METHODS OF COST LIMITATION UNDER PRIVATE UNEMPLOYMENT BENEFIT PLANS

BY

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I. INTRODUCTION

For a number of years, several major labor organizations with large membership in mass production industries have had as a goal an increase in the income of their members during periods of unemployment. The rationale has been that the income of most workers while employed is insufficient to permit saving for unemployment; that unemployment compensation under existing state and federal laws is generally inadequate; and that, in consequence, the living standard of the unemployed is far lower than for those employed and that, in fact, only relief and private charity prevent many from becoming completely destitute.

The original trade union goal was the so-called "guaranteed annual wage." A demand made on the steel industry in 1944 by the United Steelworkers of America for an unlimited guarantee of wages for all employees led to a study, under the auspices of the Federal Government, of such experience as existed under, and the potentialities of, plans for guaranteeing wages.

The major findings of fact and conclusions of this study,[1] published in 1947, were:

1. Guaranteed wage plans had existed in the United States for many years but had affected only an infinitesimally small segment of the total employment.
2. With only one important exception, the plans were so hedged about with qualifications and restrictions as to remain virtually inoperative for most of the time and were subject to change after the occurrence of unfavorable experience.
3. Most of the plans covered employment in consumer goods industries, with products in constant and wide use, and not subject to substantial year-to-year fluctuations in demand.
4. The unemployment suffered by employees covered by the plans was largely seasonal; but the restrictions in the plans were such as substantially to eliminate seasonal workers from guarantees.
5. Any widening of the employments covered by wage guarantees could be accomplished only if such guarantees were severely restricted; conversely, widespread adoption of unqualified guarantees on an annual basis would endanger the economy.

[1] Office of War Mobilization and Reconversion, "Guaranteed Wages," Washington, Government Printing Office, 1947.

6. Direct legislative action for the establishment of guaranteed wage plans would be unwise, but action to remove certain obstacles was desirable. Among the obstacles were certain provisions of the Fair Labor Standards Act of 1938 which, while intended on the one hand to encourage wage guarantees by permitting an employer to avoid payment of the premium part of wages for overtime work, in fact discouraged such guarantees by requiring that the guarantee cover a full year, and specifying that if any employee worked more than 2080 hours in the guarantee year, the overtime penalty would again become operative.
7. Much the most promising method of increasing incomes of unemployed workers would be arrangements for supplementing the benefits under unemployment compensation laws.

By "guaranteed wages" is ordinarily meant a commitment by the employer to pay certain or all of his employees a full or partial wage for a specified time, whether or not work for such employees is available. "Supplemental unemployment benefits," as the name implies, means a commitment by the employer to augment the statutory unemployment compensation. Technically, the incomes to the unemployed could be made the same under the one as under the other, and limitation on liability could be accomplished in substantially identical manner. The major difference has to do with financing. Under guaranteed wage plans an employer will account for his costs when wages are paid. Under the federal income tax statutes he cannot charge any part of wages accrued for 1959 against his 1956 or 1957 or 1958 business; as a practical matter, this prevents use of pre-funding techniques. Such pre-funding is possible under supplemental unemployment benefit plans. The details will be described at appropriate later points in this paper.

Influenced perhaps by the conclusions in the Guaranteed Wage Report, trade unions have, in recent years, indicated but little interest in guaranteed wages. While the Fair Labor Standards Act has been amended to incorporate the Report's recommendations, there resulted no perceptible encouragement to wage or employment guarantees in return for elimination of premium overtime. Three unions—the Teamsters, Meat Packers and Longshoremen—have negotiated a number of contracts incorporating wage guarantees involving no sacrifice by employees of any right to premium overtime. These plans cover limited groups within the bargaining units; accounts of the operations of these new plans are almost non-existent, but there has been nothing, at least to the end of 1957, to suggest that thus far they have actually been operative. What might be the case if substantial unemployment were to occur within their coverages cannot be determined from available information

The war-time demand for guaranteed wages was based in large measure on a fear that the high unemployment of the 1930's would recur at the war's end. By the time the Guaranteed Wage Report was

published, it had become clear that this fear was greatly exaggerated; and for two years thereafter employment in general was rising steadily. Though substantial unemployment occurred in 1949 and in 1953-54 in the steel, auto and some other mass production industries, the unions in those industries were heavily committed to work out pension and insurance plans which, under the favorable conditions of generally high employment, had been given first priority in the non-cash wage area.

The 1949 unemployment was, for the most part, of brief duration. The 1953-54 dip was somewhat more prolonged and, particularly in many durable goods industries, rapid expansion of producing capacity was coupled with such substantial technical improvements that employment since has never equaled the pre-1954 peak. Developments such as these made it certain that, at the first opportunity, the unions in the mass production industries would give high priority to proposals for increase of their members' incomes during periods of unemployment. There had been sufficient prior discussion of the problem, including a fairly elaborate proposal made by the United Steelworkers to the steel industry in 1952, to make it certain that the aim of the unions would be to supplement state unemployment benefits rather than to secure direct employer guarantees of wages or employment.

The opportunity for negotiation along these lines came in 1955: first the United Automobile Workers negotiated supplemental unemployment benefit plans covering members at Ford, General Motors, Chrysler and other companies in the automobile and agricultural implements industries.* Similar plans were agreed upon between the Steelworkers and the American and Continental Can Companies later in 1955. A different type of supplementation plan was adopted in the glass industry, also in 1955. In 1956 plans resembling those in the can industry were adopted by agreement between the United Steelworkers and all major companies in the United States producing steel and aluminum, and many steel and aluminum-using companies.

Since 1955 several hundred supplemental unemployment benefit plans (usually abbreviated hereinafter to SUB plans) covering perhaps two millions of workers have come into existence.

In addition to the type of plan worked out in the steel and auto industries, there is another, frequently referred to as the "glass-type" plan (because first established on a substantial scale in the glass industry), under which credits of certain amounts (frequently 5 cents per hour for which pay is received) are made to the individual accounts of employees. If an employee becomes unemployed, he may draw (subject to a weekly maximum) on his individual account. He may also draw on his account when disabled. If an employee dies, the amount in his account is payable to his beneficiary, and if he leaves service, the balance in his account is payable to him. Investment earn-

* The auto plans described in this paper are those worked out in 1955. In 1958, after this paper was completed, there were some changes made in the plans.

ings are credited to the account. This is more a savings plan, with an incidental potential use during spells of unemployment, than an unemployment benefit plan and will not be discussed in this paper.

II. BASIC CHARACTERISTICS OF SUB PLANS

A. *Supplementation of State Benefits*

The aim of SUB plans is to supplement, not supplant, state benefits. The size of supplemental benefits cannot be judged independently of the state benefits they are intended to supplement; and except as the maximum limit produces other results, the larger the state benefit, the lower the supplemental payment, and the longer the duration of state benefits, the less will the aggregate supplemental benefits be. Supplementation implies also the adoption of state standards as to entitlement; if an individual is held by a state unemployment compensation agency, for example, to have refused suitable work without good cause and is denied a state benefit, he will be denied a supplemental benefit. In all the SUB plans the supplementation is not limited to weeks in which a state benefit is payable; but the state adjudication standards apply to the benefits for these periods as well. This means, of course, that in a company doing business in more than one state, adjudication standards will not have company-wide uniformity. The alternative was to formulate a completely consistent set of standards —a task which would have multiplied administrative burdens many times and probably have had an appreciable effect on costs. All state adjudication standards do not apply. As will be seen, there are certain cases in which supplemental benefits are not paid, though a state benefit may be.

In addition to state tie-ins on benefits and adjudication, SUB plans contemplate the state employment services will be a main avenue of reemployment for beneficiaries. Finally, since the average size of state benefits will affect the average size of supplemental benefits, changes in state laws will affect the level of reserves aimed at as "maximum" under the SUB plans.

B. *SUB Plan Coverage Based on Company Units*

Generally speaking, SUB plans, like private pension and group insurance arrangements, are on a company-by-company basis. With few exceptions the plans have been the result of union demands and have been formulated through the collective bargaining processes. There is only one exception of any consequence as regards broader coverage—a maritime plan which, because it has features unrelated to unemployment, is omitted here. No further development of multi-employer plans is known to be in contemplation. In the case of some multi-plant companies, particularly cases in which employees of the same company are represented by more than one union, there may be more than one SUB plan in the same company.

Administration by the companies is the rule. Differences of opinion between the company on the one hand and employees and the union on the other are to be settled by procedures similar to those used for the adjustment of disputes concerning wages and hours and the like, due account being taken of the fact that in many cases the subject of disagreement may be a state decision rather than one of the company.

C. *Detailed Terms of the SUB Plans*

The numbered paragraphs which follow set out in more detail the major provisions of the SUB plans in the steel and automobile industries on which attention is here to be focused.

1) Not all employees are to be entitled to supplemental benefits; eligibility is limited to those employees who, at time of becoming unemployed, have completed

- 1 year of service (auto and agricultural implement industries) ;
- 2 years of service (steel and aluminum industries, and can industry after September 1958) ;
- 3 years of service (can industry[2] until October 1958)

The employees who can be eligible for supplemental benefits, if unemployed, and other employees whose only reason for not being so eligible is the shortness of their service are sometimes referred to collectively as "covered employees."

2) To be compensated, unemployment must be initiated by the employer; under no circumstances are supplemental benefits to be paid to an employee whose employment terminated by voluntary action on his part, through discharge for cause, by leave of absence, or upon call for military duty.

3) In general, entitlement to state[3] benefits is a prerequisite for receipt of supplemental benefits, but there are certain exceptions to this general rule in a few types of situations. Supplemental benefits are to be paid if failure to be entitled to a state benefit is solely the result of

- (a) The requirement of a second waiting week in a single benefit year;
- (b) Failure to have sufficient base period earnings prior to layoff;
- (c) A limit on the period of time state benefits are payable shorter than the limit for supplemental benefits.

[2] In the can and steel plans there are certain additional requirements intended to weed out from eligibility for benefits purely seasonal workers.

[3] By definition in all the plans, "state benefits" include railroad unemployment insurance benefits, veterans' allowances and, in Canada, the Dominion unemployment insurance.

These three exceptions occur in all auto, agricultural implement, steel, aluminum and can plans. The plans in the last three industries add to these exceptions two others:

(d) Receipt of compensation in excess of the maximum permitted under state law[4] but less than the amount which would disqualify an employee for the higher overall benefit; and

(e) A layoff because of plant shutdown for vacation purposes of an employee not entitled to vacation pay.

4) Layoff of an eligible employee by the company and eligibility for state benefits (other than for the reasons just stated) is not the end of the eligibility requirement, however; there is more. Merely to state all the details of all plans would require many pages. It will suffice to summarize the other eligibility requirements of the steel industry plans, which are perhaps slightly more restrictive than those negotiated by other unions; the steel requirements may be summarized by saying, in addition to having the requisite service period and being entitled to state benefits (or failing to receive such a benefit solely because of one or more of the enumerated reasons), an employee must meet the following specifications:

(a) Have made a proper application;

(b) Have appeared personally and reported at a company office at such time each week as the company may require;

(c) Have a balance of at least one credit unit at the beginning of the benefit week;

(d) Be able to work and available for work;[5]

[4] The plans specify that one or more of these causes must be the "only" reason for not receiving a state benefit. In 1957 a number of steelworkers were employed on a short-time basis with wages sufficient to keep them from being "unemployed" within the meaning of state laws, but less than the gross supplemental benefit. An employee who had already begun a benefit year, or who was covered by a state law requiring no waiting period, could receive "supplemental" benefits since the only reason for his failure to receive a state benefit was the amount of his wages. But under a state law which pays no benefit until a "waiting period" is served (i.e., a week in which an employee could, except for the waiting period requirements, be entitled to a state benefit) the case is different. It may then be said that there are two reasons for such employee not receiving state benefits—excess wages, and failure to meet the waiting period requirement. The Union contended that only one reason, excess wages, was really involved. The matter was compromised by an agreement that if an employee had one week of earnings in excess of the state but under the supplemental plan limit, he would be deemed to have a waiting period for the purposes of the plan, assuming he had not started a state benefit year. The first subsequent week of total unemployment would also be a waiting period week in these situations.

[5] This is usually a requirement for eligibility for state benefits, but there are certain exceptions.

(e) If the state requires no waiting period, have had a week in which no benefits were received, though the employee concerned was otherwise entitled to them;

(f) Have not failed to follow up on any job to which there is a company referral, and accept any such job if offered and if suitable according to the standards of applicable state law;

(g) Have not failed to accept a job with the company, whether suitable or not, if such acceptance is required by the collective bargaining agreement;

(h) Have not failed to respond to a recall to own job within three days (or for a longer period if specified by the applicable collective bargaining agreement);

(i) Have neither been eligible for nor claiming any accident or sickness or total disability benefit, or a pension financed in whole or in part by the company;

(j) Have not received any supplemental unemployment benefits under any other plan, or have been eligible for such benefits under a plan in which the employee has longer service than with the particular employer;

(k) Have not been scheduled to be on vacation;

(l) The layoff must not have been the result of a strike, slowdown, work stoppage, picketing, concerted action, or labor dispute of any kind involving (i) the union which represents the collective bargaining unit of which an employee is a member, whether or not at the plant where such employee works; (ii) employees of the company, or of a transportation or utility company, which directly interferes with production or ingress or egress of material or product at the plant where the layoff occurred;

(m) The layoff must not have been the result of

(i) War or the hostile act of a foreign power;

(ii) Government regulations or controls over the amount or kind of material or product which the company may use or sell;

(iii) Sabotage, insurrection or act of God.

5) Duration of benefits of an eligible employee who is laid off depends on the number of his credit units. Credit units under the steel plans are acquired by an employee at the rate of one for each 80 hours of time paid for, plus time lost (not over 8 hours per day or 40 per week) because of certain union duties, or on account of disability if, in the last case, workmen's compensation or company insurance benefits are payable. No more than 52 credit units may be credited to an employee at any one time and, after his first credits, not more than 26

units may be accumulated by an employee in any 12-month period. In the auto industry plans, the maximum number of credit units which an employee may have at any one time is 26; credit units accumulate at the rate of one-half for each week of full time (for 32 or more hours, exclusive of premium pay). Hours in a week of less than 32 hours pay do not count; and no extra credit is given for hours in excess of 32 in a single week. For the first two years of operation credit units were acquired by employees having less than ten years of service at half the usual rate. In the Steelworker plans, hours were credited retroactively for one year before the date of the agreement, so that when benefits became payable an employee who worked normal hours regularly had 52 credit units.

6) It is contemplated that, as a rule, when the plans are in full operation, a supplemental benefit for a week will be payable to an employee for each credit unit he has. More specifically, at least one credit unit is charged off for each payment of a weekly benefit, and if the financial position of the supplemental benefit fund of a particular employer is below certain points, a week's benefit may cost an employee of that employer more than one credit unit. The number of credit units to be charged to an employee's account depends upon his length of service and the financial condition of the fund from which supplemental benefits are paid. The size of the benefit itself is not involved.

7) All credit units are cancelled upon quit, discharge for cause, or break in continuous service for another reason, or for willful falsification or withholding of a record. In the auto plans a break in service may come only after a continuous layoff has lasted for as long as five years (as against two years in the steel industry), but any remaining credit units are cancelled after a continuous layoff of 18 months. In the American Can plan, credit units are not cancelled by a long layoff but only by quit, discharge or falsification or withholding of records.

8) In both the steel and auto plans the weekly supplemental benefit for an employee is calculated by taking an amount equal to a percentage of his weekly after-tax pay and subtracting from such amount the sum of his state benefit and other compensation. The remainder may be reduced if it exceeds a certain maximum.[6] There are then five factors to be looked at: weekly after-tax pay, the percentage, the state benefit, other compensation, and the maximum.

9) The pay from which the calculation of the weekly benefit begins is based on 40 hours.[7] The pay factor in this calculation is, for the

[6] If, after subtracting the sum of state benefits and other compensation from the gross weekly benefit, the remainder is not over $2.00, no benefit is payable under the UAW plans; such small benefits may be paid at longer intervals, not over 13 weeks, under Steelworker agreements.

[7] In plans negotiated by the Steelworkers the multiplier is the number of scheduled hours less than 40 for employees who, for their own convenience, regularly work a weekly schedule less than 40 hours.

auto plans, the base hourly rate of the applicant at the time of (or, in some cases, the highest in the 30 days preceding) the layoff, including the cost-of-living allowance, but excluding all other premiums and bonuses; and for the steel and aluminum plans the average hourly earnings (exclusive of Sunday and overtime premium) in the first three of the last six months adjusted, if necessary, by any general wage change since the first day of the six-month period. For one of the major can companies the pay factor is average hourly earnings in the 52 weeks preceding layoff; and in the other can plan, the average hourly earnings in the first four of the last five weeks preceding the week of layoff.

10) The "after-tax straight-time weekly wage" of an employee under the steel plans is the weekly pay, calculated as described in the preceding paragraph, minus the federal income tax to be withheld from such pay for a person having the number of dependents of the employee. Under the UAW agreements, the "after-tax straight-time pay" is less than the weekly pay, as described in paragraph 9, by the sum of federal, state and municipal taxes and contributions required to be withheld from the employee's pay by the company. This means the deduction of federal income and old-age insurance taxes as a minimum.

11) Under the steel industry plans the percentage factor to be applied to weekly after-tax pay to find the gross weekly benefit is 65. By the terms of the UAW plans the percentage factor for the first four weeks of benefit in any continuous layoff is 65; for the remaining weeks of any continuous layoff the percentage is 60. Irrespective of the number of layoffs in a calendar year, the maximum number at the 65 per cent rate[8] is eight, and if the fund position is less than 49 per cent, the maximum weeks of benefit in any calendar year at 65 per cent are four.

12) From the gross weekly benefit, 65 or 60 per cent of after-tax pay, there is subtracted, first, the amount of the state unemployment compensation benefit (unless there is no such benefit and the reason therefor is one of those specified in paragraph 3). If the employee received no wages during the benefit week, the amount payable to him is the gross weekly benefit less the state benefit, but subject to certain maxima. For the purposes of the plans, a "state unemployment compensation benefit" includes benefits under a federal or territorial plan now in effect or any which may hereafter be adopted. Under the provisions of the Steelworker plans, in this case, the amount to be sub-

[8] There are several variants under Steelworker plans: in the can plans the 65 per cent of take-home pay is calculated only for single employees by wage groups; the aluminum agreement fixes the gross benefit for a single employee at 22 hours pay, which is approximately 65 per cent of take-home pay based on 40 hours. The benefit for employees with dependents is calculated in both can and aluminum plans by adding $2.00 for each dependent, up to four, to the benefit for a single employee.

tracted from the gross weekly benefit would be (i) the state benefit amount, plus (ii) the excess of the employee's wages over any amount disregarded by the state in calculating the benefit. The UAW provisions are, in effect, the same as for the Steelworker plans, except that, so far as the supplemental benefit is concerned, no wages are disregarded. In case an employee's wages in a benefit week are as large or larger than the amount which disqualifies him for state benefits, no supplemental benefit is payable under any UAW plan. If, under a steel plan, such wages do not exceed the sum of the gross benefit plus the disregarded wages, a supplemental benefit may be payable.[9]

13) The maximum weekly supplemental benefit amount under all UAW plans is $25. The $25 maximum applies only to employees without dependents under steel plans and only to the period when state benefits are payable.[10] If there are dependents (a wife, for this purpose—though only an "exemption" under the Federal Internal Revenue Code—is counted as a dependent), the weekly maximum is increased by $2.00 for each dependent up to four. As previously mentioned, in the aluminum and can industry plans the benefit in all cases in which there are dependents is calculated by adding to the benefit for a single employee $2.00 for each dependent up to four. For periods after state benefits are exhausted,[11] the above weekly maxima are increased under the steel plans by $22.50.[12]

14) If the weekly supplemental benefit—the remainder after subtraction of state benefits and other compensation from the gross weekly benefit—is less than the maximum, the maximum, of course, does not apply. In such a case, if the only income tax applicable is the federal, the allowance for dependents is approximately $1.50 where the percentage factor is 65, and $1.38 if the percentage factor is 60.[13]

[9] The exact interpretation of this provision is the subject of a currently unresolved dispute between the steel companies and the United Steelworkers of America.

[10] By the terms of the Continental Can Company plan, there is no maximum other than that fixed by the gross weekly benefit.

[11] The period for which the lower maximum applies is extended under Steelworker agreements, after state benefit exhaustion, by the number of weeks for which an employee was eligible for state but not supplemental benefits.

[12] See footnote [10]. In the American Can plan the $22.50 is $21.80.

[13] The number of dependents for whom such supplemental benefit is allowable may be more or less than four if the $25 or other maximum referred to in paragraph 13 is not applicable:

2 dependents if the weekly wage before subtraction is less than $52;
3 dependents for such weekly wages between $52 and $64;
4 dependents for such weekly wages between $64 and $78;
5 dependents for such weekly wages between $78 and $90;
6 dependents for such weekly wages between $90 and $105;
7 dependents for such weekly wages between $105 and $115;
8 dependents for such weekly wages between $115 and $130;
9 dependents for such weekly wages of $130 or more.

15) The contributions for the support of the benefits are paid wholly by the employers in all the supplemental unemployment benefit plans negotiated by the Steelworkers and Automobile Workers. The contributions are paid into a trust fund and may be used only for the purpose of paying benefits and, to a limited extent, defraying the fees and expenses of the trustee. Contributions are to be made, up to a certain maximum, in amounts sufficient to bring the assets of the trust fund (usually referred to as the "SUB fund" or, in a clear context, the "fund") up to a certain level. If the fund is equal to or above the level, no contribution is made.

16) In the auto plans, the contribution to the SUB fund for any month is the smaller of (i) 5 cents multiplied by the compensated hours of covered employees in such month, or (ii) the amount required to bring the assets of the SUB fund up to the maximum level. By the terms of the steel plans, each company is to contribute to its SUB fund "(i) an amount determined by multiplying 3 cents by the total number of Contributory Hours for such month or (ii) such lesser amount which when added to such total finances of the Plan will equal maximum financing." "Contributory Hours" are hours worked by covered employees; "total finances" are the assets of the SUB fund on an accrual basis, including "contingent liability;" and "maximum financing" is what has been referred to as the "maximum level" and will be explained in the next paragraph. Assets of the SUB funds under both steel and auto plans are valued at market.

17) Under the steel plans, during the period when a SUB fund is building up to its maximum level, for each 3 cents in cash contributed by a company the company incurs an obligation (called "contingent liability") to contribute 2 cents "if and when such amounts are needed to provide the benefits of the Plan." If and when a steel company SUB fund reaches its maximum level, the company incurs a contingent liability with respect to a month for any excess of the difference between the maximum level of the fund and the sum of its total finances for the month plus 3 cents per contributory hour during the month, the maximum contingent liability to be incurred with respect to a month being 2 cents per contributory hour during that month. For example, assume that the maximum level of a SUB fund for some month is $1,000,000, the total finances for the same month $970,000, and the corresponding contributory hours 800,000. Then the contribution would be 3 cents for 800,000 hours, or $24,000, and $6,000 (¾ cent per contributory hour) would be added to the contingent liability.[14] If the total finances had been less than $960,000, the cash contribution would have remained at $24,000, the contingent

[14] Under the interpretation placed on the plan by the steel companies, the ratio between cash contributions and contingent liability is to be 60-40, irrespective of the difference between the maximum fund level and total finances.

liability incurred for the month would be $16,000, and the maximum level would continue to exceed total finances.

18) If the entire contingent liability is accounted for each month as a cost of operation,[15] the steel and auto plans may be said to have the same limit on contributions, except that the steel limit is in terms of hours worked and the auto limit is based on hours for which compensation is paid, the latter being the larger by from 6 to 8 per cent. If the contingent liability is accounted as a cost only as and when contributions based on it are made, no limit on monthly contributions for steel plans may be stated; for large contributions may be required for a month in which the hours of work may be very low.

19) At the other extreme, for a month in which no benefits are paid (or in which the benefits are no larger than the investment income of the fund) no contributions to the fund are required if the fund assets equal the maximum level. All the plans provide for an initial maximum level of the supplemental unemployment benefit level, and specify how that level is to be changed. As to the maximum level, the auto plans fix the initial maximum level of the fund as the product of $400 multiplied by the number of covered employees in active service. As the number of covered employees in service changes, the maximum fund level changes in equal ratio.

20) Under the steel plans the maximum level, for contribution purposes, was intended to be fixed at slightly over $200 per covered employee. The aim was to vary the maximum level not by the number of employees but by the number of hours worked over a period of 12 months. In fixing the level it was assumed that hours worked per year would average about 1950 per employee; the maximum level was expected to average (at about 10½¢ per hour) about $205 per covered employee. In recessions the average would be less; in periods of good business higher than this average. The fluctuations in maximum levels have an important bearing on the operation of the plans which will be explained later.

21) There is one further basis for changing the maximum level of the fund: the average size of the supplemental benefit. In the case of the auto plans, the maximum level per employee is to be unchanged if the supplemental benefits average $20 or over per week. In the case of the steel plans, the maximum level is to be calculated at 10.5 cents per hour worked in a 12-month period as long as supplemental benefits average $16 per week or more. If benefits average less than these amounts, the maximum funding would be reduced as follows:

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[15] The Internal Revenue Service has held that for federal income tax purposes contingent liability may be counted as a deductible expense only when actually paid as contribution into a SUB fund.

Auto		*Steel*	
Average Weekly Supplemental Benefit	*Percentage Reduction from Initial Maximum Level*	*Average Weekly Supplemental Benefit*	*Percentage Reduction from Initial Maximum Level*
$15-19.99	20	$12-15.99	20
10-14.99	40	8-11.99	40
5- 9.99	60	Less than $8	60
Less than $5	80		

22) The amount of the difference, as of each month-end, between the total assets of a SUB fund and the maximum level of that fund is one of the factors in determining what the employer will contribute to the SUB fund. Of course during the early stages of a plan, while the assets are being built up, it is certain that the maximum contribution will be made. Annual contribution liability per employee will not exceed $100 to $105 in the auto industry and $94 to $100 in steel, and in years like 1958 will average substantially lower. Even without expenditures, and assuming stable employment, it would take a period not much shorter than four years to accumulate assets equal to the maximum fund level for the auto companies and about two years for the steel companies.

23) Both the steel and auto plans use the ratio between the assets of the SUB funds and the corresponding maximum levels of the funds as the regulator of benefit payments. It is at this point that the greatest difference between the two groups of plans occurs: a larger than anticipated drain which threatens to lower the SUB fund unduly is compensated for under the auto plans by a reduction in the maximum number of benefit payments which may be made to an employee for a given number of credit units. In the steel plans, on the other hand, the main reliance in such a situation is in a reduction in the weekly benefit amount.

24) In both auto and steel plans, the payment of benefits began after an accumulation period of approximately one year. At the beginning of payments of benefits the assets of the SUB funds were roughly 25 per cent of their maximum level (this percentage of fund assets to maximum level will frequently be referred to as the "fund position") in the auto industry and about 50 per cent in the steel industry. In the auto industry the 25 per cent ratio was used as the basis for reducing durations of benefits just as if there had been unfavorable financial experience. Under the steel plans, on the other hand, the plans assumed that unfavorable experience was to be taken into account only after it occurred. For experience to be unfavorable, the SUB fund assets must be lower than the maximum level, not because time for accumulation of the fund has been too brief, but rather

because the accumulation is less rapid than might reasonably be expected. The framers of the steel plans believed that the use of variation in the benefit size as the method of coordinating income and expenditures would be more effective for that purpose than variation in durations of benefits and that such greater effectiveness of the benefit size method permitted the full-scale beginning of benefits to be adopted with safety.

25) The auto plans include a table by which the duration of benefits is to be regulated at all stages of the plans' operations. This regulation was accomplished by means of the number of credit units to be charged for a single week of benefits. Since the maximum limit on credit units is 26, the maximum duration of continuous benefits is 26 weeks if one credit unit is charged for each week of supplemental benefits, 13 weeks if the charge is two, 10.4 weeks if the charge for each week of supplemental benefits is 2.5 credit units, and so on. The full table of credit units to be charged under the auto plans for each week of benefits is as follows:

If the fund position applicable to the week for which a weekly supplemental benefit is paid is:	*And if the seniority of the person to whom such benefit is paid is*					
	1 to 5 Years	*5 to 10 Years*	*10 to 15 Years*	*15 to 20 Years*	*20 to 25 Years*	*25 Years and over*
	The credit units cancelled for such weekly benefit shall be					
85% or over	1.00	1.00	1.00	1.00	1.00	1.00
76-84.99%	1.11	1.00	1.00	1.00	1.00	1.00
67-75.99	1.25	1.11	1.00	1.00	1.00	1.00
58-66.99	1.43	1.25	1.11	1.00	1.00	1.00
49-57.99	1.67	1.43	1.25	1.11	1.00	1.00
40-48.99	2.00	1.67	1.43	1.25	1.11	1.00
31-39.99	2.50	2.00	1.67	1.43	1.25	1.11
22-30.99	3.33	2.50	2.00	1.67	1.43	1.25
13-21.99	5.00	3.33	2.50	2.00	1.67	1.43
4-12.99	10.00	5.00	3.33	2.50	2.00	1.67
Under 4	no benefit payable					

26) As the preceding table indicates, when benefits first became payable under the auto plans no employee could receive benefits for as long as 26 weeks continuously, 20.8 weeks being the maximum. Moreover, it will be remembered that for the first two years of the operation of the auto plans employees with less than 10 years of seniority were to accumulate credit units at half the regular rate. Thus at the end of one year the maximum scheduled duration for an employee having five or fewer years of seniority would be 3.9 weeks, and for an employee having from five up to ten years, 5.2 weeks. At the beginning of the second year, even with no benefits paid during

the first year, the maximum durations for the under five and five to ten-year groups would be only 15.6 and 18.2 weeks, respectively, and the full 26 weeks could be paid only to employees having 20 or more years of seniority.

27) The table governing the reduction of benefits under the steel plans after the period when the same maximum fund levels govern benefit amounts as well as contributions is as follows:

If the fund position applicable to the week for which a supplemental benefit is paid is:	*The Weekly Benefit Shall Be*	*And if the continuous service of the applicant is* 2-8 *Years*	8-15 *Years*	15 *Years and over*
		The credit units cancelled for such weekly benefit shall be		
75.0% or more	100.0%	1.00	1.00	1.00
67.5 or more but less than 75.0%	75.0	1.00	1.00	1.00
60.0 or more but less than 67.5	67.5	1.00	1.00	1.00
52.5 or more but less than 60.0	60.0	1.00	1.00	1.00
45.0 or more but less than 52.5	52.5	1.25	1.00	1.00
38.0 or more but less than 45.0	45.0	1.25	1.00	1.00
31.0 or more but less than 38.0	37.5	2.00	1.25	1.00
24.0 or more but less than 31.0	30.0	2.00	1.25	1.00
17.0 or more but less than 24.0	22.5	2.00	2.00	1.00
10.0 or more but less than 17.0	15.0	5.00	2.00	1.25
less than 10.0	no benefits			

28) If the table in the preceding paragraph were to apply in the same way at the start of benefit payments as after the fund had reached its maximum level, the initial weekly supplemental benefits would be only 52.5 per cent of their intended amount. In order to avoid such an occurrence, a transitional set of maximum levels was provided. For the first month in which benefits were payable the maximum level of the SUB funds was fixed at 5 cents times the hours worked by covered employees in a full 12-month period. In the next month the maximum funding increases to 5.25 cents times the hours worked by covered employees in a 12-month period ending one month later than the 12-month period used for the maximum level for the preceding month. The maximum level thereafter increases by ¼ cent each month until the ultimate 10.5-cent level is reached 22 months after benefit payments begin. During this 22-month period of transition, the maximum level for benefits, therefore, is lower than the maximum level for contributions unless the fund assets actually equal the maximum level of contributions before the end of the transition period which thereupon ends. During the transition period, fund positions for the table in paragraph 27 are based on the lower maximum levels for benefits.

29) The 12-month periods, the hours worked in which these increasing factors apply, move forward by one month each month. It will be noted that benefits are payable in full until the fund position falls below 75 per cent. The basic steel plans provided for contribu-

tions to begin on August 1, 1956, and benefits on September 1, 1957. The maximum level for a month is based on the hours worked in the first 12 of the 14 months immediately preceding the month in question; and the asset side of the fund position calculation is taken one month later than the end of the 12-month period in which hours are counted.

30) The liability to make the contributions, determined pursuant to the provisions just described, constitutes the sole obligation of the companies under the SUB plans. If the assets of a fund are insufficient to meet its obligations, the company is obliged to continue the payment of any contributions due, but nothing more. The fund assets constitute the sole security for payment of benefits; and in the event that, despite the provisions for reducing total benefits, the assets are less than the benefits due, beneficiaries have no claim against anyone for any excess of benefits over assets.

III. BACKGROUND OF COST PROBLEM

Before analyzing, from the point of view of cost limitation, the provisions of the SUB plans, it may be helpful to summarize certain characteristics of the risk of unemployment in contrast to other risks which are, to a greater or lesser degree, in the category of "insurable." As further background, certain of the provisions of the SUB plans, as summarized in the preceding Section II, such as benefit amounts, maximum fund levels and fund position, are put into quantitative form.

Unemployment Has a High Catastrophic Risk

In most areas of insurance, the event giving rise to an insurance payment will occur, during any relatively short period of time, to a minor fraction of the persons or thing exposed to the risk of its occuring. This is, unfortunately, not true of unemployment benefits. If those subject to the risk of becoming unemployed are to be paid a benefit when actually unemployed, a major fraction of those exposed to the risk may become entitled to benefits in the course of a single 12-month period. During the first six months of the operation of the steel SUB plans there were, in fact, some cases in which all of the covered employees became unemployed. The potential risk impact is so large as to make the problem of cost limitation both more important and more difficult than in other benefit areas.

Commercial Underwriting Not Available for Unemployment Risks

Generally speaking, employers can secure commercial underwriting on any hazards to which they are exposed, whether the hazards involve their property or potential liabilities to employees, customers or others. Commercial underwriting may have more restrictions than some employers think necessary. Some coverages, like that for permanent and total disability in a pension plan, are incomplete and achieved mainly

by indirection; and those for new risks, particularly those of which knowledge involves the national security, may be inevitably slow in developing. But coverage in some form or other is available, so that an employer has the option of substituting a known premium for the unknown incidence of hazard.

Unemployment Risks Not Pooled on Multi-Company Basis

This is not true of the risk involved in the operation of a SUB plan. No underwriting of any kind is available. As mentioned in the last paragraph of the preceding section, there is no security for the payment of supplemental benefits other than the assets of the SUB fund from which the payments are due.

In the fields of pensions and insurance there have developed, in recent years, many plans covering the employees of numbers of employers. Such has been the case in such industries as men's and women's clothing, contract construction, brewing, milk distribution, and general highway transport. Except for a plan providing supplemental unemployment and other benefits in the maritime industry, no such pooling of the unemployment risk has occurred. On the contrary, in the steel industry, in several companies where single insurance and pension plans exist, separate SUB plans have been created for employees in different subsidiaries, or for employees represented by different union bargaining agents or, in some cases, for employees merely employed in different plants.

It is too early as yet to determine whether there may be any effort made to limit the relative size of hazard by pooling risks over areas wider than a single company. It can be said, in substance, no such pooling has yet occurred or is presently under discussion.

SUB Plans Tend to be Substantially Identical for Agreements with One Union

The provisions of SUB plans tend to be uniform for companies dealing with a single union. There are reasons for this on both sides. The union does not ordinarily wish to take responsibility for negotiating for one group of its members any arrangement which differs from that for others of its members. This has not been true for insurance and pension plans to the extent as in SUB. The reasons for this are probably, first, that employers have not had available consulting services on SUB problems and have not wished to suggest arrangements other than the "standard" plan because of uncertainty as to the consequences of any change. On the union side, the negotiators are normally not well versed in SUB problems and equally unwilling to step into new fields. In the steel industry in particular it has been recognized that since the size of benefits is dependent upon fund position, and since the fund position is likely to reflect any change in provisions relating to eligibility, contributions or benefit amount formula, any change in a substantive provision will have consequences which

are largely unforeseeable. Under these circumstances, negotiators on both sides prefer to adopt plans which at least have the sanction of many previous adoptions

In the steel industry there has also been another factor making for uniformity of plan. A committee of the American Iron and Steel Institute has made widely available to employers in the steel, steel-using and related industries a detailed description of the basic steel SUB plan and, more important, a manual specifying administrative procedures, complete with forms and accounts. No such substantial assistance would be available for any variant of the basic steel SUB plan.

Despite the forces making for uniformity, there have been some differences in detail in SUB plans negotiated by the United Steelworkers of America. The differences in benefits in some of these plans will be referred to in passing, later in this section. In basic principles, the plans are substantially identical and, except for the one mention of other steel plans, the description and analysis, so far as steel is concerned, will be on the plan in effect in all the basic steel companies.

Illustrative Calculations of Supplemental Benefits

Finally, before analyzing the specific cost limitation effects of the SUB plan provisions, it may be well to translate some of such provisions into rather more concrete form. First of all, it may be useful to give some benefit illustrations which will indicate to what extent maxima are effective, how much variation there is as between states, persons having differing wages and numbers of dependents, and how partial employment affects benefits.

Basis of Illustrations

For purposes of illustration, nine states have been selected, primarily with an eye to the importance of auto or steel employment in their industrial structure: Alabama, California, Colorado, Connecticut, Illinois, Maryland, Michigan, New York and Pennsylvania. Ohio and Indiana would have been included except for the fact that in neither state has supplementation of state unemployment benefits been permitted in accordance with the plans described in Section I. The nine states do include the state having the highest average state benefit and the highest maximum amount—Michigan—and one having one of the lowest maxima—Alabama.

The illustrations cover two hourly wage rates: $1.975 and $2.475, $79 and $99 for a 40-hour week.[16]

[16] These amounts were selected because they are mid-points of wage brackets used for the purpose of calculating federal income taxes. In computing taxes for calculating after-tax pay, the auto plans used the tax bracket method, while the steel companies used the percentage method. If wages of $2.00 and $2.50 per hour are used, there is a slight difference between auto and steel benefits resulting from differences in tax computation methods, since weekly wages at both these rates appear at the bottom of their brackets for a 40 hour week.

Gross Benefit Amounts

In Table 1 on the following page are shown the gross benefits under three SUB plans negotiated by the United Steelworkers of America and under the auto industry plans for the two wage rates mentioned—$1.975 and $2.475 per hour, or $79 and $99 per week—and varying numbers of dependents. Under the basic steel plan, for an employee whose gross benefit is based on the lower wage rate, the amount of such benefit will be $43.63 if he has no dependents, $46.67 if he has two dependents, and as much as $51.35 if he has six or more dependents. The gross benefits under the American Can and Alcoa plans are roughly comparable with those of basic steel—lower for employees with no dependents or six or more dependents, and higher for those with from one to five dependents. The differences are not large enough to be significant, however. Since the provision for benefits during periods of partial employment are calculated under the American Can

TABLE 1

Comparison of Gross[a] Weekly Benefit
Under Selected Supplemental Unemployment Benefit Plans

	Steelworkers			*Auto*	
				No Local Income Tax	
Dependents	*Basic Steel*	*American Can*	*Alcoa*	*1st 4 Weeks*	*After 4 Weeks*
	Weekly Straight-time Wage: $79				
0	$43.63	$43.62	$43.45	$42.46	$39.19
1	45.15	45.62	45.45	43.95	40.57
2	46.67	47.62	47.45	45.45	41.95
3	48.19	49.62	49.45	46.94	43.33
4	49.71	51.62	51.45	48.44	44.71
5	51.23	51.62	51.45	49.93	46.09
6	51.35	51.62	51.45	50.19	46.33
	Weekly Straight-time Wage: $99				
0	$54.29	$54.28	$54.45	$52.83	$48.76
1	55.81	56.28	56.45	54.32	50.14
2	57.33	58.28	58.45	55.82	51.52
3	58.85	60.28	60.45	57.31	52.90
4	60.37	62.28	62.45	58.81	54.28
5	61.89	62.28	62.45	60.30	55.66
6	63.41	62.28	62.45	61.80	57.04
7	64.35	62.28	62.45	62.90	58.06

[a] Before either subtraction of state unemployment benefits and other compensation or application of the maximum benefit.

and Alcoa plans in the same way as in the basic steel industry, the analysis of methods of cost limitation would hardly be helped by the multiplication of substantially identical examples.

The initial gross benefits under the auto plans are not substantially different from those in basic steel. The main difference lies in the subtraction of the OASI tax from the auto wage, but not steel, in the computation of the after-tax amount. After four weeks in any layoff, the gross auto benefits are reduced from 65 to 60 per cent of the after-tax pay.

From the gross benefit, as illustrated in Table 1, there is to be subtracted the amount of the state benefit to which an employee is entitled. In the steel and auto industries it may very well be that the state benefit will be based on wages lower than the rate applicable for SUB purposes. State benefits in the nine states used for illustrative purposes are, without going into detail, based on wages for periods which may go back for a year or more before the initial unemployment in a benefit year. In the auto industry, since 1950, there have been regular annual increments in wages and a cost-of-living allowance based on the BLS consumer price index which have, for the most part, resulted in steady wage increases. In the steel industry annual wage negotiations have produced the same result, even though not formalized into an annual improvement factor and a cost-of-living allowance until 1956.

The auto plans base the gross benefit on pay at or about the time of layoff. The steel plans go back to the first three of the last six months preceding a layoff—in order to avoid basing the average on demotions resulting from adjusting the numbers of employees to a reduced volume of work—and add to the average hourly straight-time wage for such period any intervening improvement factor or cost-of-living allowance. Thus, at the beginning of a layoff the wage rates of steel or auto workers are, other things being equal, higher than the wage rates for previous periods. For example, a steelworker in steel job class 4 currently has a base hourly rate of $2.14. During the last half of 1956 the rate was about $1.95, for the first half of 1957 about $1.98, and for the last half of 1957, $2.09.

In considering what wage rate might be used as the basis for calculating illustrative state benefits, it is to be borne in mind that, unlike the SUB plans, the actual wages count. Further, if substantial overtime is concentrated in a single quarter of a base year, the benefit under most state laws could, in effect, be based on current levels, even though the base rates may have been significantly lower. In considering to what extent to differentiate wages for SUB and state unemployment compensation purposes, it is necessary to bear in mind that the maximum is such as to reduce the effect of wage changes at the levels applicable to steel and auto workers. Finally, an employee who was demoted from six to 15 months before layoff may have a base period wage higher than his wage as used for SUB purposes. For all these reasons, and since the purpose of the analysis is to assess the

relative effectiveness of methods of cost limitation, it did not appear that the additional difficulties of calculating a relationship between wages at different periods would be warranted.

One differentiation between SUB methods and state methods has been made. Except for employees who, for their own convenience, work short time, SUB gross benefits are predicated on a 40-hour week. It is probable that employees laid off at the onset of a period of unemployment sufficiently widespread to become a cost problem will have state benefits based also on a week of 40 or more hours. But a layoff is not the only method of adjusting the volume of employment to the volume of work. Men laid off are frequently from lower job classes; men in higher job classes are then demoted to fill in. Probably as important as layoffs and demotions, except for relatively mild adjustments, are reductions in the hours of work. In the steel industry, under most union agreements the companies may reduce the work week to 32 hours before anyone in a particular seniority unit is laid off, and sometimes this is done. The more usual practice is to reduce forces to some extent by layoff, to make some demotions and, if the disparity between work and full-time employment of the remaining work force remains, reduce hours. If, some months later, there is a further decline in work and more employees are laid off, SUB gross benefits are affected only by demotions, if at all, but state benefits may be reduced because of the diminished weekly hours. In order to examine the effect of such a situation, the state benefits have been calculated on a 32-hour as well as a 40-hour week.

Illustrative State Benefit Amounts

The detail of state benefit amounts for the nine states, the wage rate-weekly-hour combinations for varying numbers of dependents, is given in Table A at the end of this statement. For convenience, the range of state benefits in the nine states is given here:

	Hourly Wage Rate		
	$1.975 (32 hrs.)	*$1.975 (40 hrs.) $2.475 (32 hrs.)*	*$2.475 (40 hrs.)*
Alabama	$28	$28	$28
California	32	37	40
Colorado	33	35	35
Connecticut	32-48[a]	40-60[a]	40-60[a]
Illinois	30-36[a]	30-42[a]	30-45[a]
Maryland	34-42[a]	35-43[a]	35-43[a]
Michigan	28-38[a]	30-41[a]	30-50[a]
New York	33	40	45
Pennsylvania	33	35	35

[a] Where two amounts are given, the lower is the maximum benefit for an employee without dependents. The higher amount is the maximum benefit for employees with dependents.

Detailed amounts of supplemental benefits for the nine states and the several wage-weekly-hour dependency groups are given in the appended Tables B through E. For illustrative purposes attention is here confined to an employee with two dependents (Table 2).

Illustrative Supplemental Benefit Amounts

For such an employee the range of supplemental benefits for total unemployment, as between the states, is relatively large, though in absolute amounts, of course, the differences are, except for the maximum applicable here only in Alabama, the same as in the gross benefits shown in Table 1. Where the state benefit is based on a 40-hour week, the range in supplemental benefit amounts under the steel plans is from $2.67 in Connecticut to $18.67 in Alabama for a weekly wage of $79, and from a low of $13.33 to a high of $29 (in the same states) for the $99 weekly wage. The auto supplemental benefits are scaled somewhat lower than those in the steel industry, particularly after the first four weeks; in several cases the supplemental benefit is zero where the wage is $79 per week and the state benefits are based on a 40-hour week. The supplemental benefits are increased if the state benefits are based on a 32 rather than a 40-hour week. The significant factors can be seen more easily if the detail is summarized by use of averages.

Comparison of Average State and Supplemental Benefits

For the cases given in Table 2 on the next page the mean total weekly unemployment benefit, divided as between state and supplemental, would be as follows (giving the benefits in each of the nine states equal weight):

	$79 Weekly Wage			*$99 Weekly Wage*		
		Auto Plans			*Auto Plans*	
	Basic Steel Plans	*1st 4 Weeks*	*There-after*	*Basic Steel Plans*	*1st 4 Weeks*	*There-after*
	State Benefits Based on 40-Hour Week					
State benefits	$36.89	$36.89	$36.89	$38.11	$38.11	$38.11
Supplemental benefits	9.78	8.40	4.86	19.18	17.40	13.41
Total	46.67	45.29[a]	41.75[a]	57.29[b]	55.51[b]	51.52
	State Benefits Based on 32-Hour Week					
State benefits	$33.56	$33.56	$33.56	$36.89	$36.89	$36.89
Supplemental benefits	13.11	11.89	8.39	20.40	18.62	14.63
Total	46.67	45.45	41.95	57.29	55.51	51.52

[a] The total is less than 65 or 60 per cent of after-tax pay (see Table 1) because if the excess of such 65 or 60 per cent is less than $2.00, no supplemental benefit is paid.

[b] The total is less than 65 per cent of after-tax pay (see Table 1) because of the effect of the maximum.

TABLE 2

Comparative Weekly Supplemental Benefits for Total Unemployment in Nine States (Employees with Two Dependents)

	Basic Steel Plans Weekly Wage		Auto Plans			
			Weekly Wage $79		Weekly Wage $99	
	$79	$99	1st 4 Weeks of Layoff	There-after	1st 4 Weeks of Layoff	There-after
State Benefits Based on 40-Hour Week Equivalent						
Alabama	$18.67	$29.00[a]	$17.45	$13.95	$25.00[a]	$23.52
California	9.67	17.33	8.45	4.95	15.82	11.52
Colorado	11.67	22.33	10.45	6.95	20.82	16.52
Connecticut	2.67	13.33	0[b]	0	11.82	7.52
Illinois	10.67	21.33	9.45	5.95	19.82	15.52
Maryland	9.67	20.33	8.45	4.95	18.82	14.52
Michigan	6.67	14.33	5.45	0[b]	12.82	8.52
New York	6.67	12.33	5.45	0	10.82	6.52
Pennsylvania	11.67	22.33	10.45	6.95	20.82	16.52
State Benefits Based on 32-Hour Week Equivalent						
Alabama	$18.67	$29.00[a]	$17.45	$13.95	$25.00[a]	$23.52
California	14.67	20.33	13.45	9.95	18.82	14.52
Colorado	13.67	22.33	12.45	8.95	20.82	16.52
Connecticut	10.67	13.33	9.45	5.95	11.82	7.52
Illinois	10.67	21.33	9.45	5.95	19.82	15.52
Maryland	10.67	20.33	9.45	5.95	18.82	14.52
Michigan	11.67	17.33	10.45	6.95	15.82	11.52
New York	13.67	17.33	12.45	8.95	15.82	11.52
Pennsylvania	13.67	22.33	12.45	8.95	20.82	16.52

[a] Maximum.

[b] Excess of gross benefit over state benefit is less than $2.00, so that no supplemental benefit is payable.

An increase in base wages from $79 to $99 per week, 25.32 per cent, increases the supplemental benefit when the state benefit is based on a 40-hour week by 96 per cent under the basic steel plans, 107 per cent under the auto plans during the first four weeks and 176 per cent under the auto plans after the first four weeks. If the state benefit is based on a 32-hour week rather than 40 hours, the supplemental benefit based on a weekly wage of $79 is raised by 34 per cent in steel, 42 during the first four weeks of layoff under the auto plans and 73 for weeks after the first four. The increase from the same cause at

the $99 weekly wage level is less than 10 per cent in all cases because, even on a 32-hour week, wages are such that, in most cases, the state benefit is at its maximum.

Supplemental Benefits Payable for Weeks of Partial Employment

The amount of supplemental benefits payable under the auto plans is always affected by any compensation earned by a worker for part-time employment; this is true to a much lesser extent under the steel plans. The precise effect of compensation on the amount of the supplemental benefit varies with the different unemployment compensation laws. With unimportant exceptions, the state laws disregard small amounts of compensation in determining the amount of the state unemployment benefit. Usually the disregarded compensation is a uniform amount: $6.00 in Alabama and Pennsylvania; $3.00 in California, Colorado and Connecticut; $7.00 in Illinois and Maryland.

In Michigan and New York the situation is less simple. The Michigan law specifies that if the compensation earned in a week by an eligible employee is less than one-half his weekly benefit amount, the full benefit is payable. But in a week in which such an employee earns one-half or more but less than the total of his weekly benefit amount, one-half of the weekly benefit is payable. If the Michigan benefit is $40, for example, the amount of compensation disregarded may range from nothing up to $19.99. In New York one-fourth of the weekly benefit amount is withheld for each day of employment in a week. Thus if the weekly benefit is $40 and an employee works one day and earns $12, the benefit is reduced by $10 and thus $2.00 is, in effect, disregarded; if he had earned $15, $5.00 would, in effect, be disregarded.

The states differ also in the definition of partial unemployment. In Alabama, California and Colorado an employee is partially unemployed under the state law if he earns in a week less than his weekly benefit amount; he is not unemployed at all if his compensation in a week equals or exceeds that amount. In Pennsylvania an employee is partially unemployed if he has wages less than his weekly benefit amount plus $6.00. In Illinois, Maryland and Michigan an employee is partially unemployed when his weekly compensation is less than his weekly benefit amount, including allowances for dependents. In Connecticut, however, one cent less than the sum of the weekly benefit amount (exclusive of allowances for dependents) plus the disregarded amount is the point in wages at which partial unemployment stops. Finally, in New York, no person who earns in a week an amount equal to the maximum weekly benefit amount—$45—is unemployed for that week, even if he worked only one day.

To summarize for the nine states used here for illustrative purposes, suppose an employee with two dependents (wife and child) whose state benefit is based on wages for a 40-hour week of $79, works one

day and earns $12. His state benefit for total unemployment and for partial unemployment would be:

	State Benefit for			*Maximum Weekly Earnings to be Partially Unemployed*
	Total Unemployment	*Partial Unemployment*	*Compensation Disregarded*[a]	
Alabama	$28	$22	$ 6	$27.99
California	37	28	3	36.99
Colorado	35	26	3	34.99
Connecticut	44	35	3	42.99
Illinois	36	31	7	35.99
Maryland	37	32	7	36.99
Michigan	40	40	12	39.99
New York	40	30	2	44.99
Pennsylvania	35	29	6	40.99

[a] Because the states round benefits to multiples of $1.00 or 50 cents, the compensation disregarded may be 49 cents (Colorado) or 99 cents higher (California, Connecticut, Illinois, Pennsylvania) or either 50 cents higher or 49 cents lower (Alabama, Maryland) than is given here.

The Steelworker plans follow the states in disregarding compensation. Whatever the state disregards in computing the state benefit is disregarded in computing the supplemental benefit. Thus, whenever a state benefit is payable, the steel supplemental benefit is the same, irrespective of the amount of compensation. But under the auto plans the total of the state benefit and wages is subtracted from the gross 65 or 60 per cent of take-home pay to arrive at the supplemental benefit amount. Further, under the auto plans, if an employee's compensation exceeds the maximum amount which he may earn and still be counted as partially unemployed, no state benefit, and hence no supplemental benefit, is payable. In the steel plans a supplemental benefit is payable to an employee so long as his compensation, less the amount to be disregarded, is less than 65 per cent of his take-home pay.

These differences in the terms of the steel and auto plans have important consequences in the amount of supplemental benefits which are paid to persons who are partially employed. These differences are indicated in some detail in Table 3 for employees with two dependents whose state benefits are based on full-time earnings, who are employed for one, two, three and four days in a week, and who earn at a smaller rate ($12) and at the regular rate for each day worked in weeks of partial employment. The amounts in Table 3 are simple averages of the amounts in the 9 States.

Under the steel plans there is no reduction in supplemental benefits up to the point where state benefits cease to be payable, and under the Union interpretation of the agreements, the supplemental benefits may be larger after state benefits cease to be payable because of the wages earned than if there is no employment at all. Under the auto

plans, however, any wages earned in a week result in a reduction in the supplemental benefit for that week if any part of such wages is disregarded in calculating the state benefit. If the state benefit is reduced by the exact amount of any wages earned, the supplemental benefit would be the same, under both auto and steel plans, as if no wages had been earned.

TABLE 3

State and Supplemental Benefits and Total Benefits and Wages in Weeks of Partial Employment

	Days Employed in Week				
	0	*1*	*2*	*3*	*4*
	Benefits Based on $79 Weekly Wage Current Wages $12.00 Per Day				
State benefit	$36.89	$30.33	$17.67	$ 6.44	0
Supplemental benefit					
Steel	9.78	9.78	9.78	10.56[a]	$ 4.78[b]
Auto[1]	8.40	3.86	3.47	1.10	0
Auto[2]	4.86	1.32	1.32	0	0
Total benefits					
Steel	46.67	40.11	27.45	17.00	4.78
Auto[1]	45.29	34.19	21.14	7.54	0
Auto[2]	41.75	31.65	18.99	6.44	0
Total benefits and wages					
Steel	46.67	52.11	51.45	53.00	52.78
Auto[1]	45.29	46.19	45.14	43.54	48.00
Auto[2]	41.75	43.65	42.99	42.44	48.00
	Current Wages $15.80 Per Day				
State benefit	36.89	27.72	11.72	0	0
Supplemental benefit					
Steel	9.78	9.78	10.05[c]	5.38[d]	0
Auto[1]	8.40	3.01	1.78	0	0
Auto[2]	4.86	1.31	0	0	0
Total benefits					
Steel	46.67	37.50	21.77	5.38	0
Auto[1]	45.29	30.73	13.50	0	0
Auto[2]	41.75	29.03	11.72	0	0
Total benefits and wages					
Steel	46.67	53.30	53.37	52.78	63.20
Auto[1]	45.29	46.53	45.10	47.40	63.20
Auto[2]	41.75	44.83	43.32	47.40	63.20

(Footnotes on next page.)

TABLE 3 (Cont'd)

	Days Employed in Week				
	0	*1*	*2*	*3*	*4*
	Benefits Based on $99 Weekly Wage				
	Current Wages $12.00 Per Day				
State benefit	$38.11	$31.42	$18.44	$ 7.08	0
Supplemental benefit					
Steel	19.18	19.18	19.18	20.00[e]	$15.44[f]
Auto[1]	17.40	12.31	13.38	6.32	0
Auto[2]	13.41	8.49	9.08	3.93	0
Total benefit					
Steel	57.29	50.60	37.62	27.08	15.44
Auto[1]	55.51	43.73	31.82	13.40	0
Auto[2]	51.52	39.91	27.52	11.01	0
Total benefits and wages					
Steel	57.29	62.60	61.62	63.08	63.44
Auto[1]	55.51	55.73	55.82	49.40	48.00
Auto[2]	51.52	51.91	51.52	47.01	48.00
	Current Wages $19.80 Per Day				
State benefit	38.11	25.69	6.44	0	0
Supplemental benefit					
Steel	19.18	19.18	19.28[g]	4.04[h]	0
Auto[1]	17.40	11.10	3.85	0	0
Auto[2]	13.41	7.50	2.42	0	0
Total benefit					
Steel	57.29	44.87	25.72	4.04	0
Auto[1]	55.51	36.79	10.29	0	0
Auto[2]	51.52	33.19	8.86	0	0
Total benefits and wages					
Steel	57.29	64.67	65.32	63.44	0
Auto[1]	55.51	56.59	49.89	59.40	0
Auto[2]	51.52	52.99	48.46	59.40	0

[1] During the first 4 weeks of layoff.
[2] After the first 4 weeks of layoff.
[a] Under the company interpretation of the plan, the mean benefit would be $8.23.
[b] Company: $0.70.
[c] Company: $8.72.
[d] Company: $0.59.
[e] Company: $18.08.
[f] Company: $10.33.
[g] Company: $15.36.
[h] Company: $0.54.

In assessing the relation of partial employment to the amount of benefits, state and supplemental, it should not be overlooked that at certain points, under many state laws, the earning of additional wages results in a reduction in income. The points at which this occurs differ as between the state laws. In each of the following cases, if wages earned in a week are increased by one cent, the state benefit is reduced to zero, so that the total income for the week is reduced by one cent less than the state benefit as given.

	State Benefit for Total Unemployment	*Wages Earned in Week*	*State Benefit*
Alabama	$28	$27.99	$ 6.00
California	40	39.99	3.00
Colorado	35	34.99	3.00
Illinois	36	35.99	7.00
Maryland	37	36.99	7.00
Michigan	40	19.99	40.00[a]
Michigan	40	39.99	20.00[a]
New York	45	44.99[b]	11.25

[a] If the wage in this case were increased to $20, the benefit would be reduced to $20, with a resulting loss of weekly income of $19.99. (See page 111)

[b] Assumed to be earned on three days. If such a wage were earned in two days, the loss of weekly income resulting from increasing wages by one cent would be $22.49.

The maximum loss of weekly income in Connecticut and Pennsylvania from an increase of one cent in weekly wages is $1.00 and results from the fact that all benefits are rounded to the next higher multiple of $1.00.

Illustrative Calculations of Maximum Fund Levels

Since the determination of the maximum level of the fund is important for the calculation of both contributions and benefits, illustrations of the methods of calculation are in order. The calculations will be based on the following assumed facts as to numbers of employees and hours of work:

Month	*Number of Employees*[a]	*Hours Worked (000's)*	*Month*	*Number of Employees*[a]	*Hours Worked (000's)*
0	—	0	9	—	16,500
1	—	17,500	10	—	17,500
2	—	17,750	11	—	17,800
3	—	18,000	12	101,000	18,000
4	—	17,000	13	101,500	18,500
5	—	17,500	14	101,000	18,000
6	—	16,800	15	100,500	17,400
7	—	16,400	16	100,000	17,000
8	—	16,400	17	99,000	16,000
			18	98,000	15,000

[a] On the last date for which data are available for the first day of the following month, including employees having credit units who are on layoff.

Month 0 is the month immediately preceding the month for which contributions began, the latter being month 1. Hours worked in month 0 (which are relevant in the steel plans) are set down as zero because there was, in fact, a steel strike in that month, and that fact was part of the background in fixing the maximum level for benefits for the first month of benefit payments.

The maximum fund level for any month for the auto plans is, explicitly or in effect, the product of $400 multiplied by the number of employees on the last available date before the the first day of the month. The payments under the auto plans began with month 13. The number of employees in the illustrations, for the latest date in the 12th month, was 101,000; therefore the maximum level of the fund for the 13th month was $400 times 101,000, or $40,400,000.

Under the steel industry plans, the payment of benefits began with month 14. The maximum level of the fund for any month is based on the hours worked in the first 12 of the 14 months preceding such month; for month 14, the first 12 of the preceding 14 months are months 0 to 11, inclusive. The hours worked in such period totalled 189,150,000. The maximum level for contributions for month 14 would be 10.5 cents multiplied by 189,150,000, or $19,860,750, and the maximum level for benefits would be 5 cents multiplied by 189,150,000, or $9,457,500. The hours worked applicable to other months used in the illustration for the steel plans would be:

Month	*Hours Worked (000's)*
15	207,150
16	208,150
17	208,400
18	207,800

The maximum level of the auto and steel funds, using the hypothetical figures, for months 14 through 18 would be:

		Steel Fund		
			For Benefits	
Month	*Auto Fund*	*For Contributions*	*Cents Factor*	*Amount*
14	$40,600,000	$19,860,750	5.00	$ 9,457,500
15	40,400,000	21,750,750	5.25	10,875,375
16	40,200,000	21,855,750	5.50	11,448,250
17	40,000,000	21,882,000	5.75	11,983,000
18	39,600,000	21,819,000	6.00	12,468,000

Illustrative Calculations of Contributions

Until the assets of a SUB fund are smaller than the maximum level on the applicable date by less than the contribution for a month, the contributions are payable at the maximum rate. When the assets of a

SUB fund are equal or close to the applicable maximum level, the contributions may be reduced. For example, suppose that for month X the maximum level of an auto SUB fund is $40,000,000; the assets of the fund on the Friday preceding the first Monday of the month were $39,600,000. Compensated hours for each of the four pay periods ending in the month were 4,100,000. The contribution for the first pay period would be $205,000 at the 5-cent rate. The contribution for the second pay period would be only $195,000, less than 5 cents per compensated hour, since such a contribution would be the total required to bring the assets up to the maximum level. No contributions would be required for other pay periods in the month.

It may be of interest to follow the calculation of contributions under the auto SUB plan for several months, assuming no changes in assets resulting from changes in security prices and omitting investment income:

Month	*Maximum Level of Fund*	*Assets of SUB Fund on Compensation Date*[a]	*Compensated Hours*	*Contributions*	*Benefits Paid*
			In Period Between Computation Dates		
W	$40,000,000	$39,600,000	16,400,000	$400,000	$1,000,000
X	39,800,000	39,000,000	14,000,000	700,000	300,000
Y	39,500,000	39,400,000	15,000,000	100,000	250,000
Z		39,250,000			

[a] The Friday before the first Monday in the month.

In month W, the $400,000 contribution was the excess of the maximum level of the fund over the assets on the Friday before the first Monday of the month. But benefits exceeded contributions by $600,000, so that the fund assets declined to $39,000,000 on the next computation date. The maximum level dropped by $200,000, $800,000 in excess of assets. Contributions were at the 5-cent maximum, $700,000. Benefits were only $300,000, so that the assets increased to $39,400,000. The maximum level declined to $39,500,000, or only $100,000 more than assets, so the contributions for the month were much below the 5-cent level.

Turning now to steel, assume that at some time after the maximum level is the same for both benefits and contributions, the hours worked during an 18-month period are those of the illustration in the eighth preceding paragraph. The maximum level for contributions as given in the second preceding tabulation would be the maximum level for all purposes; and for one additional month the maximum level would be (based on the 12 months ending with 16—here called 46) $21,819,000. It is assumed that the hours worked in month 49 were 14,000,000.

Suppose that, for present purposes, the assets of the steel SUB fund at the end of the month 13 (called 43 for present purposes) were composed of cash and investments, $5,225,000; cash contributions accrued but unpaid of $465,000; contingent liability accrued (includ-

ing that for hours worked in month 43) of $15,910,000; or a total of $21,600,000.

For ease in following the calculation of contribution amounts, the necessary data are shown in Table 4. Since there is a lag between the end of a 12-month period and the month for which the hours in the 12-month period form the basis of the maximum fund level, that level is not given for months 43 and 44. The contributions and benefits for month 44 are assumed to be $300,000 and $100,000, respectively, with no contingent liability accrual. Therefore both investments and total assets increase in 44 over 43 by $200,000.

The maximum fund level for month 45 is $21,750,750, smaller by $49,250 than the total assets at the end of month 44. In such case, the plan specifies that the contingent liability is to be reduced by the amount of the excess. Since the assets will then equal the maximum fund level, no cash contribution is due. Benefits accrued in month 45 total $125,000, so that there is a reduction in total assets during the month of $174,250 to $21,625,750.

The maximum fund level for month 46 is $21,855,750, $230,000 more than the assets at the end of 45. Since three cents per hour worked in month 46 is $510,000, the $230,000 will be a cash contribution and no contingent liability accrued. Benefits accrued during the month aggregate $380,750, so investments and total assets are reduced by $150,750 to $21,475,000.

The maximum fund level for month 47 ($21,882,000) exceeds the assets at the end of month 46 ($21,475,000) by $407,000. The hours worked in month 47, 16,000,000, would make the maximum current cash contribution $480,000. Since the excess of the month's maximum fund level over the previous month-end asset total is the smaller, the cash contribution for month 47 is $407,000.[17]

TABLE 4

Illustrative Calculations of Contributions and of Changes in Contingent Liability

		Assets of SUB Fund at Month-End			
Month	*Maximum Level of Fund for Month*	*Investments*[a]	*Contingent Liability*	*Total*	*Hours Worked in Month (000's)*
43	[b]	$5,690,000[c]	$15,910,000	$21,600,000[c]	[b]
44	[b]	5,890,000	15,910,000	21,800,000	18,000
45	$21,750,750	5,765,000	15,860,750[d]	21,625,750	17,400
46	21,855,750	5,614,250	15,860,750	21,475,000	17,000
47	21,882,000	5,403,300	15,860,750	21,264,050	16,000
48	21,819,000	5,076,300	15,965,700	21,042,000	15,000
49	21,819,000	4,496,300	16,245,700	20,742,000	14,000

(Footnotes on next page.)

TABLE 4 *(Cont'd)*

Month	*Accrual During Month* — *Contributions*	*Contingent Liability*	*Benefits*
43			—
44	$300,000	—	$100,000
45	0	$ 49,250[d]	125,000
46	230,000	—	380,750
47	407,000	—	617,950
48	450,000	104,950	777,000
49	420,000	280,000	1,000,000

[a] Including contributions accrued and unpaid.
[b] Not relevant to the illustration.
[c] Arbitrarily assumed.
[d] Decrease; at the end of month 44, assets of the fund exceeded the maximum level by $49,250.

The benefit accruals in month 47 ($617,950) are larger than the contribution by $210,950. Since no contingent liability accrued, the month-end assets are $21,264,050, less by $554,950 than the maximum level. The hours worked in month 48 are 15,000,000, making the month's maximum cash contribution $450,000 and maximum contingent liability accrual $300,000. The excess of the maximum fund level over assets at the end of month 47 exceeds the maximum cash contribution for month 48, but is less than the sum of 5 cents times hours worked; therefore the cash contribution for month 48 is $450,000 and the excess of $554,950 over $450,000, or $104,950 (being no more than $300,000), is the contingent liability accrual for the same month.[17] Benefit accruals for month 48 being $777,000, cash and investments are reduced from month 47 by $327,000 and total assets by $222,050.

The excess of the maximum fund level for month 49 over the previous month-end asset total is $777,000. The hours worked in month 49 being 14,000,000, the maximum cash contribution is $420,000 and the maximum contingent liability accrual is $280,000. Since the sum of the two is less than the $777,000 excess of maximum fund level over previous month-end assets, the lower amounts are the contribution and contingent contribution liability for month 49.

[17] Under the companies' interpretation of the steel plan, all obligations to contribute less than five cents per hour worked are to be divided between cash contribution and contingent liability accrual in the ratio of 3 to 2. The accrual of cash contributions and contingent liability under this interpretation would be as follows:

Month	*Cash Contribution*	*Contingent Liability Accrual*
44	$180,000	$120,000
45	0	Decrease 49,250
46	138,000	92,000
47	244,200	162,800
48	332,970	221,980
49	420,000	280,000

It will be noted that in the last two months of the seven-month period illustrated in Table 4, the assets of the SUB fund in the form of cash and investments declined by $907,000. If the benefits plus fees and expenses of the trustee paid from a steel SUB fund average more than 3 cents per hour worked in excess of any investment income, it will only be a question of time until all the SUB fund assets will usually consist entirely of contingent liability.[18] Suppose at the end of month 48 in Table 4 the entire assets of the fund, $21,042,000, consisted of contingent liability. Then the cash contribution required during month 49 would be the amount required to pay the benefits—$1,000,000, or 7 1/7 cents per hour worked during the month. At the end of month 49, the assets would still be composed wholly of contingent liability.

Illustrative Fund Position Calculations

Under both auto and steel plans, the fund position which governs the payment of benefits is calculated monthly.[19] Under the auto plans the fund position is the quotient, expressed as a percentage, of the assets of the fund on the computation date for a month divided by the maximum fund level applicable to the same month. Looking at the tabulation on page 117, the fund position for month W would be $\frac{39,600,000}{40,000,000}$, or 99.00 per cent; for month X, $\frac{39,000,000}{39,800,000}$, or 97.98 per cent; and $\frac{39,400,000}{39,500,000}$, or 99.75 per cent for month Y.

Under the steel plans the fund position for any month is the quotient, also expressed in percentage form, of the assets of the fund on the last day of the second month preceding the month in question divided by the maximum funding for such month. The maximum funding, it will be recalled, is the product, of 10.5 cents (or a lesser amount during the initial transition period), and the hours worked in the first 12 of the last 14 months preceding the month in question. In Table 4 the fund positions are:

Month	Quotient	Fund position
Month 45	$\frac{21,600,000}{21,750,000}$	99.31 per cent
46	$\frac{21,800,000}{21,855,750}$	99.75 per cent
47	$\frac{21,625,750}{21,882,000}$	98.83 per cent
48	$\frac{21,475,000}{21,819,000}$	98.42 per cent
49	$\frac{21,264,050}{21,819,000}$	97.46 per cent

[18] Under the companies' interpretation of the steel SUB plans, the time required to exhaust all assets of the SUB funds, other than contingent liability, will be shorter than under the interpretation followed here.

[19] Under the auto plans, if the fund position is less than 13 per cent, it is to be calculated for each pay period separately.

IV. METHODS OF COST LIMITATION

Having described the terms of the SUB plans, attention will now be directed to the effect of those terms in producing limitations on costs. The analysis will, in substantial part, be qualitative; the experience on which final judgments can be based does not yet exist, though the records of the current recession will, when compiled, be of great utility for analytic purposes.

In general, cost limitation will be discussed in terms of the average for a covered group. The fact that the employees who are covered under the plan of Company A are members of the bargaining unit represented by Union B—60 per cent of all the employees of the company—is not regarded as a cost limitation as compared with Company C which has a plan applicable to the bargaining units represented by Unions B, D and E—80 per cent of its employees. It may very well be that the average cost per total employee in Company C will be higher than for Company A. But if the cost per covered employee for Company A is higher than for Company C, the former will be taken as having, for present purposes, the higher cost. Thus the concentration is on the plan area, and not on the plan area in relation to the total employment of a company.

A. *Limitations on Eligibility of Covered Employees*

A "covered" employee is, by definition, an employee with respect to whom a contribution (measured by his hours of work or pay) is paid by the employer to the SUB fund. The fact that an employee is covered does not mean that his unemployment is compensable. First, his employment must have lasted without interruption for a certain period of time; this period of time is one year in the auto industry and two years in steel. Obviously a larger proportion of covered employees will qualify if the service requirement is one year than if it is two. The relative cost-limiting effect will depend on the proportion of employees having less than the requisite service and on the relative probability of becoming unemployed as between the two groups. This probability is influenced greatly by the organization of the company with respect to production (or the rendition of service) and by the form of the seniority system.

Take the simplest type of case: assume that the covered employees of a company are in a single seniority unit, that the work is fairly simple, and that it is allocated solely on the basis of seniority. In such a case, if 10 per cent of the employees have less than the requisite service, a reduction in force of 10 per cent by the employer could be made without any employee who might, in such case, become eligible for benefits being affected; or if the force were to be reduced by 20 per cent, only 10 per cent could become eligible.

As a practical matter, this overall seniority system is not common. In most companies having SUB plans there is elaborate departmental organization and a high degree of specialization. Senority units are

likely to follow departmental lines, and an employee who is laid off in Department A may have no right to transfer to Department B in case of layoff. If the proportions of employees at different periods of service were about the same for all departments, and if, in a reduction of output, all departments were to be affected in equal proportion, the effect of a length-of-service qualification on eligibility would be about the same as if there were a single production unit without any departmentalization. This is quite unlikely to be the case. Departments will vary widely in the proportions of eligibles and, if forces are reduced on the average x per cent, the reduction in some departments may be $\frac{x}{10}$ per cent, or 10x per cent; and those with the heaviest reduction will not necessarily be the departments having the largest proportion of short-service employees.

In certain situations, the concentrations of layoffs may be heaviest in production units having the largest proportion of longer-service employees. Take, for example, a large steel mill having a number of blast furnaces. Each blast furnace will have for its quota of employees of various grades from the very highly skilled to laborers. Frequently each blast furnace constitutes a separate seniority unit. The furnace will either be shut down or operating; there is no in-between. If the furnace is shut down, all the employees will be laid off and, normally, they will have no right to take any job on another blast furnace, that being a separate senority unit. Further, the oldest blast furnaces, usually being technically the least efficient, are the ones most likely to be shut down when production is curtailed. Because they are the oldest, the employees assigned to them will, on the average, have the longest service, and the number of employees laid off will be disproportionately large. Under the conditions, a reduction of 10 per cent in output may well result in a layoff of 15 per cent of the employees, and even though in the plant as a whole 15 per cent of all employees have less than qualifying service, three-quarters or more of the employees laid off may be eligible.

There are many other factors which will affect the proportion of eligibles among employees laid off in addition to the length-of-service requirement. If a company has been expanding, the proportion of employees of short service will probably be higher than if productive capacity has been unchanged for a period; and, other things being equal, the longer the period of no change, the higher will be the proportion of employees who will meet the service requirement.

The first action when output ceases to expand is to stop hiring; employees quitting, retiring, dying or dismissed are not replaced. Except in periods of layoff, the largest cause of termination is quitting, and quits come predominantly from among employees with short serv-

ice. Cessation of hiring over any period normally results in a steady and rapid increase in the proportion of employees having one or two years of service.

It is clear that no general rule can be laid down as to the effect on cost of any length-of-service requirement. It will never be possible to say that if the service requirement is one year, no costs will be incurred until x per cent of the employees have been laid off, or that a two-year requirement will reduce costs by y per cent as compared with a one-year requirement.

In preparation for the formulation of SUB plans in the basic steel industry, the United Steelworkers of America, in 1956, collected data on the number and duration of layoffs of employees of steel companies having differing periods of service, by years, from 1949 through 1955. The following tabulation summarizes these data from 30 to 35 companies (some of the companies could not supply data for the earlier years) having from 75,000 to 95,000 employees. The largest company included had about 11,000 employees. The very largest companies did not report in comparable form. The data are as follows:

		Percentage of Total Layoffs of Employees Having Service of		
Year	*Weeks of Layoff Per Employee*	*Less Than 1 Year*[a]	*1 to 2 Years*	*2 Years and Over*
1949	6.3	45.0	16.0	39.0
1950	3.7	88.4	3.6	8.0
1951	1.6	65.1	6.7	28.2
1952	1.9	84.4	7.9	7.7
1953	1.7	30.1	20.2	49.7
1954	6.7	66.8	10.1	23.1
1955	2.4	83.2	2.8	14.0
1949-52	3.1	66.5	9.9	23.6
1953-54	4.4	60.3	11.9	27.8
1953-55	3.7	65.4	9.9	24.7
1949-55	3.4	65.9	9.9	24.2

[a] Includes also, for employees with one or more years of service, that part of the layoffs lasting one year which is in excess of one year.

Probably one of the two most serious defects in the data is the impossibility of separating that part of the layoffs of employees having one or more years of service which is over one year from the layoffs of employees having less than one year of service. In other words, the data were collected with the assumption already made that no employee having less than one year of service would be eligible for benefits, and that no benefit would be payable after one year of layoff. What the data represent is the year-by-year proportion of layoffs

which may be compensable, given these eligibility and duration conditions.

On the average, with a two-year service requirement roughly one-quarter of layoff time might be compensable—from as low as 7.7 per cent in 1952 to 48.9 per cent in 1953. Further, if the eligibility were fixed at one rather than two years of service, the compensable layoff area would be increased, on the average, by about 41 per cent.

The second serious defect in the data is the inclusion in the year in which the layoff began of all layoffs beginning in a particular year. This affects mainly 1953 and 1954. The totals for the two years do not give a completely accurate picture; it seems probable that if records had been maintained for the 12-month period beginning September 1, 1953, the results would have been very close to those for 1949 when the layoffs began in January and February. Despite these defects in the data, the averages for the two cycles—1949-52 and 1953-55—are strikingly similar.

It is to be pointed out that layoff and unemployment are not the same thing. While an employee must be on layoff to be entitled to supplemental unemployment benefits, there is much more to entitlement than merely being on layoff.

Finally, it is to be noted that all the data cited are averages. Examination of the data for individual companies reveals that even in 1949, 1953 and 1954 there were companies without any employees on layoff who could be entitled to supplemental benefits; and that, on the other hand, there were, even in 1951, cases in which compensable layoffs ran to five weeks per covered employee. Clearly, the cost calculations are to be performed on a company-by-company basis in the light of the experience of the particular company, and, with the realization, abundantly illustrated by the data from which the averages given here have been taken, that the past is not necessarily a good guide to the future.[20]

B. *Limitations on Characteristics of Compensable Unemployment*

A layoff is ordinarily defined as a temporary separation of an employee from service, initiated by the employer because of the inability

[20] In estimating supplemental benefit costs under steelworker plans, it was assumed that the proportion to the total of past layoffs of persons having one or more years of service would be the proportion of the total, for the future, applicable to employees having two or more years of service. While an employee on layoff will normally have some credit units, it would be possible for him to have relatively few such units. To determine how many credit units employees have would require an examination of the hours of each—obviously impractical. In the steel cost calculations it was assumed that at the time of first layoff, all employees had the maximum allowable credit units and that those who, after layoff, returned with unbroken seniority would acquire half as many credit units as there were weeks, up to 52, before any subsequent layoff. No doubt this assumption exaggerated the accumulation of credit units, but the over-statement can hardly have been a significant one.

of the employer to find work for such employee. Not all employees laid off are to be entitled to supplemental benefits. Thus, if employees are laid off in a plant because a flood prevents the operation of the plant, they may not be entitled to supplemental benefits because their layoff is to be attributed to an "act of God." Several other types of layoff are similarly not compensable. So far as is known, no employer—certainly no employer in the steel industry—maintained any records relating to the cause of layoff. The impression has been that the various disqualifying causes of layoff (see items (l), page 94, and (m), page 94) are relatively unimportant as far as cost limitations are concerned.[21]

Having been laid off for a non-disqualifying reason, an employee will normally be entitled to supplemental benefits for any week for which he qualifies for a state unemployment benefit. There may be a few cases[22] in which an employee may receive a state but not a supplemental benefit when the cause of the layoff is not itself disqualifying. Much more important costwise are the exceptions to the rule that eligibility for supplemental benefits depends on receipt of a state benefit. Of the five exceptions (pages 92-93), the most important is that which specifies that the exhaustion of state benefits, because of the limit in the state law on the period for which such benefits are payable, will not operate to prevent an employee who is otherwise eligible from receiving supplemental benefits.

In the seven-year period 1949-55, inclusive, among the 30-odd steel companies which furnished comparable records, from 5.48 per cent (1950) to 23.94 per cent (1949) of the layoffs of employees having more than one year of service lasted beyond the duration of state unemployment compensation in the state in which the layoff occurred. In two of the first three years of the period, the proportion of weeks of layoff running beyond state durations was smaller than the proportion of layoffs; that is, the average duration of layoffs beyond the state maxima was short in relation to the periods for which state benefits were payable. The opposite was true for the five years 1950 and 1952-55.

In no year was the average total duration of layoffs as long as 17 weeks, or more than 3.3 weeks beyond the end of state benefits. The percentages of layoffs of employees, having one or more years of service which lasted beyond the end of the state benefits, the percentages of the total weeks of layoff which were in the period after exhaustion of state benefits, and the average duration of layoffs—total and up to

[21] In calculating the cost of steel SUB plans, no allowance was made for any disqualifications arising from reasons for layoffs.

[22] Under some seniority agreements an employee on layoff must, in order to keep his seniority, accept any job offered him in the plant. Under these circumstances, refusal by a highly skilled employee to accept a laborer's job would disqualify him for supplemental benefits, but would usually have no effect on his state benefits. There is a specific exclusion of certain skilled employees from this sort of supplemental benefit disqualification in the auto plans.

the maximum period of state benefits—are given in the following tabulation:

	Percentage of Layoffs Exceeding Maximum State Benefit Duration	*Percentage of Total Weeks of Layoff Which Occurred After Maximum Duration of State Benefits*	*Average Total Duration of All Layoffs (weeks)*	*Average Duration of Layoffs Up to Maximum State Duration (weeks)*
1949	23.94	18.51	16.95	13.81
1950	5.48	16.23	6.94	5.81
1951	10.60	9.96	9.58	8.62
1952	9.02	12.20	8.94	7.85
1953	21.49	23.01	14.30	11.01
1954	19.23	19.42	13.99	11.27
1955	11.67	15.28	9.87	8.36
1949-52	16.17	16.29	12.72	10.65
1953-55	18.57	19.92	13.39	10.72
1949-55	17.40	18.19	13.06	10.69

The reports from the companies divided layoffs of employees having one or more years of service into two overall groups—those employees who returned from layoff when recalled, and those who did not. The major reason for not returning upon recall is known to be employment on another job. In calculating the total weeks of layoff it was assumed that those employees who returned to work on recall had no employment while on layoff, while half of the time between layoff and recall for those who did not return was assumed to have been spent in other employment. On the average, about 20 per cent of the employees laid off did not respond to recall, so that the allowance for outside employment during layoff is of the order of 10 per cent of the total weeks of layoff.

The further assumptions implicit in the calculations are (1) that during the entire period of layoff there will be no disqualification [other than for employment mentioned in the item (3)]; (2) that during the period up to the point of maximum state durations, a state benefit will be subtracted from the gross overall benefit to arrive at the supplemental benefit; (3) that except for the allowance for outside employment, while on layoff, of employees laid off who did not return when recalled, there will be no deductions from gross benefits other than the state benefits; and (4) the $47.50 to $55.50 maximum will apply to all weeks of layoff after the end of state benefits.

The first assumption is undoubtely an overstatement: there are disqualifications for state benefits, and hence for supplemental benefits. No reason appears for thinking that any such disqualifications will have any significant cost effect. The second assumption is substantially correct: if a state benefit is not paid for one of the non-disqualifying reasons, other than exhaustion, the amount of the supplemental benefit is subject to the $25 to $33 maximum—not the higher one.

The third assumption also produces some overstatement. Undoubtedly there are subtractions from gross benefits other than the state benefits. Many employees have subsidiary employments which are not affected by layoff from the principal job. And some part-time employment is available and taken even in periods of substantial recession. Checks by one large company in 1956 indicated that then, and for the preceding year, as many as half of the employees laid off were employed and earning wages in outside employment large enough to wipe out the state benefit. In the case of another smaller company, of 720 employees laid off for 12,293 weeks (excluding those weeks in excess of state durations), mainly in 1954, state benefits were paid to only 534. The weeks of benefit plus the waiting period week for those receiving state benefits totalled 8,408, or 68.4 per cent of the total weeks of layoff. Even if all the other laid-off employees got a waiting period credit, the percentage of actual to theoretical compensable weeks was only 70. This third assumption may contain substantial overstatements.

The fourth assumption is not exact: for several reasons the $25 to $33 maxima for weekly benefits may be applicable to a laid-off employee after he has exhausted his state benefits. The general rule is that the lower maximum will apply in the same benefit year for as many weeks after state benefit exhaustion as there were weeks in which state benefits, but not supplemental benefits, are received. For example, if an employee gets state benefits before he completes two years of service, and after meeting the service requirement, and in the same benefit year, has another extended layoff, the $25 to $33 maxima apply after exhaustion of state benefits for as many weeks as state benefits were received during the ineligibility period. This rule prevents persons who expect long layoffs from deliberately foregoing supplemental benefits during the state benefit period in the hope of increasing the number of weeks to which the $47.50 to $55.50 maxima apply.

C. *Requirements for Action by Employees*

In order to be entitled to supplemental benefits, an employee must maintain a live application for employment at a state employment office, whether or not he is entitled to state benefits. He must make application in person for the supplemental benefit and normally apply in the same fashion for a state benefit, so long as the latter may be payable.

The requirement of personal reporting at a company office may be more onerous than the corresponding state requirement. Under the interstate benefit arrangements, an unemployed person may register at any one of a large number of employment or unemployment compensation offices anywhere in the United States. Some of the larger steel companies authorize the acceptance of applications for supplemental benefits at any company office where covered employees work.

But even the largest company has few offices as compared to the agencies involved in the administration of state benefits. The requirement of personal reporting at a company office will operate to restrict supplemental benefits somewhat. On the other hand, the desire to make sure of meeting the reporting requirement may lead some laid-off employees to restrict the area in which their search for employment is carried on and thus lead to longer durations. During periods when jobs are scarce and supplemental benefit costs are highest, the restriction of benefits may outweigh the narrowed area of job seeking, which, under these conditions, would likely be fruitless anyway.

The steel plans—but not the auto—require that an employee be able to and available for work. This is a usual requirement of state law, but there are exceptions in eight states:[23] in these states claimants who have filed a claim and registered for work are not ineligible for state benefits because of illness or disability so long as no work which is suitable, but for the disability, is offered and refused. The requirement in the steel plans contains no such exception.[24]

Under the steel SUB plans, the employer has the right to refer laid-off employees to other jobs; failure to take such a job, if suitable under the applicable state standards, will disqualify the employees for receipt of supplemental benefits—and for state benefits as well, of course, if the refusal is made known to the state authorities. Early experience in the steel industry indicates that company activity in arranging for referrals may have considerable effect on the volume of outside employment. In two cases involving large numbers of employees, jobs for laid-off employees were secured by company activity; in neither of these cases would the state employment office have referred any of the laid-off employees to the particular jobs. Thus company job-seeking activity may well be an important factor in limiting supplemental unemployment benefit costs.

The attitude of employees in the search for work will always be important costwise; if employees receiving supplemental benefits are themselves anxious to get work, it is reasonably certain that the cost of benefits will be less than if there is no such desire. Not only will a person who wants work bestir himself to find some, but offered work on the margin of suitability will be accepted, whereas if the attitude is passive, search for jobs will be held to a minimum and no work which the state is willing to account as unsuitable—and state rules always govern on outside jobs—will be accepted. It is over this point that the main controversy as to the desirability of benefits supplementing state unemployment compensation is carried on.

Irrespective of any views on this point, it seems reasonable to sup-

[23] Delaware, Idaho, Maine, Maryland, Montana, Nevada, Tennessee, Vermont.

[24] There is a currently unresolved dispute as to the interpretation of the steel plan as to Illinois; in that state, state benefits for a week are reduced by one-fifth for each day on which an otherwise eligible employee is unavailable for work. The company holds, erroneously according to the union, that such an employee is disqualified for supplemental benefits for the whole week.

pose that job seeking and job acceptance will be affected by the effect on income of taking a job. If part-time work, for example, does not add to income, less of it will be accepted than if such employment makes total income higher.

The aim, in general, of the provision of state laws specifying that some part of wages earned in a week will be disregarded in calculating the state benefit is that there be an incentive for unemployed persons to take partial employment. Unless this is done, the income of such a person is the same if his wages are not more than his weekly benefit. The definition of unemployment in most state laws is not consistent with the aim of encouraging acceptance of part-time employment. For the existence of a point or points at which a small increase in wages results in loss of income constitutes discouragement rather than encouragement of employment. This discouragement is not offset, for steel and auto workers, by other sanctions such as that which makes rejection of suitable employment a bar to state (and supplemental) benefits. Wages which are involved in the cases illustrated here are too low (or the hours too short if the wage rates are appropriate) for the employment to be suitable for the workers involved.

The steel SUB plans aim at preserving whatever incentive exists in state unemployment compensation laws by disregarding the same amounts of wages.[25] In the auto plans, however, there is no gain in income from partial employment yielding wages less than the gross weekly benefit.

While, looking only at the amounts of benefits, the steelworker plans seem to incur higher costs for partial unemployment than do the auto plans—higher even than the costs of total unemployment—these could prove to be more theoretical than real. For the apparent higher steel costs are the result of the aim of preventing any employee from ever losing income by working and, up to the limit of the amount disregarded, increasing his income by working. This will not occur in all cases, even under the Union interpretation of the steel SUB plans, because of the vagaries of state law. But under the companies' reading of the plans there will occur, in many states, a reduction in total income when earnings reach a certain point. The avoidance of such results, within the limits of the usual disregarded amounts of earnings, should save, through more accepted employment, at least as much as is spent in the extra benefits required to carry out the policy of preventing or minimizing the loss of income referred to.

[25] The disagreement between companies and the Union as to the interpretation of the steel plan has to do with (i) the question as to whether the wages are to be disregarded beyond the point at which state benefits are payable in those states in which partial unemployment involves earning less than the state benefit amount, and (ii) the treatment of wages in states such as Michigan and New York in which no fixed amount is to be disregarded.

D. *Relation of SUB Fund Assets and Their Maximum Levels to Contributions and the Amount and Duration of Supplemental Benefits*

The heart of the control of costs in SUB plans is the relation between the actual assets of the SUB funds and their maximum levels. The differences between the fund assets and the maximum fund levels are one of the two factors governing contributions, the other factor being the maximum contribution per hour. And the ratios of fund assets to the maximum fund levels govern the duration of supplemental benefits in the auto plans, and the amount and sometimes the duration of benefits in the steel plans.

It would be possible to specify a fixed contribution to a SUB fund to provide for payment of supplemental benefits until the fund is exhausted, then simply stop. Such an arrangement would be unsatisfactory from all points of view. First, in case of favorable experience, there would be no point in simply accumulating funds. Some limit needs to be fixed on accumulations; and there should be some savings possible from low benefits in order to give incentives for the stabilization of employment.

Second, on the benefit side, it is undesirable to pay full benefits for a period and then come to a complete halt for a time, with perhaps alternate periods of full benefits and no benefits. Such an arrangement would give to employees first laid off a better chance of collecting benefits than those who, in a serious recession, would be laid off later, the latter being, on the average, the longer-service employees. Further, in a serious recession—and the problems of cost arise mainly in such a period—gradual reductions in benefits are preferable to a sudden shift from full benefits to no benefits at all and vice versa. Gradual reductions make it possible for beneficiaries to count on some income from the plans, even if not the full amounts. Finally, from the standpoint of administration, some definite arrangement with respect to benefit amount adjustment is essential in order to avoid hopeless confusion as to who is entitled to how much for what weeks if there were alternation between benefit payments and no benefits.

Numerous aspects of the many interrelations between maximum levels of funds, fund assets, contributions and benefit amounts could be explored. Attention will be directed here to (1) the initial size of the maximum levels and some of the implications of that size; (2) the methods of changing the maximum levels and some of the consequences of such changes on contributions in periods of both rising and falling employment; (3) the special problems of beginning a SUB fund, with special reference to the differences between the auto and steel plans; (4) the effectiveness of control of benefit costs by varying their duration as compared with variations in benefit amount; and finally, (5) the adequacy of controls: the chances that, on the one hand, funds may be exhausted despite controls and, on the other, that costs will be held below the limit aimed at at the expense of lowered benefits.

Fixing Initial Maximum Fund Levels

The initial maximum level of the funds under the auto plans ($400 per employee) would, if matched by assets, be sufficient to pay the maximum benefit for about 60 per cent of the maximum duration to all covered employees or to pay the maximum benefit for the maximum duration to about 60 per cent of all covered employees. The actual fixing of the maximum level appears to have been based on some such rough calculation and without any calculation as to the probability of assets equal to the maximum level being exhausted.

The steel maximum level for contributions was based on the assumptions (a) that hours of work would average about 1950 a year, making the average maximum level about $205 per employee; (b) that the fund positions at which full benefits will be paid are fixed so that, after assets have come to equal the ultimate maximum level, the combination of liquidation of assets plus current contributions will make it possible to spend in a single year the normal contributions[26] for about two years before reducing the benefits; and (c) if more than normal contributions for two years are spent in a single year, the situation is such as to call for benefit reductions. It was recognized that the factors which would, after assets have reached the ultimate maximum level, permit expenditure of as much as 10 cents per hour without affecting benefits, would, in the early stages of benefits, produce benefit reductions before the 10-cent expenditure level is reached. That is, the arrangement gives asset accumulation priority over benefit expenditures.

Methods of Changing Maximum Fund Level and Their Consequences—Auto Plans

The maximum levels of auto funds are changed by two factors: the changing numbers of employees and variations in the average weekly benefit. If the average weekly benefit were to be $20 or more, the maximum level of the auto funds for any month would be the initial maximum level per employee, $400, multiplied by the number of employees on the latest available date in the preceding month. So long as the number of employees does not change and the average weekly benefit is above $20, the initial maximum fund level will not be changed.

If the number of employees is reduced, but entirely as a result of layoff, the maximum level of the fund will not be reduced immediately, but will remain for a time at the level as of the date the layoffs began, since the number of employees used as the multiplier includes employees on layoff who have credit units. As employees exhaust credit units they are dropped from the multiplier. This seems an

[26] The two-year contributions included the maximum contingent liability accrual; for regular cash contributions, the aim was to permit expenditure of about 3½ years' contributions, or in the range of 10 to 11 cents per hour worked.

anomalous arrangement, for the process implies that the liquidation of liability has not reduced liability for the payment of any benefits until all of the benefits due to some individuals have been paid in full. If, after assets have attained the maximum level, benefits are paid to half of all employees for half of the maximum duration, surely there will have been some reduction in the fund liability and required reserves could properly be reduced in recognition of that fact. Yet under the assumptions as stated, the maximum level of the fund would be as high as ever.

It could hardly be contended, in the area of unemployment, with the possibility, at least for some employers, that all employees will be unemployed, that maximum levels can be reduced as rapidly as benefits are paid. Moreover, it would be rare for maximum levels to fail to fall because of reductions in numbers of employees resulting from employees terminating, for reasons other than layoffs, who are not replaced, or from layoffs of ineligibles. If assets are at the maximum level, reserves are released in these circumstances, but if there is no immediate unemployment, the release of reserves simply results in a reduction or omission of contributions which may later have the effect of reducing benefits. For maximum effectiveness, reduction of reserves should be timed so as to be available for benefit payments.

The device relating maximum fund levels in the auto plans to average amounts of weekly supplemental benefits implies that either the main variable in the aggregate benefit disbursements is the average benefit size, or that there is a high positive correlation between the relative number of employees on layoff, the average duration of benefits, and the average weekly benefit amount. The schedule suggests the simpler assumption, but the more complex relationship probably has substantial validity. And for that very reason, the device may have peculiar results.

In periods of relatively low unemployment, the average employee on layoff will have relatively short service and, therefore, below average wages. Even a relatively low-paid automobile worker will have, in relation to the average of all unemployed persons, relatively high wages, and his state benefit, both because of his wage level and the fact that it is based on a 40 or near 40-hour week, will be above average. Further, during periods of relatively light unemployment, persons on layoff from an auto company will have better than average chances of getting part-time outside employment. For all these reasons, in such a period supplemental benefits will tend to be low.

As a period of light unemployment is followed by one in which layoffs become progressively heavier, persons with higher wages who have been working part time for the auto company will be laid off. Though

working short time, gross supplemental benefits will be based on a 40-hour week. Despite higher wage rates, the shorter work week will have tended to reduce average state benefits.[27] The opportunities for partial outside employment will be less than before; and even within the 26-week maximum duration, some of the laid-off employees will still be entitled to supplemental benefits, but with no state benefit offset. Thus average benefits will tend to rise.[28]

If average benefits decline from over $20 to under $20, the maximum level of the auto funds declines by 20 per cent—from $400 to $320 per employee. Since unemployment will probably be light during such a period, the reduction in maximum level will result in elimination of contributions for an extended period.

Some indication of the periods for which contributions may be omitted is given in the following tabulation:

Benefit Expenditures (Annual Rate)	*Maximum Level of Fund Changes from $400 to $320 per Employee*			*Maximum Level of Fund Changes from $320 to $240 per Employee*		
	Financial Position[a]			*Financial Position*[a]		
	105%	*100%*	*90%*	*105%*	*100%*	*90%*
		(Years)			*(Years)*	
$ 40	2.5	2.0	1.0	2.4	2.0	1.2
75	1.3	1.1	.5	1.3	1.1	.6
100	1.0	0.8	.4	1.0	0.8	.5

[a] Measured against maximum fund level before reduction.

The tabulation assumes that the employment multiplier remains constant. If the employment multiplier rises, the period of no contributions will be shortened; a reduction in the employment multiplier lengthens the period. Moderately high benefit expenditures would probably be accompanied by a reduction in the employment multiplier and thus tend to lengthen the period of no contributions. However, as benefit expenditures rise, the average benefits may increase, causing the maximum level to move up, reducing the financial position, certainly requiring maximum contributions, with a reduction in benefit durations as well.

If the average benefit fluctuates around a breakpoint in average benefits ($20, $15, $10), there may be an alternation of rapid changes in fund positions and benefit durations resulting from relatively small differences in experience.

[27] In Michigan, for example, the weekly state benefit for a man with a dependent wife and child is lower if based on $2.50 per hour and an average 32-hour week than if based on $2.01 per hour and an average 40-hour week. In most states both persons would be entitled to the state maximum.

[28] The main reason for benefits not increasing under such circumstances would be amendments of state laws raising state benefits, hardly to be counted on in planning SUB financing.

Methods of Changing Maximum Fund Level and Their Consequences—Steel Plans

The maximum levels of SUB funds under the steel plans, so far as contributions are concerned, are to be changed as a result of shifts in two factors: the total number of man-hours worked by covered employees, and the average weekly supplemental benefit. Ultimately the maximum level for benefits will be identical with that for contributions, with a gradual rise from about 48 per cent of the contributions maximum when benefits start to 100 per cent of that level during the first three years of a plan's operations.

The steel plans have a section (similar to the one in the auto plan) which specifies that, if the average weekly benefit (before any reduction for financial position) is less than $16 per week, the maximum fund level will be reduced. However, it was not expected to become operative under any existing or even somewhat higher level of state benefits. The difficulties inherent in the arrangement were recognized. It is hoped, by a study of the experience as it develops, to devise a more satisfactory method of adjusting maximum fund levels to potential liabilities.

The maximum level of the fund for any month is based on the hours worked in the first 12 of the last 14 months preceding the month in question. The fund position applicable to a month is based on the ratio between the fund assets on the last day of the second month preceding the month in question, while the contributions are, subject to the maximum, based on the excess of the maximum level of the fund for the month in question over the fund assets of the month immediately preceding. The aim of these provisions is a dual one: to secure reasonably prompt contributions when the fund position falls because of benefit expenditures, and to release assets so as to support benefits higher than contributions without reducing the fund position to the point of benefit reductions.

An illustration may make this clear. Suppose that for at least 14 months, to oversimplify, employment has been stable at 100,000, each employee working, on the average, 170 hours in each month, or a total of 17,000,000. Then in the first month of the second year hours fall by 1,000,000 per month for seven months, stabilizing at 10,000,000 hours per month. Assume also that:

(1) Employment by months in the second year is:

Month 1	94,000	Month 5	70,500
2	88,000	6	64,500
3	82,000	7	58,500
4	76,000		

(2) The percentages of those becoming unemployed who are eligible for supplemental benefits are, by months:

Months 1 and 2	50
3	75
4 and after	100

(3) Those becoming unemployed have, on the average, two weeks of unemployment in the month of layoff (three weeks in months 3 and 6), one of which is the waiting period;

(4) There are four benefit weeks in months 1 and 2, 4 and 5, 7 and 8 and so on, and five benefit weeks in months 3, 6, 9 and so on;

(5) State benefits run for 26 weeks for all employees eligible for supplemental benefits;

(6) There are no disqualifications or partial employment;

(7) Supplemental benefits during the state benefit periods are $20 per week, and $50 after state benefits exhaustion;

(8) Investment income is 0.16 per cent per month on the previous month's balance (taken to the nearest multiple of $1000), and the trustee's fee and expense is $1000 per month;

(9) Maximum levels for contributions and benefits are identical.

The contributions, benefits, changes in contingent liability, and the financial positions are shown in the upper section of Table 5. The benefit expenditures and trustee's fees in months 1 and 2 of year 2 are promptly replaced in the next months by contributions and investment income. The expenditures in months 3 and later are so large that the contribution limit prevents replacement and there is a steady reduction in the assets of the fund and in total finances.[29] The financial position is reduced more slowly because, for any month, it is based on total finances at the end of the second preceding month. Though expenditures for the eight months through which the illustration is carried are about 11.3 cents per hour, the financial position is above 80 per cent for month 9. Under the assumptions as stated, the financial position for month 10 would be less than 75 per cent, and benefits would be reduced by 25 per cent for that month. Until month 8, the financial position is above 95 per cent. In months 8 and 9 the financial position is above 95 per cent. In months 8 and 9 the financial positions are 88.91 per cent and 81.70 per cent, respectively.

[29] Total finances is the sum of the assets of the fund, which includes the contribution recorded for the current month, not actually paid until after the month-end, and the contingent liability.

TABLE 5

Liability and Benefits Under Alternative Methods of Calculating Maximum Fund Levels and Fund Positions

(All Figures in Thousands)

		Receipts			*Disbursements*		*Finances*				
Yr.	*Mo.*	*Cash*	*Contin. Liab.*	*Invest-ment Income*	*Benefits*	*Trustee's Fee*	*Assets*[a]	*Contin. Liab.*	*Total*	*Maximum Level*	*Fund Position %*
Maximum Level and Fund Position as in Steel Plans											
1	12	—			—		$7461	$13,970	$21,431		
2	1	—	–$11[b]	$12	$60	$1	7412	13,959	21,371	$21,420	
	2	$48	—	12	300	1	7171	13,959	21,130	21,420	
	3	289	—	12	780	1	6691	13,959	20,650	21,420	
	4	390	260	11	960	1	6131	14,219	20,350	21,315	
	5	360	240	10	1430	1	5070	14,459	19,529	21,105	
	6	330	220	8	2440	1	2967	14,679	17,646	20,790	
	7	300	200	5	2450	1	821	14,879	15,700	20,370	95.87
	8	300[c]	200[c]	1	2990	1	—	13,210	13,210	19,845	88.91
		1869[d]	–1869[d]								
	9									19,215	81.70
Maximum Level for Month Based on Hours Worked in 12-Month Period Ended With and Finances as of Last Business Day of Preceding Month											
2	1	—	–$11[b]	$12	$60	$1	$7412	$13,959	$21,371	$21,420	
	2	—	–56[b]	12	300	1	7123	13,903	21,026	21,315	
	3	$79	—	12	780	1	6433	13,903	20,336	21,105	
	4	390	64[e]	10	960	1	5872	13,967	19,839	20,790	
	5	360	171	10	1430	1	4811	14,138	18,949	20,370	
	6	330	220	7	2440	1	2707	14,358	17,065	19,845	
	7	300	200	5	2450	1	561	14,558	15,119	19,215	88.81
	8	300[c]	200[c]	1	2990	1	—	12,629	12,629	18,480	81.81
		2129	–2129[d]								
	9									17,745	71.16

TABLE 5 *(Cont'd)*

		Receipts			*Disbursements*		*Finances*				
Yr.	*Mo.*	*Cash*	*Contin. Liab.*	*Investment Income*	*Benefits*	*Trustee's Fee*	*Assets*[a]	*Contin. Liab.*	*Total*	*Maximum Level*	*Fund Position %*
					Maximum Level for Month Based on Number of Employees With Credit Units on Latest Available Date in Preceding Month and Finances as of Last Business Day of Such Month						
2	1		–$11.0[b]	$12	$60.0	$1	$7412	$13,959.0	$21,371.0	$21,420.0	
	2		–593.6[b]	12	300.0	1	7123	13,365.4	20,488.4	20,777.4	
	3		–353.6[b]	11	780.0	1	6353	13,011.8	19,364.8	20,134.8	
	4	$390	58.7	10	960.0	1	5792	13,070.5	18,862.5	19,813.5	
	5	360	240.0	9	1430.0	1	4730	13,310.5	18,040.5	19,813.5	
	6	330	220.0	7	2440.0	1	2626	13,530.5	16,156.5	19,813.5	
	7	300	200.0	4	2450.0	1	479	13,730.5	14,209.5	19,813.5	81.54
	8	300[c]	200.0[c]	—	2242.5[f]	1	—	12,466.0	12,466.0	19,813.5	71.71
		1464.5[d]	–1464.5[d]								
	9									19,813.4	62.90

[a] Including accrued contributions as of month-end.

[b] Reduction in contingent liability because total finances at end of preceding month exceeded maximum for current month.

[c] Contribution and contingent liability based on hours worked in month.

[d] Contribution based on contingent liability needed to pay benefits in month. Contingent liability reduced by amount of the contribution.

[e] Balance needed to make up difference between cash contribution at 3 cents per hour worked and total excess of maximum fund levels over total finances at end of the preceding month.

[f] Benefits in full were $2,990,000 but are reduced 25 per cent because fund is less than 75 per cent.

It will be noted that total contributions for month 8 were $2,169,000 (21.69 cents per hour). This is the result of the fact that two cents of the maximum liability for contributions is not paid in cash currently, but only when needed. For the full eight months' contributions total $3,886,000, or 3.85 cents per hour. If the contingent liability had not been included in the plan but all liability for contributions had been met in cash currently on the basis of five cents per hour the contributions for the eight months would have been a little over three cents per hour (omitting the effect of any additional investment income) despite the expenditures of over 11 cents per hour.

Thus the methods used in the steel plans to adjust contributions so as promptly to replace benefits, and to permit benefits to be paid in full up to an annual cost of 10 cents per hour seems to work out well for a period of months, some with current benefit expenditures as high as 30 cents per hour (month 8). In the example given there were benefit ($11,410,000) and other expenditures ($8,000) of $11,418,000 financed as follows:

Contributions—cash	$ 2,017,000
contingent	1,869,000
Investment income	71,000
Financial position (88.91%)	2,199,000
Reduction of maximum level	1,586,000
Lag	4,436,000
Gross	$12,178,000
Less contingent liability reduction	760,000
Net	$11,418,000

The reduction in the maximum level of the fund operates irrespective of the cause of the reduction in hours. Thus suppose, instead of adjusting the volume of employment solely by layoffs, there are laid off only those who are ineligible for supplemental benefits (7500 employees) and that, as work falls off, hours are reduced by eight per week (20 per cent) until all employees are working a 32-hour schedule. After all active employees are on a 32-hour week and further reductions are necessary, there would again be layoffs. Under this change in assumption, no layoffs of eligibles would occur until month 5, and total benefits through month 8 would be $2,774,400 instead of $11,410,000 though hours of work are, by definition, identical.

More important, the cash contributions are, on these modified assumptions, only $457,000; and the contingent liability is reduced by $583,400. The reduction in the maximum fund level and the lag in the month for the calculation of the financial position not only result in relatively low benefits not being replaced (6.45 cents per hour for the four months in which benefits are paid, and 2.75 cents per hour for the eight months in the illustration) but the contingent liability is reduced by $583,400, making the total assets of the fund lower by

a net of $126,400 because of the conjuncture of the provisions. Thus, in such a case, the funding devices fail to accomplish the intended purposes.

Comparison of Methods of Calculating Maximum Fund Levels and Fund Positions in Steel and Auto SUB Plans

The steel and auto plans differ in two respects as to method of calculating maximum fund levels and financial position: using the numbers of employees with credit units rather than hours worked in a 12-month period as the main factor in calculating changes in such levels from month to month, and taking the figure for a date close to the beginning of the month rather than one two months old.

The middle section of Table 5 indicates the effect of eliminating the lag between the end of the 12-month period, the hours in which are used as the multiplier to get the maximum fund level,[30] and the current month.

In the second section, benefits for the same eight months would be the same as in the illustration in the top section. The sources of the expenditures are:

Contributions—cash	$ 1,759,000
contingent	2,129,000
Investment income	69,000
Financial position (81.81%)	3,361,000
Reduction in maximum level	2,951,000
Lag	2,490,000
Gross	$12,759,000
Less contingent liability reduction	1,341,000
Net	$11,418,000

The replacement of expenditures is less than under the steel plan method: as a result, total finances at the end of month 8 are almost $600,000 less than if the steel method had been followed without modification. The fund positions are lower than those in the steel illustration because, while the total finances are less, the maximum fund level declines more rapidly. Further, because the regular contributions are smaller, the contributions based on contingent liability in month 8 are increased as compared with the steel plan by $260,000. Total cash contributions under this modified method are slightly larger than under the steel method. In month 9 benefits would be reduced 25 per cent under the modified method and, as a result, contributions, for conversion of contingent liability would be smaller than under the steel method without modification.

[30] The data needed to calculate fund positions for a month must be available, if the financial position is near a critical point, by the middle of the month. It is here assumed that the hours worked in a month are known accurately by the middle of the following month.

The last section of Table 5 indicates how the maximum fund level and financial position procedures of the auto plans would operate. In order to maintain reasonable comparability between the steel and auto methods, the maximum level per employee is fixed at $214.20, so that for month 1 the aggregate maximum levels are identical. Expenditures, again, for the eight-month period are less than under the steel plan because a 25 per cent reduction in month 8 makes benefits in that month $747,500 less than if the full amount were to be paid. The sources of payments were as follows:

Contributions—cash	$ 1,680,000
contingent	1,464,500
Investment income	65,000
Financial position (71.71%)	5,604,000
Reduction in maximum level	1,617,500
Lag	1,743,500
Gross	$12,174,500
Less contingent liability reduction	1,504,000
Net	$10,670,500

The auto method[31] results in cash contributions smaller than under the steel plans by $337,000, and reduces rather than increases contingent liability. The total liability for contributions—cash and contingent —is $3,126,000 under the steel arrangements against $1,640,500 by the terms of the auto plans. As of the end of month 8, total finances of the steel method without modification exceed those under the auto method by $1,491,500—the sum of the higher contribution liability under the steel arrangement plus the extra investment income.

So far as cash contributions are concerned, the auto plan contributions for the eight months total $3,144,500, smaller by $741,500 than under the unmodified steel method. This discrepancy will increase in month 9 when there will be a benefit reduction of 32.5 per cent under the auto arrangement as compared to full benefits under the steel method.

Under most circumstances, the auto method of calculating maximum fund levels and financial positions will result in lower contribution liability than will the method used in the steel plans.

The five-cent per hour total liability limit is not reached under any of the three arrangements examined in this section.

To recapitulate, for the eight-month period covered by the illustra-

[31] Reference to the "auto method" does not imply that the entire auto plan financial pattern is followed; there is, for example, no contingent liability under any auto plan. What is called the "auto method" means simply the use of numbers of employees with credit units as the basis of changing maximum fund levels and the reduction of lag to the irreducible minimum of one month. The steel plan's use of reductions in benefits rather than in durations as the primary means of balancing contributions and benefits is retained.

tions, the contributions made and benefits paid under the three methods are:

	Steel		*Auto*		*Intermediate*	
	Amount (000's)	*Cents per Hour*	*Amount (000's)*	*Cents per Hour*	*Amount (000's)*	*Cents per Hour*
Regular cash contributions	$ 2,017	2.00	$ 1,680.0	1.66	$ 1,759	1.74
Cash under contingent liability	1,869	1.85	1,464.5	1.45	2,129	2.11
Total cash contribution	3,886	3.85	3,144.5	3.11	3,888	3.85
Regular contingent liability accrual	1,109	1.10	—39.5	—0.04	788	0.78
Total regular cash and contingent liability	3,126	3.10	1,640.5	1.62	2,547	2.52
Benefits paid	11,410	11.30	10,662.5	10.56	11,410	11.30

If the aim is to provide benefits for a liability averaging five cents per hour, these devices are not effective for a moderately long period of unemployment. In terms of its own aims, the steel plan works out better than either of the two other methods.

Relative Effectiveness of Reductions in Duration and Reductions in Benefit Amounts as in Adjusting Benefits to Contributions

As has been pointed out, the steel plans rely mainly on reductions in benefit amounts to adjust benefits to finances, whereas the auto plans rely for that purpose on variations in the period for which benefits are to be paid. If all persons entitled to benefits were to be entitled to them for the maximum duration, the two methods would have identical results. Ordinarily, given a group of employees laid off, some will be recalled or get other employment almost immediately; a few will, for one reason or another, be disqualified for benefits; some will be recalled to replace those terminated for reasons other than layoff; and this attrition in the numbers of unemployed will be a continuous process. The faster unemployed are reemployed or become ineligible for benefits for other reasons, the less effective will curtailment of duration be in reducing benefits.

Experience under SUB plans, when available, will indicate the differences between these two methods. State unemployment benefit experience might give some indication up to the end of the state benefit period. Though not necessarily indicative of unemployment, the 1949-55 layoff experience in steel is believed to be a better index of the effectiveness of the two methods than state experience would be. The numbers of employees laid off by 26 steel companies, mostly small, in the years 1949-55, by the year layoff began and by the length of time the layoff lasted, are given in Table 6.

Total weeks of layoff at the several durations were calculated on the assumption that the numbers at each interval were equally distributed therein. Thus in 1949, the total weeks of layoff, up to 52 weeks, ran to 172,767. The weeks of layoff for those whose absences did not exceed 39 weeks totaled 111,842, there were 1249 whose layoffs exceeded 39 weeks, so that total weeks of layoff up to 39, amounted to 160,553 (including the 1249 employees at 39 weeks of layoff). In the same year, weeks of layoff up to 39 were 7.07 per cent less than weeks of layoff up to 52. The following tabulation shows similar percentages for other years and periods.

Weeks of Layoff Up to	*Are Less Than Weeks of Layoff Up to*	*By the Following Percentages for the Specified Year in Which the Layoffs Started*						
		1949	*1950*	*1951*	*1952*	*1953*	*1954*	*1955*
39 weeks	52 weeks	7.07	2.62	4.33	2.75	9.84	5.50	4.39
30 weeks	39 weeks	9.70	2.80	5.65	4.47	10.54	7.88	6.59
26 weeks	30 weeks	6.96	1.81	3.35	4.18	6.44	5.08	4.13
26 weeks	39 weeks	15.83	4.56	8.81	8.46	16.31	12.55	10.45
22 weeks	26 weeks	9.00	2.90	4.06	5.88	7.92	6.28	5.36
18 weeks	26 weeks	19.72	7.07	8.68	12.60	17.26	13.57	12.08
14 weeks	26 weeks	32.15	12.84	14.29	21.34	28.23	22.28	21.34
10 weeks	26 weeks	46.70	22.64	23.67	33.15	40.93	33.27	33.87

The effect of reducing durations has the greatest impact in years of high expenditure.[32] Even so, in 1949 a 26-week duration would have had to be reduced to less than ten weeks in order to reduce benefits by half. If, in some year, under an auto plan a fund position were 50 per cent, maximum durations would be reduced for employees having less than 20 years of service by from ten to 40 per cent, as compared with durations if the fund position were 85 per cent or over. If the average reduction were, say 31 per cent, or the equivalent of changing to a maximum of 18 weeks in place of 26, benefits would be reduced by 20 per cent. On the same financial position the steel plans would reduce all benefits by 47.5 per cent and reduce some durations by 25 per cent. This latter would reduce the benefits of those affected by probably less than ten per cent.

[32] Layoffs starting in 1953 began late in the year, and any limitation on duration of benefits for these layoffs would have been effective in 1954. Layoffs starting in 1949 and 1954 occurred early in the year and were largely finished by the end of the year.

TABLE 6

Number of Employees Laid Off
By Year Layoff Began
and by Total Duration of Layoffs in Weeks

Total Duration of Layoffs in Weeks	*Year Layoff Began* 1949	1950	1951	1952	1953	1954	1955
1 but less than 2	532	947	1284	883	1373	4547	1185
2 but less than 3	511	451	322	560	652	3607	535
3 but less than 4	359	186	256	347	970	3035	211
4 but less than 6	977	299	1210	307	424	4043	348
6 but less than 8	931	246	740	201	347	3239	293
8 but less than 10	473	305	224	238	359	2128	190
10 but less than 14	773	310	559	211	274	1756	219
14 but less than 18	662	100	143	204	239	1068	271
18 but less than 22	494	61	41	69	245	693	112
22 but less than 26	664	68	63	44	179	562	91
26 but less than 30	498	39	48	161	126	591	67
30 but less than 39	963	16	84	135	257	1075	89
39 but less than 52	619	28	144	30	214	1349	165
52 and over	630	30	70	49	489	593	36
Total	9086	3086	5188	3439	6148	28,286	3812

There can be no question that the method of reducing benefits incorporated in the steel plans is far more powerful than the corresponding provision of the auto plans.

V. THEORETICAL "MODEL" EXPERIENCES

A. *Estimated Costs of Benefits*

In preparation for the formulation of the steel industry SUB plan, data were collected from a number of companies covering layoffs of employees having more than one year of service, with classification by year of layoff (1949 through 1955), rate of compensation, length of service, state in which unemployment occurred, whether or not there was a return to service on recall, and with length of layoffs divided so as to make possible a division of the weeks of layoff between the period of state benefits and thereafter. The current rates of pay were translated into 1956 rates, with an allowance for further increase, and gross benefits were calculated on the basis of such adjusted rates. From the gross benefits, state benefits at the 1956 levels were subtracted for the period for which state benefits were payable. In calculating the state benefits it was assumed that laid-off employees had worked an average of 36 hours in their base periods.[33] For sup-

[33] In Pennsylvania it was assumed that the state benefit would, under that provision fixing the benefit at not less than one-half full-time compensation, be 20 hours' pay (not over $35).

plemental benefits, dependents were assumed to average 1.8 per employee. For states with dependents' allowances, the average number of dependents, for state benefit purposes, was taken from the latest available reports to the Bureau of Employment Security. No reports being available for Illinois, it was arbitrarily assumed that each person unemployed would have two-thirds of a dependent. It was assumed that all employees laid off who returned to service were unemployed and eligible continuously during the entire period of layoff, up to 53 weeks. One week was allowed as waiting period once each year. Those who did not return when recalled were assumed to be unemployed and eligible for half the period between layoff and date of recall to maximum of 27 weeks. The maximum weekly benefit was assumed to be, during the period when state benefits were payable, $25 plus $2.00 per dependent. The net benefits so calculated were totaled for each company by years. The total for each year was divided by the hours worked by all covered employees during the year to get a cents-per-hour cost.

Data were received from 71 companies for the following periods:

	Number of Companies		*Number of Companies*
1949-55	37	1954-55	5
1950-55	4	1953-54	1
1951-55	2	1954 only	7
1952-55	1	1955 only	1
1953-55	13[a]	Total	71

[a] Data from four companies for the three-year period could not be processed for each year separately.

The companies which reported each year had smaller layoff volumes than those companies reporting for 1953-55 or for 1954 and 1955 only. But measured by medians, in only two years would benefit costs have been as high as three cents per hour (Table 7). And the median cost for the entire period reported, for those reporting three years or longer, was two cents or less.

TABLE 7

Number of Companies Classified by Estimated Annual Cost of Supplemental Benefits (in Cents per Hour) and by Year Covered by Reports, 1949-55

Cents	*1949* [1]	*1950* [1]	*1951* [1]	*1952* [1]	*1953* [1]	*1953* [2]	*1954* [1]	*1954* [2]	*1955* [1]	*1955* [2]	*1949-55* [1]	*1953-55* [1]	*1953-55* [2]
0	6	17	20	20	11	13	7	8	16	23	3	6	6
Under 1	7	15	13	10	10	13	9	12	16	20	11	11	14
1.0- 1.99	2	2	—	2	5	8	5	5	3	4	8	4	7
2.0- 2.99	3	1	—	2	2	2	—	—	—	1	5	4	5
3.0- 3.99	4	—	2	1	1	2	3	5	1	3	2	3	3
4.0- 4.99	—	—	—	2	1	3	3	4	1	1	4	3	5
5.0- 7.49	3	—	—	—	4	5	3	4	—	—	2	4	9
7.5- 9.99	2	—	1	—	1	3	2	4	—	—	1	—	—
10-14.99	2	2	1	—	—	2	2	5	—	—	—	—	—
15-19.99	2	—	—	—	1	1	1	2	—	—	1	1	2
20-24.99	1	—	—	—	—	—	—	1	—	—	—	—	—
25-29.99	2	—	—	—	—	—	—	—	—	—	—	—	1
30 and over	3	—	—	—	1	1	2	3	—	1	—	1	1
Total	37	37	37	37	37	53	37	53	37	53	37	37	53
Median	3.53	0.05	0	0	0.27	1.14	1.65	3.24	0.02	0.03	1.76	1.38	1.81
Mean (unweighted)	9.34	0.92	0.92	0.55	3.32	3.54	5.13	7.95	0.46	1.46	2.41	3.20	4.03

All Reports

Cents	*1949*	*1950*	*1951*	*1952*	*1953*	*1954*	*1955*	*1949-55*	*1953-55*
0	—	18	24	24	13	8	23	—	6
Under 1	—	16	14	11	14	16	24	—	16
1.0- 1.99	—	3	—	3	8	5	5	—	8
2.0- 2.99	—	1	—	2	2	1	1	—	6
3.0- 3.99	—	—	2	1	2	5	4	—	5
4.0- 4.99	—	—	—	2	3	6	1	—	6
5.0- 7.49	—	—	1	1	5	6	—	—	10
7.5- 9.99	—	—	1	—	3	5	—	—	—
10-14.99	—	2	1	—	2	6	—	—	1
15-19.99	—	1	—	—	1	3	—	—	3
20-24.99	—	—	—	—	—	1	—	—	—
25-29.99	—	—	—	—	—	1	—	—	1
30 and over	—	—	—	—	1	3	1	—	1
Total	—	41	43	44	54	66	59	—	63[3]
Median	—	0.06	0	0	0.92	3.43	0.03	—	2.07
Mean (unweighted)	—	1.29	0.97	0.61	3.48	7.86	1.32	—	4.23

[1] Companies reporting for each year 1949-55.
[2] Companies reporting for each year 1553-1955.
[3] Includes five companies reporting for 1954-55, four reporting for 1953-55 without breakdowns by years, and one company reporting for 1953-54.

On the other hand, there are companies which had average costs over periods of years of 7.5 cents or higher. And, particularly in 1949 and 1954, the proportion of companies with relatively large costs is high—the proportions with costs over 15 cents per hour in those two years being about 20 and 12 per cent respectively.

The cost-of-benefit calculations were based on the assumptions of 100 per cent payments and (except for those failing to respond to recall) on 100 per cent eligibility for supplemental benefits throughout the first 52 weeks of layoff. These assumptions were thought to be conservative; it was concluded that if (1) the plans could be begun at a favorable period, and (2) such favorable period was without substantial interruption for two years—i.e., until the ultimate maximum level of the fund was matched by finances—five out of six of the plans would be able, with contributions, cash and contingent, of 5 cents per hour, to pay benefits in full during periods of unemployment slightly more severe than occurred in 1949 and 1954.

For some plans it is clear that, on the basis of past experience, either contributions larger than the expected maximum would be required, or benefits would have to be reduced, either by beginning with a gross benefit of less than 65 per cent or by reducing the maximum amounts at the beginning or by building some adjustment device into the plan.

Since it is hardly to be assumed either that a plan with a past history of low costs will not have high costs in the future, or that past high costs place future low costs out of question, the adjustment of benefits to contributions on the basis of actual experience rather than forecast was decided upon.

A "Model" Experience, 1949-56

Calculations made for whole years, as in the preceding section, may fail to catch certain critical points. Very heavy unemployment for a short period might, because of the month-by-month limit on contributions, result in drains which could reduce the fund so rapidly that, because of the lag between the current month and the months used in calculating its financial position, the devices intended to keep a balance between benefits and the supporting finances would not have time to operate. In order to judge the effectiveness of those devices, and as a final check on the estimates, a model experience was constructed.

This model was based on the layoff experience of relatively small companies, having about 10,000 employees on the average, and little higher than average proportion of layoffs. It was clear that if the plan were started in 1949, the benefits due until the end of 1953 would be very small. In order to observe the effect of a substantial volume of layoffs beginning with the initiation of benefits, a hypothetical workhour experience was constructed, back to January 1, 1948. The extrapolation for any month was based on the relationship between the product of the number of basic steel production and maintenance employees in that month (as reported in the *Monthly Labor Review*)

multiplied by the average weekly hours for the same industry in the same month (from the same source) and the corresponding product for the month of January 1949.

Data were available for most of 1956, and hours were extrapolated to the end of the year by the method used for 1948. Benefits were put in for the last half of the year arbitrarily; it is known that there were few layoffs.

For the first model, the benefits were assumed to be payable to 80 per cent of the employees who, on the day of layoff, had two or more years of service. Average benefits during the period of state benefits were assumed to be $17.50 per week and, after state benefit exhaustion, $50 per week. Interest was calculated on fund assets at the current rates of interest on 60-90-day prime commercial paper. The fees and expenses of the trustee, beginning with the payment of benefits, was assumed to be $9000 per year and $3600 during the first year.

The results of the first model construction are summarized in Table 8. It may be noted that:

(1) In only one year, 1949, did expenditures for benefits exceed 5 cents per hour;

(2) After the initial build-up of finances, cash contributions in no year were as much as three cents per hour for the full year;

(3) After the first three years, contingent liability accruals were never as high as one cent per hour in any year, and there were no accruals in three years, the previous accrual being reduced in two of these three;

(4) In 1954 the maximum level fell faster than benefits and, as a consequence, the cash contributions were but little more than 12 per cent of benefit payments;

(5) Because the heaviest unemployment occurred in 1949, before assets had reached the ultimate maximum level, benefits were reduced under the formula;

(6) The reductions, which would not have occurred if the assets at the start of the 1949 recession had reached the maximum level for contributions, affected only five months, one in 1949 and the others in 1950;

(7) The reductions diminished 1949 benefits by about 1.5 per cent and 1950 benefits by less than 12 per cent;

(8) The reductions began four months after the peak in benefits had been reached, and the total amount of reductions, $28,348, was less by 40 per cent than the decline in full benefits from the peak to the month in which the reduction started; and

(9) No contingent liability had to be converted into cash.

TABLE 8

Contributions, Investment Income and Expenditures During the Years 1949-1956 and Finances at Year-End Aggregates and in Cents Per Hour Worked in the Year

Model A

Year	Hours Worked	Contributions: Cash	Contributions: Contingent Liability Accruals	Investment Income	Administrative Expense
		Aggregates			
1948	19,811,329	$ 594,337	$ 396,228	$ 2,631	$ 3,600
1949	13,796,724	413,901	275,936	4,733	8,100
1950	18,053,344	541,600	361,066	2,984	9,000
1951	19,374,234	525,264	159,541	10,788	9,000
1952	16,682,962	70,458	—	12,337	9,000
1953	17,131,329	335,525	81,205	12,506	9,000
1954	12,756,718	65,546	—	6,731	9,000
1955	14,975,960	257,306	—	4,927	9,000
1956	18,878,166	435,709	22,840	13,871	9,000
Total	151,460,766	3,239,646	1,296,816	71,508	74,700

Year	Benefits Paid	Finances at Year-End: Fund Assets[a]	Finances at Year-End: Contingent Liability	Finances at Year-End: Total	Reduction in Contingent Liability During Year
1948	—	$593,368	$ 396,228	$ 989,596	
1949	$ 909,835[b]	94,067	672,164	766,231	
1950	109,744[b]	519,907	1,033,230	1,553,137	
1951	178,823	868,136	1,192,771	2,060,907	
1952	241,908	700,023	1,011,442	1,711,465	$181,329
1953	276,674	762,380	1,092,647	1,855,027	—
1954	547,074	278,583	1,055,758	1,334,341	36,889
1955	94,177	437,639	1,055,758	1,493,397	
1956	30,858	847,361	1,078,598	1,925,959	
Total	2,389,093	847,361	1,078,598	1,925,959	218,218

[a]Including accrued contributions to be paid in cash.

[b]Total benefits paid after reduction of benefits in accordance with SUB benefits reduction schedule. Benefits at the 100 per cent level would be higher than benefits paid by $13,903 in 1949 and $14,445 in 1950.

TABLE 8 *(Cont'd)*

	Contributions					*Finances at Year-End*			*Reduction in Contingent Liability During Year*
Year	*Cash*	*Contingent Liability Accruals*	*Invest-ment Income*	*Adminis-trative Expense*	*Benefits Paid*	*Fund Assets*[a]	*Contingent Liability*	*Total*	
				Cents Per Hour					
1948	3.00	2.00	0.01	0.02	—	3.00	2.00	5.00	
1949	3.00	2.00	.03	.06	6.59	.68	4.87	5.55	
1950	3.00	2.00	.02	.05	.61	2.88	5.72	8.60	
1951	2.71	.82	.06	.05	.92	4.48	6.16	10.64	
1952	.42	—	.07	.05	1.45	4.20	6.06	10.26	1.09
1953	1.96	.47	.07	.05	1.62	4.45	6.38	10.83	
1954	.51	—	.05	.07	4.29	2.18	8.28	10.46	.29
1955	1.72	—	.03	.06	.63	2.92	7.05	9.97	
1956	2.31	.12	.07	.05	.16	4.49	5.71	10.20	
Total	2.14	.86	.05	.05	1.58	—	—	—	.14

[a]Including accrued contributions to be paid in cash.

It is clear that the only years in which meeting benefits with regular contributions was a problem was in 1949-50 and 1953-54. In order to observe the effects of substantially higher benefits, two further models have been constructed. In Model B, hours of work were unchanged; benefits, as calculated for Model A, before reduction, were increased by five per cent for February 1949 to 20 per cent from August through November 1949, with the percentage of increase tapering off by 2½ per cent in each month thereafter to 0 in July 1950.

Starting with a five per cent increase in October 1953 over the benefits in Model A, there was a sharp increase by 115 per cent in July 1954, and 110 per cent in August, with lower increases thereafter as follows:

September 1954	100	January 1955	40
October	80	February	30
November	60	March	20
December	50	April	10
		May	0

Under these assumptions, benefits before reduction compared as follows:

	Model A	*Model B*
1949	$923,738	$1,074,266
1950	124,189	133,090
1953	276,674	286,128
1954	547,074	1,033,262
1955	94,177	108,623

In Model B, 1949 benefits before any reductions were increased by $150,528. The adjustment formula produces reductions in benefits in 1949 for both Models A (one month) and B (two months). Benefits after reduction were larger in Model B (Table 9) than in Model A by $105,713. In 1950, while benefits before reduction were larger in Model B than in Model A by $8901, after reductions the 1950 benefits under Model B were smaller by $11,436. Thus for the two years, as compared with an increase before reduction of $159,429 (15.2 per cent), the actual benefits in Model B were larger than in A by $94,277 (9.2 per cent). The regular contributions in 1949 and 1950 were at the maximum in Model A, and therefore could not be increased in Model B. Assets were exhausted in December 1949, and a cash contribution of $12,101 based on the contingent liability had to be made in order to cover benefits. No such contribution was required in any other month. The regular contributions in 1951 were larger in Model B as compared with Model A by $9471 in cash and $87,303 in contingent liability. The impact of the assumed increase in benefits may be summarized as follows:

	Model A	*Model B*	*Increase B Over A*
Full benefits (1949-50)	$1,047,927	$1,207,356	$159,429
Reductions	28,348	93,500	65,152
Actual benefits	1,019,579	1,113,856	94,277
Cash contributions			
Regular (1951)	525,264	534,735	9,471
On contingent (1949)	—	12,101	12,101
Contingent liability accrual (1951)	159,541	246,844	87,303

Benefit payments under Model B in 1949-50 were highest in August 1949. Benefit reductions began after three months and after benefits, before reductions, had fallen by 20 per cent.

So far as cash outlay is concerned, payment of $94,000 in additional benefits was made with an extra contribution of $21,572. But total obligations were increased by more than benefits—$96,774.

The assumed increase in benefits in 1953-55 was of much larger proportions, but no benefit reductions occurred:

1953-55 benefits	
Model A	$ 917,925
Model B	1,428,013
Increase	510,088

Cash contributions for the three years were larger, by $338,254 under Model B, and contingent liability accrual by $141,726. The adjustment provisions operated to keep actual contributions to cover higher benefit expenditures substantially lower than extra benefits.

The nine-year period as a whole compared as follows for the two models:

	Model A	*Model B*	*Excess B Over A*
Cash contributions	$3,239,646	$3,592,069	$352,423
Net contingent liability	1,078,598	1,346,508[a]	267,910
Benefits paid	2,389,093	2,993,458	604,365
Excess of trustee's fee over investment income	3,192	19,775	16,583
Total finances, end of period	1,925,959	1,925,344	—615

[a] Amount is $12,101 above the net contingent liability shown in Table 9. See footnote[c] of that table for explanation of this item.

TABLE 9

Contributions, Investment Income and Expenditures During the Year and Finances at Year-End 1949-1956

Model B

Year	*Hours Worked*	*Contributions*		*Investment Income*	*Administrative Expense*
		Cash	*Contingent Liability Accruals*		
1948	19,811,329	$ 594,337	$ 396,228	$ 2,631	$ 3,600
1949	13,796,724	413,901	275,936	4,278	8,100
1950	18,053,344	541,600	361,066	2,006	9,000
1951	19,374,234	534,735	246,844	9,626	9,000
1952	16,682,962	71,046	—	11,159	9,000
1953	17,131,329	336,261	86,448	11,220	9,000
1954	12,756,718	361,573	136,483	4,706	9,000
1955	14,975,960	298,797	—	1,122	9,000
1956	18,878,166	439,819	24,242	8,177	9,000
Total	151,460,766	3,592,069	1,527,247	54,925	74,700

TABLE 9 (Cont'd)

Year	Benefits Paid	Finances at Year-End: Fund Assets[a]	Contingent Liability	Total	Reduction in Contingent Liability During Year
1948	—	$593,368	$ 396,228	$ 989,596	—
1949	$1,015,548[b]	0[c]	660,063	660,063	$ 12,101[c]
1950	98,308[b]	436,298	1,021,129	1,457,427	—
1951	178,823	792,836	1,267,973	2,060,809	—
1952	241,908	624,133	1,087,234	1,711,367	180,739[d]
1953	286,128	676,486	1,173,682	1,850,168	—
1954	1,033,262	503	1,310,165	1,310,668	
1955	108,623	182,799	1,310,165	1,492,964	
1956	30,858	590,937	1,334,407	1,925,344	
Total	2,993,458	590,937	1,334,407	1,925,344	192,840

[a] Including accrued contributions to be paid in cash.

[b] Total benefits paid after reduction of benefits in accordance with SUB benefit reduction schedule. Benefits at the 100 per cent level would be higher than benefits paid by $58,718 in two months of 1949 and $34,782 in seven months of 1950.

[c] In order to pay benefits in one month in 1949, a contribution based on the contingent liability in the amount of $12,101 was made, and the contingent liability was reduced by the same amount.

[d] Reflects an excess of total finances over the maximum fund level for the months June-November.

Contributions, under Model B, for the period as a whole averaged 2.37 cents per hour in cash and 1.01 cents per hour in contingent liability. Benefits paid averaged 1.98 cents per hour.

In Model C, it was assumed that there would be no change from Model B for the years 1948-52, but that beginning in 1953 hours of work would be smaller and benefits larger than in Model B (see Tables 9 and 10).

For the three-year period 1953-1955, the increase in benefits, if paid in full, for Model C over Model A was $1,597,298. Benefits were reduced by $296,095, so that the increase in benefits actually paid was $1,301,203, or almost 142 per cent. Regular cash contributions in the four years increased from $1,094,086 to $1,603,205, or by $509,119. This amount, plus the fund assets at the end of 1952, was insufficient to pay for the increase in benefits, so that a contribution based on the contingent liability was required in 1954. Regular contributions in 1954 were at a low point, so that the contingent liability contribution was relatively large—over three times the regular contribution for the year.

For the four-year period 1953-56, benefit expenditures under Model C were 3.74 cents per hour as compared with 1.49 cents per hour under Model A and 2.29 cents under Model B. Under Model C the cents-per-hour benefit payment would have been 4.24 at 100% of benefit

obligations. Thus, even without any provisions for reductions in benefits, the cost of benefits in the period was less than five cents per hour. The limit of five cents per hour liability on overall contributions generally keeps the cost within the five-cent limit, on the average, over a period of time. The five-cent limit would not require adjustment if the contingent liability provision were to be eliminated.

In the three models, the year 1954 under Model C was the most critical. Benefit expenditures in cents per hour were 18.40. While regular cash contributions of three cents per hour constituted less than one-quarter of the total of required contributions, over nine cents per hour was the cash contribution from contingent liability needed for payment of benefits. The reduction of benefits in 1954 was important—2.37 cents per hour. That is, in 1954, except for the reduction of benefits, the contribution in cash, instead of 12.10 cents per hour, would have had to be 14.47 cents.

TABLE 10

Contributions, Investment Income and Expenditures During the Year and Finances at Year-End 1949-1956

Model C

		Contributions			
Year	*Hours Worked*	*Cash*	*Contingent Liability Accruals*	*Investment Income*	*Administrative Expense*
		Aggregates			
1948	19,811,329	$ 594,337	$ 396,228	$ 2,631	$ 3,600
1949	13,796,724	413,901	275,936	4,278	8,100
1950	18,053,344	541,600	361,066	2,006	9,000
1951	19,374,234	534,735	246,844	9,626	9,000
1952	16,682,962	71,046	—	11,159	9,000
1953	16,774,610	325,559	95,473	11,182	9,000
1954	9,913,000	297,390	198,260	2,683	9,000
1955	14,552,464	436,572	291,049	2,373	9,000
1956	18,878,166	543,684	281,960	13,817	9,000
Total	147,836,833	3,758,824	2,146,816	59,755	74,700

TABLE 10 (Cont'd)

Year	Benefits Paid	Finances at Year-End: Fund Assets[a]	Finances at Year-End: Contingent Liability	Finances at Year-End: Total	Reduction in Contingent Liability During Year
1948	—	$593,368	$ 396,228	$ 989,596	—
1949	$1,015,548[b]	0[c]	660,063	660,063	$ 12,101[c]
1950	98,308[b]	436,298	1,021,129	1,457,427	—
1951	178,823	792,836	1,267,973	2,060,809	—
1952	241,908	624,133	1,087,234	1,711,367	180,739[d]
1953	321,331	630,543	1,182,707	1,813,250	—
1954	1,824,055[b]	0[c]	478,528	478,528	902,439[c]
1055	73,742[b]	356,203	769,577	1,125,780	—
1956	30,217	874,487	1,051,537	1,926,024	
Total	3,783,932	874,487	1,051,537	1,926,024	1,095,279

Year	Contributions: Cash	Contributions: Contingent Liability Accruals	Investment Income	Administrative Expense	Benefits Paid	Finances at Year-End: Fund Assets[a]	Finances at Year-End: Contingent Liability	Finances at Year-End: Total	Reduction in Contingent Liability During Year
				Cents Per Hour					
1948	3.00	2.00	0.01	0.02	—	3.00	2.00	5.00	—
1949	3.00	2.00	.03	.06	7.36	0	4.78	4.78	0.09
1950	3.00	2.00	.01	.05	.54	2.42	5.66	8.07	—
1951	2.76	1.27	.05	.05	.92	4.09	6.54	10.64	—
1952	.43	—	.07	.05	1.45	3.74	6.52	10.26	1.08
1953	1.94	.57	.07	.05	1.92	3.76	7.05	10.81	—
1954	3.00	2.00	.03	.09	18.40	—	4.83	4.83	9.10
1955	3.00	2.00	.02	.06	.51	2.45	5.29	7.74	—
1956	2.88	1.49	.07	.05	.16	4.63	5.57	10.20	—
Total	2.54	1.45	.04	.05	2.56	—	—	—	.74

[a] Including accrued contributions to be paid in cash.

[b] Total benefits paid after reduction of benefits in accordance with SUB benefit reductions schedule. Benefits at 100 per cent level would be higher than benefits paid by $58,718 in two months of 1949, $34,782 in seven months of 1950, $234,523 in four months of 1954, $61,572 in all twelve months of 1955, and $641 in one month of 1956.

[c] In order to pay benefits in one month of 1949, a contribution based on the contingent liability in the amount of $12,101 was made, and the contingent liability was reduced by the same amount. Similarly, in 1954 a contribution of $902,439 was made based on the contingent liability, with a resultant reduction in the contingent liability by the same amount.

[d] Reflects an excess of total finances over the maximum fund level for the months June-November.

VI. CONCLUSIONS AS TO EFFECTIVENESS OF COST LIMITATIONS

In this statement a number of the provisions of SUB plans have been examined from the point of view of their effect in limiting the costs of paying benefits under the plans.

It has been apparent that there are wide differences as between different companies in any single year, and as between years as far as the same company is concerned, both in the level of costs and in the influence on costs of any particular factor.

The more important provisions affecting costs for a given level of benefits are:

(1) The length of service required for eligibility;
(2) The limit on contributions;
(3) The method of applying the limit;
(4) The point at which the maximum level of the fund is fixed;
(5) The method of changing maximum fund levels;
(6) The method of adjusting benefits to contributions and finances;
(7) The method of accumulating assets to meet potential liabilities;
(8) The initial eligibility requirements other than length of service;
(9) The duration of benefits;
(10) Current week-by-week eligibility requirements;
(11) Definition of layoff;
(12) Maximum limits on weekly individual benefit amounts.

(1) It is probable that the major cost factor, given a decision that benefits will be fixed at a certain level, is the decision as to what, if any, length-of-service requirement will be fixed as an overriding condition of becoming entitled to benefits. If an employer is forced, by a falling off of his work volume, to curtail the volume of his employment, and if the curtailment takes the form of layoff, those employees laid off are almost certain to be largely drawn from employees having the shortest periods of service. This is true whether employment is governed by union agreements or not.

Detailed data from the steel industry (see page 123) indicate that over a period of years something of the order of 60 per cent of the weeks of layoff are taken by employees having less than one year of service as of the date the layoffs begin. Unfortunately the data make it impossible to distinguish between the effect of a service requirement and the effect of eliminating unemployment after the first year. Since, in no year for which data are available, did persons laid off for a year or more (among those having one year or more of service)

constitute as much as eight per cent of all such employees laid off (page 143), and in view of the fact that that part of unemployment of up to one year's duration covered by the last 13 weeks of the 52 is never as much as ten percent of the total (page 142), it is certain that a minor part of the excluded unemployment is to be attributed to that part of the layoffs of eligible employees which is over one year.

(2) Given a decision to provide benefits to supplement state unemployment up to say, 60 or 65 per cent of after-tax pay, and calling the cost of benefits for all employees for the entire duration of their unemployment, without any maximum, X, the introduction of a one-year service requirement will reduce costs (generalizing from steel industry experience) by from probably 50 to 60 per cent, and a two-year service requirement probably 60 to 70 per cent. If there were to be a limit on contributions in any month of, say, one cent, the further reduction in cost might be, in relation to the 30 to 50 per cent remaining after the service requirement, more drastic than the service limitation was in relation to the 100 per cent of possible cost. No SUB plan is likely to contain any such limit. Again generalizing from steel experience, and assuming that there will be an accumulation of assets up to about two years' contributions, a five-cent per hour[34] limit on contributions in any month will result in minor cost reductions over a period of time, though such a limitation may shift the timing of the contribution from a year of serious recession to one not so serious.

(3) The effect of a cost limit is greatest if applied month by month. As the period to which it is applied is lengthened, the limit becomes less effective. In a single year, a five-cent limit, for example, might affect a third of all employers, whereas over a seven-year period ten per cent would be the order of magnitude involved. It is reasonable to suppose that almost all employers would at some point be affected by a five-cent limit applied each month.

(4) The consequences on benefits of a limit on contributions applied on a month-by-month basis will differ, depending on the size of accumulated funds and their availability for expenditure. If, during periods of large business volume, an employer were to accumulate SUB funds of substantial size, any reasonable month-by-month limit on contributions would have no perceptible effect. The indefinite accumulation of funds is not desirable, and some limit must, as a practical matter, be fixed. The initial limit fixed by the auto industry was about four years' regular contributions against two years' contributions in the steel industry. Obviously, if SUB funds are to be accumulated up to the maximum level, the lower the level, the less will be the cost to the employer.

This generalization can be carried too far. An employer cost of X

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[34] No distinction will here be made between hours of work and hours for which compensation is paid, the latter currently being six to eight per cent above the former.

in a year of high activity may be quite different from an identical dollar cost in a year of recession. This is partly the result of differences in need for and inability to raise cash. The point will be discussed again at the end of these conclusions.

(5) No maximum limit on SUB funds can remain fixed indefinitely. Changing volumes of employment and changes in benefit liabilities make adjustments in maximum levels desirable. The steel and auto SUB plans use average benefits as the index of changing benefit liabilities. The steel industry measures employment in terms of hours of work in a 12-month period, while the auto plans take the numbers of employees who would be entitled to benefits if laid off as the indicator of shifting fund requirements.

The average benefit is not likely to be a satisfactory index of fund requirements. First, while there is probably a fairly high correlation between amount of benefits and average per capita benefit, the correlation is not perfect. But the correlation is probably high enough to make it reasonably certain that fund requirements (except for the fortuitous amendment of state laws) will rise in periods of recession. To be most serviceable, funds should be liquidated in periods of heavy demand, not accumulated. Both as to qualities as an index and in timing, the average benefit is defective. Substitution of a better device must be based on experience with plan operations.

The auto index of employment remains relatively level at the onset of a period of layoffs, for the numbers potentially entitled to benefits include eligible employees on layoff. Therefore, even in a period of moderate layoffs, benefits under the auto plans will be covered by current contributions. Under the steel plans, the maximum fund requirements will reflect fairly well even a slight recession. Assuming the plan to have accumulated funds to the maximum level, there will be reserves released in the recession period, limiting the need for current contributions. (For an example, see maximum fund levels, contributions and benefits for 1954 on page 148.) After the recession, fund levels reflect higher hours, and contributions then become due to recoup expenditures made during the recession.

The steel method unfortunately adjusts maximum fund levels when no benefit expenditures are involved. Thus if, instead of reducing the numbers of employees and hours of work by layoff, a short work-week is instituted, ultimate liabilities for benefits may not be affected, for employees may later on be laid off with undiminished amounts and even longer durations of benefits; but the maximum fund level indication will be otherwise. Extensive short time is, of course, an indicator of a recession; and reducing contributions during such a period is appropriate, as is done by the steel but not the auto plans. Some way needs to be found to combine this appropriate result with some other device which does not improperly indicate a fall in ultimate potential obligations.

(6) Both the steel and auto plans use the ratio between finances

(including, for the steel plans, the contingent obligation to contribute) and the maximum fund level as the index of the need for benefit adjustments. Thus in the steel plans, if finances in hand fall below 75 per cent of the maximum fund level, benefits will be reduced by 25 per cent; and under the auto plans, if fund assets are less than 85 per cent of the maximum level, the duration of benefits for some employees will be shortened.

As a device for limiting expenditures, the steel arrangement is much more effective than the auto plan provisions. But the experience raises a question as to whether the timing of the operation under the steel plan robs it of its effectiveness. Unemployment in the steel industry is clearly cyclical in character; no one has yet detected, in the basic industry, any of those regular variations in employment, hours, or output which are the hallmark of seasonality. With unemployment, and therefore benefits, concentrated in 12 to 15 months out of four or five years, the major function of a reserve fund should be to make possible full payments during substantial recessions, contributions being limited to the maximum or, in periods of modest decline and benefits, even permit the financing of benefits with contributions remaining substantially under the maximum.

The steel experience raises the question as to whether the reductions in benefits are likely to be worth while. Such reductions tend to come after the most critical unemployment is past, and the savings in contributions resulting from operation of the reduction provisions are, in relation to total benefits, usually small. One of the main motives for operating a SUB plan is that of affording additional security to employees and the resulting gain in employee goodwill and morale which that additional security will produce. The reduction of benefits could lead to loss of confidence by employees in the value of the SUB plan as a means of providing additional security. If this were the case, the small saving which appears to be the consequence of operation of the benefit reduction provisions would be minor as compared to overall loss.

This last conclusion is in part made possible by operation of hindsight. While the recessions of 1949 and 1953-54 were in progress, there was no certainty that they would not be much longer than they turned out to be. And it does not follow that, because the 1949 and 1953-54 recessions were brief, that of 1957-58 will be also. The reductions provided for under the steel plan, mistaken though they may appear to be in retrospect, are to be justified, when operative, on the ground that the further duration of recession being unknown, it is prudent to conserve.

The method of adjusting benefits to contributions under the auto plans is the relatively mild one of shortening the maximum duration of benefits; the method is mild because anyone whose unemployment does not last as long as the maximum applicable to him will not be affected. The steel method of reducing benefits applies to every beneficiary, whether unemployed for one week or 52. Each of these meth-

ods is an appropriate part of an overall scheme. In relation of benefit levels, the auto plan assets are intended to be roughly double those of the steel plans; the maximum duration of benefits is intended to be twice as long under the steel plans than under those in the auto industry. While an extension of the duration of benefits beyond 26 weeks will normally add less than one-third to total compensable unemployment, it is to be remembered that the benefit payable for the weeks beyond 26 will be at a rate double, or more than double, that paid during the state benefit period. The steel benefit adjustment provisions must therefore be much more drastic than those which are appropriate for the auto plans.

(7) The steel SUB plans accumulate assets to meet benefit obligations by the companies (a) paying a contribution in cash to their SUB funds, and (b) making promissory notes to the funds to be redeemed,[35] if and when required to pay benefits. Under the auto plans, the accumulation of assets is entirely through the payment of contributions to their SUB funds by the companies.

If the benefits under the steel plans never exceeded three cents per hour worked, the problem of making contributions on the basis of the contingent liability would never arise.[36] But it is wholly unlikely that costs will be under three cents per hour in all years, and in some companies in some periods benefit expenditures are likely to be several times three cents.[37] Under the steel SUB plans, a recession period is likely to be the period of highest cash contributions. And the period of lowest unemployment is likely to be the point at which the plan becomes one operated on a pay-as-you-go basis.

If, so far as its own books are concerned, a steel company charges contingent liability accruals to operating expenses, the accounts will never show a SUB cost higher than five cents per hour worked. If a steel company has a policy of following Internal Revenue Service practice and its books reflect as expenses only those items allowed as such by IRS, then contingent liability will be reflected as a cost only when contributed. In that case, the highest expense will occur at the bottom of the depression, subject to some shift in timing as a result of operation of the benefit reduction provisions.

In all steel cases, however, the largest cash drain, both on the company and on the fund, will occur in a recession period. Under the auto plans, the cash drain on the company will fall in a period of recession

[35] The agreement with the Union specifies that these "notes," referred to in the preceding description by the term "contingent liability," used in the plans are to be cancelled upon expiration of the agreement. There will no doubt be a renewal of the "notes" upon renewal of the agreement itself.

[36] Under the companies' interpretation of the plan that all contributions are to be divided in a six to four ratio between cash and contingent liability, the need for making contributions based on contingent liability could arise with any low average cost.

[37] Current indications are that the first half of 1958 will be such a period for most steel SUB plans.

because of the reduction in hours; the cash drain on the plans will, of course, be at a maximum.

That part of the steel plans which imposes the greatest strain during periods of recession is the weakest point in the steel plans.

(8) The main requirements for initial eligibility for supplemental benefits, other than length of service, have to do with the cause of layoff: (1) Layoffs resulting from most labor disputes affecting any workers or operations at a plant where a layoff occurs, or involving employees anywhere who are members of the union concerned in the SUB plan will not be compensable under SUB; (2) layoffs caused by war, hostile acts of foreign governments, sabotage, insurrections or acts of God are not compensable; and (3) in the steel industry, layoffs arising out of (a) strikes which interfere with production at the plant, or the ingress or egress of product or material there, or (b) government regulations or control over the kind or amount of material which the company may sell or use is not compensable.

These are probably more useful in preventing benefits for catastrophic unemployment than for any effect on day-to-day operation. In the nature of the case, it has been impossible to secure past records which would indicate the quantitative importance of any of these restrictions. In this area only experience can indicate the degree of cost limitation which these provisions produce.

It can reasonably be expected that the concepts underlying these limitations will need to be refined so as to confine the limitations to those appropriate to the exclusion of purely catastrophic risk. For example, cases have recently come up in which extreme cold coupled with failure of the usual fuel supply made work in a plant impossible and layoffs necessary. Additional fuel was available but at a higher cost than the regular supply. Are the layoffs due to the unprecedentedly extreme cold or to a man-decision not to buy available fuel because of the cost? The former is clearly an act of God, which the latter just as clearly is not. Or, to take another example: a manufacturer of tin cans has for many years bought a large extra supply of tin plate just before the expiration date of contracts between the basic steel companies and the United Steelworkers of America. On such an occasion in the future, the manufacturer concludes there will be no strike and, on the basis of his conclusion, orders no extra tin plate. A strike occurs and employees are laid off because of exhaustion of all tin plate stocks everywhere. Are these layoffs to be attributed to the strike or to a change in long followed management policy?

It is not necessary to be able to measure catastrophic risk even by approximation to be certain that the exclusion of such risks from SUB plans with reserves of the order thus far provided for are essential for reasonably secure plan operation. Sharpening definitions so as to eliminate, from the definition of catastrophic, layoffs which are not properly so classified is an appropriate development of the plans.

(9) The data relating to durations of layoff in the steel industry

(see pages 142 and 143) suggest that the average duration of layoffs lasting for more than one year is probably not longer than 80 weeks and probably shorter. If 80 weeks is such average duration, weeks in excess of 52 would account for a little more than seven per cent of all weeks of layoff in the period 1949-55. If all weeks of layoff were weeks of benefit, the increase in benefits would, on the average, be raised by 14 per cent.

In cost calculations for steel SUB it was assumed that, with minor exceptions, weeks of layoff were weeks of benefit, and under that assumption it would follow that the cost of a plan without limitation on the duration of benefits would be about 14 per cent more than a plan with a limitation of benefits to 52 weeks. Such a conclusion would probably be wide of the mark.

The cost assumption as to substantial identity between weeks of layoff and benefits might have validity but for two considerations: a safety factor for experience worse than any in the 1949-55 period is needed, and the volume of employment secured by those on layoff may not be the same under SUB as before SUB plans were initiated. Employees frequently take jobs which are classified as "unsuitable"; in such a case unsuitable includes, among other things, wages lower than those which the employee has been earning. Such jobs are taken because they mean some additional income as compared with state benefits (or in periods after state benefits are exhausted, as compared with no income). The receipt of supplemental benefits will normally lead employees on layoff to reject unsuitable jobs. Very little information is available on part-time employment by persons who could be entitled to state and supplemental benefits. The proportion of the persons receiving state benefits who are partially employed ranges usually from about 6 to 9½ per cent. Many others are partially employed but, unfortunately, the data do not show how many of the partially unemployed do not desire full-time employment. Further, while the data suggest substantial employment with layoff periods, there is no way to determine how much of the employment is marginal and likely to be eliminated by supplemental benefits—at least insofar as the beneficiaries are concerned—and how much is in the "suitable" category which would not be affected.

Supplemental benefits do have a limited duration; work may be accepted in view of the certainty that benefits will necessarily run out which might be rejected if the benefits were to continue indefinitely. The unlimited duration of benefits is therefore to be rejected, primarily because of its impact on motivation. On the cost limitation side, the confinement of compensable unemployment to unemployment resulting from a layoff is the major factor. Only the employer can initiate or terminate a layoff, and the employer's decision will be based on his need for workers. This is not to say that limitation of duration to 52 weeks is without important cost effects but rather that, irrespective of cost extension, may be undesirable on other grounds.

There is widespread opinion to the effect that extension of benefits beyond 26 weeks will constitute an undesirable inhibition on the desire for employment. The numbers holding this view, and the intensity with which it has been held, have both experienced a sharp decline in the past year. It can probably be said that for those concerned with SUB plans, the point at which, up to 52 weeks, the line of maximum duration is drawn will depend primarily on cost. If, as seems possible, state benefit maximum durations are increased to 39 weeks in a benefit year in most of the important industrial states, SUB durations, where now less than 52, are likely to be raised to 52.

This is not to imply that increases in the duration of state benefits make it possible for the employer to increase SUB durations without cost. Or to put it the other way, the total cost of unemployment benefits for an employer who has instituted a 52-week SUB plan will be raised by an increase in the duration of state benefits. For while such an increase in duration will lower SUB costs, the increase in state benefit costs will be much more than SUB savings because those laid-off employees, usually a majority, who are not entitled to SUB will receive more state benefits, a fact which, under the experience rating provisions of most state unemployment compensation laws (unless already at the maximum state contribution rate—and steel companies usually aren't) will result in the employer paying for extra state benefit costs.

The belief that maximum benefit durations in most SUB plans will go to 52 weeks is based on the obvious widespread weakening of the belief that duration of benefits beyond 26 weeks constitutes undue encouragement of malingering.

There is one final matter to be referred to: the extent to which durations will be curtailed by failure of employees to have credit units. A steel employee who completes two years of service will normally have 52 credit units. During his first two years of service an employee will accumulate credit units for all hours paid for, for illness or disability for which he was paid a benefit (which means substantially all illness or disability up to 26 weeks per spell), and for time lost from the company because of union duty. Generally, immediately prior to years of substantial layoff such as in 1949 and 1953-54 (and 1958) there has been a period of at least two years of extremely intense employment activity. Thus at the critical point, the main factor which cuts down credit units—layoffs—will have been at a minimum, and most employees, at two years of service, will have 52 credit units. The main exceptions will be persons who, having been in the armed services for two years, and who, having received service credit for armed service time, get no credit units because of not having hours of pay, union duty or disability benefits during their time in the service.

For the same reason that most employees at two years of service will have 52 credit units, most employees of longer than two years of service will come to any period of layoff with 52 credit units.

(10) The major part of the week-by-week eligibility requirements for supplementary benefits are the same as those for receipt of state benefits. Under the state laws, in 1957, disqualifications of employees applying anew for unemployment benefits were applied in about five per cent of the cases. No benefits under SUB plans are payable to employees whose unemployment begins with a quit or discharge for misconduct. In terms of aggregate impact, all disqualifications ran to about two per cent of claimant contacts, i.e., new plus continued claims. The two most important disqualifications applicable to SUB plans—inability to or unavailability for work—applied to less than one per cent of the total claimant contacts. There are substantial variations between states as to disqualification experience, and since SUB application of some of the more important tests may be independent of state agency decisions on the same sets of facts, differences between state and SUB experience may also be substantial. While a difference between one per cent and two per cent of "claimant contacts" is a large relative difference, in terms of claim payments the one case is only one per cent larger than the other.

There seems no reason to expect that the week-to-week eligibility requirements will have a different impact when state benefits are not payable than when they are. The specifications that, in order to become entitled to supplemental benefits, (a) an employee must meet the ability and availability tests, (b) he may not, without good cause, refuse suitable employment, (c) he must maintain a live registration at a state employment office, (d) he must apply for other employment when so directed, and (e) he may not voluntarily leave other suitable employment will continue to apply. Unless administered in a way fundamentally different from the way in which they are administered by the states, and such is improbable, the results should be about the same as current state experience.

There are other requirements independent of those in state systems which must be met by applicants for supplemental benefits: failing to follow up on jobs to which the company, independently of the state employment service, has directed an applicant; failing to report promptly upon recall from layoff; failure to accept an unsuitable job if such is required by the collective bargaining agreement; and, in certain cases, where vacation pay is paid in lieu of an actual vacation, the payment may be deemed to have been made during a subsequent period of layoff. Except for the requirement of accepting an unsuitable job, these requirements are analogous to provisions in state laws or regulations—even in treatment of vacation pay. The sanction for acceptance of the job which the collective bargaining agreement calls for is very powerful. While all these provisions are important for the orderly administration of supplemental benefits, for elimination of claimants not genuinely unemployed, and for the systematic maintenance of the status of employees laid off as active participants in the labor market, they are not likely to show up in any statistics as constituting important limitations on benefit costs.

(11) An employee is not on layoff from his employer when he quits work voluntarily, or is dismissed for some reason other than lack of work, or if he has been recalled to work. He may, after quit or dismissal, be unemployed and, under some state systems, after a disqualification period, he may become entitled to state benefits. An employee on layoff from Company A may secure employment at Company B, and for the best of reasons quit his work at the latter. This latter quit will not necessarily[38] have an effect on supplemental benefit payments from Company A, for with respect to that company he will still be on layoff.

Except in recessions, voluntary quits greatly outnumber layoffs. While in most cases unemployment does not follow quits, the strict definition of layoff in SUB plans undoubtedly has a major effect in limiting benefit costs.

Perhaps some SUB plan at some future time will provide supplemental benefits for former employees unemployed following a quit or discharge. If such were to be the case, it might be possible to gain some idea of the cost-limiting effect of the restriction of benefits to employees on layoff. In the absence of experience under some such plan—and at this time the possibility that any such plan will be adopted appears highly remote—all that can be said is that the restriction of benefits paid under a company SUB plan to employees on layoff from that company has important cost-limiting effects.

In the steel but not in the auto plans, an employee working a short week—less than 32 hours—is deemed to be on layoff. If his wages are less than his gross supplemental benefit (in states such as Pennsylvania, less than his gross supplemental benefit plus disregarded wages), he will be entitled to a supplemental benefit, even though the wages are such as to disqualify for the state benefit. In other words, partial unemployment is tantamount to layoff.

Under the auto plans, apparently, layoff is so narrowly defined as to exclude an employee doing any work for a company. In both steel and auto plans, partial employment (or, indeed, full-time employment) for another company does not interrupt the layoff status as far as the first company is concerned. Steel benefits are calculated in the same way as if the partial employment were with the first company. The auto plans treat the employee partially employed by a second employer somewhat more liberally than if partially employed by the first: he can receive a supplemental benefit if a state benefit is payable. Supplemental benefits and state benefits cease simultaneously. The auto provisions have much stronger cost-limiting effect than do those of the steel plans—an effect which can be expected to influence

[38] Whether he is entitled to supplemental benefits from Company A immediately will depend in part on whether the state law eliminates the disqualification for a voluntary quit only if the "good cause" for the action is attributable to the employer, or whether the "good cause" is sufficient; the period for which a disqualification, if any, runs; whether the disqualification takes the form of postponement or reduction of benefits; and whether state benefits can be paid in the absence of additional covered employment.

unfavorably the desire of beneficiaries to work. However, since the available evidence seems to indicate that partial employment during benefit periods is relatively uncommon, these cost-limiting effects appear to be minor.

(12) The maximum limits on benefits are important in states in which state benefits are low. (See the appendix tables.) In the major industrial states, the costs, if there were to be no maximum during the period in which state benefits are paid, would be different from what they are at present to only a minor degree. This is because, in general, employees in the top wage brackets have not been laid off. In the case of catastrophic unemployment where all or substantially all of the employees in a plant are laid off, including the highest paid, the maximum benefit could be important. Further, the maxima during state benefits may become important if, because of long periods of short-time employment, state benefits are reduced. For companies employing the bulk of steel and auto workers, low state benefits from this cause have not been important since World War II. If the present recession should be extended, the situation could be very different.

The steel maxima for the period after exhaustion of state benefits will be applicable more often than not, since the wage rate levels at which the maxima are operative are substantially under the average (from $2.16 for an employee without dependents to $2.25 for one with four.) The auto maximum of $25 is applicable both before and after exhaustion of state benefits; it will operate in all cases after such exhaustion. Since the maximum duration of auto benefits is 26 weeks and since most state benefits are payable for the same maximum period, the cost-limiting effect of the low maximum is not substantial.

This statement has dealt primarily with unemployment which is cyclical in character. While most of the devices for limiting benefit costs would apply in principle and be effective in connection with seasonal unemployment, this might well not be true of the methods of fixing the maximum fund levels. In the steelworker plans at least a repetitive pattern of hours at 12-month or approximately 12-month intervals would interfere with the release of reserves and upset one of the main aims of the timing of the several calculations. The steel plans, and perhaps the auto as well, have not been constructed with seasonal unemployment in mind.

There is an implicit assumption in this statement that a level of cost of X cents per hour in one year is exactly the same as an identical level in another year. This is patently not true. A device which limits cost to an average of five cents per hour, with nothing or a very small amount, say, in a year like 1956, and eight cents or 10 cents or 20 cents in a year like 1954, may not be as desirable from the point of view of either employer or beneficiaries as one which limits costs to an average of six or seven cents per hour, with eight cents or 10 cents in a highly prosperous year and little or nothing during recession.

The auto plans come closer than the steel in proportioning costs to

varying ability to pay. The steel plans may duplicate the auto in cost impact, on a purely accounting level, if the contingent liability is accounted for as a cost when it accrues. If contingent liability is treated as cost only when it forms the basis for a contribution, and under all the steel plans on the financing levels, there is a tendency for the costs to be light in good years and heavy in bad.

The problem of devising a different type of cost limitation involves many difficult problems. This statement has concerned itself with a description and analysis of devices in being. But it is appropriate to close by pointing out that what exists clearly needs improvement. The tests to which the SUB plans are being subjected by the present recession will, one may confidently predict, bring this out clearly when the records for their operations become available for analysis.

TABLE A

Weekly Benefit for Total Unemployment
Under Selected State Laws
For Specified Wage Base
April 1958

State	*Number of Dependents*[1]						
	0	*1*	*2*	*3*	*4*	*5*	*6*
	Benefit based on: $1.975 per hour for 32-hour week[2]						
Alabama	$28	$28	$28	$28	$28	$28	$28
California	32	32	32	32	32	32	32
Colorado	33	33	33	33	33	33	33
Connecticut	32	32	36	40	44	48	48
Illinois	30	33	36	36	36	36	36
Maryland	34	34	36	38	40	42	42
Michigan	28	30	35	37	38	38	38
New York	33	33	33	33	33	33	33
Pennsylvania	33	33	33	33	33	33	33
	Benefit based on: $1.975 per hour for 40-hour week[2] $2.475 per hour for 32-hour week[2]						
Alabama	$28	$28	$28	$28	$28	$28	$28
California	37	37	37	37	37	37	37
Colorado	35	35	35	35	35	35	35
Connecticut	40	40	44	48	52	56	60
Illinois	30	33	36	39	42	42	42
Maryland	35	35	37	39	41	43	43
Michigan	30	34	40	40[3]	41	41	41
New York	40	40	40	40	40	40	40
Pennsylvania	35	35	35	35	35	35	35

(Footnotes on next page.)

TABLE A (Cont'd)

State	Number of Dependents[1] 0	1	2	3	4	5	6
	Benefit based on: $2.475 per hour for 40-hour week[2]						
Alabama	$28	$28	$28	$28	$28	$28	$28
California	40	40	40	40	40	40	40
Colorado	35	35	35	35	35	35	35
Connecticut	40	40	44	48	52	56	60
Illinois	30	33	36	39	42	45	45
Maryland	35	35	37	39	41	43	43
Michigan	30	34	43	49	50	50	50
New York	45	45	45	45	45	45	45
Pennsylvania	35	35	35	35	35	35	35

[1] One dependent is assumed to be a wife; all dependents in excess of one are assumed to be minor children.

[2] It is assumed that 13 weeks were worked in each quarter of the base period.

[3] The amount based on an hourly wage of $2.475 for 32 hours in a week is $41.

TABLE B

Illustrative Weekly Supplemental Benefit Amounts
For Total Unemployment Under Steel and Auto Plans
In Nine Selected States
Average Hourly Earnings: $1.975 ($79 Per Week)
State Benefit Based on 32-Hour Weeks in Base Period

State	Number of Dependents[a] 0	1	2	3	4	5	6
Alabama							
Steel	$15.63	$17.15	$18.67	$20.19	$21.71	$23.23	$23.35
Auto[1]	14.46	15.95	17.45	18.94	20.44	21.93	22.19
Auto[2]	11.19	12.57	13.95	15.33	16.71	18.09	18.33
California							
Steel	11.63	13.15	14.67	16.19	17.71	19.23	19.35
Auto[1]	10.46	11.95	13.45	14.94	16.44	17.93	18.19
Auto[2]	7.19	8.57	9.95	11.33	12.71	14.09	14.33
Colorado, New York and Pennsylvania							
Steel	10.63	12.15	13.67	15.29	16.71	18.23	18.35
Auto[1]	9.46	10.95	12.45	13.94	15.44	16.93	17.19
Auto[2]	6.19	7.57	8.95	10.33	11.71	13.09	13.33

(See next page for footnotes.)

TABLE B (Cont'd)

State	Number of Dependents[a] 0	1	2	3	4	5	6
Connecticut							
Steel	11.63	13.15	10.67	8.19	5.71	3.23	3.35
Auto[1]	10.46	11.95	9.45	6.94	4.44	0	2.19
Auto[2]	7.19	8.57	5.95	3.33	0	0	0
Illinois							
Steel	13.63	12.15	10.67	12.19	13.71	15.23	15.35
Auto[1]	12.46	10.95	9.45	10.94	12.44	13.93	14.19
Auto[2]	9.19	7.57	5.95	7.33	8.71	10.09	10.33
Maryland							
Steel	9.63	11.15	10.67	10.19	9.71	9.23	9.35
Auto[1]	8.46	9.95	9.45	8.94	8.44	7.93	8.19
Auto[2]	5.19	6.57	5.95	5.33	4.71	4.09	4.33
Michigan							
Steel	15.63	15.15	11.67	11.19	11.71	13.23	13.35
Auto[1]	14.46	13.95	10.45	9.94	10.44	11.93	12.19
Auto[2]	11.19	10.57	6.95	6.33	6.71	8.09	8.33

[a] The first dependent is assumed to be a wife, the others dependent children as defined in the appropriate law.

[1] First 4 weeks of layoff.

[2] After first 4 weeks of layoff.

TABLE C

Illustrative Weekly Supplemental Benefit Amounts
For Total Unemployment Under Steel and Auto Plans
In Nine Selected States

Average Hourly Earnings: $1.975 ($79 Per Week)
State Benefit Based on 40-Hour Weeks in Base Period

	Number of Dependents[a]						
State	*0*	*1*	*2*	*3*	*4*	*5*	*6*
Alabama							
Steel	$15.63	$17.15	$18.67	$20.19	$21.71	$23.23	$23.35
Auto[1]	14.46	15.95	17.45	18.94	20.44	21.93	22.19
Auto[2]	11.19	12.57	13.95	15.33	16.71	18.09	18.33
California							
Steel	6.63	8.15	9.67	11.19	12.71	14.23	14.35
Auto[1]	5.46	6.95	8.45	9.94	11.44	12.93	13.19
Auto[2]	2.19	3.57	4.95	6.33	7.71	9.09	9.33
Colorado and Pennsylvania							
Steel	8.63	10.15	11.67	13.19	14.71	16.23	16.35
Auto[1]	7.46	8.95	10.45	11.94	13.44	14.93	15.19
Auto[2]	4.19	5.57	6.95	8.33	9.71	11.09	11.33
Connecticut							
Steel	3.63	5.15	2.67	0.19	0	0	0
Auto[1]	2.46	3.95	0	0	0	0	0
Auto[2]	0	0	0	0	0	0	0
Illinois							
Steel	13.63	12.15	10.67	9.19	7.71	9.23	9.35
Auto[1]	12.46	10.95	9.45	7.94	6.44	7.93	8.19
Auto[2]	9.19	7.57	5.95	4.33	2.71	4.09	4.33
Maryland							
Steel	8.63	10.15	9.67	9.19	8.71	8.23	8.35
Auto[1]	7.46	8.95	8.45	7.94	7.44	6.93	7.19
Auto[2]	4.19	5.57	4.95	4.33	3.71	3.09	3.33
Michigan							
Steel	13.63	11.15	6.67	8.19	8.71	10.23	10.35
Auto[1]	12.46	9.95	5.45	6.94	7.44	8.93	9.19
Auto[2]	9.19	6.57	0[3]	3.33	3.71	5.09	5.33
New York							
Steel	3.63	5.15	6.67	8.19	9.71	11.23	11.35
Auto[1]	2.46	3.95	5.45	6.94	8.44	9.93	10.19
Auto[2]	0	0	0	3.33	4.71	6.09	6.33

[a] The first dependent is assumed to be a wife, the others dependent children as defined in the appropriate law.
[1] First 4 weeks of layoff.
[2] After first 4 weeks of layoff.
[3] Gross benefit less state benefit is less than $2.00 so no supplemental benefit is payable.

TABLE D

Illustrative Weekly Supplemental Benefit Amounts
For Total Unemployment Under Steel and Auto Plans
In Nine Selected States

Average Hourly Earnings: $2.475 ($99 Per Week)
State Benefit Based on 32-Hour Weeks in Base Period

	Number of Dependents[a]							
State	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*
Alabama								
Steel	$25.00	$27.00	$29.00	$30.85	$32.37	$33.00	$33.00	$33.00
Auto[1]	24.83	25.00	25.00	25.00	25.00	25.00	25.00	25.00
Auto[2]	20.76	22.14	23.52	24.90	25.00	25.00	25.00	25.00
California								
Steel	17.29	18.81	20.33	21.85	23.37	24.89	26.41	27.35
Auto[1]	15.83	17.32	18.82	20.31	21.81	23.30	24.80	25.00
Auto[2]	11.76	13.14	14.52	15.90	17.28	18.66	20.04	21.06
Colorado and Pennsylvania								
Steel	19.29	20.81	22.33	23.85	25.37	26.89	28.41	29.35
Auto[1]	17.83	19.32	20.82	22.31	23.81	25.00	25.00	25.00
Auto[2]	13.76	15.14	16.52	17.90	19.28	20.66	22.04	23.06
Connecticut								
Steel	14.29	15.81	13.33	10.85	8.37	5.89	3.41	4.35
Auto[1]	12.83	14.32	11.82	9.31	6.81	4.30	0[3]	2.90
Auto[2]	8.76	10.14	7.52	4.90	2.28	0	0	0
Illinois								
Steel	24.29	22.81	21.33	19.85	18.37	19.89	21.41	22.35
Auto[1]	22.83	21.32	19.82	18.31	16.81	18.30	19.80	20.90
Auto[2]	18.76	17.14	15.52	13.90	12.28	13.66	15.04	16.06
Maryland								
Steel	19.29	20.81	20.33	19.85	19.37	18.89	20.41	21.35
Auto[1]	17.83	19.32	18.82	18.31	17.81	17.30	18.80	19.90
Auto[2]	13.76	15.14	14.52	13.90	13.28	12.66	14.04	15.06
Michigan								
Steel	24.29	21.81	17.33	17.85	19.37	20.89	22.41	23.35
Auto[1]	22.83	20.32	15.82	16.31	17.81	19.30	20.80	21.90
Auto[2]	18.76	16.14	11.52	11.90	13.28	14.66	16.04	17.06
New York								
Steel	14.29	15.81	17.33	18.85	20.37	21.89	23.41	24.35
Auto[1]	12.83	14.32	15.82	17.31	18.81	20.30	21.80	22.90
Auto[2]	8.76	10.14	11.52	12.90	14.28	15.66	17.04	18.06

[a] The first dependent is assumed to be a wife, the others dependent children as defined in the appropriate law.

[1] First 4 weeks of layoff.

[2] After first 4 weeks of layoff.

[3] Gross benefit less state benefit is less than $2.00 so no supplemental benefit is payable.

TABLE E

Illustrative Weekly Supplemental Benefit Amounts
For Total Unemployment Under Steel and Auto Plans
In Nine Selected States

Average Hourly Earnings: $2.475 ($99 Per Week)
State Benefit Based on 40-Hour Weeks in Base Period

	Number of Dependents[a]							
State	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*
Alabama								
Steel	$25.00	$27.00	$29.00	$30.85	$32.37	$33.00	$33.00	$33.00
Auto[1]	24.83	25.00	25.00	25.00	25.00	25.00	25.00	25.00
Auto[2]	20.76	22.14	23.52	24.90	25.00	25.00	25.00	25.00
California								
Steel	14.29	15.81	17.33	18.85	20.37	21.89	23.41	24.35
Auto[1]	12.83	14.32	15.82	17.31	18.81	20.30	21.80	22.90
Auto[2]	8.76	10.14	11.52	12.90	14.28	15.66	17.04	18.06
Colorado and Pennsylvania								
Steel	19.29	20.81	22.33	23.85	25.37	26.89	28.41	29.35
Auto[1]	17.83	19.32	20.82	22.31	23.81	25.00	25.00	25.00
Auto[2]	13.76	15.14	16.52	17.90	19.28	20.66	22.04	23.06
Connecticut								
Steel	14.29	15.81	13.33	10.85	8.37	5.89	3.41	4.35
Auto[1]	12.83	14.32	11.82	9.31	6.81	4.30	0[3]	2.90
Auto[2]	8.76	10.14	7.52	4.90	2.28	0	0	0
Illinois								
Steel	24.29	22.81	21.33	19.85	18.37	16.89	18.41	19.35
Auto[1]	22.83	21.32	19.82	18.31	16.81	15.30	16.80	17.90
Auto[2]	18.76	17.14	15.52	13.90	12.28	10.66	12.04	13.06
Maryland								
Steel	19.29	20.81	20.33	19.85	19.37	18.89	20.41	21.35
Auto[1]	17.83	19.32	18.82	18.31	17.81	17.30	18.80	19.90
Auto[2]	13.76	15.14	14.52	13.90	13.28	12.66	14.04	15.06
Michigan								
Steel	24.29	21.81	14.33	9.85	10.37	11.89	13.41	14.35
Auto[1]	22.83	20.32	12.82	8.31	8.81	10.30	11.80	12.90
Auto[2]	18.76	16.14	8.52	3.90	4.28	5.66	7.04	8.06
New York								
Steel	9.29	10.81	12.33	13.85	15.37	16.89	18.41	19.35
Auto[1]	7.83	9.32	10.82	12.31	13.81	15.30	16.80	17.90
Auto[2]	3.76	5.14	6.52	7.90	9.28	10.66	12.04	13.06

[a] The first dependent is assumed to be a wife, the others dependent children as defined in the appropriate law.

[1] First 4 weeks of layoff.

[2] After first 4 weeks of layoff.

[3] Gross benefit less state benefit is less than $2.00 so no supplemental benefit is payable.

TABLE F

Illustrative Supplemental Benefits Under Steel and Auto Plans In Weeks of Partial Unemployment

Employees with Two Dependents

(Both Supplemental and State Benefits Based on Full-Time Employment in Base Period at $1.975 Per Hour)

	Wages for Current Partial Employment at						
	$1.50 Per Hour Employed in Week				*$1.975 Per Hour Employed in Week*		
	1 day ($12)	*2 days ($24)*	*3 days ($36)*	*4 days ($48)*	*1 day ($15.80)*	*2 days ($31.60)*	*3 days ($47.40)*
Alabama							
Steel	$18.67	$18.67	$16.67	$ 4.67	$18.67	$21.07	$ 5.27
Auto[1]	11.45	11.45	0	0	11.65	0	0
Auto[2]	7.95	7.95	0	0	8.15	0	0
California							
Steel	9.67	9.67	9.67	1.67	9.67	9.67	2.27
Auto[1]	5.45	5.45	5.45	0	4.65	4.85	0
Auto[2]	[3]	[3]	[3]	0	[3]	[3]	0
Colorado							
Steel	11.67	11.67	13.67	1.67	11.67	11.67	2.27
Auto[1]	7.45	7.45	0	0	7.15	7.35	0
Auto[2]	3.95	3.95	0	0	3.65	3.85	0
Connecticut							
Steel	2.67	2.67	2.67	1.67	2.67	2.67	2.27
Auto[1]	0	0	0	0	0	0	0
Auto[2]	0	0	0	0	0	0	0
Illinois							
Steel	10.67	10.67	17.67	5.67	10.67	10.67	6.27
Auto[1]	2.45	2.45	0	0	[3]	[3]	0
Auto[2]	0	0	0	0	0	0	0

(Footnotes see next page.)

TABLE F (Cont'd)

	Wages for Current Partial Employment at						
	$1.50 Per Hour Employed in Week				*$1.975 Per Hour Employed in Week*		
	1 day ($12)	*2 days ($24)*	*3 days ($36)*	*4 days ($48)*	*1 day ($15.80)*	*2 days ($31.60)*	*3 days ($47.40)*
Maryland							
Steel	9.67	9.67	9.67	5.67	9.67	9.67	6.27
Auto[1]	[3]	[3]	[3]	0	[3]	[3]	0
Auto[2]	0	0	0	0	0	0	0
Michigan							
Steel	6.67	6.67	6.67	8.67[4]	6.67	6.67	9.27[4]
Auto[1]	0	[3]	0	0	0	0	0
Auto[2]	0	0	0	0	0	0	0
New York							
Steel	6.67	6.67	6.67	8.67[4]	6.67	6.67	9.27[4]
Auto[1]	3.45	[3]	0	0	0	0	0
Auto[2]	0	0	0	0	0	0	0
Pennsylvania							
Steel	11.67	11.67	11.67	4.67	11.67	11.67	5.27
Auto[1]	4.45	4.45	4.45	0	3.65	3.85	0
Auto[2]	[3]	[3]	[3]	0	[3]	[3]	0

[1] First 4 weeks of layoff.

[2] After first 4 weeks of layoff.

[3] The excess of the gross benefit over the state benefit is less than $2.00, so no supplemental benefit is payable.

[4] It is assumed that $10 of wages are disregarded in calculating the benefit amount.

TABLE G

Illustrative Supplemental Benefits Under Steel and Auto Plans
In Weeks of Partial Unemployment

Employees with Two Dependents

(Both Supplemental and State Benefits Based on
Full-Time Employment in Base Period at $2.475 Per Hour)

	Wages for Current Partial Employment at						
	$1.50 Per Hour Employed in Week				*$2.475 Per Hour Employed in Week*		
	1 day ($12)	*2 days ($24)*	*3 days ($36)*	*4 days ($48)*	*1 day ($19.80)*	*2 days ($39.60)*	*3 days ($59.40)*
Alabama							
Steel	$29.00	$29.00	$27.33	$15.33	$29.00	$23.73	$ 3.93
Auto[1]	21.82	21.82	0	0	22.02	0	0
Auto[2]	17.52	17.52	0	0	17.72	0	0
California							
Steel	17.33	17.33	17.33	12.33	17.33	17.33	0.93
Auto[1]	12.82	12.82	12.82	0	12.02	12.22	0
Auto[2]	8.52	8.52	8.52	0	7.72	7.92	0
Colorado							
Steel	22.33	22.33	24.33	12.33	22.33	20.73	0.93
Auto[1]	17.82	17.82	0	0	17.52	0	0
Auto[2]	13.52	13.52	0	0	13.22	0	0
Connecticut							
Steel	13.33	13.33	13.33	12.33	13.33	13.33	0.93
Auto[1]	8.82	8.82	8.82	0	8.02	8.22	0
Auto[2]	4.52	4.52	4.52	0	3.72	3.92	0
Illinois							
Steel	21.33	21.33	28.33	16.33	21.33	24.73	4.93
Auto[1]	12.82	12.82	0	0	12.02	0	0
Auto[2]	8.52	8.52	0	0	7.72	0	0

(Footnotes see next page.)

TABLE G (Cont'd)

	Wages for Current Partial Employment at						
	$1.50 Per Hour Employed in Week				*$2.475 Per Hour Employed in Week*		
	1 day ($12)	*2 days ($24)*	*3 days ($36)*	*4 days ($48)*	*1 day ($19.80)*	*2 days ($39.60)*	*3 days ($59.40)*
Maryland							
Steel	20.33	20.33	20.33	16.33	20.33	24.73	4.93
Auto[1]	11.82	11.82	11.82	0	12.02	0	0
Auto[2]	7.52	7.52	7.52	0	7.72	0	0
Michigan							
Steel	14.33	14.33	14.33	19.33[3]	14.33	14.33	7.93[3]
Auto[1]	[4]	10.32	0	0	0	0	0
Auto[2]	0	6.02	0	0	0	0	0
New York							
Steel	12.33	12.33	12.33	19.33[3]	12.33	12.33	7.93[3]
Auto[1]	10.07	9.32	8.57	0	2.27	0	0
Auto[2]	5.77	5.02	4.27	0	0	0	0
Pennsylvania							
Steel	22.33	22.33	22.33	15.33	22.33	22.33	3.93
Auto[1]	14.82	14.82	14.82	0	14.02	14.22	0
Auto[2]	10.52	10.52	10.52	0	9.72	9.92	0

[1] First 4 weeks of layoff.

[2] After first 4 weeks of layoff.

[3] It is assumed that $10 of wages are disregarded in calculating the benefit amount.

[4] The excess of the gross benefit over the state benefit is less than $2.00 so no supplemental benefit is payable.