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THE Actuary

The Search for Competitive Advantage

by James C.H. Anderson

(Ed. note: The following paper was presented at the Sixth International Week of Insurance Marketing conference, June 1987, Paris, France. It is reprinted with the kind permission of the Committee on Action for Productivity in Insurance (17, rue La Fayette — 75009 PARIS — France). The conference was attended by 570 persons, from 25 countries. Two main topics were discussed: "Crossing the Frontiers of Financial Services" and "New Approaches to Distribution." Seventy papers were delivered in 25 working sessions, with simultaneous translations into English, French, German, and Spanish. The next such conference is scheduled for May 28-31, 1990. It should be of special interest to insurers marketing or planning to market in Europe, since geographical boundaries within Europe will "blur" in 1992 with respect to insurance, and significant changes may come about as a result.)

Many life insurance product concepts, distribution methods and management techniques have developed in one country and then been transplanted successfully to another. Variable life insurance, for example, migrated from the Netherlands to the United Kingdom and then to many other countries. ... There is also an important corollary: many problems which emerge in one country may, if identified and understood, be avoided in other countries where similar driving forces may later be present. ...

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Pensions and Tax Expenditures

by Paul H. Jackson

Much attention has been focused on broad reforms of the U.S. tax structure. The generally accepted "facts" are the tax expenditure figures published in the Special Analyses of the Budget of the U.S. Government. The largest single tax expenditure is for excluding both pension contributions and investment income on pension funds from the taxable income of covered individuals. Thus, annual tax reform legislation usually contains significant cutbacks in the tax advantages of qualified pension plans.

Tax expenditure complexity and the almost complete lack of information on the development of the numbers force people to accept the figures provided by the Office of Management and Budget (OMB). Unfortunately, these tax expenditure "facts" are conceptually flawed, arbitrary, and almost useless for budget purposes. For example, many assume that if the tax law were changed to delete an exemption, tax revenues would increase by about the amount shown as an expenditure for that item. This is no longer the case.

The Tax Expenditure Concept
Special Analysis G of the Budget of the U.S. Government contains the listing of tax expenditures that is required by the Congressional Budget Act of 1974. The Act defines tax expenditures as "revenue losses attributable to provisions of the federal tax laws which allow a special exclusion, exemption or deduction from gross income or which provide a special credit, a preferential rate of tax, or a deferral of tax liability."

The estimates are based on sample tax returns and other data. They estimate the direct cost of the individual tax expenditure provision and do not account for the second order effects that might occur if the particular provision were repealed.

The tax expenditure estimates have varied considerably from year to year. According to the Congressional Budget Office in "Tax Expenditures:

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Susan L. Pasini
Staff Editor

Correspondence should be addressed
The Actuary
P.O. Box 105006
Atlanta, GA 30348-5006
Tel: (404) 980-5644

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Pensions and Tax cont'd.

Current Issues and Five-Year Budget Projection for Fiscal Years 1980-85" (April, 1980), "the differences stem from inflation and other changed economic conditions, better data, and improved estimating techniques." There may well be some disagreement whether estimating techniques have been improved or manipulated.

The Fallacies

The tax expenditures concept is flawed in many ways:

1. Arbitrary Nature. There is no generally accepted view as to what is a special exclusion, exemption or deduction, credit, preferential rate, or deferral in any given year. For example, while the personal income tax is considered normal in having graded percentages as income rises, the failure under the corporate income tax to charge a single level rate to small businesses with lower income has been considered a tax expenditure. Furthermore, the definitions have been changed often.

2. Second-Order Effects. The Special Analyses and the Budget process have consistently ignored second-order effects. No businessperson would assume that if a product were priced at $100, aggregate revenues would be doubled by raising the price to $200.

3. Comparable Benefits. The employee retiring today with a noncontributory pension receives a benefit entirely subject to income tax at individual rates. That benefit also might even trigger income tax on up to half of the employee's Social Security benefit. If the employee were to pay taxes on the employer contribution and interest, then the tax basis at retirement would amount to about half the pension. Thus, the tax expenditure number for pensions includes the amount necessary to provide about a 20% increase in after-tax benefits to the covered employees (assuming a 28% tax rate on only half the benefit).

The Numbers

In the Special Analyses, tax expenditures are developed on a "revenue loss" basis. The revenue loss is the tax collected if employer pension contributions and pension fund interest and dividend receipts were both taxed in the current year to the covered employees. Each year's Budget contains estimates for the year of the Budget and the two prior years. For example, the fiscal year 1985 tax expenditures were first estimated in the fiscal year 1985 Budget; a second estimate was made and published in the fiscal year 1986 Budget; and a final estimate was made and published in the fiscal year 1987 Budget. The first, second and final estimates of tax expenditures for calendar years 1978 through 1987, taken from Special Analysis G, are shown in Figure 1.

Sharp changes clearly occurred in the Special Analyses published in both the 1982 and 1984 Budgets. The first and second estimates for fiscal year 1980 were $12.925 billion, but the final estimate for 1980 in the 1982 Budget was $19.785 billion! Similarly, in the 1984 Budget the fiscal year 1982 estimate was increased from $25.765 billion to $45.280 billion. This was said to be due to improved estimating techniques.

Some of these substantial aberrations can be explained. The tax rates to determine revenue loss in 1983 and later apparently were 32% for the active worker and 18% for the retired. For 1980, these rates were said to be 24% for the active worker, 14% for the retired. Whether these changes were made with the 1982 Budget is unknown, but they would have resulted in a large increase in the tax expenditure.

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Figure 1 Tax Expenditures, Revenue Loss Basis (Employer Plans)

Fiscal year	First estimate*	Second estimate*	Final estimate*
1978	–	–	$ 9.940
1979	–	$11.335	11.335
1980	$12.925	12.925	19.785
1981	14.740	23.605	23.390
1982	27.905	25.765	45.280
1983	27.500	49.700	46.585
1984	56.560	50.535	44.050
1985	56.340	44.205	48.525
1986	55.110	53.365	N/A
1987	59.195	N/A	N/A

* in billions

Pensions and Tax cont'd.

The 1984 budget-year tax expenditures for pensions were about 75% higher than the estimates in the 1983 Budget. However, the 1984 Budget figures included employees of state and local governments, covered under retirement plans, and employees of the U.S. government participating in the Civil Service Retirement System. If those plans had not been set up in trust, but were simply held as part of the funds of the state, local or U.S. governments, there would be no difference in the taxes paid by the sponsoring employer, and there is thus no special exclusion or exemption involved.

Some of the massive growth in the tax expenditure revenue loss for private pensions can be traced to change in procedure. It is clearly not all due to proliferating growth in the private pension sector.

Outlay Equivalents

The Special Analysis G of the 1982 Budget for the first time proposed determining tax expenditures on an "outlay equivalent" basis. This concept assumes that if the government replaced the benefits through a direct outlay program, those outlays would be taxable to the individuals. Hence, it is necessary to gross up the revenue loss for the income tax on it so individuals are in the same after-tax position. For 1987, the outlay equivalent tax expenditure for private pensions is $86.8 billion compared with a revenue loss basis tax expenditure of $59.2 billion. (This implies an average federal tax rate of 32%, unchanged from prior years despite the lower tax rates in the Tax Reform Act of 1986.)

It is questionable whether the outlay equivalent concept is helpful in budgeting. The extent to which an outlay equivalent exceeds a revenue loss is the extent to which the income tax on that outlay is expected to generate additional revenue for the U.S. government. The net outlay is most important for budgeting, and this is precisely what the revenue loss basis tax expenditure is supposed to be. The outlay equivalent is much bigger, seems more wasteful and, therefore, is more useful in generating pressure for reform.

The Normal Tax System

Tax expenditures are imputed deviations of the current tax Code from what is considered the normal tax structure. A normal tax structure requires a set of accounting procedures for classifying, recording and summarizing transactions during a tax year. The first principle of this system used through 1982 was "the reliance on valuations determined at the time transactions occur" ("realization" as opposed to "accrual" accounting). This was intended to "avoid the complexities that would result from including in taxable income an imputation for accrued but unrealized gains received by individuals and an imputation for the rental value of services from owner-occupied homes and from consumer durables, integrating the corporate and personal income taxes and adjusting measured net income from capital for the effects of inflation."

Thus, an individual holding common stock would not be expected to include in his income a change in the market value of that stock over the course of a year. But cash dividends from that security would be included in income. This accounting principle suggests that the dividend and interest receipts of pension funds should not be considered gross income when received by the qualified pension trust but only when received by the beneficiary! The changes made by OMB for the 1984 Budget are referred to as "evolutionary" and a "modification of previous estimating methodology," but neither the Congressional Budget Office nor the Joint Committee on Taxation adopted these revisions. The 36-page explanation published annually with the Special Analyses has not reduced the resulting confusion.

Here we should distinguish between two types of pension plans. Most academics in the U.S. are covered under the Teachers Insurance Annuity Association/College Retirement Equities Fund plan or a comparable defined contribution plan. Each employee has a separate account balance, generally fully vested, and allocation of investment income to that balance is easy. Also, individuals often can withdraw proceeds for specified expenses such as education costs, home purchases, and financial catastrophes. Thus, it is not surprising to find that many of those doing theoretical work on taxes believe that employer contributions and investment income can be allocated readily to each participant and ought to be considered part of taxable income.

The second type of pension plan is the defined benefit plan like the programs negotiated by major unions. Here, the dividend and interest receipts of the pension fund cannot be allocated accurately to individual beneficiaries. Even if a specific balance were attributed to an employee, that balance would not be equal to the value of the benefits he actually receives. Benefits are payable only if (1) the employee dies and the plan provides for a survivor benefit, (2) the employee is disabled and the plan provides for a disability pension, or (3) the employee quits the job and has enough service to vest or is old enough to elect retirement benefits. The list of contingencies is so long that "realization" accounting is the only fair and practical approach. Furthermore, under many negotiated plans, the value of the benefits under various circumstances may actually decline from the earliest retirement age, while any account balance attributed to the employee on average would always increase from the allocation of employer contributions and investment income.

If a "realization" accounting system is the norm, individuals covered under pension plans should be taxed when pension payments are paid according to provisions of the plan. This would mean no tax expenditure for private pensions at all!

The Breakdown

The $87 billion of tax expenditure for pensions in the 1987 Special Budget Analysis can be broken down in the following manner:

1. About $28 billion is the amount by which the revenue loss (i.e., the original tax expenditure) must be grossed up to handle the transaction as a taxable outlay from the government rather than a forgiveness of a current tax. Clearly, however, the government

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Standards of Practice Supplement

Many Society members have received a special subject supplement to the Academy's newsletter, *The Actuarial Update* (December 1987), on standards of practice for the actuarial profession. We commend this special supplement to your reading. The future of the standards movement is significant for all practicing actuaries of whatever affiliation or specialty.

Pensions and Tax cont'd.

could not expect to collect another $87 billion in taxes if the law were changed, but only the $59 billion of revenue loss.

2. About $27 billion can be eliminated by taking out the state and local government plans and the federal employees' plan. These plans are not receiving a tax preference by having trust funds, because these plan sponsors could hold the funds themselves and still not pay tax.

3. The remaining $32 billion in revenue loss should be further reduced to about $27 billion to equalize after-tax benefits. Again, if we properly apply "realization" accounting, this tax should not be collected anyway.

Conclusion

The published pension tax expenditure does not represent the tax that the government would receive if employees were taxed on pension contributions and interest income. The numbers vary considerably from year to year because both methodology and assumptions change regularly. Anyone relying on the tax expenditure figures is likely to be misled, and any tax law based on such arbitrary and capricious figures can be good only by accident. Actuaries are uniquely qualified to understand the ramifications of tax expenditures and to check the annual calculations. More actuaries should get a copy of the Special Analyses of the Budget of the U.S. Government (price $8.50 from the U.S. Government Printing Office, Washington, D.C. 20402) and study Special Analysis G. Somebody has to keep the Treasury honest!

Paul H. Jackson is a Consulting Actuary at The Wyatt Company. He is a former SOA Board member and has been a winner of the Society's Triennial Prize competition. He has co-authored papers on the valuation of pension fund assets and on pension mortality.

Waterloo/St. Louis Exam Seminars

During the period April 16 – May 5, 1988, the University of Waterloo will offer study seminars for Courses 150, 151, 160, 161, 162, 165 and Parts 6 and 8 in Waterloo and St. Louis.

For more information contact Frank G. Reynolds at his *Yearbook* address.

The Controversy Over Health Insurance Reserves

Features Editor Deborah Poppel spoke with Paul Barnhart, who chairs a subcommittee of the AAA Committee on Health, which has been charged by the NAIC with drafting new health insurance reserve standards.

Poppel: *Would you describe the controversial elements of the proposed health reserve standards?*

Barnhart: I'll describe three of the several controversial elements. One is what we call the "benefit ratio reserve." This reserve method deals aggregately with policies by assuming that the ratio of the valuation net premium to the gross premium is constant. One can then calculate reserves for a block of business without having to apply separate factors to each individual policy. It's also designed for flexibility — the constant percentage of gross premium can be adjusted if experience calls for it. This adjustability has raised controversy.

Poppel: *Why?*

Barnhart: Some of those in opposition think it's too subjective. They feel that any statutory reserve standard must be absolutely objective, like the standard for noncancelable disability policies. Whereas that standard uses specific morbidity and mortality tables and interest rates, the standard the Academy subcommittee is proposing is subject to adjustment based on actuarial judgment. Some people say that it is therefore open to manipulation. We think there is no way around having to apply actuarial judgment, since health insurance experience factors can fluctuate so much that an objective tabular standard isn't feasible.

A second, equally controversial feature of our proposal is use of a retrospective reserve formula, enabling one to use actual claim experience rather than expected. Many states have rate regulations that require, for example, that a specific loss ratio be met over the lifetime of a policy, on an actual basis. We felt that to recognize the effect of such regulations our reserve method had to operate retrospectively and account for actual rather than expected results.

Some actuaries feel, however, that you simply can't get appropriate reserves on a retrospective basis, because reserves need to be adequate prospectively. That is, the reserve you're carrying, when combined with future premiums, must be sufficient to pay future claims. Our mathematics show that, provided you have a good estimate of the ratio of net to gross premiums, the retrospective method is equivalent to the prospective method.

Poppel: *What is the third element of controversy?*

Barnhart: It is the manner of recognizing high first-year expenses. Traditionally, individual health insurance has used a two-year preliminary term reserve method, which in effect creates an allowance for high first-year expenses. We feel that's too arbitrary — sometimes too generous, sometimes not generous enough. Instead, we're proposing a "reserve expense deduction," which is similar in concept to the deferred acquisition cost in GAAP. We determine the actual excess first-year expenses for a block of business and amortize them over ten policy years. Many critics feel that two-year preliminary term is working fine. We say that to make two-year preliminary term work properly with a benefit reserve ratio, you'd need to recalculate a modified loss ratio leaving out the first two years. Besides being complicated, this ignores the experience of the first two policy years, which is a large fraction of the usual cumulative experience. The reserve expense deduction method permits a realistic treatment of actual first-year expenses.

Poppel: *Are there other issues concerning the proposed standards?*

Barnhart: Federal income tax has become an issue. The IRS has some rather specific rules as to what policy reserves it will allow for tax purposes. The point has been made that this new reserve doesn't fit in with those rules, and therefore the IRS may not recognize it. We know that, but the IRS guidelines were developed around traditional reserving methods; therefore, by definition, any new method

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