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ACCOUNTING ALTERNATIVES FOR A NEGATIVE INCOME TAX

by

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DISCUSSION PAPERS

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ABSTRACT

The choice of an accounting system for any income maintenance program has important implications for the program's fairness, ease of administration, and responsiveness to need, as well as for its impact on incentives to work. Great care must be taken in devising such a system to insure that, in pursuing one goal, such as fairness, one does not needlessly or inadvertently sacrifice some other goal, such as responsive to need.

This discussion paper reviews the shortcomings of a variety of traditional accounting approaches (ranging from one in which payments are based simply on the income of the preceding month to one in which payments are based on a twelve-month moving average) and thereby tries to signal the pitfalls that one should seek to avoid. It then describes an accounting innovation called the carryover concept that copes with the very difficult problems created by fluctuating incomes and has the advantage of permitting the system to achieve fairness as between people of different patterns of income, without substantial sacrifice of other goals. Finally, the paper sets forth a model set of rules, with detailed comments, for reporting, accounting, and making payments under an income maintenance program.

It is hoped that the model rules and the discussion of the problems that they respond to will permit designers of income maintenance programs in the future to perceive clearly the policy issues presented in the formulation of an accounting system and to develop the kind of accounting system that most effectively promotes their agreed upon policy objectives.

The problems of implementation of a negative income tax may seem at first blush to be technical and mechanical--mere nuisances that can be disposed of without much further thought. The special problems of reporting and accounting are often viewed in this way. Upon further consideration, however, it becomes apparent that solutions to these problems (and to other problems such as how to define income and the family unit) may contribute significantly to the success or failure of the program. There are many alternatives and the choices to be made are fundamental and important.

The question of how often people must report, for example, has an important bearing on administrative feasibility as well as on acceptability of the program to its beneficiaries. The frequency-of-reporting problem is in turn related to the even more significant issue of the proper period for determination of level of benefits. Should benefits be based on the income of the past month, the past twelve months, expectations about the next month or twelve months, some combination of these and other possibilities, or what? In answering this kind of question we must take account of administrative feasibility, responsiveness to need, incentives to work, and other effects. A naive solution could seriously undercut one or more of the most fundamental goals of the negative income tax approach to the relief of poverty. In this paper we hope to provide some insight into the basic issues presented by problems of reporting and accounting, as well as some understanding of the major alternatives. We will also describe, first in general terms and then in detail, the accounting system used in the Institute's urban and rural negative income tax experiments and,

more particularly, an accounting innovation--what we call a carryover concept--that permits the system to be highly responsive to need without sacrificing fairness, equity, and other goals.

FAMILIAR ACCOUNTING ALTERNATIVES

In traditional welfare programs, benefits are based (at least in theory) on the recipient's income for the past month (or some other relatively short period).[1] Thus, benefits are very closely related to current need; the system may be said to be very responsive. Of course responsiveness works two ways. When income is lost, full benefits become available very quickly; when income rises, benefits are reduced or eliminated just as quickly. Another significant consequence of a simple, short accounting period is that it favors a person with an income that fluctuates widely from month to month (either because of seasonal or sporadic employment or because of bunching). Such a person is much better off than he would be under a system using a one-year accounting period and, thus, better off than a person with the same annual income earned in a steady occupation. For example, the seasonally employed farm laborer whose income on an annual basis would be high enough to eliminate all entitlement to benefits may receive benefits for the months in which he is not working. This creates a serious problem of equity between seasonal and steady workers with similar annual incomes. It also tends to deprive a person of incentive to budget. Given a fixed appropriation for the entire program, more needy persons would be deprived of benefits in favor of less needy persons.

The problem of the fluctuating income may not be of great magnitude in the existing welfare system, but presumably it will become much more serious as coverage is broadened--as it would be under the negative income tax--to include families headed by males engaged in farming, construction work, fishing, and other such activities--in other words, as coverage is broadened to include all of the working poor. Moreover, under traditional welfare programs the bias in favor of recipients with fluctuating incomes produced by a short accounting period is blunted to some extent by very stringent asset tests--that is, by rules that deny benefits to persons with any significant amount of assets that they can consume. Thus, if part of a seasonal income is saved, benefits will later be denied because of the availability of those savings. Although an assets test serves to eliminate the bias in favor of fluctuating incomes, it creates an even more disturbing bias in favor of spendthrifts as opposed to those who prudently budget their earnings. And, in any event, a stringent assets test is one of the harsh features of traditional welfare programs that negative income tax proposals seek to eliminate. Finally, in traditional welfare programs any potential bias in favor of persons with fluctuating income may in fact be eliminated by various kinds of ad hoc, individualized actions and informal controls administered by caseworkers. But this kind of personalized administrative process is another feature of traditional welfare that the negative income tax seeks, for very good reasons,[2] to avoid.

One way to avoid the bias in favor of fluctuating income is to make a year-end adjustment. Under this approach, payments would be

made throughout the year on the basis of the income of, say, the preceding month. Then, at the end of the year, benefits would be calculated on a yearly basis. For families with fluctuating incomes the calculation on an annual basis would often reveal that an overpayment occurred which would have to be recovered. But the recovery of such overpayments could cause considerable hardship for people living at the edge of poverty, and it is small consolation to observe that they brought the hardship on themselves by not saving their excess payments. Accordingly, the possibility of overpayment should be avoided if at all possible. We shall describe later an accounting system which retains virtually all the responsiveness of the short-period approach without sacrificing either objectivity or uniformity, without having to rely on an assets test, without leaving any bias in favor of fluctuating incomes, and without requiring year-end adjustments.

The one-month approach of a typical traditional welfare accounting system may be contrasted with the annual period used for purposes of federal income taxation. If the positive tax model were followed, income would be reported once a year. The level of payment to be made (either in lump sum or, more likely, in twelve installments) would be based on that return. This approach has the obvious advantage of minimizing the bookkeeping burden both on the individual and on the administering agency. It eliminates the problems arising from seasonal fluctuations in income (though not of fluctuation from year to year, if that is seen as a problem). It works perfectly well for a family that never has any income or one with a steady income from year to year. It can fail miserably, however, when income drops substantially,

because in such cases there could be a delay of as long as a year before any of the family's new need is met. It may be that the prospect of a future payment would permit the family to borrow enough to live on; perhaps the government itself could provide credit in such cases. But private credit could be very expensive and difficult to get. A government credit program would, after all, be just one more needs-tested program of a sort, and why have two programs if one will do? In the absence of a good system of private or public credit there would have to be some fairly substantial welfare program to meet interim needs. To maintain such a program would be to retain a significant part of the system that the negative income tax is designed to replace. Thus, a simple one-year accounting period of the sort suggested does not seem to be an attractive alternative.

The unresponsiveness to need of the one-year period could be alleviated by borrowing another feature of the positive tax system--namely, the quarterly estimate. A family could estimate its income for the next three months (or the next month or any other period) and receive payments based on that estimate. This kind of procedure would meet the problem of need but would resurrect another serious problem: the recovery of overpayments.

An approach that combines some of the virtues of both the twelve-month and the one-month period is the twelve-month moving average. Under this approach, income would be reported once a month. (Actually, reporting once every four weeks will presumably be easier for most of the working poor, since they will be paid weekly or biweekly. If a four-week reporting period is adopted, then thirteen periods rather

than twelve would be averaged; but the principles are all the same.) Payments each month would be based on the average income of the preceding twelve months. Each month, as a new report is added, the earliest one would be dropped from the average. This approach would eliminate the problem of seasonal income fluctuation. In the absence of mistake or fraud there would be no overpayments or underpayments as there would be with estimates of future income or with short-period payments and year-end adjustments. Such a system is considerably more responsive than a simple twelve-month period, but is much less responsive than a one-month period. For example, suppose that a family's income was at the breakeven point (that is, the point at which income is just high enough so that no more payments are made) for a year or more and then dropped to a zero income and stayed there permanently. Its payment in the month after the drop would be one-twelfth of the full allowance, in the next month one-sixth, and so on, until the full allowance level was finally reached twelve months after the drop initially occurred. Suppose, on the other hand, that income had been zero for a year and earnings suddenly and permanently increased to the breakeven level. The process would be reversed and payments (which were at the maximum level) would gradually be reduced and would finally end a year later.

Thus, it is obvious that the twelve-month moving average is not very responsive; it fails to make adequate payments when there is need and continues to make payments after current income has risen to the breakeven level. If the negative income tax is viewed simply as a program to relieve poverty, then this unresponsiveness is a serious

weakness of the twelve-month moving average accounting system. However, another important goal of negative income taxation is to preserve incentives to work, and a reasonable amount of unresponsiveness may actually promote this goal. For example, for the man who is fully employed, the prospect of a delay between the loss of earnings and the receipt of full benefits might operate as an inducement to stay with a job that he would otherwise abandon. And, for the man who has been unemployed, the fact that his benefits will decline slowly as income rises means in effect that he will keep most of his paycheck for quite a while, which might make the prospect of working more attractive than it would otherwise be.[3] Thus, some degree of unresponsiveness may be a good compromise between the dual objectives of meeting needs and of maintaining incentives. The twelve-month moving average may seem excessively unresponsive to need, but a compromise between the two objectives can of course be achieved by using less than twelve months but more than one. For example, in the New Jersey and rural experiments the basic accounting plan uses a three-month moving average. The use of a three-month period reintroduces the problem of the fluctuating income, but that problem can be solved by use of the carryover concept.

THE CARRYOVER CONCEPT

As has been suggested, the objective of the carryover device is to permit the accounting system to be highly responsive without creating a bias in favor of seasonally fluctuating income (or income whose receipt is bunched). Because the idea is something of an innovation and may therefore not be readily grasped, we will devote the remainder of

this section to describing it in general terms. For purposes of illustration, assume monthly reporting of income and monthly recomputation of benefits.[4] The idea, simply stated, is that income in excess of the breakeven point in any month creates a carryover account; subsequently, whenever current income falls below the breakeven point, payments are based not on current income alone but on current income plus income from the carryover account. The carryover account is reduced by the amount taken from it to bring the income of any subsequent period up to the breakeven point. The unused portion, if any, remains available for future use, but a carryover has a life of only eleven months after the month in which it arises and then expires.[5]

A metaphorical explanation may aid understanding: Imagine that any income above the breakeven point is required to be put into a savings account. There is a separate savings account for each month. Any time income falls below the breakeven point enough money is taken from the savings account or accounts to bring income up to the breakeven point. If current income plus all available income from the savings accounts is insufficient to reach the breakeven point, there will be a deficit, and payments will be made according to the size of the deficit. (Where more than one savings account contains money, and the total monies in all accounts are more than is needed to make up the difference between current month's income and the breakeven level, then a choice must be made about which account to dip into; consideration of this problem is left for the detailed discussion in Section II.) After money has been in a savings account for eleven months, it becomes immune from seizure for carryover accounting purposes and then may be used by its owner however he wants.

The carryover device would also be applied to deductions (for example, business expenses in excess of receipts, unreimbursed medical expenses in excess of a "floor," and child-care expenses). Where deductions exceeded current and carryover income, a negative entry would be made in the carryover account; the negative account would offset any future income for eleven months.

The carryover device is, in a sense, independent of the basic accounting system. It could be used with a one-month system, a three-month moving average system, or any of a variety of other possibilities. Its use in conjunction with a three-month moving average creates complications that are best avoided for the purpose of the present effort to explain and illustrate the basic concept. (A three-month moving average will be used and described in the detailed discussion in Section II.) For the present, therefore, assume that income is reported once a month and that payments are based on the income (including carryover income) of the past month.

Consider the case of a family of four with a basic allowance (which is the amount paid when income is zero) of $3,000 per year, or $250 per month, and a tax rate (which is the rate at which payments are reduced as income rises or, looking at it another way, the percentage of income that cannot be retained) of 50 percent. The breakeven point (the level of income at which payments are zero) will be $6,000 per year, or $500 per month. If the family's income is never below zero (by virtue of deductions in excess of income) or above the breakeven point of $500 in any month, then the carryover device is irrelevant and payments are the same as they would be under a simple one-month

accounting system, with all that that implies about responsiveness. Thus, if the family's income in any month were zero, its payment the next month would be the maximum of $250. If the family income reached the breakeven point of $500 in any month, then it would receive no payment in the next month.

Now assume that the income of the family is from seasonal work and consists of $1,000 a month earned in each of the months of June, July, and August; that no income is earned in any other month; and that this pattern repeats itself every year. The outcomes are summarized in Chart A which illustrates that, at the end of June, $1,000 is reported, $500 is used to reach the breakeven point for June, and the remaining $500 goes into a carryover account. No payment would be made in July, because of the June income. At the end of July and at the end of August, again $500 would be used to reach the breakeven point, and $500 would go into the carryover account. In September, a zero current income would be reported but carryover income is available. Assume that the oldest carryover is used first (see Rule 10, p. 23) $500 is taken from the carryover account created at the end of June; September is therefore treated as a month in which $500 is earned, so no payment is made in the next month. The same thing happens at the end of October and November. By December, however, the carryover accounts have been exhausted, so December income is zero and a full payment of $250 is made in January. Full payments continue through June, for a total of $1,500. This is the same total amount that the family would have received in a twelve-month period if its total income had been spread equally over twelve months (that is, if its income had been $250

CHART A

	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
Current Income	1000	1000	1000	0	0	0	0	0	0	0	0	0
Plus: Income carryover	--	--	--	500	500	500	--	--	--	--	--	--
Total Income after application of carryover	1000	1000	1000	500	500	500	0	0	0	0	0	0
Breakeven point	500	500	500	500	500	500	--	--	--	--	--	--
New Income carryover	500	500	500	0	0	0	0	0	0	0	0	0
Payment entitlement, to be paid in next month							250	250	250	250	250	250
Carryover Income balance	500	1000	1500	1000	500	0	0	0	0	0	0	0

in each month and its payments, consequently, $125 in each month). Moreover, payments would be timed well in relation to presumed need.

In the kind of case illustrated, the accounting system with the carryover concept is no less responsive to increases in income than is a simple one-month accounting system.[6] When income has been above the breakeven point and then falls, however, there may be a problem of responsiveness to need for payments. Looking at the facts used for illustration in Chart A, payments do not resume until the fourth month after income drops to zero. If the family, knowing the pattern of its income and its negative tax payments, prudently saves its "excess" income in June, July, and August, then those savings will be available to meet living expenses during the later months in which the assignment of the carryover cuts off payments. In such cases the savings account metaphor is apt, there is a behavioral justification for the carryover device, and there is no hardship. But what if the family had been earning, say, $800 a month for many months, expected that level of income to be permanent, and consequently had failed to save? There will then be an interim need that will not be met by the negative income tax system. Hopefully, the number of such cases will be small, particularly in light of the fact that many steady workers will have income from unemployment compensation when they lose their jobs. But presumably some sort of residual welfare program will be necessary to meet emergency needs.

To illustrate a slightly more complicated situation, assume that the family earns its income from farming, that its only receipts are from the sale of a crop in August for $7,000, and that it has expenses

of $2,000 in June and $2,000 in October and no other deductions. Assume further that a strictly cash accounting method is used. (Complexities such as depreciation will be considered in Section II.) These outcomes are summarized by Chart B. In June (the first column on the chart), since there is no current or carryover income, the $2,000 expense cannot be used to offset any income and therefore will create a negative carryover. June and July are zero-income months, entitling the unit to the full payment of $250, with the payment being made in the following month. In August, the current income of $7,000 is reduced to $5,000 by application of the $2,000 negative carryover created in June. From this $5,000, $500 is used to bring income to the breakeven point in August and the remaining $4,500 becomes a positive carryover. In September, $500 of the carryover is used to bring income to the breakeven point. In October, accordingly, $4,000 initially remains in the carryover account: $2,500 is used--$2,000 to offset expenses and $500 to reach the breakeven point. The remaining $1,500 in the carryover account is used, $500 per month, to reach the breakeven point in November, December, and January. In February, there is no current or carryover income; it is a zero-income month and entitles the unit to a full payment, which is made in the next month. The same is true in March, April, and May. For the year, net income is $3,000 and total payments to the unit are $1,500 ($250 per month for 6 months)--which, of course, is the proper result on an annual basis.

These presentations may make the system appear to be excessively complex. In fact, it must be assumed that the calculations will be

CHART B

(Negative figures in parentheses)

	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
Current income less current deductions	(2000)	0	7000	0	(2000)	0	0	0	0	0	0	0
Plus or minus Income carryover	0	0	(2000)	500	2500	500	500	500	0	0	0	0
Total income after applying carryovers	(2000)	0	5000	500	500	500	500	500	0	0	0	0
Breakeven point	--	--	500	500	500	500	500	500	--	--	--	--
New carryover	(2000)	--	4500	--	--	--	--	--	--	--	--	--
Payment entitlement, to be paid in next month	250	250	0	0	0	0	0	0	250	250	250	250
Carryover balances	(2000)	(2000)	4500	4000	1500	1000	500	0	0	0	0	0

made by computers. The computational job is easy once the information is fed into a computer. It is true that the monthly job of collecting information and feeding it into the computer is a big one in the aggregate, but that kind of processing job cannot be avoided without abandoning responsiveness. The point is that the carryover device does not add to the processing burden; it adds only to the computational burden, which is easily handled by computers.

II

RULES AND COMMENTS

It seems useful at this point to set forth the actual rules we developed for use in the rural experiment, together with explanatory comments. The rules utilize both a three-period moving average[7] and a carryover.

1. Definitions.

a. "Net income" means income less allowable deductions. Net income may be either positive or negative.

b. "Average net income" means the arithmetical average of net income for three consecutive periods. The average is computed by algebraically adding the net incomes for the three periods and dividing the sum by three. Average net income can be either positive or negative.

c. "Breakeven point" is the amount of average net income which would reduce payments to zero.

Comments to Rule 1: The definitions of income and the enumeration of allowable deductions are outside the scope of this paper. It is sufficient to note that income is far more compendiously defined for negative income tax than for positive income tax purposes. For example,

gross income includes imputed rent on owner-occupied homes and a provision for annual consumption of 10 percent of the unit's usable capital. These innovations create accounting problems which are dealt with in Rule 6, infra. Many of the personal deductions granted under the positive income tax are not allowed.

Among the allowable deductions is a provision for deducting twice[8] the amount of positive income taxes paid, whether by withholding, declaration of estimated tax, or otherwise. The essential purpose is to reimburse federal, state, and local income taxes.[9] This might be done more directly by simply providing that taxes paid should be added to the basic payment prior to deduction of 50 percent of net income. However, it proved to be more convenient in defining the breakeven point and in drafting carryover provisions to treat taxes as a deduction. A double deduction is required because allowing only a single deduction would have the effect (under a 50 percent negative tax rate) of reimbursing only half the taxes paid.[10] Any refunds of income taxes must be included in income (after being doubled) in order to prevent excessive reimbursement.

The computations required by Rule 1 are simple. If net income for the three periods averaged is minus $300, minus $600, and positive $150, average net income would be a negative $250 (i.e., 1/3 of the algebraic sum of -300, -600, and +150).

The breakeven point is also easy to compute. If the "basic allowance" in a period is $250 and the tax rate is 50 percent, the breakeven point would be $500. The meaning of a 50 percent tax rate is that payments are reduced by one-half of income. Therefore, when income reached

$500, the payment would be zero. A breakeven point is needed as a measuring rod against income to determine whether a carryover has been created, as well as to measure the consumption of the carryover in subsequent periods.

As some commentators have noted,[11] it is possible to conceive of two breakeven points. The "first" breakeven point is the level of income at which the payment would be zero if there were no reimbursement of positive tax. The "second" breakeven point is the level of income at which the payment would be zero, assuming that taxes are reimbursed. In the range of incomes between the two breakeven points, the negative tax payment will be less than the positive taxes paid out; the sole function of the negative tax program in that range would be to offset part of the unit's positive tax burden. In other words, if the plan fully reimburses income taxes, then, at the first breakeven point, the negative tax payment will be equal to the positive tax payment. At the second breakeven point, the negative tax payment would be zero.[12]

The negative income tax plan to be used in the rural experiment does fully reimburse income taxes. Hence the first breakeven point is of no particular significance. The second breakeven point is the significant one and the one utilized in these rules as a measuring rod against income to determine whether a positive carryover has arisen. All further references to a breakeven point mean the second breakeven point.

The definition and computation of the breakeven point is greatly simplified by treating taxes paid as a double deduction (the "double deduction approach") rather than ignoring taxes in the calculation of

net income and then adding them on to the payment ("the reimbursement approach"). The complexity is created by the fact that the amount of positive tax may vary sharply for the same amount of income as defined for negative tax purposes. Whether the unit files separately, jointly, or as head of household; whether it claims the minimum standard deduction or itemizes deductions; how many personal exemptions can be claimed (which is based on the number of dependents and whether anyone is over 65 or blind)--all these factors and others cause positive tax on the same amount of income to differ.[13] Consequently, it is not possible to state in advance what the breakeven point will be if it is based on pre-tax income, as it is under the reimbursement approach. Nor will it be obvious from the amount of pre-tax income whether the unit is over the breakeven point, thus creating a positive carryover, or whether the unit is under the breakeven point, thus being entitled to payment.

The definition of the breakeven point under the double deduction approach is simple. It is the basic allowance times the reciprocal of the negative tax rate. For example, assuming a basic allowance of $250 and a negative tax rate of 50 percent, the breakeven point is $500. It will be immediately clear whether net income is above or below the breakeven point.

As suggested above, the definition of breakeven point under the reimbursement approach is, in contrast, most awkward. It is that amount of pre-tax income which will generate positive taxes such that the taxes, plus the basic allowance, equal one-half of income. And it will be impossible to prepare in advance a schedule of breakeven points since they will vary for each unit.

Perhaps an example will clarify the foregoing. Assume a basic allowance of $250 and a 50 percent negative tax rate. Assume net income (before taxes) is $520 and taxes are $30. Under either approach, the unit is entitled to a payment of $20. Under the double deduction approach income is $460 (pre-tax income--$520--less $60--twice the amount of taxes paid). It is immediately apparent that income is below the breakeven point of $500. Under the reimbursement approach, it is not immediately obvious from the income level of $520 (without some further arithmetic) that the unit is below the breakeven point. In fact it cannot be ascertained from these figures alone just what the breakeven point would be, except that, for this unit, it is above $520.

2. The accounting period (sometimes referred to as "the period") is four weeks.

Comment: It seems convenient to utilize a reporting period which corresponds to the pay period of employees. This is more apt to be weekly or bi-weekly than monthly; hence these rules utilize an accounting period based on weeks. There will be about 13 periods in the calender year rather than the 12 used in examples earlier in this paper. The accounting periods will not fit perfectly into the calender year (52 weeks is only 364 days).

3. Net income of the preceding period will be reported every four weeks. Payments will be made every two weeks.

4. Payments will be based on average net income for the preceding three periods. Carryovers will be added to or subtracted from average net income as provided in Rule 9.

5. Income and deductions will be reported under the same method of accounting used for positive income tax purposes. If no positive income tax returns have been

> filed, the cash receipts and disbursements method shall be employed. Net income from a trade or business (other than as an employee) may (but need not) be computed and reported once a year when the federal income tax return reporting such net income is filed (or would be filed if taxes were payable). Net income from a trade or business, if reported once a year, must be reported at the same time every year. Such net income shall be divided into thirteen equal parts, one of which will be assigned to the period in which the calculation is made and one of which will be assigned to each of the next 12 periods.

Comment: Most units will be composed of persons who have always used the cash method of accounting; however, there may be some small tradesmen who use the accrual method for positive income tax purposes. It seems desirable to permit such persons to use the same method for negative tax purposes, particularly since they may well be reporting annually under this rule. In a unit with a member using accrual accounting, there may also be a wage earner who is on the cash method; the simplest approach is to let everyone in the unit report on the same basis used for positive tax purposes.

The reason for permitting the reporting of income from a trade or business (other than as an employee) once a year is to simplify bookkeeping. Small tradesmen probably do not close their books any more frequently than required for positive income tax purposes. The disadvantage of the annual accounting approach, however, is that it is quite unresponsive to need. Income in January 1969 may not be reported until April 15, 1970. Thus it will be reflected in the payment level for the first time 15 months after receipt. Nevertheless, the rule seems a necessary compromise with practicality.

6. Income or deductions resulting from:

a. The computation of imputed rent from an owner-occupied dwelling;

b. The computation of capital consumption, or;

c. Depreciation or amortization of assets used in a trade or business (which does not report annually under Rule 5),

Shall be divided into 13 equal parts, one of which will be assigned to the period in which the calculation is made and one of which will be assigned to each succeeding period until a recomputation is made. Such computations shall be made as of the beginning of the experiment and whenever a new unit is formed. Said computations shall be repeated not later than one year after the earlier computation on such date as the administrator shall determine (and on a corresponding date in succeeding years).

The items described in Rules 5 and 6 share a common trait--although they are enjoyed or suffered constantly, our accounting provisions cause them to be reported in an annual lump. These items--namely net income from annual reporting of a trade or business, imputed rent, capital consumption income, and depreciation deductions--might be accounted for in two different ways. They might simply be treated as the income or deduction of the period in which the calculation happens to be made. This might create a carryover which would be consumed sometime during succeeding periods. The alternative--which we have employed--is to pro rate the amounts into the calculation period plus succeeding periods. This seems a more accurate reflection of reality since the items are being enjoyed or suffered continuously, not in a lump. It would seem unrealistic, for example, to create a positive carryover from capital consumption which might reduce payments to zero in the calculation period and in, say, three subsequent periods and which would be ignored after the carryover runs out.

7. A "positive carryover" is computed by subtracting the breakeven point from average net income (after any negative carryover is first subtracted from average net income).

Comment: The computation of a positive carryover may be illustrated as follows: Suppose average net income is $800 and there is a $100 negative carryover. If the breakeven point is $500, a positive carryover of $200 is created[14] and no payments would be made to the unit. Note that there could never be both a positive and a negative carryover carried into a single period, since the two would have offset each other in a prior period.

8. A "negative carryover" is created if average net income (after any positive carryover is first added to average net income) is a negative figure.

9. A positive or negative carryover is carried forward to the next succeeding period and added to or subtracted from average net income. If the sum again exceeds the breakeven point, in the case of a positive carryover, or the difference again is negative in the case of a negative carryover the portion of the carryover not used to bring average net income up to the breakeven point or down to zero shall be carried forward in the same manner to the next succeeding periods. No carryover may be carried forward for more than 12 periods following the period in which it first arose. A carryover is deemed to arise in the most recent period of the three periods averaged under Rule 4.

Comment to Rule 9: We have already pointed out how a positive carryover can be likened to a savings account. Whenever income falls below the breakeven point, the unit is deemed to draw from the savings account enough money to bring income up to the breakeven point. In the case of a negative carryover, the unit hypothetically incurred debts when the carryover arose. It must allocate current income to pay the debts. Therefore, it is entitled to a payment notwithstanding its current income.

We have provided that a carryover expires after one year (i.e., after the period in which it arose plus the succeeding twelve periods). The carryover thus equalizes the positions of those with seasonal employment and those with steady jobs producing the same annual income. A longer expiration period would equalize the positions of those whose incomes fluctuate from year to year (such as farmers) and those with a steady income year after year.

Thus a longer expiration period would improve the plan's performance in treating equally persons with the same long-term income. However, there are substantial drawbacks to lengthening the expiration period. One is, of course, the bookkeeping problem of maintaining carryover accounts over a long period of time--as well as explaining to recipients why they are receiving no benefits. Another problem with a very long carryover period is that the assumption underlying the positive carryover concept--i.e., that the family will conserve funds from the high income period--tends to become unrealistic. Imagine, for example, a family with a steady income above the breakeven point whose income drops permanently to zero. Such a family is not likely to have set aside substantial sums for the lean period and may well become needy fairly soon. Even in the case of the person receiving a large nonrecurring payment, such as a recovery for a disabling injury, it appears unrealistic to assume that the family can budget the amount received to meet day-to-day needs far in the future. Thus, as the carryover period lengthens, it becomes more difficult to maintain that total income during that period is the most accurate indication of need. Similarly, the assumptions underlying the negative carryover

become dubious as the lifetime of the carryover lengthens. Debts resulting from the loss period will eventually be paid off, compromised, or discharged in bankruptcy. Thus, all things considered, we felt that one year was a reasonable compromise.

Of course, in some cases, income over the breakeven point will be turned into assets which survive the expiration of the carryover. This windfall, will in part, be offset by a capital consumption provision which annually treats as income one-tenth of total capital (after certain exemptions, primarily for homes, business assets, and personal items, all within specified dollar limits).

Several technical points about Rule 9 might be noted. We provide that the carryover is added to or subtracted from average net income--not added or subtracted from the sum of the net incomes of the three periods before dividing by three. The latter approach would clearly be wrong. The positive carryover was computed by subtracting the breakeven point from an averaged figure (not from the sum of the figures before dividing by three); if the carryover were added to the sum of the net incomes of the three periods before dividing by three, the effect would be to dilute by two-thirds the effect of the carryover in reducing benefit payments. The same is true of a negative carryover, which arises because <u>average</u> net income was negative.

Finally, the rules provide that a carryover will "arise" in the most recent of the three periods averaged. For example, assume that net income in five consecutive periods is $400, $400, $1300, $700, and $100. Average net income in period 3 would be $700 (1/3 of $400 + 400 + 1300). If the breakeven point were $500, a $200 positive carryover

would be created and would be viewed as arising in the third of the three periods averaged. Average net income in period 4 would be $800 (1/3 of 400 + 1300 + 700) and a $300 carryover would arise from period 4. Average net income in period 5 would be $700 (1/3 of 1300 + 700 + 100) and a $200 carryover would arise in period 5. These carryovers would expire (if not used up in intervening periods) after the 15th, 16th, and 17th periods respectively.

> 10. If a carryover is available from more than one preceding period, it shall be taken from the earliest available period.

Comment: There are at least three defensible procedures for determining the order in which carryovers are utilized. One approach--which is used in Rule 10--might be called FIFO (meaning first-in, first-out--after one of the inventory procedures used for positive tax purposes). The notion is that the first carryovers created are the first ones used. From the recipient's point of view, this is the least favorable approach to positive carryovers because it is in his interest to have a positive carryover expire rather than be utilized. The FIFO approach (used in Rule 10) would, by using the oldest carryovers first, minimize the chances of expiration. By the same token, of course, FIFO represents the most favorable approach to negative carryovers from the recipient's viewpoint.

A second rational approach would be LIFO (last-in, first-out), in which the last carryover created would be the first one used. It maximizes the possibility of the expiration of a carryover. The FIFO and LIFO approaches can be illustrated in this example: Suppose positive carryovers of $500 and $750 arise in periods 1 and 2 respectively and

assume a $500 breakeven point, a 50 percent rate and a $250 basic allowance. Then assume that income is at the breakeven point until the 12th, 13th, and 14th periods, when income is zero. If FIFO is used, the entire carryover from period 1 will be utilized in period 12; $500 of the carryover from period 2 will be utilized in period 13, and $250 in period 14. Thus there will be payments of zero for periods 12 and 13 and $125 for period 14. On the other hand, if LIFO were used, the payments in periods 12 and 13 would still be zero, but the payment in period 14 would be $250---the basic allowance. This is because the period 2 carryover is used first---$500 in period 12 and $250 in period 13. The period 1 carryover is used to the extent of $250 in period 13, but the remaining $250 of the period 1 carryover then expires and no carryover is available for period 14.

Still a third approach to this problem might be called the "ratable drawdown." This approach would use a pro rata part of all available carryovers in the periods to which they can be carried. For example, assume again the example employed in the preceding paragraph in which carryovers of $500 from period 1 and $750 from period 2 are available. The $500 of carryover utilized in both periods 12 and 13 would be drawn 2/5 from the $500 carryover from period 12 ($200 in both periods) and $3/5^{15}$ from the carryforward from period 2 ($300 in both periods). Following period 13, the remaining carryforward from period 1 ($100) would expire and only the remaining carryover from period 2 ($150) would be available for use in period 14. Therefore, in period 14 the unit would be entitled to a payment of $175.

It is difficult to make a rational choice from among the three methods. We rejected the ratable drawdown approach, even though it seemed the fairest compromise, because it is complicated and difficult to explain to the recipients. Since a computer would be making the calculations, however, it would be feasible to use the ratable drawdown approach in spite of its difficulty. As between FIFO and LIFO, we selected FIFO as being more consistent with the assumptions underlying the carryover approach. Carryovers last one year, and then expire; the premise is that a unit can reasonably be expected to conserve for one year the assets generated by a high-income period.[16] By using the oldest carryover first, FIFO maximizes the chances that a positive carryover will be used during its one-year life expectancy when it is hypothetically available to be drawn on. LIFO, on the other hand, maximizes the chances that a positive carryforward will expire, even though it would have been used up if an additional positive carryover had not arisen in a later period. Such an expiration would be a windfall which FIFO would tend to prevent. By the same token, of course, FIFO maximizes the chances that a negative carryover will be used, rather than expire, which again seems consistent with equity.

> 11. For purposes of computing average net income under Rule 4, the income and deductions of the preceding three periods will be the income and deductions of persons who were members of the unit in the preceding period. Payments will be based upon family composition of the preceding period.

Comment: Among the most difficult choices involved in drafting a negative income tax plan are those encountered in defining the family unit. Once these decisions have been made, the accounting provisions must be integrated with the family rules. Rules 11 and 12 are designed for this purpose. Rule 11 provides that, in the event a unit

in size (for example, by a marriage) or splits up (for example, by the departure of a son), the income and deductions of the three periods averaged will be the income and deductions of the persons who were members of the unit in the preceding period. In other words, a change in the family unit would immediately be reflected in the calculation of benefits. Thus suppose that, in each of periods 1, 2, and 3, the family's income was $300, of which $100 was attributable to the earnings of a son. In period 4 the son leaves and the family's income drops to $200. The average income for the family for periods 2, 3, and 4 would be only $200 since the son's departure in period 4 requires readjustment of the unit's income in the 3 periods averaged. The son, if he qualifies for benefits, would report income for each of the three preceding periods of $100.

> 12. Upon initial enrollment, or whenever a new unit increases or decreases in size, carryovers arising from earlier periods will be computed by examining income and deductions for the preceding 12 periods, as though these rules had applied to such periods. In the event that a carryover arising in the preceding 12 periods cannot readily be allocated to the appropriate individual, it shall be allocated to the filer in the unit which reported the carryover.

Comment: At the beginning of the experiment, it is necessary to trace the financial history of each family unit for the preceding 12 periods to find out whether there is a carryover which must be taken into account in computing benefits. The same analysis is required if a unit increases in size or splits up, since a carryover must be allocated to the appropriate individual who may be joining or leaving the group. The administrative effort required to reconstruct and analyze earlier periods is a serious drawback of the carryover method. We feel

these administrative costs are tolerable when compared to the benefits of the carryover system described in Section I.

We further provide that, if a carryover cannot be conveniently allocated to the appropriate individual i.e., the person primarily responsible for the activities which generated the carryover, it will be allocated to the head of the unit reporting the carryover. The theory for this approach is that he is likely to have had control over the family's finances. Normally, however, it should be easy to decide who is responsible for the carryover since it would typically be attributable to services or to property or a business owned by a particular person within the unit.

Another defensible approach to the problem of allocation of carryovers would be to pro rate them between the two units. For example, suppose that, in a family of a husband, wife, son, and daughter, the father's work as a farm laborer generated an income carryover. Assume further that the son leaves home. One might divide the carryover 1/4 to the son and 3/4 to the remainder of the family. The argument in favor of this approach would be that the negative income tax treats the family as a unit. This assumes that income and benefits are shared. Thus a carryover--which is attributable to income or deductions of an earlier period--should also be shared between family members without regard to who was responsible for it. This approach would be administratively simpler in one respect--because it obviates the need to decide who was responsible for the carryover--but more complex in another respect since it multiplies the number of individuals who bear carryovers with them when they change units.

We rejected the pro ration approach because we think it makes more sense to allocate the carryover to the person responsible for it. The assumption of sharing, which is useful when the unit is together, makes much less sense when it splits up. In the example in the previous paragraph, it seems more reasonable to assume that the "nest egg" represented by the carryover is in the control of the father who earned it. If the son qualifies as a new unit, it would be unjust to reduce his payments by reason of a carryover which represents resources to which he has no access. Moreover, the carryover is necessary to properly reflect the income of the unit headed by the father, who probably will continue to earn seasonally. If the son takes a job as an urban laborer with a steady income, a positive carryover is not appropriate in calculating his benefit level.

Obviously, it will not be feasible to decide in each case whether it would be more appropriate to utilize the responsibility model (i.e. Rule 12) or the pro ration model (explained in the previous paragraph). Our choice represents simply a guess that the responsibility model will be realistic more often than the sharing model.

Footnotes

[1]By "traditional welfare programs" we mean programs such as AFDC and general assistance that are designed purely to relieve poverty; not social welfare programs such as OASDHI.

[2]William A. Klien, "Some Basic Problems of Negative Income Taxation," *Wisconsin Law Review* (Summer 1966) pp. 789-797.

[3]Of course, we do not know to what extent, if any, this phenomenon would occur. That is why a twelve-month moving average accounting system is one of the experimental variables in the urban experiment.

[4]The device also works with other reporting and recomputation periods; it becomes unnecessary, however, with an annual, or a twelve-month moving average system. An annual system, by hypothesis, will even out seasonal fluctuation. The carryover concept could be employed in connection with an annual system if there were concern with annual fluctuations.

[5]If the carryover were used to even out annual fluctuations then, like the net operating loss or charitable contribution carryovers under the positive income tax, it should have a life of several years.

[6]This is also true when there is a deduction carryover but the amount is not great enough to reduce current income below the breakeven point. If the deduction carryover equals or exceeds current income, then payments will continue in spite of an increase in current income, but that result is precisely what one wants, in the interests of fairness.

[7]The period used in these rules is four weeks rather than one month (unlike the examples in Section I). See the comment to Rule 2. The rural rules also contain a one-month plan with a carryover, for comparative evaluation purposes.

[8]If a negative tax rate other than a 50 percent is used, the multiple for the income tax deduction should be the reciprocal of the negative tax rate.

[9]The reason for reimbursing taxes is to preserve the overall 50 percent tax rate. If there is a 50 percent negative income tax rate plus a 14 percent positive income tax rate, the unit winds up with less than 50¢ of each dollar earned if taxes are not reimbursed. Therefore the incentive effect of the plan is altered from that intended.

[10]One might rationally propose a system which reimbursed only half the income taxes rather than the full amount. Such a system would be consistent with preserving incentives, see note 8, supra, if the recipient bases his decisions to work on "take-home" pay rather than pre-tax pay.

For example, suppose that, in the first period, a family earns $50 and pays income tax of $8; the take-home pay is $42. In the second period, it earns $60 and pays income tax of $10; the take-home pay is $50. Under the plan explained herein, which reimburses all income taxes, a benefit of $233 would be paid in the first period and $230 in the second period. (This assumes a $250 basic allowance and a 50 percent negative income tax rate.) This means that, in the first period, the family retains a total of $275--$233 benefit plus $42 take-home pay. In the second period, the family retains $280--$230 benefit plus $50 take-home pay. Consequently, from $10 additional pre-tax income, $5 was retained. But of $8 additional take-home pay, $5 was retained. Thus the negative income tax rate is only 37.5 percent (i.e $3 out of $8), rather than 50 percent if the familyvviews take-home pay as the relevant standard on which to base decisions to work. Thus the plan we propose may not be accurately testing the incentive effects of a 50 percent tax rate.

If we reimbursed only half of income taxes paid, rather than the entire amount, the benefit in the first period would be $229 and in the second period would be $225. Thus in the first period, the family would retain $271--$229 benefit plus $42 take-home pay. In the second period, the family would retain $275--$225 benefit plus $50 take-home pay. Thus, of an additional $8 in take-home pay, $4 was retained. But, of an additional $10 in pre-tax pay, only $4 was retained. Consequently, the negative income tax rate would be 60 percent (i.e. $6 out of $10) if the family views pre-tax income as the relevant standard on which to base decisions to work. Such a plan would be less expensive than the one we propose, but it might contain unacceptable disincentives to work.

[11]Sheldon S. Cohen, "Administrative Aspects of a Negative Income Tax," *University of Pennsylvania Law Review* Vol. 117, No. 5 (March 1969), pp. 681-682; Comment, A Model Negative Income Tax Statute, Yale Law Journal, Vol. 78, No. 2, (December 1968), p. 271.

[12]A negative income tax might provide for the reimbursement of positive taxes only up to the first breakeven point. However, assuming that some positive income tax was in fact being paid at the first breakeven point, the result would be a sharp discontinuity in the unit's position vis-a-vis the government. Suppose that, at the first breakeven point, the unit was paying $300 of income tax per annum; the unit would therefore receive $300 in benefits. If taxes were reimbursed only up to the first breakeven point and if the unit earned one additional dollar, it would receive no benefit and would be paying out more than $300 in taxes. This "notch" in payments seems highly undesirable since it provides a disincentive to earn that extra dollar.

[13]See Internal Revenue Code of 1954 sections 1(a), 1(b), 2 (separate, joint, head of household returns); 141(c) (minimum standard deduction); 161-182 (personal deductions); and 151-54 (exemptions).

[14]Note that the carryover is applied after, not before, the averaging process is completed. This is explained in the comment to Rule 8, infra.

[15]In other words, $1250 of carryover is available; 2/5 of it ($500) arises from period 1 and 3/5 of it ($750) arises from period 2.

[16]In the case of a negative carryover, the premise is that debts insured as a result of the loss period are still being paid off.