

# THE EFFECTS OF RELATING WEEKLY BENEFIT AMOUNTS TO ANNUAL EARNINGS

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*What is the effect on the amounts workers receive when unemployment benefits are computed on the basis of an individual's annual earnings rather than his earnings in a specified quarter of the base period? This article summarizes the results of experience and analyses in several States which have adopted or studied annual-earnings plans, and considers, in particular, the effects of such a plan on the benefits paid to workers who have had low wages or irregular employment.*

MOST STATE unemployment compensation laws have expressed the general principle that the weekly amount of unemployment benefits should be related to the weekly wage loss resulting from unemployment. On this basis, the wage loss for a week of total unemployment is measured against the full-time weekly wage or the earnings which would have been received had the worker been fully employed throughout the week. As State systems were established, efforts were made to obtain from all subject employers individual wage reports setting forth the worker's full-time weekly wage. Administrative considerations, however, soon led to the use of an approximation of the full-time weekly wage. This result was accomplished by selecting the calendar quarter of highest earnings in the period used as a basis for determining wage credits and dividing such earnings by thirteen. Subsequently, many States adopted fractions higher than one-thirteenth on the principle that many workers are not employed fully and continuously and that even the highest quarterly earnings, therefore, do not always represent full employment.

During the past year, it has been seriously proposed in many States that the weekly benefit amount be based on annual earnings, chiefly as a means of simplifying the computation of benefits. Under this method, the worker's weekly benefit amount is usually calculated either as a flat percentage of his annual earnings, regardless of that amount, or as a series of percentages that vary inversely with the amount of such earnings. In either case, annual-earnings brackets and corresponding weekly benefit amounts are usually specified.

\*Bureau of Employment Security, Research and Statistics Division. The discussion of the annual-earnings plans incorporated in State laws is based upon an analysis prepared by Mrs. Enid Francis.

Four States—Maine, North Carolina, South Dakota, and West Virginia—incorporated annual-earnings plans in their laws in 1939. Several other States have made studies comparing weekly benefit amounts based on proposed annual-earnings plans and on quarterly earnings plans by applying both formulas to the earnings of a sample of claimants. The resulting substantial body of data makes possible comparative analyses of the effect of the annual-earnings formula on the weekly benefit amounts of all claimants and of claimants in different earnings classes.

A number of conclusions stand out in the analyses of the actual benefit-paying experience in States which adopted an annual-earnings plan as well as in the State studies of the potential effects of such a change upon a sample of claimants: (1) there is so much irregular employment in the groups studied that annual earnings in general are not proportionately related to quarterly earnings; (2) for a large number of individuals there is considerable variation between weekly benefit amounts determined from annual earnings and those determined from highest-quarter earnings; (3) the annual-earnings plan yields rates which bear little relationship to the weekly wage loss of a totally unemployed worker; (4) the lowering of benefit amounts under the annual-earnings plan is greatest in the low-earnings groups, where irregular employment is most prevalent; (5) in general the effect of the proposed annual-earnings plans and those now in operation is to lower weekly benefit amounts noticeably; and (6) when the percentages of annual earnings are increased or when they are graded to equalize the effect for various earnings groups, the resulting benefit rates for a considerable number of claimants with steady employment may exceed their weekly earnings.

## State Studies of Annual-Earnings Plans

Six representative State studies have been selected for present analysis.<sup>1</sup> The samples on which these studies were based are not equally representative of the universes from which they were drawn, mainly because of variations in size and composition (table 1). The annual-earnings plans studied also varied somewhat from State to State, as did the high-quarter earnings formulas used for purposes of comparison. Nevertheless, all the studies lead to similar conclusions.

A high incidence of irregular employment is reflected in several of the studies. The Alabama report indicates that annual earnings for the sample group of claimants averaged only 2.7 times the earnings in the highest quarter, ranging from one to four times the quarterly earnings, and that the claimants were distributed almost evenly throughout the range. In addition, few claimants with identical quarterly earnings were found to have the same amount of annual earnings. In the Illinois study 55.7 percent, and in the Massachusetts study 47.4 percent, of the sample claimants had earnings in covered employment in less than 4 quarters. If to these groups are added the indeterminate number of claimants who, although they had earnings in all 4 quarters, were not employed full time in each quarter, it is evi-

<sup>1</sup> These studies were made by the research staffs in State agencies of Alabama, Illinois, Massachusetts, Michigan, New Hampshire, and Ohio.

dent that a large proportion of the claimants had irregular employment during the year.

The effects of such employment can be clearly seen when individual weekly benefit amounts determined according to the annual-earnings plan are compared with those determined according to the quarterly plan. With the exception of the Massachusetts study, for which such information is not presented, the determination of weekly benefit amounts on the basis of annual earnings results in every case in large differences in benefits to claimants as compared with benefits based on highest quarterly earnings. In each of the sample groups only a minority of the claimants would receive the same benefit rates under both plans. The proportion of claimants whose rates change varies from 61.0 percent in Michigan to 86.1 percent in Alabama. The presence of such a large disparity in Michigan is especially significant when it is considered that the annual-earnings schedule used in the study was designed to yield a distribution of claimants by weekly benefit amount as similar as possible to that obtained with the quarterly plan in use.<sup>2</sup>

The effect of the annual-earnings plan upon claimants at different earnings levels is noteworthy. The annual plan employing a flat percentage of earnings resulted in a more general

<sup>2</sup> Michigan Unemployment Compensation Commission, *Effects of the Annual Wage Method for Determining Weekly Benefit Rate*, Research Memorandum 17, First Draft, April 1939, p. 1.

Table 1.—Selected representative State studies of annual-earnings plans: Size, composition, and method of sampling

State	Title of study	Sample		
		Size	Composition	Method of selection
Alabama.....	<i>Annual Earnings as the Basis of the Weekly Benefit Amount</i> , August 1939.	10,866 claimants....	Claimants who completed their first benefit years between Jan. 1 and Apr. 30, 1939.	Claimants whose fourth and fifth account number digits were of the "01" grouping.
Illinois <sup>1</sup> .....	Special report, January 1939.....	1,613 claimants.....	3 percent of Indiana claimants receiving benefits during week of Nov. 14-19, 1938.	Claimants whose benefit check number ended in 33, 66, and 99.
Massachusetts....	<i>Effect of Proposed Changes in Benefit Formulae</i> , Apr. 9, 1939.	30,625 covered workers, containing 8,398 claimants.	2.5 percent of individuals with wage records in covered employment, Jan. 1, 1937-June 30, 1938.	Groups of cards chosen at regular intervals from trays in which wage records are filed by social security account number.
Michigan.....	<i>Effects of the Annual Wage Method for Determining Weekly Benefit Rate</i> , Research Memorandum 17, April 1939.	27,140 claimants....	67 percent (estimated) of individuals whose claims were allowed in November and December 1938.	
New Hampshire..	<i>Analysis of Six Waiting Period Plans</i> . . . , January 1939.	5,000 claimants....	11.5 percent of claimants who filed for benefits, Jan. 1-Nov. 30, 1938.	Cards chosen proportionately from active file, last check (exhaustion of wage credits) file, and inactive withdrawn folders. Chosen randomly from first 2 files and selectively from last.
Ohio.....	<i>Report of the State Advisory Council</i> , May 19, 1939.	5,005 claimants....	All individuals whose claims were allowed during the period Apr. 19-26, 1939, inclusive.	

<sup>1</sup> At the time of the study, Illinois was not yet making benefit payments; hence, a sample of Indiana claimants was used.

lowering of rates among the claimants already receiving low weekly benefit amounts than among those receiving higher weekly benefits. The New Hampshire study examines the effects of using three flat percentages (1.3, 1.4, and 1.5 percent of annual earnings) and shows the percentage of claimants at each benefit rate under the quarterly plan whose rates are lowered when computed by the annual-earnings method. These tables indicate a definite tendency for larger proportions of the claimants in the lower benefit classes to suffer reductions in their weekly benefit amounts. Further, among claimants with high benefit rates, use of the annual-wage base results in more increases than decreases as compared with benefit amounts based on highest quarterly earnings; for those with the lower benefit amounts the reverse is true.

This phenomenon is directly traceable to the concentration of irregular employment among workers with low quarterly earnings. When annual earnings are used as the basis for calculating benefits, the effect of irregular employment upon benefit rights becomes even more pronounced, with the result that workers in this group are placed at an even greater disadvantage than those whose high-quarter earnings are relatively high. The more frequent occurrence of irregular employment among the low-paid groups is reflected by data presented in the Alabama and Illinois reports. Distributions of claimants in different quarterly earnings groups by the ratio of annual to high-quarter earnings are shown in the Alabama report. Annual earnings for claimants with less than \$50 of earnings in the highest quarter are equal to only 1.7 times the highest quarterly earnings, whereas a ratio of 4 would indicate full employment throughout the year. The ratio rises rapidly with increases in high-quarter earnings, reaching 2.9 for the groups earning between \$150 and \$300 in the quarter of highest earnings. Moreover, 49.4 percent of the group whose quarterly earnings are less than \$50, and 31.2 percent of those with quarterly earnings between \$50 and \$100, have ratios between 1.0 and 1.5, while only 3.2 percent in the \$250-300 class and 1.8 percent of those earning \$350 and over in the highest quarter have ratios between 1.0 and 1.5.

The annual-earnings formula employing a graduated scale of rates which are higher for the lower-paid workers has been developed in an attempt

to equalize the effect on all earnings groups of a change from the quarterly plan. The necessity, however, of applying high percentages of annual earnings in the low-earnings classes to compensate for greater irregularity of employment among these workers has the effect of yielding weekly benefit amounts for steadily employed workers that may be greater than their full-time weekly wages. This disparity is an indication of the tendency of annual-earnings plans to throw benefit amounts out of proportion to full-time weekly wages.

Almost without exception, the information contained in the State studies reveals that in general the proposed annual-earnings plans reduce the weekly benefit amounts payable under the quarterly earnings provisions. This reduction manifests itself in three ways: (1) an excess of claimants whose benefit rates are lowered over those whose rates are raised; (2) a shift in the distributions of claimants by size of weekly benefit amount toward the minimum and away from the maximum rate; and (3) the reduction in the average weekly benefit amount.

The first of these manifestations is illustrated in chart 1; under each of the situations there presented, more claimants have their rates lowered than increased by application of an annual-wage formula. The excess ranges from 8.5 percent in New Hampshire (under the 1.3-percent formula) to 75.2 percent in Illinois. Not only are the decreases more frequent, but they are also of greater magnitude than the increases. The Illinois data, for example, show that more than half the claimants would suffer a decrease greater than \$2 in the weekly benefit amount and none would have a comparable increase.

The only exceptions to the generalization that annual-earnings plans caused more decreases than increases in weekly benefit amounts arise under the New Hampshire plans based on 1.4 and 1.5 percent of annual earnings, which are not included in the chart. When these high percentages are used, however, failure to reduce weekly benefit amounts is accompanied by further distortions of the relationship between benefit amounts and weekly wages. This distortion is indicated by the decreases in the proportion of individuals whose benefit rates remain the same under both the quarterly and the annual plans as the percentage of annual earnings increases. These proportions

range from 25.1 percent under the 1.3-percent formula to 22.8 percent under the 1.5-percent formula. Moreover, the weekly benefit amounts for a number of individuals are increased by such large amounts under the 1.4 and 1.5-percent annual plans as to equal more than one and one-half times the amounts calculated under the quarterly plan. In some instances use of these percentages more than doubles the weekly benefit amount a worker is entitled to receive under the quarterly plan, and results in weekly benefit amounts which are probably in excess of weekly earnings.

Greater concentration of claimants at low benefit amounts and a decrease in the average weekly benefit amount are shown in every comparison of quarterly and annual-earnings plans. Chart II summarizes the relevant data from the State sample studies. In every State, the annual-earnings plan yields a higher proportion of benefit rates equal to \$7 or less and, except for New Hampshire, a smaller proportion equal to \$13 or more. A minimum of \$7 was chosen for the sake of comparability, since one of the plans sets that amount as the minimum payment. When a lower minimum is provided, the tendency for a greater concentration at the lower benefit rates under the annual plan is equally pronounced.

Concomitant with this general downward shift in the distributions, a reduction in the average benefit rate is uniformly found. In the three studies for which a direct comparison is possible, the average weekly benefit amount is, respectively, 2.9 percent, 5.5 percent, and 26.2 percent lower under the annual than under the quarterly plan. In two other studies the minimum and maximum rates provided under the annual plans are higher than under the quarterly plan; nevertheless the averages under the former method are lower by 13.5 and 22.9 percent, respectively. If the same minimum and maximum had been used for both plans, the reductions would have been even more pronounced. In the remaining study a lower minimum and less stringent eligibility provisions are required under the annual plan; hence the resulting 22.4-percent drop in the average rate somewhat overstates the difference arising from change in the earnings base.

#### *Benefit Experience in States With Annual-Earnings Base*

Data on payments for total unemployment classified by size of payment in the monthly State reports submitted to the Social Security Board during 1939 provide an opportunity to measure the actual effect of the annual-earnings

**Chart I.—Percent of claimants whose weekly benefit amounts are lower, the same, or higher under annual-earnings plans as compared with high-quarter earnings plans, in 5 State samples**

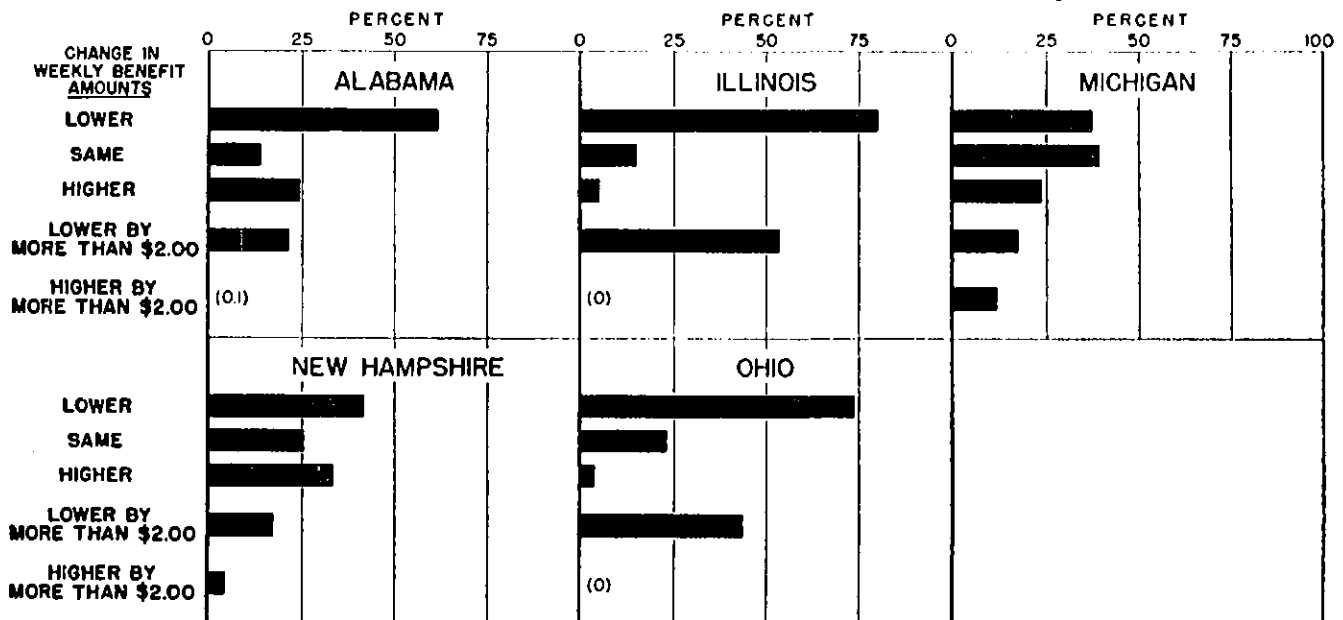
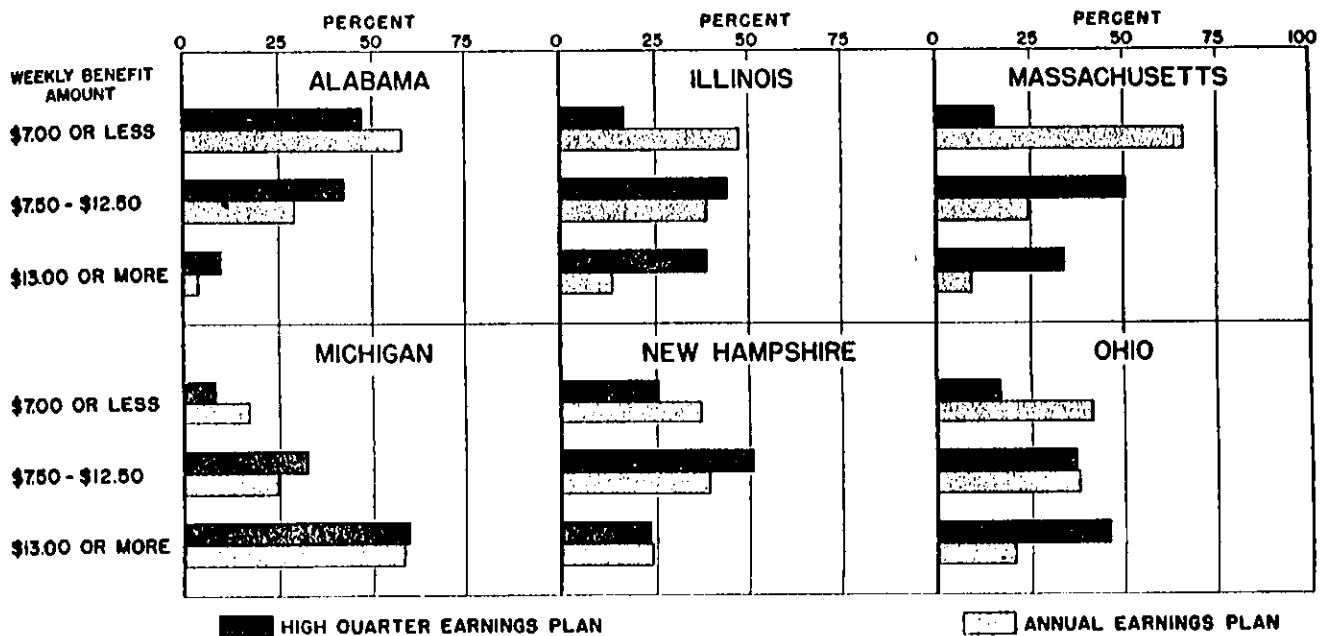


Chart II.—Percentage distribution of claimants under high-quarter earnings and annual-earnings plans, by weekly benefit amount, in 6 State samples



plan in operation in the four States which changed their laws in 1939 to base weekly benefit amounts on annual earnings. The data for Maine and West Virginia were prepared on a sample basis, using all benefit payments issued during the week ending nearest the fifteenth of each month. For North Carolina and South Dakota all benefit payments within the month were used. These four States previously calculated the weekly benefit amount as 50 percent of the reported full-time weekly wage or, when that could not be determined, as one-twenty-sixth of wages in the quarter of highest earnings. In practice all but a few of the benefit amounts were determined on the basis of highest quarterly earnings, and the distributions of weekly benefit amounts for a period before and after the laws were amended serve as a valid basis for comparing the annual with the highest quarterly earnings plan.

In South Dakota and West Virginia percentage distributions of weekly benefits under the two plans can be clearly isolated, because the State agencies stopped all benefit payments under the quarterly formula and resumed them under the annual-earnings formula. In Maine and North Carolina a transition period was provided during which payments were based on both the old and the amended laws. It is possible, however, to

divide this period into months when all or most of the payments were based on highest quarterly earnings and months when they were based on annual earnings. Both the flat and the variable-percentage annual-earnings plans are also represented, the first by North Carolina and the second by the other three States.

The percentage distributions presented in table 2 reveal the same movement as was discovered in the special State studies. There is a decided shift toward the smaller benefit amounts under the amended laws, which use annual earnings as a basis for determining the weekly benefit amount, with a particularly marked concentration below the \$6 rate. The number of payments for less than \$6 is increased by 15 percent under the amended law in North Carolina, is more than doubled in Maine and South Dakota, and is multiplied approximately 4 times under the amended West Virginia law. In addition, except for West Virginia where the annual plan yields a few more payments between \$7 and \$9, there is a smaller percentage of payments under the amended laws at every benefit rate from \$7 and over.

Consistent with the changes in the distributions, the average weekly benefit amount decreased significantly in each of the four States after the amendments went into effect. The decreases

ranged from 11.9 percent in North Carolina to 26.7 percent in West Virginia.

In order to eliminate any factor other than the change in the method of determining the weekly benefit amount as a possible reason for these rate declines, data in 10 States<sup>3</sup> adjacent to the 4 which adopted the annual-earnings plan were used as a control. Benefit payments in these States were compared for the periods in which payments were made under the quarterly earnings and under the annual-earnings plans in the States which amended their laws. Although some of these 10 States altered their benefit formulas during 1939, a comparison of the distributions of benefit payments by size indicates, for the most

part, that little change took place over the period; in fact, in some instances there was actually an increase in the proportion of payments at the maximum amount. In New Hampshire and Vermont the proportion of payments definitely increased for amounts between \$5 and \$8. In both States the minimum benefit provision remained unchanged during 1939; it was set at \$5 in New Hampshire and in Vermont at \$5 or three-fourths of the full-time weekly wage, whichever is less. In Maine, the State with which these two are compared, the minimum was lowered from \$5 to \$3 by the amendment containing the annual-earnings plan. The flat \$5 minimum in Maine, under the old law, and in New Hampshire, over the period, vitiates a comparison of the proportions of payments below that amount. When the

<sup>3</sup> Georgia, Kentucky, Nebraska, New Hampshire, North Dakota, Ohio, Pennsylvania, South Carolina, Vermont, and Virginia.

Table 2.—Percentage distribution of benefit payments for total unemployment by size of payment, under old<sup>1</sup> and amended<sup>2</sup> laws in 4 States that adopted annual-earnings plans, 1939

Weekly benefit amount	Maine		North Carolina		South Dakota		West Virginia	
	Old law, January-April	Amended law, May-September	Old law, January-March	Amended law, April-September	Old law, February-July	Amended law, October-November	Old law, February-April	Amended law, May-September
Total number.....	27, 155	31, 225	161, 640	352, 801	28, 370	6, 065	18, 408	66, 122
Percentage distribution								
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under \$1.00.....	( <sup>1</sup> )	( <sup>1</sup> )	2.0	0.5	( <sup>1</sup> )	.....	( <sup>1</sup> )	.....
\$1.00-\$1.99.....	0.8	0.1	4.7	4.2	0.2	.....	( <sup>2</sup> )	.....
\$2.00-\$2.99.....	1.1	.2	0.5	16.1	.6	0.1	0.6	( <sup>1</sup> )
\$3.00-\$3.99.....	1.0	14.3	0.4	12.8	.9	10.5	.8	13.6
\$4.00-\$4.99.....	2.0	12.1	5.7	12.4	1.5	14.1	1.1	12.7
\$5.00-\$5.99.....	14.0	14.0	20.7	17.3	13.4	13.3	8.2	10.8
\$6.00-\$6.99.....	10.3	12.4	12.5	11.3	9.7	10.8	7.1	9.8
\$7.00-\$7.99.....	12.3	11.5	10.9	8.3	8.1	7.4	6.8	9.2
\$8.00-\$8.99.....	11.0	9.4	6.9	4.9	8.1	7.1	8.1	8.3
\$9.00-\$9.99.....	11.4	7.3	4.1	3.7	12.1	6.4	8.2	7.7
\$10.00-\$10.99.....	9.1	5.0	2.7	2.6	9.4	5.0	9.3	6.9
\$11.00-\$11.99.....	4.7	3.7	1.9	1.6	6.8	4.7	8.5	5.2
\$12.00-\$12.99.....	5.3	2.7	1.5	1.0	5.7	3.2	8.7	3.9
\$13.00-\$13.99.....	3.2	1.8	1.1	.8	4.2	2.7	6.4	3.6
\$14.00-\$14.99.....	2.3	1.1	.9	.6	3.5	2.3	5.9	2.2
\$15.00.....	10.6	3.8	3.5	2.1	15.8	9.5	20.3	6.7
Cumulative percentage distribution								
Under \$1.00.....	( <sup>1</sup> )	( <sup>1</sup> )	2.0	0.5	( <sup>1</sup> )	.....	( <sup>1</sup> )	.....
Under \$2.00.....	0.8	0.1	6.7	4.7	0.2	.....	( <sup>1</sup> )	.....
Under \$3.00.....	1.9	.3	13.2	20.8	.5	0.1	0.6	( <sup>1</sup> )
Under \$4.00.....	3.8	14.6	19.6	33.6	1.7	10.6	1.4	13.6
Under \$5.00.....	5.8	26.7	25.3	46.0	3.2	24.7	2.5	26.3
Under \$6.00.....	19.8	40.7	55.0	63.3	16.6	38.0	10.7	37.1
Under \$7.00.....	30.1	53.1	67.5	74.6	26.3	48.8	17.8	46.0
Under \$8.00.....	42.4	64.6	78.4	82.9	34.4	56.2	24.6	56.1
Under \$9.00.....	53.4	74.0	84.3	87.8	42.5	63.3	32.7	64.4
Under \$10.00.....	64.8	81.3	89.4	91.5	54.6	71.7	40.9	72.1
Under \$11.00.....	73.9	86.9	91.1	94.1	64.0	77.6	50.2	79.0
Under \$12.00.....	78.6	90.0	93.0	95.5	70.8	82.3	58.7	84.2
Under \$13.00.....	83.0	93.3	94.5	96.5	76.5	85.5	67.4	88.1
Under \$14.00.....	87.1	95.1	96.6	97.3	80.7	88.2	73.8	91.1
Under \$15.00.....	89.4	96.2	98.5	97.9	84.2	90.5	79.7	93.3
\$15 and under.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average weekly benefit amount.....	\$9.14	\$7.32	\$9.39	\$5.03	\$9.94	\$8.12	\$10.89	\$7.08

<sup>1</sup> Weekly benefit amounts based on full-time weekly wage or highest quarterly earnings.

<sup>2</sup> Weekly benefit amounts based on annual earnings.  
<sup>3</sup> Less than 0.1 percent.

payments below \$6 are considered, however, it is evident that the slight increase from 11.1 percent to 15.9 percent in New Hampshire explains only a small part of the increase from 19.8 percent to 40.7 percent in Maine.

For Vermont the distributions by size of payment do not tell the whole story, and it is necessary to resort to a distribution of benefit payments by industry for the first 9 months of 1939.<sup>4</sup> This distribution reveals that whereas benefit payments for all industries decreased by about 27 percent between the periods January–April and May–September, payments to claimants previously employed in the textile mill products industry tripled, increasing from 9.0 to 36.5 percent of all payments. Employees in this industry are a predominantly low-earnings group, whose average benefit payment during the first 9 months in 1939—\$8.34—is approximately 12 percent below the average for all industries. Consequently the increase in low benefit payments in Vermont may be attributed to the large influx of claimants from the low-wage group.

Although similar data on benefit payments by industry were not reported by Maine, information is available on the number of covered workers in textile mill products by months for the first 6 months of 1939.<sup>5</sup> These figures, which reasonably approximate employment in that industry, indicate that employment decreased from January to February and from February to March, remained about the same through April, and then increased rapidly in May and June. In other words, during March and April there was probably an increase in the number of benefit payments to claimants from the textile mill products industry in Maine. During May and June, however, after the effective date of the annual-earnings plan, these claimants were being rapidly rehired, at the same time that Vermont was experiencing its greatest increase of payments to claimants formerly attached to the industry.

It may be concluded, therefore, that, although there was an increase in the proportion of low benefit payments in New Hampshire and Vermont coincident with a similar movement in Maine, it was caused in the former States entirely by a

<sup>4</sup> *Monthly Report of Number and Amount of Benefit Payments Classified by Industry*, Social Security Board, Form UC-237, January–September 1939.

<sup>5</sup> *Quarterly Report on Number of Covered Workers by Industry Groups*, Social Security Board, Form UC-234, January–March, April–June, 1939.

**Table 3.—Maine: Comparison of amount of earnings required for specified weekly benefit amounts under old<sup>1</sup> law and under amended<sup>2</sup> law**

Weekly benefit amount	Minimum earnings required for specified weekly benefit amount		Ratio of earnings required under amended law to earnings required under old law
	Old law <sup>1</sup>	Amended law	
\$3.00	\$48.00	\$144.00	3.0
4.00	64.00	228.25	3.6
5.00	80.00	318.50	4.0
6.00	96.00	415.17	4.3
7.00	112.00	517.85	4.6
8.00	128.00	626.88	4.9
9.00	144.00	741.55	5.1
10.00	160.00	862.02	5.4
11.00	176.00	989.78	5.6
12.00	192.00	1,123.17	5.8
13.00	208.00	1,262.65	6.1
14.00	224.00	1,408.21	6.3
15.00	240.00	1,560.00	6.5

<sup>1</sup> Weekly benefit amounts based on full-time weekly wage or highest quarterly earnings.

<sup>2</sup> Weekly benefit amounts based on annual earnings.

<sup>3</sup> Old law required earnings of 16 times weekly benefit amount.

change in the characteristics of the claimant group and in the latter partially by such a change but chiefly by the institution of the annual-earnings plan.

Comparison of the average weekly benefit amounts in the 10 control States before and after the effective dates of the annual-earnings amendments in the 4 adjoining States reveals that in 7 of the 10 the average weekly benefit amounts increased. In the remaining 3, slight decreases in the average benefit amount are explained by increases in the number of payments in the \$6 to \$8 range, rather than in those for very low amounts. Evidently there was some increase at that period in the proportion of workers with low weekly earnings records who claimed benefits. The much more decided downward shift in the distributions for the 4 States that adopted the annual-earnings plan, as well as the consistency with which the average rates decreased in these States, justifies the conclusion that introduction of the annual plans resulted in a general lowering of weekly benefit amounts.

Another indication of the effect of the annual-earnings plan on payment of benefits is found in a comparison of the amounts of earnings a claimant must have had in order to qualify for a specified weekly benefit amount under the old and the amended laws. Such a comparison is shown for Maine in table 3. Like comparisons for the other three States disclose similar tendencies. To qualify for benefits under the old Maine law, a

claimant must have had earnings equivalent to 16 times the weekly benefit amount. The amended law requires total earnings of \$144 for a claimant to be eligible for benefits. For an eligible claimant to receive a higher weekly benefit than the minimum, however, he must have total earnings ranging from 48 to 104 times the specified weekly benefit amount. If it is assumed that the weekly benefit amount approximates 50 percent of the full-time weekly wage, the Maine requirement may be interpreted to mean that an individual must have from 24 to 52 weeks of full employment to receive a specified weekly benefit amount under the annual-earnings plan, in contrast to only 8 weeks under the quarterly plan. In general, to receive the same weekly benefits, the amended law requires total earnings that are 3.0 to 6.5 times as great as under the old law. For example, under the old law a claimant could receive a weekly benefit of \$10 if he were credited with as little as \$160 of total earnings, whereas to receive the same benefit under the amended law he would need \$862.62, or 5.4 times as much. A number of States that have quarterly plans with more stringent eligibility requirements than those in the old Maine law require higher amounts of total earnings for a claimant to receive a specified weekly benefit amount. However, even when earnings as high as 30 times the weekly benefit amount are required, it would be necessary for an eligible claimant to have from 1.6 to 3.5 times as much in total earnings to receive the same weekly benefits under the amended Maine law as under the law in any of these States.

It may be questioned whether or not the tendencies outlined above are inherent in annual-earnings plans. It may be argued, for example, that extension of coverage to employers of one or more and to additional occupations would materially reduce the proportions of claimants with irregular covered employment and thus equalize the effect of both plans. This argument is based on the theory that there is considerable shifting of workers between covered and noncovered employment. Obviously some, but only a part, of the irregularity of employment would be so reduced. The absence of universal coverage is, in fact, a strong argument against the annual-earnings plan, in that it places at a disadvan-

tage the worker who has considerable earnings in noncovered employment.

It may also be questioned whether use of the particular periods of time covered by this analysis affects the validity of the general conclusions. The relationship between the annual-earnings and the highest quarterly earnings plans is not static; it is considerably influenced by the phase of the business cycle and the employment patterns of claimants during the period when their wage credits are accumulated. Some of the claimants studied built up their wage credits during 1937, some in 1938, and some in part of 1939. Years of relatively good and relatively poor employment conditions are therefore included. Hence, the tendencies evident in the current investigations probably will be found also in data for longer periods.

### *The Effect of the Annual-Earnings Base*

If employment were steady and earnings regular, neither individual workers' weekly benefit amounts nor the mean weekly benefit amount would differ under the full-time weekly wage method, the quarterly plan, or the annual plan. The widespread existence of irregular and intermittent employment results, however, in quite different amounts for individual workers under each of the three formulas. For this reason, the length of time that is used as the basis for determining the weekly benefit amount is highly significant. The full-time weekly wage method considers only weeks in which the individual has had full employment and thus eliminates the effects of irregular or under-employment. In the quarterly plan, which is based on the 13 weeks within a calendar quarter, the pattern of employment has some effect in determining the benefit rate, although the fact that provision is made for choosing the highest of 4 calendar quarters greatly limits the effect of under-employment. Under the annual-earnings plan, wages earned throughout an entire year form the basis for computing the weekly benefit amount. Since most workers have some under-employment during a year, it is clear that weekly benefit amounts based on highest quarterly earnings will more nearly approximate a relationship to full-time weekly wages than those based on annual earnings.