SOCIETY OF ACTUARIES

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Taxation of Insurance Companies

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preserve the 34% rate if the ordinary rate increases (a troublesome reason).

The Alternative Minimum Tax (AMT) has been strengthened. The concept of AMT is that of a minimum tax, calculated as 20% of regular taxable income plus preference income. Preference income includes accelerated depreciation, tax-exempt interest on most nongovernmental-purpose bonds issued since Aug. 7, 1986, and one-half of untaxed but reported profits (book income). Some corporations have been paying little tax, but at the same time reporting significant earnings to their stockholders. Now income reported on financial statements will affect the AMT.

The corporate dividends received deduction is reduced from 85% to 80%. Hence the effective tax rate on such dividends drops from 46% of 15% = 6.9% to 34% of 20% = 6.8% (except for 1987).

Effect on Life Companies

The 20% taxable income adjustment in present life insurance tax law is repealed Jan. 1, 1987. The effective tax rate for life insurers in 1986 is 80% of 46% or 36.8%, increasing to 100% of 40% for 1987, then falling to 34% in 1988 and later. While technically the increase for 1987 — unique under this bill — comes about through base broadening, most analysts will treat it as a rate adjustment.

For the calculation of "book income", a part of the AMT computation, income reported on financial statements will be the base for the first three years of the new law. If the corporation issues audited GAAP financials, these will be used; if not, financials reported to regulatory bodies will be substituted. The effect is that most stock insurance companies will use GAAP earnings for AMT purposes, while mutuals will use statutory. Attempts by the industry to standardize on statutory have been so far unsuccessful.

After the first three years the "business untaxed reported profits" shifts to "earnings and profits", a concept from current tax law designed to determine whether a distribution to shareholders is from capital or from earnings. This is not precisely defined, and there are few court cases to make the meaning clear. Tax writing staff was attempting to draft language to improve this situation when this article was being written.

In a late technical amendment, Congress confirmed the grandfathering of pre-1983 modified co-insurance contracts except in case of fraud. The IRS had been challenging certain aspects of these arrangements on audit.

Effect on Property-Casualty Insurance Companies

Property and casualty insurers experience both the rate reduction and the base broadening. The rates go from 46% in 1986 to 40% in 1987, to 34% in 1988 and thereafter. Other changes affecting these insurers have the effect of lowering reserve deductions.

Eighty percent, rather than 100%, of changes in the unearned premium reserves is allowable as a deduction. Twenty percent of the 1986 reserve is to be brought into income over six years.

The deduction for loss reserves will be reduced by 15% of tax exempt interest and the deductible portion of corporate dividends received.

It has been standard P&C practice to ignore the time value of money in setting up loss reserves. The Act provides for discounting as of the beginning of 1987. The decrease from the end-of-1986 reserve will not be taken into taxable income (there will be a "fresh start"); but it will add to 1987 "earnings and profits".

The Act repeals the deductions for additions to the protection against loss account (PAL) for mutual P&C companies. The PAL account balances as of the 1986 year-end will be included in income in the same manner as under the former law.

The Act continues to allow full deduction of policyholder dividends for both stock and mutual P&C insurers; but it provides for a Treasury study, including the appropriateness of an ownership differential similar to that already existing for mutual life insurance companies.

A Competitive Change

A change not directly affecting insurance companies, but of interest to those who compete against Blue Cross and Blue Shield, is that these organizations will be taxed as if they were stock P&C companies. There are special allowances, set to reach a revenue target, that will be detailed in the final draft.

Industry Success?

Some observers feel that the insurance industry did rather well. There is ample room for difference of opinion.

If one compares the final result with Treasury proposals, it is clear that the industry was quite successful. An important base broadening proposal which did *not* survive was to use guaranteed cash values in determining the reserve deduction. The 1986 Act continues the federally mandated method of computing tax reserves introduced by the 1984 Act.

In any case, the impact of the new law on the corporate tax of insurance companies is not nearly as negative as it appears to be in some other industries. Some insurance companies may pay more tax, others less — but the overall tax paid by the entire industry may not be much different. □

THE ROLE OF INTEREST IN FINANCING THE OASDI SYSTEM

By Robert J. Myers

Let us assume that the OASDI system is funded in the future so that it is on a current cost basis — which is not the case under current law. Further, assume that the goal is to maintain the trust-fund balance at the level of one year's outgo on a retrospective basis (i.e., measuring the fund balance at the end of the year against outgo for the year). The question then is what effect do the interest earnings of the OASDI Trust Funds have on the overall financing of the system?

This will be considered on the basis of the intermediate (Alternative II-B) estimates contained in the 1986 Trustees Report, as extended by Actuarial Note No. 127, Social Security Administration. Under this estimate, the fund balance at the end of 1993 ($396.7 billion) is almost exactly equal to the outgo for 1993. If this fund balance is accumulated at the ultimate interest rate used in the actuarial estimates (6.08% compounded annually) until the end of 2055, the result is $15.4 trillion, which is

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[Rat]e of Interest *(Continued from page 4)*

37% higher than the estimated outgo for 2055 ($11.2 trillion). This indicates that most of the interest earnings of the OASDI Trust Funds is used to keep the fund balance up to the standard of one year's outgo.

A better measurement as to how the interest income of the trust funds is utilized is to determine the interest rate (compounded annually) which, when applied to a fund balance at the end of 1993 equal to the outgo in that year, will accumulate to an amount at the end of 2055 equal to the outgo in that year. Such interest rate turns out to be 5.53%. Thus, it may be said that the interest rate earned by the trust funds in excess of that needed to maintain the fund balance of one year's outgo is 0.55% (i.e., 6.08% minus 5.53%).

Accordingly, each year, it could be said that there is available for financing the outgo an amount equal to 0.55% of such outgo (because the fund balance, by definition, is one year's outgo). Based on the average 75-year cost rate of 13.40% of taxable payroll, the outgo cost financed by the available excess interest amounts to the equivalent of 0.07% of taxable payroll (.0055 × 13.40). The income rate can be lower than the cost rate to this extent.

In summary, it can be seen that, under true current-cost financing, the interest earnings of the OASDI Trust Funds have a small effect in lowering the income requirements to finance the system. A different assumed level as to the relative fund balance would, of course, have a proportionately different effect. □

INTERESTING QUOTATIONS

From a column by Don Barnes, *National Underwriter*, Sept. 6, 1986:

> Someday I am going to start a Society for the Preservation of Actuaries. They are the most maligned men and women in our business, and possibly in any business I know. They tend to have sneaky senses of humor that creep up on you when you least expect it, and blow your pomposity apart. They are also very brilliant people. I promise never to join the crowd that makes fun of actuaries — unless, of course, they deserve it.

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From "A Short Account of the History of Mathematics", W.W. Rouse Ball, 4th Edition, 1908:

> The numbers e and π would enter into mathematical analysis from whatever side the subject was approached. The latter represents among other things the ratio of the circumference of a circle to its diameter, but it is a mere accident that that is taken for its definition. De Morgan (1806-1871) in the *Budget of Paradoxes* tells an anecdote which illustrates how little the usual definition suggests its real origin. He was explaining to an actuary what was the chance that at the end of a given time a certain proportion of some group of people would be alive; and quoted the actuarial formula involving π, which, in answer to a question, he explained stood for the ratio of the circumference of a circle to its diameter. His acquaintance, who had so far listened to the explanation with interest, interrupted him and explained, "My dear friend, that must be a delusion; what can a circle have to do with the number of people alive at the end of a given time?"

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From a review of "Actuarial Mathematics", appearing in the June/July issue of the *American Mathematical Monthly*, and written by Louis M. Friedler:

> The book under review is well motivated and is suitable for the self-study that is the usual preparation for the Part 4 exam. However, the mathematician reading this book may not find it completely smooth going. Although computation is less stressed than in Jordan, actuaries must be familiar with many standard formulas, so parts of this book become quite tedious. .... The authors state in the introduction that the necessary prerequisites include only calculus and undergraduate probability, yet they occasionally use mathematics beyond that level.
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> Nevertheless, this new approach is a major improvement on Jordan. We can only hope that the questions on the Part 4 exam will eventually change to reflect not only the new material but the new emphasis on understanding. □

LETTERS

SS Trust Funds

Sir:

I completely agree with the general thesis of Dwight Bartlett's letter (September) that the likely huge build-up of the OASDI Trust Funds beginning in 1990 is most undesirable.

I have written and spoken out on this matter at numerous times in the recent past. I believe that the best solution is to provide for automatic adjustment of the OASDI tax rates, beginning in 1990, such that the ratio of the fund balance to annual outgo would be held within a certain range (possibly 50-60%). Another way would be to revise the long range tax schedule in the law.

The Academy's Committee on Social Insurance is currently developing a report on the measurement of the actuarial status of the SS system. It will deal with the funding of the program, among other aspects.

There is a factual error in the Bartlett letter, which in no way affects the validity of his argument. He tells us that Social Security finances are considered part of the unified budget at present, but that they will not be so treated in future years as provided in the 1983 amendments. That legislation provided that OASI, DI, and HI would be out of the unified budget after fiscal 1992. He overlooks the legislation of 1985 (PL 99-177) which removed OASI and DI beginning with fiscal 1986. This legislation, which also contains the Gramm-Rudman-Hollings budget procedure, confuses the situation because the operations of the OASDI Trust Funds *are* included in the targets for the deficit reduction procedures! Legislation currently pending would provide the same treatment for HI.

Robert J. Myers

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Sir:

Dwight Bartlett uses the phrase "somewhat fictional Trust Funds". Whether or not federal government trust funds are a "fiction" is a complex question involving economic and accounting considerations as well as actuarial ones. I agonized over this question some 20 years ago after a short

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