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## AGAINST TAX-EXEMPT INVESTMENT INSTRUMENTS

*by Clayton A. Cardinal*

Many considerations enter into the determination of investment strategy. Important among these considerations is the maximization of investment income on an after-tax basis rather than on a before-tax basis. Because of the complexity of the federal income taxation of life insurance companies, the determination of after-tax investment income and thus the realization of maximizing such income are not easy undertakings.

Beginning in the early 1960's after-tax investment yield for each of the major classes of investment instruments has been analyzed by many life insurers by what is commonly referred to as the marginal tax rate approach. For a number of insurers such analysis of the impact on these investment instruments of the marginal tax rates resulted in a change in investment strategy from corporate bonds to municipal and other similar tax-exempt bonds. The assets of some of these insurers are heavily invested today in such tax-exempt instruments. For these insurers much of the increase in corporate assets since the early 1960's has been invested in the tax-exempt instruments.

Two important considerations in the determination of investment strategy receiving more attention today than in the recent past are (1) the servicing of an investment instrument and (2) the preservation of the principal of the investment. Servicing an investment instrument embodies for the most part the payments such as interest, dividend, mortgage, or the like which are required by the terms of the instrument. It is a consequence of these additional considerations which leads me to the following recommendation.

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## THE TRUST FUNDS

*1977 Annual Reports of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds, of the Federal Hospital Insurance Trust Fund, and the Federal Supplementary Medical Insurance Trust Fund.*

*by Benjamin R. Whiteley*

An excellent introduction to the 1977 Annual Reports of the Board of Trustees of the Social Security Trust Funds, in this reviewer's estimation, may be obtained by reading the Commentary Prepared to Assist in the Reading and Interpretation of the Reports. The Commentary was prepared by A. Haeworth Robertson, Chief Actuary of the Social Security Administration. This is the second year we have had the benefit of Mr. Robertson's Commentary which is easily readable and extremely helpful.

As in previous recent years, there are three 1977 Trustees Reports: one for the Federal Old-Age and Survivors Trust Funds; one for the Federal Hospital Insurance Trust Fund; and one for the Federal Supplementary Medical Insurance Trust Fund. Each of the reports is organized similarly. Major sections are devoted to highlights, an explanation of the nature of the trust funds, a summary of operations of the funds for the past fiscal year, projected operation and status of the funds, a statement of the actuarial status of the trust funds, conclusions and appendices. The appendices contain assumptions, methodology and other details.

### Old-Age and Survivors Insurance and Disability Insurance Trust Funds

Continuing the pattern of recent years' reports, this report calls attention to the need for additional financing for the Old-Age and Survivors Insurance and Disability Insurance Trust Funds in both the short and long range. The excess of

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## AN UNLOADED QUESTION?

*by John W. Grantier*

On June 23, 1977 the Supreme Court ruled that a life insurance company must include the net valuation portion (but not the associated loading) of deferred and uncollected premiums in its assets and gross premium income as well as in its reserves in computing its tax liability. Some companies have been using this procedure or a modification of it for the past few years. Other companies have been filing returns conforming to IRS regulations which required including gross deferred and uncollected premiums. These companies may need to file amended returns for open tax years if they paid taxes not due or understated usable operations loss carryforwards.

The purpose of this article is to review the implications of the court's decision for companies filing amended returns. It does not discuss: the IRS's extension of the deadline for filing Form 3115, Request for a Change in Accounting Method, to September 30, 1977; whether or not these changes represent a Change in Accounting Method; or any alternative procedures for handling these changes.

One question to be answered is "How far back must amended returns be filed?" One possible answer is five years back, since operations loss carryforwards developed after 1972 will have expired before 1977. (For "new" companies, substitute eight years and 1969). The 1972 return, however, includes understated earnings rates for each of the four previous years (based on overstated assets), which may be used in computing the policyholder's share of taxable investment income. These earlier year earnings rates will be used in 1972 and later if their average is less than the current earnings rate, which will be

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## Trust Funds

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outgo over income is increasing and in calendar year 1977 it is estimated that outgo will exceed income by $5.6 billion.

Projections into future years are made on three sets of assumptions — an Optimistic, an Intermediate, and a Pessimistic set, Alternatives I, II, and III respectively. Under the optimistic set of assumptions the assets of the OASI Trust Fund are expected to be exhausted by 1984 and the DI Trust Fund by 1979 unless legislation is enacted to provide additional financing.

The report displays medium-range (25 year) cost estimates and long range (75 year) cost estimates in terms of estimated percentages of taxable payroll on the basis of the present laws. These estimates are compared with taxes as a percent of taxable payroll to demonstrate the estimated shortfall of projected income compared with taxes.

These percentages show considerable changes over the period 1977 to 2050, as the following abbreviated table shows.

**Alternative II**

| Year | Expenditures | Tax Rate | Excess Expenditures Over Taxes |
|---|---|---|---|
| 1977 | 10.91% | 9.90% | 1.01% |
| 2050 | 26.93 | 11.90 | 15.03 |

These Excess Percentages vary widely with the Alternative Assumptions. The following figures are for the 75 year average 1977 - 2051.

| | |
|---|---|
| Alternative I | 3.88% |
| Alternative II | 8.20 |
| Alternative III | 16.09 |

An interesting feature of the report is the presentation of cost estimates based on "a more stable system." Apparently, it is expected that Congress will, sometime soon, agree that benefit levels projected under the present law are too high and will take steps to reduce them. Accordingly, "estimates of income and outgo . . . are presented in the report for a 'modified theoretical' system which would maintain through time, the relationship between average awarded benefits and average earnings at the beginning of 1979." Even under the "modified theoretical" approach the projected outlays of the trust funds are estimated to exceed tax income in every calendar year for the next 75 years. However, the average annual excess (over 75 years) of expenditures over taxes is reduced from 8.20% of taxable payroll to 3.74% of taxable payroll by use of the "modified theoretical" approach.

A significant portion of the report (Appendix A) is devoted to a discussion of the basic assumptions used in preparing the long range cost estimates. Among the factors for the assumptions are Wages, CPI, Annual Unemployment Rate, Fertility Rates, in addition to Mortality and Morbidity.

### Federal Hospital Insurance Trust Fund

This report concludes that "The present financing schedule for the hospital insurance program is not adequate to provide for the expenditures anticipated over the entire 25-year valuation period, if the assumptions underlying the estimates prove to be realistic." The estimated average annual deficit for the 25-year period is 1.16% of taxable payroll under the "intermediate assumptions" (Alternative II).

Alternative II assumes that hospital costs during the next 5 years will increase approximately 15% each year grading to a 10% rate of increase after 10 years.

It is noted in the report that this fund is in danger only in the long run. The current financing schedule of the program over the next 5 years is adequate to provide for anticipated program expenditures.

### Supplementary Medical Insurance

SMI is essentially financed on a pay-as-you-go basis. It is intended to be self-supporting from premiums paid by participants and from general revenue contributions. The financing of the SMI program has been established through June 30, 1978 by the promulgation of standard monthly premium rates for participants ($7.20/month for year ending 6-30-77 and $7.70/month for year ending 6-30-78), and adequate actuarial rates which determine the amount to be contributed from general revenue for each enrollee. □

*Note: A more extensive review of the Reports will appear in the* Transactions.

## To Be Continued

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his work in the study of immunization and term structure concepts as they may be applied to actuarial science. C. L. Trowbridge reviewed the initial efforts of the Society Committee recently formed to investigate inconsistencies in valuation assumptions. Robert Link examined a model which has been used for devising investment strategy for a life insurance company. Ronald Karp took up another model approach for evaluation of investment strategy. Irwin Vanderhoof commented on the extension of investment risk principles to other actuarial planning situations. Finally, Richard Ziock discussed a "modified random-walk" model for prediction of investment results.

Special honor was paid during the conference to the memory of David Halmstad, who in years past contributed so much of his unique personal talents and energies to the annual research conference, as well as to many other endeavors of the Research Committee. Banquet speakers Russ Collins and Courtland Smith spoke of the contribution of Halmstad, and of his hopes for the future of actuarial research.

David Halmstad and his early colleagues of the Committee on Research initiated the annual research conference eleven years ago as a means of encouraging research on particular topics and of giving researchers a forum to discuss recent work. The New York Conference was very much in this spirit, as evidenced by the lively questioning that speakers received from the audience. The Committee on Research is at this time considering possible topics and sites for the 1978 conference. Any Society members wishing to make suggestions should contact Frank Irish. □

## Actuarial Club Meetings

Nov. 15, Chicago Actuarial Club
Nov. 16, Nebraska Actuaries Club
Nov. 16, Seattle Actuarial Club
Nov. 17, Baltimore Actuaries Club
Nov. 17, Actuarial Club of Indianapolis
Nov. 17, Actuaries' Club of the Southwest
Dec. 1, Boston Actuaries' Club
Dec. 6, Twin Cities Actuarial Club
Dec. 8, Baltimore Actuaries Club
Dec. 20, Chicago Actuarial Club
Dec. 21, Seattle Actuarial Club