Fourteenth Annual Report

of the

TEACHERS' RETIREMENT SYSTEM

of the

State of Kentucky

1953-54

DECEMBER, 1954

CONTENTS

RETIREMENT OFFICE STAFF

N. O. Kimbler, Executive Secretary of the Retirement System
Miss Vera Beckham, Assistant Secretary of the Retirement System
William Ray Holt, Accountant
Mrs. Wilma L. Shryock, Secretary to Mr. Kimbler
Mrs. Anna Mae Connelly, Account Clerk
Mrs. Alean McDonald, Bookkeeping Machine Operator
Miss Sophia Johnson, Bookkeeping Machine Operator
Mrs. Dorothy L. Wood, Bookkeeping Machine Operator
Mrs. Doris W. Ward, Bookkeeping Machine Operator
Mrs. Helen Meade, Steno-Clerk
Mrs. Jean L. Pulliam, Steno-Clerk
Mrs. Nancy Lou G. Cosby, Clerk-Typist
Miss Shirley Lutkemeier, Steno-Clerk
Miss Wilma Gains, Steno-Clerk

FOREWORD

We have a new Retirement Act which will go into effect July 1, 1956. The provisions of this Law should be studied by the members of the Retirement System, and especially by those who teach or recruit teachers.

The new amendment amounts to a new Retirement Program and it will so well meet the needs of the profession that it will never be necessary to ask the General Assembly for an amendment of this nature again. Under its provisions a year of service credit has a value of 1¾% of the gross salary; as adequate as the best in the country.

The new minimum annuity Law went into effect July 1, 1954, and under its provisions approximately 1,000 retired teachers had their pensions raised, some as much as 30%. This is the third time the minimum annuity has been increased.

If the Retirement Law made some provision for survivors' benefits, it would be about perfect. For teachers, survivors' benefits are not expensive.

We should bend every effort to understand the Retirement System, to protect its reserves which now approximate $30 million, and to make any minor changes necessary to serve the whole profession.

There is some agitation for Social Security, OASI. Many studies have been made revealing that teachers as a group, comprised mostly of married women, can profit most by depending upon their respective husbands' Social Security, rather than by obtaining the coverage for the profession. If anyone, or any group, is not so convinced, further study may be made.

I any case, the profession should act as a whole and should not allow itself to be broken up into segments as could be done. "One for all and all for one" is a good motto for the teachers of Kentucky, and only upon this united and unselfish basis can we hope to progress.

The Retirement Program is a part and an important part of the Foundation Program. When we work for one, we work for both. We can get the Retirement Program easier and earlier than we can get the full Foundation Program because it will cost less, but both should move forward together for the best interest for teachers and pupil children of this State.

Let us not be diverted by Social Security, lack of correct information, local pride, or any other objective calculated to divide our efforts; as a united, working, conscientious profession, the reward is certain.

(Signed) 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 Fourteenth 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, 1953, to June 30, 1954, 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, excepting for the $400,000 reduction in the appropriation, due to a decrease in tax revenue for the Commonwealth. We hope to regain this in future appropriations when tax increase is more adequate. We earnestly solicit your continued help in the maintenance of this program, which is growing in usefulness and developing according to plan.

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

FOURTEENTH ANNUAL REPORT

INTRODUCTION

Each Annual Report should be read and kept for future reference. The Thirteenth Annual Report listed the amendments previously made to the Retirement Act, and this, the Fourteenth Annual Report, lists the amendments passed at the 1954 Session of the General Assembly, and explains each. The Thirteenth Annual Report presents the answers to typical questions from teachers, and also the results of a survey to determine to what extent the higher mortality of men is taken into consideration by the State Retirement Systems of the United States.

The Twelfth Annual Report explains the status of the Teachers' Retirement System as a corporation; the annuity as a deferred salary, and some discussion of vested interests.

The Eleventh Annual Report compares the Kentucky Retirement System with those of other states, Civil Service Retirement System, and Social Security as of that date. These, and prior Reports, are adequate to provide essential information in regard to the principles upon which the Retirement System operates.

Amendments. The Retirement Act has been amended 18 times. Every amendment requested by the teachers as a professional group has been passed and signed into Law by the Governor. We summarize major amendments from 1946 to 1954 as follows:

Amendments, 1946. Increasing the per cent of contribution from the per cent based upon age at entrance to 2% to age 30; 3% from age 30 to age 40; and 4% thereafter. Increasing the maximum annuity from $1,000 to $1,200, and the maximum salary base from $2,000 to $2,400. The adoption of a revised and improved age factor table. The minimum retirement allowance was set at $300 for 30 or more years of service. A "reciprocity" law was passed.

Amendments, 1948. Public junior colleges were covered by the Retirement System. A special appropriation of $2,439,606.64 was given to make the Retirement System actuarially sound.

Amendments, 1950. The age requirement for eligibility for retirement was repealed and a vested interest given to all members upon attaining 30 years or more of service credit. The minimum retirement allowance was increased to $480 for 30 years or more of service credit. The Voluntary Program was authorized.

Amendments, 1952. The Act was amended authorizing the payment of retirement allowances and annuities in 12 installments per year instead of four installments. Teachers retired for age, and teachers retired for disability upon reaching age 60, were authorized to do "substitute" teaching for not more than 30 days in each scholastic year.

Amendments, 1954. Four amendments were passed by the General Assembly at the Regular Session and signed into Law by the Governor.

Three of these become effective July 1, 1954, and the remaining one will become effective July 1, 1956 (K.R.S. 161.620 (3)).

H. B. 319 increased the minimum retirement allowance from \$16 per service credit year to \$18 per service credit year upon not more than 35 years. In other words, the minimum was increased for all retired teachers, and any falling into that bracket, who may later retire, from \$480 to \$630 if the teacher had taught 35 years or more. This is an increase of about 31%. For teachers who have taught 30 years only, the increase is from \$480 to \$540, an increase of 12½%. After this increase several retired teachers began receiving pensions that are larger than their salaries were when they retired. The effect of this legislation is to increase the State's obligation for prior service, since the retired teachers have quit paying retirement contributions leaving all the cost on the State and the Retirement System. In order to activate this Bill on July 1, 1954, the Retirement System made available \$300,000 out of the Guarantee Fund for the biennium; otherwise, the retired teachers would have received no increase until July 1, 1956, thus giving apportunity and time for the General Assembly to make and approve a new Budget. The Board of Trustees declared an emergency to exist and made the provision under K.R.S. 161.420 (5). More than one thousand retired teachers received increases under this amendment.

S. B. 230 provides that any honorably discharged veteran of World War I may receive prior service credit for the actual months he served with the armed forces, upon presenting his discharge or a photostatic copy of it. About a dozen veterans who are now teaching have received credit for their Military Service. Veterans of World War II and the Korean War receive subsequent service credit by paying the contribution at the rate provided by the Law upon the salary base in their last school contract.

H. B. 366 liberalized the investment restrictions of the Retirement Act, K.R.S. 161.430, making investments in a more diversified field legal. There are still, and should be, many restrictions in the new amendment for the protection of the funds of the retirement system.

Under the new Law which went into effect as of July 1, 1954, not over 8% of the portfolio may be invested in corporate bonds which have an Aaa or Aa rating. Not over 16% of the portfolio may be invested in voted school bonds and revenue school bonds for building purposes.

The bonds of Departments of the State Government are made eligible for investment purposes. Not more than 25% of any issue may be purchased, and not more than 5% of the portfolio may be invested in the bonds of any issuer excepting that of the United States of America. Even with this liberalization, about 84% of the funds of the Retirement System must be invested in U. S. Treasury Bonds. This change will tend to increase the interest income of the funds and add to the financial strength of the System. On present assets an increase of 1/10 of 1% in net rate of interest will result in an increase of \$29,000 in interest income.

Investments are made upon the authority and order of the Board of Trustees.

H. B. 322 (K.R.S. 161.220 (10) (11); 161.540; 161.620 (1) (2)) amends the principal provisions of the Retirement Act, that fixing the contributions and the amount of the annuities due at retirement. It makes no change in the value of prior service credit to July 1, 1941, and no change in the value of subsequent service credit from 1941 to July 1, 1956. Under the amendment the contribution after July 1, 1956, will be 3% to age 30; 4% to age 40; and thereafter 5%, all percentages to apply to the gross salary. Previously no contribution was paid on that part of the salary exceeding $2,400. This limited the maximum annuity to $1,200. The new maximum limit will be one-half the average salary on the highest five consecutive years after July 1, 1956. In this way the Retirement Program is geared to the Foundation Program in that as salaries increase the annuity will increase proportionately.

The value of service credit earned after July 1, 1956, is to be 1½% "plus a percentage" justified by the increase in the contributions. Actuarial computations indicate a total percentage of 1¾% of the salary base as defined above. This gives the members of the teaching profession a new and much more effective Retirement System. It is already having a good effect upon the morale of the teaching and supervisory personnel.

These changes in the Retirement Law make it more complicated, but if one keeps in mind the fact that the annuity depends upon the contributions matched by the State, it can easily be understood. In estimating probably future benefits, three categories of service credit will be used: (1) prior service, the salary base being the average for the five years ending July 1, 1941; value 1% per year of prior service: (2) subsequent service from 1941 to 1956, the salary base being the average for the last five years (excluding any annual salary in excess of $2,400) ending July 1, 1956; value 1½% per year of service: and (3) subsequent service earned after July 1, 1956, the salary base being the average for the highest five consecutive years after July 1, 1956; value 1¾% per year. The three items are summed and multiplied by the age factor in the table of factors recommended by the Actuary and approved by the Board of Trustees. The age factor table is based upon the 1937 Standard Annuity Table, modified by the Actuary.

Thirty years of service credit earned under this new law multiplied by 1¾% equals 52.5% to be applied to the salary base. If we consider 35 years of service as a career for a teacher, it is ample to provide an annuity of half-pay at age 63.

The new Law will go into effect gradually as members earn credits under its provisions, and pay into the System their part of the required financial support. Even one year under the new Law will provide some increase in the annuity. For financial reasons it is necessary to retain the values of service credit previously earned. These values are guaranteed by the current assets of the System plus the obligation of the State for prior service, which is approximately $12½ million at this time.

To put the benefits of the new Law into effect with higher values for previous service would bankrupt the System, but by going into effect as provided, gradually as service credit is earned, the Retirement System can remain actuarially sound.

By reason of the new Law, budget requirements for the Retirement System will increase about an estimated $585,000 over the amount required now. This is not beyond the ability of the State to provide, and if the teachers show their interest in the new plan, the State Administration will show a like interest.

For those teachers who planned to retire by July 1, 1956, many will continue an extra year or two. For those who reach compulsory retirement age before or on July 1, 1956, there will be no increase, excepting for any who might receive a minimum, or receive more by reason of the removal of the maximum limit of $1,200 on that date.

LEGISLATIVE

The 18 amendments previously made have brought the Retirement Law to a very satisfactory standard of usefulness and effectiveness, however, there are some minor revisions now under study. Some of these may come soon; others be deferred until the passage of time has strengthened the System and the accounts of individual members have increased in amount.

There is considerable interest in survivors' benefits. The plans in use by other systems will be studied, with special attention to that of Ohio. The next Annual Report will likely present a definite plan for survivors' benefits. Suffice is to say now that survivors' benefits for the profession in Kentucky should not be expensive. Teachers have small families and many no close or dependent survivors. During 1952-53 only 18 children were orphaned by the loss of one or both parents, and during 1953-54 only 15 children were orphaned by the loss of one parent; this among 21,474 members of the profession.

From this it may be deduced that the cost would be comparatively small. It should be noted that the average age of orphaned children is slightly over nine years and that after nine or ten years the peak of the accumulating number of beneficiaries would be reached so far as children under the age of 18 years is concerned. The accumulation of widows would obtain for a longer period, but if the benefit ceases when the youngest child is 18 and begins again when the widow is age 65, the cost would still be low. Social Security has found that for a cross section of the population, including larger families on the average and when the adult death rate is greater than that for teachers, the cost of childrens' benefits is .35 of 1%. Ohio Teachers' Retirement System has found that the cost of the whole program for survivors' benefits is .20 of 1%. If surviving parents are included, the cost would be only nominal, about .01 of 1%.

Present indications are that a reasonable program of survivors' benefits equal to or better than that provided by Social Security OASI can be provided without increasing the contributions of the members.

Eighteen per cent of all members are husband and wife teaching teams. They have 20% of all children in the profession under age 18. From 36% to 45% of all children have Social Security protection by reason of their fathers' coverage in industry or otherwise.

It will not be easy to write such an amendment, and we recommend that a further study of the matter be begun soon.

There are some who believe the requirement of 20 years of service for eligibility for retirement for disability is too high. There is no age requirement. Many of the state systems have lower requirements, some as low as five years of service. A cross section of the United States reveals the following as to average age of retirement for disability; Alabama, age 51; Arizona, age 54; Connecticut, age 50; Florida, age 50; Idaho, age 51; Illinois, age 45; Kentucky, age 53; Louisiana, age 42; Michigan, age 52; New Hampshire, age 55; New York, age 55; Pennsylvania, age 54; South Carolina, age 53; West Virginia, age 48; Ohio, age 48; and Washington, age 48.

Service requirements of a cross section of the states are as follows:

Five years of service, Colorado and Louisiana; 10 years, Alabama, Illinois, Arkansas, California, Connecticut, Florida, Idaho, Indiana, Maine, Mississippi, Montana, Nevada, New Hampshire, New Jersey, Ohio, North Carolina, Pennsylvania, Rhode Island, South Carolina, Tennessee, Utah, and West Virginia.

Fifteen years of service required: Arizona, Colorado, Georgia, Kansas, Massachusetts, Michigan, Minnesota, Nebraska, North Dakota, Oklahoma, Oregon, South Dakota, Vermont, and Wyoming. Requiring 20 years of service for retiring for permanent disability are Kentucky, New York, Texas, Virginia, and Washington. Few states have an age requirement for retirement for disability.

It appears that the requirement of 20 years of service is high by comparison, but the average age at retirement reveals that the retiring teacher has had ample time in which to reach the requirement of 20 years of service.

This is not an urgent matter, since very few disabled teachers, if any, have failed to acquire the 20 years of service by the time retirement is indicated by reason of health. Since, if a teacher lacks three years or less, she can pay her retirement contribution under leave for illness and acquire the full 20 years, this reduces the number failing to qualify. Many who think they should retire for disability, should really be on leave for illness since the number who recover with a year of rest and medical advice is quite large. Even so, about 12% of all of our retired teachers retire for disability. This is above the national average. No doubt this section of the Law will be liberalized.

Under the new Law, providing for increased contributions, the individual accounts of the members will increase rapidly. This opens up many possibilities not available at present. Amendments to provide for paying an annuity of equal value, instead of a refund in a lump sum, at the option of the beneficiary should be an advantage after individual accounts have accumulated to $3,000 or $4,000, or more for some members. This would entail only the cost of administration, a small amount.

We should also report the possibility of paying an annuity instead of a refund in case of the death of a member eligible to retire. For example, a member has 20 or more years of service credit and dies before retirement. Under the present Law a refund of the account, including the teacher's contributions and 3% compound interest, is made to the beneficiary. In some cases an annuity would serve better; however, it might interfere with survivors' benefits or amount to a duplication if such amendments are made. A usual procedure for providing an annuity for a survivor in case of the death before retirement of a member eligible to retire is to assume that the member had retired on the day of death and taken Option IV, which provides that the beneficiary shall receive for life an annuity equal to one-half of the annuity the member should have received had he retired instead of died. This would be very helpful to surviving widows, or surviving sisters or brothers dependent upon the member for support.

As the Retirement Law now stands, it is, or will be, adequate and practically perfect for serving the teachers and schools, however, the foregoing is presented for the consideration of the membership and others interested. As the System matures, and as the obligation for prior service, which now is $12.5 million, is liquidated, the possibility for fringe benefits will be greater.

SOCIAL SECURITY

With the recent amendments to the Law governing Old Age and Survivors' Benefits, there has been increased interest in how it would apply to a professional group like teachers. At the last Session of Congress coverage was made optional for teaching groups under certain conditions. This was acquiesced in by the National Conference on Teacher Retirement and the National Education Association when they found that retirement laws of certain states could be repealed and Social Security substituted.

The teachers had previously held for the exemption of all teachers having retirement systems from coverage by Social Security. The fear that State Legislatures would repeal retirement acts because Social Security would cost less for a few years, and thus result in a savings to state treasuries, caused the NEA and the NCTR to withdraw their objections to Social Security coverage upon the promise of certain safeguards. Most of these safeguards appear in the new Law, but the principal and only effective one is the required referendum. It was assumed, and we think correctly so, that if teachers were allowed to vote as to whether they would take Social Security, the majority would vote negatively, or "no." This is because more than half of all teachers already have the protection provided by Social Security by reason of the husbands' work and payment of the tax. The children are likewise protected if the father has a Social Security card and pays the tax.

The National Education Association and its affiliates have always, and still are, of the opinion that the profession is best served by its own distinctive retirement system, and that Social Security would in the long run cost them more than they would get out of it, considering that so many already have it, and that those who do not have husbands have few or no survivors.

For the further protection of the teachers and their retirement systems, enabling legislation must be passed by the General Assembly, and the obligation of formally stating what the situation will be if the teachers vote affirmatively, is placed upon the State Administration. It is obvious that no average state like Kentucky can provide both an effective retirement system and Social Security for its teachers or other employees because of the cost. The Retirement Program would of necessity have to be cut back so it would cost less. This has been true in the six states coming under Social Security.

The teacher has nothing to gain if the benefits of her Retirement System are reduced by approximately the amount she will receive from Social Security as is the case in Virginia and some other states.

In anticipation of this situation the Board of Trustees had a survey made of the teachers, and their family relations, in Kentucky by checking a great sampling of 15,049 teachers of the 21,000 paying contributions. If the facts of costs and benefits are known, there will be no responsibility resting upon the Board; the teachers can make any decision necessary according to future developments. Following, we quote excerpts from a Report of the Survey made by a member of the Retirement staff to the Southern Conference on Teacher Retirement at their annual meeting in 1953:

"A SURVEY OF RELATIVE COSTS AND BENEFITS OF SOCIAL SECURITY TO KENTUCKY TEACHERS

F. L. Phillips

. . . . "We have found a staggering amount of misunderstanding among teachers in regard to what Social Security will do for them, and what it will cost them. They are strongly inclined to believe what they want to believe without too much questioning of the actual facts. The nature of Social Security and the world-wide generosity of Uncle Sam have led many people, not excepting teachers, to believe that happy days are here again, and that when they have worked leisurely for a few years they can retire and live in ease and comfort to a venerable old age without a care or a worry. This lack of understanding is a dangerous thing.

"What we say here is no condemnation of OASI. It is a noble experiment that has brought promise of economic relief to the minds of millions of people who otherwise might go down the sun-set trail in fear for the necessities of life. The simple days are gone when the aging and dependent could usually find a place at the table and fireside of near relatives. The growing burden of the aged is being assumed by Society, and if wisely administered, will assure a larger degree of independence and self-respect for this great company which is now gathering, estimated to be more than twenty million by 1980. It is not our desire to be critical of this worthy effort to bring well-being and happiness to this great group of people living in the evening of life.

"However, in our study of the situation we are thoroughly convinced that our teachers, as a group, are much better off under their present retirement system than they would be under Social Security. There are exceptions, of course, especially among older teachers. Often it is from these exceptions that uneasiness among younger teachers stems. A young teacher with a wife and children knows of an elderly man who worked under Social Security for six quarters and retired on a pension for life with half the amount of the primary benefit payable to his wife if living and aged sixty-five, and it makes him wonder if his teachers' retirement will serve him as well as Social Security. We believe that his teachers' retirement, because of its flexibility and adaptability, and because of its assurance against any loss, will, in the end, serve him better.

"A few months ago we made a survey of our membership for the purpose of trying to evaluate the relative benefits and costs to our teachers if they were under Social Security. We do not claim that this survey and its evaluation are scientifically accurate to a high degree. There are too many variable factors to be considered to enable us to arrive at conclusions that are wholly valid, but we believe that we have a fair indication of what Social Security would cost our teachers in relation to possible benefits. We believe that the results of the survey are significant, and for that reason, we wish to pass the idea on to you for whatever it may be worth.

"About March of 1953, we mailed a questionnaire to the superintendents of all the school districts in Kentucky and to the State Colleges on which we requested information for making the survey, The response was satisfactory, but we recognize that the information furnished was not always complete nor highly accurate. . . ."

. . . .

When these questionnaires were received back, they were tabulated and summarized into the following information, applying to the 15,049 teachers surveyed:

"I. We found 1,387 cases in which both the husband and wife were teaching, making a total of 2,774 teachers with 1,622 children under eighteen. This group included 18% of teachers reported and 20% of all children under eighteen.

"II. We found 5,676 unmarried women and widows, and unmarried men and widowers with no children under eighteen. This was 38% of all teachers reported.

"III. We found 370 widows and widowers with 566 children under eighteen. This was 2% of teachers and 7% of children reported.

"IV. We found 4,175 wives whose husbands are now under Social Security, and husbands whose wives are under Social Security. This is 28% of teachers reported, and they have 2,819, or 36% of all children under eighteen reported. (This does not include farmers' wives who have since been covered by Social Security.)

"V. We found 2,054 husbands whose wives do not teach nor do they work under Social Security. They have 2,967 children. This was 14% of teachers and 37% of children reported.

"VI. There were also reported 2,722 other eligible dependents, mostly parents.

"This gave us a total of 15,049 teachers, 7,974 children under eighteen, and 2,722 other eligible dependents for whom reliable data were received. These figures constitute the raw material out of which it has been our purpose to try and measure the relative cost and benefits of Social Security in its application to our Kentucky teachers.

"To evaluate these two elements, i.e., cost versus benefit, it was necessary that we have a unit of measurement that could be translated into terms of both cost and benefit. We have devised a standard of measurement, but are fully aware that it is not perfect because of the many variables . . . but we believe that what it indicates is significant.

"Since the Social Security Program is set up for the family with considerable emphasis for dependents and survivors, whether or not the primary worker has dependents, we have used the family unit as the basis for fixing a standard of evaluation measurement. We start with the primary benefit and assume that it is equal to 1 unit. We further assume, for simplification, that the benefit of a spouse would be .75 unit, and of each child under eighteen, or other eligible dependent, would be .50 unit. By so doing we have tried to equalize the change in direct benefits for spouse and children upon the death of the insured worker. If the population covered by Social Security averages a primary worker, a spouse and one child under eighteen, or other eligible dependent, we find that the measure of potential benefit for which the covered worker pays the tax is 2.25 units of primary benefit, i.e., 1 plus .75 plus .50. For the promise of this much benefit the worker pays an equal cost in his Social Security Tax, therefore, we have the equation: 2.25 units of cost = 2.25 units of benefit. The use of the term "Benefit" is not limited to the pensions which dependents may receive before and after the death of the insured worker, but also includes the **insurance protection** which they have after the worker becomes currently insured, and until the dependent is no longer eligible. If the system were perfect and the population uniform, our study would have little value other than confirmation, but such is not the case. Groups in the population vary in their make up, and our purpose has been to test its application to Kentucky teachers.

"With the assumption previously stated and the equation, we were able to make a fairly indicative evaluation of the relative costs and benefits for any group or population for which the necessary data are available. It should be obvious that as the group approaches the average, the measure will apply with less variability than it does when the group departs from the average. We have applied the formula in our survey of Kentucky teachers and give you the result.

"COMPARATIVE MEASUREMENT OF RELATIVE COST AND BENEFITS OF SOCIAL SECURITY TO KENTUCKY TEACHERS

"Class I — Both Husband and Wife Teaching.

	Cost	
No. of Husbands	1387 × 2.25 =	3120.75 units
No. of Wives	1387 × 2.25 =	3120.75 units
Total Cost		6241.50 units
	Benefit	
Benefit of Husbands	1387 × 1 =	1387.00 units
Benefit of Wives by Reason of Husbands' Coverage	1387 × .75 =	1040.25 units
Benefit of Wives by Reason of own Coverage	1387 × .25 =	346.75 units
Benefit of Children	1622 × .50 =	811.00 units
Total Benefit		3585.00 units
Excess Cost		2656.50 units

"Class II — Unmarried Men and Women, and Widowers and Widows with no Children under Eighteen.

	Cost	
No. of Teachers	5676 × 2.25 =	12771.00 units
	Benefit	
No. of Primary Benefits	5676 × 1 =	5676.00 units
Excess Cost		7095.00 units

"Class III — Widows and Widowers with Children under Eighteen.

	Cost	
No. of Teachers	370 × 2.25 =	832.50 units
	Benefit	
No of Primary Benefits	370 × 1 =	370.00 units
No. of Children	566 × .50 =	283.00 units
Total Benefits		653.00 units
Excess Cost		179.50 units

"Class IV — Number Wives and Husbands whose Spouses are Presently Covered by Social Security.

	Cost	
No. of Wives	3704 × 2.25 =	8334.00 units
No. of Husbands	471 × 2.25 =	1059.75 units
Total Cost		9393.75 units
	Benefit	
No. of Wives by Reason of Husbands' Coverage	3704 × .75 =	2778.00 units
No. of Wives by Reason of Own Coverage	3704 × .25[a] =	926.00 units
No. of Husbands	471 × 1 =	471.00 units
No. of Children	4873 × 0[a] =	0.00 units
Total Benefits		4175.00 units
Excess Cost		5218.75 units

a) In this class the wives are already protected to the extent of .75 of the primary benefit, by reason of their husbands' being under Social Security, and the children are fully protected because one or the other parent is now covered.

"Class V — Husbands Whose Wives do not Teach nor Work under Social Security.

	Cost	
No. of Husbands	2054 × 2.25 =	4621.50 units
	Benefit	
No. of Husbands	2054 × 1 =	2054.00 units
No. of Wives	2054 × .75 =	1540.50 units
No. of Children	2967 × .50 =	1483.50 units
		5078.00 units
Excess Benefits		456.50 units

"Class VI — Other Eligible Dependents, principally Parents.

	Cost	
No. of Other Dependents	2722 × 0 =	0.00 units
	Benefit	
No. of Other Dependents	2722 × .50 =	1361.00 units
Excess Benefits		1361.00 units

"In summary, we find that total cost of Social Security to the sample of Kentucky teachers under test would be 33860.25 units, and the total possible benefits would equal 19167 units, or an excess cost over benefits of 14693.25 units. This would indicate that Kentucky teachers because of occupational relationships and number of dependents would pay a cost in Social Security Tax equal to 178% of all possible benefits which they might receive. In other words, the study shows that if Kentucky teachers were put under Social Security, for each unit of benefit received they would pay 1.78 units of cost. (If farmers' wives had been included at the time of the study, the relative cost to benefits should have been about $2.00 of cost for $1.00 of benefits.)

"Why would Kentucky teachers pay more for Social Security coverage in relation to possible benefits than the average of the population? Here are some of the answers:

"1. Eighteen per cent of our teachers are in families in which both the husband and wife are teaching. Under Social Security each would be taxed for the protection of the same family unit, but, while the family cost would be doubled, the family benefit would be increased very slightly, if any. The most that these families could expect would be 2.5 units of benefit instead of 4.5 units for which the working members had paid.

"2. Thirty-eight per cent of the teachers reported are single with few or no dependents. They would be required to pay the same Social Security Tax for family coverage as though they were heads of families. The cost to the unmarried teachers would be two and one-fourth times the prospective benefits. The extra benefit would be received by other groups with large families.

"3. Twenty-eight per cent of teachers and 36% of all children under eighteen are now protected by secondary benefits under Social Security by reason of primary workers in their families. For these teachers to go under Social Security would increase the family cost, but add very little, if anything, to their benefits, and nothing to the benefits of the children.

"4. If our study has any validity, it shows that the excess cost of Social Security to the sample of Kentucky teachers under test is 14693.25 units, equal to the cost that would be paid by 5877 teachers as covered workers, or a little more than one-third of the number reported.

"5. It is not the purpose, nor do we believe it is the result of this study, to show that Social Security is not a good thing, and should be shunned by teachers. . . . We do not favor the repeal of our Retirement Law and the substitution of Social Security, nor do we favor any type of integration. We are thoroughly convinced that our teachers will be better served by their present Retirement System, disregarding possible improvements for which we are striving, than they would be under Social Security alone or any form of integration. Social Security OASI will serve the teachers best if the profession is not under its provisions but if each individual teacher gets the coverage that may come incidentally. For example, the farmer, or businessman, who is a teacher; the wife who teaches and whose husband is a farmer, worker, or businessman will have Social Security incidentally, and at a reasonable cost if the family is covered.

"In this study covering 15,049 members of the profession, the benefits estimated to come from Social Security coverage have been exaggerated and not minimized. For example, it was assumed that every person would qualify for benefits, which they will not, and that every child would receive benefits by reason of the death of the father, which we know is very favorable to Social Security.

"Still Social Security does not stand up on a cost versus benefit study for teachers."

(Excerpts from the Study and from a Report to the Southern Conference on Teacher Retirement by F. L. Phillips, B.C.S., A.B., M.A., and Diploma in Higher Accountancy, October 14, 1953.)

It should be noted that doctors, lawyers, and other professional groups are mostly excluded from Social Security coverage. Also that the Civil Service Retirement System with two million members who work for the Federal Government are excluded; also police and firemen if they have a retiremnt system. Further, that the Congress makes no appropriation for this OASI Program; they manipulate it usually just before election.

Other studies bearing upon the desirability of Social Security OASI for teachers are: Social Security and Ohio Teachers, published by the

Ohio Education Association, (1954), Columbus 15, Ohio; and Report to Legislative Recess Committee on Maine State Teachers' Retirement System and Social Security Coverage, by Bowles, Andrews, and Towne, Consulting Actuaries, 421 American Building, Richmond, Virginia.

STATISTICAL

Most members think of the money transactions of the Retirement System but are not very mindful of the statistics, vital and other, however, it is only in terms of the statistics of the Retirement System that the assets have any meaning. Active membership as presented in Table I of the Thirteenth Annual Report was 25,692. Since that date, July 1, 1953, there have been issued 194 prior service certificates to teachers who have taught before the Retirement System began, and 2,557 membership certificates to teachers who have no prior service. This means that there were 2,751 additions to the Retirement System and the profession of teaching during the scholastic year 1953-54. The gains, corrections, and losses are set forth in Table I, Membership 1940-1954.

During the year 1953-54, 25,446 active accounts with contributing members were maintained, together with 3,346 accounts to which no monthly contributions were made, total 28,792. The aggregate funds in these accounts is $12,245,095.55. Interest is added each month and compounded on July 1 of each year to each account, and for the first three years of absence of the member. The interest for the year amounted to $321,613.36.

If a member is absent more than three years, the account is inactive unless the teacher is in service on the first scholastic day of the fourth year. For this reason 1,448 accounts were closed July 1, 1954. Of this number, 1,224 were in county school districts, 225 in independent districts, and 26 in colleges. The aggregate of these accounts is $171,506.98. They were notified that interest had ceased on their respective accounts and that they were in danger of losing their service credit by absence. There is something wrong with salary or teaching conditions when so many teachers are not performing their usual professional duties for such long periods of time.

As of July 1, 1954, the total number of inactive accounts was 3,346, and they contained $431,656.06. This control account is reduced by members returning to service before the absence is six years, and by deaths and withdrawals.

After the absence exceeds six years, the service credit is forfeited, but the account may be withdrawn. After the absence exceeds 13 years, the account is forfeited. Not many teachers wait so long to withdraw. They are more likely to withdraw their accounts too soon; however, 194 accounts were forfeited July 1, 1954, and $1,795.33 therein was transferred to the Guarantee Fund as provided in the Statutes.

During 1953-54 there were 51 deaths reported, 23 men and 28 women. The causes of death were: heart diseases 16; cancer 8; cerebral hemorrhage 6; accidental 3; suicide 3; arteriosclerosis 3; pneumonia and other diseases of the lungs 3; tumors 2; hepatitis (liver), brain tumor, pregnancy, Hodgkins Disease, leukemia, kidney diseases, one each; and one undetermined. Of the 51 deaths reported, 11 men and 4 women left children under the age of 18; 11 children fatherless; 4 children motherless. To the deceased members' beneficiaries the largest payment was $1,460.42 and the average was $632.21.

All additions and losses are set forth in Table I.

TABLE III

Distribution by ages of 2,009 teachers without prior service who became members during 1953-54 indicates the new recruits. There is a slightly higher per cent of young men. The modal age for women is 22 years and for men age 26. The men spent more time in college, or in military service, on the average. The average salary for the 521 men is $2,000.96, for the women $1,796.02. These are, of course, beginning salaries. The average for all is $1,849.17. We do not know what brings the older people into the profession; it is possible that some have retired in other states, and that some have taught before and lost their service credit by long absence and return as new members. There were 467 who filed enrollment forms in 1953-54, but who had taught previously within the last six years.

TABLE I. MEMBERSHIP 1940-54

	SERVICE RECORDS			Members Without Records Filed	Totals
	With Prior Service	Without Prior Service	Total with Records Filed		
Active Membership	11,260	12,808	24,068	1,378	25,446
Inactive Membership	507	1,819	2,326	1,020	3,346
Inactive accounts Membership lost	594	856	1,450	2,179	3,629
Absence of 13 Years	164		164	30	194
Professional Service Records in Force	11,767	14,627	26,394	2,398	28,792
Deceased before Retirement	570	85	655	88	743
Withdrawn	9,873	8,969	18,842	4,373	23,215
Retired	1,955	11	1,966		1,966
	11,767	14,627	26,394	2,398	28,792
	13,156	9,921	23,077	6,670	29,747
Total Accounts Handled 1940-54	24,923	24,548	49,471	9,068	58,539

TABLE III. Distribution by Ages of 2,009 Teachers Without Prior Service who Became Members of the Teachers' Retirement System During the Year 1953-54

Attained Ages	Men	S. S. SALARIES Total	S. S. SALARIES Average	Women	S. S. SALARIES Total	S. S. SALARIES Average
18	2	$ 2,023.00	$1,001.50	15	$ 19,899.96	$1,326.66
19	13	18,162.58	1,397.12	80	111,189.75	1,389.87
20	19	26,098.20	1,373.59	120	179,794.74	1,498.29
21	15	25,698.14	1,713.21	119	202,880.51	1,704.88
22	24	44,142.27	1,839.26	165	323,549.59	1,960.91
23	33	67,653.05	2,050.09	150	303,891.45	2,025.94
24	36	73,349.70	2,037.49	85	163,199.65	1,920.00
25	30	60,904.96	2,030.17	54	97,085.18	1,797.87
26	42	87,045.61	2,072.51	39	73,109.61	1,874.61
27	31	66,291.60	2,138.44	25	41,109.34	1,644.37
28	36	77,199.17	2,144.42	29	54,563.16	1,881.49
29	32	65,100.75	2,034.40	29	52,188.11	1,799.59
30	34	76,581.25	2,252.39	22	37,359.88	1,698.18
31	22	46,827.72	2,128.53	33	61,500.92	1,863.66
32	20	40,984.16	2,049.21	30	57,535.27	1,917.84
33	13	27,502.70	2,115.59	30	51,712.00	1,723.73
34	16	33,130.00	2,070.63	30	53,674.58	1,789.15
35	12	23,938.40	1,994.87	25	45,483.05	1,819.32
36	9	17,065.00	1,896.11	25	44,182.52	1,767.30
37	7	15,237.80	2,176.82	25	44,830.65	1,793.23
38	5	10,496.00	2,099.20	35	65,183.23	1,862.38
39	7	11,992.80	1,713.26	19	33,472.71	1,761.72
40	11	21,775.80	1,979.61	33	59,897.22	1,815.07
41	5	10,461.45	2,092.29	25	47,403.40	1,896.14
42	3	6,417.26	2,139.00	39	68,356.04	1,752.72
43	5	9,104.20	1,820.84	27	47,646.59	1,764.69
44	5	10,107.60	2,021.52	33	64,037.72	1,940.54
45	5	9,529.00	1,905.80	23	41,372.50	1,798.80
46	5	9,712.20	1,942.44	16	29,418.27	1,838.64
47	6	12,861.00	2,143.50	14	25,017.20	1,786.94
48	2	3,756.00	1,878.00	15	29,020.45	1,934.70
49	4	7,648.00	1,912.00	20	36,118.05	1,805.90
50	0	00.00	00.00	11	22,076.66	2,006.97
51	4	8,499.00	2,124.75	8	14,397.22	1,799.65
52	0	00.00	00.00	4	7,137.03	1,784.26
53	1	2,400.00	2,400.00	8	12,089.80	1,511.23
54	0	00.00	00.00	5	10,238.55	2,047.71
55	1	2,400.00	2,400.00	3	5,603.40	1,867.80
56	2	3,900.00	1,950.00	4	6,898.80	1,724.70
57	2	3,606.00	1,803.00	1	1,089.60	1,089.60
58	0	00.00	00.00	4	7,992.75	1,998.19
59	0	00.00	00.00	3	5,875.80	1,958.60
60	0	00.00	00.00	2	3,070.62	1,535.31
61	0	00.00	00.00	0	00.00	00.00
62	0	00.00	00.00	0	00.00	00.00
63	0	00.00	00.00	1	2,400.00	2,400.00
64	0	00.00	00.00	2	3,217.10	1,608.55
65	0	00.00	00.00	0	00.00	00.00
66	0	00.00	00.00	1	1,086.72	1,086.72
67	0	00.00	00.00	2	3,616.44	1,808.22
68	2	3,900.00	1,950.00	0	00.00	00.00
Totals & Averages	521	$1,042,502.37	$2,000.96	1,488	$2,672,473.79	$1,796.02

Total—2,009 S. S. Salaries—$3,714,976.16 Average Salary—$1,849.17

TABLE VII

In This Table VII, members who have withdrawn during the life of the Retirement System, those with prior service credit are segregated so as to determine the cancellation of this part of the obligation of the State. The 11,043 withdrawn members had an average of 6.788 years of prior service, a total of 74,970.5 years. The remaining amount of prior service credit (held by active members) is 125,699.48, which is 10.68 years held by 11,767 members. The retired teachers hold credit for much of the prior service aggregate, but their credit has been translated into dollar values and is shown as the reserve requirement. It is regrettable that there are significant withdrawals to beyond age 40; also, that the modal age is 21 for new teachers and age 25 for the more experienced. The total members withdrawn over the 14-year period is 23,215, an average of 1,658 plus per year. It might be less expensive for the State to give more help to the young recruits until they have found themselves or adjusted to the work of teaching, than to expend so much effort educating more to teach a short time and quit. When teaching becomes a profession, the teachers will select the recruits and train them by cadet teaching, or otherwise, and prevent this great loss to the children and taxpayers. The subsequent service is also lost upon withdrawal, but the teacher receives a refund of her contributions and interest.

During the year 1953-54 there were 2,313 accounts refunded, of which 1,656 were for teachers who had taught recently. Some of the reasons given for withdrawal are: homemaking and family duties, 330, the largest of the causes given; teaching in other states, 257; husband's work necessitated transfer to another state, 198; changed professions, 185; and other work not indicated, 184. If we analyze the 257 who are teaching in other states, as to states they are now serving, we find that 74 went to Ohio; 33 to Indiana; 30 to Florida; 27 to Tennessee; 11 to Illinois; 7 to Virginia; 6 to West Virginia; and the remainder to 26 other states. That Kentucky is educating teachers for other states is quite evident. It might be profitable to determine why.

Of the 185 who chose other work, 40 went into the ministry or related work; 20 went into full-time farming; 8 into the medical or related professions; 14 chose secretarial work; 10 the Federal Civil Service; and the others into 44 other different fields of work. Four were elected to county office, and five began the study of Law.

During 1953-54 withdrawing teachers received a return of $310,882.51, representing their individual accounts.

TABLE VIII

The youngest teacher having any prior service credit is now 32 years old. The modal age on Table VIII is 48, and this group of members have an average of 10.51 years of prior service credit, very near the average for the 11,767 having prior service. There are now more teachers who do not have prior service than do have it. The average age of all the members of the Retirement system is 40 years; there are more members age 46 than any of any other age. They were 32 when the Retirement System began. We have only 60% as many now age 32 as we now have age 46.

TABLE VII. Members Who Have Withdrawn Before Retirement 1940-54

Entrance Age	Members Without Prior Service	Members With Prior Service	PRIOR SERVICE Total	PRIOR SERVICE Average	PRIOR SERVICE SALARY Total	PRIOR SERVICE SALARY Average
16	21	......	......	......	$	$ ....
17	317	5	4.3	.860	2,763.08	552.62
18	1,064	57	59.0	1.035	30,664.03	537.97
19	1,139	158	194.9	1.233	83,374.04	527.68
20	1,147	284	430.0	1.514	166,640.14	586.76
21	1,312	446	852.0	1.910	287,376.16	644.34
22	1,050	520	1,167.2	2.244	367,607.47	706.94
23	744	494	1,562.8	3.163	362,903.35	734.62
24	585	618	2,405.5	3.892	447,905.09	724.77
25	596	625	2,744.2	4.390	468,863.25	750.18
26	441	614	3,196.9	5.206	457,830.84	745.65
27	397	605	3,612.6	5.971	470,466.19	777.63
28	326	578	3,806.1	6.584	451,443.12	781.04
29	294	555	3,944.9	7.107	432,061.14	778.49
30	303	583	4,548.7	7.802	479,271.70	822.09
31	223	511	4,077.6	7.979	429,749.65	841.00
32	211	495	4,186.5	8.457	415,232.94	838.85
33	173	443	3,886.1	8.772	376,722.52	850.39
34	196	405	3,752.8	9.266	359,719.42	888.20
35	148	390	3,542.2	9.082	340,279.64	872.51
36	138	305	2,885.9	9.461	284,005.84	931.17
37	137	280	2,726.0	9.735	251,465.32	898.09
38	144	240	2,234.8	9.311	218,629.01	910.95
39	96	211	1,901.3	9.010	183,999.18	872.03
40	102	176	1,694.0	9.625	146,647.11	833.22
41	94	169	1,650.8	9.768	153,576.81	908.74
42	77	152	1,547.7	10.182	132,042.59	868.70
43	71	119	1,222.9	10.276	98,095.84	824.33
44	65	107	1,068.8	9.988	84,417.69	788.95
45	64	105	1,111.1	10.581	92,418.43	880.18
46	50	95	914.0	9.621	79,388.67	835.67
47	66	70	684.2	9.774	56,102.26	801.46
48	48	68	636.6	9,361	48,070.57	706.92
49	49	70	833.3	11.904	61,443.22	877.76
50	45	71	819.4	11.540	50,008.50	704.35
51	22	56	582.9	10.408	39,721.15	709.31
52	33	44	499.8	11.359	34,828.57	791.56
53	19	45	493.7	10,971	32,437.05	720.82
54	27	35	403.7	11.534	22,585.84	645.31
55	22	41	465.7	11.358	25,918.10	632.15
56	23	34	402.7	11.844	21,777.76	640.52
57	22	37	481.1	13.002	25,607.29	692.09
58	14	19	211.8	11.147	13,772.82	724.89
59	11	21	294.1	14.004	12,982.72	618.22
60	11	23	303.2	13.182	14,798.33	643.41
61	6	15	213.7	14,246	10,174.82	678.32
62	8	14	157.8	11,271	11,613.85	829.56
63	4	12	127.1	10.592	8,002.25	666.85
64	4	5	66.0	13.200	1,934.66	386.93
65	3	8	129.1	16.138	5,644.14	705.51
66	2	....	....	....	....	....
67	4	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	12,172	11,043	74,970.5	6.788	$8,661,618.76	$784.35

* Not eligible for Retirement.

**During the years 1940-54 the number of those teachers withdrawing who did not file professional service records were prorated to Columns 2 and 3 on this table.

TABLE VIII. Distribution of 11,767 Members Who Have Prior Service Credit With Attained Age July 1, 1954

Attained Age	Number of Members	PRIOR SERVICE YEARS		PRIOR SERVICE SALARY	
		Years	Average	Total	Average
32	25	41.00	1.64	$ 10,259.21	$ 410.37
33	31	38.32	1.24	17,266.41	556.98
34	89	107.63	1.21	50,437.28	566.71
35	128	181.16	1.42	74,301.00	580.48
36	168	135.53	.81	97,576.07	580.82
37	211	475.60	2.25	129,637.94	614.40
38	277	721.82	2.61	178,383.53	643.98
39	314	1,105.54	3.52	194,077.03	618.08
40	388	1,644.68	4.24	259,200.59	668.04
41	467	2,568.60	5.50	313,978.54	672.33
42	517	3,184.42	6.16	355,448.45	687.52
43	552	3,881.56	7.03	396,369.13	718.06
44	534	3,904.92	7.31	393,487.27	736.87
45	613	5,355.38	8.74	490,464.06	800.10
46	646	6,061.76	9.38	513,830.55	795.40
47	603	5,800.04	9.62	514,822.17	853.77
48	661	6,949.62	10.51	572,715.37	866.44
49	593	6,561.42	11.06	547,644.09	923.51
50	536	6,284.54	11.72	497,932.17	928.97
51	507	6,329.26	12.48	472,281.59	931.52
52	478	6,223.14	13.02	473,584.09	990.76
53	335	4,777.32	14.26	344,450.83	1,028.21
54	376	5,422.84	14.42	390,050.13	1,037.37
55	310	4,450.22	14.36	324,675.27	1,047.34
56	300	4,497.08	14.99	312,862.73	1,042.88
57	240	3,953.34	16.47	236,301.29	984.59
58	242	3,887.62	16.06	255,943.08	1,057.62
59	259	4,349.48	16.79	273,335.51	1,055.35
60	208	3,602.54	17.32	216,355.61	1,040.17
61	198	3,921.30	19.80	224,265.70	1,132.66
62	194	3,555.36	18.33	210,165.28	1,083.33
63	157	3,126.52	19.91	170,467.03	1,085.78
64	129	2,639.02	20.46	151,569.75	1,174.96
65	137	2,863.60	20.90	160,431.60	1,171.03
66	92	1,726.70	18.76	89,582.16	973.72
67	86	1,914.90	22.27	96,360.60	1,120.47
68	95	2,148.40	22.61	112,685.71	1,186.17
69	71	1,307.30	18.41	77,437.57	1,090.67
Totals & Averages	11,767	125,699.48	10.68	$10,200,638.39	$ 866.88

Prior service still dominates the service record of those retiring, and probably will for 10 years. A teacher retiring now may have 30 years of prior service providing $600 of the allowance, and 13 years of subsequent service providing $468 of the total allowance of $1,068. It will be three more years before any retiring teacher with 30 years of prior service credit will be able to receive as much or more for her (16 years) subsequent service. From that date forward, annuities will increase more rapidly in comparison to service.

The State's obligation for prior service shown on this table is estimated by the Actuary to be $6,345,871.81; for those already retired the unliquidated part due for prior service is $6,211,836.20. The State has

TABLE XX. The Distribution of 20,401 Members As To Ages and Salaries (Actual Salaries)

Attained Age	Number Teaching	Average Salary	Total Salaries
18	14	$1,316.14	$ 18,426.00
19	91	1,411.30	128,428.00
20	187	1,537.18	287,452.00
21	251	1,707.01	428,460.00
22	390	1,989.10	775,748.00
23	460	2,142.34	985,477.00
24	522	2,161.59	1,128,349.00
25	475	2,201.90	1,045,904.00
26	514	2,266.16	1,164,806.00
27	528	2,361.93	1,247,102.00
28	497	2,428.75	1,207,091.00
29	505	2,468.54	1,246,613.00
30	428	2,480.87	1,061,812.00
31	421	2,548.73	1,073,014.00
32	435	2,584.97	1,124,461.00
33	425	2,595.76	1,103,196.00
34	438	2,607.36	1,142,023.00
35	428	2,549.06	1,090,996.00
36	453	2,598.30	1,177,030.00
37	426	2,589.93	1,103,309.00
38	519	2,594.27	1,346,426.00
39	546	2,603.25	1,421,377.00
40	619	2,608.14	1,614,439.00
41	690	2,642.22	1,823,129.00
42	723	2,564.02	1,853,787.00
43	687	2,591.48	1,780,350.00
44	727	2,660.80	1,934,398.00
45	705	2,677.95	1,887,955.00
46	730	2,656.88	1,939,521.00
47	669	2,661.78	1,780,730.00
48	687	2,759.73	1,895,930.00
49	580	2,770.75	1,607,034.00
50	541	2,778.57	1,503,204.00
51	470	2,792.30	1,312,379.00
52	428	2,811.47	1,203,308.00
53	391	2,876.28	1,124,624.00
54	311	2,901.63	902,406.00
55	292	2,888.63	843,481.00
56	280	2,801.42	784,397.00
57	224	2,941.85	658,974.00
58	237	2,895.23	686,169.00
59	221	2,784.85	615,452.00
60	206	2,958.35	609,420.00
61	183	2,904.46	531,516.00
62	170	3,064.60	520,982.00
63	127	2,911.56	369,768.00
64	136	2,988.35	406,415.00
65	92	2,871.13	264,144.00
66	87	2,721.13	236,738.00
67	91	2,873.89	261,524.00
68	75	2,893.95	217,046.00
69	69	3,124.99	215,624.00
Totals & Averages	20,401	$2,582.83	$52,692,350.00

paid for prior service $4,669,930.99 (which is not to be deducted from the above). The cost of prior service has bankrupted many retirement systems. It comes about by amending the Retirement Law, giving too high a value to such service, more than the State can ever pay, in order to provide larger annuities for members with little service after the System began. The passage of H.B. 319 increasing the minimum annuity to $630 increased the State's obligation for prior service millions of dollars, and illustrates this point. Some several retired teachers are receiving pensions larger than the salaries were when they retired. The heart dictates larger allowances for the retired teachers who have paid in little, but the head must hold the cost within bounds that the State can pay. The State is able to meet this obligations for prior service of $12,557,707, but it may take it 25 or 30 years to amortize it. The General Assembly should be very careful not to increase this obligation until the amount now outstanding has been greatly reduced.

TABLE XX

The average age of teachers in Kentucky is moving upward. This appears to be due to two reasons: (1) fewer teachers coming into the profession before college graduation, and (2) the holding power of the Retirement System. Only 933 are under the age of 18 years while the modal age is 46; the average age, 40. There are 4,434 teachers under the age of 30, and 4,519 between age 30 and age 40. This indicates the need for a vigorous recruitment program. There are 414 teachers over the age

TABLE IX

TEACHERS RETIRED, WITHDRAWN, OR DECEASED

July 1, 1942, Through June 30, 1954

	SUPERANNUATION		DISABILITY			
	Retirements	Deaths	Retirements	Recovered	Deaths	Living Retired At End of Year
1942-43	232	15	14	1	1	229
1943-44	93	14	9	0	3	314
1944-45	71	14	6	0	0	377
1945-46	109	33	11	2	1	461
1946-47	142	26	23	1	4	595
1947-48	111	30	16	0	3	689
1948-49	122	26	14	1	2	796
1949-50	125	42	24	1	6	896
1950-51	167	38	35	2	2	1,056
1951-52	129	48	23	2	6	1,152
1952-53	161	50*	25	1	3	1,284
1953-54	149	38*	24	4	5	1,410
Totals	1,611	374	224	15	36	1,410
Retired 7-1-54	118	0	13	0	0	131
Totals	1,729	374	237	15	36	1,541*

* In addition to payments to 1,541 living retired teachers, annuity payments are made to survivors of two teachers who retired under Settlement Options.

TABLE IXa
DECEASED RETIRED TEACHERS
Age at Death
July 1, 1954

Age	Men	Women	Total
42	0	1	1
48	0	1	1
50	0	2	2
51	0	2	2
52	1	4	5
54	2	2	4
56	0	1	1
57	2	2	4
58	1	3	4
59	0	2	2
60	3	7	10
61	2	4	6
62	2	2	4
63	3	5	8
64	7	7	14
65	7	5	12
66	6	7	13
67	3	5	8
68	3	6	9
69	10	9	19
70	10	10	20
71	12	16	28
72	12	15	27
73	13	21	34
74	16	12	28
75	7	12	19
76	12	10	22
77	8	7	15
78	8	9	17
79	8	6	14
80	7	14	21
81	2	6	8
82	1	3	4
83	0	2	2
84	5	2	7
85	1	2	3
86	0	2	2
87	1	3	4
88	1	0	1
89	2	0	2
90	2	1	3
Totals	180	230	410

of 64 years. The average of their salaries is $2,886.66, while the general average for all members is $2,576.54.

The obligation to the living retired teachers, numbering 1,541, is $9,166,747.81. The amount for prior service is $6,424,421.19 for women, and $2,742,326.62 for men. The remainder is for subsequent service ($583,305.51).

The age range for living retired teachers is from 41 years to 94 years. The number now age 80 or older is, for women, 85; and for men, 39. The modal age for women is 72, and for men, 70 years. These are attained ages and are not to be confused with age at retirement. There are 370 still under the age of 65. This reveals one of the inadequacies of Social Security for teachers, many of whom should be retired before age 65.

In Table IXa of deceased retired teachers, the modal age at death is 73. The number of men exceeding the age of 80 before death is 22, and the number of women is 35. Thirty-six have attained the age of 85, and of this number, 21 are living. The average amount to be paid to living retired teachers in Table IX is $5,949; the aggregate exceeds $9 million.

ACTUARIAL

". . . Periodically, an Actuarial Valuation of the Assets and Liabilities of the System is made to determine whether the contributions, both from the membership and from the State, are proving sufficient to meet its established liabilities and to show what adjustments for further amendments, if any, are necessary on the basis of the actual experience of the System to maintain solvency.

"The following Valuation Balance Sheet, therefore, shows the Current and Deferred Assets and the Current and Deferred Liabilities of the Retirement System as of July 1, 1954, after taking into consideration the future impact of the implications of the governing law, as amended July 1, 1954. The Current Assets (Assets in hand) were taken from statements prepared by the Secretary of the System after the close of the fiscal year ending June 30, 1954 (as of July 1, 1954) and submitted in the form required for this report."

RESULTS OF VALUATION

Description and Comments

ASSETS

"The Assets of the System are divided into two general categories, Current Assets and Deferred Assets. The Current Assets, i.e., Assets in hand, are represented by cash, securities, receivables and other items and are equal in aggregate amount to the balances in the several fund accounts of the System (itemized among the Current Liabilities). The Current Assets reflect the financial position of the System as of July 1, 1954 and it is significant to note that the Current Assets, amounting to $28,835,073.28 bear a ratio of approximately 30.7 per cent to the Total Assets of the System. The Deferred Assets, i.e., Prospective Assets, aggregating $65,079,649.34 ($52,521,941.23 representing Deferred Assets by reason of Subsequent Service, and $12,557,708.11 representing Deferred Assets by reason of Prior Service), reflect the effect of future operations on the financial condition of the System in light of the law as amended July 1, 1954. The Deferred Assets are represented by several items set out and labeled in the Balance Sheet, as follows:

VALUATION BALANCE SHEET — JULY 1, 1954

(On basis of assumed retirement at age 65)

ASSETS

Current Assets		
Cash, 7-1-54	$ 103,894.45	$
Accounts Receivable		
Bond Investments	28,681,995.96	
Unamortized Premiums, less discount	41,911.69	
Accrued Interest on Bonds Purchased	7,271.18	
Furniture and Fixtures		
		28,835,073.28
Net Current Assets		$28,835,073.28
Deferred Assets: (Present Value on 3% interest assumption, etc.)		
(1) Present Value Teachers' contributions mandatory by reason of Subsequent Service, 7-1-54. (A')		$24,961,991.93
(2) Present Value State's contributions mandatory by reason of Subsequent Service, 7-1-54. (A")		24,961,991.93
(3) Indicated deficiency from members' future contributions (Amendment, 7-1-54)		2,597,957.37
Deferred Assets mandatory by reason of Subsequent Service		$52,521,941.23
(4) **Actuarial Reserve Deficiency:** Deferred obligations of the Commonwealth of Kentucky. Present Value Accrued obligation mandatory by reason of Prior Service, 7-1-54		
Active Members	$ 5,033,612.71	
Members eligible to retire	1,312,259.20	6,345,871.91
(5) **Current Assets Deficiency:** Present Value of Accrued Prior Service obligation due retired teachers, 7-1-54	$ 8,583,442.30	
Less: State's Prior Service Contributions	2,371,606.10*	
Net **Allowance Reserve Fund** deficit		6,211,836.20
Deferred Assets mandatory by reason of Prior Service		$12,557,708.11
TOTAL ASSETS		$93,914,722.62

*See discussion of Allowance Reserve Fund.

VALUATION BALANCE SHEET — JULY 1, 1954

(On basis of assumed retirement at age 65)

LIABILITIES

Current Liabilities		
Outstanding Items ....$		$ 4,621.19
(1) Expense Fund, 7-1-54		1,732.60
(2) Teachers' Savings Fund—		
Accumulated Contributions by reason of Subsequent Service, 7-1-54	12,116,193.72	
Voluntary Contributions, Active Members, 7-1-54	11,618.31	12,127,812.03
(3) State Accumulation Fund—		
Accumulated Contributions (State) by reason of Subsequent Service, 7-1-54		12,116,197.36
(4) Allowance Reserve Fund:		
Retired Teachers' S. S. Contributions with Accumulated Interest, 7-1-54	187,056.20	
State S. S. contribution, Retired Teachers' with accumulated interest, 7-1-54	396,249.31	
Voluntary Contributions, Retired Members, 7-1-54	6,803.72	
State P. S. Contributions, Retired Teachers, 7-1-54*	2,371,606.10	2,961,715.33
(5) Guarantee Fund, 7-1-54		1,622,994.77
Current Liabilities		$28,835,073.28
Deferred Liabilities: (Present Value on 3% interest assumption, etc.)		
(6) Present Value Benefits mandatory by reason of Subsequent Service active members, 7-1-54. (B')		$52,281,535.36
(7) Present Value Benefits mandatory by reason of S. S., members eligible to retire, 7-1-54. (B''')		240,405.87
Deferred Liabilities mandatory by reason of S. S. (B' plus B''')		$52,521,941.23
(8) Present Value Benefits mandaory by reason of Prior Service, 7-1-54		
Active Members (B)		$ 5,033,612.71
Members eligible to retire (B'')		1,312,259.20

(9) Present Value Benefits mandatory by reason of Prior Service — Retired Teachers (B""), 7-1-54	$ 8,583,442.30	
Less: State's Prior Service Contributions	2,371,606.10*	
		6,211,836.20
Deferred Liabilities mandatory by reason of Prior Service		$12,557,708.11
TOTAL LIABILITIES		$93,914,722.62

*See discussion of Allowance Reserve Fund.

"Deferred Assets

"(1) Present value of teachers' contributions mandatory by reason of Subsequent Service, July 1, 1954, (A'), i.e., the value at the Balance Sheet date of future contributions to be made by the teachers who eventually will qualify for retirement benefits.

"This item amounts to $24,961,991.93. The increase in the Subsequent Service Salary scale, that has come about in recent years, made itself manifest in the calculation of this item. Likewise, the increase in contribution rates and the removal of the maximum limitation on salaries against which the contribution rates are applied, brought about by the amendment referred to as House Bill No. 322, has very drastically and favorably influenced this item. In calculating this item, representing, as it does, the present value of teachers' future contributions, your actuary relied upon the assumption stipulated in House Bill No. 322 which imply that contributions by the membership will continue at their old rates until July 1, 1956, after which date they will be increased in accordance with that amendment. It may be expected that future trends in salaries will tend to influence, materially, the contribution provisions of the Act.

"(2) Present value of State contributions mandatory by reason of Subsequent Service, July 1, 1954, (A"), i.e., the value at the Balance Sheet date of future matching contributions to be made by the State.
"This item, likewise, amounts to $24,961,991.93. The same interactive elements were considered in the calculation of this item as were mentioned in the preceding paragraph. With respect to this item, however, it is significant to note that deaths and withdrawals in the future, in excess of original assumptions, will create a small margin of safety in the matching funds which is not reflected in the present value of State contributions mandatory by reason of Subsequent Service.

"(3) Indicated deficiency from members' future Subsequent Service contributions, i.e., the amount at the Balance Sheet date by which the present value of teachers' future contributions, matched by the State, falls short of the present value of benefits mandatory by reason of Subsequent Service as provided in the Act.

"This item, amounting to $2,597,957.37, decreased more than $2,000,000.00 as compared with the corresponding item appearing in the

Valuation Balance Sheet dated July 1, 1951. In past Valuations it has been pointed out that the indicated deficiency from members' future Subsequent Service contributions injected itself into the Valuation Balance Sheets because the provisions of the governing law rigidly fixed not only the contributions of member teachers for Subsequent Service, matched by the State, but also the measuring rate of benefit per year of Subsequent Service to be used at retirement. The law was silent (no covering provision) as to what could be done in event the specified contributions proved to be insufficient to guarantee the payment of the stipulated Subsequent Service benefits. However, the provisions of the current amendment (House Bill No. 322, effective date July 1, 1956) now recognizes that defect in the law by increasing the contribution rates to a more adequate basis and provides, at the same time, for an adjustable measuring rate for benefits mandatory by reason of Subsequent Service. By this corrective amendment equality will ultimately be brought about between the present value of teachers' future contributions, matched by the State, and the present values of benefits resulting from Subsequent Service. The previously increasing trend with respect to this "indicated deficiency" will reverse itself, since it is now within the control of the Board of Trustees to exercise the mandate specified in House Bill No. 322 and bring about an ultimate equality by an adjustment in the benefit rate for Subsequent Service. This implication with respect to the amendment will be treated further in the discussion of Deferred Liabilities.

"(4) Actuarial Reserve Deficiency, consisting of the present value of the accrued obligation mandatory by reason of Prior Service, July 1, 1954, on account of both active members and members eligible to retire who eventually will qualify for retirement benefits, i.e., the value at the Balance Sheet date of future contributions "temporary" to be made by the State on account of Prior Service of the existing active membership who eventually will retire.

"This item, amounting to $6,345,871.91, reflects a decrease of $303,857.89 over the corresponding item appearing in the last Balance Sheet as of July 1, 1951. The implications of House Bill No. 319 have been taken into consideration in the calculation of this item. From the statistics forming the basis of the calculation of this item, it was noted that a considerable amount of this obligation was transferred, by reason of retirements, to the "Current Assets Deficiency" (Item (5) following) and that there has been a significant reduction in the number of active members with Prior Service credits, due to the telling effect of both the death rate and the withdrawal rate. However, the average Prior Service per active member remains fairly constant—10.26 years as of July 1, 1954 as compared with 10.37 years as reflected in the last previous study. The indicated change in the trend of this "Actuarial Reserve Deficiency" item is a favorable manifestation.

"(5) Current Assets Deficiency, the present value of the accrued **Prior Service** obligation due retired teachers, July 1, 1954, i.e., the value at the Balance Sheet date of the future contributions yet to be made by the State to liquidate the existing obligation to teachers currently receiving retirement benefits.

"This item amounts to $6,211,836.20—up approximately $3,200,000.00 as compared with the corresponding item appearing in the last previous Balance Sheet as of July 1, 1951. It should be emphasized again that this "Current Assets Deficiency" item absorbes the entire impact with respect to teachers who have already retired, not only of the minimum pension amendments which became effective July 1, 1950, but also the new minimum pension amendment (House Bill No. 319) which became effective July 1, 1954. Item (4), "Actuarial Reserve Deficiency" and Item (5), "Current Assets Deficiency," now aggregate $12,557,708.11 and represent the Deferred Assets mandatory by reason of Prior Service. This aggregate is a deferred obligation of the Commonwealth of Kentucky.

"Another influence that has contributed to this aggregate obligation has been the failure of the State to fully comply with the provisions of the Kentucky Teachers' Retirement law providing for "temporary" State contributions to the System. In 1946 your actuary recommended that an amortization plan be adopted covering a period of twenty-five years to implement the State's requirement for "temporary" contributions to be used in lieu of the original requirement of two per cent of aggregate salaries as a measure of the State's "temporary" contributions. That plan has now become inadequate and requires modification. Accordingly, your actuary volunteers a new amortization schedule that would guarantee the Deferred Assets mandatory by reason of Prior Service over a period of thirty years. The annual State "temporary" contribution that would liquidate the Deferred Assets mandatory by reason of Prior Service ($12,557,708.00) over a period of thirty years (assuming three per cent interest) would amount to $640,685.00. This would mean a biennial appropriation requirement for the next fifteen biennial amounting to $1,281,370.00 each. Such a revised amortization plan would not only guarantee the Deferred Assets mandatory by reason of Prior Service but would supply sufficient funds annually to discharge the cash requirements for retiring members, as far as the State's Prior Service obligation is concerned. Minor adjustments between fund accounts would satisfactorily take care of certain anticipated peak load years. The size of the annual amortization requirement, even over a period of thirty years, is considerably less than the original requirement of the law calling for two per cent of aggregate payroll which would now require an annual "temporary" contribution of approximately $1,053,000.00 per year. The urgency of adopting a new plan of amortization, the requirements of which can be regularly appropriated by future legislatures, seems apparent.

LIABILITIES

"The liabilities of the System were likewise divided into two general categories, Current Liabilities and Deferred Liabilities. The liabilties in these two categories, in the aggregate, represent all of the obligations of the System. The Current Liabilities reflect the current operating position of the System as of July 1, 1954. They consist of the balances in the several fund accounts of the System together with minor outstanding items. . . ." (The reader is referred to items listed in the Balance Sheet.)

"In the discussion, earlier in this report, of the subject "Deferred Assets" mandatory by reason of Subsequent Service, it was pointed out that the Board of Trustees could ultimately bring about an equality between the Deferred Assets mandatory by reason of Subsequent Service and the Deferred Liabilities mandatory by reason of Subsequent Service by an adjustment, if necessary, in the benefit rate per year of Subsequent Service (House Bill No. 322). The benefit rate for use in connection with this amendment has been tentatively established at one and three-fourths per cent (one and one-half per cent plus one-fourth per cent. While the effective date of this amendment (House Bill No. 322) is deferred until July 1, 1956, the indications, as a result of the current valuation, point to the possible necessity of later adjusting the tentatively adopted Subsequent Service rate to some slightly lesser rate. It is not recommended, at this time, that the tentatively adopted rate of one and three-fourths per cent per year of Subsequent Service be changed, although a test rate of one and two-thirds per cent brought about practical equality between Deferred Liabilities mandatory by reason of Subsequent Service and Deferred Assets mandatory by reason of Subsequent Service. If the indications persist, following 1956, then a change in the benefit rate per year of Subsequent Service should be seriously considered."

. . . .

CONCLUSIONS

"As has been repeatedly stated in previous reports, a sound financial condition exists, from the standpoint of actuarial requirements, when the System has Current Assets equal to the difference between the total obligations of the System and the present value of future contributions, by both member teachers and the State, on account of service to be rendered by the membership subsequent to the date of the Valuation Balance Sheet, and by the State alone on account of the obligations it has assumed for Prior Service. The Valuation Balance Sheet displayed herein, together with the accompanying comments and recommendations, clearly illustrate this condition.

"The changes that have occurred in the membership characteristics and statistical data, since the last report as of July 1, 1951, have, of course, augmented materially the totals that compose the Valuation Balance Sheet. However, the import and implications of the new amendments to the Retirement System law passed by the 1954 General Assembly have vouchsafed the ultimate actuarial funding of the obligations of the System that will come about as a result of future Subsequent Service of member teachers. The sovereignty of the Commonwealth of Kentucky, whose promise substantiates and guarantees the Prior Service obligations, makes certain their future liquidation. The liberalizing provisions of the amended law with respect to the control over the investment portfolio of the System, that is now vested in the Board of Trustees, has opened the way for a substantial improvement in interest earnings.

"Therefore, the overall financial outlook is more satisfactory at this time than at any previous period in the commendable history of the System. The conscientious concern for the financial welfare of the

System, on behalf of both the Board of Trustees and the Secretary, continues to manifest itself. Member teachers and their beneficiaries, whose future interests are tied so closely to the stability of the System, can take pride in the present financial showing and look forward with confident dependence upon the soundness of the Teachers' Retirement System of the State of Kentucky.

"Respectfully submitted,

(Signed) L. C. Cortright

L. C. Cortright

Actuary"

FINANCIAL

The handling of the receipts of the Retirement System is a varied and complicated task. The Law, Regulations and adopted procedures cover a multitude of teachers and cases which are not routine. The making of records, vouchers and other evidences of each transaction is a great responsibility.

The Retirement Office receives each month a pay roll report showing name, retirement number, salary and the amount deducted for retirement with check to cover.

In addition to these receipts there are those from members in Military Service, on Leave, on exchange, and on deferred retirement. There are also those who have the privilege of reinstating accounts previously withdrawn, and those who pay for out-of-state service. Quite a few additional make voluntary contributions. From these sources, 511 checks or separate individual transactions were completed during 1953-54, involving funds in excess of $43,000. This also involves service credit directly and is so important to the proper functioning of this phase of the Retirement System that the Assistant Secretary has this responsibility directly under her supervision. In proportion to the annual receipts this is a small matter, but for the teacher concerned it is of major importance. Such service requires time and adds to the cost of administration.

The Statutes provide that no more than 4% (excepting for the year 1940-41 of a sum equal to the receipts of the State Accumulation Fund may be used for the administration of the Retirement System. This has so far been fairly adequate, depending upon the amount needed for equipment in certain years. For 1953-54, $62,860 was set aside by the Board of Trustees for such expenses, but $1,694.35 was not used, making the percentage 3.71%. The receipts of the State Accumulation Fund were $1,649,688.28 for 1953-54, out of a total of $3,980,829.24. If the cost of administration is compared with total receipts, as in most agencies, the percentage is 1.53%, which is very low indeed. The cost of administering life insurance companies in general, including agents' salaries also, the percentage range is from 12% to 25%. The Retirement System has no agents.

The total receipts of the Retirement System since July 1, 1940, for 14 fiscal years amount to $35,393,319.82, of which $3,816,322.24 is from interest.

Excluding receipts from interest, this is 12%. This is the salvation of any annuity system. Unless reserves can be built up so as to earn interest, a retirement system will soon be bankrupt. A pay-as-you-go plan with an ever increasing obligation cannot long survive. In 50 years, or less, the interest income should be equal to half the cost of annuities. In this way the State and teachers will be able to finance the program.

The obligation for prior service has been referred to above. After the State has paid for $4,669,930.99 of this obligation, $12½ million remains. The minimum retirement Laws are responsible for most of this obligation. Even a slight increase in the minimum annuity is reflected in millions of dollars increase in this obligation. From this analysis, it is observable that the State has contributed much more than the teachers. Of the teachers' contribution, over $2,000,000 has been returned as refunds and approximately $4,000,000 in annuities. So far the teachers have paid 17.3%of their annuities, and the State 82.7%. This reveals the cost of prior service for those retired. Out of total receipts of $35,393,319.82, the Retirement System has disbursed $6,555,246.54 and has a balance of $28,835,073.28 as of July 1, 1954.

There are three reserve funds in the Retirement System. They are for the purpose of protecting the interests of those providing said funds.

COST OF ADMINISTRATION
TEACHERS' RETIREMENT SYSTEM
July 1, 1940, to June 30, 1954

Year	Receipts of State Accumulation Fund (for Matching & P.S.)	Administrative Expenses	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	36,039.67	3.92%
1947-48	919,960.33	36,409.41	3.96%
1948-49	1,434,834.59)	41,059.78	2.90%
	2,439,606.64)*		
1949-50	1,434,315.22	43,396.76	3.03%
1950-51	1,577,988.24	52,324.68	3.32%
1951-52	1,580,070.32	58,303.98	3.69%
1952-53	2,102,681.02	57,490.72	2.73%
1953-54	1,649,688.28	61,165.65**	3.71%

* The amount of the special Prior Service appropriation in 1948-49 $2,439,606.64, was not included in Receipts of State Accumulation Fund for this computation.

**Net amount of 1953-54 administrative expenses after liquidation of outstanding encumbrances.

ANALYSIS OF RECEIPTS
TEACHERS' RETIREMENT SYSTEM
Fiscal Years 1940-41 through 1953-54

Date	Teachers' Savings*	Re-instatements	State Matching Contrib.	State Prior Ser. Contrib.	State Contrib. for Expenses	Interest and Profit	Total Receipts
7/1/40 - 6/30/44	$ 2,063,716.64	$ 675.28	$ 2,063,636.92	$ 146,846.21	$ 89,516.87	$ 161,182.57	$ 4,525,574.49
1944-45	646,738.13	1,532.32	646,559.38	126,240.62	26,200.00	115,572.02	1,562,842.47
1945-46	659,667.42	1,710.26	658,004.24	133,345.76	31,650.00	163,671.56	1,648,049.24
1946-47	867,521.73	2,868.82	867,222.82	52,008.18	36,769.00	180,529.08	2,006,919.63
1947-48	1,010,250.24	2,027.34	867,231.00	52,000.00	36,769.00	221,023.20	2,189,300.78
1948-49	1,105,134.40	537.41	1,247,642.85	2,626,438.79	41,500.00	318,688.22	5,339,941.67
1949-50	1,181,924.12	1,049.89	1,181,632.98	252,242.02	44,000.00	429,361.89	3,090,210.90
1950-51	1,251,317.46	4,002.05	1,250,896.04	326,488.96	52,615.00	399,979.09	3,285,298.60
1951-52	1,413,081.57	4,290.75	1,410,675.96	169,104.04	$ 60,220.00	528,127.92	3,585,500.24
1952-53	1,470,569.81*	3,887.05	1,460,497.62	640,267.38	59,039.00	610,139.97	4,244,400.83
1953-54	1,509,971.81*	6,262.44	1,503,190.97	144,949.03	62,860.00	688,046.72	3,915,280.97
Totals	$13,179,893.33	$28,843.61	$13,157,190.78	$4,669,930.99	$541,138.87	$3,816,322.24	$35,393,319.82

* Includes Voluntary Unmatched Contributions.

The Teachers' Savings Fund is inviolate; the State Accumulation Fund can be used for certain purposes only, and the Allowance Reserve Fund provides for the payment of annuities. By segregating the assets into funds, it is possible to determine the solvency of the Retirement System. For the year, increase in assets is $2,799,393.18.

During 1953-54, retired teachers received $727,274.65, and withdrawing teachers $310,882.51, a total of $1,038,175.16. Teachers were credited with $1,516,234.25, representing their contributions and interest. Due to the amendment increasing the minimum annuity, disbursements for this purpose may be expected to rise sharply.

The amendment authorizing investments in School Revenue Bonds and Corporate Bonds will make it possible to earn a higher net rate of interest. The net rate for the preceding year was 2.646% and for 1953-54, 2.681%, an increase of $.035%. On $28,000,000, this is $10,800. The net rate for the ensuing year may be expected to exceed 2.71%. This will produce enough revenue to credit all reserve funds with 3% interest. U. S. Treasury 2½% Bonds on which a profit can be made will gradually be sold and the proceeds invested in higher yielding securities.

BALANCE SHEET
TEACHERS' RETIREMENT SYSTEM
June 30, 1954

ASSETS		
Cash, Unencumbered, All Funds ....$	99,276.90	
Cash, Encumbered	4,617.55	
Total Cash		$ 103,894.45
Investments:		
U. S. Treasury Bonds, 2½%-3¼%	26,174,000.00	
U. S. Treasury 90-day Bills	747,995.96	
Ashland School Voted Bonds, 3%	100,000.00	
Ky. Bridge Revenue Bonds, 3¼%-3½% ..	400,000.00	
School Building Revenue Bonds, 3%-3¼%	535,000.00	
Corporate First Mortgage Bonds, 3%	200,000.00	
Connecticut Expressway & Fuel Tax, 2⅞%	100,000.00	
Louisiana 3rd Series Highway, 2.75%-2.90%	425,000.00	
Total Invested		28,681,995.96
Deferred Charges:		
Unamortized Premium on Investments	208,522.59	
Accrued Interest Purchased	7,271.18	
Sub-total	215,793.77	
Unamortized Discount on Investments	166,610.90	49,182.87
Total Assets		$28,835,073.28

LIABILITIES AND FUND BALANCES

Expense Fund Encumbrances		$ 4,617.55	
Overpayment Adjustments Due to Districts		3.64	4,621.19
Fund Balances:			
Expense Fund		1,732.60	
Teachers' Savings Fund		12,245,095.55	
State Accumulation Fund		12,245,099.19	
Guarantee Fund		1,622,704.55	
Voluntary Contributions, Active Members		11,618.31	
Allowance Reserve Fund:			
Teachers' Contributions	$ 58,154.37		
State Per. Contributions	267,637.70		
State Temp. Contributions	2,371,606.10		
Voluntary Contributions, Retired Teachers	6,803.72		
		2,704,201.89	
Total Fund Balances			28,830,452.09
Liabilities and Fund Balances			$28,835,073.28

STATEMENT OF RECEIPTS AND DISBURSEMENTS
TEACHERS' RETIREMENT SYSTEM

For the Fiscal Year Ending June 30, 1954

Cash Balance, July 1, 1953			$ 609,457.46
Receipts:			
Teachers' Savings	$1,503,346.19		
Reinstatements	6,262.44		
Voluntary Unmatched Contributions	6,625.62		
Total from Members		$1,516,234.25	
State Contribution for Matching	1,503,190.97		
State Temporary Contribution for P.S.	144,949.03		
State Contribution for Expense Fund	62,860.00		
Total from State		1,711,000.00	
Interest Collections on Investments		701,319.17	
U. S. Treasury "G" Bond Paid at Maturity		50,000.00	
Annuity Checks Returned, Miscellaneous		2,275.82	
Total Receipts			3,980,829.24
Total Available			4,590,286.70

Disbursements:

Administrative Expense Fund			
Payments for Current Year	56,509.85		
Liquidation of Prior Year Encumbrances	369.94	56,879.79	
Refunds for Withdrawal from Membership		310,882.51	
Retirement Allowance Payments			
Superannuation	652,732.57		
Disability	73,955.76		
Voluntary	586.32	727,274.65	
Purchase of Investments			
Par Value of Securities	3,331,995.96		
Premium	40,931.15		
Accrued Interest Purchased	18,428.19	3,391,355.30	
Total Disbursements			4,486,392.25
Cash Balance, June 30, 1954			$ 103,894.45

TEACHERS' RETIREMENT SYSTEM
EXPENSE FUND PAYMENTS

July 1, 1953 to June 30, 1954

SCHEDULE III

Actuarial Fees	$ 1,825.00	
Board of Trustees—Meetings	630.11	
Board of Trustees—Elections	976.44	
Fidelity Bonds and Insurance	111.20	
Maintenance and Repair of Equipment	603.27	
Medical Examinations Expense	147.00	
Office Supplies	1,125.44	
Office Equipment Purchased	1,049.63	
Postage	1,274.21	
Printing and Materials	1,211.48	
Salaries	45,469.20	
Social Security Tax	558.07	
Telephone and Telegraph	393.92	
Travel Expenses	1,007.34	
Miscellaneous Expenses	127.54	
Total Payments to Date		$56,509.85

ANALYSIS OF YIELD RATE ON INVESTMENTS OF TEACHERS' RETIREMENT SYSTEM HELD AT JUNE 30, 1954

Description	Par Value	Interest Collection Per Year	Premium (Discount) Amortization Per Year	Net Annual Interest Earning	Yield Rate
Registered, by Subscription at Par:					
U. S. Treasury Bonds 2½%	$ 5,350,000.00	$133,750.00	$	$133,750.00	2.500%
U. S. Treasury Bonds 2¾%	200,000.00	5,520.00	....	5,520.00	2.760%
Registered, by Subscription at Premium:					
U. S. Treasury Bonds 2¾%	11,000,000.00	302,500.00	7,245.04	295,254.96	2.684%
Coupon Bonds, by Subscription at Par:					
U. S. Treasury 2½%	1,350,000.00	33,750.00	....	33,750.00	2.500%
U. S. Treasury 3¼%	250,000.00	8,125.00	....	8,125.00	3.250%
U. S. Treasury 2¾%	24,000.00	660.00	....	660.00	2.750%
Coupon Bonds, Purchased at Premium:					
U. S. Treasury 2½%	1,400,000.00	35,000.00	346.90	34,653.10	2.475%
U. S. Treasury 3¼%	1,200,000.00	39,000.00	1,697.42	37,302.58	3.108%
Ashland School Voted Bonds, 3%	100,000.00	3,000.00	86.44	2,913.56	2.914%
Connecticut Expressway & Fuel Tax 2⅞%	100,000.00	2,875.00	50.14	2,824.86	2.825%
Commonwealth Edison 1st Mortgage 3%	200,000.00	6,000.00	26.44	5,973.56	2.987%
Jefferson County School Bldg. Revenue 3¼%	150,000.00	4,875.00	173.20	4,701.80	3.134%
Paducah School Bldg. Revenue 3¼%	200,000.00	6,500.00	299.04	6,200.96	3.100%
Louisiana 3rd Series Highway 2.90%	65,000.00	1,885.00	27.00	1,858.00	2.858%
Coupon Bonds, Purchased at Discount:					
U. S. Treasury 2½%	5,100,000.00	127,500.00	(8,676.88)	136,176.88	2.670%
U. S. Treasury 3¼%	300,000.00	9,750.00	(58.12)	9,808.12	3.269%
Kentucky Bridge Revenue 3¼%	200,000.00	6,500.00	(150.92)	6,650.92	3.325%
Kentucky Bridge Revenue 3½%	200,000.00	7,000.00	(67.08)	7,067.08	3.533%
Louisiana Highway 2¾%	360,000.00	9,900.00	(133.34)	10,033.34	2.786%
Henderson School Building 3¼%	35,000.00	1,137.50	(2.72)	1,140.22	3.257%
Jefferson County School Bldg. 3%	150,000.00	4,500.00	(52.82)	4,552.82	3.035%
TOTAL—long-term investments	$27,934,000.00	$749,727.50	$ 809.74	$748,917.76	
U. S. Treasury 91-day Bills, purchased 4/15/54 at a discount, maturing value $750,000, to yield approximately 1% on cash held pending delivery of long-term investments in July	747,995.96				
TOTAL (as shown on Balance Sheet)	$28,681,995.96				

Net yield on long-term investments =
$748,917.76 ÷ $27,934,000.00 = 2.68103%

AUDITOR'S REPORT
TEACHERS' RETIREMENT SYSTEM
STATEMENT OF RECEIPTS AND DISBURSEMENTS

July 1, 1953 to June 30, 1954

Cash Balance, June 30, 1953		$ 609,458.74
Less: Adjustment		1.28
		609,457.46
Receipts:		
Teachers' Savings	$1,503,346.19	
Reinstatements	6,262.44	
Voluntary Contributions (Unmatched)	6,625.62	
Total		1,516,234.25
State Contributions for Matching	$1,503,190.97	
Temporary Contributions for P. S.	144,949.03	
State Contributions for Expense Fund	62,860.00	
Total from State		1,711,000.00
Interest Collections on Investments	$ 701,319.17	
U. S. Treasury "G" Bond, Paid at Maturity	50,000.00	
Miscellaneous	2,275.82	
Total		753,594.99
Total Receipts		$3,980,829.24
Total to be Accounted for		$4,590,286.70
Disbursements:		
Administrative Expense Fund		
Payments for Current Year	$ 56,509.85	
Payments of Prior Year Encumbrances	369.94	
Total		56,879.79
Refunds for Withdrawal from Membership		310,882.51
Retirement Allowance Payments		
Superannuation	$ 652,732.57	
Disability	73,955.76	
Voluntary	586.32	
Total		727,274.65
Purchase of Investments		
Par Value of Securities	$3,331,995.96	
Premiums	40,931.15	
Accrued Interest Purchased	18,428.19	3,391,355.30
Total Disbursements		$4,486,392.25
Cash Balance, June 30, 1954		$ 103,894.45

COMMENTS

"The examination of the records of the Teachers' Retirement System for the year ending June 30, 1954 included a review of all receipts and disbursements of funds, the activities and management of the System in relation to its divisions of service to members and a check on the observance of the laws of the State, governing the maintenance of the System.

"Strict compliance with the provisions of the statute is maintained, and the financial records of the System are in reconciliation with the records of the Finance Department and the State Treasury Department.

"This audit was made as of June 30, 1954, ending of the fiscal year. All figures herein are as they appear in the records of the System on that date.

"Adjustments made by outstanding encumbrances, and transfers between accounts as provided by law, result in reconciliation with the records of the Finance and Treasury Departments.

"The Treasury Department shows investments of $28,684,000.00 as of June 30, 1954. The System's records show total investments of $28,681,-995.96, a difference of $2,004.04. The Treasury carries a purchase of U. S. 91-day bills at maturity value $750,000.00 whereas the System carries them at the purchase value $747,995.96, a difference of $2,004.04.

"The average yield on all investments is 2.68103% — an increase over the prior year yield of .03503%.

"The fund balance of the System, under the provisions of KRS 161.420 is allotted to various sub-funds, as provided in that section of the law.

"All receipts of the System are now credited to one major controlling fund balance, then allotted to the proper sub-fund in a subsidiary ledger. Under the law, the various sub-funds are dependent upon each other, and various transfers between the funds are provided.

"The report and statements herein show the condition of the Teachers' Retirement System as a whole and not as a number of separated legal entities. This method eliminates duplicate bookkeeping, effects economy in the keeping of all records and meets all provisions of the law.

"In this report and in future reports, the portion of the expense fund, allotted for capital outlay, is not and will not be shown as fixed asset on the balance sheet. However, records are kept on the actual physical inventory of furniture, fixtures and equipment but the monetary value will not be included in financial reports.

"It is our opinion that all funds coming into the System are properly accounted for; that the status of the System may be ascertained at any time desired; that the actuarial set-up is such that any member may ascertain his or her standing in the System promptly upon application; and the management is complying fully with the provisions of the statutes."

"Frankfort, Kentucky
December 10, 1954

"Honorable Lawrence Wetherby
Governor of Kentucky
Frankfort, Kentucky

Dear Governor Wetherby:

"We submit herewith report of our audit of the Teachers' Retirement System of the State of Kentucky, for the year ending June 30, 1954.

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

"Respectfully,

(Signed) T. H. Tinsley
T. H. Tinsley
Auditor of Public Accounts"