Thirteenth Annual Report

of the

TEACHERS' RETIREMENT SYSTEM

of the

State of Kentucky

1952-53

November, 1953

CONTENTS

BOARD OF TRUSTEES

RETIREMENT OFFICE STAFF

FOREWORD

As a member of the Board of Trustees of the Retirement System for eighteen months, I have observed its growth in popularity, usefulness, and financial strength, as few people are privileged to do.

I have just participated in the approval of the retirement and annuities of 128 members, who will receive during their retired life approximately $1,000,000 in monthly checks. Several of these retiring teachers are disabled and at comparatively early ages; many have completed their 30 years of service and are retiring about age 50 years. The whole age range was from 40 to age 70. The assurance that on the last day of every month, come what may, their check will be received is a measure of the value of the Retirement System.

It is doubtful that the teachers really know what their Retirement System is worth to them. As of now, the assets in cash and securities amount to $26,400,000, an increase of $3,230,000 over last year after paying back to teachers over a million dollars last year. The estimated value of service credit now in force exceeds $75,000,000. The teachers of the State, therefore, have in real and prospective benefits, to mature as they retire, at least $100,000,000.

Let every teacher, therefore, do everything possible to support the Retirement System for humanitarian as well as selfish reasons against all proposals to substitute something else for it, to do away with it for any reason, or to hamper its operation and management.

When the Foundation Program gets under way, it will give impetus to further improvement of the Retirement System, toward which every teacher should give of her time and influence.

To give up such a Retirement System for Social Security would be, in our judgment, the height of folly and a great financial loss; to integrate it with Social Security, the breeding of problems, dissatisfaction, greater costs, and lower returns on the average, as is already being observed in some states where this has happened. If Social Security comes, let it come as a separate proposition, not in any way connected with or affecting your Retirement System. You will make the decision.

/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 Thirteenth Annual Report of the Board of Trustees of the Teachers' Retirement System of the State of Kentucky, prepared and submitted in accordance with K.R.S. 161.320, and covering the period July 1, 1952, to June 30, 1953, 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.

We close the year in a sound financial condition, having met current obligations in excess of one million dollars, and, having maintained the reserves at the level required by accumulating service credit. According to present outlook, we will not be able to do this during the ensuing year but we hope to recoup any necessary amount the following year. We earnestly solicit your continued help and support. Our Budget Requests will be as low as possible.

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

THIRTEENTH ANNUAL REPORT

INTRODUCTION

Each Annual Report presents a new phase of the vast store of information and literature in this field. A chronological listing of amendments to the Teachers' Retirement Act is presented here, in a nontechnical manner.

The first State Teachers' Retirement Act was known as the Porter-Rayburn Act and it was passed in 1938 (1st ex. 3, c.1) to become effective July 1, 1940.

The legislation met with some opposition in the State Senate and was mutilated considerably by amendments weakening the coverage. At the regular session of the General Assembly in 1940, the Act of 1938 was amended to make it more nearly conform to the Bill as originally introduced, and one million dollars was appropriated to activate the Retirement System for the biennium 1940-42. No teachers were to be retired before July 1, 1942, and the year 1940-41 was designated a prior service year. In the 1940 Act the qualifications of the Secretary were made more rigid.

The Board of Trustees was made responsible for making investments and was forbidden to hold in cash more than the receipts for one year. The value of service was made dependent upon the ages 60 years, 65 years, and 70 years, and the maximum retirement allowance was set at half pay, or $1,000, whichever was the smaller. The average of teachers' salaries in 1940 was $895. The maximum for many teachers was less than the present (1953) minimum for 30 years of service any age. (1940, c. 192, p. 742).

Major Amendments, 1946. No additional amendments were made to the Retirement Act until 1946. By that time the average salary for teachers was $1,535.35, and inflation had reduced the value of annuities granted. Also, there were certain defects making their appearance and various needs revealed by the operation of the System.

It was evident that the contribution based upon entrance age, and which was usually 2%, and a maximum salary of $2,000, even when matched and supplemented by the State, could not give the support needed. In 1946, the General Assembly redefined subsequent salary making the maximum $2,400, and amended the Act so that the members (teachers) would pay 3% upon attaining age 30, and 4% upon attaining age, 40, and thereafter. (1946, c. 111, sec. 3). The maximum annuity was set at $1,200. In order to increase the annuities (retirement allowances) in accordance with this increase of funds and to give an annual increase in the value of service credit, the General Assembly repealed Section 4506b-43 (1940, c. 192, p. 742) and enacted Section 161.620 (1946, c. 111, par. 4) providing the desired improvements. This amendment provided for a mortality-interest (3%) table with age factors fixing the annuity at the amount which the reserve "will purchase as of the actual age of retirement".

The reserve was found by calculating the annuity as though the member were age 70; and then the age factor applied.

Upon the employment of an actuary at the beginning of operations of the System, The 1937 Standard Annuity Table was adopted for the evaluation of the System and other uses. From this basic table age factors were derived for women and were used for men and women alike until July 1, 1952.

The annuity for retirement for disability was to be found in the same manner excepting the age factor for age 60 was to be used instead of the age factor for the actual age of the retirant. (1946, c. 111, sec. 5).

The minimum retirement allowance (annuity) was set at $300 for 30 years of service, and a proportionate amount for less than 30 years. (1946, c. 111, sec. 4). A special appropriation of $212,000 was made for this.

It was in 1946 that the reciprocity feature of the Retirement System was enacted (161.515). Many teachers have found this provision of the Law very satisfactory and very fair in their respective cases. Almost all members having performed service in other states, now have service credit for it in Kentucky. There are some restrictions, the most important of which is that a teacher cannot leave Kentucky after July 1, 1946, and then upon returning to Kentucky receive credit for such out-of-state service. (1946, c. 111, sec. 2). The amendment also provided for the continued membership of teachers transferring to teach in the penal and welfare organizations of the State. (1946, c. 102).

Amendments of 1948. At this session of the General Assembly, Junior Colleges organized and operated under K.R.S. 161.160 and 165.260 were admitted to coverage in the Teachers' Retirement System. Three options were made available to the then faculties of the institutions so as to not work any undue hardship on any teacher.

At this session, much attention was given to the matter of making the Retirement System actuarially sound, and in order to do so, the Governor recommended that the General Assembly appropriate over and above the usual biennial appropriation $2,439,606.64 for that purpose. The System has remained in a sound financial condition since.

Amendments of 1950. Amendment was made to 161.610 adding Section 2, permitting a member with 30 years or more of Kentucky service credit to retire at any age with an annuity, or to wait until age 65 to request an annuity. This section also provides that members with 30 years or more of Kentucky service credit have a "vested" interest in the Retirement's Funds. (See Twelfth Annual Report.) A number of teachers are retiring and asking for their annuities at very early ages, such as 49 years, 51 years, and so on. In order to carry out the provisions of this amendment, there must be in force an age factor table derived from the mortality-interest table in effect by the System. Under the Act before this amendment, no teacher could retire for superannuation before age 60. The annuity, therefore, must be reduced in accordance with the age at which it begins, by use of an actuarial factor to comply with K.R.S. 161.620 as well as other sections of the Law. (1950, c. 194).

The minimum was also increased from $300 for 30 years or more of service credit **to $480, effective July 1, 1950. Applications for retire-**

ment previously filed were reviewed and the annuity increased for all retired teachers affected by this amendment. The General Assembly made an extra appropriation of $250,000 to take care of the increase for ensuing biennium. (1950, c. 78, sec. 1).

For those retiring for disability, amendment of K.R.S. 161.600 removed the age requirement. It has previously been 50 years. This enables members to retire for disability, if disabled in the meaning of the Law, as early as age 38 or 39 years. The only requirement is that they shall have taught in Kentucky in a covered position for 20 years, with the last five years immediately prior to retirement. The liberalizing of this section appears to meet the needs of the membership reasonably well.

The important provisions under which members may deposit voluntarily, extra contributions, not matched by the State, was passed by the General Assembly in 1950. It is a new section, 161.705, K.R.S. This amendment is especially helpful in case a comparatively young teacher wants to deposit in the fund more or less regularly $50 or $100, etc., per year in order to build up a reserve for an additional annuity by means of the deposits and interest, which is 3% compounded annually; or an older teacher who prior to retirement wants to convert real property, securities, or other assets into an annuity. At time of retirement the extra annuity is calculated by means of the mortality-interest table in use by the System. A reasonable number of teachers are taking advantage of this provision of the Law. More will do so as they become accustomed to the routine. Under this amendment, a member may provide as large an annuity as is desired, or as personal resources will permit. Boards of Education may under this amendment contribute funds for the purpose of providing larger annuities for their teachers.

Amendments, 1952. Two amendments were passed by the General Assembly in 1952. Section 161.640 was amended so that annuities could be paid in monthly payments instead of quarterly payments. This has proved to be expensive to the funds of the System, but it is acknowledged by all that it is a convenience to the annuitants, and should be done.

The other amendment, a new subsection, K.R.S. 161.600 (2), provides that retired teachers may do "substitute" teaching for not more than 30 days in any scholastic year. In many instances this has been a help in getting teachers during short illness or absence of the regular teacher. There has been little abuse of the Law.

Rules and Regulations. It has been necessary for the Board of Trustees, by authority of K.R.S. 161.310, to establish rules and regulations from time to time for the interpretation of the Law, adoption of tables, and the guidance of the administration of the Retirement System. Upon adoption of Rules and Regulations, attested copies are filed with the Statutes Revision Commission, and are published by the State in the Administrative Code.[1]

[1]Copies of the Rules and Regulations of the Board of Trustees may be had from the Retirement Office, or may be found in any lawyer's office in an up to date copy of the Administrative Code.

Complete minutes of all Board Meetings and of all motions and enactments of the Board, together with exhibits of all public documents, are scrupulously kept, permanently bound, and filed in the fireproof safe. This constitutes a minute and complete history of the Retirement System.

LEGISLATION BY REGULATION. OPTIONS

By authority of K.R.S. 161.310 and 161.630, the Board of Trustees created five options to apply to the regular retirement program and five options to apply to the voluntary contributions program of the Retirement System, effective July 1, 1952. Each and all options are required to be the actuarial equivalent of the benefit granted by K.R.S. 161.620. Tables based upon the mortality of men and women separately have been prepared and adopted for use with each option. Copies of the Option may be obtained from the Retirement Office, or found in the 1952 Handbook.

These options were prepared after a review of the options in use in other State Teachers' Retirement Systems and a careful analysis of the needs of the membership. Generally speaking, the Options are (1) Straight Life, (2) Ten Years Certain and for Life Thereafter, (3) Equal Annuity for Annuitant and Surviving Beneficiary, (4) One-Half Annuity to Surviving Beneficiary, and (5) Any other "actuarially equivalent" plan.

As the annuity becomes larger, because of increased membership service, the options will become more useful in the protection of survivors, especially.

THE ADOPTION AND USE OF MORTALITY TABLES

The Board of Trustees, upon the recommendation of the Actuary, has adopted Mortality-Interest Tables as required by K.R.S. 161.400. As previously stated, the basic Table is The 1937 Standard Annuity. Since July 1, 1952, there has been a separate table for men and women; prior to that time men were considered women for the payment of contributions and the calculation of retirement allowances.

After the second five-year period and investigation required by the Law, the Actuary recommended that a separate table be used for men, reflecting their mortality rate instead of the mortality rate for women. This did not interfere with the Table in use for women.

As a related investigation, the Board of Trustees surveyed the forty-eight State Teachers' Retirement Systems by means of a questionnaire to determine what was currently being done in this regard. Replies were received from forty states, and tabulations are presented here in Table L.

The development of the Retirement System has necessitated a more accurate mortality table for men. The number of men in membership has increased to 23%, and form a significant part of the membership. It became evident that the death rate was preventing men from receiving from the Retirement System their fair share of the equity provided by their accumulated accounts and the contributions of the State. Men retiring with an annuity based upon the life expectancy of women would, on the average, not receive an equitable part of the reserve which would result in a surplus in the Retirement Funds, which would have to be offset by smaller appropriations.

The voluntary contributions plan, K.R.S. 161.705, and the Options also required that annuities represent actuarial equivalents, and this could be complied with only by the use of separate mortality tables for men and women.

Comment on Table L. Questionnaire investigations leave much to be desired as to accuracy and interpretation of raw data, but Table L is accurate enough for all practical purposes.

The purpose of this study is to show the extent to which the higher mortality of men is taken into consideration by other State Teachers' Retirement Systems in the matter of contributions, annuities, and related statistics. Forty-eight questionnaires were mailed out, and forty replies returned. Fourteen states voluntarily returned tables showing a monetary or percentage comparison of the status of men and women. We refer to these later in this report.

To: State Teachers' Retirement Systems
From: Kentucky Teachers' Retirement System
N. O. Kimbler, Secretary
Frankfort, Kentucky

INFORMATION PLEASE:

It will help us much if you will answer the following questions and return soon. Just answer off the cuff and if you do not now know the answer to a question, please omit it. Thanks very much. We will reciprocate.

1. What mortality table is in use by your Retirement System?
2. In making an evaluation of your System do you separate men and women in the statistics?
3. (a) Is the higher mortality of men taken into consideration in the calculation of the annuity?
   (b) Is the higher mortality of men taken into consideration in the contribution?
   (c) Is the lower mortality of women taken into consideration in the matter of the amount of the annuity or contributions?
4. Approximately what per cent of your members are men and what per cent women?
5. If the higher mortality of men is taken into consideration, by what means, device, method, or **technique do you accomplish this?** Explain briefly.
6. Will your members reach the maximum retirement allowance fairly early or rather late in their careers?
7. Will a man retiring at, say, age 65 receive the same annuity as a woman retiring at age 65, all conditions being equal excepting the sex?

____
(Signature of person answering)

____
(Retirement System)

TABLE L

Survey of the 48 State Retirement Systems to Determine the Extent to Which the Higher Mortality of Men is Taken Into Consideration With Reference to Evaluation of the System, Contributions, Annuities and Retirement Allowances.

40 States Answering 6-15-53	Mortality Table in Use (1)	Separate Men and Women in Statistics? (2)	Mortality of Men Considered in Annuity? (3a)	In Contributions? (b)	Mortality of Women Considered in Annuity or Contributions? (c)	Per Cent Men—Women (4)	If Mortality of Men is Considered, What Technique is Used? (5)	Maximum Annuity Early or Late? (6)	Will a Man Retiring at Age 65 Receive the Same as a Woman Age 65? (7)	Remarks (8)
Alabama	Furnished by Actuary	Yes	Yes	No	Annuity Yes	25% 75%	Table by Actuary	Later Retirement higher allowance	No; man more	M. $114.83 F. 100.00, Age 60
Arkansas	Not Actuarial	......	......	......	......	20% 80%	....	....	Yes	Pension Plan
California	Own Experience Table	Yes	Yes	Yes	Yes	20% 80%	By separate tables	Late	(Yes)?	Mortality Computed separately
Colorado	Combined Annuity Tables	Yes	No	No	No	32% 68%	....	Early; 35 yrs.	Yes (Both Maximum)	....
Connecticut	Standard Annuity (1937)	Yes	Yes	No	Yes Annuity	....	Difference of 5 yrs.	No maximum	No	M. $7.52 F. 6.38, Age 65
Florida	Furnished by Actuary	Yes	Yes	Yes	Yes	28% 72%	Women pay more	No maximum	No; man more	M. 5.19% F. 5.96%, at 40
Georgia	Actuary Provides Table	Yes	Yes	No	No	33% 67%	Different Factors for Sex	About 65	No; man more	M. 9.588 F. 11.026, at 65
Idaho	Own Table on Experience	Yes	Yes	Yes	Yes Annuity	35% 65%	Different Factor Tables	No maximum	No; women less	....

Indiana	American Annuitants	Yes	No Except in Tables	No	No	30% 70%	....	Late	Yes	....
Illinois	American Experience	Yes	Yes	No	No	18% 82%	....	Early	Yes	Either would reach maximum by 65
Kansas	Provided by Actuary	No	Yes	No	Yes Annuity	....	Flat rate plus annuity by tables	Early	No; more	M. $6.916 F. 5.855 at 65
Kentucky	1937 Standard Annuity Table	Yes	Yes	No	Yes Annuity	23% 77%	Factor Tables	Early	No; unless minimum or maximum	M. $11.05296 F. 12.89309, Age 65
Louisiana	Recommended by Actuary	Yes	Yes	No	Annuity for disability	25% 75%	....	Late	(Yes)?	For Men N. Y. Table; for women New Jersey Table
Maine	Combined Annuitants	Yes	Yes	No	Yes Annuity	23% 77%	Factor Tables	No maximum	No; more	....
Maryland	American Experience	Yes	Yes	Yes	Yes	34% 66%	Factor Tables	Late	No; more	M. 9.105 F. 10.429, age 65
Michigan	Combined Annuitants	Yes	Yes	No	Yes Annuity	30% 70%	Factor Tables	Early	No; man slightly more	Teachers and school employees
Minnesota	American Experience	Yes	Yes	No	Annuity Yes	33% 67%	Factor Tables	Late	No; man more	M. 105.44 F. 94.40
Missouri	1937 Standard Annuity Table	Yes	No	No	No	30% 70%	....	Early	Yes	Maximum reached
Montana	Standard Annuitants	Yes	Yes	No	Annuity Only	....	Tables	Late	No	....
Nebraska	1937 Standard Annuity	Yes	Yes	No	Annuity Yes	33% 67%	Tables on sex and age	....	(Yes)? See 3(c)	Allowance based on equal pension plus annuity on sex and age
Nevada	Actuary Provides Table	Yes	Yes	No	Annuity & Reserve	35% 65%	....	Late	Yes; except on certain plans	....

TABLE L—Continued

40 States Answering 6-15-53	Mortality Table in Use (1)	Separate Men and Women in Statistics? (2)	Mortality of Men, Considered in Annuity? (3a)	In Contributions? (b)	Mortality of Women Considered in Annuity or Contributions? (c)	Per Cent Men—Women (4)	If Mortality of Men is Considered, What Technique is Used? (5)	Maximum Annuity Early or Late? (6)	Will a Man Retiring at Age 65 Receive the Same as a Woman Age 65? (7)	Remarks (8)
New Hampshire	Actuary provides Table	Yes	Yes	Yes	Annuity Yes Pension No	38% 62%	Rate Tables	Early	Yes	Man contributes less
New Jersey	Own Experience Table	Yes	Yes	Yes	Yes	Act. (32% (68% Ret. (19% (81%	Separate Tables	No maximum	No	Separate tables for men and women
New York State	Own Experience Table	Yes	Yes	No	Annuity Yes	27% 73%	Different tables for male and female	Early	No	M. $107 F. 93 per $1,000 Age 65
North Carolina	Old Tables	Yes	Yes	No	No	20% 80%	Charts for sex and age	No maximum	No; man more	Life expectancy considered
North Dakota	Standard Annuity 1937	Yes	Yes	No	Yes	26% 74%	Separate tables	Early	Yes	....
Ohio	Own Experience Table	Yes	Yes	No	Yes	25% 75%	Factor Tables	No maximum	No	....
Oklahoma	1937 Standard Annuity	Yes	Yes	No	Annuity Yes	33% 67%	IBM Cards	Early	No; more	....
Oregon	American Experience, adjusted	Yes	Yes	Yes	Yes	40% 60%	Factor Tables	Late	Yes; contribute less	....
Pennsylvania	Furnished by Actuary	Yes	Yes	Yes	Yes	....	Contributions smaller	Early	Yes; contribute less	M. 7.13% F. 8.13%, age 60

South Carolina	Own Experience Table	Yes	Yes	No	Annuity Yes	39% 61%	Men get actuarial equivalent; more	No maximum	No; larger annuity	....
Tennessee	Furnished by Actuary	Yes	Yes	No	Annuity Yes	33% 67%	Factor Tables	No maximum	No; larger annuity	Same reserve on each
Texas	Own Experience Table	Yes	Yes	No	Annuity Yes	....	Factor Tables	No maximum	No	M. 115.644 F. 132.336, age 65, Division
Utah	California State Table	Yes	Yes	Yes	Yes	....	Different Tables for male and female	Late	Approximately same	Men pay less
Vermont	Furnished by Actuary	Yes	Yes	Yes	......	25% 75%	....	Early	Not necessarily	Men pay less
Virginia Supplemental	1937 Standard Annuity	Yes	No	No	No	37% 63%	Tables; 5-yr. difference	No maximum	Yes	Same for male and female. State paying difference
Washington	1937 Standard Annuity	Yes	Yes	No	Annuity Yes	35% 65%	Tables; 4-yr. difference	No maximum	Larger annuity same pension	M.60, F. 64 $6.49 per $1,000
West Virginia	Furnished by Actuary	Yes	Yes	Yes	Yes	36% 64%	Factor Tables	No maximum	No; more	M. $7.51 F. 6.44, age 65
Wisconsin	American Annuitant	Yes	Yes; No	No	Annuity Yes	25% 75%	Factor Tables	Early	Yes with exceptions	M. 7.32 F. 6.29, age 65
Wyoming	Furnished by Actuary	Yes	Yes	No	Annuity Yes	50% 50%	Factor Tables	No Maximum	No; more	Tables as to age and sex
	Own Experience Table .... 7 Combined Annuity .... 3 1937 Standard Annuity .... 8 Furnished by Actuary ....12 Others 10	Yes 38 No 1 No Ans. 1	Yes 35 No 5 No Ans. 1	Yes 11 No 28 No Ans. 1	Yes....27 No........7 Cond. 4 No Ans. 2	Ave. 30% 70%	Different Tables for Male and Female ....27 Men Contribute less .... 2 Others .... 3 No reply 8	Early ....13 Late ....10 No maximum ..15 No Ans. 2	Yes ....10 No ....23 Cond. 7	Comparison in figures ....14 State pays more for women .... 1 Other difference ..10 No difference .... 1 Both receive maximum .... 3 No remark 11

Kentucky Teachers' Retirement System has always used The 1937 Standard Annuity Table. Of the states replying to this question, eight are known to use this table; twelve report that the actuary furnishes the table, and the Secretary does not know its identity. Of the twelve, no doubt, many use The Standard Annuity Table. Seven retirement systems use mortality tables constructed from their own death, retirement, and withdrawal experience. Kentucky will probably do so at some later date.

Since statistics showing the experience of a retirement system are essential to its proper management, we asked if statistics were compiled as to sex. Thirty-eight states replied in the affirmative; one state does not, and one state did not answer this question. It is obvious that separate statistics should be kept as to men and women because of the higher mortality of men, the earlier retirement of women, and for the difference in the withdrawal rate. No accurate evaluation of a retirement system can be made without statistics as to sex.

Usually mortality tables used by retirement systems are mortality-interest tables and are made to reflect the interest accumulation on funds; retirement rate, withdrawal rate, and death rate as factors. All of these rates excepting interest, are different for men and women. Section 161.400 K.R.S. makes it incumbent upon the Retirement Board to adopt the table recommended by the Actuary, after he has made a thorough investigation into all the factors.

Thirty-five of the forty states replying state that the greater mortality of men is taken into consideration in the calculation of the amount of the annuity; five states reported it was not. Where the difference in mortality is taken into consideration in the contribution of member or state, it is not taken into consideration in the annuity. In twelve states, the contribution of men is less than that for women, according to the replies returned. In 27 states, the contribution is the same for men and women, and in 27 states the difference in mortality for men and women is considered in the annuity, and therefore, not in the contribution.

In answer to the question as to the technique for recognizing the difference in mortality, 27 states reported they used a table for men and a separate table for women; and two states appropriate more for women to make up the difference.

In some states the maximum is reached for both men and women rather early, and in those cases both receive the same, the maximum. This will be true in Kentucky in about four years. This is illustrated by data in column (7) showing that in ten states the annuity is the same at age 65, and that in seven states it is the same under certain conditions.

With the replies of 14 states, there were enclosed copies of the factor tables in use. The difference in the contribution or in the annuity is definite. A study of Table L indicates conclusively that Retirement Systems do recognize that the difference in mortality after retirement for men and women is such that some adjustment must be made either in the contribution, the annuity, or in the appropriation of the employer (state).

In the Kentucky Retirement System, a comparison of deaths among men and deaths among women for active and retired teachers is as follows:

Upon the basis of 25,692 active members, of which 6,892 are men and 18,800 are women, the losses by death since July 1, 1940, are 279 men and 411 women. The deaths per 1,000 men is 40.48, and per 1,000 women 21.86.

Of the retired teachers, numbering 1,804, of which 661 were men and 1,143 were women, the losses by death since July 1, 1942, are 169 men and 202 women. The number per 1,000 is 255.6 men, and 176.7 women.

The above does not constitute a life expectancy evaluation, but it is indicative of the situation as to mortality of the membership as to sex.

STATISTICAL

All joint-contributory retirement systems expend much time and energy upon the compiling of statistics. The evaluation of a retirement system is much more complicated than the evaluation of a life insurance business. Every new member, every deceased, retired, or withdrawing member has an influence upon the liabilities of a retirement system.

The files of the Retirement System contain the records of 46,829 teachers and partial records on 9,421 additional. Prior Service Certificates have been issued to 24,878 members, of whom 12,138 are still valid. Membership Certificates have been issued to 21,951, and of these 13,576 are still valid. There are, therefore, 25,714 teachers holding valid Retirement Certificates.

The number "without records filed" is increased when a teacher teaches a short while and quits before she has filed an enrollment form; the number is reduced when such a teacher withdraws her account or files the enrollment form. The number in this cateory is less each year. In some systems, such accounts are segregated, but in this System they are handled in the same manner as other accounts. In almost all the districts the teacher files an enrollment form upon employment. The 3,164 shown on Table I is an accumulation over a period of thirteen years, and few of these are teaching now.

We emphasize the total number of memberships handled by the Retirement Office during the thirteen years of its operation. For the manning and management of 21,500 positions, 56,250 persons were required because of the great turnover in our State. As shown in Table I, 20,953 worked a while and withdrew. This will be discussed further later.

The 3,925 who have lost membership have been absent from teaching six years or more and their accounts will be refunded to them upon the surrender of their Retirement Certificates.

TABLE I. MEMBERSHIP 1940-53

	SERVICE RECORDS			Members Without Records Filed	Totals
	With Prior Service	Without Prior Service	Total with Records Filed		
Active Membership	11,614	12,051	23,665	2,027	25,692
Inactive Membership	524	1,525	2,049	1,137	3,186
Inactive accounts Membership lost	984	695	1,679	2,246	3,925
Professional Service Records in force	12,138	13,576	25,714	3,164	28,878
Deceased before Retirement	535	75	610	80	690
Withdrawn	9,425	7,597	17,022	3,931	20,953
Retired	1,796	8	1,804	....	1,804
	12,138	13,576	25,714	3,164	28,878
	12,740	8,375	21,115	6,257	27,372
Total Accounts Handled 1940-53.	24,878	21,951	46,829	9,421	56,250

Death has taken comparatively few, 690. During 1952-53 there were 72 deaths from the following causes: cancer, 15; heart diseases, 16; accidentally, 14; cerebral hemorrhage, 8; killed in military service, 4; tuberculosis, 4; brain tumor, 2; peritonitis, 2; and one each from leukemia, childbirth, strangulation, carbon monoxide poisoning, thyrotoxicosis, poliomyelitis, and infectious hepatitis.

Accidental deaths are unusually high, but other causes are about the same as for last year.

These 72 deceased teachers left 18 children, of whom 8 lost the father, 8 lost the mother, and 2 who were completely orphaned. The Retirement System made cash payments of $24,405.01 to beneficiaries.

The number of members with prior service is growing less each year, and since July 1, 1952, more than half of the membership is composed of teachers who have come into the profession since July 1, 1941, the last 12 years. This represents a real recruitment of approximately 1,000 per year. The loss of members with prior service has been about 1,000 per year.

TABLE III

The distribution of new members without prior service is shown in Table III. The modal age for the men is 25 years, and for the women 21 years. Of the 1,720, there are 485 men and 1,235 women. The percentage is 28.2% men, and 71.8% women. The trend is national, more men are teaching.

TABLE III. Distribution by Ages of 1,720 Teachers Without Prior Service Who Became Members of the Teachers' Retirement System During the Year 1952-53

Age	Men	S. S. SALARIES Total	S. S. SALARIES Average	Women	S. S. SALARIES Total	S. S. SALARIES Average
17	1	$ 961.80	$ 961.80	10	$ 12,541.90	$1,254.19
18	12	16,041.80	1,336.81	59	78,833.69	1,336.16
19	13	18,169.60	1,397.66	86	130,279.56	1,514.87
20	12	19,645.55	1,637.13	113	194,988.45	1,725.56
21	27	49,266.50	1,824.68	151	293,831.12	1,945.90
22	29	57,782.52	1,992.50	119	236,454.47	1,987.01
23	27	56,307.89	2,085.47	67	133,480.74	1,992.25
24	38	80,384.65	2,115.38	43	81,834.50	1,903.13
25	49	105,079.10	2,144.47	29	52,928.45	1,825.12
26	36	79,184.50	2,199.56	36	68,535.96	1,625.99
27	37	80,450.30	2,174.33	26	49,891.40	1,918.90
28	28	62,568.00	2,234.57	26	50,347.20	1,936.43
29	28	62,084.85	2,217.31	22	40,747.30	1,852.15
30	23	50,306.87	2,187.25	22	41,115.10	1,868.86
31	15	32,204.70	2,146.98	16	30,012.60	1,875.78
32	10	22,687.10	2,268.71	27	52,995.12	1,962.78
33	17	34,534.60	2,031.44	22	39,007.30	1,773.06
34	11	24,055.20	2,186.83	33	59,667.94	1,808.12
35	5	7,620.15	1,524.03	21	41,375.62	1,970.27
36	3	6,171.00	2,057.00	34	61,193.63	1,799.81
37	10	20,785.40	2,078.54	20	34,989.20	1,749.46
38	6	12,699.20	2,116.53	25	45,724.28	1,828.97
39	12	23,443.98	1,953.66	26	53,862.80	2,071.64
40	3	6,800.00	2,266.66	23	44,160.94	1,920.04
41	5	11,659.20	2,331.84	23	45,960.80	1,998.29
42	1	2,304.00	2,304.00	15	31,243.00	2,082.87
43	6	13,450.00	2,241.66	21	38,367.75	1,827.03
44	4	8,465.70	2,116.42	19	35,185.25	1,851.85
45	4	8,675.00	2,168.75	19	31,480.43	1,656.86
46	0	00.00	00.00	10	20,314.40	2,031.44
47	0	00.00	00.00	8	16,425.30	2,053.16
48	2	3,178.40	1,589.20	6	11,425.00	1,904.26
49	1	2,400.00	2,400.00	8	15,498.46	1,937.30
50	3	6,794.00	2,264.66	7	12,807.60	1,829.66
51	1	1,731.20	1,731.20	5	8,159.40	1,631.88
52	0	00.00	00.00	6	11,230.40	1,871.73
53	1	2,400.00	2,400.00	4	6,814.00	1,703.50
54	0	00.00	00.00	2	3,600.00	1,800.00
55	2	3,273.20	1,636.60	4	7,219.60	1,804.90
56	0	00.00	00.00	4	6,753.03	1,688.26
57	1	2,400.00	2,400.00	2	4,263.80	2,131.90
58	1	1,808.00	1,808.00	3	4,590.60	1,530.20
59	0	00.00	00.00	2	4,800.00	2,400.00
60	0	00.00	00.00	3	5,521.32	1,840.44
61	0	00.00	00.00	2	2,303.60	1,151.80
62	0	00.00	00.00	1	2,067.03	2,067.03
63	0	00.00	00.00	1	2,053.80	2,053.80
64	0	00.00	00.00	2	4,764.75	2,382.37
65	1	1,602.00	1,602.00	1	1,169.00	1,169.00
66	0	00.00	00.00	0	00.00	00.00
67	0	00.00	00.00	1	1,260.00	1,260.00
Totals & Averages	485	$999,375.96	$2,060.56	1,235	$2,264,077.59	$1,833.26

Grand Total—1,720 General Average Salary—$1,897.35

There were 246 teachers, 87 men and 159 women, who had taught previously but who did not file enrollment forms until 1952-53. These do not materially change Table III.

There were 135 teachers with prior service returning to teaching in 1952-53, of which number 12 were men and 123 women. The modal age, about 43. Evidently they were drawn back into the profession after an absence of many years. This makes the total additions to membership for 1952-53, 1,855, about as usual. According to Table I, about 855 will eventually withdraw and 1,000 continue teaching.

This matter of withdrawals in such large proportions is a serious problem. It should be better understood by the leadership and by the taxpayer. It is a continuing drain upon the economy of Kentucky and a barrier to educational advancement. Children are not educated by those who are not dedicated to the profession.

TABLE VII

There are about 9,500 teachers in Kentucky who are well trained, experienced and among whom there is no turnover, excepting that caused by death, retirement, or loss to other states' schools. These constitute the backbone of the public school system. There are 21,500 educational positions in Kentucky covered by the Retirement System. Of the remaining 12,000 there is a constant shifting.

Table VII gives an overall picture; and an analysis of causes of withdrawal for 1952-53 is given later for the use of those concerned. Statistics like Table VII are essential because they help to measure the State's obligation for prior service. Withdrawal of the member cancels the State's obligation for not only prior service, but also the subsequent service. In terms of the average prior service salary, the State's obligation for this 72,052.5 years was $566,750.55 times life expectancy after retirement, or approximately $9,000,000. The 10,358 members with no prior service had about three years, on the average, of subsequent service; and so did those with prior service, making a total of 20,953 as shown in Table I, who canceled 62,859 years of subsequent service by withdrawal.

The value of this subsequent service was about $18,000,000, making a total of $27,000,000 as the estimated value of service credit canceled by withdrawals since July 1, 1940.

This, however, is a paper loss, a mere bookkeeping matter. The great turnover in teaching and supervising personnel merits the serious attention of all those interested in the public schools.

During 1952-53 there were 2,942 withdrawals, of which 1,302 had been absent from teaching for six years or more. We do not know the cause of their absence, but we have some indication as to the cause of withdrawal on the part of the remaining 1,653. Of this number, only 15 reported they disliked teaching. Of the 1,653, one hundred seventy-eight (178) began immediately to teach in some other state. The largest

TABLE VII. Members Who Have Withdrawn Before Retirement 1940-53

Entrance Age	Members Without Prior Service	Members With Prior Service	PRIOR SERVICE		PRIOR SERVICE SALARY	
			Total	Average	Total	Average
16	21	......	......	......	$	$ ....
17	265	5	4.3	.860	2,763.08	552.62
18	914	56	58.0	1.035	30,150.03	538.39
19	987	149	184.8	1.240	78,757.45	528.57
20	958	263	401.2	1.525	154,924.18	589.06
21	1,148	421	794.1	1.886	273,645.02	649.99
22	911	499	1,119.4	2.243	354,468.16	710.36
23	641	482	1,523.8	3.161	353,798.40	734.02
24	495	600	2,330.2	3.883	436,864.28	728.11
25	509	606	2,666.2	4.399	456,831.71	753.85
26	372	594	3,090.9	5.203	443,296.63	746.29
27	324	581	3,469.7	5.971	452,514.39	778.85
28	253	561	3,687.6	6.573	439,514.10	783.45
29	255	522	3,730.8	7.147	410,193.40	785.81
30	257	561	4,355.2	7.763	463,991.12	827.08
31	191	494	3,957.5	8.011	415,619.25	841.33
32	177	479	4,053.4	8.462	401,935.26	839.11
33	151	426	3,683.2	8.646	359,491.77	843.88
34	157	392	3,648.4	9.307	348,514.47	889.07
35	124	374	3,380.9	9.039	325,270.69	869.70
36	122	293	2,764.1	8.763	273,865.10	934.69
37	112	265	2,567.6	9.689	240,766.51	908.55
38	121	229	2,139.7	9.343	209,723.68	915.82
39	80	201	1,832.7	9.117	173,798.78	864.67
40	87	167	1,615.1	9.671	140,336.24	840.34
41	82	160	1,597.6	9.985	148,332.86	927.08
42	63	147	1,507.1	10.252	125,758.59	855.50
43	58	114	1,183.1	10.378	93,810.84	822.90
44	51	104	1,039.1	9.991	81,582.69	784.45
45	54	101	1,085.7	10.749	88,906.18	880.26
46	43	87	868.1	9.978	72,932.56	838.30
47	54	67	655.9	9.789	54,306.66	810.54
48	39	63	577.6	9.168	43,619.82	692.37
49	39	65	787.0	12.107	57,219.02	880.29
50	42	67	806.4	12.035	47,773.50	713.04
51	20	51	542.4	10.635	36,373.15	713.20
52	30	43	493.4	11.474	33,878.57	787.87
53	15	44	476.7	10.834	31,373.85	713.04
54	23	32	374.7	11.709	20,581.84	643.18
55	18	40	449.3	11.232	25,505.10	637.63
56	20	30	369.7	12.323	19,644.76	654.82
57	19	36	471.1	13.086	25,287.29	702.42
58	10	18	199.8	11.100	12,972.82	720.71
59	9	20	289.1	14.455	12,682.72	634.14
60	11	23	303.2	13.182	14,798.33	643.41
61	6	14	203.7	14.550	9,624.82	687.48
62	5	14	157.8	11.271	11,613.85	829.56
63	2	12	127.1	10.592	8,002.25	666.85
64	2	5	66.0	13.200	1,934.66	386.93
65	2	8	129.1	16.138	5,644.14	705.51
66	2	....	....	....	....	....
67	3	4	90.0	22.500	3,453.84	863.46
68	1	2	45.0	22.500	1,726.92	863.46
69	1	....	......	....	....	....
70-74*	2	4	98.0	24.500	3,453.84	863.46
Totals & Averages	10,358**	10,595**	72,052.5	6.800	$8,333,829.17	$786.58

*Not eligible for retirement.

**During the years 1940-53 the number of those teachers withdrawing who did not file professional service records were prorated to Columns 2 and 3 on this table.

number, 48, went to Ohio; 23 to Tennessee; 22 to Illinois; 16 to Florida; 15 to Indiana; and smaller numbers to other states. This loss compares with the annual output of any one of our teacher training institutions.

Of the 1,653, another 183 changed professions. Contrary to public opinion, a good teacher can do almost anything. Thirty-seven took positions with the Government, ranging from Postal Service to Soil Conservation; 26 went into religious work; 24 into farming; 12, insurance; 12, medical and health work; 19, secretarial and bookkeeping; 10, clerical or selling; 4 Home Demonstration or County Agents work; railroads and large corporations took 12; and other occupations represented are law, newspaper work, engineering, library service, banking, and 6 into factory employment.

Why do they leave teaching? Only 65 reported insufficient salary, but salary and working conditions are among the real reasons for leaving teaching.

There were 212 additional who withdrew for "other work", but who did not indicate the type of work. Most of these teachers, principals, and superintendents were educated in the teacher training institutions of Kentucky at a great expense to the taxpayers. Better salaries and better working conditions would have reduced the number withdrawing very greatly. In 1952-53 the salary was less than $2,400 for 12,358 teachers in Kentucky. The retirement annuity can never rise higher than half pay, or $1,200, whichever is the smaller. These and many more teachers do not see any future in teaching in Kentucky with low salaries until retirement and low annuities thereafter. A few million dollars put into salaries and retirement prospects would, in our opinion, change this picture materially. What profit is it to the taxpayer to educate teachers for other states, or to serve some other profession?

In order to give a longer perspective to this matter of withdrawals, we report the losses for 1951-52 as 2,384; for 1950-51, 2,709 for 1949-50, 1,938; for 1948-49, 2,049—making a total of 12,035 during the last five years.

TABLE VIII

The maximum number of valid years of prior service was 212,000 years. Table VIII shows a distribution of the prior service credit held by active teachers. The average per teacher with prior service is 10.81 years, and the aggegate is 131,174.8 years. The teachers who have retired are not included since their prior service credit has matured.

The above is increased by 3,022.4 years of prior service transferred from other states. This represents 2.3% of the total. There have been 266 years of subsequent service transferred from other states, and on which members have paid in arrearages $16,034.71 for its validation. Out-of-state service is used to increase the annuity at retirement, and is not used to meet the eligibility requirement of 20 years or 30 years. Almost all out-of-state service held by members at this time has been validated and complete records are in the Retirement Office.

TABLE VIII. Distribution of 12,138 Members Who Have Prior Service Credit With Attained Age July 1, 1953

Attained Age	Number of Members	PRIOR SERVICE YEARS		PRIOR SERVICE SALARY	
		Years	Average	Total	Average
31	11	8.3	.75	$ 5,362.39	$ 487.49
32	38	46.7	1.23	21,712.06	571.37
33	78	98.0	1.59	44,018.52	564.34
34	130	206.8	1.59	74,681.10	574.47
35	164	162.7	.99	95,944.92	585.03
36	217	502.1	2.31	135,423.19	624.07
37	249	673.9	2.71	160,099.53	642.97
38	338	1,276.5	3.78	211,966.56	627.12
39	411	1,891.6	4.60	283,269.42	689.22
40	489	2,754.3	5.40	335,424.66	685.94
41	532	3,375.4	6.13	370,713.56	696.83
42	600	4,205.2	6.88	429,966.00	716.61
43	555	4,180.8	7.33	408,208.05	735.51
44	638	5,516.8	8.47	510,597.78	800.31
45	662	6,129.9	9.09	528,282.62	798.01
46	619	5,878.8	9.31	524,701.54	847.66
47	670	6,936.1	10.18	576,052.60	859.78
48	603	6,582.6	10.73	553,560.03	918.01
49	549	6,343.8	11.35	508,319.10	925.90
50	527	6,432.3	11.99	485,688.47	921.61
51	489	6,245.5	12.54	481,948.62	985.58
52	337	4,792.8	13.88	347,025.75	1,029.75
53	376	5,454.6	14.20	390,216.56	1,037.81
54	320	4,560.5	13.89	330,505.60	1,032.83
55	305	4,587.4	14.66	315,854.95	1,035.59
56	243	3,965.5	15.85	236,997.90	975.30
57	241	3,886.3	15.65	256,332.42	1,063.62
58	260	4,421.6	16.56	273,304.20	1,051.17
59	218	3,775.4	16.79	224,668.62	1,030.59
60	205	4,086.4	19.37	232,795.95	1,135.59
61	198	3,653.6	17.87	215,586.36	1,088.82
62	164	3,256.5	19.16	178,646.84	1,089.31
63	135	2,787.2	19.79	156,207.15	1,157.09
64	145	3,065.6	20.35	168,124.60	1,159.48
65	103	1,962.9	17.94	101,219.13	982.71
66	88	1,982.0	21.22	97,122.96	1,103.67
67	102	2,346.7	21.88	122,221.09	1,198.25
68	77	1,827.1	22.24	83,476.54	1,084.11
69	52	1,314.6	23.03	56,025.32	1,077.41
Totals & Averages	12,138	131,174.8	10.81	$10,532,272.66	$ 867.72

LEGISLATIVE

One never knows what legislation will be introduced or passed at a regular session of the General Assembly. There are some standards by which to judge the desirability and effectiveness of bills introduced. Any bill which tends to reduce the reserves of the Retirement System, or otherwise adversely affect its actuarial soundness should not be passed. Any bill introduced upon the basis of an individual case should be studied with care by those familiar with the Law and conditions.

Bills to increase the minimum retirement allowance should provide some means of financing the increase; bills to increase the annuities of teachers already retired should carry appropriations to meet that outlay of money until the end of the biennium.

Bills affecting the mortality-interest tables of the System should be studied by the Actuary of the System. The assets of $26,000,000 will be a temptation to some Legislators who may not realize that the liabilities of the System are also $26,000,000, and that there is no surplus in the Retirement Funds. What may be considered adverse legislation usually requires so much attention that there is not time or staff enough to give consideration to desirable legislation.

As was done at the preceding session of the General Assembly, legislation will be introduced to provide that teachers may pay one per cent more in each age bracket, to be matched by the State, and providing that contributions may be paid on $3,600 of salary instead of upon $2,400 as in the present Law. This would enable a larger value to be assigned to each year of service credit earned after the effective date of the Act, and in this way it would make possible a larger annuity for all teachers, not qualifying for the minimum, with a maximum of $1,800.

Consideration is being given to increasing the minimum retirement allowance for all teachers, retired and to retire later, who have credit for more than 30 years of service. Almost all professional teachers have more than 30 years of service credit at retirement, and this basis for an increase in the minimum annuity has been found to have merit.

Many teachers are still studying Old Age and Survivors Insurance (Social Security) as a retirement plan. For a discussion of this subject, see the Twelfth Annual Report, page 16.

If the family status of each teacher is known, an evaluation of the benefits of Social Security can be determined. A survey (1953) covering 18,454 teachers indicates that at least 2,774 husbands and wives are teaching, and that they have 17.3% of the children of teachers. If both husband and wife pay the Social Security Tax, it amounts to double taxation for them, since wife and children would be covered if husband alone paid the tax.

Social Security (OASI) is a family coverage, and only in case a husband pays the tax alone does the taxpayer get value received. For this reason, unmarried teachers, widows, and widowers with no children, comprising 5,676 members of the faculty, would pay the same taxe as if each were head of a family but become eligible to receive primary benefits only. The cost to such is, on the average and for the long run, greater than the equity they will receive after retirement if the employer's contribution is also considered.

Then there was found to be 20% of all teachers checked on this item, 3,704, whose husbands' coverage took care of them for one-half to three-fourths of a primary benefit. Since the husbands' salaries were greater than the teaching wife's salary, her primary benefit would be no greater than what she would receive by reason of her husband's coverage; hence, the tax the wife should pay would bring her no additional benefit. Such families have 30% of all children of teachers. OASI in such cases would cost the wife more than it is worth to her.

This means that 12,151, at least, of the present faculty are either already covered, would pay double, or would otherwise be at a disadvantage if teachers were under Social Security. This is roughly two-thirds of the teaching force.

There are, however, two groups of teachers who would find the coverage profitable. They are the husbands, with or without children, whose wives do not teach or work. There are 2,054 of these families and they have 31.6% of children belonging to teachers. This group would have a coverage of insurance commensurate with the cost of the tax.

There are approximately 1,500 teachers aged sixty or older. These would profit from the payment of the tax because they could pay the tax only a comparatively short time. Such a teacher would not feel the real burden of the tax since she would pay 2% for five years and 2½% for five years and reach age 70, the compulsory retirement age. The cost would be small and the benefits comparatively large.

It must be noted that there are no refunds of the tax upon withdrawal, and at death the benefit is only three times the monthly benefit, regardless of how long the tax is paid. When one is absent as many quarters as one works, plus one, current insurance coverage is lost. The loss to teachers on this basis would be approximately $175,000 a year at this time, and greater as the percentage goes up.

A study of the results of the survey brings us to these conclusions:

(1) As a group, the teachers in Kentucky would lose instead of gain from coverage by Old Age and Survivors Insurance in the long run. The reasons are, (a) many families would pay double tax, (b) many teachers are unmarried but would pay the same tax as the head of a family, (c) many teachers already have the benefits of Social Security by reason of their husbands' coverage, (d) there is no refund upon withdrawal, (e) the death benefit has no direct relation to amount of tax paid in, and (f) unless one obtains 40 quarters of coverage, she will eventually lose all benefits unless age 65 is reached before absence equal quarters worked.

(2) If a sum equal to the cost of Social Security could, instead, be provided for the Retirement System, the resulting annuities and

benefits would be far better and more equitable for the teachers of this State.

Some work has been done toward determining the cost of group death benefits for the active teachers of the State. The cost of a \$500 death benefit is calculated to be \$5.50 per year; for \$1,000, twice as much. Such policies would be annual, renewable each year, and the premium payable only if the teacher was teaching. After retirement, no premium would be paid but upon death, the benefit would be paid to the estate of the retired deceased annuitant.

Some work has been done on survivors benefits, but nothing definite has been accomplished. The administration of this benefit would be very difficult unless the State could pay the premium. It is estimated to cost about three-tenths of one per cent of the salary base of those affected. Ohio has an excellent plan for this feature of their Retirement Law.

Teachers should agree upon the legislation they desire and no other bills should be introduced at their request.

TYPICAL QUESTIONS ASKED BY TEACHERS

1. Q. If one has taught 30 years and retires prior to 70 years of age, what would the benefits be?

   A. The annuity would depend upon age at retirement, prior service years, subsequent service years, and salary. For example, a member has 10 years prior service, salary \$2,000; 20 years subsequent service, salary \$2,400, and retires at age 67, the average age for retirement.

   10 years x 1% x \$2,000=\$200
   20 years x 1½% x \$2,400=\$720, total \$920
   Age factor for a woman age 67 is .90954, annuity \$837.
   Age factor for a man 67 is 1.0697, annuity \$984.
   Note: This teacher did not begin teaching until age 37. If service had begun at age 25, the annuity would have been \$1,200, the maximum.

2. Q. On what basis may a teacher pay into her annuity fund over and above the amount she pays which is matched by the State? What per cent of interest do such extra payments draw?

   A. For members with a salary of \$2,400 or more, \$48 is the lowest amount that may be paid in at any one payment. There is no upper limit. The larger the better. If the payments are used to buy an annuity, the interest is 3% compound; if withdrawn, 2½% compound.

3. Q. Is it permissable to retire after a certain number of years—say, 30 years, even though one has not reached the age of 65?

   A. Any member is eligible to retire after 30 years of service in Kentucky, any age. Any member reaching the age of 70 is eligible regardless of the number of years of service.

4. Q. What effect, if any, does sabbatical leave during the last five years immediately before retirement, have on determining the amount of the retirement payments?

   A. No effect if usual dues are paid.

5. Q. When entering the Louisville System in 1937, five years' teaching experience in the state outside Louisville was ignored by the Board of Education in order to start the teacher on a minimum salary. How can this teacher receive credit in the Retirement System for these teaching years?

   A. If the teacher reported the years to the Retirement Office, she may already have credit.

6. Q. Is the Teachers' Retirement System working in any way to have annuities exempt from federal taxes? Is it in a position to do so. Can it make recommendations to the K.E.A. to work to that end with the N.E.A.? What maximum of annuities, tax exempt, does the T.R.S. recommend?

   A. There is no state tax on annuities. The K.E.A., N.E.A, National Council, and Southern Conference are keeping the matter before Congress and working for exemption. Your Teachers' Retirement System recommends exemptions at least equal to those previously granted to any other annuitants.

7. Q. Suppose a teacher, at retirement, has paid $2,000 into his retirement fund. He has paid state and federal taxes on these funds as he earned that money. Are these funds, exclusive of the interest and funds matched by the State, taxable again as they are paid out in annuities?

   A. No; not taxable.

8. Q. How many days each year may a retired teacher substitute? (If a teacher retired because of permanent disability, could he still substitute those days, depending on his disability?)

   A. Teachers retired for age; and teachers retired for permanent disability who have attained age 60, may substitute for 30 days each scholastic year. Teachers retired for disability cannot substitute prior to age 60

9. Q. What happened to the last bill in the Legislature raising the maximum benefits? What are the maximum sums now?

   A. The bill died at the close of the Session, for want of financial (tax) support. The highest annuity being paid now is $1,185; the maximum $1,200.

10. Q. If a retired teacher's total income comes within Income Tax brackets (State and Federal), must he pay income tax on that portion of his income too? (The retirement annuity.)

    A. There is no state and local tax on annuities from the Teachers' Retirement System. There is Federal Income Tax on annuities, less the cost of the annuities to the annuitants.

11. Q. Once a teacher retires, it seems he can never change his mind and come back. Could he repay annuities received, plus regular payments for years out of teaching, and return to the job?

A. No. It is not in the interest of the profession to encourage temporary retirement.

12. Q. If a teacher retires because of permanent disability, after 27 years of teaching, can he draw his annuity and still hold a full-time job doing something else? Example—a teacher with extremely poor eyesight might do all right as a salesman?

A. Yes. If his work salary exceeds his teaching salary, there is an adjustment of the annuity for disability.

13. Q. If a teacher retires because of permanent disability within two or three years of his 30 years, how can he get the greatest annuity for life? How is is figured?

A. He may increase his service credit by paying under leave for illness for not over three years. This would not be recommended if the illness was known to be permanent. It would be better to take the annuity on the 27 or 28 years. It is calculated as for age excepting the age factor for age 60 is used.

14. Q. If a retired teacher qualifies for **both** his teaching annuity and Social Security, can he earn any other money after 65?

A. The Retirement System does not limit the earning of a retired teacher. Social Security limits it to $75 per month, until age 75 when the limit is removed.

15. Q. If a teacher earning $4,600 takes Sabbatical year one of the last five, would that lower his annuity at any age? Even 30 years of teaching?

A. Not if the regular retirement contribution is paid. Thirty years does not guarantee the maximum.

16. Q. Why does the annuity have to be paid quarterly? Many would prefer monthly payments?

A. The annuity is paid monthly, but many prefer quarterly or annual payments.

17. Q. If one enters the System at age 44, what would her retirement be at age 70? How much prior service will one be given for service in other states?

A. At age 70, $936 for Kentucky Service. Kentucky will accept eight years of prior service and eight years of subsequent service. If this teacher has eight years of prior service, the annuity would be $1,096.

18. Q. What plans, if any, does the Teachers' Retirement System have to set up pensions for survivors? That is, for wife or minor children survivor?

A. The Retirement Office will make a survey this year to determine the number of teachers with children or other dependents. Survivors benefits are not expensive for teachers. The Law would have to be amended to take care of survivors benefits. The cost is about three-tenths of one per cent of salary used as base.

19. Q. In what way is our Retirement Plan better than Social Security?

A. Please read the article on this in K.E.A. Journal, March, 1951, page 12.

Social Security, OASI, is a welfare plan for the family unit; the Retirement System is an individual plan for teachers. Social Security collects a tax; the Retirement System provides that the teacher gets an annuity, or a refund of contributions and interest is made. Social Security costs less and pays off better now than it ever will later under the present law; the Retirement benefits get better as the years pass. Social Security provides for one retirement age, 65; the Retirement System provides for retirement from about age 39 to 70, which is much better for teachers. Social Security does not provide for disability; the Retirement System retires about 12% of its annuitants for disability, some at rather early ages.

Social Security pays an average monthly benefit of about $37 even though retirement is not earlier than 65; for retirants at 65 or older, the Retirement System pays about twices as much on the average.

Social Security will by 1960, or earlier, cost as much as the Retirement System but its benefits will be no greater than now under the present Law.

Social Security has none of the principles of an insurance company or reserve retirement system, while your Retirement System uses the principles of insurance companies and is a reserve system.

Social Security is for a cross section of the workers of the Nation while your Retirement System is for the teaching profession.

To get a proper share of Social Security, there must be a family unit of wife and children; under retirement coverage, everyone gets her proper and equitable share.

After retirement under Social Security, one's earnings are limited; there is no limit for a retired teacher. After retirement, some teachers work under Social Security and qualify for OASI at little cost to themselves.

Under Social Security the younger employees pay for the benefits of the older employees; under the Retirement System each (and the State) pays for his own annuity.

Length of service has no effect on the amount of the benefits under Social Security; under the Retirement System length of service is considered.

There are no Options under Social Security and it is static; the Retirement System is flexible and provides Options.

Social Security is administered from Washington and there is no local control over it; the teachers control the management of their Retirement System. (It is not practical to list more here.)

20. Q. Is there a possibility of increasing benefits by both teachers and the Commonwealth paying larger amounts into the Retirement Fund? This means the Regular Matched Plan.

    A. Yes; and desirable.

21. Q. If a teacher would put more money per month into the Retirement Fund, will it be matched by the State, and will that teacher receive more annuity?

    A. Not matched by the State. The teacher will receive an additional annuity purchased by the deposits, plus 3% compound interest.

22. Q. What is the maximum yearly amount one may receive from the Retirement Fund? What is the minimum yearly amount?

    A. For career teachers the minimum is $480; the maximum $1,200.

23. Q. What per cent of Retirement Funds will a teacher receive if he retires on total disability before age 60?

    A. One per cent of salary base for each year of prior service, plus one and one-half per cent of salary base of each year of subsequent service, multiplied by the age factor for 60. The factor for a woman is .74930; man .85728.

24. Q. If a teacher quits teaching before the age of retirement, will the money he has put into the Retirement Fund be returned with interest? If so, at what interest?

    A. Yes; 3% compound interest.

25. Q. What does the N.E.A. recommend on Social Security?

    A. That we build up our Retirement Systems and stay out of Social Security as long as possible. Less contributions to existing Retirement Systems will provide greater and more flexible benefits. If a group has no retirement system and little prospect of getting one, then go under Social Security as soon as possible.

26. Q. Are any teachers under Social Security? Who pays the matching fund when teachers are under Social Security? Are all Government employees under Social Security?

    A. Comparatively few teachers are under Social Security. They are found mostly in church supported schools having no state retirement systems. In Mississippi the teachers are under Social Security. The local Boards of Education match the teachers' tax out of educational funds. In Virginia **the teachers** are under Social Security and a Supplemental Retirement System. It was adopted because for the next eight or ten years it will be less expensive to the state. The matching is in part by the state and in part out of educational funds. The teachers pay the Social Security Tax up to $3,600 and 4% on all salary above $1,200. The state guarantees that the combined benefit shall not be less than they would have received under the former Retirement System.

Government employees are under Civil Service and have a reserve Retirement System. They do not want Social Security but are fearful they will some day be forced to take it by Act of Congress.

27. Q. What would my retirement be at age 60, 65? I have eight years of service allowed me before 1940—**outside** of Kentucky, plus some service in Kentucky before Law went into effect.

    Would $100 (if too high $50) be permitted as a separate payment? Can it be made by $10 a month deduction by the Louisville Board of Education as is the case with the regular deductions?

    A. At age 60, $918; at 65, $1,200.
    You may deposit any amout any time, but not less than $48 per deposit. It cannot be deducted on the pay roll. Instead of paying $10 per month, you might pay $50 every five months.

28. Q. Where can we get information on the Retirement System?
    A. Your Retirement Board maintains an office at the State Office Building in Frankfort. Each teacher's case is individual. If you have questions, write the Retirement Office, or N. O. Kimbler, Secretary, Frankfort, Kentucky. The office sent out 60,000 pieces of mail last year, and much of it was personal letters to teachers giving information and advice. **(October 16, 1952)**

ACTUARIAL

When Federal taxes are extremely high, as at this time, there is a tendency to defer the payment of current obligations to reserve retirement systems. The reserves are subject to attack, because the funds with which to maintain the reserves are hard to get. There are certain safeguards, however, and these should be used by members of the Retirement System to insist upon proper maintenance of the necessary reserves.

One of these safeguards is the history of non-reserve pay-as-you-go retirement plans. Experience has shown that pay-as-you-go plans and other non-reserve plans for retirement go bankrupt after a few years. If an employer, the State or other, cannot during the working period of the employee provide a sufficient reserve with which to pay the retirement allowance of that person, it can never be done. With additional retirements, the cost increases with the years, and soon inevitably a point is reached where the burden cannot be carried.

Interest on the reserves reduces this burden and makes it possible to bear even for all the future. Ultimately the interest earnings of the reserve should provide for approximately one-half of the annuity.

The most important safeguard is in the Retirement Act, of which Section 161.400 reads in part as follows:

> "At least once in each five-year period after the first year of operation of the system the actuary shall make an actuarial investigation into the mortality, earnable interest, and service and compensation of the members and beneficiaries of the retirement system, make a valuation of the assets and liabilities of the funds of the system, and recommend to the board of trustees such changes as may be deemed necessary to keep the retirement system on a sound financial basis. On the basis of the results of such investigations the board of trustees shall make necessary changes in the retirement system within the provisions of law, and shall recommend the contributions payable by the state within the limits specified in KRS 161.550"

This gives the Retirement System the information on which to determine its current needs for the liquidation of its future obligations.

Section 161.550 reads as follows:

> "Beginning with July 1, 1942, the state shall annually contribute to the retirement system a permanent amount equal to that contributed by all members, and shall annually contribute a temporary amount equal to two per cent of the salaries of all present teachers, in order to cover the obligation assumed by the state for prior-service credit."

For a discussion of Mortality-Interest Tables and actuarial principles, see the Twelfth Annual Report beginning on page 29.

According to the Actuary's latest report, inserted herein, the present state faculty will require $75,793,962.39 for the payment of their annuities after retirement. This is a present worth figure and will increase by reason of interest as the years pass. Of this amount, $26,035,680.10 was in the Retirement Funds July 1, 1953. The remainder is to be obtained from members' contributions paid in the future before retirement, aggregating $17,696,981.63, the "matching" of the same, and additional appropriations of the State. In other words, the Retirement System is approximately one-third "funded" at the end of thirteen years of operation. This represents a good financial condition.

The prior service costs for a new system are always heavy and sometimes discourage the State or employer. The State's prior service obligation has been greatly reduced by the $2,291,479.80 already paid to retired teachers for prior service and by the balance of $2,633,019.76 now in the Allowance Reserve Fund. This is a total of $4,924,499.56 up to this reporting, paid by the State for prior service. The remaining amounts are to be amortized over a period for about twenty-five years.

The amount still to be paid is $9,565,473.20 out of the whole amount needed, aggregating $14,489,972.76. The obligation is not all due yet by any means, and will not be until the last teacher with prior service retires. Our youngest member with any prior service is 31 years old and will probably retire at age 65, which means the State has 34 years in which to liquidate all of the balance for prior service which is $9,565,473.20; 33.9% of the total obligation is paid.

If withdrawals continue at a greater rate than that estimated by the Actuary, the obligation for prior service will be reduced, and we have reason to believe they will.

Attention is directed to the Teachers' Savings Fund balance of $10,869,428.29 and the "matching" amount in the State Accumulation Fund. Out of assets of $26,035,680.10, the teachers have contributed $10,869,428.29, less interest credited to their several accounts. Older teachers will be interested to compare the $48,235.69 in the Allowance Reserve Fund contributed by retired teachers with the total balance in that fund of $2,895,903.36. From this it is evident that the cost of the annuity to teachers retiring now is very small and that the State is providing almost all of the funds needed for their allowances.

The interest earned by the Retirement System on its $25,400,000 in securities held is very significant as a financial support. After the reserve funds of the Retirement System are credited with 3% interest each year, the remainder of the earnings, if any, are held in the Guarantee Fund. The balance in this Fund is $1,364,084.44. It is also supported by surpluses in the Matching Fund caused by death and withdrawal. During the year, the average net interest has increased from 2.613% to 2.646%, or an increase of $8,382 on investments held per year. That the State receives 3% compound interest on the funds it has in the Retirement System should not be overlooked. This helps materially in financing the System. To date the Retirement System has earned $3,138,363.71 in interest and profits. This sum represents more than 10% of all funds coming into the Retirement System from every source.

There is an indicated deficit of $4,798,845.83 as shown by the Actuary's Valuation Balance Sheet which shows that teachers are not contributing enough to pay their part of the annuity based upon subsequent service. We are watching this deficiency expecting the next Balance Sheet to show a reduction of it since more teachers are getting above the minimum annuity guarantee. Many teachers receiving the minimum, which is set arbitrarily, have paid into the Retirement System very little, and proportionately less than those receivin more than the minimum retirement allowance. No action should be taken on this matter until a definite trend is shown. This is not preventing an actuarially sound condition. The Retirement System is actuarially sound and in good financial condition. It should be noted that there is no surplus in the Retirement System; that liabilities equal assets. This is a proper condition.

In preparing this Evaluation, current assets were set into the last evaluation, as of June 30, 1951. Results will be somewhat distorted but satisfactory for use this year. A new evaluation of the System will be made as of June 30, 1954.

VALUATION BALANCE SHEET—July 1, 1953

(On basis of assumed retirement at age 65)

ASSETS

Current Assets		
Cash, 6-30-53	$ 609,457.46	$
Accounts Receivable, 6-30-53	1.28	
Bond Investments, 6-30-53	25,400,000.00	
Unamortized Premium, less discount, 6-30-53	2,222.33	
Accrued Interest on Bonds Purchased, 6-30-53	1,071.10	
Office Furniture and Equipment, 6-30-53	22,927.93	
Total		26,035,680.10
Total Current Assets		$26,035,680.10
Deferred Assets: (Present Value at 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 Provision in Act.)		4,798,845.83
Total **Deferred Assets Mandatory** by Reason of Subsequent Service		$40,192,809.09
(4) **Actuarial Reserve Deficiency**		
Deferred Obligation 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	
Total		$ 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, 6-30-53	2,633,019.76*	
Net Allowance Reserve Deficit		2,915,743.40
Deferred Assets Mandatory by reason of Prior Service, 6-30-53		$ 9,565,473.20
TOTAL ASSETS		$75,793,962.39

*See discussion of Allowance Reserve Fund.

VALUATION BALANCE SHEET—July 1, 1953
(On basis of assumed retirement at age 65)

LIABILITIES

Current Liabilities		
Accounts Payable	$	$ 476.94
(1) Expense Fund Balance, 6-30-53		24,370.68
(2) Teachers' Savings Fund Balance Accumulated Contributions by Reason of Subsequent Service, 6-30-53		10,869,428.29
(3) State Accumulation Fund Balance Accumulated Contributions by Reason of Subsequent Service, 6-30-53		10,869,428.48
(4) Allowance Reserve Fund Balances, 6-30-53		
Retired Teachers' S. S. Contributions with Accumulated Interest.	48,235.69	
State's S. S. Contributions with Accumulated Interest.	214,647.91	
State's P. S. Contributions with Accumulated Interest.	2,633,019.76*	
Total		2,895,903.36
(5) Guarantee Fund Balance, 6-30-53		1,364,084.44
(6) Voluntary Contributions Fund, 6-30-53		11,987.91
Total Current Liabilities		$26,035,680.10
Deferred Liabilities: (Present Value at 3% Interest Assumption, etc.)		
(7) Present Value Benefits Mandatory by Reason of S. S., Active Members, 6-30-51 (B')		39,993,496.00
(8) Present Value Benefits Mandatory by Reason of S. S., Members Eligible to Retire, 6-30-51 (B''')		199,313.09
Total **Deferred Liabilities** Mandatory by Reason of S. S. (B' plus B' '')		$40,192,809.09

(9) 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
(10) 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, 6-30-53	2,633,019.76	
		2,915,743.40
Total Deferred Liabilities Mandatory by Reason of Prior Service, 6-30-53		9,565,473.20
TOTAL LIABILITIES		$75,793,962.39

*See discussion of Allowance Reserve Fund.

FINANCIAL

The Retirement System does a great banking business in addition the the other administrative tasks. At the close of the year there were 25,692 active accounts, of which 8,121 were for teachers in Independent Districts and Colleges, and 17,571 in County Districts. These accounts aggregated $10,869,428.29. They are built up by means of small monthly contributions and interest which is calculated and credited each month. Under certain conditions a teacher may make contributions directly to the Retirement System. During 1952-53, more than 500 such payments were made. Seven members paid their contributions under 161.516; twenty-two under 161.610, while on deferred retirement. Fifty-six members paid for the remainder of the year after having taught a part of the year. Seven regularly elected substitute teachers paid for the year. Twenty teachers paid for the months or years they were on Military Leave. Forty-seven teachers paid arrearages on out-of-state service under 161.515. Twenty-three withdrawn teachers returned to the profession before they were absent three years and during the first semester of service returned the money withdrawn plus regular interest under 161.520. One hundred sixty-three teachers sent personal checks to cover underpayments caused by error of deducting too little on the pay roll. Sixty-five teachers on Leave of Absence paid their regular annual contributions; one member paid while on loan to a related service.

These cases require much correspondence and great care in handling the records of such payments. The service credit involved must be clear for future use. The work required is much greater than the receipts of $27,766.15 indicated. All teachers having a problem illustrated by the above should promptly write the Retirement Office for advice and instruction. Many lose privileges provided by the Law by procrastination. Deposits (payments) must be made before June 30, the end of the fiscal year, so as to be matched by the State out of the current appropriation. Teachers should give their Retirement Policy (Certificate) the same prompt attention they give their insurance policies. The foregoing does not include unmatched contributions made under 161.705.

The General Assembly in its 1950 session amended the Teachers' Retirement Law to provide that any member of the System, or boards of education employing such members, or both, may make voluntary contributions of 2% or more of the member's annual compensation to the Retirement System for the benefit of the member. No one contribution may be less than 2% of the member's annual salary, up to a salary of $2,400, but there is no maximum amount for any contribution. Such volutary contributions will accumulate at 3% compound interest, and upon retirement the member will receive, in addition to the regular retirement allowance, the annuity earned (or purchased) by the voluntary contributions made by or for the member, computed on an actuarial basis using the 1937 Standard Annuity Table in use by the Retirement System. Voluntary contributions will not be matched by the State.

Since the amendment was passed, 15 members have made voluntary contributions. During the year 1951-52, four members deposited in voluntary contributions $1,850. During the year 1952-53, fourteen members deposited $10,016.87. As of July 1, 1953, the 15 members deposited a total of $11,866.87. This amount has been paid in, in 33 different personal checks.

Three of the members who made voluntary contributions were retired as of July 1, 1953. By their voluntary contributions they paid for an additional annual annuity in the amount of $63.33; $285.12; and $237.84, respectively.

Principal financial statements follow.

During the year, we have been able to offset much unamortized premium accumulated while securities were above par by unamortized discount due to a decline in the price of securities below par. Premium and discount are amortized to the call date of the bonds so as to determine the exact net interest obtained.

This statement shows that the Retirement System handled $8,721,-935.42 during 1952-53. I am glad to report that all accounts are in exact balance. The contributions of the teachers amounted to $1,474,459.01, and the contributions of the State $2,161,720.02 with the State obligated for an additional $104,416, payment of which was deferred because of a shortage in tax income. Even so, the State's contribution is more than 150% of the teachers' contributions, which is quite good. Of the cash balance, $400,000 was invested soon after the close of the fiscal year.

As shown by the **CONDENSED ANALYSIS,** the teachers received from the Retirement System $1,016,542.41 during the year. This compares with contributions of $1,460,552.94. This is a good showing for a system thirteen years old. In a few years the number retired will make it necessary to pay out each year more than the active members are paying in. This will not adversely affect the members concerned because of the reserves, but if the System was on a pay-as-you-go basis, it would affect each member. The funds show a healthy increase, but

GENERAL BALANCE SHEET
TEACHERS' RETIREMENT SYSTEM

June 30, 1953

ASSETS			
Current			
Cash		$ 609,457.46	
Deposit—U.S.P.O.		1.28	
Total			$ 609,458.74
Investments (Sch. I)			
Investments (Par)		25,400,000.00	
Unamortized Premium		167,786.18	
Accrued Interest Purchased		1,071.10	
Unamortized Discount		—165,563.85	
Total			25,403,293.43
Fixed			
Office Equipment			22,927.93
Total Assets			$26,035,680.10
LIABILITIES AND FUND BALANCES			
Current			
Encumbrances (Sch. V-A)		476.75	
Overpayments		.19	
Total Liabilities			476.94
Fund Balances			
Expense Fund		24,370.68	
Teachers' Savings Fund		10,869,428.29	
State Accumulation Fund		10,869,428.48	
Allowance Reserve Fund			
Teachers' Contributions	$ 48,235.69		
State Contribution—Per.	214,647.91		
State Contribution—Temp.	2,633,019.76		
Total		2,895,903.36	
Guarantee Fund		1,364,084.44	
Voluntary Contributions Fund		11,987.91	
Total Fund Balances			26,035,203.16
Total Liabilities and Fund Balances			$26,035,680.10

GENERAL STATEMENT OF RECEIPTS AND DISBURSEMENTS TEACHERS' RETIREMENT SYSTEM

July 1, 1952, to June 30, 1953

Cash Balance, July 1, 1952			$ 399,296.85
Receipts (Sch. II)			
Teachers' Savings	$1,460,552.94		
Reinstatements	3,887.05		
Teachers' Voluntary Cont.	10,016.87		
Gifts and Forfeitures	3.96		
Net Irregular Payments	-1.81		
Total		$1,474,459.01	
State Contributions—Per.	1,460,551.13		
State Contributions—Temp.	642,183.40		
State Contributions—Exp.	59,039.00		
Special Refunds Adjust.	-53.51		
Total		2,161,720.02	
Net Interest Earned	610,136.01		
Premium Amortized	7,563.61		
Accrued Interest Amortized	12,534.44		
Total		630,234.06	
Total Receipts			4,266,413.09
Total Cash			4,665,709.94
Disbursements			
Administrative Expense (Sch. V)			
Salaries	47,304.00		
Other Current Expenses	9,816.78		
Payments on Pr. Yr. Enc.	3,732.13		
Transfer to ARF—Temp.	1,916.02		
Total		62,768.93	
Refunds (Sch. III)			
Refunds of Annuitants Dec.	507.90		
Refunds—Regular	310,048.98		
Refunds—Special	53.51		
Refunds—Interest	2,369.09		
Total		312,979.48	

Retirement Allowances (Sch. IV)			
Superannuation	580,283.64		
Disability	66,293.72		
Payments on Pr. Yr. Enc.	69.89		
Total		646,647.25	
Investments (Sch. I)			
Securities (Par)	3,100,000.00		
Premium Paid	3,417.84		
Accrued Interest Purchased	13,203.04		
Discount Received	–82,854.06		
Total		3,033,856.82	
Total Disbursements			$4,056,252.48
Cash Balance, June 30, 1953			$ 609,457.46

we wish the Allowance Reserve Fund could have shown a larger increase than $352,529.32, however, this is larger than the average annual increase. The overall increase in assets for the year was $3,229,774.44. This is held in trust to pay the increase in annuities based upon 21,500 years of subsequent service earned in 1952-53. There will be deductions of service credit for deaths and withdrawals.

This is the best report we have made on investments. Each item is 2.5% or above and the average is 2.646%. The increase over 2.5% is $37,388.80 per year on the amount invested. Economic conditions indicate a further rise in the average interest income. During the ensuing year $672,084 in net interest will be received from present investments. We expect the interest income for 1953-54 to reach $700,000. If the State had to increase its appropriations by this amount, it might find it impossible to do so. Earned interest is the life blood of an annuity system and advocates of any pay-as-you-go plan will find they are shortsighted.

CONDENSED ANALYSIS OF CHANGES IN FUND BALANCES TEACHERS' RETIREMENT SYSTEM

July 1, 1952, to June 30, 1953

Fund Balances, July 1, 1952	
Expense Fund	$ 22,317.25
Teachers' Savings Fund	9,571,499.38
State Accumulation Fund	9,571,501.38
Allowance Reserve Fund	2,543,374.04
Guarantee Fund	1,094,879.54
Voluntary Contribution Fund	1,857.13
Total	$22,805,428.72

Additions			
Teachers' Savings	$1,460,552.94		
Reinstatements	3,887.05		
Teachers' Voluntary Cont.	10,016.87		
State Cont.—Per.	1,460,551.13		
State Cont.—Temp.	642,183.40		
State Cont.—Expenses	59,039.00		
Net Interest Earned	610,136.01		
Gifts and Forfeitures	3.96		
Spec. Refund Adjustment	-53.51		
Total Additions		$ 4,246,316.85	
Deductions			
Administrative Expenses (Sch. V & V-A)	$ 56,985.57		
Refunds (Sch. III)	312,979.48		
Retirement Allowances Paid (Sch. IV)	646,577.36		
Total Deductions		1,016,542.41	
Net Addition			3,229,774.44
Total Fund Balances June 30, 1953			$26,035,203.16
Fund Balances, June 30, 1953			
Expense Fund		$ 24,370.68	
Teachers' Savings Fund		10,869,428.29	
State Accumulation Fund		10,869,428.48	
Allowance Reserve Fund			
Teachers' Cont.	$ 48,235.69		
State Cont.—Per.	214,647.91		
State Cont.—Temp.	2,633,019.76		
Total		2,895,903.36	
Guarantee Fund		1,364,084.44	
Voluntary Contribution Fund		11,987.91	
		$26,035,203.16	$26,035,203.16

As teachers with prior service retire, the obligation for prior service matures. The State is amortizing this obligation at a rate which will keep the balance in the Allowance Reserve Fund above $2,500,000. If this is done, no difficulty will be encountered; if for any reason it is not done, the System will be in trouble. The rate of amortization is not so high as to be unreasonable or out of the reach of the State to attain. In 1948-49, an appropriation of $2,439,606.64 was made by the State to put the System on a sound basis. It has been maintained on a sound basis since that date.

Retired teachers have received in excess of $3,000,000. The amount disbursed annually for annuities has more than doubled in the last five years and will likely double in the next five years. Of the amount paid out, the State has provided 83.29% and the teachers 16.71% thus far.

There have been 1,813 retirements, with four recoveries from retirement for disability. Schedule IV-A gives the detailed information to September 1, 1953. The age range for annuitants is from 39 to 93. Retirements for disability run a little higher than the national average, and the overall death rate is higher than anticipated. In 1942-43 many overage teachers retired and this increases the average loss by death. The loss by death of 53 annuitants during 1952-53 is slightly higher than the mortality table indicates. The System operates under The 1937 Standard Annuity Table which applies to selected groups like teachers.

SCHEDULE I

INVESTMENTS
TEACHERS' RETIREMENT SYSTEM

June 30, 1953

Name and Description	Par Value	Unamort. Premium	Unamort. Discount	Accrued Interest	Average Net Yield
U. S. Defense Bonds, Series G	$ 2,900,000.00	$	$	$	2.500%
U. S. Defense Bonds, Series K	200,000.00	....	....	....	2.750%
U. S. Treasury 2½%, 6/15/1964-69	250,000.00	....	....	....	2.500%
U. S. Treasury 2½%, Series A—1965	250,000.00	....	....	....	2.500%
U. S. Treasury 2½%, 3/15/1965-70	1,100,000.00	....	11,135.28	....	2.601%
U. S. Treasury 2½%, 3/15/1966-71	950,000.00	....	13,922.60	....	2.626%
U. S. Treasury 2½%, 6/15/1967-72	2,150,000.00	1,253.00	22,632.58	....	2.579%
U. S. Treasury 2½%, 12/15/1967-72	5,650,000.00	3,739.84	116,123.39	....	2.644%
U. S. Treasury 2¾%, Series B, 1975-80	11,000,000.00	159,390.88	....	....	2.662%
U. S. Treasury 3¼%, 6/15/1978-83	850,000.00	417.84	1,750.00	1,071.10	3.257%
Ashland School Bonds	100,000.00	2,984.62	....	....	2.881%
Total Par Value	$25,400,000.00				
Total Unamortized Premium	167,786.18	167,786.18			
Total Unamortized Discount	−165,563.85		165,563.85		
Total Accrued Interest	1,071.10			1,071.10	
Total Investment	$25,403,293.43				
Average Net Yield					2.646%

SCHEDULE II-A

CONDITION OF THE RESERVE FOR PRIOR SERVICE IN RELATION TO OBLIGATION FOR PRIOR SERVICE TO TEACHERS PRESENTLY RETIRED

June 30, 1953

Year	Obligation for Prior Service	Reserve Bal. Available for Prior Service	Per Cent of Reserve to Obligation (d)	State Deficiency for Prior Service (e)	Per Cent of Deficiency to Obligation
1942-43	$ 582,203.64	$ 39,657.18	6.80%	$ 542,546.46	93.20%
1943-44	749,836.45	1,323.65	.18%	748,512.80	99.82%
1944-45	893,552.03	2,955.15	.33%	890,596.88	99.67%
1945-46	1,136,092.84	145,798.93	12.80%	990,293.91	87.20%
1946-47 a	1,885,076.11	55,948.54	2.97%	1,829,127.57	97.03%
1947-48	2,208,145.87	(def.) 71,790.48	-3.25%	2,279,936.35	103.25%
1948-49 b	2,476,697.66	2,408,669.83	97.00%	73,027.83	3.00%
1949-50	2,810,836.02	2,493,807.76	88.72%	317,028.26	11.28%
1950-51 c	5,400,795.05	2,541,671.52	47.06%	2,859,123.53	52.94%
1951-52	5,779,430.25	2,370,796.54	41.02%	3,408,563.82	58.98%
1952-53	6,379,452.68	2,632,959.80	41.13%	3,746,492.88	58.87%

a) Increase of minimum annuity to $10 per year of service credit not to exceed 30 years.
b) Special appropriation of $2,439,606.64 for prior service.
c) Increase of minimum annuity from $10 to $16 per year of service credit.
d) This ratio will bear watching. It should be increased until ultimately it reaches 100%.
e) Because of the State's Deficiency for Prior Service the reserve fund has lost more than $357,000 in interest not earned.

SCHEDULE IV
RETIREMENT ALLOWANCES PAID
TEACHERS' RETIREMENT SYSTEM
July 1, 1942, to June 30, 1953

Year	Cause of Retirement		Funds From Which Paid			Per Cent for P. S.	Total
	Superannuation	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
1946-47 a	200,903.68	13,430.52	39,159.38	28,118.59	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
1950-51 b	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	57,528.38	83,881.48	68,091.54	419,435.47	73.40%	571,408.49
1952-53	580,283.64	66,293.72	119,661.80	67,935.42	458,980.14	70.99%	646,577.36
	$2,941,334.81	$262,052.39	$534,684.21	$377,223.19	$2,291,479.80	71.53%	$3,203,387.20c

(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) 16.71% paid by retired teachers and 83.29% by the State.

SCHEDULE IV-A
TEACHERS RETIRED, WITHDRAWN, AND DECEASED
TEACHERS' RETIREMENT SYSTEM
July 1, 1942, to September 1, 1953

Year	Superannuation			Disability			Living Retired at End of Year
	Retired	Withdrawn	Deceased	Retired	Withdrawn	Deceased	
1942-43	238	5	16	14	1	1	229
1943-44	96	3	14	9	0	3	314
1944-45	72	1	14	6	0	0	377
1945-46	112	3	33	11	2	1	461
1946-47	142	0	26	23	1	4	595
1947-48	111	0	30	16	0	3	689
1948-49	122	0	26	14	1	2	796
1949-50	126	1	42	24	1	6	896
1950-51	167	0	38	35	2	2	1,056
1951-52	129	0	47	23	2	6	1,152
1952-53	161	0	50 a	25	1	3	1,285 a
1953-54 b	125	0	3	12	0	2	1,417
	1,601*	13	340 a	212¶	11	33	1,417 a

a) A teacher having Option III died leaving a survivor to receive an annuity.
b) To September 1, 1953.
*) 12 teachers have retired for superannuation, withdrawn from retirement to return to teaching and have been retired the second time.
¶) 4 teachers have been retired for disability, recovered and returned to teaching and have been retired the second time.

COST OF ADMINISTRATION
TEACHERS' RETIREMENT SYSTEM
July 1, 1940, to June 30, 1953

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%
1952-53	2,102,681.02	58,065.72	2.76%

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 REPORT
TEACHERS' RETIREMENT SYSTEM
GENERAL FINANCIAL STATEMENT

Fiscal Year Ending June 30, 1953
by T. H. Tinsley, Auditor of Public Accounts

Cash Balance, June 30, 1952		$ 399,296.85
Deposits in U. S. Post Office		12.86
Underpayment		1.31
Total Cash		$ 399,311.02
Total Investments		22,389,534.66
Office Equipment		19,285.39
Total		$22,808,131.07
Less Encumbrances		(5,721.35)
		$22,802,409.72
Add Adjustments after June 30, 1952		3,019.00
Total Fund Balance, June 30, 1952		$22,805,428.72
Additions During the Year	$ 4,246,316.85	
Deductions During the Year	(1,016,542.41)	
Net Additions During the Year		3,229,774.44
Total Fund Value June 30, 1953		$26,035,203.16
Reconciliation		
Cash in all Funds	$ 609,458.74	
Investments	25,400,000.00	
Unamortized Premiums	167,786.18	
Accrued Interest Purchased	1,071.10	
Unamortized Discount	(165,563.85)	
Total		$26,012,752.17
Add: Office Equipment		22,927.93
Total		$26,035,680.10
Less Encumbrances		476.94
Total		$26,035,203.16

Comment of the Auditor of Public Accounts, the Honorable T. H. Tinsley:

"COMMENTS"

"The examination of the records of the Teachers' Retirement System for the fiscal year ending June 30, 1953, included a review of all receipts and disbursements of funds, the activities of the System in relation to its members, and the observance of the laws of the State regarding the establishment and maintenance of the System.

"The financial records of the Teachers' Retirement System are in agreement with those of the Finance Department and the State Treasury Department.

"All funds coming into the System are properly accounted for.

"Investments consist of U. S. Government bonds, $25,300,000.00, and Ashland School bonds, $100,000.00, a total of $25,400,000.00. The average yield on investments is 2.646% per annum.

"The percentage of Administration cost is below 4% of the State Accumulation Fund, as provided in Kentucky Revised Statutes, Section 161.420."