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DISCUSSION OF PRECEDING PAPER

DONALD B. WARREN:

Mr. Musher's paper brings out the disquieting information that, on the basis of the absolutely minimum sound method of level-contribution financing, the estimated cost of the Railroad Retirement system is 14.43% of taxable payroll, while the maximum tax rate provided in the law is 12.50% of taxable payroll. Actually the present estimated cost of the system is slightly less than the 14.43% mentioned in the paper, due to the 1952 Social Security Amendments. Nevertheless, there would still appear to be at least a 1.5% deficiency in expected contributions as compared with the level rate needed to fund the system. This is based on the premise that the actuarial assumptions are reasonably in line with expected future experience and that the costs based on those assumptions do not contain any substantial margin of conservatism.

A good argument can even be made for the fact that the method of funding adopted for the system is not too sound for a one-industry system where that industry may conceivably be a retrogressive industry. The usual presentation of the cost of this system is in a form which does not emphasize the normal-cost-plus-interest method, but actually the method of funding is the entry age normal cost method with interest, only, being paid on the accrued liability.

The entry age normal cost method of funding is very common in self-administered or deposit administration pension plans. It consists in determining a level contribution (or premium) applicable to the average employee, which, if paid from his date of first employment to his date of retirement, will exactly provide all his benefits without the need of any further payments for him after his retirement. This is on the supposition that all the actuarial assumptions work out exactly. For those employees already at work when a retirement system is first adopted, the payment of the normal cost is not sufficient to pay for their benefits; there is a deficiency equal to the accrued value of normal contributions which would theoretically have been paid for those employees had the system always been in existence. This deficiency is known as the initial accrued liability or, more loosely, as the prior service liability.

The minimum annual contribution to a retirement system, which is necessary to keep the initial accrued liability from increasing in size, is equal to the normal contribution plus interest at the valuation rate on the

initial accrued liability. This minimum contribution assumes, of necessity, the perpetual continuation of the system at a size and with an amount of payroll not less than that at the date the system is started.

This minimum level-funding method is widely used for public employee retirement systems. It can be justified, whether wisely or not, on the theory that the existence of political subdivisions continues forever, that public employee groups never decrease in size, that in any event the taxing power of the political unit can be invoked to save the system if need be, and finally if the worse comes to the worst a public body has the legal if not the moral right to abrogate its promises and reduce benefits sufficiently to balance with income.

Whether any of these arguments are valid, even for a public employee system, is open to grave question. Whether they are valid for the Railroad Retirement system, which should essentially be a private system under government administration, is open to much graver question. When to this ideological approach is added the practical consideration that railroad employment is declining over the long term, it becomes a very grave question indeed whether it is ethically right to try to fund the Railroad Retirement system on the minimum basis.

Up until the present time, cost estimates for the Railroad Retirement system (when expressed as a percent of taxable payroll) have invariably proved to be too high. This has been due to the effects of inflation and not to erroneous actuarial assumptions. The cost of paying interest on the accrued liability has been relatively stable over the years while the payrolls have risen almost $2\frac{1}{2}$ times. This has resulted in the interest cost being a smaller and smaller percentage of payrolls.

This expressing of relatively constant dollar costs in terms of fluctuating payrolls is another sin (in addition to the minimum funding sin) which we actuaries may have to answer for eventually. It has given rise in connection with the Railroad Retirement system to a false feeling of safety. Since actual costs always have turned out to be smaller than expected costs, why worry now because the tax rate is $1\frac{1}{2}\%$ lower than present estimated costs? But the old safety-valve is worn out now! Payrolls, because of declining employment coupled with a legal limit of $300 a month on the taxable pay of any individual, are fast approaching an absolute maximum. The present cost estimates are apt to prove to be the correct cost estimates on the basis of actual future payrolls.

The Railroad Retirement system therefore faces a very serious situation. It seems almost a certainty that the tax provisions in the law will not support the benefit provision in the law.

DORRANCE C. BRONSON:

We are indebted to Mr. Musher for rounding up for us the many different viewpoints and objectives which were grist for the Conference Committee's mill in grinding out the final 1951 Amendments to the Railroad Retirement Act. Anyone who reads this paper must come away convinced that here is the most complicated pension plan in the world. To an actuary coming upon it afresh—being given some assignment, say, necessitating an understanding and appraisal of the Act—it must appear a formidable task, a thirteenth labor of Hercules. While Mr. Musher's paper is no substitute for a lot of hard work in such a case, the task without the help of papers such as this—the endless reading of the different bills, the hearings, the debates, etc.—would be, indeed, disheartening.

My comments on this paper will be confined to that part wherein the author considers ways of effecting solvency for the system. After all, that is the *sine qua non* of the actuary's job. The system is now falling behind, at an annual rate of about 2% of covered payroll according to the paper. What can close the gap? Mr. Musher tries raising the applicable wage ceiling. He tries a more restrictive work clause, suspending annuities at certain levels of postretirement earnings. He looks at a possible solution by increasing the rates of employee and employer contributions, now $6\frac{1}{4}\%$ each; but what railroad employee—the young one—wants to pay more than his prospective benefits are worth? Finally, he somewhat reluctantly, it appears, looks to the possibility of a government subsidy; but how could the Railroad Retirement expect subsidy unless Social Security were "subsidized"? ("Subsidy" here, is pretty much a euphemism for a contribution tax increase.)

It seems to me that the big opportunity for solving the problem, Mr. Musher misses, or avoids. This lies in covering railroad employment in the Social Security Act. This would make the low current rate of OASI contribution available to employee and employer in producing a large part of the current scale of Railroad Retirement benefits. True, the OASI tax will go up to $3\frac{1}{4}\%$ each, employee and employer, by 1970 as now scheduled, but with a $12\frac{1}{2}\%$ current Railroad Retirement charge, there would be $9\frac{1}{2}\%$ available now and 6% available in 1970 (assuming the OASI tax schedule holds) to build a system of benefits above the OASI base.

The problems, confusion and complexities that would be remedied by this course are many. It is not feasible to extend this discussion to cover them all, but one is of such importance that I must mention it. It is the contingency of further inflation. As it now stands, the Railroad Retire-

ment system is in a strait jacket on this. Since it is already behind in contributions to support the benefits, a further inflationary level could hardly be followed by another round of higher railroad pensions within the present structure—particularly if such a round of pension increases were to apply to the then already retired roll as well as to the active employees. Social Security on the other hand, being an almost complete national system, is in a better position to furnish inflationary rounds of benefit increases when necessary, to both existing aged beneficiaries and active employees alike.

Must not the Railroad Retirement system and Governmental pension plans—as well as industrial pension plans in respect of the retired rolls at any time—look to Social Security for modest corrections in pensions occasioned by further inflation?[1] By remaining out of Social Security, the railroad employee groups—and public employees generally—are apparently going on the theory that legislation can always be counted on to increase and increase and increase the pension under their particular plan—not only for active employees but for the whole retired roll as well. This, to my mind, cannot be accomplished and these groups should fall in under Social Security with all the rest of us.

Mr. Musher's—and Mr. Niessen's—papers are always interesting. They are living with a highly complex and changing system which yields much lore for the actuary. We can be grateful for being kept up to date through these papers of the Railroad Retirement actuaries.

ROBERT J. MYERS:

Mr. Musher's paper is very valuable in giving factual information as to policy decisions and actuarial analysis in regard to the recent Railroad Retirement Amendments, and also some insight as to future developments. Those interested in the general social security provisions in the United States will find it essential to read this paper quite closely to obtain the many vital points so closely packed therein. The paper is also valuable in its presentation and consolidation of cost estimates made by the Railroad Retirement Board for various versions of the legislation and for possible subsequent changes.

One point especially striking to actuaries is the lack of balance between benefit cost and contribution rates—a difference of almost 2% of payroll on a level premium basis when the legislation was enacted. During the Congressional hearings some witnesses testified that a discrepancy of 1% was reasonable and could readily be acceptable; this, of course, did not

[1] See "Pension Roll Dilemma," by Dorrance C. Bronson, *Trusts and Estates*, June, 1952.

explain away the other 1% difference. The argument of these witnesses was based on the consistent overstatement of costs in the past which, however, occurred primarily because of the steadily rising wage level. There would seem to be some question as to whether this should be counted upon to occur indefinitely into the future, or if it does, whether benefits would not be adjusted accordingly, thus leaving the lack of balance still present.

Still another matter of great interest is the further—although not full—coordination of the Railroad Retirement system with the general old-age and survivors insurance program brought about by the 1951 Railroad Retirement Amendments which contained two provisions along these lines. First, in the future workers with less than 10 years of railroad service receive no monthly benefits under Railroad Retirement but rather OASI wage credits, and thus potentially OASI benefits, for that service. Second, necessarily complicated financial interchange provisions are introduced such that the OASI trust fund will be placed and maintained in the same position it would have been in if railroad service had always been covered by OASI. The specific mechanism as to how this works is necessarily not described in detail by Mr. Musher. A description may be found along with an illustrative example in my article, "Railroad Retirement Act Amendments of 1951: Financial and Actuarial Aspects," in the *Social Security Bulletin* for March 1952. In essence then, as between Railroad Retirement and OASI, there is now partial coordination as to benefits and coverage as far as railroad workers are concerned, but full coordination financially as far as the OASI system is concerned.

The financial interchange provisions were undoubtedly introduced because it was anticipated that the Railroad Retirement system would make a "profit" thereby, and this could be used to provide more liberal benefits. Considering only this provision and not that for the transfer of short-service employees, the Railroad Retirement Board estimate of the profit which that system would make from OASI is about $\frac{3}{4}$% of payroll on a level premium basis. However, the Social Security Administration believes that the effect of this provision will be quite different and that rather there will actually be a small "loss" to the Railroad Retirement system. The details of the actuarial controversy are contained in the article previously cited, but in essence we believe that increasing the coverage of the OASI program in general results in lower relative costs therefor. At any rate, the provision is in the law and the future will tell the results.

Further in regard to the financial interchange provision, it should be noted that any increase in OASI benefits without a change in contribution

rates results in a lower cost for the Railroad Retirement program considered in the aggregate. This has already occurred as a result of the Social Security Act Amendments of 1952, and perhaps Mr. Musher will indicate how they affect the cost data given in his paper. Likewise, through this same provision any contribution from general revenues to the OASI system would flow through to Railroad Retirement.

As another point about the financial interchange provision it should be noted that the $700 million initial credit from Railroad Retirement to OASI is to be retained by Railroad Retirement, and interest is to be paid to OASI. This is a significant advantage to the Railroad Retirement system because the Treasury pays it 3% interest, and it must pay OASI only 2¼%.

The provision for transfer of short-service employees to OASI results in a "profit" to Railroad Retirement which receives the full Railroad Retirement tax from employer and employee but transfers to OASI only the lower OASI tax. These employees pay the higher Railroad Retirement contributions and in the vast majority of the cases receive no more than OASI wage credits. This is—in my opinion—a great inequity. Imagine, if you will, a private pension plan supplementary to OASI under which the employee contributions are held for the benefit of the fund if the employee withdraws before completing 10 years of service! This is essentially the situation under the Railroad Retirement system. The employees under such a private plan would certainly react, both individually and collectively.

There are several ways in which equity could be achieved in this matter if the general basis of the Railroad Retirement program were to be left unchanged. For instance, a refund benefit of the excess employee contributions could be made at time of death or retirement. Still another solution would be to have the employee pay only the OASI contribution during his first 10 years of service (with the employer paying the full Railroad Retirement rate), modified perhaps as to specific application in accordance with desirable administrative procedures. The latter basis might be criticized as being contrary to the original agreement between employers and employees to share the cost equally, but actually there is no difference between the short-service employees paying only the OASI rate and their paying the full Railroad Retirement rate but later receiving a refund of the difference.

In conclusion, in my opinion, the dilemmas and anomalies brought out not only in Mr. Musher's paper but also in the discussion indicate that a genuine coordination of Railroad Retirement and OASI is necessary. Actually, under such coordination OASI should be the basic layer of pro-

tection—not only for short-service railroad employees, but also for career ones. Then, a supplementary Railroad Retirement program—possibly involving only disability and age retirement benefits along with lump-sum death refunds—would be added, just as private pension plans supplement OASI. Mr. Musher's paper is essential reading in meeting and solving this complex problem facing social security in the United States, and he deserves a hearty vote of thanks for presenting it.

RAY M. PETERSON:

One of the previous speakers spoke of the possible future necessity of a Government subsidy for this program. There is now a Government subsidy which you and I are paying. The Government is required to issue 3% securities to this fund; and, as we know, it could borrow money at a considerably lower rate.

I believe, in their valuation, Mr. Niessen and Mr. Musher have used experience tables which are virtually at the current experience level as to mortality. By referring to another paper which is up for discussion at this meeting, it is evident that, if you make reasonable allowance for future mortality improvement, you can expect pension costs 10 or 15 percent greater than those calculated on current experience levels.

As to the difference in the interest rates of which I speak—if a rate were used in valuation which approximated, say $2\frac{3}{8}\%$, that, in itself, would perhaps increase costs 15 percent; and you add another 10 or 15 percent for, shall I say, a realistic approach to the mortality, and you have at least a 25 percent increase in costs, so that the real cost of this program is perhaps closer to 18 percent than to 14 percent.

I noticed that he has allowed for expenses a little more than 1 percent of the current contributions. In the group annuity business, where we have a great variety of contracts, the companies' administrative expenses, after you take out commissions and taxes, are only about $1\frac{1}{4}$ percent of considerations. So I think we are doing pretty well.

CECIL J. NESBITT:

Mr. Musher deserves the thanks of the Society for presenting this digest of the actuarial and broader problems relative to recent developments in railroad retirement legislation. These are problems in which actuaries should take an interest as a matter of public service. Unfortunately, as the paper reveals, the railroad system, the old-age and survivors insurance system, and their interrelations, have become so complicated that weeks of study would seem necessary to give authority to conclusions. Mr. Musher's paper should, however, substantially short-

en the time required to achieve an understanding of the problems of the railroad system.

It seems clear that taxes, which now provide less than level premium financing for the system projected into perpetuity, will eventually have to be raised. It is to be hoped that by the time the tax and other problems become acute, our social security system may have evolved into a much more universal program that other systems will adopt as base upon which to provide additional benefits. Proposed solutions for interim problems should be examined as to whether they will impede or hasten such evolution.

The prior service restriction provision which reduces the railroad benefit by the lesser of the portion of the annuity based on service prior to 1937 or the amount of old-age insurance benefit was puzzling to me—as one reduction is based on employment before 1937 and the other on employment thereafter—and would seem to invite odd consequences. The author explains in a later section that the provision aimed to prevent a double windfall. He recognized difficulties that may arise under the provision and that the saving in cost is low. I would concur with him that there is question about the worth of the provision.

The author discusses the adoption of a social security work clause as a means of solving the financial dilemma of the railroad system. For a retirement system which includes in its coverage some employees who are engaged in semihazardous work, such a clause involves more than the usual number of difficulties. If social security were to become the base, and more individual equity were developed in the railroad retirement benefits, the problem might be eliminated. There is some indication that UAW-CIO retirement plans are moving toward more individual equity while retaining social security as a base.

(AUTHOR'S REVIEW OF DISCUSSION)

JOSEPH MUSHER:

It is a very rewarding experience to have one's paper discussed by members of the Society who are so representative of the various fields of actuarial endeavor. Messrs. Bronson and Warren are leading experts in the consulting field; Mr. Myers has played a key role in establishing the actuary's position in social insurance; private insurance has been represented by one of its top group annuity men, Mr. Peterson; while Professor Nesbitt speaks as one of the important authorities in the academic realm. May I express my thanks and gratitude for the temper of their discus-

sions, the nature of which has undoubtedly added much to whatever intrinsic worth the paper may have originally possessed.

Mr. Warren has presented succinctly the method of financing which underlies the actuarial analysis of the railroad retirement benefit structure. In effect, the level cost is obtained by combining the entry age normal cost and the annual interest charge on the unfunded accrued liability expressed as a percent of payroll, together with an allowance for administrative expenses. While the type of financing adopted implies the indefinite continuance of the system, it does not necessarily require "the perpetual continuation of the system at a size and with an amount of payroll not less than at the date the system is started." While it has been the general practice in adapting the level cost method to utilize the current payroll in translating the interest charges as a percent which can be added to the normal cost (note the practice for the Civil Service Retirement Fund, for example), it is not obligatory to do so.

Mr. Warren points to the fact that railroad employment is declining over the long term. This practical consideration was certainly not overlooked in our own calculations which established an equivalent future level payroll against which the annual interest charge could be measured in terms of a percentage. The actual facts of the matter are that for the second, third, and fourth valuations of the system, the payrolls adopted for the cost calculations were substantially below the current levels at the time the respective valuations were being prepared.

Mr. Warren then points to the fact that the periodic cost estimates for the railroad retirement system, when expressed as a percentage of payroll, have proved to be too high from one valuation to the other. The author takes comfort, of course, in Mr. Warren's remark that the troubles have arisen because of the inflationary pressures of the last few years and the resulting sharply higher payrolls rather than because of erroneous actuarial assumptions. The financial relief in terms of level cost that can be afforded henceforth must necessarily be limited, as Mr. Warren points out, as more and more individuals reach the $300 ceiling on creditable monthly earnings.

Mr. Bronson shares Mr. Warren's concern, as well as the author's, with respect to the inadequacy of the actual tax rates for sound financing of the railroad retirement benefits. He points to the apparent gap equivalent to 2 percent of payroll which was indicated in the paper between the actual tax rate and that required for financing on a level cost basis. This gap has been narrowed somewhat in consequence of the 1952 Social Security Amendments to which Mr. Myers refers in his discussion. Mr. Bronson then goes on to indicate, possibly inadvertently, that the author was

considering the possibility of a government subsidy for the railroad retirement system independent of the general social security situation. What I actually had in mind was the effect on the level costs of the railroad retirement system if social security taxes did not rise to their ultimate levels and where the government picked up the slack through a subsidy to the general social security system itself. The natural consequence which Mr. Myers has correctly pointed out is in terms of larger net reimbursements to the railroad retirement system from the OASI Trust Fund. It is clear, of course, that railroad employees, like all other workers, would have to share in the additional tax burdens which would be reflected as a result of such general subsidy.

In writing the paper, the author approached it from the point of view of two nationally administered systems which continue to be self-contained. It was indicated that there were other ways of dealing with the problem which would involve a new orientation in terms of the functions each system should perform, but that such alternatives were outside the scope of the paper itself. The underlying reasons for this position are self-evident. It should be noted, however, that the gap which was purposely left in this area has been partially filled in by Mr. Bronson as well as the others who participated in the discussion. Unfortunately, none of them, within the limitations of available time, could do real justice to the problem of coordination between railroad retirement and the general social security system. May I refer the interested reader in this connection to the forthcoming report by the Joint Congressional Investigating Committee on Railroad Retirement which should be ready about April. The problem of coordination along with all the other aspects of the railroad retirement system will be gone into extensively in that report. Incidentally, the committee has indeed been fortunate to retain Mr. Warren as its actuarial consultant for critical review of the actuarial implications of the railroad retirement system.

One further comment is in order with respect to Mr. Bronson's discussion. He gives the impression that the railroad retirement system is in something of a strait jacket in connection with the contingency of further inflation. It should be noted, however, that there is a very important loophole introduced with the 1951 amendments which permits a considerable amount of "play" within such strait jacket. Within the present framework of coordination, any increase in social security benefits which is not accompanied by a corresponding increase in the social security tax rate—as a case in point, the 1952 Social Security Amendments—automatically reflects itself in a lower level required rate for financing the railroad retirement benefit structure. Conversely, a freeze in the social security tax rate

below the ultimate level while the social security benefits remain the same will also result in a lower level rate for the railroad retirement system. Thus, to the extent that a further inflationary round of benefit increases is provided in social security benefits, the railroad retirement level of benefits can increase accordingly without suffocating in the strait jacket with which Mr. Bronson has encased the system. Of course, the main problem which faces all pension systems at the present time is one of obtaining benefit adequacy for all individuals covered by a particular plan, including those on the rolls, and still keeping within the bounds of actuarial soundness. The nature of this latter problem is ably presented in Mr. Bronson's article to which he refers in his discussion of my paper.

Mr. Myers' views are particularly welcome since he was one of the two social security representatives who testified at the Senate hearings which were held prior to the passage of the 1951 amendments. He collaborated with Mr. Wilbur Cohen on a description of the railroad retirement amendments in an article in the *Social Security Bulletin*, and then followed it up with another one in the *Bulletin* for March 1952 to which he refers in the discussion. Both of these articles are well worth reading for the student of the railroad retirement system. Especially noteworthy is Mr. Myers' description of the detailed mechanism involved in the operation of the financial interchange provisions.

In his discussion, Mr. Myers reflects his feeling that the financial interchange provisions contained in the 1951 railroad retirement amendments were "undoubtedly introduced" because a "profit" was anticipated which could be used for more liberal benefits. I presume that the so-called profit of $\frac{3}{4}\%$ of payroll to which he refers relates to the .25% which our estimates indicated would flow directly to the Railroad Retirement Account and to the additional $\frac{1}{2}\%$ which the OASI Trust Fund would pay in increased social security benefits to employees with less than 10 years of railroad service transferred to the social security system. Possibly a more valid reason underlying the action was that such financial interchange provisions were introduced rather to permit railroad employees to share in the advantages of the social security system while at the same time retaining their own separate system as it had evolved to date. It cannot be denied, of course, that one of the selling points of the financial interchange provisions was the feeling that they provided a means for recouping the "loss" which was involved in a separate system completely divorced from social security coverage.

The details of the actuarial controversy to which Mr. Myers refers in his discussion make interesting reading. Such controversy, as Mr. Myers points out, centered about the question whether the OASI Trust Fund or

the Railroad Retirement Account would stand to gain from the financial interchange provisions as compared to the situation before the amendments. The respective positions taken by the actuaries of the Railroad Retirement Board and the Social Security Administration related to a bill sponsored by the Railway Labor Executives' Association rather than to the one which was finally enacted. For a balanced viewpoint, the interested student should refer not only to Mr. Myers' presentation, but also to the Board's rebuttal contained on pages 618–20 of the 1951 Senate hearings (item 5 of the bibliography contained in the paper). The main point made in such rebuttal is that while it is true that the introduction of an employee's "fringe" earnings within the coverage of the OASI program will produce lower relative costs therefor, the analogy cannot be stretched to include the type of career employment which is generally involved for employees with at least 10 years of railroad service.

Mr. Myers then goes on to discuss the "profit" to the railroad retirement system involved as a result of the transfer of less-than-10-year employees to OASI. On this point, the actuaries of both agencies are in accord. As my paper points out, if a service limitation had not been applied, along with the financial interchange provisions, then the indicated deficiency in the tax rate for the new level of benefits as developed in the estimates for the 1951 amendments would have been doubled.

Mr. Myers, like others, feels rather strongly about the inequities involved with respect to employees who leave the railroad industry with less than 10 years of service. My paper has gone into some of the arguments advanced in this connection and has pointed to the various administrative difficulties involved in putting into effect any type of withdrawal benefit similar in nature to that usually available in a private pension plan. Further arguments given on the other side relate to the fact that while these less-than-10-year employees were with the railroad industry, they had "insurance protection" for rights to far more liberal benefits than under social security, contingent on their remaining in the railroad industry. Second, the thought has been expressed that a return, for the withdrawing employees, of the differential in taxes between the railroad retirement and social security rate would amount to "peanuts," the size of which would tend to be out of all proportion to the administrative complexities and costs involved in handling the benefit.

Mr. Myers' alternative suggestion that employees pay only the OASI contribution during the first 10 years of service (with the employer paying the full railroad retirement rate) seems reasonable enough on the surface. Yet, it too would involve serious practical problems in terms of a system which is industry-wide in nature as compared with a single company plan.

Furthermore, it would be contrary to the 1937 agreement between management and labor—which is still maintained—to split the costs down the middle for employers and employees alike. I suspect that such a proposal would be highly unpopular not only with the employers for the reasons mentioned above, but also with the career employees who in effect would be asked to carry a heavier share of the cost burden. While the principle involved is not unreasonable, it is questionable whether it would get far as a practical matter.

Mr. Peterson points to the government subsidy which is paid to the railroad retirement system in that the investments of the Railroad Retirement Account must be made in issues bearing at least 3 percent interest. He refers, I presume, as did Mr. Myers, to the differential in interest rates on investments of the OASI Trust Fund and the Railroad Retirement Account. On the other hand, the individuals with a direct stake in the railroad retirement system look with envy to the 4 percent earned by the U.S. Civil Service Retirement Fund and to the even higher interest income which could conceivably be obtained if government issues were not the only source of investment.

Mr. Peterson then expresses the view that the mortality rates used for our cost estimates might not have been too conservative—that future mortality improvement should have been taken into consideration. Then he says that if a $2\frac{3}{8}$ percent interest rate were hypothesized together with a realistic approach to mortality, it would be conceivable that the real cost of the railroad retirement program could well be closer to 18 percent than to 14 percent. The force of Mr. Peterson's remarks would have most direct bearing to the group annuity structure developed by private insurance companies. In that framework, no interest rate guarantees exist and, as I understand it, benefit payments are made by the insurance companies at the normal retirement age regardless of whether the employee does or does not retire. It does not matter from the insurance company's point of view, of course, whether disbursements are made to the employer or to the employee. As Mr. Peterson points out, however, the actual provisions involving investment of railroad retirement funds certainly entitle us to use a 3 percent interest rate. Second, benefit payments are not made during the period while the railroad employee continues working after the normal retirement age of 65. Third, the seniority practices of the industry are such as to keep earnings of the older employees at their highest levels and, if anything, to discourage retirement during periods of inflationary pressures.

Thus, in judging whether our estimates to date have been sufficiently conservative, one cannot consider the mortality standards independently

of the retirement assumptions. In the latter connection, our actual retirement rates have tended to be somewhat less than 70 percent of those adopted for valuation purposes. We believe that when this is kept in mind, the use of mortality rates which give rise to actual to expected mortality ratios of about 105 percent is not too unconservative. Then, of course, we have the additional safeguard not ordinarily available in individual or group annuity contracts which permits a change in the tax rates by Congress if experience so dictates.

Professor Nesbitt notes, as did some of the others, that taxes are out of balance with the indicated costs of the system. He expresses the hope that before definitive action is taken at the time the tax and the other problems become acute, social security will have become the basic universal program on top of which supplemental benefits could be constructed. With that point of view in mind, he suggests that all interim problems be considered in the light of whether such natural evolution as he sees it will be speeded or impeded. The author does not consider it necessary to enter into the pros and cons of this problem of coordination other than to point out some practical considerations. First, Congress has made it a policy to exempt certain groups from social security coverage from the beginning. It has generally been guided by the wishes of the particular groups who have been excluded, especially where provisions have already been made for their own retirement and survivor benefit programs. Second, the railroad industry has been affected by a series of historical precedents which singled it out from other groups for separate treatment by the government. Third, railroad management and labor are both united in their desire to have a system different from that of the ordinary social security coverage which can continue to evolve independently and yet be correlated with the general system through the financial interchange and transfer relationships with OASI.