

THE ACTUARIAL IMPLICATIONS OF THE 1951
RAILROAD RETIREMENT AMENDMENTS

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INTRODUCTION

ON OCTOBER 20, 1951, the day of adjournment, both Houses of Congress passed some rather far-reaching amendments to the 1937 Railroad Retirement Act. Then, in tacit recognition of the fact that such amendatory action was not necessarily considered as final, each House proceeded to enact concurrently the Senate version of a resolution setting up a joint congressional committee on railroad retirement legislation. The heart of the resolution establishing the joint congressional committee is contained in Section 2 which reads:

It shall be the duty of the joint committee, and it is hereby authorized and directed, to make a full and complete fact-finding study and investigation of the Railroad Retirement Act, and of such related problems as it may deem proper, with a view toward ascertaining what changes should be made in such act. The joint committee shall determine the scope of such study and investigation, without limitation thereon, and the following shall be given consideration:

1. The character and amount of present benefits and the estimated cost of providing such benefits.
2. The existing relationships between the system established by the Railroad Retirement Act and the old-age and survivors insurance system.
3. The changes that should be made in the character and amount of benefits to be provided workers subject to the Railroad Retirement Act and the estimated cost of providing such benefits.
4. Any changes that should be made in the existing relationships between the system established by the Railroad Retirement Act and the old-age and survivors insurance system with a view to simplifying administration, eliminating inequities and anomalies as regards benefits to workers whose earnings are included in whole or in part under either system, and strengthening the financial base for benefits to be provided under one system without impairing the financial base underlying benefits provided under the other system.

These companion pieces of legislation—that is, the 1951 amendments and the Senate resolution concurred in by the House—furnish the *raison d'être* of the present paper. For purposes of this paper, it has been deemed advisable and expedient to restrict the presentation of costs to estimates prepared by the actuarial staff of the Railroad Retirement Board, first

* The opinions expressed in this paper are those of the author and do not necessarily represent the official views of the Railroad Retirement Board.

because they were basic, and second because, in the final analysis, they represent figures officially accepted by the Senate and House Committees assigned to draft the necessary amendatory legislation.

STATUS PRIOR TO THE 1951 AMENDMENTS

Actuarial

For clarity of subsequent exposition as well as to establish a base of reference, it appears to be desirable to present the actuarial status of the

TABLE 1

COST ESTIMATE AS OF DECEMBER 31, 1950, FOR THE
THEN-EXISTING RAILROAD RETIREMENT BENEFITS
ON THE ASSUMPTION OF AN EQUIVALENT LEVEL
PAYROLL OF \$4.9 BILLION
(\$300 Limit on Creditable Monthly Compensation)

Item	Cost as Per- cent of Payroll
A. Retirement benefits.	10.58
1. Age annuities, pensions, and options.	7.76
2. Disability annuities before 65.	1.46
3. Disability annuities after 65.	1.36
B. Survivor insurance benefits.	2.38
1. Aged widows' and parents' annuities.	1.74
2. Widowed mothers' annuities. . . . .	.17
3. Children's annuities. . . . .	.28
4. Lump sums. . . . .	.19
C. Other costs. . . . .	.94
1. Residual payments. . . . .	.80
2. Administrative expenses. . . . .	.14
D. Summary:	
1. Total costs.	13.90
2. Reduction on account of funds on hand.	1.30
3. Net costs.	12.60

NOTE.—Except for the payroll assumption, all other cost factors and employment assumptions of the fourth valuation were retained.

railroad retirement system just prior to the 1951 amendments. A bird's-eye view of the then-existing benefit and financing provisions is contained in pages 2-3 of the paper "Actuarial Aspects of the Railroad Retirement System" appearing in *TSA II*. For the system of benefits outlined therein, the level cost calculations as of December 31, 1950, indicated that a uniform tax rate of 12.60 percent of covered payroll would be necessary to insure adequate financing. The breakdown of costs involved in this figure is presented in Table 1.

The level cost figure of 12.60 percent developed in the present table compares with the 12.72 percent shown in Table 11 of the aforementioned paper, as of December 31, 1947. It should be noted, however, that the level future annual payroll assumption adopted for the later estimate was taken as \$4.9 billion instead of the \$4.6 billion assumed as of the earlier date for the Fourth Valuation Report on the Assets and Liabilities of the Railroad Retirement System. The future payroll assumption was changed in recognition of the new wage rate increases which went into effect or else were in prospect when the revised actuarial cost estimates were being prepared for the Senate and House Hearings.

It has been considered desirable for purposes of this more recent analysis to break down the future costs of the disability benefits into two parts, the first to include the cost of payments prior to the normal retirement age of 65 and the second to represent the remaining cost. This indicates that if the Railroad Retirement Act had permitted the vesting of rights to only deferred benefits beginning at age 65 for employees who, because of previous disability, did not continue in railroad employment to that age, then the gross cost of retirement benefits would have been 9.12 percent. The actual inclusion of a disability provision which allows benefits to begin prior to age 65 increases the retirement cost by 1.46 percent of payroll to the indicated total of 10.58 percent. Death benefits and administrative expenses then take up an additional 3.32 percent.

When offsetting against the gross costs of 13.90 percent the 1.30 percent for funds on hand (which represents the annual interest that could be earned at 3 percent on the reserves of \$2,149 million expressed as a percent of a \$4.9 billion equivalent level annual payroll), there emerges the required rate of 12.60 percent which would be needed hereafter for proper financing of the system. Note that the combined employee and employer tax rates had been scheduled to rise no higher than 12½ percent (the rates were 6 percent apiece in 1950-51 and go to 6¼ percent apiece in 1952 and thereafter). Thus, if it be granted that the assumptions underlying the development of the 12.60 percent cost estimate are not unreasonably conservative, it is clear that no consequential benefit increases could be provided without affecting the actuarial soundness of the system unless, at the same time, the conditions of eligibility for benefits were made more restrictive or additional taxes were provided to support the expanded benefit structure.

The level tax rate as computed above implies a system which continues into perpetuity and makes no distinction between the differing classes of employees. This type of level premium financing on an open-end basis anticipates new accessions throughout time in its calculations; its degree of conservatism, of course, varies directly with the probabilities which can

be attached to such anticipations. While the method of financing is demonstrably far less conservative than the usual method adopted for private pension plans in which prior service liabilities are amortized over a relatively short period of time, nevertheless it has been considered adequate by Congress for a nationally administered industry-wide program whose degree of permanence is certainly of a far more solid nature than could be implied for any particular company in the industry.

General

Several pertinent remarks are in order before discussing the details of the new amendments. It should be pointed out to begin with that prior to the 1951 amendments a person could be eligible for retirement benefits at age 65 *regardless* of the length of his railroad service. Further, there was nothing to stop him from also receiving a social security benefit at the same time based on social security wages alone, subject, of course, to meeting the conditions of eligibility imposed under that Act. Thus, at the retirement level, the systems lived side by side without any coordination of earnings whatsoever; that is, railroad compensation was excluded in determining the social security primary benefit and social security wages were disregarded in the determination of the railroad retirement benefit.

An entirely different situation existed with respect to survivor benefits. In this area, dual benefits with respect to the deceased employee's earnings were avoided by the simple expedient of coordinating the coverage of the two systems and determining the agency which was to pay the survivor benefit on the basis of whether the employee did or did not have a current connection with the railroad industry at the time of his death.

The reason for this apparent anomaly in treatment lies in the fact that originally the railroad retirement system was, as its name implies, a retirement system. The monthly survivor insurance benefits were first introduced with the 1946 amendments—7 years after the precedent for survivor annuities was set by the 1939 social security amendments.

These amendments introduced formulas that produced a differential of roughly 25 percent in favor of the amount of survivor benefits available when the Railroad Retirement Board became the adjudicating agency. However, the advent of the social security amendments of 1950, which increased retirement and survivor benefits for individuals already on the rolls by more than 75 percent on the average, vitally changed the relationship between the social security and railroad retirement benefits which had existed until that time. Parenthetically, the manner in which the monthly survivor benefits came into being for the railroad retirement system makes it understandable why a more restrictive work clause existed

for monthly survivor benefits (similar to social security) than for employee annuities under the railroad retirement system—in contradistinction with the social security system where the work clauses have been the same for both types of benefits.

PRELIMINARY CONGRESSIONAL ACTION

Prior to the enactment of the 1951 amendments, extensive hearings were held before a Senate subcommittee of the Committee on Labor and Public Welfare and subsequently before the House Committee on Interstate and Foreign Commerce. Altogether, both committees had about a dozen different bills under consideration. Of these, three were given major consideration and were of most vital import in developing the shape of the final legislation. The first was H.R. 3669 (S. 1347) which had the backing of the Railway Labor Executives' Association. The second, H.R. 3755 (S. 1353), was introduced at the request of the operating brotherhoods known as the Big Four. Finally, more than passing consideration was given to H.R. 4641, introduced after the hearings in both Houses were closed, which had the backing of the Association of American Railroads.

One of the most difficult tasks faced by the Congressional Committees concerned with railroad retirement amendatory legislation was to reach a reconciliation of the opposing views as reflected in the bills championed by each of the interested railroad organizations. It would appear that there was unanimity of opinion in only two respects. First, everyone agreed that increases in the then-existing level of benefits were necessitated by the sharp rise in the cost of living. Second, all parties shared the view that it was not expedient to increase the existing tax rates still further in order to finance the additional costs arising from proposed benefit liberalizations.

The answer reached by the House Committee was introduced by Mr. Hall of that Committee. A radically different version was reported out by the parallel Senate Committee. The Senate Committee bill was passed by the Senate in essentially the same form. On the other hand, the bill which was subsequently passed by the other Congressional chamber was a far cry from the bill first reported out by its Committee on Interstate and Foreign Commerce. In effect, the House adopted the increased level of benefits provided in the Senate bill, but without any of the latter's offsetting savings. The indicated result was to produce a level cost of 16.43 percent as compared with 14.71 percent for the bill originally reported out by the House's own committee. The Senate bill, on the other hand, had the more reasonable price tag of 14.06 percent, mainly accomplished by introducing a 10-year service requirement and by raising the taxable ceiling from \$300 to \$350 monthly.

In accordance with usual Congressional practice, the resolution of the differences between these bills was left to a conference committee. The conference report prepared by this committee accepted the Senate version with the single important exception that the ceiling either for benefit or taxation purposes would still remain at \$300 for any calendar month. The conference bill, after passage by both Houses, was signed by the President on October 30, 1951.

CHANGES INTRODUCED BY THE 1951 AMENDMENTS

Retirement

1. As a condition of eligibility to a benefit—retirement or survivor—the employee must have completed at least 10 years of railroad service.

2. The employee benefits based on the regular formula are increased 15 percent by changing the annuity factors per year of creditable service from 2.4 percent of the first \$50 of average monthly compensation, 1.8 percent of the next \$100, and 1.2 percent of the remainder, to 2.76, 2.07, and 1.38, respectively. A corresponding revision is made in the minimum annuity provision, modifying it from \$3.60 per year of service up to \$60, to \$4.14 per year of service up to \$69.

3. All service after age 65 is recognized by removing the previously existing provision which had excluded from credits any railroad service performed beyond the end of the calendar year in which the employee attained age 65. Total creditable service still cannot exceed 30 years if service prior to 1937 (prior service) is included in the computation.

4. A spouse's annuity is added equal to one-half of the employee's annuity but subject to a maximum of \$40. This benefit begins at the time the wife (or dependent husband) attains age 65 provided that the employee annuitant has already attained that age. It can also be payable prior to the wife's attainment of age 65 so long as she has a child under age 18 in her care.

5. A prior service restriction provision is introduced which, while permitting dual retirement benefits under the railroad retirement and social security systems, reduces the railroad retirement benefit by that portion of the employee's railroad annuity which is based on his years of prior service and compensation before 1937 or by the amount of the old-age insurance benefit to which the railroad annuitant might be eligible under the Social Security Act, whichever is less.

6. A new over-all minimum annuity provision is introduced such that where the employee's annuity together with his spouse's annuity, if any, or the total of survivor annuities under the Railroad Retirement Act deriving from the same employment turns out to be less than the social se-

curity benefits or the *additional* social security benefits which would have been payable for the month, the annuity or annuities will be increased to the social security total or to the *additional* social security amount. To all intents and purposes, the effect of this provision was to guarantee that the aggregate of benefits payable to the employee (under both systems) or to his survivors under the Railroad Retirement Act would not be less because of the separate existence of the railroad retirement system than the total which would have been available had railroad service been included under social security coverage.

7. Recomputations of annuities previously awarded are permitted for the first time on the basis of additional creditable service and compensation accumulated after the annuity has begun to accrue.

8. An additional savings clause is introduced for annuitants already on the rolls to guarantee that the application of the various amendments to the Act would not operate to reduce benefits to the employee and his spouse after the effective date below the amount which was available to him immediately prior thereto. This savings clause feature, it will be noted, is directed primarily against the possible operation of the prior service restriction provision mentioned under 5 above. Similarly, a guarantee is provided to prevent the reduction of any survivor benefit below the amount actually paid before amendment.

Survivor

1. The aged widow's and widowed mother's insurance annuities are increased from 75 percent to 100 percent of the "basic amount." A corresponding percentage increase raises the children's and parents' benefits from 50 per cent to $66\frac{2}{3}$ percent of such basic amount.

2. The monthly survivor benefit ceiling to the family is similarly increased to \$160 or $2\frac{2}{3}$ times the basic amount.

3. An aged widower's benefit is introduced, the level of which is the same as for aged widows.

4. The lump-sum benefit payable at the time of the insured employee's death (available only where there are no survivor beneficiaries otherwise immediately eligible for a monthly benefit) is increased from 8 to 10 times the basic amount.

5. The permissible level of earnings in social security employment for survivor beneficiaries under the Railroad Retirement Act in a particular month is raised from \$25 to \$50.

6. The residual lump-sum benefit remains at 4 percent of the employee's aggregate railroad earnings in 1937-46 and 7 percent thereafter less the total amount already paid out in retirement and survivor benefits, ex-

cept that the subtractive offset for retirement benefits paid by the Social Security Administration (to employees who had less than 10 years of railroad service) is limited to the portion of the social security benefit directly traceable to the crediting of railroad earnings.

7. The various benefit liberalizations listed above apply to retirement and survivor benefits already awarded.

Transfer and Financial Interchange with Social Security System

1. Individuals with less than 10 years of railroad service (120 calendar months of credit) are transferred to the social security system. This has been accomplished by an amending provision to the Social Security Act deeming railroad compensation earned by such individuals after 1936 as within the definition of "wages."

2. A provision has been included which is designed "to place the Federal Old-Age and Survivors Insurance Trust Fund in the same position it would have been had service as an employee (railroad) after December 31, 1936, been included in the term 'employment' as defined in the Social Security Act and in the Federal Insurance Contributions Act." In effect, it calls for a determination of the amount which will have to be allocated to the OASI Trust Fund as of June 30, 1952, in accordance with the criterion spelled out above. Then, additional computations are to be made each year thereafter to determine the current amounts which would have to be added or subtracted in order to re-establish the status of the Trust Fund in accordance with the criterion as quoted above.

With reference to the initial determination of the sum which would have to be added to the OASI Trust Fund, no physical transfer of this *principal* amount is contemplated. Instead, yearly transfers of interest on such principal will be effected from the Railroad Retirement Account to the OASI Trust Fund based on the average of all interest-bearing obligations of the United States forming a part of the public debt. Further, in lieu of effecting a transfer from the OASI Trust Fund to the Railroad Retirement Account with respect to a particular year in which the current flow of funds would otherwise be in the direction of the Railroad Retirement Account, the Federal Security Administrator is given the discretion to reduce the principal debt as of June 30, 1952.

Actuarial Considerations

The breakdown of costs of the new amendments to the Railroad Retirement Act is presented in Table 2. The indicated rate of 14.43 percent representing the level tax rate required to finance adequately the amended railroad retirement system of benefits reflects a deficit of almost 2 percent

TABLE 2

COST ESTIMATES FOR MODIFICATIONS OF THE 1937 RAILROAD RETIREMENT ACT ACCORDING TO (a) THE CONFERENCE BILL ENACTED INTO LAW, (b) THE BILL PASSED BY THE SENATE, (c) THE BILL PASSED BY THE HOUSE, AND (d) H.R. 3669, AS ORIGINALLY INTRODUCED

ITEM	COST AS PERCENT OF INDICATED TYPE OF PAYROLL			
	Conference Bill \$4.9 Bill. \$300 Limit Monthly	Senate Bill \$5.3 Bill. \$350 Limit Monthly	House Bill \$4.9 Bill. \$300 Limit Monthly	H.R. 3669* as Introd. \$5.5 Bill. \$400 Limit Monthly
A. Benefits to employee and spouse.....	12.00	11.66	13.45	10.84
1. Age annuities, pensions, and options.....	7.74	7.50	8.92	6.81
2. Disability annuities before 65.....	1.71	1.65	1.71	1.59
3. Disability annuities after 65.....	1.52	1.49	1.56	1.35
4. Wives' benefits.....	1.03	1.02	1.26	1.09
B. Survivor insurance benefits.....	2.74	2.67	3.16	3.73
1. Aged widows' and parents' annuities.....	2.16	2.10	2.32	2.69
2. Widowed mothers' annuities.....	.15	.15	.23	.21
3. Children's annuities.....	.24	.23	.37	.42
4. Insurance lump sums.....	.19	.19	.24	.41
C. Other costs.....	.96	.90	1.12	.71
1. Allowance for maximum and minimum provisions.....	.28	.25	.44	.20
2. Residual payments.....	.54	.52	.54	.39
3. Administrative expenses.....	.14	.13	.14	.12
D. Funds on hand.....	1.30	1.20	1.30	1.15
E. Credits from OASI Trust Fund†.....	5.97	5.52	.....	5.57
1. Employee retirement benefits.....	3.25	3.01	.....	3.11
2. Wives' benefits.....	.51	.47	.....	.49
3. Survivor benefits.....	2.21	2.04	.....	1.97
F. Credits to OASI Trust Fund.....	6.00	5.55	.....	5.34
1. Settlement through 1950‡.....	.42	.39	.....	.38
2. Social security taxes on railroad payrolls after 1950.....	5.58	5.16	.....	4.96
G. Net costs, including social security adjustments, (A+B+C-D-E+F).....	14.43	14.06	16.43	13.90

* In contrast with the others, the R.L.E.A. sponsored bill provided for a social security type work clause applicable to retirement as well as survivor benefits.

† Additional benefits which would have been payable under the Social Security Act with respect to employees with at least 10 years of railroad service.

‡ Excess of social security taxes on covered railroad payrolls during 1937-50 over additional social security benefits which would have been payable if railroad earnings were credited.

in the existing tax schedule. The table, in addition, shows how the required level rate (level cost) would have been modified had the bill which first passed the Senate been adopted without change. Then, there is presented the level cost which would have arisen if the conferees had adopted the version passed by the House.

It should be pointed out that each of the series of amendments whose costs are presented in Table 2, other than the House version, provides for a 10-year service requirement as a condition for eligibility to either a retirement or survivor benefit. In comparison, the House bill continued the right to future monthly benefits under the Railroad Retirement Act regardless of the amount of service rendered in the railroad industry. It is the retention of this feature rather than anything inherent in the benefit level itself which produced the much higher level net cost of the House bill.

The other important respect in which the House bill would have been more favorable to the railroad annuitant was that it did not provide for any restriction in the retirement benefit regardless of the possibility of a benefit under the Social Security Act. The additional cost involved in this instance by not adopting the prior service restriction is included with the other miscellaneous cost elements covered in section C-1 of the table entitled "Allowance for maximum and minimum provisions." This particular item is something of a catch-all which includes cost allowances not otherwise provided for in sections A and B. The adoption of the prior service restriction provision has the effect of cutting costs which would arise otherwise by about .15 percent of payroll.

Adjustments between the OASI Trust Fund and the Railroad Retirement Account.—The nature of the adjustments referred to under this heading is reflected in sections E and F of Table 2. Note that application of the criterion which aims to put the OASI Trust Fund in the same financial position as it would have been in had railroad compensation been considered as social security wages means, in the last analysis, that the OASI Trust Fund is to be credited with taxes on all railroad employment at social security rates and in return must be charged with the additional benefits arising from the employee's augmented wage credits. Since individuals or survivors of individuals with less than 10 years of service would have their railroad credits transferred directly to the social security system along with survivor benefit claims where the employee (or annuitant) did not have a current connection with the railroad industry (regardless of the amount of the deceased employee's railroad service in the latter instance), the additional payments involved in these instances would be made directly to the employees or their beneficiaries. In the other instances where the Railroad Retirement Board became the adjudicating

agency, whether it be at the retirement or survivor benefit level, the additional social security benefits which theoretically might have come into being are charged against the OASI Trust Fund and credited to the Railroad Retirement Account (which becomes the direct payer of railroad employee and/or survivor benefits). For purposes of Table 2, the calculations are concerned only with the social security transfer and financial interchanges as they affect the Railroad Retirement Account. It is of no relevance to the status of such Account as to what additional benefits, on the basis of railroad employment, are paid out directly by the Social Security Administration to employees not otherwise eligible to monthly benefits under the amended Railroad Retirement Act.

Several remarks are in order with respect to transfers required from the OASI Trust Fund. On the retirement level (see E-1 and E-2) the cost calculations had to consider the social security benefits actually payable by the Social Security Administration on the basis of wages alone and the benefits which would theoretically have been paid by that agency on the basis of a combination of social security wages and compensation, with respect to cases in which the Railroad Retirement Board is the adjudicating agency. Then, in accordance with the criterion being considered, the Railroad Retirement Account would be entitled to only the difference.

Where survivor benefit awards are considered, compensation and wages of the deceased employee are consolidated and dual benefits are eliminated. Credits to be assigned from the OASI Trust Fund to the Railroad Retirement Account where the Railroad Retirement Board is the adjudicating agency would be based on *full* combined social security benefits which would have theoretically been paid out by the Social Security Administration if it had been the adjudicating agency.

As indicated by section F of the table, the determination of the credits to the OASI Trust Fund has been considered in two parts. The first represents the excess of social security taxes on covered railroad payrolls during 1937-50 over the additional social security benefits which would have been payable if railroad earnings had been creditable during such period, including a provision for interest; the second refers to the equivalent of social security taxes applied against covered railroad payrolls after 1950. Inherent in the figure shown through 1950 is the assumption that the net effect of the calculations which are to be conducted in the immediate future will be to show a credit to the OASI Trust Fund in the neighborhood of \$700 million as of December 31, 1950. It should be understood, of course, that the \$700 million figure is only in the nature of a rough guess at the present time and is not intended as anything but a working figure for purposes of a cost estimate. Needless to say, the differing percentages

shown in section F come into being in consequence of the varying railroad payroll bases as the compensation ceiling changes, rather than because of any differences in the size of the annual dollar credits to the OASI Trust Fund.

Effect of change in creditable compensation ceiling.—Let us now consider briefly how the cost of the new amendments would have been modified by the bill which first passed the Senate. While additional liabilities in terms of dollars were involved, the point to keep in mind is that both the retirement and survivor annuity formulas are of a bent nature and that the lowest percentages would be applicable to the compensation range opened for the first time as a source of additional revenue as well as a means for increasing benefits to individuals earning past \$300 a month. The consequent over-all effect on the level cost when expressed in terms of the higher future payroll must be downward. Conversely, since the enacted amendments retained the old creditable ceiling, the dollar costs went down, while, at the same time, the percentages related to a lower effective future payroll went up from 14.06 percent to 14.43 percent.

PROBLEMS POSED BY THE LATEST AMENDMENTS

Financing Inadequacy

In presenting the status of the retirement system before amendment, the author indicated that the level of benefits at that time was just about equivalent to the existing tax schedule. Thus, no substantial increase in benefits would appear to have been justified from an actuarial point of view unless offsets were found through restrictions in eligibility conditions to a benefit or from new provisions which would yield additional revenues to the Railroad Retirement Account. In H.R. 3669, as sponsored by the Railway Labor Executives' Association, the types of offsets made use of included a transfer and interchange with the social security system for employees with less than 10 years of service, the adoption of a social security type work clause, and the tapping of additional funds by lifting the taxable ceiling to \$400 a month. That such provisions did not go far enough relative to the liberalizations requested is evidenced by the fact that the benefit package finally produced a price tag of 13.90 percent in terms of an augmented covered payroll based on a compensation ceiling of \$400 a month (see Table 2). No change was contemplated in the combined tax itself which was to remain at 12½ percent of an equivalent level annual payroll of \$5.5 billion after 1951—reflecting a yearly deficit in such financial schedule of \$77 million.

It is of interest to note that in their initial efforts to reduce the indi-

cated actuarial deficit both Houses sharply curtailed the survivor benefit liberalizations as originally provided in the bill sponsored by the R.L.E.A. In addition, the Senate proceeded to take advantage of all the other cost-saving methods adopted in original H.R. 3669 except for the proposed change in the railroad postretirement work clause. The net effect if the payrolls had been kept the same (subject to a ceiling of \$400 on monthly compensation credits) would have been to make the 1951 amendments just as costly as the original bill itself. The retention of the lower \$300 limit on creditable compensation produced an estimated level cost 1.93 percent above the existing tax schedule, indicating a relative inadequacy of \$95 million annually.

Several questions naturally arise in connection with the latter figure. The first is whether the assumptions involved in the actuarial calculations themselves are not entirely too conservative. On this point, the prevailing view among the actuaries who testified at the hearings was that the assumptions underlying the cost estimates presented in this paper were, if anything, not conservative enough.

If it be conceded that the cost estimate for the present amendments is based on reasonably appropriate assumptions, the next question which must be posed is whether there is any way out of the financing dilemma produced by the amendments. Consider first what could be done by adopting the same creditable monthly ceiling as contemplated in original H.R. 3669 (\$400). That would result in a new rate of 13.88 percent for adequate financing. A somewhat more drastic step would be to adopt the social security work clause for employee retirements under the Railroad Retirement Act. The two steps taken in conjunction would bring the required level rate to support the benefit structure below 13 percent—from 14.43 based on a \$4.9 billion payroll to 12.88 percent on a \$5.5 billion payroll (see Table 3).

These two possibilities were seriously considered before final action was taken by both Houses. One of the arguments advanced against the first cost-saver was that it would mean an additional financial load on the railroad industry and would have its repercussions, if adopted, in demands by the industry for increased freight and/or passenger rates. Nor has the prospect of increased benefits been sufficient to convince the operating brotherhoods (as compared with the position taken by the nonoperating brotherhoods) of the advantages to their membership of paying additional taxes at $6\frac{1}{2}$ percent in an earnings range which is now untaxed (from \$300 to \$400 a month).

The difficulties encountered in adopting a more restrictive social secu-

TABLE 3

EFFECT ON COSTS OF THE BENEFITS OF THE 1951 AMENDMENTS BY (a) CHANGING THE CREDITABLE COMPENSATION CEILING TO \$400 A MONTH AND (b) CHANGING THE CEILING TO \$400 A MONTH IN CONJUNCTION WITH THE SOCIAL SECURITY TYPE WORK CLAUSE

ITEM	COST AS PERCENT OF PAY-ROLL RELATED TO		
	1951 Amendments without Change*	\$400 Monthly Ceiling and \$5.5 Billion Payroll	
		Present Work Clause	Social Security Type Work Clause†
A. Benefits to employee and spouse	12.00	11.52	10.72
1. Age annuities, pensions and options	7.74	7.41	6.85
2. Disability annuities before 65	1.71	1.63	1.60
3. Disability annuities after 65	1.52	1.47	1.36
4. Wives' benefits	1.03	1.01	.91
B. Survivor insurance benefits	2.74	2.63	2.63
1. Aged widows' and parents' annuities	2.16	2.08	2.08
2. Widowed mothers' annuities . . . . .	.15	.14	.14
3. Children's annuities . . . . .	.24	.23	.23
4. Insurance lump sums . . . . .	.19	.18	.18
C. Other costs . . . . .	.96	.86	.91
1. Allowance for maximum and minimum provisions . . . . .	.28	.23	.23
2. Residual payments . . . . .	.54	.51	.56
3. Administrative expenses . . . . .	.14	.12	.12
D. Funds on hand	1.30	1.15	1.15
E. Credits from OASI Trust Funds‡	5.97	5.32	5.57
1. Employee retirement benefits	3.25	2.90	3.11
2. Wives' benefits . . . . .	.51	.45	.49
3. Survivor benefits	2.21	1.97	1.97
F. Credits to OASI Trust Fund	6.00	5.34	5.34
1. Settlement through 1950§ . . . . .	.42	.38	.38
2. Social security taxes on railroad payrolls after 1950	5.58	4.96	4.96
G. Net costs, including social security adjustments, (A+B+C-D-E+F)	14.43	13.88	12.88

* Based on a \$300 monthly compensation ceiling and a creditable payroll of \$4.9 billion.

† Provides for suspension of the disability annuity benefit for any month of employment in which earnings are greater than \$100 under age 65. After that age, the benefit would be suspended in any month for which earnings were greater than \$50, for disability and nondisability annuitants alike.

‡ Additional benefits which would have been payable under the Social Security Act with respect to employees with at least 10 years of railroad service.

§ Excess of social security taxes on covered railroad payrolls during 1937-50 over additional social security benefits which would have been payable if railroad earnings were credited.

urity postretirement work clause are equally manifest. First, there must be faced the very strong opposition of railroad annuitants who have had the privilege of working in social security employment over more than a 15-year period without suspension of their benefits. Second, at least one member of the Senate Committee which was intimately concerned with the legislation as finally enacted felt that any provision which restricted employment opportunities for the aged population was a step in the wrong direction from the point of view of the national economy. While the Senator may well be correct from the over-all point of view of the national economy, the natural consequence of such position when applied to the railroad retirement system is to deprive it of a very important implement (the social security type work clause) which it would seem almost imperative to use if the railroad retirement benefit structure as fashioned by the 1951 amendments is to be brought into a state of financial balance without resort to further tax rate increases. Note, in this connection, that while the adoption of the social security type work clause would *decrease* the employee's over-all working life expectancy after age 65 (in and out of the railroad industry), it would also tend to *lengthen* the period of railroad employment and thus postpone the beginning date of the railroad annuity. The net effect would be, first, to save the Railroad Retirement Account benefit payments during the period he postpones retirement from the railroad industry as well as during subsequent social security employment, and second, to increase the size and duration of reimbursements from the OASI Trust Fund—as compared with the present railroad work clause.

One other possibility exists which could conceivably bring the present system of benefits into an actuarially sound position. The thought is a speculative one and cannot be given too much weight as of the present moment. The thought here has reference to a possibility that, as in the past, Congress might freeze the social security taxes in the future and provide for a subsidy when required at a later date. In that event, of course, the railroad retirement system would get the full benefit of social security reimbursements at a much lower price than provided for in the present cost estimates. The means available is through the financial interchange provision of the Act which involves the Railroad Retirement Account and the OASI Trust Fund. Needless to say, however, the subsidy under such conditions would be paid for from additional taxes on railroad employees as well as on the rest of the working population.

A final thought which cannot be ignored is that, in the last analysis, the U.S. Government is the payer of railroad benefits and its taxing power can be utilized to insure their continuance.

Loss of Vested Rights

The adoption of the 10-year provision itself was not accomplished without serious opposition, the prevailing thought of the opponents being that the transferees were being short-changed. Second, it was argued that the Government was going back on an obligation by depriving the individuals involved of previously vested rights to deferred annuity benefits.

The first argument presented against the 10-year eligibility requirement would, of course, be pertinent with reference to a private pension plan in which the usual procedure adopted is to return the employee's own contributions, generally with interest, in lieu of rights to a deferred annuity. The nature of the analogy is such as to have suggested the adoption of a similar refund of railroad retirement contributions over and above the social security taxes. Instead, the new Act provides in such cases for a return of the employee tax (including the portion allocated to the OASI Trust Fund) less the benefit payments based on the additional amount of his social security benefit directly due to the crediting of railroad earnings and less the *total* survivor insurance benefit payments.

There are practical reasons which can be given to rationalize the less liberal "withdrawal" benefits of the railroad retirement system. First, the system itself is something of a hybrid between the private pension plan approach on the one hand and the social security practice on the other; it thus does not pretend to be solely guided by considerations of individual equity. Another factor to consider is that the adoption of a provision returning the excess employee contributions above the social security rate would bog down the effective operation of the railroad retirement system; it would involve, for example, hundreds of thousands of refunds yearly to people who come into the industry for only a brief time. The sums to be returned would be negligible, in general, while the administrative expenses would be far out of proportion. Nor should we overlook the fact that there would have to be as many as 100,000 reimbursements yearly to the Railroad Retirement Account by individuals who re-enter the industry after initial withdrawal.

It is apparent from the above that the usual type of withdrawal benefit, if considered desirable as an amendatory provision to the railroad retirement system, would have to be modified—with the possibility that it be made available at the time of the individual's death or retirement, whichever was first. Even with this more practical approach, a tremendous amount of bookkeeping would still be involved, including the calculation of accrued interest for the period between withdrawal and death or retirement, as the case may be.

Considering the second argument which maintains that the Government has broken a sacred trust in depriving short-service railroad employees of rights to their annuities, the author does not consider it appropriate to go into the question of the ethics involved. There is no question, however, of the legal power possessed by Congress to deprive employees of such conditional rights. And, of more importance from the actuarial point of view is the fact that if the railroad retirement system were to be restored to its original financing status by amending legislation removing the transfer and financial interchange arrangements with the OASI Trust Fund and instead making the benefit provisions of the 1951 Act applicable regardless of the extent of railroad service, the result would be to raise the required level rate by another 2 percent of payroll. It would mean that the already indicated serious deficit in the existing tax rate schedule would be doubled.

Prior Service Restriction

The reasoning underlying the adoption of this provision was that it was not considered desirable to give the annuitant a double windfall, first with respect to untaxed service before 1937, and then on the basis of minor social security employment on which the benefit payoff is extremely handsome. The practical consideration which guided the dual benefit restriction was that it would serve to reduce the over-all cost of the 1951 benefit amendments. It would, however, appear that the savings effected (.15 percent of payroll) might not be sufficient to offset the added cost it must necessarily occasion in terms of misunderstanding on the part of the railroad employee.

A troublesome area affected by this provision includes employees who had retired before the effective date of the amendments. Preliminary investigations indicate that about 30,000 such annuitants had enough social security employment for eligibility under that Act on the basis of wages alone. In these instances, the amendments, far from increasing the individual's railroad retirement annuity, would have *decreased* it instead. That would explain the additional proviso of the amendments which in effect guaranteed that the railroad benefits to annuitants on the rolls (including the spouse's benefit) would not be smaller after the amendments than prior to the enactment date. Such legal provision, however, still will not satisfy the many thousands of annuitants who have been permitted to work in social security employment until now without any effect on the size of their railroad benefit, and who felt more or less assured that the amendments would uniformly increase such benefit.

Another interesting peculiarity of the prior service restriction provision is that in as many as 10,000 cases of awards to date, the married employee's annuity check will actually be reduced immediately as compared with what he was getting before the amendments went into effect. For such cases, however, there will be a spouse's benefit, and the sum of the two benefits will at least equal the railroad benefit the employee annuitant himself was receiving before the amendments.

The most trying implication of the prior service provision, however, relates to its effect on individuals who retire *after* October 1951. For the employee who meets the minimum service conditions for eligibility to a social security benefit on the basis of wages alone, the peculiarity resulting is that amendments originally designed to increase the benefits of the 1937 Railroad Retirement Act will have an exactly opposite effect.

For the situation involved immediately above, there would still remain the positive fact that the individual could be entitled on application therefor to a social security benefit which, together with the railroad retirement annuity under the 1951 amendments, will be at least as great as the employee might have received before the amendments to the Act. Even this argument is not completely valid with respect to any month in which the railroad annuitant returns to social security employment, in which case it would be at the expense of the social security annuity to which he is eligible on the basis of wages alone.

The inescapable question that the above discussion raises and to which only an inadequate answer can be given at best is whether the prior service restriction provision is sufficiently satisfactory as a cost-saver to offset the many misunderstandings and additional complexities in administration which this particular provision brings in its wake.

Dual Benefits

The prior service restriction provision discussed in the immediately preceding section indicates one approach to the dual benefit problem in terms of effecting cost savings. Consider further the effect on costs if it were not possible for *any* individual retiring under the Railroad Retirement Act to get a social security benefit in addition.

On the basis of the assumptions underlying the cost estimates for the new amendments, the calculations have indicated that the value of the social security benefit based on *wages alone* comes to .77 percent (when expressed in terms of the equivalent \$4.9 billion future level annual railroad payroll). This estimate includes an allowance for the spouse's benefit based on such social security wages. At first blush it would therefore ap-

pear that if social security benefits were eliminated whenever a retirement benefit was payable under the railroad retirement system, savings of .77 percent of payroll could be effected with respect to the 1951 retirement benefit amendments. Such reasoning would, however, ignore the fact that the complete restriction against dual benefits would automatically result in a higher minimum guarantee for the family benefit equal to the *total* of social security benefits available on the basis of compensation and wages combined rather than to the *difference* between such consolidated family total and the corresponding amount based on wages alone. The net effect in terms of financing the benefit structure of the railroad retirement system would be to save about .4 percent of payroll.

The approach taken above has been in terms of the tacit assumption of two nationally administered systems which continue to be self-contained. There are several other ways of dealing with the problem which would involve a new orientation based on the functions each system should perform. A discussion of these alternative approaches is, however, outside the scope of this paper.

Social Security Minimum Guarantee

As a practical matter, it would have been rare until the 1950 social security amendments for the railroad benefit to be smaller than the corresponding social security benefit. However, with the advent of the 1950 social security amendments, the situation changed so radically that the survivor benefit scales, for example, were completely tipped in favor of the social security system. Further, those amendments not only provided for a more liberal retirement benefit formula, but also introduced "new start" provisions additionally advantageous to the employee. The result was to broaden the service and compensation area within which the railroad retirement benefit formula might well yield smaller amounts.

Two possibilities for a solution of the survivor benefit problem existed. The first would have been similar to the one chosen when the 1946 survivor benefit amendments were introduced. This would have meant following the lead of the Social Security Act by making corresponding changes in the relationships between the various categories of survivor benefits and by introducing a type of formula which would produce levels equal to or somewhat higher than under the Social Security Act. Such approach was recommended by the Association of American Railroads in the survivor benefit provisions of H.R. 4641 sponsored by that organization. The second solution was to proceed independently in arriving at survivor benefit relationships or in the determination of the benefit

formula but with the provision on the retirement as well as the survivor benefit side that the social security family benefit total would serve as an over-riding minimum. This alternative approach was taken in H.R. 3669, as introduced, and was followed by Congress in the 1951 amendments which it finally enacted.

Because the 1951 amendments increased the regular survivor benefit formulas to a much smaller degree than the original H.R. 3669, and insofar as they did not change the relative benefit relationships between different classes of survivor benefit categories, a situation has resulted in which the social security minimum guarantee actually has become the regular benefit for about half of the survivor beneficiaries already on the rolls. In effect, the reopening program for such survivor benefits amounts to changing the railroad retirement formula to the social security benefit formula even though it was not so intended. This rather paradoxical situation will not be typical in the future with respect to the aged widows' benefit; the instances in which the social security formula will give higher results will decrease as the number of increment years (since 1936) going into the railroad retirement formula increases. While the corresponding benefits to widowed mothers according to the railroad retirement formula will be larger than under the social security formula, nevertheless there will be sufficient difference in the child's or children's benefits (under the Social Security Act the first child gets an additional bonus of 50 percent above that of the other children) to make the social security family minimum provision applicable anyhow in many instances. Similar comments are in order for survivor benefit families composed of children only or dependent parents. Corresponding difficulties come into being in survivor cases which would ordinarily be affected by the maximum benefit provisions according to the railroad formula.

The foregoing discussion would seem to lend support to the view that Congress might well consider it necessary to re-examine the survivor benefit provisions. To the extent that the present social security minimum guarantee in effect makes the survivor benefit formula of that system the regular one for railroad survivor insurance benefits in a large area, thought might once more be given to the desirability of accomplishing the same purpose more directly; that is, for purposes of administrative simplicity it might well be desirable, unless other considerations are over-riding, to modify the regular survivor insurance benefit formulas in line with those of the social security system and thus, in process, allow the social security minimum guarantee to perform the usual function assigned to any minimum provision.

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