cover liabilities for future claims payments) would be higher. According to data from the National Council on Compensation Insurance, losses incurred by private carriers represented 63 percent of net premiums earned in 1962-a drop of two percentage points from 1961.

In contrast to the experience of private carriers, the State funds (with the Federal fund excluded) showed a rise in the ratio of benefits paid to premiums-from 77 percent in 1961 to a new postwar high of 78 percent. The loss ratios for private carriers and, to some extent, for State funds do not take into account the amount of premium income that is returned to employers in the form of dividends.

Railroad Retirement Act as Amended in 1963*

On October 5, 1963, President Kennedy signed Public Law 88-133 amending the Railroad Retirement Act and the Railroad Unemployment Insurance Act. The changes in the Railroad Retirement Act are summarized in the following paragraphs, and the principal provisions of the law as amended are outlined in the accompanying chart.¹ The purpose of the amendments is to improve the financing of the railroad retirement program, which has had an actuarial deficiency computed as 1.79 percent of taxable payroll. It

*Prepared by Marice C. Hart, Division of the Actuary. ¹ For a brief summary of the provisions amending the railroad unemployment insurance program, see page 20. is estimated that the new provisions will reduce the deficiency to 0.34 percent and cut the annual deficit (on a level basis) from \$77 million to \$16 million.

In signing the bill President Kennedy stated that, though it carries out his 1961 request for legislation to put the railroad retirement and the railroad unemployment insurance systems in sound financial condition, he considered undesirable the "provisions in the bill providing a 3percent guaranteed return of the retirement fund's investments, and requiring the immediate investment of the fund's assets at a rate of interest substantially higher than now being paid." During congressional consideration of the measure, he went on to say, "the point was stressed that those special provisions developed in the legislation for the railroad industry were not applicable to the other retirement systems and were not to be regarded as a precedent."

MAXIMUM TAXABLE COMPENSATION

Beginning in November 1963, the maximum compensation taxable and creditable toward benefits is increased from \$400 a month to \$450. No change is made in the rate of contribution $(14\frac{1}{2})$ percent for 1963 and 1964), which is paid half by employer and half by employee. For 1965 and thereafter, the tax rate is to be determined by increasing the preceding year's rate by the number of percentage points that the combined employer-employee tax rate under old-age, survivors, and disability insurance exceeds $5\frac{1}{2}$

TABLE 1.—Illustrative monthly retirement annuities under the Railroad Retirement Act, as amended in 1963

	10 years of service									
Average monthly compensation	Minimum guarantee applicable ¹		Minimum guarantee not applicable		20 years of service		30 years of service		40 years of service ³	
	Retired worker only	Retired worker and spouse ²	Retired worker only	Retired worker and spouse ²	Retired worker only	Retired worker and spouse ²	Retired worker only	Retired worker and spouse ²	Retired worker only	Retired worker and spouse ²
\$100	\$64.90 80.30 92.40 104.50 115.50 127.60 139.70 139.70	\$97, 40 120, 50 138, 60 156, 80 173, 30 191, 40 209, 60 209, 60	4 \$50.00 4 50.00 50.20 58.60 66.90 75.30 83.60 92.00	\$75.00 \$75.00 \$75.30 \$7.90 \$100.40 \$113.00 \$125.40 \$136.50	4 \$83.50 83.70 100,40 117,10 133.80 150.50 167.20 183.90	4 \$125.30 125.60 150.60 175.70 200.70 220.40 237.10 253.80	\$87.90 125.60 150.60 175.70 200.70 225.80 250.80 275.90	\$131.90 188.40 220.50 245.60 270.60 295.70 320.70 345.80	\$117.20 167.40 200.80 234.20 267.60 301.00 334.40 367.80	\$175.80 237.30 270.70 304.10 337.50 370.90 404.30 437.70

¹ OASDI average monthly wage assumed to be the same as the average monthly compensation shown, to maximum of \$400. ² Spouse assumed to be aged at least 65.

³ Not payable until 1977.

⁴ Railroad retirement minimum.
⁵ All service must be after May 1959.
⁶ All service must be after October 1963.

percent. The ultimate tax rate for the railroad retirement program (181/4 percent) will be effecve for 1968 and thereafter according to the presently scheduled rates for old-age, survivors, and disability insurance.

INTEREST RATE ON INVESTMENTS

Since its inception in 1937, special issues of the railroad retirement account have borne interest at a flat rate of 3 percent. Under the amendments, special-issue obligations are to bear interest at a rate based on the average market yield, computed as of the end of the calendar month immediately preceding the date of the issue, borne by all interest-bearing obligations of the United States that are not due or callable until 3 years after the end of such calendar month. The rate is the market yield rounded to the nearest $\frac{1}{8}$ of 1 percent but may not be less than 3 percent.

This basis for computing the interest rate is the same, in general, as that for special issues held by the old-age, survivors, and disability insurance trust funds. For obligations acquired by these trust funds, however, no minimum interest rate is specified, and the maturity period is 4 ears. In addition, the Secretary of the Treasury is prohibited from buying marketable obligations for the railroad retirement account (but not for the old-age, survivors, and disability insurance funds) that have an interest rate less than the average market yield. The amendments specifically provide for immediate retirement of special obligations held by the account and the issuance of new obligations bearing the new rate of interest; the conversion was made effective October 5, at 4 percent.

REIMBURSEMENT FOR MILITARY SERVICE CREDITS

Reimbursement to the railroad retirement account for credit for military service through 1956 has been based, since 1937, on payment from the General Treasury of the combined employer-employee tax on \$160 a month for each month of creditable service rendered. For service after 1956 it has been based on the amount by which the railroad retirement tax on \$160 a month exceeds the actual old-age, survivors, and disability insurance contributions paid. Under the new law, reimbursement for service after June 1963 will be based on the actual cost of the additional benefits awarded, increased by an allowance (currently computed at about 25 percent) for administrative expenses and interest charged on the unfunded accrued liability. Adjustment for effective old-age, survivors, and disability insurance taxes and benefits is to be taken into account in the financial interchange between the two systems.

ILLUSTRATIVE ANNUITIES

Tables 1 and 2 give illustrative amounts of monthly retirement and survivor annuities for various combinations of average monthly compensation, years of service, and family composition. Some of the amounts shown cannot be awarded in 1963, however, because it is not now possible to be credited with more than 30 years of service and because average monthly compensation of \$350 or more cannot yet be achieved.

In table 1, persons with 10 years of service are grouped into (1) those who would have been fully insured under the Social Security Act had

TABLE 2.—Illustrative monthly survivor annuities under the Railroad Retirement Act, as amend
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A A A	10 years of service		20 years	of service	30 years	of service	40 years of service		
Average monthly remuneration	Widow aged 60 or over	Two children and mother	Widow aged 60 or over	Two children and mother	Widow aged 60 or over	Two children and mother	Widow aged 60 or over	Two children and mother	
\$100	\$53.60 66.30 76.30 86.30 95.30 105.30 115.30	² \$102.20 132.00 177.90 222.90 260.10 279.60 279.60		² \$111.30 132.00 177.90 222.90 260.10 279.60 279.60		² \$120.70 ² 138.90 177.90 222.90 260.10 279.60 279.60	$2 $55.70 \\ 66.30 \\ 76.30 \\ 86.30 \\ 95.30 \\ 105.30 \\ 115.30 $	² \$129.90 ² 149.50 177.90 222.90 260.10 279.60 279.60	

¹ All service assumed to be after 1936, with earnings of at least \$200 for each year of service. Minimum guarantee applies, unless otherwise indicated. Where minimum guarantee is applicable, OASDI average monthly wage assumed to be same as average monthly remuneration shown, to maximum of \$400. ² Minimum guarantee not applicable. Initial qualifications for benefits:

Minimum of 10 years of railroad service is required to qualify for all but one type of benefit under the Railroad Retirement Act (see item A (8)). Persons with less than 10 years of service are transferred, in essence, to OASDI system.

A. Benefits payable to-

- (1) Age annuitant:
 - Aged 62 or over, but with annuity reduced 1/180 for each month under age 65 at time of retirement; or aged 60 or over if 30 or more years of service, but with annuity for men reduced 1/180 for each month under age 65 at time of retirement.
- (2) Disability annuitant:
 - Unable to engage in any regular employment, regardless of age or current connection with railroad industry, or unable to engage in usual occupation if having "current connection" with railroad industry when disabled and either 20 or more years of service or aged 60 or over.
- (3) Spouse of annuitant aged 65 or over:
 - Aged 65 or over or any age with child (including disabled child) in care, if child would qualify for survivor benefit on death of annuitant; or aged 62-64 (with reduction of 1/180 for each month under age 65).
- (4) Widow:

Aged 60 or over, or with dependent child under age 18 (or child aged 18 or over if disabled and disability began before that age). Dependent widower aged 60 or over.

- (5) Child of deceased individual:
- Under age 18 (or aged 18 or over if disabled and disability began before that age),
- (6) Dependent parent:

Aged 60 or over, and no surviving spouse or child who can ever receive monthly benefits.

- (7) Lump-sum death payment: Generally for deaths when no monthly benefits are payable immediately.
- (8) Residual death payment:

Payable after all benefit rights, including those of survivors, have terminated—to assure total payments of at least employee contributions paid plus some allowance for interest. Suitable modifications for those with less than 10 years' service. (See item on initial qualification.)

B. Insured status for survivor benefits

(1) "Quarter of coverage":

In general, calendar quarters with \$50 or more of railroad compensation after 1936 or similar credits under OASDI.

- (2) "Current connection": In general, exists at time of retirement or death if worker had 1 year of railroad service in preceding 23⁄2 years.
- (3) Completely insured status:
 - (a) Current connection, and (i) 1 quarter of coverage for each 2 quarters after 1936 (or after age 21 if later) and before age 65 (or death or retirement if earlier), with minimum of 6 quarters of coverage; ¹ or (li) 40 quarters of coverage; ¹ or (lii) fully insured status, on the basis of combined earnings, under OASDI; or
 - (b) Receipt of retirement annuity based on at least 10 years of service accrued before 1948, or pension payable from former railroad private plans.

(4) Partially insured status:

Current connection, and 6 quarters of coverage ¹ in year of death or retirement and 3 preceding years.

(5) Transfer of credits to OASDI system:

If not insured as in items (3) and (4), railroad credits used in determining survivor benefits under OASDI.

C. Amount of retirement benefits

- (1) "Years of service":
 - All service after 1936 plus (for those in specified "employment relation" on Aug. 29, 1935) service before 1937 that brings the total to not more than 30 years.
- (2) "Average monthly compensation":
 - A verage of creditable compensation paid in period of service counted; maximum of \$300 creditable for any month before July 1954, \$350 for any month July 1954-May 1959, \$400 for any month June 1959-October 1963, and \$450 for any month after October 1963. For retirement after end of year in which age 65 is attained, amount computed as of end of such year is used if larger. Special method used for determining average earnings for services before 1937.
- (3) Monthly benefit amount:

3.35% of first \$50 of monthly compensation, plus 2.51% of next \$100, plus 1.67\% of next \$300, all multiplied by years of service.

- (4) Minimum benefit amount:
 - (a) If having current connection at retirement, amount determined under item (3) shall not be less than the least of \$83.50, \$5.00 times years of service, or 110% of average monthly compensation.
 - (b) "OASDI minimum guarantee" (see item F (9)).

D. Basic amount for survivor benefit

- (1) "Average monthly remuneration":
 - Based on railroad compensation and OASDI credits from 1937 to first day of calendar year (a) employee attained age 65 and was completely insured, or (b) employee died, or (c) following year of employee's death, divided by elapsed period to applicable date (omitting periods during which a retirement annulty was payable to him)---whichever provides the highest average. Maximum combined earnings are \$3,600 a year through 1954, \$4,200 for 1955-58, and \$4,800 thereafter. (Compensation alone is creditable to a maximum of \$3,900 in 1954, \$4,500 in 1959, \$4,900 in 1963, and \$5,400 in 1964 and thereafter.)
- (2) "Basic amount":
 - 49% of first \$75 of average monthly remuneration, plus 12% of remainder, all increased by 1% for each year after 1936 with \$200 or more of remuneration. Minimum basic amount is \$16.95. For individual completely insured as under item B (3) (b), basic amount alternatively computed from average monthly compensation (item C (2)) or from average monthly earnings of pensioner but without 1% increase for years after 1936, and higher amount used.
- (3) Maximum family benefits:
 - \$193.60 or 23% times the basic amount, whichever is less, but not less than \$36.30 or the OASDI minimum guarantee (see item F (9)); a dollar maximum of \$279.40 can thus be produced.
- (4) Minimum family benefits:

\$16.95; also OASDI minimum guarantee (see item F (9)).

E. Amounts of dependent and survivor benefits

- (1) Spouse:
 - 50% of full retirement or disability annuity (disregarding any reduction made for retirement before age 65 or joint-and-survivor option election), with the maximum 110% of the maximum wife's benefit under OASDI.
- (2) Widow:

100% of basic amount. Not less than any spouse's annuity received immediately before widow's annuity becomes payable.

- (3) Child of deceased worker: 662/3% of basic amount.
- (4) Dependent parent:
 - 663%% of basic amount.
- (5) Lump-sum death payment:10 times basic amount.
- 6) Residual death payment: Specified percentages of compensation, less total benefits paid on basis of such earnings.

""Compensation quarters of coverage" not creditable under the Social Security Act are counted.

	F. Miscellaneous benefit provisions	 (10) Credit for military service: Given at rate of \$160 a month during war service if in railroad employ- 					
(1)	Employment permitted retired workers and spouses: None for any railroad or for last employer before retirement. No other restriction except where OASDI minimum guarantee applies (and then only with respect to the additional amount payable).	ment in year of entry into military service or in the preceding year. Special provisions for crediting military service rendered before 1937. Provisions against using same service under more than one Federal system.					
(2)	Employment permitted disability annuitants: None for any railroad or for last employer. Earnings of \$1,200 a year in wages and self-employment permitted while under age 65; 1 month's benefit withheld for every \$100 of annual earnings in excess of \$1,200, but no deductions for months with earnings of \$100 or less. After age 65, same as F (1).	 (11) Time within which benefits must be claimed: Lump-sum death payment within 2 years. No limit for residual death payment. Monthly benefits retroactive for 12 months. G. Financing 					
(3)	Employment permitted survivor beneficiaries: None for any railroad. Otherwise to the same extent as for OASDI beneficiaries (full benefits if earnings from wages and self-employment are \$1,200 or less a year, but in any event for months with \$100 or less of wages and no substantial service in self-employment), with this test also applicable to work activity outside the United States.	 (1) Tax rates: Combined rates, shared equally by employer and employee, paid of maximum compensation of \$450 a month (after October 1963): 14¼ (1963-64); 1965 and thereafter, rates increased by number of percenta points that OASDI rates exceed 5½%. Current schedule provid for a 16¼% rate in 1965, 17¼% in 1966 and 1967, and 18¼% in 1966 					
(4)	Effect of railroad work on benefits of OASDI beneficiaries: Railroad earnings counted in determining if benefits are payable.	 and thereafter. (2) Government contribution for military service: Actuarially determined cost of additional benefits for military service rendered before 1937 and after June 1963, plus allowance for admin- 					
(5)	Duplication of benefits under railroad system: Survivor beneficiary may concurrently receive retirement annuity.						
(6)	Duplication of retirement annuity with OASDI benefits: Allowed with no reduction in benefit.	istrative expenses and for interest on the unfunded accrued liability Regular employer and employee taxes on other creditable militar service based on imputed earnings of \$160 a month for January 1937					
(7)	Duplication of spouse's annuity with OASDI benefits: When individual is eligible only for OASDI wife's benefit, no reduction made in annuity; when eligible for other type or types of OASDI benefit, annuity reduced by any excess of all OASDI benefits over full amount of wife's benefit (if any).	 (3) Interest rate on investments: Equal to average market yield borne by all marketable interest-bear obligations not due or callable for 3 years from date of investment 					
(8)	Duplication of survivor benefits with OASDI benefits: Allowed (except benefits not payable under both systems on basis of wage record of a deccased individual).	rounded to the nearest 1/4%, with a minimum rate of 3%. (4) OASDI "financial interchange": OASDI trust funds to be put in same position in which they would have					
(9)	"OASDI minimum guarantee" provision: Retirement or survivor benefits under railroad system, plus any OASDI benefits payable, will not be less than 110% of OASDI benefits on basis of combined credits under both systems.	been if railroad employment after 1936 had been covered under OASDI, by transfers in appropriate direction. Takes into account, among other matters, payment of benefits on basis of combined earnings credits.					

railroad service always been covered and (2) all others. The "social security minimum guarantee" contained in the Railroad Retirement Act assures that the total amount payable in a month to the retired railroad employee and his dependents or to his survivors, on the basis of his earnings record since 1937, will be at least 110 percent of the amount that would be payable under old-age, survivors, and disability insurance if service as a railroad employee were included in the term "employment" as defined in the Social Security Act.

In cases of entitlement to monthly benefits under both programs, the total sum payable is considered in determining whether the minimum guarantee provision is applicable. The annuities shown for 10 years of service in the first category are therefore 110 percent of the amounts that would be payable for the same average monthly wage under the old-age, survivors, and disability insurance program. (It is assumed that the employee is not simultaneously entitled to a separate benefit under old-age, survivors, and disability insurance, since the guarantee is seldom applicable in such instances).

For the second category—employees who would not be insured under the Social Security Act if that Act had covered railroad employment—the benefits shown in table 1 were computed according to the regular formula or the railroad minimum formula, which is not related to old-age, survivors, and disability insurance benefits. For individuals with 20 or more years of service, the railroad retirement formula usually yields a higher retirement annuity than does the old-age, survivors, and disability insurance benefit formula for the same average monthly wage.

For the purposes of table 2, it was assumed that none of the beneficiaries are entitled to a separate old-age, survivors, and disability insurance benefit. Under this assumption, practically all monthly survivor annuities are paid in accordance with the provisions of the Social Security Act, with the benefits increased by 10 percent, even when benefits are based on as many as 40 years of service and on average monthly remuneration as high as \$450. As a result, the same survivor annuity is payable for average monthly remuneration higher than \$400 and for averages of exactly \$400. In general, only survivors of employees with relatively low pay will receive survivor annuities based on the formula in the Railroad Retirement Act.

Amendments to the Railroad Unemployment Insurance Act*

Public Law 88-133, in addition to amending the Railroad Retirement Act, makes several changes in the railroad unemployment insurance program. The program has had to borrow funds from the railroad retirement account for several years to meet its obligations, and at the end of October it owed more than \$300 million to that account. The new law is intended to eliminate the need for further borrowing and to permit the gradual repayment of the existing loans.

Although no increase is made in the maximum taxable earnings base (\$400 a month), the maximum rate for contributions, which are payable entirely by the employer, is increased from 33/4 percent of taxable payroll to 4 percent, effective January 1, 1964. (The 4-percent rate was in effect throughout 1962 and 1963 under temporary legislation adopted in 1961 to finance the temporary extended unemployment compensation benefits for railroad workers.) The maximum rate is currently applicable and apparently will continue to be effective for at least a few years because of the condition of the railroad unemployment insurance account.

The interest on funds borrowed from the railroad retirement account is changed from 3 percent to rates equal to the average rate of interest earned by the special obligations in the account.¹ The amount of contributions set aside for administrative expenses is increased from 0.20 percent of taxable payroll to 0.25 percent, since the former rate had proved inadequate.

The conditions for receipt of benefits are made

somewhat more restrictive by increasing from \$500 to \$750 the amount of base-year earnings required and by disqualifying workers who vo untarily leave work without good cause from receiving railroad unemployment insurance benefits until they return to work and have earned not less than \$750 in railroad employment.

Recent Publications*

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DIVISION OF THE ACTUARY. Actuarial Cost Estimates for Hospital Insurance Bill, by Robert J. Myers. (Actuarial Study No. 57). Washington: The Division, July 1963. 33 pp.

Includes data and methods used in developing actuarial cost estimates. Limited free distribution; apply to the Division of the Actuary, Social Security Administration, Washington, D.C. 20201.

HESS, ARTHUR E. Social Insurance Disability Benefits and Rehabilitation in the United States. Baltimore: The Administration, 1963. 15 pp.

Paper presented before the Ninth World Congress of the International Society for Rehabilitation of the Disabled, held in Copenhagen in June 1963. Limited free distribution; apply to the Social Security Administration, Baltimore, Md. 21235.

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BUREAU OF FAMILY SERVICES. Sketches on Working with the Sick and Disabled, by E. Esther Hoade. Washington: U.S. Govt. Print. Off., 1963. 56 pp.

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BUREAU OF FAMILY SERVICES. DIVISION OF MEDICAL CARE STANDARDS. *Home Health Care Services*. (Medical Care in Public Assistance, Guides and Recommended Standards.) Washington: U.S. Govt. Print. Off., 1963. 21 pp. Limited free distribution; apply to the Bureau of Family Services, Welfare Administration, Washington, D.C. 20201.

(Continued on page 26)

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^{*}Prepared by Marice C. Hart, Division of the Actuary. ¹ See page 17.