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SOCIAL SECURITY AMENDMENTS—1969-72

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ABSTRACT

The four-year period of President Nixon's first term was one of intense legislative activity with respect to what is broadly termed the social security program of the United States—old-age, survivors, and disability insurance; health insurance; public assistance; and unemployment insurance. Both the Ninety-first and Ninety-second Congresses devoted time and attention to this program. The years 1969-72 were a period of rapid expansion in OASDI, one of consolidation and one important extension in Medicare, and one of controversy with respect to public assistance.

This paper summarizes this legislative activity, not only as to changes that were eventually enacted but also as to important proposals that did not survive. This paper does not cover developments after 1972.

The paper also presents the actuarial status of those parts of the program operating through the social security trust funds, after the enactment of the social security amendments of 1972.

THE four-year period of President Nixon's first term was one of intense legislative activity with respect to what is broadly termed the social security program of the United States—old-age, survivors, and disability insurance (OASDI); health insurance; public assistance; and unemployment insurance. Both the Ninety-first and Ninety-second Congresses devoted considerable time and attention to this program, and to three of its four components. Only with respect to unemployment insurance was the status quo essentially preserved, and even in this area some extensions were enacted. The years 1969-72 were a period of rapid expansion in OASDI, one of consolidation (and one important extension) in health insurance, and a period of major controversy with respect to public assistance.

This paper summarizes this legislative activity, not only with respect to amendments actually enacted but also as to important proposals that did not survive all the steps of the legislative process. Particularly as to so-called welfare reform, proposals that failed are possibly of as much interest as those finally enacted.

This paper also presents the actuarial status of those parts of the program operating through the four social security trust funds, after the enactment of the social security amendments of 1972.

I. MAJOR LEGISLATIVE DEVELOPMENTS

The legislative history of 1969–72 was more complicated than that of any other period of comparable length. There was a major bill affecting most parts of the social security program which passed both Houses of the Ninety-first Congress but eventually failed, and a second bill of similar magnitude which succeeded (in part) during the Ninety-second. There was additional legislation of the "quickie" type increasing OASDI benefits in 1970, 1971, and 1972. An important Advisory Council on Social Security was appointed in 1969 and made its recommendations in 1971.

It will be helpful to the reader to outline in chronological order eleven major events affecting the legislative history of the four-year period.

Ninety-first Congress:	
August, September, 1969	Submission of administration proposals to Congress
December, 1969	Enactment of P.L. 91-172—15 per cent benefit increase
April, 1970	Passage of H.R. 16311 by the House of Representatives
May, 1970	Passage of H.R. 17550 by the House of Representatives
December, 1970	Passage of H.R. 17550, as amended by the Senate; failure of bill because of lack of agreement between House and Senate
Ninety-second Congress:	
March, 1971	Enactment of P.L. 92-5—10 per cent benefit increase
March, 1971	Report of the Advisory Council on Social Security
June, 1971	Passage of H.R. 1 by the House of Representatives
July, 1972	Enactment of P.L. 92-336—20 per cent benefit increase, and addition of automatic provisions
October, 1972	Passage of H.R. 1, as amended, by the Senate
October, 1972	Enactment of P.L. 92-603 (H.R. 1 as further amended)

Not included on the above list are the reports of the Ways and Means Committee of the House and the Finance Committee of the Senate,

which preceded action in their respective Houses of Congress. The recommendations of the Senate Finance Committee usually differ in certain detail from the action of the Senate itself. The House version of any social security bill is usually that reported out by its Ways and Means Committee, since this type of legislation reaches the House floor under a "closed" rule and is not there subject to amendment.

Also omitted from the above list, in the interest of simplicity and at the possible expense of completeness, are legislative developments particularly affecting specialized parts of the over-all program. Public Law 92-223 is important to the Medicaid program and P.L. 91-373 had an effect on unemployment insurance.

Rather than indicate the details of each of the steps in the legislative process outlined above, this paper will trace program changes separately. The OASDI area will be examined first, followed by Medicare, public assistance, and finally unemployment insurance.

II. OLD-AGE, SURVIVORS, AND DISABILITY INSURANCE (OASDI)

There were several important developments in the eligibility provisions and the benefit structure of the OASDI or cash benefits system during the 1969–72 period, as well as many smaller changes. There were also very important developments with respect to the financing of the OASDI system. The organization of this portion of the paper will be (1) to discuss each of the more important changes in eligibility and benefit structure, separately, with some indication of the history of and rationale behind the change; (2) to list without much discussion the minor changes that actually took place; (3) to mention changes that were seriously proposed but did not survive the legislative process; and (4) to delve rather deeply into the financing changes and the implications thereof.

A. *General Benefit Increases*

Effective through 1969 was a benefit table which first became effective for February, 1968, as a result of the 1967 amendments, the formula behind which was essentially 71.16 per cent of the first $110 average monthly wage (AMW), plus 25.88 per cent of the next $290, plus 24.18 per cent of the next $150, plus 28.43 per cent of the next $100. The minimum primary insurance amount (PIA) was $55, and the special benefit for the uninsured was $40.

The administration, in September, 1969, recommended a 10 per cent across-the-board benefit increase; but in late 1969 Congress voted a 15 per cent increase instead, which became effective for January, 1970.

The minimum PIA was then raised to $64, and the special benefit for the uninsured to $46.

Another 10 per cent general benefit increase became effective as of January, 1971, as a result of P.L. 92-5, signed into law on March 17, 1971, and retroactively applied to the beginning of 1971. The minimum PIA became $70.40, but the special benefit for the uninsured was raised only 5 per cent—to $48.30. Because the same legislation raised the taxable earnings base from $7,800 to $9,000 beginning in 1972, the benefit table was extended to another $100 of potential AMW, with the extension carrying a 20 per cent rate. Unlike earlier general benefit increases, the 1971 increase applied to the family maximum for those not yet on the beneficiary rolls, as well as for those already beneficiaries.

The third and most recent general benefit increase was 20 per cent, which became effective for September, 1972, as a result of legislation passed at midyear. The minimum PIA and special benefit to the uninsured were each increased 20 per cent, to $84.50 and $58, respectively. The same legislation raised the taxable earnings base to $10,800 for 1973 and $12,000 for 1974, necessitating a $250 extension to the range of AMW recognized in the benefit table, again at 20 per cent. The benefit table, after the 1972 amendments, is therefore based on the following unwieldy formula:

108.01% of the first $110 of AMW
\+ 39.29% of the next $290 of AMW
\+ 36.71% of the next $150 of AMW
\+ 43.15% of the next $100 of AMW
\+ 24% of the next $100 of AMW
\+ 20% of the next $250 of AMW.

The three general benefit increases of 1970, 1971, and 1972 accumulate to a 51.8 per cent over-all benefit increase over the 1969-72 period. This expansion in the general benefit level was at a much higher rate than in any comparable period, and greater than could possibly have been foreseen when the Nixon administration came into office in early 1969.

B. *Automatic Benefit Increases*

The most imaginative of the administration's OASDI proposals put forth in 1969 was that for an automatic adjustment in the benefit table in accordance with increases in consumer prices. An increase for a year was to occur, effective as of January 1, if the consumer price index for the second calendar quarter of the preceding year exceeded the CPI

for the base quarter (related to the time of the last general benefit increase) by as much as 3 per cent. The CPI for a quarter was defined as the average of the three monthly CPI results within the quarter, and the percentage increase called for was equal to the percentage increase in the CPI, rounded to the nearest 0.1 per cent. The base quarter was defined as the quarter in which any directly legislated general benefit increase became effective, or the second quarter of the preceding calendar year with respect to increases which took place on January 1 under the automatic provision.

These automatic benefit increases, at the rate of increase in consumer prices, were considered to be self-financed by increases in average taxable earnings. It had been observed that the rate of increase in average covered earnings had historically been about twice the rate of increase in the CPI, and that if taxable earnings could grow at the same rate as covered earnings and if the historical relationship between growth rates of consumer prices and covered earnings were to hold for the future, the additional income would be in reasonably close balance with additional outgo. It was clearly necessary to provide that the taxable earnings base also increase (at the same rate as average covered earnings), so that the ratio that taxable earnings bears to covered earnings would hold relatively constant. Otherwise, increases in average covered earnings would not flow through to similar increases in taxable earnings.

The recommendation therefore included a provision that whenever the benefit table was increased under the automatic provision, the taxable earnings base would also increase. The rate of increase in the taxable earnings base was to be calculated in accordance with the rate of increase in average covered earnings since the last earnings base increase. The resulting taxable earnings base was to be rounded to the nearest multiple of $300.

These important administration recommendations were not initially accepted by the House Ways and Means Committee, and the bill (H.R. 17550, Ninety-first Congress) reported out by this committee did not include these automatic provisions. They were added, however, on the floor of the House and were passed by the full House in May, 1970. This is the only instance in recent social security history where the House of Representatives did not fully accept the recommendations of its Ways and Means Committee.

When H.R. 17550 reached the Senate Finance Committee, the automatic provisions faced two obstacles. One was the realization that future Congresses would get no political credit for future benefit increases if they were to happen entirely automatically. Congress might maintain

its control, however, if it were clear that Congress had the power to override the automatic increase by prior action and if the expectation were that any future Congress was likely to do so. The Senate Finance Committee rewrote the automatic provisions so that essentially they have become a fallback position if future Congresses do not take action. Some observers feel that these provisions will never actually be effective. However, clearly they have a psychological impact, since they imply strongly a congressional intention to preserve the purchasing power of social security benefits.

The second obstacle faced by the administration in selling the automatic provisions to the Senate Finance Committee had to do with the mechanics under which the taxable earnings base was to be increased. The committee was under the impression that the financing of the automatic benefit increases would come entirely from the increase in the taxable earnings *base,* whereas it would come largely from the increase in earnings, *irrespective* of the base. With this misconception, the committee attempted to divide the additional financing needed between a smaller increase in the base and an increase in the future contribution rates.

After the Ninety-first Congress adjourned without passing H.R. 17550, the automatic provisions were reintroduced for consideration of the Ninety-second Congress as a part of H.R. 1. This time the Ways and Means Committee reported out the automatic provisions with essentially the same details as had passed the House the year before, but with provisions, similar to those of the Senate, making it easy for Congress to pre-empt the action of the automatic provisions.

When H.R. 1 reached the Senate, the Finance Committee's reservations about the mechanics for the increase in the taxable earnings base were still in evidence. The final version, however, which was passed as a part of P.L. 92-336 in midsummer of 1972, included all the essential features of the automatic provisions originally proposed in 1969.

The final legislation delays the first possible automatic benefit increase to January 1, 1975. It provides that the percentage increase on that date will be equal to the percentage by which the CPI for the second quarter of 1974 exceeds the CPI for the third quarter of 1972, the latter being the quarter of the most recent general benefit increase (the 20 per cent enacted as a part of P.L. 92-336). As of June, 1973, the time at which this paper is being written, it appears that the first automatic increase in benefits, recognizing CPI changes over the seven-quarter period, could well be more than 8 per cent. The pre-emption of the January, 1975, automatic increase, by some congressional action in 1973 or 1974, is a strong possibility.

The increase in taxable earnings base as of January 1, 1975, is to be calculated from the rate of increase in covered earnings over the period from the first quarter of 1973 to the first quarter of 1974. In this case the adjustment period is for only one year, whereas it is for seven quarters in the case of the benefit adjustment, because the base was last raised (to $12,000) for 1974. It is likely that the 1975 taxable earnings base under the automatic provisions will be $12,900, since the base must be a multiple of $300. The 1975 base will be $12,900 if average covered earnings should increase by as much as $6\frac{1}{4}$ per cent (but by no more than $8\frac{3}{4}$ per cent) over the year beginning with the first quarter of 1973, and if Congress sees fit to let the automatic provisions operate.

C. *Retirement Test*

The retirement test (sometimes called the earnings test) has over the years been almost unique among social security provisions because of its *lack* of acceptance by a large part of the general public.

Social security technicians view the cash benefits portion of social security as an earnings replacement system and feel that the system squanders its resources unless benefits are paid only when earnings have in fact been lost. A system which pays benefits at a specified age to persons who have not retired seems to defeat the earnings replacement purpose. The opposite viewpoint is that the retirement test causes a forfeiture of a benefit toward which the worker has contributed, and is a work disincentive.

A compromise between these two viewpoints has long been a part of the OASDI benefit structure. Under the retirement test the system ignores a certain level of earnings, and for higher levels of earnings it reduces social security benefits by less than such excess earnings. As of 1969, $1,680 of annual earnings (or $140 of monthly earnings) were ignored, and the next $1,200 of annual (or $100 of monthly) earnings reduced the benefit by only $1 for each $2. Only above $2,880 (or $240 per month) did each $1 of additional earnings subtract $1 from the benefit payable. For social security beneficiaries who have reached age 72, the retirement test has been inoperative since the 1954 amendments.

The administration proposals in 1969 were (1) to raise the $1,680 exempt amount to $1,800, (2) to make the $1-for-$2 arrangement effective for all excess earnings rather than only for a $1,200 band, and (3) to make the exempt amount increase automatically in step with average covered earnings. This last part of the recommendation was viewed by many as consistent with the other automatic provisions proposed.

The administration recommendation survived without essential change, except that the exempt amount was, at various stages of the legislation,

$2,000 (House version of H.R. 17550 and H.R. 1), $2,400 (Senate version of H.R. 17550 and Senate Finance Committee version of H.R. 1), and $3,000 (version of H.R. 1 passed initially by the Senate). The final result was $2,100 ($175 per month). At this level a worker can earn as much as twice his unreduced social security benefit, plus $175 monthly, before his benefit disappears entirely. With unreduced social security benefits for a retired couple now as high as $400, some workers may earn as much as $975 per month before all benefits disappear.

There was another minor change of a technical nature, making the application of the annual form of the retirement test slightly less effective in the calendar year during which the worker attains age 72.

D. *Special Minimum PIA*

There has always been special congressional interest, particularly in the Senate, in raising the minimum PIA up to a level approaching the assumed level of poverty. The Senate voted a $100 minimum PIA in 1969 (when the 15 per cent benefit increase was enacted), and again in 1970 in connection with its consideration of H.R. 17550; but both of these failed of eventual enactment.

It was the position of the Social Security Administration that the minimum PIA did not normally benefit the very low paid regular worker (an AMW of as much as $76 was enough to make the minimum then in the law ineffective) but instead was of help primarily to those whose AMW was low only because the period of covered service was short. The SSA preferred a special minimum PIA which would apply only to those with substantial covered service. If so restricted in application, the minimum PIA might be at a considerably higher level than any previously suggested.

The first appearance of a "special" minimum PIA was in the House-passed version of H.R. 1, which provided a minimum PIA of $10 for each year of covered service in excess of fifteen, but not to exceed $150. The Senate version became $10 for each year of covered service in excess of ten, but not to exceed $200. The provision that ultimately became law was $8.50 for each year of covered service in excess of ten, but not to exceed $170.

It should be noted that the special minimum actually enacted crosses the regular minimum ($84.50) at twenty years of covered service. Covered service for this purpose includes only years of coverage since 1950 in which covered earnings were at least one-fourth of the base, and years of coverage prior to 1951 equal to the number of years (up to fourteen) obtained by dividing total taxable earnings by $900. The effect of this

definition of years of covered service is that the special minimum can have a practical effect on the benefits for low-paid workers only where years of coverage are as many as twenty-two.

It might also be noted that the special minimum provision is not automatically adjusted. As earnings rise, the special minimum will become less and less effective, and the provision will eventually become entirely inoperative, unless the automatic provisions are sometime extended to the special minimum or the $8.50 (and the $170) otherwise increased.

E. *Age 62 Averaging Period for Men*

The "averaging period" for use in calculating the AMW for the retired worker's benefit has been effectively (1) the calendar year in which the worker reaches age 65 (for men) or age 62 (for women), less (2) the year 1956. The three-year-shorter averaging period for women was an accident of the past, arising in 1956 when actuarially reduced retirement benefits at age 62 were first granted to women. Later, when age 62 benefits were extended to males, the shorter averaging period for men was left out of the legislation to avoid additional cost.

Elimination of this example of sex discrimination was one of the original recommendations of the administration. After some modification in the Senate, the specific proposal was to stop the scheduled lengthening of the averaging period for male workers until that for females could catch up, thereby making a smooth transition from the present arrangements. This recommendation was accepted by Congress without much controversy, and the 1972 amendments define the averaging period for retirement situations in such a fashion that it works out as shown in the accompanying tabulation.

Worker's Year of Birth	Reaching Age 62 in	Reaching Age 65 in	Averaging Period	
			Males	Females
1908	1970	1973	17	14
1909	1971	1974	18	15
1910	1972	1975	19	16
1911	1973	1976	19	17
1912	1974	1977	19	18
1913	1975	1978	19	19
1914	1976	1979	20	20
. . .	. . .	. . .	. . .	. . .
1929 and thereafter	1991 and thereafter	1994 and thereafter	35	35

The over-all effect will be an increase in old-age benefits to males reaching age 62 in 1973 or later, with no effect on those born before 1911 and no effect on any worker already retired. A similar provision, but applying retroactively to those already retired, was considered but eventually rejected.

Of similar nature, but of considerably less importance, is the computation of the number of quarters of coverage required for fully insured status. For men this calculation has been based on the year in which age 65 was attained, whereas for women it is based on age 62. The 1972 amendments remove this difference, again only prospectively and over a transition period, by making the requirement for men eventually the same as for women.

F. *Widow's Benefit—100 Per Cent of PIA*

The benefit for aged widows was originally 75 per cent of the worker's primary insurance amount, first payable when the widow reached age 65. Liberalizations over the years had resulted in increases to 82½ per cent of the worker's PIA, payable when the widow reached age 62 without actuarial reduction and payable at age 60 (or as early as age 50 if the widow were disabled) with actuarial reduction. Since 1950 a similar benefit has been provided for dependent widowers.

The administration's 1969 proposals recognized the growing public concern for the aged widow and proposed that the widow's (and dependent widower's) benefit be raised to 100 per cent of the PIA, making it essentially the same as the retired worker's benefit. To make the widow's benefit no larger than the retired worker's benefit, the actuarial reduction under the 100 per cent PIA arrangement was to begin at age 65 (rather than at age 62). To avoid a reduction in widows' benefits below that previously provided, the actuarial reduction grades into the 82½ per cent PIA amount previously in effect at age 62.

This provision was included in the House-passed bill of the Ninety-first Congress and appeared in a slightly modified form in the Senate version. The Senate added a limitation that the widow's (or widower's) benefit should not exceed the retired worker's benefit if the worker were actually drawing such benefit at the date of his death. This limitation becomes meaningful if the worker was subject to an actuarial reduction because he claimed benefits before age 65.

This liberalization for many (but certainly not all) widows, including the special Senate limitation, survived the actions of the Ninety-second Congress and became law in late 1972. It affects widows and dependent widowers already on the beneficiary rolls, as well as those who

will come on the rolls in the future. The increases were first recognized in the checks for January, 1973. If neither the widow nor her former husband claimed benefits before age 65, the January, 1973, increase for the widow was about 21 per cent, following closely behind a 20 per cent increase effective four months earlier. Many other widows, particularly those who had claimed benefits at age 62 or were receiving the sole-survivor benefit based on 100 per cent of the minimum PIA, were not entitled to a January increase.

This change may have the long-range effect of encouraging widows to wait until age 65 before claiming the widow's benefit. Previously there was no incentive for a widow who had reached age 62 to do so.

G. *Delayed Retirement Increment*

The House version of H.R. 1 included a new provision which would add $\frac{1}{12}$ per cent to the worker's retirement benefit (but not to benefits for dependents or survivors) for each month beyond age 65 (and after 1970) and before age 72 that the worker delayed his retirement (and consequently did not receive retirement benefits). This provision was to operate prospectively only, not being applicable to those already retired. The Senate passed the same provision in such a form that it would apply to those already retired as well. The final legislation adopted the House version.

The delayed retirement increment is intended to give a slightly larger benefit in recognition of the additional contributions required after age 65 and the shorter time period during which the retirement benefit will be paid. The magnitude of the increment, however, is less than one-sixth of what would have been appropriate on the basis of actuarial equivalence, the principle which applies for retirement prior to age 65.

There is a technical difficulty with the delayed retirement increment, which may be corrected in a technical amendment before the Ninety-third Congress. The provision as now written does not apply to any retirement benefit begun before age 65, although cases where the benefit starts at a younger age, but nonetheless vanishes after age 65 because of the retirement test, are not uncommon.

H. *Waiting Period for Disability*

Since the beginning of the disability insurance program, the waiting period has been stated as six months. Since the calendar month in which disability first occurs is not considered one of the six, and since the payment for the seventh month is not made until just after its end,

the average period between the onset of disability and due date of the first check is seven and one-half months. As a matter of practice, the claim adjudication process often creates a delay in the actual receipt of the first disability check.

A reduction in the stated waiting period (to four months) first appeared in the Senate version of H.R. 17550, then in the House version of H.R. 1 (to five months), and again in the Senate version of H.R. 1 (to four months). The House version prevailed, and the final legislation requires a five-month waiting period. Effectively the waiting period will be about six and one-half months, thereby providing disability insurance benefits that follow rather closely the twenty-six week duration of temporary disability benefits rather commonly provided in the private sector.

I. *Less Important OASDI Changes*

The 1972 amendments resulted in a number of smaller changes in the benefit or eligibility structure of OASDI. The listing below indicates the general thrust of these minor changes.

1. *Disability Benefits for the Blind*

Interest in liberalizing the requirements under which the blind may draw disability insurance benefits was apparent first in the House version of the legislation presented to the Ninety-first Congress. The recency-of-work requirement was to be eliminated for the blind, reducing the eligibility requirements for disability benefits for the blind to the fully insured requirement.

The Senate version of H.R. 17550 further liberalized the House provision so that the blind could draw disability benefits with as little as six quarters of coverage, and benefits could be payable even if the blind worker were partially employed.

The history of H.R. 1 was almost identical until its final stages. Then the House-Senate conference committee adopted the less far-reaching provisions in the House version.

2. *Disabled Child*

Since the 1956 amendments, a person considered disabled since childhood has been entitled, under certain circumstances, to a disabled child benefit. This benefit is in many ways similar to the more common child's benefit, except that it does not terminate when the adult ages are reached. Prior to the 1972 amendments, to qualify for the longer-duration disabled child benefit, disability must have commenced prior to age 18. This provision was consistent with the original age 18 termination date for regular child's benefits but somewhat inconsistent with the 1965 extension of child's benefits to age 22 (if still in school). The 1972 amendments extend the age before which

childhood disability must have occurred to age 22 and also make possible the reinstatement of a childhood disability benefit after a short period of gainful employment.

This change in the statute was among those originally recommended by the administration. It survived the legislative process without controversy.

3. *Noncontributory Earnings Credits*

Members of the armed forces have been covered (with respect to their base pay) in the usual contributory manner since 1956. Wage credits were granted without contribution for any service in the armed forces prior to December 31, 1956 (and after September 16, 1940).

The 1967 amendments recognized that part of the compensation of those in the armed forces was in the form of rations, quarters allowances, and the like. Noncontributory credits up to $300 per quarter were given for service in the armed forces beginning in 1968, in recognition of this characteristic of the military pay structure.

The administration recommended that essentially the same $300 per quarter earnings credits be set up for military service back to January 1, 1957, the date when contributory military service credits were first earned. This recommendation survived the legislative activity of the period without difficulty and became law in late 1972.

Somewhat similar gratuitous wage credits were granted to Japanese-Americans interned during World War II.

In all cases, the additional benefits arising from gratuitous wage credits are to be financed from general revenues.

4. *Student Coverage to End of Semester*

Child's benefits previously terminated at age 18, or upon attainment of age 22 if the child was still in school as an undergraduate. The benefit period for undergraduate students was extended slightly by the 1972 amendments. It now terminates at the end of the school semester (or quarter) in which age 22 is attained.

5. *Workmen's Compensation Offset*

The 1972 amendments provide a third alternative for the calculation of "average current earnings" for the purpose of reducing disability insurance benefits in cases where workmen's compensation benefits are also payable.

6. *Support Requirement—Divorced Wives and Widows*

Divorced women no longer need to demonstrate their financial dependence on their former husbands in order to qualify for the divorced wife, divorced widow, and surviving divorced mother benefits. It is still necessary that the marriage have lasted for twenty years, and that no remarriage have occurred.

This provision was in the House bill presented to the Ninety-first Congress but was deleted by the Senate. It was included in all versions of H.R. 1, and became law in October, 1972.

7. *Child's Benefits Extended to Grandchildren—Conditions Revised Slightly as to Adopted Children*

The benefits granted to a child of a retired, disabled, or deceased worker are now extended to a grandchild of the worker or his spouse if the grandchild is or was living with and dependent upon the worker and if the child's natural parents are disabled or dead.

The conditions under which children adopted by old-age and disability insurance beneficiaries are entitled to child's benefits were made consistent. The adoption must have been decreed by a competent court, the child must be living with and dependent upon the beneficiary, and the child must have been under age 18 when he first lived with the worker.

8. *Dependent Widowers*

The 1965 amendments permitted widows (but not dependent widowers) to file for the widow's benefit as early as age 60, but subject to an actuarial reduction if the benefit were to begin before age 62. The 1972 amendments put dependent widowers in the same position.

9. *Extensions of Coverage*

The 1972 amendments include two very minor extensions of social security coverage to new groups.

a) Covered on a compulsory basis for the first time are certain self-employed United States citizens temporarily living abroad.

b) Covered at the election of the employer are members of a religious order subject to a vow of poverty. Wages for social security purposes are the fair market value of remuneration in kind, but not less than $100 per month.

10. *Rehabilitation of Disability Beneficiaries*

The amount of trust fund money authorized for reimbursement of state vocational rehabilitation agencies for the costs of rehabilitation efforts for disability insurance beneficiaries was increased from 1 per cent of disability insurance outgo to $1\frac{1}{4}$ per cent for fiscal year 1973, and $1\frac{1}{2}$ per cent thereafter.

J. *OASDI Changes Which Failed*

There were several changes in OASDI that were not actually enacted but gained some important measure of support. These may be considered directions in which OASDI might possibly move in the future.

1. The House version of H.R. 1 contained a provision for additional dropout years, and hence the shortening of the averaging period, for workers with long periods of covered service.
2. The House versions of H.R. 17550 and H.R. 1 both provided that an actuarial reduction imposed because of the early election of one category of benefit (e.g., retired worker's benefit) should not cause a reduction in

another (e.g., wife's benefit). The 1971 Advisory Council endorsed this provision.

3. The House version of H.R. 1 included a provision that the earnings records of married couples could be combined under certain circumstances, effectively increasing benefits to what they might have been had all the earnings appeared on one wage record.
4. The Senate version of H.R. 1, via an amendment added on the floor, lowered the earliest age at which reduced benefits could begin to age 60 (for workers, wives, dependent husbands, and parents) and to age 55 for widows.
5. The Advisory Council proposed that it be made no longer possible to collect OASDI benefits retroactively, whenever the effect of such retroactivity would be to actuarially reduce the benefit below the amount to which the beneficiary would be entitled if it were not retroactive.
6. The Advisory Council proposed the elimination of the disability insurance requirement that disability be expected to last for at least twelve months, and that workers age 55 or over be considered disabled under the more liberal test that now applies only to the blind.
7. The Advisory Council proposed that social security coverage be extended to some farm laborers not now covered.
8. The Advisory Council recommended a limited coverage transfer arrangement with the civil service retirement system.

K. *Financing*

The 1971 Advisory Council's recommendations with respect to benefit changes in the OASDI area were largely ratifications of proposals already partway through the legislative process, or minor liberalizations that did not elicit enough support and eventually failed. The immediate impact of this council on the benefit structure of the cash benefits program was probably not very great.

As to the financing of the OASDI system, however, the council's recommendations were far-reaching and eventually were largely accepted. The council's financing recommendations were developed by a subcommittee which included a prominent actuary. The subcommittee was assisted by a panel of outside actuaries and economists. The financing recommendations of the panel, the subcommittee, and eventually the council were made without a dissenting vote and were to have an important influence on the actuarial methodology and on the schedule of contribution rates eventually enacted.

As a background to the discussion of financing issues, three features of the actuarial methodology as it existed prior to the council's report will be described. For each, the council's attitude will be discussed and the eventual resolution of the issue outlined.

1. SINGLE BEST ESTIMATE

The long-range cost estimates had previously been made in accordance with two different sets of actuarial assumptions: (*a*) a set of "low-cost" or possibly "optimistic" assumptions which might well understate the eventual cost of the program and (*b*) a set of "high-cost" or possibly "conservative" assumptions which might well overstate the eventual cost. For the purpose of displaying an actuarial balance, the arithmetic mean of the high- and low-cost results (described as an intermediate estimate) was compared with the contribution schedule in the statute.

The council expressed a strong preference for a "single best estimate," augmented by sensitivity testing, as a substitute for the low-cost, high-cost, and intermediate estimates employed previously. The council buttressed its opinion with the following argument:

a) There could be no assurance that actual experience would fall between the low- and the high-cost estimates—although it would appear to the public that such a result was expected.

b) The actuarial assumptions behind the intermediate estimate, which became the important estimate in view of its role in testing the actuarial balance, could not be clearly described, because a mean of two results is not equal to the result of using the mean of each assumption. For this reason the mean-of-results methodology made it very difficult for even an informed observer to get a feel for the conservatism (or lack thereof) in the actuarial assumptions.

c) The intermediate estimate drew all the attention, and the high-cost and low-cost projections were largely ignored.

The eventual result of this recommendation was an acceptance of the council's viewpoint and a commitment on the part of the Office of the Actuary to the development of a single estimate and as much sensitivity testing as appears to be meaningful.

2. CURRENT-COST FINANCING

The Advisory Council used the term "current-cost financing" to describe a modification of what is commonly called "pay-as-you-go" financing. The modification lies in the intention to maintain a trust fund, largely for contingency reserve purposes, approximately equal to one year's outgo. Current-cost financing will require a slightly higher contribution rate than a strictly computed pay-as-you-go rate, in the usual situation where the outgo grows at a rate in excess of the interest rate earned by the trust assets.

It can be shown that the OASDI system has operated, over the last ten years at least, on close to current-cost financing principles. As of the early 1971 date of the Council's report, the trust funds were in fact very close to the projected outgo for 1971.

There was, however, another sense in which the system had historically departed widely from current-cost financing principles. Contribution rate increases not far into the future were commonly established, for the purpose of holding down the ultimate contribution rate. If actually allowed to go into effect without a concurrent increase in benefits, the higher contribution rates would have resulted in a fund buildup in excess of one year's outgo. Actuarial reports based on such higher contribution rates projected trust funds of substantial size and left the impression that a considerable degree of advance funding was intended. In the actual event, when the time came for the contribution rate increase to go into effect, Congress would either postpone such increase or enact a benefit increase sufficient to keep the fund level not far from a year's outgo.

The Advisory Council recommended that this practice be changed, in such a way that all the future contribution rates would be set in accordance with the current-cost principle. It was recognized that the contribution rates set in the law would need to be rounded and that they should not change very often; to this extent, compromises with the current-cost financing principle would be necessary. The council also recognized that a fund of one year's outgo could not be maintained exactly without undesirable manipulation of the contribution rates, and suggested that a range of fund ratios—from 75 per cent of the projected outgo for the following year to 125 per cent—be considered acceptable. The council specifically recommended that the statute require the secretary of HEW to notify Congress whenever it appeared that the fund ratio was about to go outside this range.

The reasoning behind the council's current-cost financing recommendation was generally accepted by the trustees, the administration, and Congress. While the specific recommendation regarding a statutory provision has never become law, attention has clearly been focused on the fund ratio.

It should be noted that the fund ratio will necessarily take a substantial drop whenever a large general benefit increase is enacted, because the additional projected outlays immediately increase the denominator of the fund ratio, while any buildup of the trust funds from additional financing is necessarily gradual. The 20 per cent general benefit increase effective for September, 1972, is largely responsible

for a drop in the fund ratio, from 99 per cent as of the beginning of 1972 to 80 per cent at its end.

Current-cost financing principles are the basis for the contribution rates eventually enacted as a part of the 1972 amendments. There is no increase from the 4.85 per cent OASDI contribution rate established for 1973 until well into the next century. The relatively large increase in rate scheduled for the year 2010 recognizes the adverse demographic trend which will begin to be felt at about that time, as the early end of the post–World War II baby boom begins to reach retirement age. Until then a rather level OASDI rate fits current-cost financing fairly well. The rate for 2011 and after does not fit current-cost rates very closely, but the time in question is more than thirty-five years away, and a close fit to current cost so far in the future cannot be considered important.

There has been a change in the actuarial methodology which is in keeping with, although not necessarily required by, the new emphasis on current-cost financing. Formerly the comparison, for the purpose of computing an actuarial balance, was between the level equivalent of outgo and the level equivalent of contributions, both expressed as a per cent of taxable payroll and both computed on the basis of a long-range interest assumption. Such an approach seems necessary if the trust funds are to become relatively large. If the contribution rates are always rather close to current-cost financing rates, however, a simpler and more understandable comparison becomes practical. This simpler computation of an actuarial balance compares the arithmetic mean of the current cost financing rates (over the seventy-five-year valuation period) with the arithmetic mean of the contribution rates. An interest rate enters into the calculation only in the estimation of the current-cost financing rate. It can be shown that the actuarial balance on the simpler method is very close to that on the method formerly used. In fact, they will come out identically in the special case where the taxable payroll grows at exactly the assumed interest rate.

3. "DYNAMIC" EARNINGS ASSUMPTIONS

The long-range cost estimates for the OASDI system necessarily have been based on the law as it stood as of the date the estimates were made. Before the introduction of automatic provisions into the situation, the system outlined in the law was a "static" system, with a fixed benefit table and taxable earnings base. Although the history of the system showed clearly that both the benefit table and the taxable earnings base were adjusted upward periodically, there was no indication in the law

itself as to how benefits or the earnings base might be adjusted in the future.

Under these circumstances it was appropriate to make the long-range cost calculations on what has come to be known as the "level earnings" assumption. The average earnings of covered workers were assumed to stay at their current level, in keeping with the concept that, if inflationary tendencies cannot be recognized in the benefit structure (since the law gives no clue as to how any adjustment will be made), they should not be recognized in the income projections.

The "level earnings" assumption is misnamed, in a sense, since, as the actual experience emerged, the facts as to average covered earnings replaced the assumption concerning them. As average covered earnings rose in response to price inflation and increased productivity of labor, the level of projected earnings increased and actuarial gains emerged, which were available to finance benefit increases.

The deliberations of the Advisory Council took place in a somewhat different atmosphere. The automatic provisions, although not yet a part of the law, had been put forth by the administration and were endorsed by the Advisory Council itself. It was apparent that the automatic provisions could be a base on which a different actuarial methodology could be built. The Advisory Council recommended that the so-called level earnings assumption be abandoned, to be replaced by an explicit assumption as to the rate of future increase in average covered earnings. At the same time the assumption of a static benefit table and a static taxable earnings base would be abandoned as well, to be replaced by the concept that the benefit table would increase at the assumed rate of increase in consumer prices, and the taxable earnings base would increase at the assumed rate of increase in average covered earnings. The effect of the Advisory Council recommendations would be to change the actuarial view of the system from "static" to "dynamic," with changes assumed to occur in accordance with the proposal then before Congress (but not then part of the law) with respect to automatic increases in benefits and the earnings base.

This recommendation of the Advisory Council gave rise to more controversy than did its suggestions regarding current-cost financing or a single best estimate. There were at least two important difficulties from the point of view of those responsible for the actuarial estimates under which the system operates.

a) It was evident that the Advisory Council was recommending dynamic assumptions even if the automatic provisions were not to pass. The Office

of the Actuary (SSA) felt that the appropriateness of the dynamic approach depended heavily on the passage of the automatic provisions, since without them the basic assumption as to what might happen to benefits and the earnings base as wages and prices rose would be based on theory or speculation rather than on law.

b) It was also evident that the council's methodology would put upon the actuaries the heavy burden of making and defending assumptions as to economic factors—essentially those as to the rate of increase in consumer prices and in average covered earnings—for a very long time (seventy-five years) into the future. Moreover, the results, and hence the actuarial balances by which the adequacy of future financing is measured, would be very sensitive to these economic assumptions. The single most important factor is the assumption as to the rate of increase in earnings in constant-dollar terms.

After an intensive study of this recommendation of the council, the trustees of the OASDI system, advised by the social security actuaries, concluded (and stated in their 1972 report) that the dynamic methodology recommended by the council would be appropriate for a system which included the proposed automatic provisions, provided that a margin for contingency were introduced to act as protection against all the ways in which the long-range cost estimates might prove to be deficient, but particularly against adverse experience with respect to the important economic factors.

The council's basic recommendation, with the contingency margin backed by the trustees, was effectively adopted by the Congress with the passage of P.L. 92-336 in mid-1972, which legislation also included the two automatic provisions. The new principles also determined the contribution rates in P.L. 92-603, enacted four months later.

The 1971 amendments provided for a $9,000 taxable earnings base and an OASDI employee contribution rate of 5.0 per cent for calendar year 1973, increasing to 5.15 per cent in 1976. The dynamic assumptions made possible a 20 per cent general benefit increase and the OASDI liberalization included in H.R. 1, on a taxable earnings base of $10,800 for 1973, $12,000 for 1974, and automatic increases thereafter, and a contribution rate of 4.85 per cent for 1973–77, 4.8 per cent for 1978–2010, and 5.85 per cent for 2011 and later.

The Congress effectively had a one-time choice, whenever the new methodology was adopted, of reducing the future financing, of revising benefits upward, or of doing a little of both. It is perhaps not surprising that in 1972, an election year, the choice went the way it did.

The current-cost estimates of the Office of the Actuary, on which the

actuarial balances are computed, are now based on the following assumptions: for the long-range annual rate of increase in the CPI, $2\frac{3}{4}$ per cent, and for the long-range annual rate of increase in average covered earnings, 5 per cent.

As a corollary to the above, the long-range rate of increase in average covered earnings in constant-dollar terms is assumed to be approximately 5 per cent minus $2\frac{3}{4}$ per cent, or $2\frac{1}{4}$ per cent,[1] a rate close to the actual experience over the twenty-year period ending in 1972. Both the $2\frac{3}{4}$ per cent and the 5 per cent are higher (by about $\frac{1}{2}$ per cent) than the past experience, in recognition of the prevailing opinion that rates of both wage and price inflation are likely to be at higher levels in the future than in the past.

The possibility that gains in real earnings may not continue over the long-range future at a $2\frac{1}{4}$ per cent annual rate must be faced, as must the possibility that the contribution rates may prove to be deficient for other reasons. The specific margin for contingencies is $\frac{3}{8}$ per cent per year, applied for the period 1973–2010. The margin is introduced by multiplying the theoretical rate otherwise computed for the year 1973 $+ t$ by $(1.00375)^t$, where $t \leq 37$. This contingency factor accumulates to about 15 per cent by 2010 and holds constant thereafter.

In assessing the adequacy of the contingency margin, it may be helpful to note that if the CPI rose by $3\frac{1}{8}$ per cent annually to the year 2010, instead of the $2\frac{3}{4}$ per cent assumed, but all the other actuarial assumptions (including the 5 per cent gain in average covered earnings) were to be exactly according to experience, the contingency margin would offset the higher level of consumer price inflation.

Table 1 shows the OASDI current-cost projections by which the contribution rates were tested. The resulting actuarial balance is almost exactly zero for the system as a whole, although it is very slightly negative for old-age and survivors insurance and very slightly positive for disability insurance.

III. MEDICARE—HOSPITAL INSURANCE (HI) AND SUPPLEMENTARY MEDICAL INSURANCE (SMI)

The important developments in the Medicare area differed somewhat from those in OASDI, in that fewer of the important new concepts actually were enacted, and many of the new developments were rather late in the period under consideration. As in the previous section on OASDI, this description of Medicare development will (1) describe individually the more important changes which did occur, (2) list the minor changes

[1] More precisely, the increase in earnings in constant-dollar terms is $1.05/1.0275 - 1 = 2.19$ per cent.

that were enacted, (3) give some picture of the more important proposals which so far have not become law, and (4) delve rather deeply into the changes in financing.

A. *Extension of Medicare to the Disabled*

The original Medicare legislation covered only persons who had reached age 65, most of whom were beneficiaries under the old-age provisions of the cash benefits program. The logic of confining Medicare to the 65 and older group was partly that this group had higher hospital and medical expenditures and partly that they had reduced income from which such expenditures could be met. That this rationale applied with

TABLE 1

ESTIMATED CURRENT COST* OF OLD-AGE, SURVIVORS, AND DISABILITY INSURANCE SYSTEM AS PER CENT OF TAXABLE PAYROLL,† UNDER PUBLIC LAW 92-603, LONG-RANGE DYNAMIC COST ESTIMATE,‡ FOR SELECTED YEARS, 1980–2045

Calendar Year	Old-Age and Survivors Insurance	Disability Insurance	Total
1980	8.14	1.15	9.29
1985	8.20	1.16	9.36
1990	8.56	1.15	9.71
1995	8.26	1.15	9.41
2000	8.00	1.20	9.20
2005	7.95	1.31	9.26
2010	8.50	1.41	9.91
2015	9.31	1.44	10.75
2020	10.15	1.43	11.58
2025	10.74	1.39	12.13
2030	10.86	1.39	12.25
2035	10.75	1.43	12.18
2040	10.78	1.45	12.23
2045	10.94	1.45	12.39
Average cost §	9.32	1.31	10.63
Average contribution rate ‖	9.31	1.32	10.63
Actuarial balance	− 0.01	+0.01	....

* Represents the cost as per cent of taxable payroll of all expenditures in the year, including amounts needed to maintain the funds at about the following year's expenditures.

† Payroll is adjusted to take into account the lower contribution rate on self-employment income, on tips, and on multiple-employer excess wages as compared with the combined employer-employee rate.

‡ Under the dynamic assumptions, the average taxable earnings and the taxable earnings base are assumed to increase at a rate of 5 per cent per year, while the benefit table is subject to annual increases of 2¾ per cent corresponding to increases in the CPI. In addition, a margin of three-eighths of 1 per cent is added for every year after 1973 and before the year 2011.

§ Represents the arithmetic average of the current cost for the seventy-four-year period 1973–2046 adjusted for the effect of the fund ratio at the end of 1972.

‖ Combined employer-employee rate.

almost equal force to beneficiaries under the disability insurance program was recognized early, but cost and technical considerations have until recently prevented the extension of Medicare to other than the 65 and older group.

The push toward extension of Medicare to the disabled was not particularly strong during the lifetime of the Ninety-first Congress. The 1969 administration recommendations were silent on this point, and no such extension was included in any of the social security legislation submitted in 1969 or 1970.

A quickening of interest was noticeable in the early days of the Ninety-second Congress. The 1971 Advisory Council on Social Security, in its report of March, 1971, recommended the extension of Medicare to the disabled. At almost the same time the Ways and Means Committee of the House, in its executive sessions on H.R. 1, voted to add a provision extending both parts of Medicare to the disabled.

The H.R. 1 provision did not extend Medicare benefits to *all* of those entitled to disability benefits under the disability insurance program but only to those so entitled for as long as twenty-four months. Because of the disability insurance waiting period, a worker must be disabled for nearly two and one-half years before he becomes eligible for Medicare. Cost considerations played the important role in this limitation, although a case can be made that those more recently disabled may have an even greater need.

It should be noted that those entitled to disability benefits under the disability insurance program, and hence potentially eligible for Medicare, include not only disabled workers but also disabled widows or disabled dependent widowers aged 50–65, disabled women aged 50 or older entitled to mothers' benefits, and persons entitled to childhood disability benefits because they were disabled before age 22. H.R. 1 also covered persons effectively entitled to disability insurance benefits through the operation of the Railroad Retirement Financial Interchange.

Once adopted by the House Ways and Means Committee, the extension of Medicare to the long-term disabled had relatively smooth sailing, despite some concern as to its effect on the federal budget. The provision became law in essentially its original form with the passage of H.R. 1 in October, 1972. Its effective date became July 1, 1973.

B. *Chronic Kidney Disease*

Very late in the legislative considerations of H.R. 1, a provision was introduced on the floor of the Senate extending Medicare benefits to certain individuals under age 65 suffering from chronic kidney disease

and requiring treatment by renal hemodialysis or kidney transplant. This amendment passed the Senate in early October, 1972. Surprisingly, this provision, after some minor cost-reducing modifications, survived the conference held a few days later. The amendment became law with the passage of H.R. 1, and its provisions became effective on July 1, 1973.

The eligibility requirement is that the individual be currently or fully insured, or that he be a beneficiary under the cash benefits program, or that he be a spouse or dependent child of an insured worker or beneficiary. There are very few persons suffering from kidney disease who do not meet this requirement.

The Medicare benefits are limited to the time period starting with the third month after the month in which a course of renal hemodialysis begins and lasting through the twelfth month after a kidney transplant is performed or renal dialysis terminates. Within this time period, and subject to the cost-sharing features already a part of Medicare benefits, reasonable costs for inpatient hospital care and reasonable charges for physicians' services are covered, as for any other Medicare insured.

The Secretary of HEW is given certain powers to ensure efficient use of medical resources in the operation of this provision. Regulations spelling out the details had not yet been issued when this paper was written.

Many observers of Medicare developments, including the author of this paper, find the passage of special-purpose amendments to the Medicare program disturbing. Putting any one disease, or any particular treatment for such disease, in a priority position over other diseases and other treatments seems to be a reversal of the trend toward neutrality of financing. This provision has many of the characteristics of "dread disease" provisions of older health insurance policies.

C. *Change in SMI Deductible and Coinsurance*

Unlike the "dynamic" inpatient deductible under HI, the deductible under SMI has been a "static" $50, with no mechanics for automatic upward change as health expenditures rise. H.R. 1, as it passed the House, preserved the static nature of the SMI deductible but raised its amount to $60, effective for calendar year 1973. The Senate passed H.R. 1 without this increase in deductible, but the increase was included in the final legislation.

The 20 per cent coinsurance was eliminated with respect to home health services only, as a result of a floor amendment in the Senate that was accepted by the House-Senate conference committee.

D. *Other Changes in Medicare Provisions*

Among the many other changes that survived the legislative activity and became law with the passage of P.L. 92-603 were those listed below. Many of these were intended to improve the effectiveness of the program in delivering quality care at a reasonable cost. Others were intended to make the coverage more universal.

1. *Professional Standards Review Organizations (PSRO's)*

Largely at the instigation of the Senate Finance Committee, H.R. 1 as it was finally enacted provides for PSRO's. These are substantial numbers of practicing physicians in a local area responsible for review of institutional services covered under Medicare and Medicaid, to see that such services are medically necessary and are provided in accordance with professional standards. The Secretary of HEW is to establish, by January 1, 1974, areas throughout the United States with respect to which PSRO's may be designated, and then to make agreements with individual organizations as they voluntarily develop, provided that it can be shown that the PSRO is representative of the practicing physicians in the area.

2. *Health Maintenance Organizations (HMO's)*

In line with efforts in other legislation to encourage the development of what are now defined as HMO's, provisions are made to reimburse such organizations on an incentive basis.

A prepaid group health or other capitation plan that meets prescribed standards can elect to be reimbursed for services that it renders to Medicare enrollees on an "at risk" basis. This method will permit the HMO and the Medicare trust funds to share, according to a prescribed formula, in any savings that the HMO achieves in relation to average per capita costs of covered health services for persons outside the HMO. A beneficiary enrolled with an HMO that elects this option will receive covered services only through the HMO, except for emergency services received when temporarily outside the HMO service area.

HMO's can also choose to be reimbursed on a basis that reflects the HMO's reasonable costs of providing Medicare covered services. This is the basis that has been employed in the past and the only choice offered to newly established HMO's.

The law also encourages the development of new ways of providing medical care by authorizing experiments and demonstration projects. Special mention is made of experiments involving services by physician assistants and clinical psychologists.

3. *Limitations on Recognition of Increase in Prevailing Charges*

To determine the reasonableness of charges by physicians under SMI, (*a*) charge levels recognized as prevailing for a fiscal year cannot exceed the

75th percentile of actual charges in a locality during the calendar year ending prior to the start of the fiscal year; (*b*) prevailing charges in a locality can be increased in the aggregate only to the extent justified by indexes reflecting changes in costs of practice and in earnings levels; and (*c*) for medical supplies, equipment, and services that do not vary significantly by supplier, charges allowed as reasonable may not exceed the lowest levels at which such supplies, equipment, or services are widely and consistently available in the locality.

4. *Uniform Medicare and Medicaid Definitions and Requirements for Nursing Facilities*

A single "skilled nursing facility" definition is established for institutions formerly identified as extended care facilities under Medicare and skilled nursing homes under Medicaid. The Medicare definition of covered extended care services is broadened somewhat, and the same definition applies to skilled nursing services under Medicaid. The Secretary of HEW may no longer require medical social services as a condition of participation for skilled nursing facilities under either Medicare or Medicaid. The Secretary may waive the requirement that a skilled nursing facility must employ a registered nurse full time for certain rural facilities unable to ensure the presence of a full-time registered nurse seven days a week.

5. *Hospital Insurance for the Uninsured*

Persons over age 65 but ineligible for hospital insurance may enroll, on a voluntary premium payment basis, for such coverage. Those who enroll pay the full cost of their protection—set at $33 per month initially and increasing thereafter at the same rate as the inpatient hospital deductible increases. Enrollment for SMI is required.

6. *Provisions Making SMI Enrollment Easier*

Aged and disabled beneficiaries will be automatically enrolled for SMI as they become entitled to hospital insurance, but such enrollment will not be effective if the beneficiary declines the coverage. Provisions preventing enrollment more than three years after the first opportunity are repealed.

7. *Chiropractors*

The 1972 amendments cover, for the first time, certain services rendered by licensed chiropractors, but only with respect to correction of subluxation of the spine demonstrated by X-ray.

8. *Physical Therapy*

Services of independent physical therapists are now covered, on a limited basis, under SMI.

9. *Speech Pathologists*

Services of speech pathologists are now covered under SMI.

10. *Co-ordination with Federal Employees Health Benefit Program*

Antiduplication provisions with the Federal Employees Health Benefit program are to be effective in 1975 if that program is not amended to co-ordinate with Medicare.

E. *Medicare Proposals That Failed*

There were several proposals of some importance affecting the Medicare program which made some headway but did not become a part of the final legislation.

1. *Catastrophe Insurance*

Senator Long, chairman of the Senate Finance Committee, introduced into both the Ninety-first and the Ninety-second Congress a form of "catastrophe" insurance, covering all persons under age 65 for Medicare benefits, but subject to 20 per cent coinsurance and a very high deductible. The deductible was expressed as the expenses associated with the first sixty days of hospital confinement, and for SMI, $2,000 per person in a calendar year. This provision was reported favorably by the Senate Finance Committee in connection with H.R. 17550 but was deleted by the full Senate before passage. It played no real part in the legislative history of H.R. 1.

2. *Coinsurance after Thirty Days; Lifetime Reserve Increase*

In early 1971 the administration proposed that a cost-sharing feature be introduced into the HI program, with respect to the eleventh to the sixtieth day of hospitalization. The proposed amount of this cost-sharing was one-fourth of the inpatient deductible, the amount already provided for the sixty-first to the ninetieth day.

The House Ways and Means Committee introduced this concept into H.R. 1, except that the additional cost-sharing would start with the thirty-first day instead of the eleventh. At the same time the committee included an extension of the number of lifetime reserve days from 60 to 120. The cost effects of the two provisions were roughly offsetting.

The Senate eliminated both of these provisions, and they were not restored by the conference committee.

A provision passed by the Senate would have decreased the cost-sharing in the lifetime reserve from one-half to one-fourth of the inpatient deductible, but it too failed in conference.

3. *Prescription Drugs*

For some time the Senate has shown interest in including prescription drugs under Medicare. In early 1972 the administration came rather close to recommending coverage of a limited formulary of prescription drugs under the hospital insurance program. There was no formal recommendation along these lines, although a study of such coverage had been undertaken within the

Department of Health, Education, and Welfare, and the Secretary was known to be interested therein.

The Senate Finance Committee, in its 1972 deliberations as to H.R. 1, added the coverage of certain maintenance prescription drugs used in the treatment of the most common chronic diseases of the elderly, with a $1 copayment per prescription. This provision was passed by the full Senate but was eliminated by the conferees.

4. *Medicare Extension to "Black Lung"*

A provision first introduced on the floor of the Senate and passed by the Senate as a part of H.R. 1 would have extended Medicare coverage to coal miners receiving disability-type benefits under the black lung program. This provision was dropped by the House-Senate conference.

5. *Extension of Medicare below Age 65*

The Senate Finance Committee reported out an extension of Medicare protection, on an optional premium-paying basis, to aged 60–64 spouses of Medicare beneficiaries, to others aged 60–64 who are entitled to benefits under the OASDI system, and to disability beneficiaries aged 60–64 who are not eligible for Medicare because they have not been entitled for as long as twenty-four months. This provision passed the full Senate but was dropped by the conferees.

F. *Financing*

The Medicare portion of the social security system had some financing problems before the 1969–72 period began, and additional financing was needed because of the extension of the program to the disabled.

1. The contribution rates for HI, essentially set by the 1967 amendments, proved to be too low. The 1970 report of the board of trustees of the HI system showed a negative actuarial balance of 0.48 per cent of taxable payroll, but the deficiency had been recognized earlier. The administration, in its recommendations of 1969, had proposed increases in the financing of the HI program to eliminate the emerging deficit.
2. There has been for some time interest in eliminating the monthly premium required of SMI enrollees. It was noted that the voluntary nature of the SMI program was more theoretical than real, since the 50 per cent government contribution resulted in a rate of participation in excess of 95 per cent. Moreover, the increases required in SMI premium rates were a constant source of complaint from enrollees and the organizations representing the retired.

   The 1971 Advisory Council for Social Security recommended that HI and SMI be combined for financing purposes and that the combined program be financed two-thirds by a payroll tax split equally between employer and employee and one-third by general revenues. The administration picked

up and recommended the combined financing idea, although in this case it was not clear how much (if any) general revenue financing was recommended. Both of these recommendations would eliminate the politically sensitive enrollee premium.

3. The per capita cost of the SMI coverage for the disabled was thought to be something like 2½ times the similar cost for those aged 65 and older, and it was generally understood that the disabled could not afford premium payments at such high levels, nor could the aged be expected to subsidize the disabled. There was no comparable problem in the HI program, because of its payroll tax financing, unless the resulting contribution rates were found unacceptable by the United States public.

After all the dust had cleared, the concept of combining the financing of the two programs, supported by both the Advisory Council and the administration, has been postponed if not actually abandoned. The financing problems of HI and SMI, as changed by the 1972 amendments, were solved in the following ways.

TABLE 2

TAXABLE EARNINGS BASES AND HI CONTRIBUTION RATES 1972 AND 1971 AMENDMENTS

Calendar Year	1972 Amendments		Calendar Year	1971 Amendments	
	Taxable Earnings Base	Contribution Rate*		Taxable Earnings Base	Contribution Rate*
1973	$10,800	1.0 %	1973–75	$9,000	0.65%
1974	12,000	1.0	1976–79	9,000	0.70
1975–77	†	1.0	1980–86	9,000	0.80
1978–80	†	1.25	1987 and later	9,000	0.90
1981–85	†	1.35			
1986 and later	†	1.45			

* Employer, employee, and self-employed.
† In accordance with automatic provisions.

1. HOSPITAL INSURANCE

The law now includes contribution rates and taxable earnings bases that provide additional financing sufficient to (1) extend the coverage to the long-term disabled, and to those requiring renal hemodialysis or kidney transplant, and recognize all of the other new features of the new statute affecting the HI system, and (2) eliminate the earlier deficit and restore the long-range actuarial balance.

Table 2 shows the contribution rates and taxable earnings bases in

the new law and compares them with those in effect under the 1971 legislation.

It should be noted that the automatic provisions with respect to changes in the taxable earnings base apply to the financing of the HI program in the same way that they do to OASDI. Dynamic assumptions as to earnings have been a part of the actuarial methodology of the HI program for some time, and no modification was required to bring the estimates into conformity with this Advisory Council recommendation.

The current-cost financing concepts put forth by the 1971 Advisory Council, and by now accepted by the trustees, apply with equal force to the OASDI and HI programs, and the test of actuarial adequacy is

TABLE 3

Calendar Year	Current Cost of Program*
1973	1.74%
1974	1.99
1975	2.12
1980	2.50
1985	2.65
1990	2.86
1995	2.99
Average over 25 years 1973-97	2.61
Average tax rate	2.63
Actuarial balance	+0.02

* Per cent of taxable payroll required to provide the benefits and administrative expenses for the calendar year and to build and maintain the ratio of the fund to next year's outgo at 100 per cent.

essentially the same. In the case of HI, however, the program has an inadequate fund ratio as of the beginning of 1973 (36 per cent), as a result of both inadequate past financing and the extension of the program to the disabled as of mid-1973. Tests show that the fund ratio will build rapidly under the contribution rates now in the law and that a 100 per cent fund ratio may well be attained by 1979.

After the passage of the 1972 amendments, the actuarial balance was determined as shown in Table 3.

2. SUPPLEMENTARY MEDICAL INSURANCE

The financing of the SMI program was not so radically changed as it might have been if any of the "combined with HI" financing proposals had been successful. The SMI program will still be financed in a manner peculiarly its own, relying on premiums from enrollees and general

revenue financing to meet the incurred benefit payments and administrative expenses on a year-to-year basis.

The new law, however, changes the relationships between the premiums collected and the general revenue financing. Previously these two sources were equal in magnitude, but, with the new statute, financing from general revenue will become the larger. Two provisions of the new law make the difference:

1. The premium rate charged the disabled (and those eligible under the chronic kidney disease provision) is to be the same as that charged those 65 and older and hence considerably less than the theoretical half-premium for this substandard group. The SMI trust fund is to be made whole by appropriately increasing the government contribution.
2. The SMI premium rate is limited, since it now cannot increase by a greater percentage than OASDI benefits have increased since the last increase in the SMI premium rate. When the enrollee premium is so limited, the government contribution is increased so that the SMI trust fund income is unaffected. This limitation did not apply to the 50-cent increase (from $5.80 to $6.30) in the enrollee premium promulgated in December, 1972, for fiscal 1974, because the 20 per cent OASDI increase of September, 1972, clearly exceeded the rate of premium increase. This limitation is likely to operate for future years, however, and in particular is likely to require that the $6.30 rate be maintained for fiscal 1975.

These two new provisions, in addition to increasing the proportion of general revenue financing in the SMI program, have some more subtle effects. The pressure that enrollees have exerted toward holding down the SMI premium rate, and hence on holding down the expenditures of the program, will be lessened. The result could well be the rather strange combination of a better-financed system (because the actuaries have a freer hand in setting the actuarial rates) and even more rapidly increasing per capita expenditure (because enrollees and their representatives may lose interest in the rate of increase in the actuarial rates).

IV. PUBLIC ASSISTANCE

The Nixon administration in 1969 inherited a public assistance program consisting of (1) a family assistance program—Aid to Families with Dependent Children (AFDC); (2) three adult assistance programs—Old-Age Assistance, Aid to the Disabled, and Aid to the Blind; and (3) a medical assistance program—Medicaid. All were established under the Federal Social Security Act, and all operate with federally established guidelines; but within this federal framework these programs were state-designed and state-administered. The financing was based on the principle that the federal government, from general revenues, would

in some proportion match the outlays of the states. The federal matching varied by program, and by the principle that the states with larger financial resources should pay a larger share.

Public criticism of the public assistance program had grown over the years since its establishment in the late 1930's, and by 1969 it had reached the stage of a considerable demand for welfare reform. Among the concerns about the public assistance programs which indicated dissatisfaction were the following:

a) Concern about a very rapidly rising welfare load, causing severe financial strain in several of the more populous states.
b) Concern that the incentives for work were not strong enough and that the working poor not covered under public assistance too often had lower income than those in AFDC.
c) Concern that many of the conditions under which assistance was granted treated welfare recipients in a degrading manner, as if they were second-class citizens.
d) Concern as to the nonuniformity of benefits from state to state, raising the question as to why public assistance programs were so much more generous in some states than in others, why the federal welfare dollar was allocated geographically in a manner quite different from the presumed needs, and whether nonuniformity might be causing migration of the welfare population into the more generous states.
e) Concern that the structure of AFDC encouraged dependency and had undesirable effects on the structure of the families it was intended to serve.

A. *Family Assistance*

The administration's 1969 proposals for reform of the AFDC program were essentially the following:

1. Replacing AFDC was a new program called the "Family Assistance Plan" (FAP). The program employed the "guaranteed income" or "negative income tax" idea, assuring a basic level of income to each eligible family. The basic level was to be uniform throughout the country and to vary only by family size, with uniform eligibility requirements set by the federal government, 100 per cent federal financing, and federal administration. State supplements were contemplated without federal sharing of the supplementary cost, except that the federal government stood ready to administer the state supplement at federal expense if a state so desired.
2. The program was to be extended to the working poor, providing welfare benefits for the first time to low-income male-headed families.

The program outlined above passed the House as a part of H.R. 16311 in April, 1970; this bill was not acted on by the Senate Finance Committee, which transferred part of the bill (but not FAP) to its version of

H.R. 17550, passed by the Senate in December, 1970. Disagreement between House and Senate on welfare reform was in large measure responsible for the ultimate failure of H.R. 17550 in the closing days of the Ninety-first Congress.

The basic welfare reform provisions of the House version of H.R. 17550 were reintroduced in H.R. 1, the first House bill of the Ninety-second Congress. The House passed H.R. 1 in June, 1971. The Senate entirely rewrote the House provisions with respect to FAP, however, substituting a complex program of work encouragement, which abandoned the idea of welfare for most female-headed families unless the youngest child was no older than 6.

Both FAP and the Senate substitute failed in the Ninety-second Congress, as the former had in the Ninety-first, because of lack of agreement between the Senate and the House.

In the design of the basic federal tier, as proposed under FAP, certain questions must be met. Much of the controversy around welfare reform during the Ninety-first and Ninety-second Congresses revolved around questions as to the following:

a) The level of income guaranteed to an eligible family.

b) The extent to which each dollar of income received by the welfare recipient reduced the assistance. In an analogy to income tax law, if each $1 of outside income reduced the assistance by 50 cents, the outside income was thought of as bearing a 50 per cent "tax rate." Where the tax rate was set at zero, as it might well be for very small amounts of income, the term "disregard" came into use.

c) The conditions of eligibility, particularly with respect to assets the recipient might own, financial responsibility of other family members, and the degree to which persons able to work must do so. Some of these features in state assistance programs have given rise to criticisms of the welfare program as degrading to welfare recipients or as destructive to family structure.

d) The flexibility to be granted to the states in the design of the state supplement (particularly as to whether the state would be required to maintain the previous level of benefits).

e) Guarantees to the states that the state cost would not rise as a result of federal administration.

f) The application of the so-called income policy, under which payment in cash was intended to substitute for some types of payment in kind (food stamps were the most important specific example).

Among the difficulties of welfare reform is the setting of the particular design features in such a way as to accomplish the best compro-

mise between conflicting objectives. Among the goals sought in setting these design details are the following:

1. A reduction in the number of people in poverty, hence in the "poverty gap."
2. Provision of incentive for people to work.
3. A reduction in the number of people on the assistance rolls.
4. Fiscal relief to the states.
5. Strengthening of family relationships.
6. Minimization of federal financing (in view of the federal budget problems).

The tension between some of these objectives and others is readily apparent whenever the arithmetic is examined. Setting the level of the federal guaranteed income high reduces the poverty gap and provides a maximum of relief to the states, but at the expense of work incentives, the federal budget, and a substantial increase in the number on the assistance rolls. Reducing the "tax rates" increases the work incentive but adds to the number on the assistance rolls, and to federal costs. Stringent rules as to requirements for work registration, work training, and actual performance of work may add to the number working and reduce federal costs, but at the expense of a mother's care to young children or other hardships on family structure.

B. *Adult Categories*

Much of the previous discussion of public assistance to families applies to the three categories of adults eligible for public assistance. Aid to the aged, the disabled, and the blind is a somewhat simpler matter, however, and was subject to considerably less controversy. Adults in these categories are not really expected to work, and the problems of family structure do not arise when children are not involved. Some of the emotion that led to the eventual defeat of FAP was absent from the consideration of similar proposals with respect to the adult categories, and ultimately the administration proposals as to welfare reform largely succeeded as to these adult categories, although they failed with respect to families and with respect to the working poor.

The original administration proposals in 1969 would have combined the three adult programs, and a uniform minimum plan was to be made mandatory in each state. Federal-state financing was to be continued, as to both the mandatory uniform plan and any state supplement, and the states would continue to be the administering agencies. This proposal, although it passed the House as a part of H.R. 16311, failed even prior to the final failure of H.R. 17550.

When welfare reform provisions were reintroduced as H.R. 1, there

was an important change in direction for the adult categories. The two-tier system, already established for FAP, was proposed for the adult categories. Public assistance for the three adult categories would be essentially federalized, with the states supplementing the basic federal tier at their own expense if they chose to do so.

The Senate version of H.R. 1, passed sixteen months later, accepted most of the House version of welfare with respect to the adult categories, but under a new name—"Supplemental Security Income" (SSI). The SSI program was the only part of welfare reform to survive this tumultuous period.

The details of the SSI program as finally enacted are basically as follows:

1. The level of guaranteed income in the federal tier was set at $130 for an individual, $195 for a couple.
2. The "tax rate" was set at 50 per cent for earned income, with a disregard of $20 per month of any income and an additional $65 per month of earned income.
3. The conditions of eligibility with respect to assets, liens, and financial responsibility were standardized and generally liberalized. The definitions of disability and blindness were established in conformance with OASDI.
4. State supplements were encouraged but not required. They can be, but are not necessarily, federally administered.
5. States were "held harmless" as to additional costs arising from federal administration.
6. SSI recipients will not be eligible for food stamps.
7. The SSI program will be administered by the Social Security Administration. The SSA district offices will, for the first time, be directly involved in public assistance.

C. *The Medical Assistance Program (Medicaid)*

Changes in the Medicaid program during the 1969–72 period were numerous, but none were of great significance.

Public Law 92-223, a bill passed in late 1971, provided that care in an intermediate care facility (ICF) would become one of the services that states could optionally provide under Medicaid. Such care was formerly provided only under the various cash assistance programs. The practical effect of the new legislation was to extend to the medically indigent, in states where the medically indigent are covered under Medicaid, care in a facility that provides more than room and board but less than the services of a skilled nursing home.

Public Law 92-603, the major piece of social security legislation enacted in October, 1972, had some thirty sections affecting Medicaid.

The most significant of these were (1) several changes intended to bring Medicaid and Medicare provisions into conformity; (2) elimination of the requirement that states move toward comprehensive Medicaid provisions, and repeal of parts of the maintenance-of-effort requirement; (3) the introduction of the cost-sharing principle, on a mandatory basis for the medically indigent, and with the states having the right (but not the requirement) to impose cost-sharing for the optional services provided for those on cash assistance; (4) incentives for states to establish effective utilization review activities; and (5) the addition, as an optional service, of the treatment of those under age 21 in mental hospitals.

V. UNEMPLOYMENT INSURANCE

Enactment of P.L. 91-373 in 1970 extended the application of the Federal Unemployment Tax Act to certain kinds of employment not previously covered, thereby increasing by more than 10 per cent the number of jobs covered.

The definition of a covered employer was widened to include employers with one or more workers (instead of four or more) in twenty weeks of the year or who paid total wages in excess of $1,500. Certain types of employees previously exempt (agent drivers, certain commission salesmen, and others) are now covered. Employment in firms processing agricultural products for market and employment in state hospitals, institutions of higher education, and certain nonprofit organizations are newly covered, as is employment outside the United States of United States citizens by United States employers.

There are still twelve million jobs not covered by unemployment insurance, many of these in agricultural, seasonal, or casual employment. An administration proposal to cover employment on large farms failed.

Another title of P.L. 91-373 requires that the state laws provide up to 50 per cent additional duration of benefits during periods of high unemployment. The financing of these extended benefits is shared by the state unemployment fund and an "earmarked" portion of the revenues derived from the federal unemployment tax.

VI. CONCLUSION

Consideration of social security matters was at a very high level during the 1969–72 period. Although one of its most important proposals (AFDC reform) failed, the administration obtained congressional backing for much of its social insurance program. Other important changes, particularly with respect to financing, occurred at the initiative of the 1971 Advisory Council on Social Security. The Social Security Act was

substantially modified. Actuaries and their clients will feel the effect of the 1972 amendments for years to come.

The OASDI and HI systems were both in close actuarial balance, as of the date that P.L. 92-603 was enacted, in accordance with the actuarial assumptions used at that time. For OASDI, however, the dynamic assumptions employed for the first time represented a decrease in the level of conservatism implicit in the methods employed. Further detail can be found in *Actuarial Cost Estimates for the Old-Age, Survivors, Disability, Hospital, and Supplementary Medical Insurance Systems as Modified by Public Law 92-603,* prepared by the Office of the Actuary, Social Security Administration, and published by the Committee on Ways and Means on March 2, 1973.

It might be noted, however, that the 1973 trustees' report of the OASDI trust fund shows a less favorable actuarial balance, a deficiency of 0.32 per cent of taxable payroll. The deficit is largely with respect to the disability insurance program and arises because of the partial recognition of a markedly increased level of disability incidence first noticeable in 1971 and sustained through 1972. Additional financing may eventually be needed if the experience as to the incidence of disability does not return to its earlier levels.

This paper was written prior to the enactment of P.L. 93-66, signed into law on July 9, 1973, and therefore does not cover this important development.

DISCUSSION OF PRECEDING PAPER

ROBERT J. MYERS:

Mr. Trowbridge has presented an excellent, interesting account of the very significant social security amendments that were enacted during the first Nixon administration. He not only has given the facts of what has happened but also has indicated some of the underlying events that led to those actions. As he points out, these amendments were probably the greatest relative *real* increases in the level of cash benefits since the program began—a result which seems most amazing in view of the supposedly conservative or moderate nature of the Nixon administration.

Financing Matters

First, as to financing matters, I am not at all convinced about the Advisory Council's recommendation that there should be a "single best" actuarial cost estimate. I believe that there really is not such a thing and that one is only fooling oneself when the estimate is proclaimed to be so. The former "range" basis clearly indicated the variations possible.

The Advisory Council set up the criterion that the ratio of the balance in the OASDI trust funds to the following year's anticipated outgo should fall within the range 0.75–1.25. It is interesting to note that in a recent congressional report this criterion has degenerated to the point of using only the lower end of the range. In fact, as a result of the 1973 amendments, this test ratio will be as low as about 0.70 in the near future.

Mr. Trowbridge points out the interesting and somewhat curious fact that under the current-cost financing principle (with which I am in full agreement) proposed by the Advisory Council and accepted by the administration and by Congress, a level tax rate for OASDI will be adequate for a period of almost four decades, 1973–2010. This is the result of a number of counterbalancing factors, the relative growth in the aged population and the relative increase in the benefit level being offset by the effect of economic assumptions under which earnings rise more rapidly than the cost of living (CPI).

However, if the economic assumptions of 5 per cent annual increases in wages and $3\frac{1}{8}$ per cent increases in the CPI (including the $\frac{3}{8}$ per cent contingency margin in the cost estimates) are not realized, the tax schedule could be a significantly increasing one rather than remaining level. Although past history has indicated a spread of about 2–$2\frac{1}{2}$ per

cent between wage increases and price increases (due to productivity rises), I seriously question whether this will continue in the future. My disbelief is based on several factors: the loss in productivity necessary to achieve ecological goals, the higher proportion of service industries (where productivity gains are difficult to achieve), and changes in life style (in that people are less concerned with increasing productivity and efficiency in manufacturing procedures).

Certainly, current developments indicate that price inflation is running close to the rate of wage inflation, in that the two are mutually interacting. If wages and prices were to increase at about the same rate in the future, the OASDI tax schedule could no longer be level until the year 2010 but rather would have to rise from the present combined employee-employer rate of 9.7 per cent to about 15.6 per cent by the end of this century.

Several changes in the actuarial cost-estimating procedures have been made in the past few years. One change is to measure the actuarial balance of the system by considering average costs and average contribution rates instead of so-called level costs and level contribution rates. The "average" method simply averages out the annual figures as a percentage of taxable payroll for the period considered, without taking into account interest or the growth in the taxable payroll over the years. Actually, the two procedures give almost the same results, because the two elements neglected are counterbalancing. It may be simpler to explain the "average" method, but I continue to prefer the level method as being technically more correct.

A much more important change in the actuarial methodology is the use of dynamic economic assumptions. On the whole, I believe that this is justified because of the inclusion of automatic adjustment provisions as a result of the 1972 amendments. On the other hand, if the program had continued to have static benefit provisions, I would have opposed strongly the use of dynamic economic assumptions.

As indicated previously, the choice of the dynamic economic assumptions to be used can have a great effect on the resulting tax schedule developed, particularly with respect to the situation several decades hence (as a result of the compounding effect of the assumed rates of change of prices and earnings). I think that it would be more prudent and more reasonable to assume dynamic economic conditions for only a limited period in the future, such as a decade, and then to assume static conditions. In any event, a wide spread between prices and earnings for a long future period does not seem desirable, since it may greatly understate ultimate tax rates.

Mr. Trowbridge mentions that the SMI premium rate for the disabled is the same as for those aged 65 and over and hence is considerably less than the theoretical half-premium for this substandard group. A word of explanation may be in order. This lower rate was decided upon in part because of the financial burden that the half-rate would have been, but, even more importantly, on actuarial grounds. The disabled group is a very nonhomogeneous one—probably much more so than the aged—and so a relatively high half-rate might have caused the better risks from among this group not to enroll. Thus a snowballing effect would have resulted as only the poorer risks joined and forced the premium rate even higher.

Anomalies in 1972 Legislation

The 1972 amendments contain two serious anomalies that will place many beneficiaries in a difficult position.

The first one is in connection with the delayed retirement increment, which is payable only if the individual did not collect any retirement benefits for any month before age 65. Mr. Trowbridge states that this is a technical error, although it was my understanding that Congress did this intentionally. The problem, of course, is the severe penalty imposed on an individual who retires before age 65, finds that he does not like retirement after a few months, and then returns to gainful employment that he pursues until several years after age 65. This individual receives no delayed retirement increments, just because he made the mistake of touching early retirement benefits. The solution is, of course, to remove this restriction.

The other anomaly is in connection with the new higher widow's benefits. The limitation that such benefit should not exceed the retired worker's benefit is applicable only if the worker actually retired at ages 62–64. Very harsh and inequitable results obtain under certain circumstances. For example, consider a worker aged 62 with a wife aged 65 (inequity, but of a lesser degree, will occur if the wife is younger). If the worker's PIA is $204, his monthly benefit will be $163.20. If he should die a month after retirement, his widow will receive $168.30 (slightly more than his benefit, because of the 82½ per cent minimum), well below the $204 which she would have received if he had not applied for early retirement benefits.

Thus, under circumstances like this, individuals must be very careful to consider the possible adverse results of claiming early retirement benefits. The solution to avoid this anomaly would be to base the widow's benefit on the computed reduced benefit for the retired worker that takes

into account only the months that he had received such reduced benefit at ages 62–64 (instead of basing the reduction on the entire period from the time when the benefit was first received up to age 65). This procedure is followed at age 65 for primary benefits when the worker claimed them at ages 62–64 but returned to work subsequently before age 65.

Self-Employment Tax Rate

One significant occurrence resulting from the 1972 amendments that has gone unnoticed is the OASDI tax rate for the self-employed. Under present law, this rate will remain unchanged in all future years at 7 per cent, while the employee rate will be rising toward this. It may well be that eventually the self-employed will pay the same rate for OASDI as does the employee—and as has always been the case under HI.

Although this is a nice situation for the self-employed, it is really inequitable. In essence, a part of the employer taxes is being used to finance the benefit protection of the self-employed. In this connection, the Canada Pension Plan and the Quebec Pension Plan have what I believe is the correct approach—namely, that self-employed persons pay the same rate as the employer and employee combined.

Change in Method of Physician Reimbursement and Its Philosophical Significance

The 1972 amendments formalized a method of reimbursing physicians under SMI that had been in effect since 1969 as a result of administrative regulations (which I believe were of doubtful legality and certainly were contrary to the original congressional intent). These regulatory changes had been instituted by Secretary of Health, Education, and Welfare Wilbur J. Cohen in his lame-duck period in office in order to "justify" his freezing of the SMI premium rate for fiscal year 1970 and at the same time to "control" physicians.

As a result, physician reimbursement is no longer actually on a reasonable, customary, and prevailing charges basis, but rather will be significantly lower for all future periods. The original philosophy of Medicare was that the aged would, by the help of Medicare benefits, be able to pay the same medical charges as everybody else, and they would no longer be second-class or charity patients. The 1972 amendments have now regularized a procedure under which physicians, if they take assignments, will receive lower reimbursement for aged persons than from their regular patients. Otherwise, if the enrollees pay the physicians directly, they will no longer be assured the benefit protection that Medicare originally provided—20 per cent coinsurance after an initial deductible.

Role of Economists in Actuarial Cost Estimates

An alarming feature on the Washington scene is the increasing involvement of economists in the preparation of actuarial cost estimates for OASDI, Medicare, and national health insurance. Certainly, actuaries can obtain useful advice from economists about the economic assumptions that should be made for long-range actuarial cost estimates, but the final responsibility for the choice of the assumptions should be with the actuaries. I believe that the advice of economists would be exceptionally helpful for short-range matters; as to long-range assumptions, however, the actuary—with both his knowledge of economics and his understanding of the over-all effect of the assumptions—has ample ability in this area.

It may be said that in some ways actuaries in government service have always had problems in their relations with economists and that this situation is becoming more critical. Perhaps there is a certain parallelism between actuaries in the private insurance field and accountants! The solution to the problem of the relations between government actuaries and economists lies, I believe, in the actuaries becoming deeply involved in economics so that they can truly say that they have training in this area (whereas I doubt whether any economists will be able to say the reverse).

Supplemental Security Income

Mr. Trowbridge describes the SSI program that was enacted in 1972, to be effective in January, 1974. It is interesting to note that this program of guaranteed income for the aged, blind, and disabled has already been liberalized by legislation in 1973. Effective in July, 1974, the basic monthly benefit rates are to be increased from $130 for an individual and $195 for a couple to $140 and $210, respectively. This may be said to be a cost-of-living change.

The SSI program is of considerable significance because it involves the federalizing of the public assistance programs for adult categories. It is thus a step away from President Nixon's new federalism philosophy of moving power down from the federal government to state and local governments.

Furthermore, SSI may well be a sleeping giant, just as Medicaid was in the legislation in 1965 that established Medicare. If the level of payments under SSI were to be greatly expanded, it could well mean the destruction of both social security and private pension plans. Like any other guaranteed income program, SSI could result in people having no

advantage from social security benefits and private pensions if the SSI benefits were large enough (because then the former sources of income would be completely offset or, in other words, would not provide additional income over the amount that would be paid under SSI alone).

Legislation in 1973

Quickie legislation in mid-1973 (P.L.93-66) increased benefits across the board by 5.9 per cent, effective in June, 1974; increased the annual exempt amount in the earnings, or retirement, test from $2,100 to $2,400, effective in 1974; and raised the maximum taxable earnings base for 1974 from the previously scheduled $12,000 to $12,600. Thus the subsequent operation of the automatic adjustment provisions will be built on $12,600 rather than on $12,000.

The benefit increase will apply only for the last seven months of 1974 and will then be overridden by the automatic adjustment provisions in January, 1975. At that time there will probably be about a 9–10 per cent increase in benefits over the 1972 level—about a 3–4 per cent increase over the level resulting from the 1973 amendments.

An interesting minor result of the 1973 amendments is that, for deaths after May, 1974, the lump-sum death payment will always be $255, regardless of earnings record. The law provides that it shall be the lesser of $255 and 3 times the PIA. Now, the spread is only from $253.50 to $255, and the 5.9 per cent increase will eliminate it.

One might ask whether the 1973 legislation was yet another expansion of social security and thus a further step away from having the private sector bear significant responsibility in the economic security field.

In my opinion, the 5.9 per cent benefit increase was reasonable, although it could have been accomplished in a better manner technically. When the 20 per cent benefit increase was enacted, it seemed that inflation was diminishing and that it would be unnecessary to have another benefit increase in the next two years to maintain reasonably the purchasing power of the benefits.

Why were the automatic adjustment provisions not put into effect in January, 1974? If this had been done, the benefit increase would have been based on the change in the CPI from the third quarter of 1972 to the second quarter of 1973. The result, as the experience has turned out, would have been an increase of 4.5 per cent, beginning with the January, 1974, benefits.

In hindsight, certainly, the automatic adjustment provisions logically should have been first operative in January, 1974, and then the 1973 legislation would not have been needed. The net result for 1974 for the

beneficiaries involved would properly have been somewhat more favorable if the original legislation had been on a more logical basis.

One aspect of the 1973 legislation is encouraging from the standpoint of those who believe that the automatic adjustment provisions might tend to take arguments about the magnitude of the changes in the benefit level out of politics. The benefit change that was made was based solely on a change in the CPI. No "competitive bidding" occurred between those who wanted much larger increases than were enacted in 1969, 1971, and 1972.

The increase in the annual amount exempt under the earnings test was not in itself unreasonable. The $2,400 figure adopted is certainly consistent with the levels prevailing in previous periods—for example, the $1,200 which prevailed in the mid-1950's. However, the method used to finance this liberalization—namely, increasing the taxable earnings base for 1974 and all future years—was most unfortunate.

Increases in the earnings base other than as required to update it in accordance with changes in the general earnings level, as the automatic adjustment provisions will do, should not be made. Such changes narrow the field of activity for the private sector in providing complementary economic security. If any real benefit liberalizations are to be made, they should be financed by increases in the tax rates. Such a procedure distributes the costs more equitably and makes them more recognizable to the covered population.

GRACE V. DILLINGHAM:

The period of "intense legislative activity" referred to in the opening sentence of Mr. Trowbridge's paper obviously has not ended. Not only was P.L. 93-66 enacted after the paper was written, but a new amendment, which would accelerate the increase in benefits, has passed the Senate and, as of last week, awaited assignment to a House committee. Because the amendment was attached to a civil service bill, there is a jurisdictional question as between the House Committee on Post Office and Civil Service, which has already reported a counterpart civil service bill, and the Ways and Means Committee, which has jurisdiction over social security amendments. The bill is being held at the Speaker's desk until the jurisdictional question can be resolved.

Meanwhile, fifty-five senators are enrolled as cosponsors of a bill to amend P.L. 93-66 to provide a 7 per cent increase effective January 1, 1974. There is a strong prospect that this bill will be attached as a rider to the debt-ceiling bill which must be enacted by November 30, and a reasonable prospect that the House will concur.

No doubt Mr. Trowbridge intends to comment on the 5.9 per cent increase effective in June, 1974, under P.L. 93-66; I hope that he will comment also on the effect of an earlier effective date and a greater increase.

Under the 1972 act (P.L. 92-336) an increase legislated in 1973, effective in 1974, would have meant that the next possible automatic increase would have been determined in 1975, effective in 1976. The 1973 act (P.L. 93-66) specifically overrules this provision. Neither the fact of an increase in 1974 nor the amount of the increase is to be taken into account in determining, in 1974, benefits for 1975. It is theoretically possible that the CPI will have decreased by the second quarter of 1974 to such an extent that the increase over the third quarter of 1972 will be less than 5.9 per cent, thus providing smaller benefits in 1975 than in the latter part of 1974; it is of course far more likely that there will be a further increase, even above the 7 per cent now pending in the Senate.

While benefits in 1975 will be just what they would have been if P.L. 93-66 had not been enacted, it appears to me that the wage base will necessarily be higher. If P.L. 93-66 had not been enacted, the wage base for 1975 would have been $12,000 (the 1974 base) times the ratio of average wages in the first quarter of 1974, subject to the $12,000 limit, to average wages in the first quarter of 1973, subject to the $10,800 limit of this year's base. Under P.L. 93-66 the formula will be the same, but the wage base to which the formula is applied will be $12,600 instead of $12,000, and average taxable wages in the first quarter of 1974 will be slightly higher than they would have been under the $12,000 base. Instead of the $12,900 base for 1975, estimated by Mr. Trowbridge before enactment of P.L. 93-66, I would expect a base of at least $13,500. Without the overrule provisions of P.L. 93-66, of course, there would be no automatic increase in the year following a legislated increase. I would appreciate confirmation—or refutation—of my conclusion regarding the effect of the wage base increase provision.

To a student of the legislative process, the most interesting part of P.L. 93-66 may be what I earlier referred to as the "overrule provision." As Mr. Trowbridge so clearly indicates, the expectation when P.L. 92-336 was passed was that the automatic increase provisions would continually be postponed by the enactment of legislated increases. The prospect now is for a legislated increase in 1974 and an automatic increase in 1975—an earlier increase in benefits than would have resulted from the automatic provisions, but not as great an increase as might have been enacted had Congress chosen to override the automatic provisions completely.

CECIL J. NESBITT:

This paper is a superb exposition of social security proposals and developments in the period 1969–72. Our profession and our country are both indebted to the author for the great services he has rendered in regard to actuarial advising of the Social Security Administration, as, indeed, we are indebted also to his predecessor, Robert J. Myers.

There is much significant information and comment in this paper. It has stimulated me to raise a question which may be quite fundamental for the ongoing social security system. It has also led me to examine a few mathematical relations.

My major question is in regard to the system of providing across-the-board benefit increases (on either an ad hoc or an automatic basis). For benefits in current payment status, there is a compounding of increases over the finite period of the benefit payments, and the system works reasonably well as an adjustment to the changing cost of living. It appears to me, however, that irrationality is developing in applying compound increases from time zero to the various levels of the benefit formula. Already the benefit rate on the first $110 of AMW is 108.01 per cent, and, over a period of years with further compound adjustments, this can reach 200 per cent, 300 per cent, or any conceivable per cent, with similar effects in the next levels of benefits. To provide compound increases indefinitely in the benefit formula appears to me to be basically wrong and bound to appear irrational in the future.

The objective sought in providing across-the-board compound adjustments for both current and future benefits is clear, but the means for attaining that objective are less clear. One device that occurs to me is borrowed from the theory of mutual funds and variable annuities, namely, that all calculations should be made in terms of units rather than dollars. Congress might set up a system of social security units which would parallel roughly the CPI but also might include some allowance for improvements (if any) in the standard of living. Under this system a covered employee would receive adjustment of his benefits not from time zero but only over the period of his covered employment and benefit status.

At this stage I am uncertain as to how sound and how necessary this concept is for social security. It would involve a basic transformation of the social security benefits. The concept applied in relation to a weighted formula such as exists in social security may have some anomalous effects. I do believe that the concept deserves discussion in our profession;

if it continues to appear sound, a substantial study of it should be made and the results should be made known to our government and the general public.

My mathematical comments will be presented briefly on the basis of continuous functions and the following notations:

B_t = Total annual benefit outgo at time t;

P_t = Total taxable annual payroll at time t;

b_t = Benefit outgo rate at time t, as a per cent of P_t;

c_t = Current cost rate at time t, as a percent of P_t;

g_t = Rate of growth of benefit outgo at time t, as a per cent of B_t;

t_t = Tax rate at time t, as a per cent of P_t;

δ_t = Force of interest at time t, applied to a fund equaling B_t, and expressed as a per cent.

Then

$$c_tP_t = b_tP_t + g_tB_t - \delta_tB_t \,,$$

or

$$c_t = b_t[1 + 0.01(g_t - \delta_t)] \,.$$

From this relation one can see that, as the author remarks, current-cost financing will require a slightly higher contribution rate than a strictly computed pay-as-you-go rate (b_t) in the usual situation where the outgo grows in excess of the interest rate. If $g_t = \delta_t$, then $c_t = b_t$.

In former actuarial studies the level equivalent (under interest) of benefit outgo was compared with the level equivalent of tax income. This can be re-expressed as a comparison of the weighted average of the rates b_t with the weighted average of the rates t_t, where the weights are v^tP_t. However, if $P_t = (1 + i)^tP_0$, then the weights become uniformly P_0, and the weighted average is simply the arithmetic mean of b_t or t_t, as the case may be. This, together with the fact that the trust fund is to remain relatively small, has led the author to compare the arithmetic mean of rates c_t (or the discrete analogues thereof) with the arithmetic mean of the rates t_t.

My discussion has touched on one major question and two smaller matters related to the contents of this paper. There is a wealth of material in the paper covering a wide range of social benefits. This paper is a tremendous aid to actuarial knowledge and understanding of these benefit programs.

A. M. NIESSEN:

In the part of the paper dealing with the newly introduced dynamic features of the OASDI system, Mr. Trowbridge calls attention to the great sensitivity of this mechanism to the spread between the rate of increase in wages and the rate of increase in prices. The social security cost estimates now current are for a combination of 5 and $2\frac{3}{4}$ per cent, but according to the author there is a margin sufficient to sustain a 5 and $3\frac{1}{8}$ per cent combination.

That such sensitivity should exist is obvious from the fact that OASDI benefits will be adjusted not only for price increases but also for the crediting of more earnings brought about by adjustments in the earnings base. This means that the dynamic mechanism will produce more than a cost-of-living adjustment in benefits. But how much more is a question that cannot be answered without some probing into the workings of the mechanism. A related question is whether the dynamic formulas will produce reasonable relationships between benefits and earnings, be they the earnings base, the AMW, or final pay.

To obtain at least partial answers to the above questions, I developed certain analytical ratios for several combinations of rates of increase in wages and prices. The combinations selected were 5 and $2\frac{3}{4}$, 5 and $3\frac{1}{2}$, and 5 and 4 per cent. The ratios in which I was interested were (1) maximum PIA to maximum AMW in the benefit table, (2) maximum PIA for a typical retirement in the year to the corresponding AMW, and (3) maximum PIA for a typical retirement to final creditable pay. Each combination of rates of increase was followed through to the year 2000 in order to permit the trends, if any, to manifest themselves.

On the theory that some other readers of Mr. Trowbridge's fine paper might be interested in the ratios referred to above, I am presenting the results of my analysis in Table 1 on page 675. I might add that the computations for the table were made without the aid of a computer on the basis of special formulas developed for this purpose.[1]

As can be seen from Table 1, the automatic adjustment mechanism for OASDI has the following interesting characteristics:

1. For the 5 and $2\frac{3}{4}$ per cent combination the ratio of the maximum PIA to the maximum AMW in the benefit table (item F) will remain practically constant throughout the years. For the other combinations the ratio will increase,

[1] See A. M. Niessen, "Observations on the Automatic Benefit Adjustment Provisions of the Social Security Bill, H.R. 1," *The Actuary*, March, 1972.

but very slowly, so that for all intents and purposes the relationship of the two amounts will remain within reasonable limits.

2. The ratio of the maximum PIA to the corresponding AMW for typical retirements (item G) will increase, but not in a uniform manner. For the 5 and $2\frac{3}{4}$ combination that ratio will not exceed two-thirds, but for the other combinations it could reach levels which would not be considered reasonable.
3. Insofar as the ratio of an employee retirement benefit to final pay is concerned (item H), variation will remain within a rather narrow range and will not attain levels even under the 5 and 4 per cent combination.
4. A comparison between items E and D of the table shows that the benefit for retirements with maximum creditable earnings will be larger than the corresponding 1975 maximum PIA adjusted for a rise in the standard of living as measured by the increases in wage levels (5 per cent per year). Obviously, the excess over a pure cost-of-living adjustment will be even greater. What all this means is that the dynamic mechanism will tend to raise social security benefits to significantly higher levels in terms of real worth.

BARNET N. BERIN:

Just a minor addendum to this well-organized and quite readable paper on a difficult subject.

Under "Financing" (Sec. II[K]), a brief discussion of the "single best estimate" as opposed to the average of two sets of assumptions might be expanded to cover the limitation due to the number of projections which ought to be made, at least theoretically. For example, if we confine ourselves to a low assumption and a high assumption only, for each of n possible variables, we end up with 2^n projections, which clearly is not manageable. In such nongovernmental projections, besides the usual actuarial assumptions, implicitly we make many other assumptions (almost never stated) that certain events will not change; for example, that taxing regulations, accounting regulations, the company's financial policies (to name only a few) will not change. I believe the single best estimate, complemented by an actuarial gain and loss analysis, to be the most reasonable approach.

It would be logical, someday, for the Advisory Council to consider the testing of costs by developing actuarial gains and losses. This would appear to be an inescapable consequence of the use of a single best estimate. (There is a reference to actuarial gains under "Dynamic" Earnings Assumptions.)

I am puzzled as to Mr. Trowbridge's reference to a "single best estimate" augmented by sensitivity testing. The latter sounds like a doubtful basis for meaningful decisions, although possibly good fun.

TABLE 1

WORKINGS OF THE OASDI AUTOMATIC ADJUSTMENT MECHANISM UNDER SELECTED COMBINATIONS OF RATES OF INCREASE IN WAGES AND PRICES, 1973–2000

Item	Calendar Year					
	1973	1975	1980	1985	1990	2000
A. Highest AMW in benefit table, all combinations*	$1,000	$1,125	$1,436	$1,833	$2,339	$3,810
B. Highest PIA in benefit table:						
5% and 2¾% (wages and prices)	$ 404	$ 464	$ 597	$ 767	$ 985	$1,622
5% and 3½%	404	464	617	818	1,080	1,862
5% and 4%	404	464	631	854	1,148	2,048
C. Maximum AMW for age retirement in the year, all combinations†	$ 488	$ 539	$ 686	$ 841	$1,015	$1,728
D. Maximum PIA for item C:						
5% and 2¾%	$ 266	$ 309	$ 423	$ 532	$ 664	$1,121
5% and 3½%	266	309	438	572	740	1,337
5% and 4%	266	309	449	600	796	1,500
E. Maximum 1975 PIA for age retirement as adjusted for rise in standard of living	....	$ 309	$ 394	$ 503	$ 642	$1,046
F. Ratio of item B to item A:						
5% and 2¾%	0.40	0.41	0.42	0.42	0.42	0.43
5% and 3½%	0.40	0.41	0.43	0.45	0.46	0.49
5% and 4%	0.40	0.41	0.44	0.47	0.49	0.54
G. Ratio of item D to item C:						
5% and 2¾%	0.55	0.57	0.62	0.63	0.65	0.65
5% and 3½%	0.55	0.57	0.64	0.68	0.73	0.77
5% and 4%	0.55	0.57	0.65	0.71	0.78	0.87
H. Ratio of item D to item A for preceding year:						
5% and 2¾%	0.35	0.29	0.31	0.30	0.30	0.31
5% and 3½%	0.35	0.29	0.32	0.33	0.33	0.37
5% and 4%	0.35	0.29	0.33	0.34	0.36	0.41

NOTE.—All amounts are rounded to the nearest dollar. The basic 1975 figures are based on current SSA projections for the near-term effects of the automatic adjustment provisions.

* For 5 per cent annual increase in the earnings base beginning with 1976, disregarding the rounding provisions.

† Case of continuous employment at maximum creditable earnings and computation period ending with the calendar year preceding the year indicated.

(AUTHOR'S REVIEW OF DISCUSSION)

CHARLES L. TROWBRIDGE:

First, let me thank Mr. Robert J. Myers and Miss Grace V. Dillingham for bringing members of the Society up to date with respect to what has occurred since the 1972 social security amendments were enacted.

It might be helpful to view the mid-1973 amendments in two parts. The first was the advancement to mid-1974 of a portion of the benefit increase which would otherwise have gone into effect under the automatic provisions on January 1, 1975. Since this would have an effect only for the last six months of 1974, benefits January 1, 1975, and later being exactly as if the 1973 legislation had not been passed, no additional financing was felt necessary for this part of the mid-1973 legislation.

The second part of P.L. 93-66 was the increase in the exempt amount under the retirement test from $2,100 to $2,400. This amount is subject to automatic provisions, and the $300 increase for 1974 will have a permanent effect, since the automatic provision takes off from the higher figure. This liberalization in the retirement test made necessary the increase in the 1974 taxable earnings base from $12,000 to $12,600. Miss Dillingham's interpretation that the taxable earnings base may now be expected to be permanently $600 higher is essentially correct, since the automatics start in 1975 and use the $12,600 figure as the starting value.

Mr. Myers would have preferred the liberalization in the retirement test to be financed by an increase in the contribution rate instead of an increase in the taxable earnings base. Perhaps I might agree with him, though I do not feel as strongly on the subject as he seems to. It is my opinion, however, that future liberalizations are likely to be financed by taxable earnings base increases rather than by increases in the contribution rate, at least for a while. Politicians are very sensitive to the argument that the social security tax is regressive because it does not extend beyond the base. An increase in the base gets the extra tax from the upper end of the income range only and eventually increases benefits for the highly paid, while an increase in the contribution rate is spread against all pay under the base and has no effect on benefits. There is a point, of course, beyond which raising the base raises relatively little additional revenue; but modest liberalizations can be financed this way for a while longer.

Both Mr. Myers and Miss Dillingham have speculated as to what the 1973 amendments portend with respect to the likelihood of Congress overriding the automatics. The evidence is not yet in, and one can in-

terpret the mid-1973 legislation in more than one way. This reply to the discussion is written before any late-1973 legislation, but it now appears that another increase in benefits and in earnings base is likely.

Mr. Myers raises the interesting point that legislative activity in calendar year 1973 would have been less likely if the automatic provisions had been made effective for 1974, and he raises the question as to why their effect was delayed to January 1, 1975. I am not at all sure that I know why the first automatic benefit increase was scheduled for 1975, but I suspect that it was because a specific taxable earnings base for 1974 was a part of the 1972 legislation, and the two automatics have always been viewed as acting in concert. Specifying the 1974 earnings base was done to get the taxable earnings base up quickly, in two steps, in partial answer to the economists' regressive tax argument.

Mr. Cecil J. Nesbitt and Mr. A. M. Niessen, in somewhat different ways, comment upon the mechanics of the system under the new automatic provisions. I do not exactly agree with Mr. Nesbitt that the benefit formula is "basically wrong, and bound to show up as irrational in the future." However, I do agree with him that the rationale behind the present mechanics is not at all clear, and, if it does work out reasonably well, this will be something of a fortuitous circumstance.

As to benefits for those already on the benefit rolls, the rationale is clear enough; benefits are intended to go up with the CPI so that the purchasing power of beneficiaries is not impaired. The confusion comes from the progress of potential benefits for those not yet retired. Potential benefits also increase with the CPI under the automatic provisions, but there is an additional rate of increase arising from the feature that the benefit formula is wage-related. One of the peculiarities of the OASDI benefit formula is that an r per cent constant rate of taxable earnings increase does not flow through to an r per cent increase in potential benefits; instead, only about 40 per cent of the earnings increase rate flows through into the PIA. If the rate of earnings increase is 5 per cent, then 2 per cent or so flows through from the benefit/earnings relationship. Add the CPI increase, and we may find potential benefits increasing about as fast as earnings. This is what one would expect in a wage-related system, but social security gets to this point in a very indirect fashion, one that depends too much upon the difficult-to-predict relationship between the rates of increase in consumer prices and in average earnings.

Mr. Niessen's Table 1 gives an illustration of the effect I have just described. From item H of his table we see that the replacement ratio at the maximum earnings point is rather constant over time under the 5

and $2\frac{3}{4}$ per cent assumptions. This simply tells us that potential benefits and assumed earnings are going up at about the same speed. On the other hand, if the benefit table increases at 4 per cent rather than at $2\frac{3}{4}$ per cent, as shown on the 5 and 4 per cent line, then replacement ratios can be expected to increase. Incidentally, the ratios in Mr. Niessen's item H will be more understandable to the reader who recognizes that item A, the highest AMW in the benefit table, is also the maximum taxable earnings in the year of retirement.

Although the ratios in items F and G of Mr. Niessen's table are of some interest, I do not think they are nearly as meaningful as those in item H. Neither the highest PIA nor the highest AMW in the benefit table at any given time can be obtained until many years later, and the ratio of these two is not of real practical significance. Because item C, the maximum AMW for age retirement in a particular year, involves a continually lengthening average period, a ratio of item B to item C is also somewhat confusing. As stated earlier, however, the ratio of item D to item A displayed in item H really is the key to the social security automatic benefit increase mechanics. The results in item H, not only for the maximum case treated by Mr. Niessen but also for median and low wages, have been computed by the Social Security Administration and published in Actuarial Note No. 81 (which can be obtained from the Office of the Actuary). Students of the social security system will find this Note most interesting.

Mr. Myers made a brief comment about the self-employed tax rate, pointing out that whereas the self-employed have in the past always paid 150 per cent of the employee tax rate, the 1972 amendments have the effect of dropping the ratio below 150 per cent. This arises from a limitation established earlier that the self-employed tax rate for OASDI should not exceed 7 per cent. Since 150 per cent of the OASDI employee tax rate exceeded 7 per cent for the first time in 1973, the 7 per cent maximum first applied in that year. As to Part A of Medicare, the self-employed have always paid 100 per cent of the employee rate.

Mr. Myers and Mr. Barnet N. Berin both commented on the "single best estimate" recommended by the Advisory Council. Mr. Berin seems to like this approach, if complemented by an actuarial gain and loss analysis; Mr. Myers likes the older range approach better, at least partly because it indicates the degree of variation possible. Although a gain and loss analysis would indicate how the various assumptions worked out over the year just past, it would give very little indication as to which of these assumptions are critical in the long run. Sensitivity testing is intended to identify the critical assumptions, and to indicate how much the

cost estimates are affected if these are varied. So far, the only sensitivity tests published are those related to the price and earnings increase assumptions, but eventually there may be others. I would think that a good sensitivity testing effort would remove Mr. Myers' objection to the single best estimate.

The sensitivity testing already done bears out, even if one were not convinced by general reasoning, that the assumption with respect to gain in real earnings is by far the most important. The assumption currently employed, ignoring for the moment the margin for contingencies deliberately added, is $2\frac{1}{4}$ per cent annually, the result actually attained over the most recent twenty-year period. This may be the point for the author to assume personal responsibility for this assumption, because it was not set by economists as Mr. Myers seems to suspect. At least some of the economists consulted might have used a higher figure, and most of the author's actuarial associates would have preferred a lower one. The best judgment of the then chief actuary was the assumption that the future would reproduce the past. At the same time, he employed a deliberate margin for conservatism to hedge against this way, and all other ways, that the long-range cost estimates may prove to be low.

The arguments that Mr. Myers puts forth as to why future gains in real earnings may not be as high as in the past were all considered, along with some others that he does not mention. Several of the forces noted have been operating over the recent past and have held the historical gain in real earnings below where it might otherwise have been. A lowering of the projected gain in real earnings because of these factors implies a belief in a speedup of the trend, not only a continuation of the trend which has already been observed. If any of these forces are lessening, even though continuing, a higher rate of real earnings growth is implied rather than a lower one.

The author appreciates the five discussions. Perhaps he is now well enough informed to present a discussion himself to the next paper, under different authorship, describing social security developments.