24,296.95	13,686.44	95,482.08	71.54%	133.465.47
1946-47a	200,903.68	13,430.52	39,159.38	28,118.53	147,056.23	68.61%	214,334.20
1947-48	234,185.94	17,893.88	37,891.27	31,348.35	182,840.20	72.53%	252,079.82
1948-49	267,246.96	20,763.60	44,459.44	29,902.32	213,648.80	74.18%	288,010.56
1949-50	306,232.13	24,918.44	57,466.56	36,823.79	236,860.22	71.53%	331,150.57
1950-51b	464,259.93	50,970.99	88,592.56	66,228.19	360,410.17	69.95%	515,230.92
1951-52	513,880.11	57,440.38	83,881.48	68,091.54	419,435.47	73.42%	571,408.49
	$2,361,051.17	$195,758.67	$415,022.41	$309,287.77	$1,832,499.66	71.67%	$2,556,809.84c

a) Minimum allowance raised to $10 per year of service credit not to exceed 30 years.
b) Minimum allowance raised from $10 to $16 per year of service credit.
c) 16.66% paid by retired teachers and 83.34% paid by the State.

COST OF ADMINISTRATION
TEACHERS' RETIREMENT SYSTEM

July 1, 1940, to June 30, 1952

Year	Receipts of State Accumulation Fund	Administrative Expense	Per Cent 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	36,113.58	3.93%
1947-48	919,490.57	36,409.41	3.96%
1948-49	1,247,770.36	41,059.78	3.29%
1949-50	1,434,612.86	43,348.09	3.02%
1950-51	1,577,787.18	52,324.68	3.32%
1951-52	1,581,696.02	58,303.98	3.69%

NOTE: For 1948-49 the permanent and temporary contributions of the State to the State Accumulation Fund amounted to $3,874,568.74. The State Auditor based his percentage on the permanent contribution only.

N. O. K.

AUDITOR'S TABLE I

TEACHERS' RETIREMENT SYSTEM
GENERAL BALANCE STATEMENT

Assets:		
June 30, 1949	$15,156,863.24	
June 30, 1950	17,680,426.98	
June 30, 1951	20,124,465.24	
June 30, 1952	22,808,131.07	
Reconciliation:		
General Balance Statement June 30, 1952		$22,808,131.07
Encumbrances		(5,721.35)
Total		$22,802,409.72
Cash Balance—Per Office Records		$22,802,409.72

AUDITOR'S TABLE II

TEACHERS' RETIREMENT SYSTEM
SCHEDULE OF INVESTMENTS

AS OF JUNE 30, 1952

Name and Description	Par Value	Unamortized Premium	Unamortized Discount	Accrued Interest
U. S. Defense Bonds				
Series G	$ 2,950,000.00	$	$	$ ....
U. S. Treasury Bonds:				
2½% Series A—1915	250,000.00	....	....	....
2½% June 15, 1964-69	250,000.00	....	....	....
2½% March 15, 1965-70	1,100,000.00	....	12,063.22	....
2½% March 15, 1966-71	950,000.00	....	14,871.22	312.50
2½% June 15, 1967-72	1,950,000.00	1,342.50	15,255.00	....
2½% December 15, 1967-72	3,850,000.00	3,997.76	40,520.40	....
2¾% Series B—1975-80	11,000,000.00	166,591.69	....	....
Total Par Value	$22,300,000.00			
Total Unamortized Premium	171,931.95	171,931.95	....	....
Total Unamortized Discount	(82,709.79)	....	82,709.79	....
Total Unamortized Interest	312.50	....	....	312.50
Total Invested	$22,389,534.66	$	$	$ ....

Average Net Yield 2.613%

AUDITOR'S TABLE III

TEACHERS' RETIREMENT SYSTEM
EXPENSE FUND
SOURCE AND APPLICATION OF FUNDS

July 1, 1951, to June 30, 1952

Cash Balance, June 30, 1951		$ 1,097.47
Receipts Allotments		60,220.00
Total		$61,317.47
Disbursements:		
Office Equipment Purchased	$ 222.98	
Actuary Expense	1,675.00	
Trustees Expense—Meetings	262.33	

Trustees Expenses—Elections	846.10	
Fidelity Bonds	112.05	
Equipment, Repairs and Service	557.86	
Medical Expense	210.00	
Miscellaneous Expense	57.85	
Office Supplies	472.25	
Postage	1,677.42	
Printing and Materials	1,219.03	
Salaries—Regular	44,265.68	
Salaries—Extra	681.44	
Social Security Tax	482.78	
Telephone and Telegraph Expense	307.83	
Travel Expense	1,521.25	
Total Expense	$54,571.85	
Payments on Prior Year Encumbrances	807.15	
Transfer to State Accumulation Fund—Temporary	290.32	
Total Disbursements		$55,669.32
Cash Balance, June 30, 1952		$ 5,648.15
Expense Fund Balance Sheet, June 30, 1952:		
Cash	$ 5,648.15	
Deposit—U. S. Post Office	12.86	
Office Equipment Inventory	19,285.39	
Total		24,946.40
Liabilities and Fund Balance:		
Encumbrances	$ 5,648.15	
Expense Fund Balance (In Equipment)	19,298.25	
Total		$24,946.40

Frankfort, Kentucky
October 30, 1952

"Honorable Lawrence Wetherby
Governor of Kentucky
Frankfort, Kentucky

Dear Governor Wetherby:

"We submit herewith report of our audit of the Teachers' Retirement System of the State of Kentucky, for the year ending June 30, 1952.

"This examination was made by D. H. Starnes, under my supervision."

"Respectfully yours,
/s/ T. H. Tinsley
"T. H. Tinsley
Auditor of Public Accounts"

"COMMENTS OF AUDITOR

"We have examined the records of the Teachers' Retirement System for the fiscal year ending June 30, 1952.

"A review of the Control and accounting procedure reconciles all accounts with those of the Finance Department and the State Treasury.

"Balances at the beginning of the year; receipts; disbursements, and balances at the end of the year are in complete reconciliation, in the records on file in the Teachers' Retirement System, the Finance Department and the State Treasury Department.

"The investment bonds are in the custody of the State Treasurer, and the amount reconciles with the records of the Teachers' Retirement System.

"Individual Teachers' accounts are set up and maintained in such manner that any member may ascertain the amount of accumulation at any time.

"It is our opinion that all funds referred to the Agency are duly accounted for and the fund accumulations are carefully invested.

"The bonds held by the System show that all investments are in U. S. Government Securities and at present the par value of all bonds is $22,300,000.00, yielding a return of 2.613% interest per annum.

"The administration expense of operation in the current year was 3.32% of the State Accumulation Fund. This is indicative of good management on the part of the Teachers' Retirement System Board, and the Secretary and his aides, in executing the Boards adopted policies.

"This percentage of administration cost is well below the 4% of this fund, as provided in Kentucky Revised Statutes, Section 161.420."