

**A BETTER FINANCING APPROACH  
FOR SOCIAL SECURITY**

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**ABSTRACT**

The purposes of this paper are to discuss the cause of the long-term financial problem of the Old-Age, Survivors, and Disability Insurance (OASDI) program, to outline an alternative "actuarial" financing approach for OASDI as a solution to this problem, and to detail the advantages of this approach over the current financing method. It is not the purpose of this paper to recommend specific changes to the existing benefit structure, for there have been numerous sound suggestions in this area.

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A 1936 publication of the Social Security Board entitled "Security in Your Old Age" contained the following description of the financing of the system: "beginning in 1949, twelve years from now, you and your employer will each pay 3 cents on each dollar you earn, up to \$3,000 a year. That is the most you will ever pay." In 1982, employees and employers each paid 5.4 cents of each dollar earned, up to \$32,400, to OASDI. By 1990, the OASDI rate is scheduled to increase to 6.2 cents. If no changes are made to the current benefit structure or financing method, then, according to the 1981 "pessimistic" projections prepared by the Social Security Administration, the rate will need to be increased to 7.0 cents in 2010, 11.3 cents in 2030, and 13.4 cents in 2050, to provide for payment of OASDI benefits. The magnitude of these potential contribution rates is generally viewed as the "long-term financial problem" of the OASDI portion of social security.

Many of the experts on social security cite congressional increases in benefits beyond those initially intended, persistent unemployment, and declining birth rates as the causes of the long-term financial problem. Most suggestions on how to save social security involve reduction of future benefit payments or extension of the retirement age so that potential beneficiaries of the system remain taxpayers for longer periods of time and will be benefit recipients for shorter periods. While meriting serious consideration, these suggestions treat only the symptoms of the long-term

problem, and not the cause. The real cause of the financial problem is the "pay-as-you-go" approach used to finance system benefits. Until this method is changed, attempts to ensure the adequacy of both the benefits provided and the financing required will be frustrated.

Pay-as-you-go financing is generally recognized as a fiscally irresponsible method of financing retirement benefits, and its use is legally prohibited in the funding of private pension plans. Although financing for social security is not intended to be purely pay-as-you-go, tax rates have been designed to increase on a gradual basis to match expected increases in benefit disbursements. As a result, each generation of workers is expected to pay for current benefits on the assumption that the next generation will return the favor. With benefits designed to replace constant percentages of preretirement income, this method will result in inequitable distributions of cost between generations if successive generations of workers are not of equal size or do not increase in size at a constant rate.

As illustrated in Figure 1, increases in birth rates in the twenty-year period following World War II created a bulge in the population profile (at ages 5-24 in 1970). Because of the influx of these "baby boomers," as well as large numbers of women and immigrants, into the active work force in the early 1970s, it was suddenly discovered that system benefits could be substantially liberalized without attendant increases in required tax rates. Pay-as-you-go financing provided gratuitous windfalls for people collecting benefits, without recognizing the ultimate cost of providing the same level of benefits to those retiring in the future. The financing approach led to an expansion of the social security promise which taxpayers of tomorrow may not be willing to support.

Some actuaries claim that pay-as-you-go financing can, in certain circumstances, be considered "actuarially sound." In his book *Social Security*, Robert Myers claims, "Such a program [Social Security] could be actuarially sound if a gradually rising contribution schedule were determined to approximate closely the estimated disbursements year by year."<sup>1</sup> On June 16, 1981, Mr. Myers told the Senate Special Committee on Aging that "enactment of the Reagan administration proposals for reforming the Social Security system would assure the system's actuarial soundness over the short run and well into the next century even under the most pessimistic assumptions."<sup>2</sup> Of course, just three years prior to this statement, Mr. Myers had claimed that as a result of the 1977 amendments to

<sup>1</sup> Robert J. Myers, *Social Security* (Homewood, Ill.: Richard D. Irwin, Inc., for the McCahan Foundation, 1975), p. 143.

<sup>2</sup> *BNA Pension Reporter*, no. 347, p. A-2

the system. "the financial problems of OASDI, both short and long range, were solved by raising additional revenues and, in the long-range situation, by decoupling."<sup>3</sup> Despite Mr. Myers's statements to the contrary, the author finds little justification for considering the current financing approach to be either actuarial or sound, much less actuarially sound.

The problem with statements ascribing "actuarial soundness" to any financing approach is that actual experience almost invariably differs from the actuarial assumptions used to develop cost projections. In the above instance, assumptions with respect to unemployment and increases in the Consumer Price Index proved to be too optimistic when measured against actual experience in the three-year period following Mr. Myers's 1978 pronouncement of system solvency (i.e., actual costs were underesti-

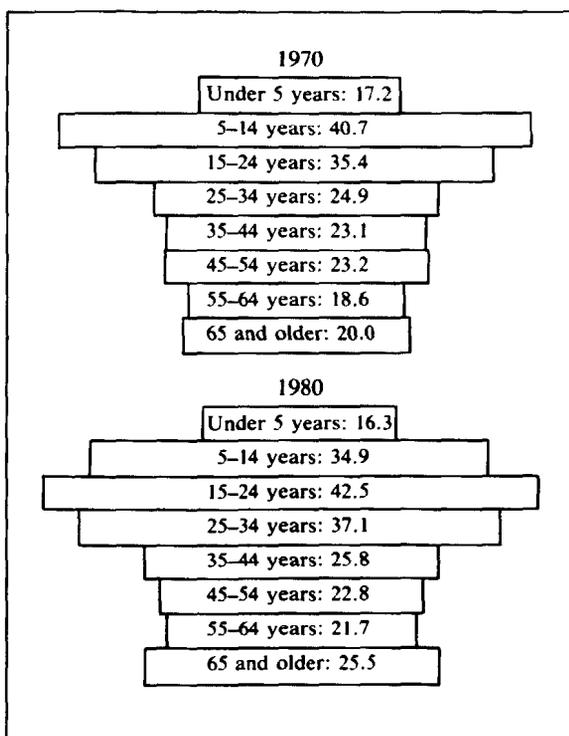


FIG. 1.—Profile of the population by age groups (figures rounded off, in millions). Source: Bureau of the Census. Reprinted from the *New York Times*, May 24, 1981.

<sup>3</sup> Robert J. Myers, *Social Security Amendments of 1977*, Actuarial Study Note 92-55-78, (Chicago: Society of Actuaries, Education and Examination Committee, 1978).

mated). In fact, a recent study has shown that actuarial assumptions used in the 1971–80 annual social security projections by the OASDI Board of Trustees have been “consistently optimistic” when measured against actual results. The study concludes that “the reports projected more robust financial pictures for OASDI than what, in fact, occurred.”<sup>4</sup>

Actuaries have not been able, nor can they be expected, to predict the future with complete accuracy. It is for this reason that the American Academy of Actuaries discourages its members from issuing opinions regarding the “actuarial soundness” of a financing approach.<sup>5</sup> However, it is the author’s opinion that “inadequate” or “unsound” funding may be defined as that situation where the sum of fund assets plus future fund income, *assuming no increases in the current tax (or contribution) rate*, is insufficient to provide for all future fund outgo. This definition is founded on the premise that future taxpayers can realistically be expected to pay tax rates that are equal to but are no higher than those that present taxpayers must pay. To believe otherwise, one must surmise that workers and employers of tomorrow will somehow find it easier to contribute higher rates than we now struggle to pay. When so defined, the current pay-as-you-go approach results in inadequate funding of OASDI benefits under most reasonable sets of assumptions unless benefit decreases are contemplated.

The solution to the long-term financial problem created by pay-as-you-go financing of social security is to adopt an actuarial funding approach to determine the tax rate of the system. If adopted, the tax rate stabilization approach outlined below would produce a level tax rate for all future years, years, provided the actuarial assumptions used in determining the rate prove to be accurate and system benefits remain unchanged. Since actual experience can be expected to deviate from assumed experience, the proposed approach incorporates actuarial methodology that automatically adjusts the tax rate to reflect such variation.

The proposed financing approach would require annual actuarial valuations, use of the entry-age actuarial cost method, and best-estimate actuarial assumptions to determine the tax rate. A more detailed description of the proposed approach, including definitions of terminology, is provided in Appendix A.

<sup>4</sup> Joseph A. Applebaum, *Comparison of Actual Economic Experience and Assumptions in Trustees Reports, 1971–1980*, Actuarial Note 106 (Washington, D.C.: Office of the Actuary, United States Department of Health and Human Services and Social Security Administration, August 1981).

<sup>5</sup> Opinion A-4, *Actuarial Principles and Practices in Connection with Pension Plans*, *American Academy of Actuaries 1980 Year Book* (November 1979), p. 350.

In the first year following adoption of the proposed approach, the total combined employer and employee contribution would be determined as the sum of the "normal cost" and a payment toward unfunded benefits earned to date, designed to represent the same percentage of each current and future worker's taxable earnings. The initial tax rate would be determined by dividing the total contribution by total taxable payroll.

Figure 2 compares projected benefit disbursements with the projected level combined employer and employee tax rate produced by the proposed financing approach and with scheduled OASDI tax rates. The lines representing projected benefit disbursements and the proposed level contribution rate are "actuarially consistent" in that the present value of projected benefit disbursements less existing system assets is equal to the present value of future proposed contributions. In contrast, the present value of contributions provided by the scheduled tax rates is significantly less than the present value of projected benefit disbursements less existing assets, with the result that either scheduled taxes must eventually be increased or benefit levels decreased, or both, for the system to be actuarially consistent. The area between the proposed approach and the scheduled tax rates represents the current tax rate shortfall under the assumptions discussed in the next paragraph.

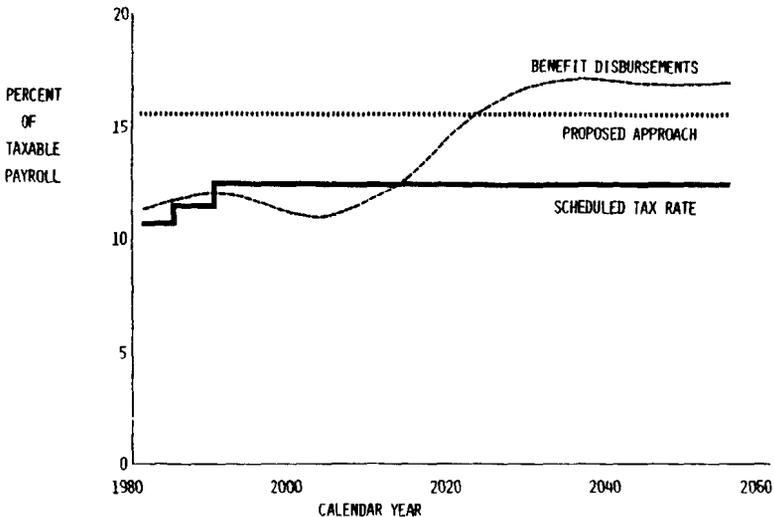


FIG. 2.—Comparison of projected benefit disbursements and level combined employer and employee tax rate produced by proposed financing approach. Source for projected benefit disbursement curve: *Summary of the 1981 Annual Reports of the Social Security Boards of Trustees* (Washington, D.C.: Social Security Administration and Health Care Financing Administration, July 6, 1981).

The projected benefit disbursements shown in Figure 2 were developed by the Social Security Administration using what the Administration refers to as Intermediate B (or Alternative II-B) assumptions. The rate shown for the proposed financing approach was estimated by assuming experience consistent with the Intermediate B assumptions and by further assuming that accumulated OASDI funds will earn an annual investment return 2.5 percent greater than the rate assumed for growth in the Consumer Price Index. If a larger "real rate" of return is assumed, the proposed level tax rate of 15.6 percent would be somewhat less. Lowering the assumed real rate or increasing projected disbursements would produce a higher level rate. As can be seen above, if the 2.5 percent real rate and the Intermediate B assumptions are correct, adoption of this approach would require an immediate 44 percent increase in the combined 1982 OASDI tax rate of 10.8 percent and a 26 percent increase in the ultimate scheduled rate of 12.4 percent. Appendix B contains a more detailed summary of the assumptions and method used to obtain this 15.6 percent rate.

In years following, automatic increases or decreases in the tax rate would result from amortization of actuarial gains or losses (derived from variation of actual experience from that assumed), amendments of system benefits, or changes in actuarial assumptions. The adjustments would be designed to spread increases or decreases in the "accrued liability" resulting from these occurrences over a period approximating the working lifetimes of employees affected. Appendix C includes a table of recommended periods to amortize such increases or decreases.

There are those who argue that the approach recommended in this paper is not politically feasible because the resulting tax rate is unaffordable. If this is so, how can we expect workers of tomorrow to afford even higher tax rates? Only by designing the tax rates to be level (or declining) over time can we be reasonably assured that future taxpayers will be able to make the contributions required. The same response applies to those who argue that tax rates cannot be increased now because it would be too damaging to the nation's economy. While somewhat outside the scope of this paper, Appendix D outlines an investment approach that could possibly mitigate some of the undesirable economic consequences that could result from an immediate increase in the OASDI tax rate.

Others argue that amounts accumulated under an actuarial funding approach will grow to levels so large that prudent investments will be unavailable, private markets will be seriously disrupted by government manipulation, or our capitalistic economy will succumb to a socialistic system run by government-owned businesses. While the potential for

these problems exists, the author finds it difficult to envision the problems associated with significant fund accumulations as being more difficult to deal with than the problems associated with little or no fund accumulation.

If the assumptions outlined in Appendix B are correct, the ratio of fund assets to taxable payroll is expected to increase under the proposed financing approach from practically nil in 1982 to about 1.85 in 2030 and remain at that level thereafter. To get an idea of the magnitude of potential fund accumulations, we can look at the size of today's fund if it were 1.85 times the expected 1982 taxable payroll. Since the 1982 taxable payroll is estimated to be about \$1,436.5 billion, the resulting fund would be about \$2.66 trillion, or about two and one-half times the national debt.

If we assume these funds are first invested in federal, state, and local debt before being invested in private securities, the remainder of the 1982 hypothetical Social Security Trust could be used to purchase slightly more than all the stocks listed on the New York Stock Exchange.<sup>6</sup> While accumulation of such a fund would result in formidable investment in the private sector, and, with such investment, certain social and economic problems, the fund assets would not exhaust all available investments worldwide. Based on rough estimates, a \$2.7 trillion fund would represent about one-fourth of the 1982 national wealth of the United States.<sup>7</sup>

If such a fund did exist today, it is highly unlikely that we would be reading headlines about the demise of social security. While potential problems cannot be capriciously discounted, it is important to recognize that regardless of whether adequate retirement benefits are provided from the public or the private sector, prudent funding of these benefits will result in substantial accumulations of assets.

To prevent disruption of private markets and to avoid the problems associated with individual stock or bond selection by the federal government, funds invested in the private sector should probably be limited to pooled or indexed fund arrangements or other investments designed to have a neutral impact on private markets and individual companies. Fed-

<sup>6</sup> As of November 1981, the national debt was \$1,031.3 billion. Source: *Federal Reserve Bulletin*, December 1981, Table 1.41: Gross Public Debt of the United States Treasury. Since state and local debt has averaged about 37 percent of federal debt in the years 1977-80, the author estimates 1982 state and local debt at about \$400 billion. Source: *Statistical Abstracts of the United States, 1980* (Washington, D.C.: United States Department of Commerce, Bureau of the Census, September 1980). Table 465: Interest-bearing Government Securities Outstanding, 1960-1980. The value of stocks on the New York Stock Exchange as of November 1981 was \$1.18 trillion. Source: *Survey of Current Business*, LXI, 12 (Washington, D.C.: United States Department of Commerce/Bureau of Economic Analysis, December 1981).

<sup>7</sup> The national wealth as of 1975 was estimated to be \$5.6 trillion. Source: *Statistical Abstracts of the United States, 1978* (Washington, D.C.: United States Department of Commerce, Bureau of the Census, September 1978). Table 777. With inflation measured by the CPI, the author estimates 1982 national wealth at about \$10.3 trillion.

eral control of United States businesses could also be avoided if investment responsibility were delegated to a number of different investment managers. Another possible approach, consistent with President Reagan's "new federalism" proposals, would be to have each state share responsibility for investment of a portion of the Social Security Trust. For example, the existing trust could be divided among the states in proportion to contributions received, and elected trustees could make investment decisions within strict investment guidelines.

If adopted, the proposed financing approach will provide the following advantages not enjoyed under the current financing approach:

1. The cost of system benefits will be more equitably shared by current and future generations of taxpayers. If actuarial assumptions are reasonably accurate, each generation will pay for benefits earned during the year plus a proportional share of the unfunded cost for benefits accrued to the date of adoption of the proposal. If future taxpayers choose to increase benefit levels, the cost for improved benefits would be borne mostly by them and would not be transferred to later generations.
2. Confidence in the ability of the system to provide the benefits promised will be greatly enhanced because of higher fund accumulations and decreased dependence on the willingness of future workers to pay significantly higher tax rates.
3. Adjustments to the tax rate will be automatic and better insulated from the political process. The need to make accurate assumptions, while initially important, will be subsequently less critical because of the actuarial gain and loss adjustment mechanism inherent in this financing approach. Increases in benefits will automatically result in increases in tax rates, and the impact of changes in actuarial assumptions will be automatically spread over a fixed number of years.
4. Benefits and costs will be better correlated. A "best estimate" price tag will be placed on existing benefit levels and on proposed amendments to the system. Such a price tag will provide our policymakers with a better measure of system "solvency"<sup>8</sup> to enable them to balance the politically sensitive needs of taxpayers and beneficiaries. Without such guidance, financing problems may actually worsen in the near future, belying the appearance of improvement. As can be seen in Figure 2, if the Intermediate B assumptions prove to be correct, the scheduled tax rate will exceed projected benefit disbursements for a period of about twenty-five years after 1990, and sizable trust funds (about 1.4 times annual benefit disbursements in 2012) are projected to accumulate. Because of the accustomed pay-as-you-go nature of system financing, such fund accu-

<sup>8</sup> On May 20, 1981, the Senate approved by a vote of 96-0 a nonbinding measure "stating that Congress will not enact reforms that reduce benefits more than is necessary to keep the system solvent." *Taxation and Accounting Daily Report for Executives 5-20-81 (No. 97) G-9* (Washington, D.C.: Bureau of National Affairs, Inc., 1981).

mulation will surely create pressures either to increase benefits or decrease tax rates, and either of these actions would exacerbate the long-term problem. Although the proposed approach would result in an even larger fund accumulation, proposals to decrease taxes (or increase benefits) would have to be accompanied by proposals to decrease benefits (or increase taxes) to keep financing on an actuarially consistent basis.

Many people who examine the financing of social security believe that prospective taxpayers will probably have to pay higher tax rates and will probably receive smaller levels of benefits. The author realizes that, despite the arguments presented above, neither immediate tax increases nor immediate benefit decreases appear to be politically acceptable. The proposed approach could be modified by adopting relatively rapid phasing-in of the tax increases, benefit decreases, or combinations of the two required to place the financing of the system on an actuarially consistent basis. While such a modification would, by the definition provided in this paper, result in "inadequate funding" for a period of years, it represents a compromise solution that could still provide the advantages normally associated with actuarial funding.

For example, gradual benefit reductions that result in decreases of projected benefit disbursements averaging 1 percent per year could be combined with gradual tax rate increases averaging about 1.1 percent per year for the next nineteen years. Such an actuarially consistent approach would result in ultimate reduction in system benefit levels of about 21 percent and an ultimate combined level tax rate in years after 2000 of 13.2 percent if the Intermediate B assumptions are correct. The phased-in tax rate would also need to be adjusted for variation of actual experience from that assumed. Fund assets under this modification would accumulate to approximately 60 percent of fund assets under the unmodified proposal.

Adoption of the actuarial financing approach outlined herein, with possible modification as discussed above, is a fiscally responsible alternative to the current financing approach. Its adoption will better serve the needs of system taxpayers, beneficiaries, and policymakers.

## APPENDIX A

### SUMMARY OF PROPOSED FINANCING APPROACH

#### 1. ACTUARIAL VALUATION

An annual actuarial valuation would be prepared by Social Security Administration actuaries as of January 1 of each year to determine the tax rate for the calendar year one or two years following completion of

the valuation. For example, the rates determined as a result of the January 1, 1983, and January 1, 1984, valuations would be effective in calendar years 1985 and 1986, respectively, if a two-year delay were adopted.

#### 2. ACTUARIAL COST METHOD

The entry-age actuarial cost method would be used to determine the "normal cost" and "unfunded accrued liability" for each year. These two items (defined below) would be determined on a traditional "closed group" basis. The actuarial present value of all future taxable payrolls would be projected using an "open group" approach.

#### 3. INITIAL YEAR'S TAX RATE

The initial tax rate would be determined as the sum of the normal cost rate and the initial unfunded accrued liability rate, where the normal cost rate is equal to the normal cost divided by taxable payroll, and the initial unfunded accrued liability rate is equal to the unfunded accrued liability divided by the actuarial present value of future taxable payrolls. All values would be determined as of the first valuation date following adoption of this approach.

#### 4. NORMAL COST

This amount, calculated for each active worker who has earned at least one quarter of coverage in the preceding year, would be designed to represent a constant percentage of the worker's taxable earnings each year, and if contributed from his/her entry into the system until expected receipt of system benefits, would accumulate an amount sufficient to pay all expected benefit disbursements for the worker and his/her dependents. Total system normal cost would be equal to the aggregate of individually determined normal costs.

#### 5. UNFUNDED ACCRUED LIABILITY

This amount would be determined on a closed group basis as the excess of the actuarial present value of future benefit payments over the sum of the actuarial present value of future normal cost payments and system assets.

#### 6. SUBSEQUENT TAX RATES

The tax rate for years subsequent to the initial year would be equal to the normal cost rate for the year plus the *initial* unfunded accrued liability rate plus an increase or decrease to adjust for increases or decreases in the expected unfunded accrued liability (see Appendix C).

## APPENDIX B

SUMMARY OF ASSUMPTIONS AND METHOD USED  
TO ESTIMATE THE LEVEL TAX RATE

## 1. ECONOMIC AND DEMOGRAPHIC ASSUMPTIONS

Year	CPI	Average Wage Increase	Growth in Taxable Payroll	Investment Return
1981-85 .....	9.4%	9.4%	11.2%	11.9
1985-90 .....	6.0	7.3	7.8	8.5
1990-95 .....	4.0	5.4	6.1	6.5
After 1995 .....	4.0	5.5	5.8	6.5

## 2. OTHER ASSUMPTIONS

OASDI outgo is assumed to remain constant as a percentage of taxable payroll at 16.82 percent after 2055. The normal cost rate determined under the entry-age actuarial cost method is assumed to remain constant from year to year.

## 3. DETERMINATION OF LEVEL TAX RATE (AMOUNTS IN BILLIONS)

a) Present value of projected disbursements .....	\$ 31,517
b) System assets as of January 1, 1981 .....	\$ 26
c) Present value of future taxable payrolls .....	\$201,874
d) Level tax rate $(a - b) \div c$ .....	0.156

## 4. ENTRY-AGE ACTUARIAL COST METHOD

Because the normal cost rate is assumed to remain constant, the rate determined in item 3 above should be equal to the initial tax rate determined under the approach outlined in Appendix A.

Mr. Joseph A. Applebaum, an actuary for the Social Security Administration, has estimated the system's entry-age normal cost rate at about 13.7 percent of taxable payroll under assumptions comparable to the Intermediate B assumptions.<sup>9</sup> If this rate is correct, the unfunded accrued liability rate under the proposed approach would be 1.9 percent (15.6 - 13.7) and the system's unfunded accrued liability as of January 1, 1981, would be about \$3.8 trillion (1.9 percent of the present value of future payrolls of \$201.9 trillion).

<sup>9</sup> Joseph A. Applebaum, *Some Effects of Fully Funding OASDI*, Actuarial Note Number 97 (Washington, D.C.: Office of the Actuary, Social Security Administration, September 1979).

## APPENDIX C

PROPOSED PERIOD FOR AMORTIZATION OF VARIOUS COMPONENTS  
OF UNFUNDED ACCRUED LIABILITY\*

Liability	Amortization Period
1. Initial unfunded accrued liability	Infinite
2. Increases (decreases) in accrued liability resulting from legislated increases (decreases) to projected benefits payable to active workers retiring in the future	30 years
3. Increases in accrued liability resulting from legislated increases to benefits in pay status	15 years
4. Increases (decreases) in accrued liability resulting from changes in actuarial assumptions	30 years
5. Increases (decreases) in accrued liability resulting from actuarial losses (gains) including gains or losses attributable to the assumption with respect to growth in taxable payroll	20 years

\* All amortization "payments" to be calculated to represent a constant percentage of each year's taxable payroll (until fully amortized).

## APPENDIX D

ALTERNATIVE INVESTMENT OF OASDI TRUST FUND ASSETS:  
PURCHASING-POWER TREASURY BONDS<sup>10</sup>

Under the financing approach proposed in this paper, sizable OASDI trust fund assets would accumulate. Currently, the excess of system income over outgo is invested in government bonds. To remain competitive with other users of funds, the federal government has been obligated to increase the yields on bonds that it issues, and the high cost of servicing this debt represents a sizable portion of each year's budget.

A "Purchasing-Power Treasury Bond" would provide for payment of an inflation-indexed principal at maturity and a low coupon rate to be applied to the beginning-of-year indexed principal value. For example, in the first year following issue, a 2½ percent coupon, \$1,000 bond would pay \$25. At the end of the year, if the CPI (or some other appropriate index) had increased by 8 percent, the principal value would be increased to \$1,080, and the next year's coupons would total \$27 (2½ percent of \$1,080). This process would continue until the maturity date, at which time the indexed maturity value would be paid.

<sup>10</sup> Leo B. Helzel and David Babbel, of the Graduate School of Business Administration, University of California, Berkeley, and the International Monetary and Financial Institute, San Francisco, California. "Real Security: The Case for Inflation-induced Government Bonds." *Barron's*, March 1, 1982.

If the government were to sell these bonds, it could reduce initial borrowing costs by deferring some of its debt servicing obligation. This reduction in initial borrowing costs could offset some of the negative impact on the economy resulting from increasing the OASDI tax rate if the government passed to taxpayers the resulting cost savings.

If such a bond were sold to the OASDI trust, the trust would be assured of earning a real rate of return of  $2\frac{1}{2}$  percent per year (at least on the portion of assets so invested). This return could be used to offset some of the actuarial losses that occur when increases in the Consumer Price Index result in higher benefit disbursements than expected.



## DISCUSSION OF PRECEDING PAPER

ROBERT J. MYERS:

Mr. Steiner makes a vigorous argument for financing the Old-Age, Survivors, and Disability Insurance program in the same manner as is both desirable and necessary for private pension plans. He proposes the use of the entry-age actuarial cost method, which would require a level combined employer-employee tax rate and would result in the building up of an extremely large fund balance.

I believe that this approach is wrong, both in theory and in practice. In brief, such large-reserve funding is unnecessary in a national program involving mandatory universal coverage. This is said not solely on the basis that the federal government has the right to levy such taxes as are necessary, but rather also on the basis that the benefit provisions are not a legal contract and can be modified as the needs of the times demand. This has been vividly demonstrated by the Social Security Amendments of 1983. President Reagan, in signing the bill, pointed out significantly that the nation is committed to the program and that, if financing problems occur in the future, changes can be made to solve them.

The present current-cost method of financing is both suitable and satisfactory. The current very low (and even, at some times during the month, negative) balances of the OASDI Trust Funds should be built up, perhaps to a level of 50 percent of annual outgo. This will be difficult enough, from both economic and political aspects, but it will be much less so than building up a fund balance of more than twenty times annual outgo, as Mr. Steiner recommends.

Appropriate application of the current-cost method of financing requires long-range actuarial cost estimates, and then responsible recognition of them. Significantly, this did occur in the 1983 amendments, when long-range changes were made on the basis of such estimates, even though the additional financial resources were not needed to alleviate the short-range financing problem.

Large-reserve funding is undesirable for several reasons. Primarily, as Mr. Steiner recognizes, there is the question of what to do with the huge amounts developing. Certainly, it would be unwise to have the OASDI Trust Funds take over the entire outstanding obligations representing the national debt and still have a very large amount to invest in the private sector. Would it be desirable to increase governmental spending so as to have sufficient

debt for trust-fund investment? Would it be desirable for the trust funds to invest so much in the private sector that they would control a large proportion of the private economy? At one time, the Labour Party in Great Britain proposed building up a large social insurance fund primarily for this purpose, rather than for financing the program.

Another problem with having large balances in the OASDI Trust Funds is that this would make corrective action far more difficult from political and public-understanding standpoints. If we had had a \$2,700 billion fund in the recent past, would anybody have worried about its balance falling by about \$5–10 billion each year? I believe that few persons in the general public (and in Congress, which reflects its views) would have agreed to the long-range change of raising the normal retirement age (which, in my view, was desirably done in the 1983 amendments).

Mr. Steiner might reply that, under his proposed approach, such necessary long-range changes would be automatically forthcoming, because his system would show the need for immediately raising tax rates. For better or for worse, actuaries are not absolute monarchs in the social insurance field. Fortunately, they do play a significant role. However, it is just not likely (or even desirable) that Congress or the president would allow current tax rates to be decided upon by actuaries, especially when increases are not needed for cash-flow purposes, and when small changes in the long-range assumptions could produce significant increases in current tax rates. And what actuary can claim the infallible wisdom of making precisely the right assumptions for periods many decades hence, which assumptions might drastically change near-future tax rates?

Let me now deal with several specific points in Mr. Steiner's paper. He quotes me as saying that OASDI can be considered to be "actuarially sound if a gradually rising contribution schedule were determined to approximate closely the estimated disbursements year by year." I continue to believe that this is a proper definition of the term "actuarially sound," especially as it applies to a national social insurance system. Further, would one say that an individual annual renewable term insurance policy is not actuarially sound?

Mr. Steiner then quotes me (from a secondary source, rather than the original one) to the effect that the Reagan Administration proposals of 1981 would "assure the system's actuarial soundness over the short run and well into the next century even under the most pessimistic assumptions." For the sake of the record, let me correct this. My statement as to soundness under pessimistic assumptions related only to the short run, because the long-range financing basis of the proposal was founded on the intermediate cost estimate.

Following this, he berates me for having stated in 1978 that the 1977 amendments solved both the short-range and long-range financing problems. The quotation used was not a complete one, because it did not refer back to a more extensive discussion. The latter clearly stated that the official estimates showed that “the short-range problem is completely eliminated, and the long-range problem is greatly alleviated.” The latter statement was (and still is) true. The former statement has obviously been shown, by the actual experience, to have been wrong, but the underlying actuarial estimates to which I referred were made in good faith and with all professional skill (and with no political pressure having been applied).

If Mr. Steiner’s proposed method of financing had been adopted in 1977, the adverse experience in the next few years would still have caused financing problems although not of a cash-flow nature. Thus, the increased cost of the program would likely have been recognized and pointed out by the actuaries, but with no “painful” legislative remedial action of a benefit nature being taken (as was actually done under the present financing procedure). In any event, I see no reason why this criticism of my statements discredits my view that current-cost financing of the OASDI program is proper.

Mr. Steiner states that the adverse experience of OASDI in 1979–81 was due to assumptions with respect to unemployment and increase in the Consumer Price Index (CPI) being too optimistic. This is largely incorrect, because what was important was that the CPI rose much more rapidly than wages, whereas it had been assumed—quite reasonably—that wages would increase slightly more than the CPI.

A chart in Mr. Steiner’s paper compares the estimated intermediate-cost benefit disbursements in future years under the system as it was in 1981 with the scheduled combined employer-employee tax rates. A large gap or deficiency is shown for most of the 75-year valuation period. It should be noted that a similar chart for the program as amended in 1983 would show a quite different picture, because the system is estimated to be in close actuarial balance over the valuation period. Nonetheless, it is true that, at the end of the period, the fund is exhausted, and outgo exceeds income by about 3 percent of taxable payroll (but note that this gap was about 4 ½ percent of taxable payroll prior to the amendments). The improvement is, of course, largely due to the eventual increase in the normal retirement age to 67. This gap of outgo over income after the end of the valuation period is one difficulty with the present method of financing, but I believe that the situation can be handled over time (and, certainly, it is recognized to be a problem now).

Mr. Steiner states that the "real" rate of return used in the Alternative II-B cost estimate of the 1981 OASDI Trustees Report was 2½ percent, which he uses in his calculations. The correct figure is 2 percent.

Finally, Mr. Steiner expresses the belief that actuarial valuations of the OASDI program should not take into account future scheduled increases in the tax rates. He bases this view on the premise that future taxpayers will be unwilling to pay higher rates than we currently impose on ourselves, because they will not be able to afford such higher rates. The weakness in this argument is that, over the long run, it seems extremely likely that wages will rise more rapidly than prices. Accordingly, workers can—within reasonable limits—pay higher OASDI taxes and yet have continuing increases in their real incomes, and so they will not object to this procedure.

My more important objection to the foregoing view of not taking into account any future scheduled tax-rate increases is that one should value *all* the provisions of the existing system. Certainly, insurance companies do this in valuing individual policies under which the premium rate is scheduled to increase several years after issue. Moreover, would Mr. Steiner propose that an increase in the normal retirement age scheduled for some years hence should be disregarded in the valuation of the OASDI program, on the grounds that it might be repealed before going into effect? Or, similarly, should the provisions increasing the delayed-retirement credit and liberalizing the retirement earnings test be ignored because they are not effective until 1990?

JAMES C. HICKMAN:

My first inclination on reading this interesting paper was to supplement it with a reference list of discussions of the issue of current-cost versus reserve funding that have continued over the fifty-year period that we have debated social security in the United States. However, the work of compiling the list and summarizing the discussion has already been done by Martha Derthick [1]. Her chapter 11, "Financing," is relevant to this paper. The chapter contains references to several fascinating papers that appeared in *RAIA* and *TASA* between 1935 and 1939 on social security financing issues.

The issues raised in this paper transcend actuarial science. If a discussion is to be realistic, it must consider economic facts, political realities, and the expectations of citizens. It seems to be that the heart of the author's case comes in a sentence that follows a short discussion of problems in managing a social security investment fund. He states: "While the potential for these problems exists, the author finds it difficult to envision the problems associated with significant fund accumulations as being more difficult to deal with than the problems associated with little or no fund accumulation." Fair

enough: the issue can be decided on the grounds of which basic funding method will likely create the least difficult problems. The author's position is that a level tax rate, adjusted for gains and losses and increases and decreases in accrued liabilities created by legislative changes, with the associated accumulation of funds, will create fewer problems than a continuation of current-cost financing. This position is very reasonable. However, let us consider a set of questions and comments organized under four topic headings.

1. *Political*. Perhaps the periodic political reexamination of benefits and associated financing, made necessary by current-cost financing, is a vital function in a democracy. Perhaps stability in social security requires too high a price in political inflexibility. In a dynamic society, perhaps it is unrealistic and undesirable that an almost universal income redistribution system, among income classes and across generations, remain unexamined for long. A flat tax and the accumulation of assets would create political expectations that might impede needed adjustments.

2. *Macroeconomic*. From a macroeconomic view the accumulation of assets would reduce the relative cost of an old-age income system if the reduction in current consumption, caused by an increase in the payroll tax, resulted in the creation of human and physical assets that would create additional production in later years. Claims on this increased production, based on the earlier forced savings of the retired generation, would reduce the size of direct transfer payments from the working to the retired population. The fulfillment of this happy scenario would require several preconditions:

- a) The increase in forced savings would not be offset by a reduction in other savings.
- b) Congress would not increase benefits or reduce the payroll tax when a large investment fund emerges.
- c) Federal expenditures would not be increased over what they would have been. If the increased ease of managing the federal debt contributed to the growth of expenditures, the goal that funds that previously would have held federal debt would now be released for private investment would not be realized.
- d) There would be enough long-term capital projects that would generate long-term positive real rates of return.

It is not altogether clear that these four conditions would be realized.

At the time of the "de-coupling" argument of the mid-1970s (see Moorhead and Trowbridge [5]), several commentators advanced proposals very much like Mr. Steiner's. The goal of these proposals was to force a higher level of savings to relieve a presumed shortage of capital. An articulate statement of this view was made by Martin Feldstein[3].

3. *Industrial Organization and Ownership.* The author devotes an interesting paragraph to suggestions for preventing the disruption of private capital markets by the buildup of a large fund of social security assets. The suggestions have considerable merit. However, they do not touch the central issue. According to the folklore of capitalism, the driving force of a corporation is the pressure from stockholders on management to excel. Insofar as this creative tension is lacking, corporate management can become an insulated bureaucracy. Authors such as Drucker [2] and Harbrecht [4] have suggested the need for some new institution by which pension plan participants can recognize their interest in American corporations and have their views presented to corporate management. Under most plans, including Mr. Steiner's, these interests are represented by investment managers, trained not in corporate management but in the selection of securities.

4. *Social Policy.* Social security is a major tool of national social policy. This may be an unwelcome fact to many of us with conservative leanings, but the reality must be recognized in any discussion. For example, the tilt in the benefit formula favoring low-income workers is a major tool for income redistribution. The normal retirement age and the benefit reductions for early retirement and increments for delayed retirement have an enormous impact on retirement patterns and labor force participation rates. The spouse benefit is related to the public view of the family. In each of these examples, a subsequent generation may have rather different goals for social policy. A flat payroll tax and associated accumulation of funds may create a political expectation that will cause social stresses when needed adaptations to new realities are required. Of course, these issues are related to the political issues raised under topic 1.

In his conclusion, Mr. Steiner states that "many people who examine the financing of social security believe that prospective taxpayers will probably have to pay higher tax rates and will probably receive smaller levels of benefits." I so believe. It seems to me that profound demographic and economic changes make the scenario outlined very likely. Exactly the same shifts will require adaptations in many parts of our society and economy. Old-age income policy is not and should not be exempt from these adjustments. I doubt if a level payroll tax would succeed in isolating social security from these current and future realities.

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## A.M. NIESSEN:

Mr. Steiner presents an interesting, although not altogether original, approach toward the financing of our social security (OASDI) system. In essence, the proposed method is very similar to the one used by the Federal Civil Service Retirement System and not much different from the one that until recently had been employed by the Railroad Retirement System. The main ingredient of this method is the frozen initial unfunded liability-normal cost approach with special provisions for added costs due to amendments. There are, however, new features in Mr. Steiner's proposal: namely, the indexing of investments and the utilization of private securities as an investment medium.

Of special interest is Mr. Steiner's belief that traditional actuarial financing is the only cure for the ills of OASDI. There is no mention of the possibility of other remedies such as government participation in the financing or an overhaul of the system along cost-reduction lines that may cause a public outcry. The author is aware of the objections to his plan, but he is apparently not considering them to be serious obstacles. In fact, he dismisses these objections with just a few well-chosen phrases. To my mind, the objections to actuarial orthodoxy in social security matters are so entrenched and so well founded that it might never be possible to overcome them. Since, however, the issues involved here have been fully discussed and debated by many other people, and because of lack of space, I shall limit myself to only a few remarks on certain specific portions of the paper.

Mr. Steiner made certain criticisms of remarks about the OASDI cost estimates made in previous years by R. J. Myers. I believe these criticisms are wrong on two scores. For one thing, most serious students of social insurance are convinced that actuarial orthodoxy is not appropriate for a national social insurance scheme, particularly for OASDI, which has strong welfare elements in it. Second, at the time Mr. Myers's estimates were made, there was every reason to believe that they were the best projections consistent with the information available at that time. That they turned out "wrong" is small wonder since practically all actuarial, economic, and other projections made in past years suffered the same fate. The same thing is probably going to happen again and again, since dynamic systems do not

lend themselves to actuarial treatment along traditional lines. It is well known how sensitive OASDI costs are to changes in economic conditions, and what we are presumably talking about here is Mr. Myers's estimates after OASDI became a dynamic system.

A social security actuary must not only be a technician but also a political realist. An actuary or advisor bent on theory alone would soon be labeled a doctrinaire and stripped of any influence in policymaking. Regretfully, I consider Mr. Steiner's contribution to be an exercise in social security theory without any chance of making a practical impact.

The crucial figures in the paper were taken from SSA Actuarial Note No. 97 by J. A. Applebaum. That note includes comments on the feasibility of traditional actuarial financing for OASDI that Mr. Steiner does not mention. He does refer to the "standard" objections to actuarial funding of social security, but he does not devote many lines to them. This rather brief dismissal of the objections is puzzling. Mr. Steiner used Mr. Applebaum's unfunded liability figure (as of January 1, 1979) without any updating. If the \$3,734 billion figure is adjusted for nonpayment of interest during 1979-82 at the rate of 6.6 percent (used by Mr. Applebaum), the adjusted figure as of January 1, 1983, would be about \$4.8 trillion. With further adjustments (for the actual tax rate in 1979-82 being substantially lower than the normal rate, the change in valuation assumptions, and other factors), the unfunded liability as of January 1, 1983, would have been in the neighborhood of \$6 trillion.

It is interesting to use the \$6 trillion figure in looking at the cost picture in 1983 under the funding method proposed by Mr. Steiner. Under his economic assumptions, the 1983 taxable payroll is \$1,607 billion and the present value of future taxable payrolls as of January 1, 1983, is \$161,430 billion. Then an unfunded liability of \$6 trillion would require 3.72 percent of payroll to keep it from growing. Adding to it a normal rate of 13.72 percent gives a total tax rate of 17.44 percent. For 1983 this would mean a total payroll tax of \$280 billion as compared with disbursements of about \$175 billion. Has such a surplus in the OASDI funds any chance of being accepted by the legislators and the public at large? Furthermore, is there any real chance of instituting a payroll tax of 17.44 percent at this time? The answer is a resounding no on both scores. For 1986, the income-outgo picture would be even more striking. For that year, the surplus would be the difference between \$360 billion in taxes and about \$230 billion in disbursements. These figures speak for themselves.

FRANCISCO R. BAYO AND MILTON P. GLANZ:

We thank Mr. Steiner for his willingness to address the issues of social security financing, a subject of great importance, great controversy, and great conceptual difficulty.

The paper asserts that to the extent we are willing to prefund the social security (OASDI) system, the working population would be immunized from the extremes in tax burden caused by the baby boom. This assertion is borrowed from private pension plans. When the attempt is made to apply the assertion to the social security system, however, we must consider what the results would be using a macroeconomic viewpoint that goes well beyond the usual actuarial analyses. To begin with, in a private pension plan we pay in advance in order to distribute the cost burden evenly over time. Contributions are initially higher than needed to pay current benefits, and lower later. Correspondingly, take-home pay available for personal consumption goes down initially but later is higher.

Would the same thing happen with social security? Let us try to look at the economic reality behind the buildup of funds. The social security funds could not be used to accumulate the goods and services that will be needed by future beneficiaries; the beneficiaries of the year 2020 would consume the goods and services produced about 2020 or shortly before. If the accumulation of funds is thought of as a claim on future goods and services, the idea that storage is possible would be correct. But a legislated benefit level with a corresponding tax rate is also a claim on future goods and services, and it is one which the Congress has taken very seriously. Of course, if as a nation we are willing to forgo some consumption now, we may improve our technology, increase the skills of our work force, and keep our plant, equipment, and organization up-to-date. This will make it easier to support our aged population in 2020 than if we do not do so. It would also make it financially easier to accomplish practically anything we desire in the future. We have known for a long time about the positive effects of increased investments, and yet as a nation we have been unwilling or unable to do more investing. Let us not assume that prefunding of the OASDI system in itself will lead to these desirable economic goals without any bad consequences. We are better off concentrating on the economic goals directly and not as a by-product of social security financing.

In a pension plan covering a small portion of the population, we may think of exchanging lower consumption now for higher consumption later (i.e., accumulate funds now and use them later). This is possible only because we implicitly assume that to a large extent there are others who will accept and faithfully execute a reverse exchange (i.e., consume more now

and less later). In the case of social security, which involves essentially the whole nation, we would supposedly be making this exchange within ourselves. Such an exchange would reallocate spending by economic sector, and would generally affect the level of economic activity.

The buildup of a large fund could have major immediate consequences. A large amount of money would be taken out of personal consumption expenditures, and the determination of the optimal level of personal consumption expenditures is not an easy matter. When too much of our gross national product goes to personal consumption and too little to capital formation, we move in the direction of an underdeveloped country. We must also remember that in a free economy the level of total product can remain uncomfortably low if the willingness of the consumer to spend is insufficient. Under those circumstances business is generally unwilling to spend on plant and equipment (the "paradox of thrift," a situation we actually had in the 1930s). We have previously seen that full funding is not possible in an economic sense; we must further grant that full funding may not necessarily even build up our general productive capacities.

The paper states that "the magnitude of these potential contribution rates is generally viewed as the 'long-term financial problem' of the OASDI portion of social security." We do not believe this is correct. There would be a problem only if our nation were not willing to pay for the benefits now promised in the law. The newly enacted law makes it clear that we *are* willing to pay for what we have promised. This is not a social security financing problem. It is a problem only for those who would prefer a different social security tax schedule or a different benefit structure.

The paper states that " 'pay-as-you-go' financing is generally recognized as a fiscally irresponsible method of financing retirement benefits, and its use is legally prohibited in the funding of private pension plans." But the paper does not cite any authority on pension funding who would apply that statement to the OASDI system.

The author seems to consider a fully funded social security system as his ideal. Yet it is useful to point out that this would *not* (in economic terms) be a return to what we had before the OASDI system. It was common then for working adults to support their aged parents, and in turn to expect that they would be supported by their children. The social security system institutionalized this support and spread it to the poorer segments of the population where the aged were not being supported by their adult working children. Full funding would change this. In a practical sense, however, the author has not advocated full funding, but merely more prefunding, as is shown by his infinite amortization period of the initial unfunded accrued liability.

The author criticizes Mr. Myers for his statement that pay-as-you-go fi-

nancing could be actuarially sound, and his 1981 statement that a then-current proposal would assure the financial soundness of the system into the next century. The author's criticism is not based on the merits of the proposal or of the assumptions that Myers used, but instead is based on Myer's 1977 assertion that long- and short-range OASDI problems were solved by decoupling. The author fails to recognize that the statement Myers made in 1981 was based on "worst case" assumptions that were significantly more pessimistic than the usual pessimistic set.

With respect to the 1977 amendments, the decoupled benefit formula *did* solve much of the long-range financial problem of the social security system. Also, it is difficult to fault Mr. Myers for using the cost estimates that were available at the time the 1977 amendments were under consideration. The author adopts the II-B assumptions for presentation in his paper but criticizes Mr. Myers for using a similar set in 1977 and for using a much more pessimistic set in 1981.

Mr. Steiner defines *unsound funding* as funding that cannot pay the promised benefits "assuming no increase in the current tax (or contribution) rate." This definition seems to grant Mr. Myer's simpler and more fundamental definition of actuarial soundness as the ability of the given plan to provide the benefits established. It begs the question of whether we can pay the scheduled increases and uses only current tax rates to judge actuarial soundness. This is done in spite of the many past increases in the tax rate that have been accepted by the American public, and the fact that surveys have shown that Americans—even those of working age—prefer higher taxes to benefit cuts. He also overlooks the fact that many Western European countries are now paying a higher tax rate than what is ultimately scheduled for the OASDI system.

The question of what kind of OASDI system we are willing to pay for is one that should be decided by the political process, a process that, in this country, is peaceful and constructive. We can only appreciate the skill with which our politicians are able to mediate political forces if we compare the civility of American politics to the politics of many other countries. From an economic point of view, the tax rate that Americans are willing to pay depends on many factors, including the following: (1) whether the individual believes he is getting a good deal (which depends on the benefit formula), (2) the sacrifices needed to meet a tax increase (e.g., a tax increase would be paid more readily when real after-tax income increases), (3) the magnitude of recent tax increases, and (4) the level of the tax rate itself.

The decisions to raise taxes and to reduce benefits have certainly been difficult for Congress to make. This year in particular, the real benefit reductions, while not large, were in the most overt form ever. But Congress

did face up to its duty of assuring that the OASDI system is adequately financed. If further modifications of the OASDI system should be necessary in the future, we believe that Congress will act promptly and decisively.

We would not look upon the advance in normal retirement age from age 65 to age 67—which is a part of the newly enacted amendments—as treating merely a symptom of the financial problem of OASDI. Rather, it strikes at the heart of the problem, which is the projected fast growth of the demographic ratio of beneficiaries to workers.

The OASDI system is so complex and so much intertwined with the national economy that generally accepted principles applicable to private pension plans may not apply to social security. Careful study is always required.

STEVEN F. MCKAY:

I directed the preparation of the unfunded accrued liability estimates for about five years at the Social Security Administration. During that time, it became more and more obvious to me that, even ignoring the political considerations, anything approaching full funding of OASDI would not work technically. I would like to expand on this since there are probably many actuaries, and others, who do not believe it.

A distinction has to be made between money and actual goods and services when talking about full funding. Money in a trust fund amounts to nothing more than tallies on a ledger sheet, which at some point must be used to purchase goods and services. There is a complex equilibrium between the money supply, the amount of money which investors wish to invest, interest rates, and the prices of goods, services, and investments. Under the set of assumptions used by Mr. Steiner, the real interest rate is 2.5 percent. If this is a reasonable rate when OASDI is operated as a pay-as-you-go system, then it certainly is not reasonable when OASDI has a fund greater than the value of all of the stocks on the New York Stock Exchange. The buildup of such a huge fund would have extremely complex consequences on interest rates, the prices of stocks, and all other economic parameters. Simply stated, if twice as much money were to chase the same amount of stock, then the price of each share of stock could double, negating the benefits of prefunding suggested by Mr. Steiner. The actual situation would be quite complicated, with many side effects.

If there were a large OASDI fund that had to be liquidated in order to pay benefits, what would happen? There would have to be someone willing to buy the investments offered by OASDI. This applies on a small scale every day when securities are sold, but the situation would be much different

if the economy as a whole, were attempting to disinvest. We would run out of buyers for the investments, prices of the investments would plummet, and the fund could be wiped out.

One set of economic assumptions cannot apply over such a broad range. Applying Mr. Steiner's assumptions without checking for consistency is misleading.

It should be noted that similar arguments about the effects of prefunding can be made with regard to the private pension system, if such prefunding were of sufficient magnitude to have economy-wide effects.

I can offer no figures of my own in rebuttal to Mr. Steiner; the field at present is too complex and unexplored. It is certainly an area demanding competent technical investigation.

HOBSON D. CARROLL:

I would like to applaud Mr. Steiner's "tell it like it is" approach to the current social security situation—and the situation for eternity if the pay-as-you-go philosophy is adhered to. The point of the matter is that, under reasonable assumptions, either the tax rate will have to go up dramatically or the benefits will have to be reduced significantly sometime in the future, and perhaps sooner rather than later, if pay-as-you-go continues. It is important to shift the approach instead of trying to patch the problem using old methods. I believe Mr. Steiner has taken a major step in this direction with his proposal to fund new benefits and amortize existing unfunded liabilities.

The one area which gives me concern is the impact of government investment. While I am not frightened at the prospect of "retirement-fund socialism," perhaps a modification allowing a private sector investment mechanism would better serve the economy's capital needs. It could be "regulated" by the government so that minimum investment parameters are met and the required contributions are made. This would, of course, only apply to newly earned benefits and not the amortization of the unfunded liabilities.

Unfortunately, I must agree with Mr. Steiner's assessment that the political chances of "actuarial" funding are not good. Legislators' use of the "talk-as-you-go" method of discussing social security generally leaves well-thought-out proposals far behind on the legislative race track. Perhaps we will all be pleasantly surprised one of these days.

RICHARD M. RASIEJ:

Mr. Steiner has raised some interesting issues and has proposed a potential

solution to the financial difficulties of OASDI. Unfortunately, I feel that in this instance the proposed cure is worse than the disease.

Mr. Steiner implies that the magnitude of potential OASDI contribution rates is, in and of itself, the "long-term financial problem." My impression is that it is the actuarial deficit that is at the core of the problem and not the size of the contribution rates.

It is difficult to imagine how the accumulation of a \$2.7 trillion fund could have a neutral impact on private markets and individual companies. If this fund is large enough to wipe out the national debt and purchase all the stocks listed on the New York Stock Exchange, it appears to me that the federal government, through the Social Security Trust Fund, would be nationalizing large sectors of the economy. What would private insurers and private pension plans be able to invest in?

Legislators' penchant for liberalizing benefits whenever the Trust Fund balances look healthy is well known, the 1972 amendments being one of the more egregious examples. I think that it is unrealistic to expect a hands-off attitude to prevail when a few trillion dollars are in the OASDI fund.

The most interesting issues raised in the paper are the concepts of full funding for, and actuarial soundness in, social insurance programs. Mr. Steiner may be committing the fallacy of composition in thinking that because private insurance programs must be funded (fully in the case of insurance, at least partially in the case of private pensions), social insurance programs must be also. He overlooks the taxing power of the government to raise revenue and, more importantly, the fact that his approach is geared almost entirely to individual equity, eliminating the social adequacy features of OASDI. Similarly, actuarial soundness can legitimately mean two different things in the contexts of private and social insurance. Actuarial soundness for social insurance should not be defined in such a way as to mandate the conversion of a social insurance program into a governmentally run "private" insurance scheme.

In summary, I feel that Mr. Steiner's proposals would eliminate OASDI as a social insurance program and replace it with a massive "private" insurance program operating in a nationalized economy.

#### HOWARD YOUNG:

One of the most significant passages in this paper may be the suggestion—in Appendix D—that some of the debt servicing obligation on the government bonds suggested for the fund could be deferred. The "resulting cost savings" would be passed on to taxpayers. Since any debt service during the fund buildup phase would merely be reinvested in additional government

bonds, with no impact on cash flow or other real economic factors, the suggested deferral would reduce the current cost, which the author had argued should be recognized. Perhaps that indicates such cost recognition is really secondary to the author's apparently overriding goal suggested in the penultimate paragraph of the paper: a cut (he suggests 21 percent) in benefit levels.

The author equates "sound" funding with nonincreasing tax rates, and implies that increasing tax rates would be inequitable. However, many people believe that ability to pay is a factor in judging equity, and practically everyone projects that real earnings (after adjustment for inflation) will be much higher fifty years from now. Even if approximately 16 percent of payroll would be required for OASDI (for the total of employee and employer contributions) by 2050, as compared with approximately 11 percent now, the remaining purchasing power of future workers undoubtedly would still be much higher than now. Furthermore, one of the important assumptions used in projecting the cost rates is that payroll subject to FICA taxes will shrink in relation to total compensation, due to the growth in untaxed fringe benefits. That is, fifty years from now, FICA would apply to about two-thirds of total compensation as compared with its application to about five-sixths of compensation currently. The 11 percent of payroll currently allocated to OASDI is approximately 9 percent (i.e., five-sixths of 11 percent) of total compensation; the 16 percent projected cost fifty years from now would be under 11 percent (i.e., two-thirds of 16 percent) of total compensation. Perhaps that meets even the author's standard for equity and soundness.

In any event, equity cannot be evaluated using such a simplistic standard. If the tax rate for OASDI were stabilized by a conscious increase in the birth rate (perhaps encouraged by some national policy action) would the resulting population pressures be a more equitable approach?

After recognizing the enormous fund levels that would result from his suggested prefunding, the author refers to "investments worldwide," "neutral impact on private markets and individual companies," and state-level investment decision-making by elected trustees. Would retirees really want to depend upon the repayment of foreign investments for a significant portion of their income (presumably the foreign debtor would have to absorb any currency fluctuation risk)? Are the assets to be held in a "blind trust" so that government policy would not be influenced by the effect on trust fund holdings? Will the campaigns of those running for election as trustees be noncontroversial as to yield and investment policy?

The underlying reality is that except as we are willing to look to repayment from foreign debtors, any form of social security financing results in future

workers sharing their output with those then retired. Only the mix of payments characterized as FICA, other taxes to service the then outstanding public debt (state and local, as well as federal), or other interest and dividends would be different. While that might shift the incidence of such payment obligations, it would not change the aggregate level of such obligations. A real difference could occur if increasing the FICA rate now resulted in higher output levels in the future, but economists argue inconclusively about that.

In any case, all our retirement income claims are based upon our confidence that future taxpayers, debtors, and business managers will honor those claims; repayment of United States Government bonds may have greater apparent legal status, but it has no more economic security than the social security program. Both depend upon the willingness of future governments and taxpayers to honor those obligations. Default on private debt and cut-backs on dividends are not uncommon. Presumably under the author's automatic adjustment mechanism those obligations would be absorbed by future taxpayers.

Advance funding, with a trust holding claims on entities other than the plan sponsor, makes sense for private employers, or even relatively small public ones. However, the leading economic nation cannot look to others to support its retirees. No matter what we call the mechanism, the United States economy will have to provide the output that is shared with retirees. Neither fiscal responsibility nor public understanding is improved by disguising that basic reality.

(AUTHOR'S REVIEW OF DISCUSSION)

KENNETH A. STEINER:

As Mr. Myers correctly points out, the OASDI program as amended in 1983 shows "a quite different picture" than the picture shown in Figure 2 of the paper. Figure 1 of this discussion shows the projected "cost rate" and "income rate" under the II-B assumptions as determined for the 1983 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds.<sup>1</sup> The graph produced in the summary of the 1983 Trustees' Report (prepared by the Office of the Actuary, Social Security Administration, June 24, 1983) has been modified to illustrate the increase in the income rate expected to be required shortly

<sup>1</sup> Information with respect to system outgo and taxable payroll for years 1983 to 2007 and, quinquennially, for years 2010 to 2060 were supplied by Messrs. Milton Glanz and Francisco Bayo of the Social Security Administration. The tables contained preliminary figures from an Actuarial Note (No.117) prepared by Mr. William D. Ritchie to be published by the Office of the Actuary.

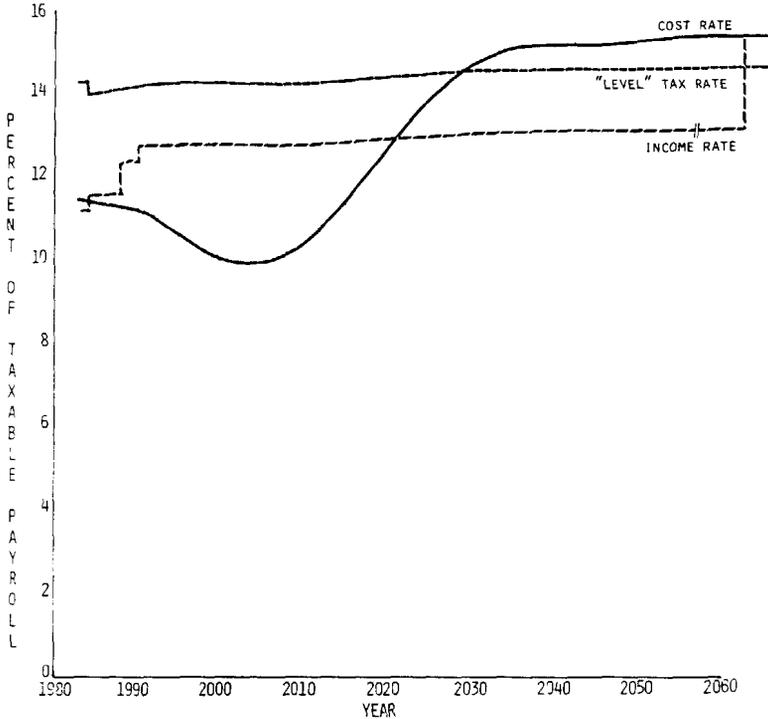


FIG. 1.—Comparison of projected cost rate, income rate, and alternative "level" tax rate after Social Security Amendments Act of 1983.

after the year 2060 when trust fund assets are projected to be completely exhausted, and has also been modified by including the "level" tax rate of 13.9 percent of taxable payroll (plus income from taxation of benefits) determined under the approach outlined in the paper. In determining this rate, it was assumed that (1) the benefit provisions of the current law would remain unchanged, (2) the II-B assumptions would be realized, (3) the cost rate would remain at 15.40 percent of taxable payroll, and the annual income from taxation of benefits would remain at 0.77 percent of taxable payroll in years following the end of the seventy-five-year projection period, (4) ultimate trust fund investment return would be 6.1 percent per annum, and (5) ultimate increases in taxable payroll would be 5.6 percent per annum. Under these assumptions, the fund accumulated on the "level" tax rate basis proposed in the paper would be expected to reach an ultimate level of about 167 percent of taxable payroll around the year 2030.

If the tax provisions of the current law remain unchanged and all the assumptions above are accurate, the following will occur:

1. A trust fund representing approximately 72 percent of taxable payroll will accumulate by the year 2020. So measured, this fund will be four and one-half times the size of the largest fund (measured as a percentage of taxable payroll) accumulated in the system's history (16 percent in 1950). Measured in 1983 dollars, the fund accumulated in the year 2025 will be about \$2.5 trillion, or twenty-five times the largest fund (measured in 1983 dollars) in the program's history (\$101 billion in 1972).
2. The cost rate will increase from 9.9 percent in the year 2005 to about 15.2 percent in the year 2035, an increase of 54 percent over a period of thirty years. By comparison, under the law prior to the 1983 amendment, the cost rate was projected to increase from 11.0 percent in 2005 to 17.0 percent in 2035, or an increase of 55 percent over the same period.
3. The system's seventy-five-year "long-term deficit" will be about 1.4 percent of taxable payroll when calculated in the year 2010.

If the assumptions above are accurate, but the tax provisions of the current law are changed so that no fund accumulates, the seventy-five-year "long-term deficit" will be about 4.4 percent when it is calculated in the year 2005.

The reader should note that the figure above illustrates three "actuarially equivalent" approaches for financing OASDI under the assumptions outlined above; (1) current-cost financing with its 54 percent increase in tax rates over a thirty-year period, (2) the legislated tax rates with about a 15 percent increase (excluding income from taxation of benefits) in the first seven years and about a 17 percent increase just after 2060, and (3) the "level" tax rate.

Instead of current-cost financing, which many of the respondents to the paper referred to as the financing basis of OASDI, the approach anticipated under the law as amended in 1983 may be more accurately classified as advance funding. If this advance funding approach is not really intended, and instead, the current-cost approach continues to be followed (as seems to be assumed by Mr. Myers, the actuaries who work for the Social Security Administration and a number of other individuals)<sup>2</sup>, the "Social Security solution" recently enacted should be relabeled the "Social Security illusion," and the assurances in the 1983 Trustees' Report that the system is in

<sup>2</sup> The Honorable J. J. Pickle, Chairman of the House Social Security Subcommittee, in a letter to the editor of the *Wall Street Journal* dated May 17, 1983, said, "To begin with, we would not want to fund our national retirement program other than on a pay-as-you-go basis. To accumulate now funds to pay all future benefits would require a government reserve in the trillions of dollars—a build up of government investments not likely to be tolerated by the public." Mr. Harry C. Ballantyne, chief actuary of the Social Security Administration, in another letter to the editor of the *Wall Street Journal*, dated May 11, 1983, said "Social Security is essentially a pay-as-you-go system."

“actuarial balance” and is “financially sound over the next seventy-five years” may be misleading to both the American public and Congress.

With the exception of the initial grading of the tax rate increases and the different treatment with respect to years subsequent to the end of the seventy-five-year projection period, there is little difference in the financing approach recently enacted and the approach outlined in the paper. In effect, both approaches anticipate significant fund accumulation as a result of approximately level tax-rate financing of OASDI. If, instead of assuming that the cost rate of 15.4 percent remains constant in years subsequent to 2057, it is assumed that the rate drops to 13.2 percent (the expected income rate in 2057), the level tax rate approach outlined in the paper would produce an initial tax rate of about 12.3 percent, or slightly less than the ultimate rate anticipated under current law. While such an assumption with respect to years after 2057 appears to be unjustified, this same assumption is effectively made by actuaries at the SSA in their calculation of the long-term deficit, as a result of the seventy-five-year limitation of the projection period. In fact, this intuitively unrealistic assumption is the “problem” that Mr. Myers assures us “can be handled over time (and, certainly, it is recognized to be a problem now).”

By instituting a level tax rate type of approach (at least during the period of seventy years from 1990 to 2060), the 1983 social security amendment incorporated the feature of my proposal found most objectionable by the majority of respondents—the large fund accumulation. Unfortunately, it incorporated none of the paper’s suggested actuarial methodology (the amortization of gains and losses, etc.) that the respondents simply ignored.

Mr. Hickman states, “Perhaps the periodic political reexamination of benefits and associated financing, made necessary by current-cost financing, is a vital function in a democracy.” He implies that adoption of actuarial financing for OASDI would cause system provisions to remain unexamined for long periods. This same argument is made by Mr. Myers, who states, “Another problem with having large balances in the OASDI Trust Funds is that this would make corrective action far more difficult, “and, “If Mr. Steiner’s proposed method of financing had been adopted in 1977, the adverse experience in the next few years would still have caused financing problems, although not of a cash-flow nature. Thus, the increased cost of the program would likely have been recognized and pointed out by the actuaries, but with no ‘painful’ legislative remedial action of a benefit nature being taken (as was actually done under the present financing procedure).”

I do not agree with these arguments. If an actuarial valuation is performed every year and a new tax rate is determined as a result, Congress can always modify the benefit provisions rather than accept the actuarially determined

tax rate. Thus, an annual actuarial valuation would effectively provide for annual reexamination of the system. By contrast, the current financing approach could easily produce just the result feared by Messrs. Hickman and Myers. Under the benefit and tax provisions of the current law, system revenues are expected, under II-B assumptions, to exceed system expenditures in each year (except 1983) until 2020. What will be the motivation, under these circumstances, for Congress to increase taxes or reduce benefits if the experience turns out to be less favorable than predicted by the II-B assumptions, but sizable assets accumulate anyway (a situation expected to result under the Alternative III assumptions, for example)?

Would Messrs. Hickman and Myers impose current-cost financing on all of our private and public plan clients so that they too could reap the benefits associated with periodic reexamination of benefit promises in the harsh light of impending plan bankruptcy? Building confidence in the system is generally recognized to be of great importance. Will such confidence be built through periodic periods of panic? I wonder if today's OASDI beneficiaries share Mr. Hickman's assessment of the recent social security amendment as a "needed adaptation to new realities."

Mr. Hickman argues, as do Messrs. Bayo, Glanz, and Young, that the accumulation of assets under an advance-funding approach for OASDI would not reduce the relative cost of the system in later years, primarily because the funds would simply represent promises to pay at a future date, and advance funding would merely replace one form of promise with another. This argument was presented by Walter Shur in 1964<sup>3</sup> and by the consultant panel of actuaries and economists working with the 1969-71 advisory council<sup>4</sup>, and undoubtedly influenced the change in the financing approach in the early 1970s from partial funding to current-cost funding.

While the argument for looking at the "total federal fiscal picture" is persuasive, I believe it is important for actuaries who are asked to comment on the financial condition of a government-sponsored retirement program to focus their attention on the financial condition of the program and not on the financial condition of the nation as a whole. As a general rule, actuaries who serve as enrolled actuaries for private plans or who advise public plans do not directly concern themselves with the financial condition of the plan sponsor. If the plan sponsor unwisely defers some of his other costs, most of us would not feel qualified to second-guess such action. So if the federal government chooses to pass higher nonretirement-related costs to future taxpayers by increasing the federal deficit, for example, such action can rea-

<sup>3</sup> "Financing the Federal Retirement Systems." Walter Shur, *TSA*, XVI, Pt. I (1964), 265.

<sup>4</sup> "Measures of Actuarial Status for Social Security: Retrospect and Prospect," Dwight K. Bartlett III, *TSA*, XXXIII (1981), 550.

sonably be assumed to fall outside the responsibilities of the actuarial profession. The same conclusion cannot be reached, in my opinion, if the profession is relied on to certify to the financial condition of a government-sponsored retirement program.

Mr. Hickman suggests that "a subsequent generation may have rather different goals for social policy," and he implies that the level tax rate approach proposed in the paper would somehow inhibit a generation's ability to control its own policy. I believe exactly the reverse. Under the approach proposed in the paper, increases or decreases in the unfunded actuarial accrued liability resulting from changes in benefits would be automatically reflected in the tax rate. Thus, generations wishing to provide themselves with lower benefit levels would pay less, and generations that wanted to provide higher benefit levels would pay more. By comparison, under current-cost financing, "goals for social policy" seem to depend heavily on the ratio of the number of retired individuals in one generation to the number of those working in younger generations.

Mr. Niessen claims that I believe "traditional actuarial financing is the only cure for the ills of OASDI. There is no mention of the possibility of other remedies, such as government participation in the financing or an overhaul of the system along cost-reduction lines that may cause public outcry." At the same time, Mr. Young insists that my "overriding goal" is to cut back benefit levels. The paper outlined an actuarial financing approach that would produce a level tax rate if all the actuarial assumptions were realized. Equally important, the proposed approach provided for automatic adjustments of the tax rate for actuarial gains or losses, changes in benefits and changes in assumptions. While I believe the proposed financing approach can be classified as actuarial, I doubt that many actuaries would consider it traditional.

Valuing the social security law in effect in 1981 under the II-B assumptions, with the modifications discussed in Appendix B of the paper, a level tax rate of 15.6 percent was developed. If, in lieu of increasing the tax rate to this level, Congress decided that changes to the benefit structure were necessary, such a decision would fall properly within the congressional mandate. If actuaries, acting as individuals, and not as representatives of the profession, wished to argue for specific benefit changes, that would be their right. Expressed in another way, while I believe that the determination of costs for the system falls properly within actuarial purview, I do not feel the same with respect to specific recommendations for changes to the system's benefits.

I concur with Mr. Niessen's conclusions that "objections to actuarial orthodoxy in social security matters are so entrenched. . . that it might never

be possible to overcome them," and "most serious students of social insurance are convinced that actuarial orthodoxy is not appropriate for a national social insurance scheme." Messrs. Bayo and Glanz also add, "The OASDI system is so complex and so much intertwined with the national economy that generally accepted principles applicable to private pension plans may not apply to social security." If this is so, however, the profession must be extremely careful to avoid giving the impression that we believe the financing of the system is either "actuarial," "actuarially sound," or financed in a manner "generally accepted within the actuarial profession."

Mr. Niessen is incorrect in saying that, "the crucial figures in the paper were taken from SSA Actuarial Note No. 97 by J.A. Applebaum." In this note, Mr. Applebaum examines the tax rates and asset accumulations that would be produced if OASDI were "fully funded" by the year 2053. The tax rate would be expected to drop from 18.35 percent prior to the year 2053 to the normal cost rate determined by Mr. Applebaum of 13.72 percent in subsequent years. The approach outlined in my paper did not anticipate amortization of the unfunded actuarial accrued liability. In fact, the unfunded actuarial accrued liability would be expected to increase at approximately the same rate as the taxable payroll, producing a level contribution requirement for all future years if the normal cost rate remained constant and all assumptions were realized. The fund accumulation under the proposed approach would be much less than that anticipated under the more traditional approach examined by Mr. Applebaum.

Because the funding horizon was not limited to seventy-five years, different actuarial present values than those determined by Mr. Applebaum were produced (as shown in section 3 of Appendix B). The unfunded actuarial accrued liability as of January 1, 1981 determined in Appendix B was simply a by-product of the assumption that the actuarial present value of future normal costs would be about 13.7 percent of the present value of future taxable payrolls.

Bayo and Glanz state, "The newly enacted law makes it clear that we *are* willing to pay for what we have promised." I fail to see how this conclusion can be reached as long as we expect future taxpayers to pay significantly higher tax rates than we now pay. Viewed in another way, instead of indicating our willingness to pay for what we have promised, the 1983 amendment indicates, by virtue of the legislated reductions in benefits, a lack of willingness to pay for the promises made prior to adoption of the amendment.

Messrs. Bayo and Glanz state, "The author seems to consider a fully funded social security system as his ideal." I find no basis in the paper for this conclusion.

Messrs. Bayo and Glanz imply that higher tax rates will not be a problem in the future because (1) "many past increases in the tax rate . . . have been accepted by the American public," (2) "surveys have shown that Americans. . . prefer higher taxes to benefit cuts," and (3) "many Western European countries are now paying a higher tax rate than what is ultimately scheduled for the OASDI system." If these arguments are valid, why did we just adopt an amendment to the law that decreased benefits payable in the distant future when we could have simply dealt with the short-term problem and legislated tax rate increases for future years? If Americans really do prefer higher tax rates, we should have no trouble convincing them that a small increase now (to the level tax rate) is desirable.

Messrs. Bayo and Glanz exhibit a strong faith in the federal government when they claim, "If further modifications of the OASDI system should be necessary in the future, we believe that Congress will act promptly and decisively." Expressing a different view in 1982, while acting as executive director of the NCSSR, Mr. Myers said, "It is likely that neither Congress nor any administration would be able to resist lowering taxes or raising benefits in the face of such large annual excesses of income over outgo that will begin in 1990."<sup>5</sup> Mr. Myers was referring to the projected accumulation under the law in effect prior to enactment of the 1983 amendments, which was about one-third the size of the fund expected after the amendments, under the II-B assumptions. As discussed earlier, it is quite conceivable that system experience will be less favorable than projected under the II-B assumptions. I question whether Congress will act so promptly as a result of this unfavorable experience if large sums still remain in the trust fund.

Messrs. Bayo and Glanz argue that increasing the retirement age from 65 to 67 "strikes at the heart of the problem, which is the projected fast growth of the demographic ratio of beneficiaries to workers." I disagree—the OASDI problem is not the projected fast growth in the ratio of beneficiaries to workers, it is the rapid increase in tax rates expected to occur after 2005 if current-cost financing is continued (a problem not solved by the 1983 amendment). There are three causes of this problem, shown below.

CAUSE 1	+ CAUSE 2	+ CAUSE 3	⇒ PROBLEM (EFFECT)
(Current-cost financing)	(Expected demographic pattern)	(Income-replacement nature of benefit promise)	(Rapidly increasing tax rates)

<sup>5</sup> Memorandum No. 6, from Robert J. Myers; Subject: Progress of OASDI Trust Funds over the Years. National Commission on Social Security Reform, Washington, D.C., November, 1982.

“In general, all approaches to the solving of problems can be grouped under one of two headings: we either (1) try to eliminate or reduce the factors of the cause or (2) we treat the symptoms (the effect).”<sup>6</sup> While the projected fast growth of the demographic ratio of workers is part of one of the causes of the problem (cause 2 above), it should be noted that the fast growth referred to by Messrs. Bayo and Glanz is preceded by a low-cost period resulting from the very low birth rates in the 1930s (the other part of the cause). Because enactment of the 1983 amendment did virtually nothing to alter the rapid increase in expenditures after 2005 (and therefore, in tax rates, if current-cost financing is continued in the future), increasing the retirement age did not “strike at the heart of the problem.” If the program is financed on a level tax rate basis increasing the retirement age will reduce the level tax rate required.

If the reader accepts the validity of the diagrammatic presentation of the problem as shown above, and if the demographic pattern and the nature of the benefit promise remain unchanged (two assumptions implicitly made in the paper), then the only cause left to eliminate, is the current-cost method of financing.

Mr. McKay believes that anything approaching full funding of OASDI would not work technically,” that “if twice as much money were to chase the same amount of stock, then the price of each share of stock could double, negating the benefits of prefunding suggested by Mr. Steiner,” and that there will be no buyers when it comes time to disinvest a large OASDI fund. Responding to these statements in reverse order: The approach outlined in the paper does not contemplate periods of forced disinvestment (as contemplated under current law). I question whether increasing the tax rate anticipated under current law by 1.5 percent from the ultimate rate in 1990 of 12.4 percent to 13.9 percent (the Alternative II-B “level” tax rate) would cause the results feared by Mr. McKay. (If so, would a similar result occur if the nation’s savings rate were increased by the same amount?) I did not suggest anything approaching full funding of OASDI.

Those who believe that actuarial financing will not “work technically” for OASDI were best answered by Mr. A. D. Watson back in the late 1930s when he said, “If what we have before us is a scheme which is out of balance with the social, economic, financial, industrial and administrative setting in which it is to function, requiring an impractical accumulation of reserves, it would be more in order to conclude that the scheme is funda-

<sup>6</sup> Norman S. Stone, *Solutions*, Apex Conference 4, the Apex Organization: A Course in Effective Communications, Norman S. Stone, Inc.

mentally unworkable rather than to make it appear as though 'current cost' finance was the main desideratum.<sup>7</sup>

I agree with Mr. Carroll's suggestion that perhaps the "retirement-fund socialism" problem so often cited by critics of advance funding could be mitigated by transferring some or all of the investment responsibility to the private sector. This transfer could also be indirectly accomplished by reducing OASDI future benefit promises (while at the same time adopting the level tax rate approach) and making up the shortfall through a privately funded approach. On the other hand, such an approach would result in even larger fund accumulations (albeit not under federal control) because of the more stringent federal funding requirements imposed on private plans.

Mr. Rasiej claims that "it is the actuarial deficit that is at the core of the problem." If this is so, we should simply adopt the proposal presented to the National Commission on Social Security Reform by Mr. Myers to automatically adjust the tax rate whenever the ratio of the trust fund balance at the end of the year to the total expected outgo during the year dropped below 55 percent (or increased above 60 percent).<sup>8</sup> If this approach were adopted, the system would always be in actuarial balance, and there would never be a problem. It should be recognized, however, that this approach was expected to have produced increases in tax rates of about 69 percent in a span of just twenty-two years. Actuaries who consider actuarial balance to be equivalent to actuarial soundness should recall the words of Ray Peterson, who said, "actuaries should be the first to warn that actuarial balance, while a necessary condition is not a sufficient condition."<sup>9</sup>

Mr. Rasiej expresses concern that if we contribute on a level tax rate basis, there will be nothing left in which private insurers and pension plans can invest. Mr. Rasiej's concern is equally valid if such a result could occur from an equivalent increase in the national savings rate.

Mr. Rasiej finds it "unrealistic to expect a hands-off attitude to prevail when a few trillion dollars are [in the OASDI fund]." This feeling is also presented by Mr. Hickman. Since the proposed approach requires amortization of increases in the unfunded actuarial accrued liability resulting from system amendments, controls would exist to prevent unwarranted benefit

<sup>7</sup> Written discussion by A.D. Watson of Mr. Albert Linton's "Reserve Provisions of the Federal Old Age Security Program," *TASA*, XXXII, 142.

<sup>8</sup> Memorandum No. 23, from Robert J. Myers; Subject: How a Proposal for Automatic Changes in OASDI Tax Rates Would Operate. National Commission on Social Security Reform, Washington D.C., June 4, 1982.

<sup>9</sup> "Misconceptions and Missing Perceptions of Our Social Security System (Actuarial Anesthesia)," Ray M. Peterson, *TSA*, XI (1959), 812.

liberalization. By comparison, there exist no such controls in the present law.

Mr. Rasiej says that my approach is "geared almost entirely to individual equity, eliminating the social adequacy features of OASDI." Since I made no suggestions with respect to the benefit structure and focused only on how the benefits might be financed, I cannot concur with Mr. Rasiej's conclusion.

Mr. Myers has sometimes misunderstood my meaning in his discussion of the paper. I did not make "a vigorous argument for financing the Old-Age, Survivors, and Disability Insurance program in the same manner as is both desirable and necessary for private pension plans." I did not recommend "building up a fund balance of more than twenty times annual outgo." The ultimate fund accumulation under the level tax rate approach (using the II-B assumptions) would be about twelve times annual outgo, or a little more than twice the accumulation anticipated under current law. I did not express "the belief that actuarial valuations . . . should not take into account future scheduled increases in the tax rates" or that legislated reductions in future benefits should be ignored.

Mr. Myers states, "Appropriate application of the current-cost method of financing requires long-range actuarial cost estimates, and then responsible recognition of them. Significantly, this did occur in the 1983 amendments, when long-range changes were made on the basis of such estimates, even though the additional financial resources were not needed to alleviate the short-range financing problem." I question whether such action would have taken place had the short-range problem not been so acute. If responsible recognition of the long-range actuarial cost estimates is part of the current-financing approach, why was no action taken in the six prior years when roughly the same long-term deficit existed? Will such action be readily forthcoming in the 1990s and early 2000s if system experience is less favorable than assumed, and the system still has plenty of assets?

Mr. Myers also states "it just is not likely (or even desirable) that Congress or the president would allow current tax rates to be decided upon by actuaries, especially when increases are not needed for cash-flow purposes. . . . And what actuary can claim the infallible wisdom of making precisely the right assumptions for periods many decades hence, which assumptions might drastically change near-future tax rates?" If the tax rates are not to be actuarially determined, why should the profession make unusual effort to certify that the financing of OASDI is actuarially sound or in accordance with generally accepted actuarial practice?

Mr. Young believes that I equate sound funding of OASDI with nonincreasing tax rates. While the distinction is somewhat subtle, I made no claim for what constituted sound financing, but rather I claimed a financing ap-

proach can be considered unsound if it depends on relatively higher tax rates in the future. I believe this is consistent with a generally held belief by actuaries that a financing approach that expects relatively higher rates of contributions in the future can hardly be considered "conservative." Along this line, it is interesting that the representatives of the American Academy of Actuaries who testified before Congress said, "it is preferable to err on the side of making more conservative benefit commitments in the future, knowing that if favorable experience is realized, increases in benefits can be made . . . . The reverse is not the case, i.e. it is difficult to reduce current benefits in an effort to kept the tax burden reasonable."<sup>10</sup> I find the rationale behind the level tax rate approach presented in the paper entirely consistent with this Academy testimony.

I agree with Mr. Young that "ability to pay is a factor in judging equity," and I would be willing to consider the merits of an actuarial financing approach that would develop contribution requirements designed to represent a level percentage of GNP, or some other measure. I would be concerned that such an approach could be abused as a result of the possible inconsistencies in GNP measurement. Even measured as a percentage of GNP, however, OASDI expenditures are projected to increase by over 40 percent in the thirty years from 2005 to 2035 under the II-B assumptions.<sup>11</sup>

I take issue with Mr. Young's claim that "practically everyone projects that real earnings (after adjustments for inflation) will be much higher fifty years from now." Mr. Myers also argues, "It seems extremely likely that wages will rise more rapidly than prices. Accordingly, workers can, within reasonable limits, pay higher OASDI taxes and yet have continuing increases in real incomes." Messrs. Young and Myers would use this optimistic view not to argue that taxes will increase in real dollars after the initial favorable cost period (because of the combined action of increases in the tax rate and real wage increases), but to argue instead that spendable income (total income less FICA taxes) will increase in real-dollar terms. If we accept this logic, we see that practically any OASDI benefit promise or future tax increase can be justified.

It is important to remember that, in the years to come, OASDI will either be financed on a basis that accumulates assets to be used to pay partially for the significant increases in expenditures expected to occur after the year 2010 (i.e., advance-funded to some degree), or it will be financed on a current-cost basis (or nearly so). In the first instance, actuaries can be of

<sup>10</sup> Statement to Social Security Financing Subcommittee on Social Security, House Ways and Means Committee, from the Committee on Social Insurance, American Academy of Actuaries, February 9, 1983.

<sup>11</sup> Table 30, 1983 Trustees' Report (see footnote 1).

assistance in ensuring that the intended funds do indeed accumulate. In the latter instance, the calculations made by actuaries may mislead those concerned with the system's financing.

It is my hope that actuaries will encourage actuarial approaches for the advance funding of OASDI. Absent such acceptance of advance funding, members of our profession must be willing to point out the serious limitations of current-cost financing and should be extremely reluctant to certify to OASDI actuarial soundness.