# Old-Age and Survivors Insurance: History of the Benefit Formula 

by Robert J. Myers*

WITH the enactment of the Social Security Amendments of 1954 , five different formulas for the determination of benefit amounts under the old-age and survivors insurance program have been in existence. This article will describe the several formulas and then analyze how they would apply to various illustrative wage histories. For these purposes the benefit formula will be construed broadly to include not only the formula itself but also the applicable minimum and maximum provisions. The other important feature in benefit determination is the average monthly wage ${ }^{1}$ to which the benefit formula is applied; this factor must necessarily be considered, but the detailed basis for calculating the average monthly wage will not be discussed.

## Formula of Various Laws

The benefit formula contained in the original Social Security Act never became operative, since before monthly benefits became payable it was superseded by the formula in the 1939 act. The formula established by the 1950 amendments went into effect in April 1952, but after 5 months of operation it was replaced by the formula in the 1952 act. That formula, in turn, was virtually superseded by the new formula in the 1954 amendments. The 1952 formula continues to be used, however, since it serves as a minimum guarantee. Chart 1 sets forth the specific benefit formulas, with a general description of the basis for computing the average monthly wage used in the formula.

Supplementary information about each of these formulas is given in table 1 , which shows the minimum

[^0]and maximum old-age benefits (the amount payable to a retired worker), the minimum and maximum family benefits, and minimum and maximum lump-sum death payments. In considering this table and also in the subsequent discussion, the major distinction between the beneflt provisions in the 1935 law and those in subsequent legislation should be kept in mind. The original act provided only retirement benefits for the insured worker, while the amendments have in addition provided supplementary benefits for the dependents of a retired worker and for survivors of deceased workers. The 1939 legislation adjusted the benefit amounts so that retired workers without dependents receive in the long run less than they would have been paid under the orlginal law and retired workers with dependents receive more.

It should also be borne in mind that

Chart 1.-Benefit formulas under the Social Security Act and its amendments

|  | Monthly benefit for retired worker | Period over which average monthly wage is computed |
| :---: | :---: | :---: |
| 1935--- | $1 / 2 \%$ of first $\$ 3,000$ of cumulative wage credits $+112 \%$ of next $\$ 42,000+324 \%$ of next $\$ 84,000$. | (1). |
| 1939.-- | $40 \%$ of first $\$ 50$ of average monthly wage $+10 \%$ of next $\$ 200$, all increased by $1 \%$ for each year of coverage. | Entire period of potential coverage under system. |
| 1950.-- | $50 \%$ of first $\$ 100$ of average monthly wage $+15 \%$ of next $\$ 200$. | Entire period of potential coverage under system after 1950. |
| 1952..- | $55 \%$ of first $\$ 100$ of average monthly wage $+15 \%$ of next $\$ 200$. | Entire period of potential coverage under system after 1950. |
| 1954.-- | $55 \%$ of first $\$ 110$ of average monthly wage $+20 \%$ of next $\$ 240$. | Entire period of potential coverage under system after 1950, excluding periods of extended disability and 4 or 5 years of lowest earnings. |

${ }^{1}$ Not applicable.
the 1950 legislation gave increasing recognition to presumptive family needs when it raised current benefit levels and at the same time eliminated the increment provision (1-percent increase for each year of coverage). An increment results in the payment of larger benefits in the later years of the program than in the early ones.

In the 20 years since the original law was enacted, the minimum oldage benefit has tripled, while the maximum old-age benefit has gone up only about 28 percent. In fact, the formulas in each of the first three major amendments resulted in a maximum old-age benefit equal to or less than the original amount. As indicated previously, however, consideration of the adequacy of the benefits cannot be viewed solely in terms of the changes in the old-age benefits. The institution in the 1939 act of family benefits for dependents and survivors resulted in a better distribution of social protection at roughly the same aggregate cost.

A married man has the protection both before and after retirement not only of monthly benefits for his survivors but also of supplementary benefits for eligible dependents that are available at his retirement. Specifically, for a retired worker whose wife is eligible and is not entitled to a benefit based on her own earnings, the maximum family benefit was raised 92 percent by the 1954 act from the amount payable under the 1935 act; the increase for a worker without an eligible wife was only 28 percent.

The minimum family benefit has likewise tripled since 1940, when these benefits were first paid, while the maximum family beneflt is about two and one-third times what it originally was. The reduction in the maximum old-age benefit from $\$ 85$ in the 1935 act to $\$ 60$, in effect, in the 1939 act is less significant than it might at first appear because at

Table 1.-Minimum and maximum benefit provisions under the Social Security Act and its amendments
[Montbly amounts except for lump-sum death payments]

| Item | Year of legislation |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1935 | 1939 | 1950 | 1952 | 1954 |
| Minimum old-age beneft ${ }^{\text {1 }}$ | \$10.00 | \$10.00 | \$20.00 | \$25.00 | \$30.00 |
| Maximum old-age benefit ${ }^{1}$ | 85.00 | ${ }^{2} 80.00$ | 80.00 | 85.00 | 108. 50 |
| Minimum family benefit ${ }^{3}$ | ${ }^{\text {a }}$ ) | 10.00 | 15.00 | 18.80 | 30.00 |
| Maximum family benefit ${ }^{3 / 5}$ | ( ${ }^{\text {( })}$ | 85.00 | 150.00 | 168.80 | 200.00 |
| Minimum lump-sum death payment ${ }^{8}$ | (7) | 60.00 | 60.00 | 75.00 | 90.00 |
| Maximum lump-sum death payment. | ${ }^{(7)}$ | ${ }^{2} 360.00$ | 240.00 | 255.00 | 255. 00 |

${ }_{1}$ Payable to retired worker.
${ }^{2}$ Assumes that, 50 years of coverage is the maximum possible.
\& Total benefit payable to retired worker and dependents or to all survívor beneficiaries.

4 No benefits provided for dependents or survivors.

- Maximum provision of 80 percent of average monthly wage also applicable, but application may not reduce beneft to less than $\$ 25$ for 1939 law, $\$ 40$ for 1950 law, $\$ 45$ for 1952 law, and $\$ 50$ or $11 / 2$ times primary insurance amount for 1954 law. In some cases
the same time a maximum of $\$ 85$ was made possible for a worker with an eligible wife.

The minimum lump-sum death payment is now only 50 percent higher than the minimum specified. in 1939; the maximum is about 30 percent lower than the potential maximum under the 1939 law but only about 7 percent less than the highest amount ( $\$ 273.60$ ) actually paid under that law.

## Benefit Computation Under Present Formula

Actually the formula prescribed in the 1954 act that is described in chart 1 is only one of three alternative methods of benefit computation, although it will be the method most often used in the future. ${ }^{2}$ The average monthly wage to be used in connection with the 1954 formula is based on covered earnings in the period from 1951 on (or after the individual's attainment of age 21, if later) to the year in which he reaches age 65 or his subsequent retirement (or death, if earlier), regardless of whether he is in covered employment throughout the period. The 4 or 5 years of lowest covered earnings (5 years for those with at least 20 quar-

[^1]slightly larger amounts can be paid as the result of Slightly larger amounts can be paid as the result of
the provision for rounding benefit amounts (to next the provision for rounding benefit an
${ }_{B}$ Under the 1939 and later laws, the lump-sum payment is made to the surviving widow or widower who lives with the deceased person at time of death. When there is no such survivor, the lump-sum payment cannot exceed burial expenses.
${ }^{7}$ No minimum or maximum provided (potential maximum was about $\$ 5,000$ ).
ters of coverage) may be ignored in the computation, and there is an additional dropout for an individual with an extended total disability.

One of the alternative methods employs the 1952 formula, with an average monthly wage computed in the same manner as under the 1954 formula except that the 4- or 5 -year dropout is not allowed. The primary insurance amount thus obtained is increased by $\$ 5$, and the total, if larger than the amount derived from the 1954 formula, is the amount used. This method will rarely be employed, since it will result in a higher benefit only if the average monthly wage is less than $\$ 130$ and if the individual has had substantially level earnings in all years from 1951 on.

A third method, using the 1939 formula, is sometimes applicable. The average monthly wage again is computed in essentially the same way as under the 1954 formula, with the exception that earnings beginning in 1937 are taken into account. The 1939 formula is applied to the average thus obtained, with increment years only for the period 1937-50, and the result is then increased by use of the conversion table in the 1954 legislation.

As indicated in table 1, the maximum family benefit under the 1954 formula is $\$ 200$ a month. The maximum is not uniformily applicable, however, but varies with the average monthly wage and the resulting primary insurance amount. Thus, while
the law provides for a maximum family benefit of $\$ 200$, it also states that the maximum cannot be more than 80 percent of the average monthly wage and further stipulates that application of this percentage maximum cannot reduce the total benefits to less than the larger of $\$ 50$ or one and one-half times the primary insurance amount. This rather complicated provision can be expressed, however, in fairly simple terms; it is, in effect, four separate provisions, each applicable to a given range of average monthly wages and primary insurance amounts (table 2).

## Benefits Under Illustrative Wage Histories

Any consideration of changes in benefit levels resulting from the various amendments must take into account not only the dollar amounts payable but also those amounts as they relate to prevailing earnings levels. Throughout the following discussion the changes in the philosophy underlying the system must be kept in mind-those that resulted in the addition of family benents and the increase in early benefits by the several revisions of the benefit formula. The most rudimentary comparison is one that relates the old-age benefit payable to the maximum creditable wage under the different formulas.

Table 3 compares benefits for a retired worker under each of the five different formulas for an individual with the maximum creditable wage who retires at the earliest time of eligibility for bencfits under that formula. The monthly benefit increased from $\$ 25.00$ under the 1935 formula

Table 2.-Maximum family benefits under the 1954 formula for selected $\geqslant$ average monthly wages and primary insurance amounts

| Averace monthly wage ${ }^{1}$ | Primary insurance amount ${ }^{2}$ | $\underset{\text { benefit } 3}{\text { Maximily }}$ |
| :---: | :---: | :---: |
| \$60 or less | \$30.00-33.00 | \$50. |
| 61-1 | 33.60-61.50 | 132 times primary in- |
| 116-249 | 61.70-88.30 | surance amount. <br> $80 \%$ of a verage |
| 250-35 | 88. 50-108. 50 | monthly wage. $\$ 200$. |

[^2]to $\$ 41.20$ under the 1939 formula. The thinking expressed in the 1939 legislation was that the benefits paid to retired workers without eligible dependents in the early years should be higher, and-as a cost offsetamounts paid in the later years

Table 3.-Benefits under the five formulas for worker with maximum creditable wage who retired at earliest time of eligibility for benefits under each formula

| $\begin{aligned} & \text { Year of } \\ & \text { legislation } \end{aligned}$ | Maximum annual creditable wage | Average monthly wage | Old-age benefit |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Monthly amount | As percent of wage |
| 1935 | \$3,000 | \$250 | \$25. 00 | 10.0 |
| 1939 | 3,000 | 250 | 41.20 | 16.5 |
| 1950 | 3,600 | 300 | 80.00 | 26.7 |
| 1952 | 3, 600 | 300 | 85.00 | 28.3 |
| 1954 | 4,200 | 350 | 108. 50 | 31.0 |

should be lower, than those payable under the preceding formula. At the same time, for workers with eligible dependents the benefits in the early years were increased even more substantially and in the later years were maintained at roughly the same level.

The substantial increase (almost 100 percent) between benefits payable under the 1939 and 1950 formulas arose in part because of carrying further this philosophy-to pay larger benefls currently. The primary reason was undoubtedly a recognition of the substantial rise in wages and prices that had occurred during the 1940's. When benefit amounts are considered in relation to wages, it is seen that each change in the formula has resulted in a rise-from only 10 percent of the maximum creditable wage under the 1935 formula to 31 percent under the 1954 formula.

The preceding analysis, however, is incomplete and to some extent misleading, since no consideration is given to the change in the general wage level other than that directly reflected in the maximum creditable wage limit. Thus, the man who earned $\$ 3,000$ a year in 1939 had a 17-percent benefit. Such an individual in 1954 had on the average a salary of about $\$ 8,000$. The present $\$ 108.50$ maximum benefit measured against such a wage is only $131 / 2$ percent, but this, too, is not a completely valid comparison because only about half his wage is subject to contribu-
tions and thus creditable for benefit purposes.

A better basis of analysis is to relate benefits to the median wage of regular workers (those with earnings in each of the 4 quarters of a year) in the particular year in which the new formula was enacled. Such an analysis is not feasible for the 1935 formula. For the 1939 formula, three separate bases are necessary since the benefit depends not only on average wage but also on an increment for years of coverage. The first basis used for the 1939 formula is for coverage near the minimum number of

Table 4.-Benefits under the five formulas, based on median wage ${ }^{1}$ of 4-quarter workers in year of legislation

| Year of legislation | Median wage ${ }^{1}$ |  | Old-age benefit |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Annual | Monthly | Monthly amount | As percent of wage |
|  | All workers |  |  |  |
| 1939: ${ }^{2}$ |  |  |  |  |
| Basis I | \$1, 113 | \$93 | \$25. 03 | 26.9 |
| Basis II | 1,113 | 93 | 34.02 | 36.6 |
| Basis III. | 1,113 | 93 | 27.70 | 29.8 |
| 1950 | 2, 566 | 214 | 69.40 | 30.3 |
| 1952 | 2,950 | 246 | 79.00 | 30.4 |
| 1954 | 3,300 | 275 | 95.10 | 33.6 |
|  | Male workers |  |  |  |
| 1939: 2 |  |  |  |  |
| Basis I. | 1,293 | 108 | 26.57 | 24.6 |
| Basis II--- | 1,293 | 108 | 36.12 | 33.4 |
| Basis III.... | 1,293 | 108 | 29.41 | 27.2 |
| 1950 | 2,978 | 248 | 75. 10 | 28.1 |
| 1052 | 3, 525 | 294 | 87.30 | 27.7 |
| 1954-...------ | 3,950 | 329 | 106.50 | 31.3 |
|  | Female workers |  |  |  |
| 1939: 2 |  |  |  |  |
| Basis I | 750 | 62 | 21.84 | 35.2 |
| Basis II.... | 750 | 62 | 29. 68 | 47.9 |
| Basis III.-- | 750 | 62 | 24.17 | 39.0 |
| 1950..........- | 1,769 | 147 | 58. 30 | 37.6 |
| 1952....-....- | 1,950 | 162 | 65.70 | 38.4 |
| 1954.........-- | 2,175 | 181 | 76. 10 | 40.5 |

${ }^{1}$ Based on actual recorded wages of covered employees plus estimated wages in excess of taxable fimit. Data for 1952 are preliminary, and data for 1954 are estimated from preliminary 1953 data (assuming a 3 -percent increase for 1954 over 1953). (assuming a ${ }_{2}$ The 1939 formula based benefit amount on average monthly wage plus length of coverage. Basis I age monthly wage plus length of coverage. Basis I assumes near-minimum coverage of 3 years, basis II basis III assumes 14 years of coverage (maximum for person retiring in 1950).
years; the second is for coverage close to the maximum; and the third is for 14 years of coverage-the most that a person could have had if he retired in 1950 when the new legislation of that year was being considered.

Table 5.-Illustrative wage histories, 1937-55

| Year of employment | Scale A ${ }^{1}$ | Scale $\mathrm{B}^{2}$ | Scale $\mathrm{C}^{8}$ |
| :---: | :---: | :---: | :---: |
| 1937 | \$899 | 4 \$1, 275 | \$3,000 |
| 1938 | 832 | 1, 211 | 3,000 |
| 1939 | 881 | 1,247 | 3,000 |
| 1940 | 926 | 1,305 | 3, 000 |
| 1941 | 1,014 | 1,466 | 3, 000 |
| 1942 | 1,127 | 1,703 | 3,000 |
| 1943 | 1,289 | 1,913 | 3,000 |
| 1944 | 1,369 | 1,996 | 3,000 |
| 1945 | 1,328 | 1,982 | 3,000 |
| 1946 | 1,394 | 2,031 | 3,000 |
| 1947 | 1,571 | 2,173 | 3,000 |
| 1948 | 1,677 | 2,281 | 3,000 |
| 1949 | 1,711 | 2,298 | 3,000 |
| 1950 | 1,769 | 2,376 | 3,000 |
| 1951 | ${ }^{8} 1,993$ | 82,666 | 3, 600 |
| 1952 | 82,060 | 82,760 | 3,600 |
| 1953 | 12, 120 | 52,810 | 3, 600 |
| 1954 | 62,120 | 62,810 | 3,600 |
| 1955 and after | 72,150 | 72,850 | 4,200 |

${ }^{1}$ Actual average earnings credits of all wage workers.
2 Actual average earnings credits of all 4 -quarter wage workers.
3 Maximum creditable earnings.
4 Estimated.
${ }_{5}$ Preliminary

- Rough estimate.

Arbitrary assumption.
Separate analyses have been made for men and women, and figures are also given for all workers combined. Table 4 indicates that the relative benefit level based on median wages was little, if at all, affected by the 1950 and 1952 amendments, since the primary insurance amount based on the median wage of all 4-quarter workers remained close to 30 percent of such wage. In the 1954 amendments, however, relative benefit levels were significantly increased (by about 10 percent) to about 33 percent of wages.

Still another method of comparing the various benefit formulas is to show how a hypothetical individual retiring at the beginning of 1955 would fare under the 1954 formula in contrast with what he might have expected if the earlier formulas had continued in effect. The same analysis can also be made for a hypothetical individual retiring at the beginning of 1980 after a full working lifetime under the system-that is, entrance at age 22 in 1937 and retirement at age 65 in 1980.

Illustrative wage histories are given in table 5 for an individual who entered covered employment in 1937 and who was in such employment each year until he retired at the beginning of 1955 or, alternatively, 1980. The actual average creditable wage of all

Table 6.-Benefits under the five formulas for illustrative wage histories of worker retiring at beginning of 1955

| $\begin{gathered} \text { Year } \\ \text { of } \\ \text { legisla- } \\ \text { tion } \end{gathered}$ | Wage assumption | Old-age benefit |  | Old-age benefit plus wife's benefit 1 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Monthly | As per- cent of wage atire- tire- ment | Monthly amount | As per- cent of wage atre- tire- ment |


|  | Using wage scale A |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1935... | Level ${ }^{\text {2 }}$-.-- | \$25.99 | 35 | ${ }^{(3)}$ | (3) |
| 1935... | Increasing | 34. 23 | 19 | (3) | (3) |
| 1939... | Increasing- | 31.94 | 18 | \$47.91 | 27 |
| 1950... | Increasing- | 60.80 | 34 | 91.20 | 52 |
| 1952... | Increasing. | 65.80 | 37 | 98. 70 | 56 |
| 1954... | Increasing | 73. 70 | 42 | 110.60 | 63 |


|  | Using wage scale B |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1935. | Level ${ }^{2}$ | \$31.63 | 30 | ${ }^{(3)}$ | (3) |
| 1935. | Increasing. | 42.75 | 18 | (3) | (3) |
| 1939... | Increasing - | 37.54 | 16 | \$56. 31 | 24 |
| 1950.-. | Increasing- | 69. 50 | 30 | 104.30 | 45 |
| 1952 | Increasing- | 74. 50 | 32 | 111.80 | 48 |
| 1054--- | Increasing- | 85.30 | 36 | 128.00 | 55 |
|  | Using wage scale C |  |  |  |  |
| 1935--- | Level ${ }^{2}$ | \$53.75 | 22 | (3) | (3) |
| 1935 | Increasing- | 453.75 | 18 | (3) | ${ }^{(3)}$ |
| 1939..- | Increasing. | 47. 20 | 16 | \$70.80 | 24 |
| 1950... | Increasing- | 80.00 | 27 | 120.00 | 40 |
| 1952. | Increasing- | 85.00 | 28 | 127.50 | 42 |
| 1954... | Increasing- | 98.50 | 32 | 147.80 | 49 |

${ }^{1}$ Assumes wife is eligible and is not entitled to benefit based on her own earnings record.
${ }^{2}$ At 1937 figure.
8 Wife's benefit not provided under 1935 act; amount same as for old-age benefit alone.
4 Same as for level-wage assumption; increased wage not creditable because of the $\$ 3,000$ maximum
workers with any wage credits in each year is used as the basis in wage scale A. Scale B is based on the average for workers employed in all 4 quarters, and scale $C$ on the maximum annual wage that can be credited.

These three wage scales were used in computing benefits under the various formulas for persons retiring at the beginning of 1955 (table 6) and 1980 (table 7). Account was taken, for the computations under each formula, of the actual upward trend in wages in the past; for the 1935 formula a level-wage assumption was also used, to show what the individual could have "anticipated" on the basis of his wage in 1937. The benefits are shown in dollars and also as a percentage of the wage being earned at retirement in 1955 or 1980. Both the worker's benefit and the combined
benefit for a worker and his eligible wife are computed under the 1939 and later formulas; the 1935 act, of course, provided no wife's benefit.

For workers retiring currently, there are naturally sharp increases in the dollar amount of the benefits compared with what might have been anticipated in 1937 on the basis of wages at that time. These changes are due not only to the rise in wages over the past 2 decades but also to the revision of the benefit formula. For wage scales A and B, the actual amount paid under the 1954 benefit formula for a retired worker without an eligible wife is almost three times what might have been anticipated in 1937; a more-than-fourfold increase occurs when the worker's wife is also eligible for benefits. If the 1935 act had not been amended, the benefit for a retired worker without an eligible wife would have risen by roughly $\$ 10$, or to one-third more than the amount payable if wages had remained level; as a proportion of the wage at retirement, however, it would have been almost 50 percent less.

For all three wage scales, the 1939 formula results in benefits for a currently retiring worker without an eligible wife that are almost 10 percent lower than those produced by the 1935 formula. When, however, the worker has an eligible wife who is not entitled to benefits on her own earnings record, the 1939 formula yields significantly more. This comparison shows the change in philosophy between the 1935 and 1939 acts; the earlier law provided for the same benefit amount regardless of marital status, while the latter realigned the benefit structure in recognition of presumptive family needs.

When benefits are considered in relation to wages at retirement, the 1954 formula currently produces amounts for all retired workers, including those without dependents, more favorable for the three wage scales than those that might have been anticipated under the 1935 act. The worker whose history would follow wage scale $A$, for example, could anticipate, on the basis of the 1935 formula and his earnings at that time, a benefit equaling 35 percent of that wage, but his own benefit under the

1954 formula is 42 percent of his final wage and is 63 percent if he has an eligible wife.
For the individual retiring at the beginning of 1980 after 43 continuous years of coverage under the system (table 7), a somewhat different picture is shown. It should be noted, however, that a level wage is assumed for the years after 1954, If wages continue to rise as they have in the past, and if the benefit formula remains unchanged, the dollar amounts of the benefits will be higher (except, of course, under wage scale $C$ ), but the benefits will be a lower proportion of the wage at retirement. No assumption based on increasing wages in the future has been made because, if this trend continues, a reappraisal of the benefit formula may be necessary.

A comparison of the 1935 and 1939
Table 7.-Benefits under the five formulas for illustrative wage histories of worker retiring at beginning of 1980

| $\begin{gathered} \text { Year } \\ \text { of } \\ \text { legisla- } \\ \text { tion } \end{gathered}$ | Wage assumption | Old-age benefit |  | $\begin{aligned} & \text { Old-age benefit } \\ & \text { plus wife's } \\ & \text { benefit } \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Monthly | As per- cent of wage at re- tire- ment | Monthly amount | As per- cent of wage atre- tire- ment |
|  | Using wage scale A |  |  |  |  |
| 1935. | Level : | \$44. 71 | 60 | (3) | ${ }^{(3)}$ |
| 1935 | Increasing. | 64.51 | 36 | (3) | (3) |
| 1939... | Increasing. | 43.57 | 24 | \$65.36 | 36 |
| 1950... | Increaslug. | 61. 70 | 34 | 92.60 | 52 |
| 1952--- | Increasing. | 66. 70 | 37 | 110.10 | 56 |
| 1954.-- | Increasing. | 74.30 | 41 | 111.50 | 62 |
|  | Using wage scale B |  |  |  |  |
| 1935.-- | Level 2.... | \$54. 09 | 51 | (3) | (3) |
| 1935. | Increasing- | 76.06 | 32 | ${ }^{(3)}$ | ${ }^{(3)}$ |
| 1939. | Increasing | 51.25 | 22 | \$76.88 | 32 |
| 1950 | Increasing | 70.40 | 30 | 105. 60 | 44 |
| 1952... | Increasing- | 75.40 | 32 | 113.10 | 48 |
| 1054... | Increasing | 85.00 | 36 | 128.90 | 54 |
|  | Using wage scale O |  |  |  |  |
| 1935.-- | Level ${ }^{\text {2 }}$---- | \$85.00 | 34 | ${ }^{(3)}$ | (3) |
| 1935. | Increasing- | 485.00 | 24 | (3) | (3) |
| 1939..- | Increasing | 57.20 | 16 | \$85. 80 | 25 |
| 1950.- | Increasing. | 80.00 | 23 | 120.00 | 34 |
| 1952 | Increasing- | 85.00 | 24 | 127.50 | 36 |
| 1954 | Increasing- | 108.50 | 31 | 162.80 | 47 |

${ }^{1}$ Assumes wife is eligible and is not entitled to benefit based on her own earnings record.
benefit based on
2 At 1937 figure.
${ }_{3}^{2}$ Wife's benefit not provided under
${ }^{3}$ Wife's benefit not provided under 1035 act; amount same as for old-age benefit alone.
${ }^{\text {i Same }}$ as for level-wage assumption; increased wage not creditable because of the $\$ 3,000$ maximum.
formulas shows that the benefit paid under the latter for a worker who does not have an eligible wife and who retires in 1980 is considerably less than that under the 1935 act-the result of the different philosophy underlying the two acts. In fact, based on the wage history assumed, for each of the three scales used the benefit under the 1939 formula for a worker with an eligible wife is virtually the same as for a single individual under the 1935 act. Under the benefit formulas developed after 1939, the amounts are considerably increased, but not until the 1954 formula does the benefit based on the assumed wage history exceed the corresponding figure for the 1935 formula for all three wage scales for a worker without an eligible wife. On the other hand, the benefit amount for a worker and eligible wife is in all instances greater under the several amended formulas than the benefit under the 1935 law.

Even under the 1954 formula, the beneflt for a retired worker without an eligible wife is significantly lower as a percentage of the wage at retire-
ment than the amount the individual would have anticipated on the basis of the 1935 formula and his wage at that time; the reverse is the case, to a slight extent, for a worker and eligible wife. On the basis of wage scale A, for example, the individual would have expected a retirement benefit arising from the 1935 formula and his wage at that time equal to 60 percent of that wage, but under the 1954 formula the benefit is only 41 percent (although it is 62 percent if he has an eligible wife).

## Summary

Five different benefit formulas have been prescribed for the old-age and survivors insurance system, although the first one was never operative. The first change in the benefit formula, made in 1939, reflected a change in benefit philosophy. Benefits payable in the early years of the program's operation were made relatively larger; presumptive family needs were recognized by provision of supplementary benefits for dependents; and, offsetting these two changes, benefits for long-term contributors
and for those without dependents were reduced. Although the second change (in 1950) carried further the philosophy underlying the payment of larger benefits currently by making no distinction in benefit amount based on years of coverage (for those continuously in covered cmployment), it consisted primarily of adjustments to changes in wage levels and the cost of living. The third change (in 1952) was also primarily a reflection of wage-level and cost-of-living changes. The fourth change, that in the 1954 amendments, reflected both an adjustment to higher wage levels and an increase of about 10 percent in the relative adequacy of the benefits.

For workers retiring currently, the benefits paid are larger than the original program would have provided, both in terms of dollars and also in relation to wage at time of retirement. The relative adequacy of the benefits was increased significantly by the 1954 amendments-a fact that is, of course, reflected by the increased financial support of the program provided by the higher ultimate contribution rates scheduled in that law.

## Notes and Brief Reports

## Assistance Expenditures per Inhabitant, 1953-54

The amount expended per inhabitant for public assistance payments is determined by the proportion of the population that has received assistance during the year and the average amount of assistance granted per recipient. Wide variations exist among the States with respect to both factors. Some states aid a relatively small proportion of the population and make relatively high payments per recipient; others have a relatively high proportion of the population receiving aid, but the average payments are low. Still others provide assistance to a relatively large segment of the population and also make relatively high payments per recipient. When costs are expressed as an
amount per inhabitant, the overall factor of differences among States in total population is removed and only the two remaining variables-the proportion of the population aided and the average payment per recipi-ent-are reflected. The per capita costs, when used in trend analysis, also give perspective on the relative growth in population and assistance costs.

During the fiscal year 1953-54, payments from Federal, state, and local funds for all five public assistance programs combined amounted, for the country as a whole, to $\$ 2.6$ billion or $\$ 15.89$ per inhabitant, about the same as the per capita expenditure in the preceding fiscal year. The population of the United States increased 1.60 percent from July 1952 to July 1953 , and the total amount spent
for assistance went up 1.57 percent. A smaller proportion of the population was aided under the programs in 1954 than in 1953, but average payments to recipients for the Nation as a whole increased. The cost of living, as measured by the consumer price index of the Bureau of Labor Statistics, remained practically unchanged from June 1953 to June 1954. Some States, however, raised assistance standards to reflect price changes that had occurred in the preceding year or earlier.

## Changes From 1953

The percentage changes in 1954 were small for all programs except aid to the permanently and totally disabled. Expenditures per inhabitant for this program rose 18 percent ( 12 cents). Changes from the preceding fiscal year for all programs combined and for the individual programs are shown in the tabulation that follows.


[^0]:    *Chief Actuary, Social Security Administration.
    ${ }^{1}$ According to the terminology in the law, covered self-employment income is combined with covered wages earned as an employee to determine the "average monthly wage."

[^1]:    'Similarly, the 1950 and 1952 acts provided an alternative method (in addition to the new formulas of those laws), under which the beneflt was based on the average monthly wage computed from 1937 on and the use of the 1939 formula slightly modified; the result was then increased by means of a conversion table.

[^2]:    1 A verage monthly wage is always in whole dollars.
    2 Benefit payable to rettred worker.
    : Total benefit payable to retired worker and dependents or to all survivor beneficiaries.

