

**RETIREMENT AND SICK LEAVE
FOR STATE EMPLOYEES AND TEACHERS
REPORT OF THE
VIRGINIA ADVISORY LEGISLATIVE COUNCIL**

**To
THE GOVERNOR
And
THE GENERAL ASSEMBLY OF VIRGINIA**



HO 8,1960

COMMONWEALTH OF VIRGINIA
Department of Purchases and Supply
Richmond
1959

MEMBERS OF COUNCIL

JOHN H. DANIEL, Chairman
ROBERT Y. BUTTON, Vice-Chairman
C. W. CLEATON
JOHN WARREN COOKE
HARRY B. DAVIS
CHARLES R. FENWICK
TOM N. FROST
J. D. HAGOOD
CHARLES K. HUTCHENS
BALDWIN G. LOCHER
W. TAYLOE MURPHY
MOSBY G. PERROW, JR.
EDWARD E. WILLEY
J. J. WILLIAMS, JR.

STAFF

JOHN B. BOATWRIGHT, JR.
G. M. LAPSLEY
WILDMAN S. KINCHELOE, JR.
FLETCHER W. HARKRADER, JR.

RETIREMENT AND SICK LEAVE
FOR STATE EMPLOYEES AND TEACHERS

REPORT OF THE
VIRGINIA ADVISORY LEGISLATIVE COUNCIL

RICHMOND, VIRGINIA,
November 5, 1959.

To:

HONORABLE J. LINDSAY ALMOND, JR., *Governor of Virginia*

and

THE GENERAL ASSEMBLY OF VIRGINIA

The Virginia Supplemental Retirement System was adopted by the General Assembly in 1952 after a full study of the retirement system of 1942 by the Virginia Advisory Legislative Council. Various proposals have been made since 1952 for amendment of the present act; and some minor amendments have been made. However, no fundamental changes have been enacted since 1952. The Council was directed in 1956 to conduct a study of one feature of the act—lowering the retirement age for State employees and teachers in the public schools (together with the question of sick leave for teachers), but the Council concluded that it would be unwise to attempt piece-meal revision of the act and urged in a report issued in November, 1957, that “no change be made in the Virginia Supplemental Retirement Act at this time, but that the whole act be studied as to what changes, if any, should be made, and the effect thereof.” As a result of this recommendation, the General Assembly at its 1958 Session adopted the following resolution:

HOUSE JOINT RESOLUTION NO. 41

Whereas, there is a number of problems which have arisen in connection with the provisions of the Virginia Supplemental Retirement Act, among these being the questions concerning service credits, the age of retirement, changes in the benefit structure, survivor's protection and methods of financing; and

Whereas, the sick leave provisions for teachers in the public free schools do not appear to be consistent with such provisions for other employees; and

Whereas, in order to find a solution to these problems an overall study should be made of all phases of the Virginia Supplemental Retirement Act and the sick leave provisions for teachers; now, therefore, be it

Resolved by the House of Delegates, the Senate concurring, That the Virginia Advisory Legislative Council is hereby directed to make a study of all features of the Virginia Supplemental Retirement Act and sick leave provisions for teachers in the public free schools. All agencies of the State

shall assist the Council in its study. The Council shall conclude its study and make its report and recommendations to the Governor and General Assembly not later than October one, nineteen hundred fifty-nine.

The Council assigned this study to C. W. Cleaton, member of the House of Delegates, and member of the Council, South Hill, to serve as Chairman of a Committee to make the initial study and report to the Council. Selected to serve with Mr. Cleaton were the following:

Earl A. Fitzpatrick, member of the Senate of Virginia, Roanoke;
Tom Frost, member of the House of Delegates, and member of the Council, Warrenton;
Herbert H. Goodman, Vice-President, Remington Rand, Arlington;
W. Wright Harrison, President, Peoples National Bank, Charlottesville;
E. E. Lane, member of the House of Delegates, Richmond;
E. B. Pendleton, Jr., State Treasurer, Richmond;
L. M. Raney, President, Bank of La Crosse, La Crosse;
Charles A. Taylor, President, Life Insurance Company of Virginia, Richmond;
Robert F. Williams, Secretary, Virginia Education Association, Richmond.

The Committee organized and elected Senator Fitzpatrick as Vice-Chairman. John B. Boatwright, Jr., and G. M. Lapsley served as Secretary and Recording Secretary, respectively, to the Committee.

The Committee sought and obtained recommendations from the Virginia Education Association and the Virginia Teachers' Association, which represent the public school teachers throughout the State, and from the State employees. As to the latter group, a committee headed by M. M. Sutherland, Executive Assistant to the Director of the Department of Conservation and Economic Development, circularized, through the several State departments and agencies, all of the State employees and obtained their views as to desirable changes in the system. The Council Committee obtained the advice and assistance of C. H. Smith, Director, Virginia Supplemental Retirement System. We express our appreciation for the assistance rendered by these individuals and organizations in furnishing it with data and in expressing their views.

In connection with the recommendations made to it, the Committee secured actuarial estimates as to costs of some of the recommendations. The firm of Bowles, Andrews and Towne, the actuaries of the Supplemental Retirement System, and the staff of the System have made the computations which appear later in this report.

Based upon its study of the Virginia Supplemental Retirement System, the data which it has obtained concerning the effect of possible modifications in the System and the information which it was able to secure concerning teacher's sick leave, the Committee completed its study and reported to the Council. The Council has carefully considered the report of the Committee and other data which it secured, and submits the following report.

SUMMARY OF RECOMMENDATIONS

MAJOR RETIREMENT RECOMMENDATIONS

1. Increase the service retirement formula from 1% to 1½% of average final compensation multiplied by the number of years of creditable service, applicable as to future benefits to all persons on the retirement rolls who retire or have retired after March 1, 1952. (See p. 16)
2. Increase members' contribution rate by 12½% (from 4% to 4.5%). (See p. 16)
3. Provide for survivors' benefits in the form of an annuity for a dependent of a member dying after attaining age 60, payable in lieu of refund of accumulated contributions to a surviving dependent wife, husband, mother, or father at the option of the survivor. (See p. 26)
4. Provide for State contribution toward the cost of group life insurance in an amount based on the member's salary, to be in full force until age 65 or retirement and thereafter gradually reduced to 25% of face amount. (See p. 26)
5. Change the method of funding the accrued liability of the system from the present requirement that such liability be liquidated by March 1, 1972, to the "aggregate cost basis" whereby this cost is spread out over a longer period. (See p. 28)
6. Increase the interest rate assumption used in valuations of the system from the present 2¾% to a more realistic but still conservative 3¼%. (See p. 28)
7. Reduce the present 15 year service requirement for disability benefits to 10 years, and provide a minimum disability benefit of \$1,000 or 25% of average final compensation, whichever is larger, requiring new employees to pass a physical examination. (See p. 31)
8. Make no future major changes in the Retirement System without a thorough study with proper actuarial calculations to determine their effect on the System. (See p. 31)

OTHER RETIREMENT RECOMMENDATIONS

1. The General Assembly has most commendably at its recent regular sessions increased the minimum retirement allowance of teachers and State employees who retired for service prior to March 1, 1952 with at least 30 years' service credit and who have attained age 65 and of all retired for disability regardless of age. Continuing attention should be given to increasing these allowances in the future as in the past in order to keep abreast of the increasing cost of living. Consideration might also be given to making an increase in the retirement allowance of persons who retired prior to March 1, 1952 and who did not qualify for the minimum. (See p. 32)
2. Grant prior service credit in the following cases to employees who do not have it, upon their making (under paragraphs (b) and (c) below) certain payments:
 - (a) Credit for service prior to July 1, 1942, by employees who are or become members of the System and have 5 years membership service;

- (b) Credit, for those who rejected membership in the 1942 system but have since or do become members of the present System, for service between 1942 and the date of becoming members of the present System, provided they did not also refuse to transfer their contributions from the 1942 System to the new System;
 - (c) Credit for service rendered and credited prior to termination of service by members who, in the past, terminated service and withdrew their contributions and subsequently have reentered or reenter service. (See p. 32)
3. The clerks of the county courts who serve full time and whose sole compensation is paid by the State should be made eligible to become members of the Supplemental Retirement System. (See p. 33)
 4. Provision should be made for coverage of civilian employees of the Army and Air National Guard in the State retirement system, provided the federal government pays the full employer contribution. (See p. 33)
 5. Any member elected to his position by the General Assembly and which position was for a period excluded under the abolished system, should be credited with service rendered in such position on paying the member contributions based on present compensation and with interest. (See p. 34)
 6. Allow a person retired for disability who is gainfully employed to show medical expenses directly incurred to reduce or eliminate the cause of disability as an offset against earnings in determining a reduction in his disability allowance. (See p. 34)

SICK LEAVE FOR TEACHERS

1. The State appropriation to match local expenditures for substitute teachers should be kept at such level as will match local expenditures, to the extent of the commitment into which the State has entered. In addition, the localities generally should be encouraged to extend the maximum sick leave accumulation beyond the present State level of 30 days. (See page 34)

THE NEED FOR CHANGES IN THE VIRGINIA SUPPLEMENTAL RETIREMENT SYSTEM

Virginia has provided for pensions for teachers in the public schools for more than half a century. The Commonwealth pioneered in correlating its Retirement System with the Old-Age and Survivors Insurance program under the federal Social Security Act. The present act is basically a good one. It provides a moderate security for the State's public employees upon retirement and avoids the excesses which occur in certain other politically oriented retirement systems which place upon the taxpayer the burden of providing extravagant retirement compensation for highly paid public officials. Nevertheless there are inequities in the System which should be corrected and if this Commonwealth is to continue to attract to its service and to the honorable profession of teaching the high type of individual which it has been fortunate in securing in the past, the system should be liberalized in some respects.

The State is in competition in the field of employment not only with private businesses which in many cases can and do pay far higher salaries than the State can offer, along with "fringe benefits", but with the federal government which, with its enormous taxing power and the resources of the entire nation behind it, uniformly offers greater compensation and also provides liberal retirement and other benefits. If public service as a career is to be attractive, particularly to those more able individuals whose services the State so badly needs, reasonable security both for the employee and his dependents must be provided. State salaries are relatively low and the accumulation by a State employee of sufficient money to insure even a moderate competence in his non-productive years is virtually impossible.

It should be emphasized that the benefits of the Retirement System accrue in the main to those who make public service a career. Transient or part-time workers are not covered and those who only temporarily work for the State receive no benefit from the System. An employee at retirement benefits directly in proportion to the years which he has spent in the State's service and also in direct relation to the value which the Commonwealth has placed upon his service. The difficulty which the State has experienced in attracting and in holding competent personnel especially in professional and technical fields is well known. Without imposing a tremendous burden on the taxpayer, the State cannot offer high salaries; it can, however, at relatively a much lower cost hold out a promise of security in old age, and more adequate protection for surviving dependents.

What has been said above as to the general field of State employment is true to an even greater respect in connection with the public school system. There is probably not a superintendent of schools in the State—certainly not in the rural areas—who has been able to fill satisfactorily the vacancies in his teaching staffs in all cases. And the problem will be multiplied and accentuated in the near future as school teachers and administrators will face the problems generated by the vastly increased number of children who will seek admission to our school system. It is not our purpose here to discuss teacher's salaries but these have been widely publicized as being far too low and it would appear that only two reasons would generally impel a girl to make a career of school teaching—a love of teaching or the expectation of security.

What is true of women is even more true of men. Educators deplore the lack of male teachers in the schools. Men to a much greater extent than women are faced constantly with the necessity of providing security for their dependents if not for themselves; and if more men are to be attracted to the public schools it is essential that the Retirement System be strengthened in this respect. It is for this reason that strong emphasis is placed in this report on the greatest defect in our present system—lack of adequate protection for the surviving dependents of teachers and State employees.

The future course of the history of this Commonwealth is being charted today in our schools. The schools are being challenged now as never before by a tide of children to be educated. The future of our civilization is being challenged by the schools of Communist Russia. To meet these challenges, we must provide in the classrooms of our schools the best talent which is available. And if we are to draw and hold such talent in our schools we must do everything possible to make the teaching profession attractive.

With these considerations in mind we shall now discuss the background of the present Virginia Supplemental Retirement System, its provisions, how the State is handling problems of retirement in other fields, and the specific recommendations of the Committee and the reasons therefor.

BACKGROUND OF THE PRESENT RETIREMENT SYSTEM

There has been in Virginia some sort of pension plan for public school teachers since 1908. This early system provided very meager benefits (the maximum allowance being \$125 a quarter) and was actuarially unsound even though the State contributed to it, though not obligated to do so. It was replaced in 1942 by the actuarially sound Virginia Retirement Act which was made applicable to teachers and administrative school employees and to the majority of State employees as well. At a later period it was made possible for political subdivisions to bring their employees into the System.

At that time it was not possible for public employees to be covered by the Old-Age and Survivor's Insurance provisions of the federal Social Security Act. The provisions of the federal law were later changed and in 1952 the General Assembly provided for Social Security coverage for State employees and public school personnel and local employees. At the same session it repealed the Virginia Retirement Act and provided for the present system as a supplement to the basic Social Security coverage. A comparison of the costs and benefits of the three systems is set forth below:

	Teachers' Pension System (1908)	Virginia Retirement Act (1942)	Virginia Supplemental Retirement Act (1952)
Cost to Individual	1% of salary	Actuarially determined based on age on first \$2,000 of salary (\$3,600 in 1950); 5% maximum at option of member	4% of salary over \$1,200 (Social Security) additional
Social Security Coverage	No	No	Yes
Contributions Returnable	No	Yes, after 1946	Yes
Maximum Benefit	\$125 a quarter	$\frac{1}{2}$ of salary up to maximum benefit of \$1,000 (\$1,800 after 1950)	None
Benefits	$\frac{1}{2}$ of salary (average last 5 years)	Actuarial equivalent of contributions $(1/160 \times \text{average annual salary last 5 years} \times \text{years service})^*$	1% of average of 5 highest consecutive years' salaries in excess of \$1,200 $\times$ years service *
Disability Retirement	Yes	Yes	Yes

* Also optional benefits such as allowances to surviving dependents with reduced primary benefit.

OTHER STATE RETIREMENT SYSTEMS

In addition to the Virginia Supplemental Retirement System, there are retirement systems maintained by the State for four other groups of State employees. The one most nearly comparable to the general State system is that which applies to State police officers. This costs the State police officer slightly more than would coverage under the general system (4% more on the first \$1,200 of salary, and 2% more on compensation over \$4,800) but certain of the benefits are substantially higher. The formula by which normal retirement allowances are computed is more than double that of the general system (although there is a maximum fixed for this allowance to State police). State police are also covered by Social Security, and these benefits are, after age 65, an offset to their retirement allowance. The State police system provides for retirement at age 60 and early retirement at age 55 as compared with ages 65 and 60 under the general system. Furthermore, there is a most important provision under the State police system whereby dependents of State police officers dying in service from causes compensable under the Workmen's Compensation Act receive survivors' benefits. This system also provides disability compensation for officers disabled in line of duty.

A third system which is available for judges of the Supreme Court of Appeals and other courts of record and members of the State Corporation Commission and the Industrial Commission provides far more liberal benefits at much less cost to the individual. After contributing at a maximum of 3% of salary for a period of 12 years, and upon obtaining age 65, the judges are entitled to retire on $\frac{3}{4}$ of the salary being received by them at the time of retirement, and in addition receive Social Security benefits, and a similar provision is made for disability retirement. Somewhat similar provisions apply to judges of county courts not of record except that the retirement age is 70, and 15 years of service are required for service retirement and 10 years for disability retirement; the Social Security benefit is offset against the retirement benefit.

Finally, it should be mentioned that the Clerk of the Senate and the Clerk of the House of Delegates are covered by a special system which allows retirement after 20 years of service at $\frac{3}{4}$ of the salary being received at time of retirement in addition to Social Security and which requires a contribution up to a maximum of 3% of salary.

A chart setting forth the salient points of difference between the major systems, follows:

STATE RETIREMENT SYSTEMS *

	State Employees (With exceptions) Teachers, Employees of Localities Electing Coverage	State Police Officers	Judges, Courts of Record, members, State Corporation Commission and In- dustrial Commission	Judges of County Courts
Contribution Rate				
(a) Individual	4% of salary over \$1200	6% of entire salary; credited with 2% of Social Security tax	Age 40 or less * - 2% 41 - 55 * - 2½% 55 or over * - 3% of salary In 1942 or when ap- pointed*	Age 40 or less * - 2% 41 - 55 * - 2½% 55 or over * - 3% of salary In 1954 or when ap- pointed*
(b) State	Actuarially determined	Actuarially determined	Equal amount by State	Equal amount by State
Benefits	Age 65	Age 60	Age 65	Age 70
(1) Normal Retirement	Annual Allowance 1% of average of 5 highest consecutive years' salaries over \$1200 x number credited yrs. service	Annual Allowance 1/50 (maximum ½ of average of 5 highest years' salaries) x number credited yrs. service	With 12 yrs. service 3/4 of salary at retirement	With 15 yrs. service 3/4 of salary at retirement
(2) Early Retirement	Age 60 - 65 As above, actuarially reduced	Age 55 - 60 As above, actuarially reduced (may be compulsory)	None—except that Indus- trial Commissioner may retire after 25 yrs. service	None
(3) Disability Retirement	To age 65, with 15 or more credited years. To age 65—Annual Allowance 1¼% of 5 highest consecutive years' salary x number credited years service; after age 65 same as for normal retirement crediting time disabled as time worked at final salary	To age 60—Same as under Virginia Supplemental System. Age 60 - 65, calculated as for normal retirement under State Police System; after age 65, reduced by OASI payments. Disability in line of duty—2/3 pay until age 65, then reduced by OASI payments	3/4 of salary at time of retirement	For judges with 10 yrs. or more service compulsory after inquiry by appointing judge—3/4 of salary at time of retirement

* Retirement system affecting Clerks of the two Houses of the General Assembly not included, as it affects only two positions.

STATE RETIREMENT SYSTEMS — Continued

		State Employees (With exceptions) Teachers, Employees of Localities Electing Coverage	State Police Officers	Judges, Courts of Record, members, State Corporation Commission and In- dustrial Commission	Judges of County Courts
	(4) Deferred Retirement	On termination of employment after 15 or more credited yrs., contributions may be left in system to provide allowance at age 60 or later.	None	None	None
	(5) Termination of employment or death	Contributions with interest refunded or paid to beneficiary.	Same as for Supplemental System, except for survivors benefits for death in line of duty	No reimbursement	No reimbursement
13	Social Security	In addition to retirement	Retirement reduced by OASI benefits	In addition to retirement	Retirement reduced by OASI benefits
	Actuarially Sound	Yes	Yes	No	No
	Compulsory Retirement Age	70	60 to 65 with 25 years; or at 65	75 for those elected or appointed after 1954	None

THE PRESENT VIRGINIA SUPPLEMENTAL RETIREMENT SYSTEM

This study, however, is not concerned with any retirement system other than that applicable to State employees and public school teachers, certain other public school employees, and covered employees of political subdivisions. In order to understand the recommendations of this report and their effect upon the system it is necessary to set forth an analysis of the present system and there follows a brief summary of the principal benefit and contribution provisions of the system.

PRINCIPAL BENEFIT AND CONTRIBUTION PROVISIONS

(a) *Contributions*

By Members: 4% of salary in excess of \$1,200 annually.

By Employers: Balance of cost, made up as follows: The

(1) Accrued Liability Contribution — the annual amount to liquidate, by March 1, 1972, the liability for retirement allowances due to service prior to March 1, 1952, plus the

(2) Normal Contribution — the annual amount payable during the members' periods of membership in addition to members' contributions to provide the retirement allowances due to membership service.

(b) *Service Retirement*

Conditions: (i) Normal—age 65.

(ii) Early—age 60 (Certain teachers who have completed 30 years of service may retire after age 58 (male) or age 50 (female)).

Allowance: (i) Normal—1% of average final salary in excess of \$1,200 annually, multiplied by number of years of credited service.

(ii) Early—same formula, but benefit is actuarially reduced depending on period by which early retirement precedes age 65.

(iii) Normal and/or Early—the basic benefits as computed by formula, may be subject to increase under certain conditions:

(1) If the member contributed under the abolished system at a higher rate than under the present System.

(2) If the benefits under the System plus Social Security are less than those that would have been payable under the abolished system. (Note: (1) and (2) apply only to former members of the abolished system who transferred their accumulated contributions to the new System.)

(3) If the normal retirement benefits under the System plus Social Security are less than \$20 annually per year of service and less than \$600 in total.

(c) *Disability Retirement*

Conditions: Physical or mental incapacitation for further duty, after 15 years of service.

Allowance: $1\frac{1}{4}\%$ of final average salary multiplied by the number of years of creditable service. When the pensioner reaches age 65, his allowance is recom uted by the normal retirement formula.

The minimum benefit, including Social Security, is the smaller of \$45 per year of service, or \$900. In addition there is a guarantee for members of the abolished system who transferred their contributions to the new System.

(d) *Death before Retirement*

Benefit: Return of contributions with 2% interest to date of death.

(e) *Death after Retirement*

Benefit: Return of any excess of (a) contributions with 2% interest to date of retirement, over (b) total allowances received, unless an optional form of retirement benefit payment has been elected.

(f) *Termination prior to Death or Retirement*

Benefit: Return of contributions with 2% interest. Alternatively, if member has completed 15 years of service, he may elect to receive a deferred retirement allowance based on accrued benefit at termination.

EMPLOYER COSTS

Based upon the annual actuary's report on the 1958 valuation of the system, cost figures have been determined and are here presented to serve as a bench mark for consideration of the costs of the various suggested amendments.

The valuation as of June 30, 1958 produced the following cost factors, which will, in the absence of significant amendments, serve as the basis of employer contributions for the fiscal years 1960-61 and 1961-62. The cost factors shown represent percentages of total covered payroll.

	State Employees	Teachers
Accrued Liability Contribution	0.84%	2.10%
Normal Contribution	1.77%	2.41%
Total	2.61%	4.51%

The application of these contribution rates to payroll as of June 30, 1958, produces the following annual dollar costs:

	State Employees	Teachers	Total Employees
Accrued Liability	\$ 793,513	\$2,520,693	\$3,314,206
Normal	1,678,468	2,892,385	4,570,853
Total	2,471,981	5,413,078	7,885,059

ANALYSIS OF RECOMMENDATIONS AND THEIR EFFECT ON THE SYSTEM

Major Retirement Recommendations

Retirement Formula and Contribution Rate

1. Increase service retirement formula from 1% to 1½% of average final compensation multiplied by number of years of creditable service, applicable as to future benefits to all persons on the retirement rolls who retire or have retired since March 1, 1952.
2. Increase members' contribution rate by 12½% (from 4% to 4.5%).

Perhaps the most important element of any retirement program is the formula by which normal service retirement benefits are computed.

The formula under the Virginia System was designed to provide benefits which would supplement Social Security benefits in providing a satisfactory level of total retirement income for career employees—hence the “Supplemental” in the title of the System and the Act. This design was accomplished by excluding from the benefit base the first \$1,200 of annual earnings of each member. The result is that the higher-paid employees receive from the System a larger benefit as a percentage of earnings than do the lower-paid, thus countering the effect of Social Security which weights benefits heavily in favor of the lower-paid. The combination thus tends toward a total benefit of the same percentage of earnings for all employees with the same period of creditable service.

A pension plan is usually considered as providing a satisfactory level of benefits if the resulting total retirement income (plan plus Social Security) falls, for career employees, within the range of 45% to 60% of the employee's earnings in the period just before retirement. The percentage range would be lower than this for employees who had not spent the majority of their working years with their final employer, since the employer in such cases would not normally feel the same responsibility for providing in full for the employee's retirement years.

A satisfactory level of retirement income when expressed as a percentage of final earnings should normally be somewhat higher for the lower-paid employees than for the higher-paid, since the actual dollar amount of income, and not a percentage, is much more important in the determination of a floor of adequacy. At the same time, however, the higher-paid employees should be entitled to a percentage benefit not unreasonably lower than that applicable to employees in the middle salary range.

As previously noted, the present benefit formula under the system is based on average final compensation and per year of credited service and is as follows: 1% (AFC—\$1,200).

Several variants of the formula were considered, and actuarial calculations were made on them. The first of these, and the one which is recommended, will provide an across-the-board increase of 12½% in retirement compensation. This formula, hereinafter designated Formula “A”, can be expressed in figures as follows: 1½% (AFC—\$1,200).

Other formulas were considered and are presented in this report for information and comparative purposes. They are designated as Formulas “B” and “C”. Retirement allowance computations under Formula “B”

would be based on 3/4% of the first \$4,800 of average final compensation plus 1½% of the amount of such compensation over \$4,800. Formula "C" would be based on 1% of the first \$4,800 of average final compensation, and 1½% of compensation in excess of \$4,800.

In order to illustrate how the benefits under the present formula and the other formulas set forth above satisfy the criteria for a satisfactory program, and to compare the resulting benefit levels under these several formulas, the tables on the following pages present dollar benefits and percentages for various combinations of monthly salary and service for each formula. (It should be noted that, as a practical matter, Social Security benefits of the full \$127 maximum will not be possible for many years; however, higher paid employees retiring in the interim will be entitled to maximum benefits close to that figure.)

PRESENT FORMULA
MONTHLY RETIREMENT BENEFITS*
SYSTEM PLUS PRIMARY SOCIAL SECURITY

V. S. R. S. Benefit Formula:

(Per year of credited service)

1% Monthly Salary in excess of \$100

Years Credited Service	\$200†			
	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$84	\$10	\$ 94	47
15	84	15	99	50
20	84	20	104	52
25	84	25	109	54
30	84	30	114	57
35	84	35	119	60
40	84	40	124	62

Years Credited Service	\$250†			
	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$95	\$15	\$105	42
15	95	22	117	47
20	95	30	125	50
25	95	38	133	53
30	95	45	140	56
35	95	52	147	59
40	95	60	155	62

Years Credited Service	\$300†			
	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$105	\$20	\$125	42
15	105	30	135	45
20	105	40	145	48
25	105	50	155	52
30	105	60	165	55
35	105	70	175	58
40	105	80	185	62

* Benefits shown to nearest dollar.

† Average monthly salary for 5 highest consecutive years.

\$350†				
Years Credited Service	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$116	\$25	\$141	40
15	116	38	154	44
20	116	50	166	47
25	116	62	178	51
30	116	75	191	55
35	116	88	204	58
40	116	100	216	62

\$400†				
Years Credited Service	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$127	\$30	\$157	39
15	127	45	172	43
20	127	60	187	47
25	127	75	202	50
30	127	90	217	54
35	127	105	232	58
40	127	120	247	62

\$500†				
Years Credited Service	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$127	\$40	\$167	33
15	127	60	187	37
20	127	80	207	41
25	127	100	227	45
30	127	120	247	49
35	127	140	267	53
40	127	160	287	57

\$750†				
Years Credited Service	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$127	\$65	\$192	26
15	127	98	225	30
20	127	130	257	34
25	127	162	289	39
30	127	195	322	43
35	127	228	355	47
40	127	260	387	52

\$1,000†				
Years Credited Service	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$127	\$ 90	\$217	22
15	127	135	262	26
20	127	180	307	31
25	127	225	352	35
30	127	270	397	40
35	127	315	442	44
40	127	360	487	49

* Benefits shown to nearest dollar.

† Average monthly salary for 5 highest consecutive years.

PROPOSED FORMULA A
MONTHLY RETIREMENT BENEFITS *
SYSTEM PLUS PRIMARY SOCIAL SECURITY

V. S. R. S. Benefit Formula:

(Per year of credited service)

1½ Monthly Salary in excess of \$100

Years Credited Service	\$200†			
	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$84	\$11	\$ 95	48
15	84	17	101	51
20	84	22	106	53
25	84	28	112	56
30	84	34	118	59
35	84	39	123	62
40	84	45	129	65

Years Credited Service	\$250†			
	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$95	\$17	\$112	45
15	95	25	120	48
20	95	34	129	52
25	95	42	137	55
30	95	51	146	58
35	95	59	154	62
40	95	68	163	65

Years Credited Service	\$300†			
	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$105	\$23	\$128	43
15	105	34	139	46
20	105	45	150	50
25	105	56	161	54
30	105	68	173	58
35	105	79	184	61
40	105	90	195	65

Years Credited Service	\$350†			
	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$116	\$28	\$144	41
15	116	43	159	45
20	116	56	172	49
25	116	70	186	53
30	116	84	200	57
35	116	99	215	61
40	116	113	229	65

* Benefits shown to nearest dollar.

† Average monthly salary for 5 highest consecutive years.

Years Credited Service	\$400†			
	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$127	\$ 34	\$161	40
15	127	51	178	45
20	127	68	195	49
25	127	84	211	53
30	127	101	228	57
35	127	118	245	61
40	127	135	262	66

Years Credited Service	\$500†			
	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$127	\$ 45	\$172	34
15	127	68	195	39
20	127	90	217	43
25	127	113	240	48
30	127	135	262	52
35	127	158	285	57
40	127	180	307	61

Years Credited Service	\$750†			
	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$127	\$ 73	\$200	27
15	127	110	237	32
20	127	146	273	36
25	127	182	309	41
30	127	219	346	46
35	127	257	384	51
40	127	293	420	56

Years Credited Service	\$1,000†			
	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$127	\$101	\$228	23
15	127	152	279	28
20	127	203	330	33
25	127	253	380	38
30	127	304	431	43
35	127	354	481	48
40	127	405	532	43

* Benefits shown to nearest dollar.

† Average monthly salary for 5 highest consecutive years.

PROPOSED FORMULA B

MONTHLY RETIREMENT BENEFIT * SYSTEM PLUS PRIMARY SOCIAL SECURITY

V. S. R. S. Benefit Formula:

(Per year of credited service)

$\frac{3}{4}\%$ Monthly Salary up to \$400

+ $1\frac{1}{2}\%$ Monthly Salary over \$400

Years Credited Service	\$200†			
	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$84	\$15	\$ 99	50
15	84	23	107	54
20	84	30	114	57
25	84	38	122	61
30	84	45	129	65
35	84	53	137	69
40	84	60	144	72

Years Credited Service	\$250†			
	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$95	\$19	\$114	46
15	95	28	123	49
20	95	38	133	53
25	95	47	142	57
30	95	56	151	60
35	95	66	161	64
40	95	75	170	68

Years Credited Service	\$300†			
	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$105	\$23	\$128	43
15	105	34	139	46
20	105	45	150	50
25	105	56	161	54
30	105	68	173	58
35	105	79	184	61
40	105	90	195	65

Years Credited Service	\$350†			
	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$116	\$ 26	\$142	41
15	116	39	155	44
20	116	53	169	48
25	116	66	182	52
30	116	79	195	56
35	116	92	208	59
40	116	105	221	63

* Benefits shown to nearest dollar.

† Average monthly salary for 5 highest consecutive years.

Years Credited Service	\$400†			
	Soc. Sec.	V.S.R.S. Bft.	Total	
10	\$127	\$ 30	\$157	39
15	127	45	172	43
20	127	60	187	47
25	127	75	202	50
30	127	90	217	54
35	127	105	232	58
40	127	120	247	62

Years Credited Service	\$500†			
	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$127	\$ 45	\$172	34
15	127	68	195	39
20	127	90	217	43
25	127	113	240	48
30	127	135	262	52
35	127	158	285	57
40	127	180	307	61

Years Credited Service	\$750†			
	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$127	\$ 83	\$210	28
15	127	124	251	33
20	127	165	292	39
25	127	206	333	44
30	127	248	375	50
35	127	289	416	55
40	127	330	457	61

Years Credited Service	\$1,000†			
	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$127	\$120	\$247	25
15	127	180	307	31
20	127	240	367	37
25	127	300	427	43
30	127	360	487	49
35	127	420	547	55
40	127	480	607	61

* Benefits shown to nearest dollar.

† Average monthly salary for 5 highest consecutive years.

PROPOSED FORMULA C

MONTHLY RETIREMENT BENEFITS * SYSTEM PLUS PRIMARY SOCIAL SECURITY

V. S. R. S. Benefit Formula:

(Per year of credited service)

1% Monthly Salary up to \$400

+1½% Monthly Salary over \$400

Years Credited Service	\$200†			
	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$84	\$20	\$104	52
15	84	30	114	57
20	84	40	124	62
25	84	50	134	67
30	84	60	144	72
35	84	70	154	77
40	84	80	164	82

Years Credited Service	\$250†			
	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$95	\$ 25	\$120	48
15	95	38	133	53
20	95	50	145	58
25	95	63	158	63
30	95	75	170	68
35	95	88	183	73
40	95	100	195	78

Years Credited Service	\$300†			
	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$105	\$ 30	\$135	45
15	105	45	150	50
20	105	60	165	55
25	105	75	180	60
30	105	90	195	65
35	105	105	210	70
40	105	120	225	75

Years Credited Service	\$350†			
	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$116	\$ 35	\$151	43
15	116	53	169	48
20	116	70	186	53
25	116	88	204	58
30	116	105	221	63
35	116	123	239	68
40	116	140	256	73

* Benefits shown to nearest dollar.

† Average monthly salary for 5 highest consecutive years.

Years Credited Service	\$400†			
	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$127	\$ 40	\$167	42
15	127	60	187	47
20	127	80	207	52
25	127	100	227	57
30	127	120	247	62
35	127	140	267	67
40	127	160	287	72

Years Credited Service	\$500†			
	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$127	\$ 55	\$182	36
15	127	83	210	42
20	127	110	237	47
25	127	138	265	53
30	127	165	292	58
35	127	193	320	64
40	127	220	347	69

Years Credited Service	\$750†			
	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$127	\$ 93	\$220	29
15	127	139	266	35
20	127	185	312	42
25	127	231	358	48
30	127	278	405	54
35	127	324	451	60
40	127	370	497	66

* Benefits shown to nearest dollar.

† Average monthly salary for 5 highest consecutive years.

Years Credited Service	\$1,000†			
	Soc. Sec.	V.S.R.S. Bft.	Total	% Sal.
10	\$127	\$130	\$257	26
15	127	195	322	32
20	127	260	387	39
25	127	325	452	45
30	127	390	517	52
35	127	455	582	58
40	127	520	647	65

* Benefits shown to nearest dollar.

† Average monthly salary for 5 highest consecutive years.

These comparisons give rise to the following conclusions. The present formula provides benefits within the "satisfactory" range for all employees who retire with thirty-five years of service. However, there is very little difference percentage-wise between the \$200 employee and the \$400 employee, thus doing violence to the "floor of adequacy" concept. Moreover, the higher-paid employees appear to be penalized percentage-wise.

The formula designed "B" would remedy the possible deficiencies in the present formula ; however, while it raises the benefits at both ends of the salary scale, it leaves the \$400 employee with exactly the same benefits as at present. Formula "A" on the other hand treats all alike and gives a uniform percentage-wise increase in benefits to all. Formula "C" weighs the increases at the extremes of the salary scale, with proportionately more to the lower-paid, but with a higher over-all benefit scale, and a correspondingly higher cost.

The number of persons, both school teachers and State employees, who would be affected in several salary ranges is shown by the following table setting forth, by general brackets, the amounts being actually received, according to the latest available figures, by school teachers and by State employees who are members of the system.

COMPENSATION OF STATE EMPLOYEES AND SCHOOL EMPLOYEES

(By Salary Brackets and Number in Bracket)

Salary Brackets	State Employees	Teachers	Supervisors & Principals	Superintendents
Under \$2000	805	725	12	
\$2000-2999	6,919	2,397	19	
\$3000-3999	9,135	14,169	232	1
\$4000-4999	3,710	9,477	496	2
\$5000-5999	2,368	2,628	545	3
\$6000-6999	1,078	770	432	3
\$7000 and over	1,540	52	379	106
Total	25,555	30,218	2,115	115

Source: Figures supplied by Virginia
Supplemental Retirement System and
Department of Education.

COSTS OF FORMULA CHANGES

As noted above, the cost to the State of the present formula was \$7,885,000 a year, based on June 30, 1958, covered wages. The State employees and teachers pay 4% of the amount of their compensation in excess of \$1,200 a year, and based on the same covered wages this would have amounted in the year ending June 30, 1958 to about \$5,900,000.

It was stated by representatives of the teachers and the State employee group that the members whom they represented are not seeking increased benefits for which they would be unwilling to pay but they are willing to bear their share of the increased costs. In calculating the increased costs to the State, accordingly, it has been assumed that a share of the increase proportional to the proposed increased benefits would be paid by members of the System. In the case of Formula "A" this would mean an increase in members' contributions from 4% to 4.5% on compensation over \$1200 and this would in terms of 1958 contributions have amounted to about \$737,500. The cost figures for Formula "B" contemplate a member contribution rate of 3% on the first \$4,800 of compensation and 6% on the amount in excess of \$4,800. This represents a small cost increase to the employee below \$4,800, the same cost at \$4,800, and an increase of 2% on the amount of

compensation in excess of that figure. Formula "C" would cost the member the most—4% more on the first \$1,200, the same from \$1,200 to \$4,800, and 2% more on the excess over \$4,800.

Based on these assumptions of increased member contributions, estimates of the increased net annual cost to the State, based on the 1958 valuation, would be as follows for the three formulas:

Formula A—\$1,672,000 (including increase for those
presently retired)

Formula B—\$1,583,000.

Formula C—\$5,485,000.

As will be explained in detail in a succeeding section of this report, the cost of either Formula "A" or Formula "B" is substantially less than the savings which can be effected by the adoption of Recommendations 5 and 6 of this report.

Survivors' Benefits

3. Provide for survivors' benefits in the form of an annuity for a dependent of a member dying after attaining age 60, payable in lieu of refund of accumulated contributions to a surviving dependent wife, husband, mother or father at the option of the survivor.
4. Provide for State contribution towards the cost of group life insurance in an amount based on the member's salary, to be in full force until age 65 or retirement and thereafter gradually reduced to 25% of face amount.

At present the only benefit payable under the System on the death of a member is the refund to the beneficiary of the member's contributions accumulated with 2% interest. In addition, certain survivors of the member may be eligible for benefits under Social Security which are payable to children under 18, to mothers with such children in their care, and to widows aged 62 or over. (As respects widows, there is thus a "black-out" period from the time the youngest child reaches age 18 until the widow attains age 62.)

Possibly a more serious deficiency in the present death benefit structure is in respect of members who die in service after attaining age 60, that is, after acquiring the right to early retirement. If a member in this category had, in fact, retired the day before his death he would have had the privilege at retirement of electing the "joint and last survivor option", under which, at the expense of a decrease in the allowance payable during his lifetime, the benefit (Option 2(a)), or one-half thereof if so designated (Option 2(b)) would be continued after his death during the subsequent lifetime of a designated survivor. By remaining in service—often at the request of the employer—the employee forfeits the opportunity to provide this survivor protection.

The inequities of this situation are being remedied in many pension plans by the addition of a death benefit under which the beneficiary (sometimes restricted to a dependent spouse or parent) has the option of receiving, in lieu of the return of the members' contributions, a monthly allowance equal to either the full joint and last survivor benefit or, in some plans, the "one-half to survivor" benefit which would have been payable had the member elected that option and died subsequent to retirement.

We recommend that a combination of a full joint and last survivor and a one-half to survivor benefit be adopted. Under this proposal, if a State employee reached the age of early retirement—age 60—but did not retire, and died in service before age 65, a dependent wife, husband, mother or father of such an employee would have the option of being paid the accumulated contributions of such member, with interest at 2%, as under the present system, or of receiving an annuity for life equal to one-half of the amount which the employee would have received had he retired under the present Option 2(b) on the date of death. If an employee who has attained age 65 thereafter dies before retiring, the proposal is that the designated dependent receive the full annuity which would have been payable to the member if retired under the present Option 2(a) on the date of his death. (It should be noted that under the present law these options entail a considerable reduction in the retirement benefit which the member would receive if he retired without exercising the option).

The reason for the differential treatment of those dying before age 65 and those dying thereafter is that the plan of group life insurance which is proposed in Recommendation No. 4 contemplates a gradually reduced coverage after age 65.

Costs of adding a program of survivor's benefits to the system have been worked on an approximate basis. Accurate computations would involve consideration of the actual family and dependency status of the individual members and this has not been given. However, the costs presented below are believed to be sufficiently accurate to serve, to the extent necessary, as a basis for a decision as to the advisability of adding benefits of this nature to the System.

The full joint and last survivor allowance death benefits, applicable to death at age 60 and over, would involve an annual cost of the order of \$350,000 for State employees plus \$300,000 for teachers. The one-half to survivor benefits would run somewhat less, probably about \$225,000 for State employees and \$175,000 for teachers. The recommended combination is estimated to cost approximately \$500,000 a year for the two groups.

To further meet the needs for survivor protection, we propose that the State contribute towards the cost of group life insurance for these employees. This enables the employee to protect himself at a figure far below what he could do on an individual basis. It should be emphasized that this is not "putting the State in the insurance business". It is merely the entering by the State into a contract for the benefit of its employees with commercial insurance firms, as it does in the case of Workmen's Compensation insurance. Although the employees would pay the majority of the costs of the coverage, the rates for each individual employee because of the group coverage would be so much less than for other types of insurance that it is felt a large majority of them would avail themselves of the coverage and it is not proposed that the taking of such insurance be made a prerequisite to State employment.

There appears as Appendix 1 to this report a schedule showing insurance which could be made available and the estimated annual costs. It should be emphasized that the costs shown are maximum figures, and would be reduced by State taxes on premium income and might further be reduced by favorable claim experience with a resulting retroactive rate credit to the State. Obviously, providing for group life insurance would be far less expensive than including survivor benefits prior to age 60 for members of the System through an amendment to the Act. The maximum cost to the

State is estimated at \$613,000 but a fair apportionment of the costs would reduce the State's cost to less than \$300,000.

The policies which are proposed would be designed to give the maximum of protection during the years when the average individual needs it most. The amount would be related to the employee's annual salary as shown in the schedule in the Appendix (although the employee would not be required to take out the insurance) and the face amount of the policy would remain in force until the employee reached age 65 or retired, at which time the amount of insurance would be reduced by 2% a month until the coverage is 25% of insurance in force at retirement or age 65. This coverage would then remain in force until death with no additional costs to the employee.

Changes in Funding Basis

5. Change the method of funding the accrued liability of the system from the present requirement that such liability be liquidated by March 1, 1972, to the "aggregate cost basis" whereby this cost is spread out over a longer period.
6. Increase the interest rate assumption used in valuations of the system from the present $2\frac{3}{4}\%$ to a more realistic but still conservative $3\frac{1}{4}\%$.

As previously noted, the funding provisions of the present Act require that the annual accrued liability contributions be sufficient to liquidate the prior service liability by March 1, 1972. After each biennial valuation, the employer accrued liability contributions are set at a level which, on the basis of the valuation assumptions employed, should be sufficient to accomplish this objective. In other words, at each valuation the future annual accrued liability contribution is determined as the annual dollar amount necessary for each year from then until 1972 to liquidate the then unfunded accrued liability. Normally, under a program of this nature, the unfunded accrued liability would gradually decrease from valuation to valuation, so that although the remaining amortization period also decreased, the indicated contribution rate would remain more or less level. This has not been the case with the System. On the contrary, despite the employer past service contributions made each year, the unfunded liability has actually increased each year as shown by the following table:

TOTAL UNFUNDED ACCRUED LIABILITY

(State Employees and Teachers combined)

June 30, 1954	\$26.4 million
5	31.2
6	32.8
7	35.0
8	38.3

The cause of this phenomenon lies in the fact that benefits under the System are based, essentially, on final salary, so that an increase of, say, 10% in payroll of employees with prior service will immediately result in an increase of 10% in the total anticipated prior service benefits (of active employees). It is the rapid increase in the average salary of the members of the System over the past few years that creates this upward trend in the unfunded accrued liability. In future years this trend will become less important as

1. the System grows in numbers and the proportion of employees with prior service thus decreases, and
2. the employees with prior service retire, die or withdraw.

In the meantime, however, the increase in the unfunded liability is coupled with the natural continuous decrease in the number of years to 1972 over which it is to be amortized, thus creating a double pressure toward an increase in the dollar accrued liability contribution. The past effects of this double pressure are shown in the trend of total (State Employees plus Teachers) accrued liability costs as indicated by successive valuations:

INDICATED ACCRUED LIABILITY CONTRIBUTIONS

1954	\$1.85 million
5	2.26
6	2.54
7	2.85
8	3.31

The closer we approach 1972, the greater will be the effect on costs of the continual diminishing of the accrued liability amortization period. It would be possible to eliminate, at least partially, this secondary cost increase factor by changing the funding provisions of the Act. If the Act were amended to remove all references to accrued liability funding, the result would be that the unfunded liability, in effect, would be funded on the same basis as the liability for membership service, i.e., over the average period of future active membership of the members of the System, a more or less constant element. To oversimplify, if the average period of future membership were computed to be, say, 16 years, then 1/16 of the unfunded accrued liability would be paid in annually. Theoretically, the liability would, on this basis, never be completely funded, but as a practical matter, the unfunded portion would eventually become insignificantly small.

An immediate effect of a funding change of this nature would be a reduction in the annual costs indicated by the 1958 valuation. Instead of separate accrued liability and normal contributions, there would be a single "aggregate" contribution rate. The comparison follows (dollar costs in thousands):

		Annual Costs				
		State Employees		Teachers		Total Employees
		\$ Cost	% Pay	\$ Cost	% Pay	\$ Cost
Present Basis:	A.L.	794	0.84	2,521	2.10	3,314
	Normal	1,678	1.77	2,892	2.41	4,571
	Total	2,472	2.61	5,413	4.51	7,885
Aggregate Basis: Total		2,411	2.54	4,999	4.17	7,410

There would thus be a reduction in outgo of approximately \$475,000 for each year of the biennium; as indicated above, this annual "saving" would grow larger in the years approaching 1972. It should be clearly kept in mind, of course, that a change of this nature cannot, over the long run, reduce the cost of the System; it can merely change the speed at which the accrued liability is being liquidated. The present Act would complete

the liquidation by 1972; the proposed change would reduce the annual payment by lengthening the payment period.

Interest Rate Assumption

Other means are available for levelling off, or stretching out the costs of the System, without sacrificing any degree of "actuarial soundness" as that term is generally understood.

If all the actuarial assumptions employed in the successive valuations of the System were shown by subsequently unfolding experience to have been exactly correct, the trend in costs would tend to be level. If the assumptions were too liberal, i.e., if actual experience proved unfavorable, the System would suffer "actuarial losses" and the trend of costs would be upward. On the other hand, if conservative assumptions were employed, actuarial gains would result which would be an offset to future costs, so that the level of required employer contributions would tend to decrease.

A case in point is the interest assumption. Obviously, the greater the interest earnings on the invested funds, the fewer the employer dollars needed to provide a given level of benefits. The present valuation interest assumption is 2.75% annually; the present yield is 3.45%. If the higher yield continued indefinitely while contributions remained predicated on a 2.75% assumption, there would be, in future years, actuarial gains which would reduce future costs. These future gains could, if desired, be discounted to the present, and used to reduce current costs instead of future costs. The discounting would be effected by the adoption of a more realistic interest assumption, i.e., one more closely coincident with future experience as to the level of investment income.

The assumption of a higher interest rate can have a dramatic effect on the costs indicated by a valuation, illustrating the importance of a respectable investment yield on the overall funding picture. It might be considered, at present, imprudent to assume that the present yield of 3.45% will continue. If the yield rate continues to rise, however, a 3.50% assumption might before long be perfectly reasonable.

For purposes of illustrating the effect on costs of a higher interest assumption, costs have been worked on a 3.25% basis, on both the "aggregate" and present funding bases. The comparison is (dollar costs in thousands) :

		Annual Costs				
		State Employees		Teachers		Total Employees
		\$ Cost	% Pay	\$ Cost	% Pay	\$ Cost
Present Funding	2.75%	2,472	2.61	5,413	4.51	7,885
Present Funding	3.25%	1,953	2.05	4,439	3.70	6,392
Aggregate Funding	2.75%	2,411	2.54	4,999	4.17	7,410
Aggregate Funding	3.25%	1,910	2.01	4,110	3.43	6,020

By changing to aggregate funding and to a 3.25% interest assumption, the current employer contribution level could thus be reduced by \$1,865,000 annually, from \$7,885,000 to \$6,020,000.

The above changes in the method of funding accrued liability and the interest rate assumption are recommended first, because it is believed that they are more realistic in the light of present conditions than were the approaches adopted in 1952. It would appear wise to eliminate the artificial peak in costs of this liability which will under the present System become

more acute up to the year 1972. As to the interest rate assumption, the experience of the System has been such that it seems only common sense to adapt this valuation factor to conditions which presently exist and will apparently continue to exist in the foreseeable future, thus relieving the System at the present time of a financial burden which experience indicates it will not have to carry. Finally, the combination of the adoption of these two recommendations will serve to offset in large part the financing of the changes in the System which are at present deemed to be desirable.

Disability Benefits

7. **Reduce the present 15 years service requirement for disability benefits to 10 years and provide a minimum disability benefit of \$1000 or 25% of average final compensation, whichever is larger, requiring new employees to pass a physical examination.**

Under the present system disability benefits are payable only in the event of termination of service due to disability after the member has completed 15 years of service. The benefit payable to age 65 is $1\frac{1}{4}\%$ of total average final compensation (that is, without the \$1200 exclusion) for each year of service prior to disability.

Supporting the basic disability formula, the system presently provides a guaranteed minimum disability benefit. No matter what the formula produces as a benefit each disability retiree is guaranteed a total annual benefit (including Social Security, if any) of \$45.00 for each year of service up to 20, so that the minimum disability benefit in any case is as follows:

Years of Service	Minimum Benefit	
	Monthly	Annual
15	\$56.25	\$675.00
16	60.00	720.00
17	63.75	765.00
18	67.50	810.00
19	71.25	855.00
20 or more	75.00	900.00

Considerable sentiment has been expressed for a reduction in the number of years service required to secure disability benefits and an increase in the guaranteed minimum retirement compensation for disability to a \$1000 annual minimum or 25% of average final compensation, whichever is larger. The cost estimated for such a provision is \$139,000 in addition to the present costs for disability retirement.

The Council recommends that this change be made but in order to prevent any possibility of saddling the system with persons who might be expected to be disability-prone, it further recommends that each new employee, in order to qualify for such a provision, be required to take and pass a physical examination on entry into State service.

Future Changes

8. **Make no future major changes in the Retirement System without a thorough study with proper actuarial calculations to determine their effect on the System.**

We would like to emphasize that the Retirement System is an extremely complicated entity and that a change which might appear to be of little

immediate effect may, in actuality, have a long-range effect which is not readily understood. As mentioned above, the Retirement System was begun initially only after a careful study and the 1952 change similarly was made only after mature deliberation. We recommend that this wise course be followed with respect to any future changes in the System.

Other Retirement Recommendations

1. Increase the minimum retirement for certain retired persons.

On March 1, 1952, teachers and State employees were covered by the Old Age and Survivors insurance program, as well as by the Supplemental Retirement System. Persons retired prior to March 1, 1952 did not have the protection of Social Security for their school or State service. Periodically, Congress has increased the benefits payable to persons retired under the Old Age and Survivors Insurance program and teachers and State employees retired subsequent to March 1, 1952 have benefited thereby. The General Assembly has increased the minimum retirement allowance of teachers and State employees retired for service with at least 30 years' service and who have attained age 65 and all retired for disability regardless of age. (A reduction was made as to retired persons who had chosen one of the options so as to protect a beneficiary.) The minimum retirement allowance in such cases was increased to \$600 per year and has since been increased to \$1020. The increase in the retirement allowance for these retired persons has meant a great deal to them. It has hardly enabled them to live luxuriously, but it has served to help them in obtaining the necessities of life. The group involved has given long and faithful service and we believe that the General Assembly should give favorable consideration in ensuing regular sessions to increasing the minimum retirement allowance for this group.

There are also a number of teachers and State employees retiring prior to March 1, 1952, who did not qualify for the minimum. This group has been confronted with the increase in living costs applicable to everyone. The General Assembly might well give consideration to an increase in the retirement allowance of persons in this group who have attained age 65. Such increase might be geared to a percentage of the allowance presently payable to these retired persons. The cost of this would depend upon the extent of the increase.

2. Grant prior service credit in the following cases to employees who do not have it, upon their making (under paragraphs (b) and (c) below) certain payments;

- (a) Credit for service prior to July 1, 1942, by employees who are or become members of the system and have five years membership service;
- (b) Credit for those who rejected membership in the 1942 system, but have since or do become members of the present system, for service between 1942 and the date of becoming members of the present System; provided they did not also refuse to transfer their contributions from the 1942 System to the new System.
- (c) Credit for service rendered and credited prior to termination of service by members who, in the past, terminated service and withdrew their contributions and subsequently have reentered or reenter service.

With regard to the category of employees covered by sub-paragraph (a) above, it should be pointed out that in many cases these employees paid into the old teacher pension fund 1% of their salaries and they were not entitled to withdraw any of these contributions upon leaving the teaching profession. The Council feels that if any such persons return to the State's service or the public school system and remain in it as long as five years it is only equitable that they should receive credit for whatever service they may have put in prior to 1942.

There are some employees who rejected membership in the retirement system when it was established in 1942 who now desire to secure credit for service rendered since that date and are willing to put up contributions approximately equivalent to those which they would have paid had they been in the System. Since the System in 1942 was not as attractive as it is today and its benefits were probably not so well understood, it is felt that any such employee who has become or becomes a member either of the abolished System or of the present System and who is willing to make contributions based on the current contribution rates plus $3\frac{1}{2}\%$ interest compounded annually on the assumption that the salary received by the employee on the date of payment had been received during the entire reject period, should be able to be credited with such prior service credit. Similarly, persons who left the State's service and withdrew their contribution with the expectation that they would not return to the State's service and who are willing to repay the withdrawn contributions plus $3\frac{1}{2}\%$ interest compounded annually should be allowed to reinstate such service by making such contributions. A charge of \$5.00 should be imposed to cover the expenses to the State of estimating the contributions to be made by employees desiring to obtain such credit.

The estimated cost of the above recommendations is \$105,000 a year.

3. Include full-time county court clerks in the State Retirement System.

Both the 1942 Retirement Act and the Supplemental Retirement Act excluded trial justices or as they are now termed, judges of the county courts, and their employees, upon the ground that they were part-time officers and employees. Subsequently, these officials have become covered by a special retirement act with most favorable retirement provisions; they are also covered by the Old Age and Survivors Insurance program with an offset feature. The clerks of these courts are paid by the State and many of them serve in a full-time capacity. While they are covered by the Old Age and Survivors Insurance program, they are not eligible to become members of the Supplemental Retirement System by reason of the exclusion in the Act. The State has made all full-time employees paid by it eligible to become members of the Supplemental Retirement System (unless they are covered by a more liberal system) and we believe that no less should be done for the clerks of the county courts who serve on a full-time basis and who are paid solely by the State.

4. Provide for inclusion in the System of civilian employees of the Army and Air National Guard, the employee contributions to be paid by the federal government.

Civilian employees of the Army and Air National Guard are paid by the federal government though they serve under State control. They are not eligible to become members of the State Retirement System. We believe that in justice to these employees they should be made eligible to become members of the State retirement system provided the federal government will pay the employer contributions. This cost will not be borne by the State or localities.

5. Grant credit, upon the making of certain payments, for service of State officials formerly excluded by law from participation in the System.

When the Retirement System was adopted in 1942, it excluded any officer elected by the General Assembly. This prohibition was removed on July 1, 1950 and the Auditor of Public Accounts was covered as a member of the Retirement System. The present incumbent was elected to the office in 1945 and thus had 5 years during which he was prohibited by law from electing membership. It is only fair that credit be given for this service upon the payment of contributions based on current contribution rate plus 3½% interest compounded annually on the assumption that the salary received on the date of payment had been received during the entire excluded period. The cost of this is negligible.

6. Allow a person retired for disability who is gainfully employed to show medical expenses directly incurred to reduce or eliminate the cause of disability as an offset against earnings in determining a reduction in his disability allowance.

Both the Virginia Supplemental Retirement Act and the 1942 Retirement Act contain a provision designed to encourage a person who has retired for disability to return to gainful employment. In some cases medical expenses are incurred to reduce or eliminate the disability. In such cases, we feel that such medical expenses should be deducted from the beneficiary's income in determining whether there should be a reduction in the disability benefit. The cost is small and will serve to reduce the cost to the State as well as to give such employees an incentive to overcome their disabilities.

A table summarizing the estimated costs of the changes hereinabove recommended is set forth in Appendix 2.

Teachers Sick Leave Recommendations

In recent years the State established a fund to provide for matching local expenditures to give sick leave to teachers. This is done by paying a portion of the salary of a substitute. The State will reimburse for sick leave accumulated up to a maximum of thirty days at the rate of 10 days the first year and 5 days annually thereafter. The maximum pay of a substitute of which the State will pay one-half has been set by the State Board of Education at \$6.00 a day. The provision of sick leave has meant a great deal for teachers as they do not have the pay of the substitute, within the limits specified, deducted from their pay.

The State allows its employees sick leave at the rate of 1¼ days per month and this can be accumulated to a total of 90 days. Efforts were made to obtain data as to the amount of absenteeism due to sickness and, while accurate data could not be obtained, it appears that sick leave beyond the thirty-day level is not used to any appreciable degree. A severe illness, of course, might require a much longer absence from work than thirty days. Fortunately, these long absences are infrequent. The State sick leave program has grown and expanded over a long period of time and has been maintained at the present level for a considerable period.

Some localities pay up to \$18.00 a day for a substitute teacher and the State reimburses only \$3.00 of this amount.

The figure of \$6.00 for a substitute teacher was set a long while ago and it would seem proper to increase the pay of a substitute of which the

State will pay half. However, when the State began support of the sick leave program for teachers, it appropriated funds which were estimated to be sufficient to pay its portion of the cost of sick leave. These funds were insufficient and each year until 1958-59 the available State funds have been pro-rated among the participating localities. Only in the year 1958-59 was the State appropriation sufficient to meet the State's share of the reimbursable cost (which was not the total cost, since, as stated, some localities pay substitutes far more than \$6.00 a day and 29 school divisions allow sick leave to be accumulated in excess of the State maximum of 30 days). The State has now honored its commitment on the basis of its undertaking with the localities and we believe that it should continue to do so. This will materially assist school superintendents in their budgeting and planning problems and, to the extent that the State funds do not have to be pro-rated, will provide additional funds for localities which desire to do so to go beyond the State maximum.

Our information indicates that the need for sick leave for teachers beyond a total of thirty days is not great and that the cost of providing additional sick leave would not be large. We believe that the localities generally should enlarge the maximum sick leave accumulation above the thirty day period. The cost to the localities will not be great, and it will take care of the case of a severe illness and serve to protect teachers in case of need. Local participation also will mean better policing of the program and will give the localities an incentive to prevent any possible abuses.

PROBLEMS RELATED TO THE INCREASING COST OF LIVING

It has become trite to remark that today's dollar is worth only fifty cents, or some such amount; this is the same thing as saying that it takes twice as many dollars to maintain a given standard of living as it used to. Generally speaking, wage earners are not, except indirectly, seriously hurt by this situation since to the extent that the wage level is reflective of the price level, they are receiving in wages twice as many dollars as they would have had the dollar not deteriorated in value.

It is those whose income, or most of it, is at a fixed dollar level who are the immediate victims of the effects of inflation. Pensioners who retired, say, 20 years ago on a pension of \$100.00 monthly may have considered themselves quite well off at the time. In terms of purchasing power, however, their \$100.00 monthly income had deteriorated by 1959 to \$48.02. A retired worker is at the mercy of the economy unless he receives income sufficient to meet the rent, food and clothing bills, regardless of the dollar increases in the levels of these bills, over the years. The result has been that many employers, including the Commonwealth of Virginia, have considered it necessary to supplement or increase, from time to time, the pensions being paid to retired employees. These employers have recognized, at least to some extent, that a pension program to be really effective must provide a retired employee with adequate purchasing power rather than a predetermined number of dollars.

Pension planners in business and industry have begun to appreciate the importance of these problems. Several pension plans have been set up, or amended, to incorporate the variable annuity principle. Under this method pension funds are invested wholly or partially in common stocks and the amount of the pension payments varies in accordance with investment experience, i.e., investment income plus capital gains or losses. Studies have shown that over a long period of time the common stock index varies closely with the cost-of-living index and thus pension pay-

ments which vary with common stock experience should follow cost-of-living changes. In pension plans which have adopted this approach pension payments have been usually split into two parts, one part that is a fixed dollar payment and the other part that varies with investment experience. This combination approach hedges any complete dependence on investment experience.

A few employers have attacked the problem more directly by incorporating into their pension plans an "escalator clause" whereby the amount of an individual's pension payable in any period bears a relationship to the amount paid in the preceding period corresponding to the change to one period from the preceding in the United States Consumer Price Index.

It is not considered necessary to present in detail in this report the provisions of an amendment which would incorporate an escalator into the Virginia Supplemental Retirement System. Suffice it to point out that there would be provisions to protect the System against the effects of sharp increases in the index, such as the use of a moving 24-month average index, and limits on the percentage change from one period to the next. The details could be worked out after the principle were accepted.

If such a concept were adopted it might be decided that the U. S. Consumer Price Index was not the most suitable criterion for use in adjusting the level of pensions. For example, it might be considered that the average earnings of State employees and teachers in Virginia was a more useful base from which to adjust pensions. The use of this index would stem from the theory that pensioners' income should be adjusted to changes in the cost of living to the same extent as active employees' earnings.

The employer dollar costs under an escalator clause would depend on the incidence of future changes in the index chosen, and the extent to which the level of pensions actually paid would be higher with the clause built into the System than if the level of pensions were supplemented arbitrarily.

It has been demonstrated actuarially that a percentage year-to-year increase in level of pensions has the same effect cost-wise as a corresponding decrease in the interest rate earned on invested funds. That is, a pension plan earning $2\frac{1}{2}\%$ on its assets and paying flat dollar benefits would involve the same level of employer costs as a similar plan earning $3\frac{1}{2}\%$ under which each annual pension payment was increased by 1% over that of the previous year. This leads to the conclusion that an escalator plan can be most conveniently financed when its funds are invested in such a way as to produce not only high investment yield, but also a high degree of asset appreciation, which for pension funding purposes has the same effect as an increase in yield. Accordingly, an escalator plan would not normally be considered for the Virginia System except in conjunction with a change in the Act to permit the investment of a considerable portion of the System's funds in equities. At present, investments are restricted by the Act to categories of securities permitted for investment of life insurance company reserves which means, in effect, governmental and corporate bonds, wherein no asset appreciation is possible, except through accrual of discount when bonds are purchased at less than par.

Prior to 1952 it was generally considered that Social Security coverage was unavailable to members of a State retirement system. Virginia found a way to achieve this coverage for its employees, and in so doing blazed a trail that was followed by several other states, and eventually led to the amendment of the federal Social Security Act.

So far as is known, only one public retirement system has incorporated the variable annuity principle, and that only partially—none has adopted an escalator clause as such. (It is believed that a few local systems are using a crude version of this for some classes of employees, principally fire and police. These operate on the principle that if an employee is retired at half-pay, for example, his pension will always be 50% of the current rate of pay for the position which he held at retirement.) Chances are good, however, that the concept of pensions fluctuating in response to changes in living costs will eventually be widely accepted. By the adoption of a cost-of-living adjustment clause, Virginia would be taking advantage of the opportunity to resume a position of leadership in the field of public employee pension plans.

We urge that, when any future changes in the System are considered, these principles be borne in mind.

In conclusion we should like to acknowledge our indebtedness to the work of the very able Committee who contributed so liberally of their time and effort toward the completion of this report.

Respectfully submitted,

JOHN H. DANIEL, Chairman

ROBERT Y. BUTTON, Vice-Chairman

C. W. CLEATON

JOHN WARREN COOKE

HARRY B. DAVIS

CHARLES R. FENWICK

TOM N. FROST

J. D. HAGOOD

CHARLES K. HUTCHENS

BALDWIN G. LOCHER

W. TAYLOE MURPHY

MOSBY G. PERROW, JR.

EDWARD E. WILLEY

J. J. WILLIAMS, JR.

APPENDIX 1
COMMONWEALTH OF VIRGINIA
PROPOSED GROUP
INSURANCE SCHEDULE

Annual Basis Salary	Amount of Insurance*
Not more than \$ 1,000.00	\$ 1,000.00
" " " 2,000.00	2,000.00
" " " 3,000.00	3,000.00
" " " 4,000.00	4,000.00
" " " 5,000.00	5,000.00
" " " 6,000.00	6,000.00
" " " 7,000.00	7,000.00
" " " 8,000.00	8,000.00
" " " 9,000.00	9,000.00
" " " 10,000.00	10,000.00
" " " 11,000.00	11,000.00
" " " 12,000.00	12,000.00
" " " 13,000.00	13,000.00
" " " 14,000.00	14,000.00
" " " 15,000.00	15,000.00
" " " 16,000.00	16,000.00
" " " 17,000.00	17,000.00
" " " 18,000.00	18,000.00
" " " 19,000.00	19,000.00
Above \$19,000.00	20,000.00

When you attain age 65 the amount of your insurance will be reduced by 2 per cent for each month you are over 65 until a reduction of 75 per cent is reached. The remaining 25 per cent stays in effect.

* Amount is doubled for accidental deaths and additional amounts are paid for dismemberment caused by accidents.

APPENDIX 1 (continued)

Summary of Costs to State and Employees—Teachers

Estimated Annual Costs Based on Employee Data As Of June 30, 1958

	Teachers	Police	Other Employees	Total
Estimated Benefits	\$134,484,876	\$3,368,081	\$105,406,954	\$243,259,911
Total Cost (Employees & State)				
(\$.75/1000 x 12)	1,210,364	30,313	948,663	2,189,340
State Cost				
(Employees pay \$.54/1000)	338,90	8,488	265,626	613,016
State Cost				
(Employees pay \$.60/1000)	242,073	6,063	189,733	437,869
State Cost				
(Employees pay \$.65/1000)	161,382	4,042	126,488	291,912
State Cost				
(Employees pay \$.70/1000)	80,691	2,021	63,244	145,956

Costs shown may be reduced by retroactive rate credits arising from favorable claim experience. They will also vary with increase in total employees compensation and any possible change in premium rate after the first year.

APPENDIX 2

Estimated Costs of Recommended Changes

Recommended Change	Cost based on 1957-58(1)	Cost based on 1960-61(2)	Cost based on 1961-62(2)
Increase in formula to 1.125%	\$ 2,172,000	\$ 2,909,000	\$ 3,258,000
Offset by increase in member contributions	- 500,000	- 620,000	- 680,000
Survivor benefits	500,000	680,000	760,000
Group life insurance	300,000	390,000	430,000
\$1000 Minimum for disability	139,000	180,000	200,000
Credit for certain past service	105,000	140,000	160,000
Offset by change in funding and interest assumption	-2,000,000	-2,850,000	-3,200,000
Total	\$ 716,000	\$ 829,000	\$ 928,000
From Special Funds	200,480	232,000	263,000
From General Fund	515,520	597,000	665,000

(1) Actual payroll figures used as basis of estimates.

(2) Projected payrolls used as basis of estimates.

—Figures supplied by Virginia
Supplemental Retirement System

