INCOME AVERAGING: EVIDENCE ON BENEFITS AND UTILIZATION

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ABSTRACT

In 1964, the Congress passed an income averaging law to alleviate the burden which a progressive income tax places on taxpayers with fluctuating incomes. Using a panel file of U.S. Treasury Income Tax Return data, the authors find that the benefits of this law have not accrued to the targeted population and also that new sources of inequity have been introduced by the law.

INCOME AVERAGING -- EVIDENCE ON BENEFITS AND UTILIZATION

Under a progressive income tax, taxpayers with fluctuating incomes are subject to relatively higher tax rates than are those with more stable incomes of equal size.1/ To alleviate the added burden placed on those with greater fluctuations, Congress passed in 1964, and amended in 1969, an income-averaging law which grants tax relief to a limited number of filers.

Since its introduction into the tax laws, averaging has been increasingly utilized by larger and larger percentages of taxpayers. Yet despite the growing importance of its use, literature on the subject of averaging has remained sparse, primarily because of the lack of available data to study averagers. The few studies that do exist often suggest improvements and alterations in the law, yet the effect of such changes on the number and characteristics of filers is seldom provided.

A five-year panel study of U.S. income tax returns now provides data appropriate to generate evidence on characteristics of taxpayers that utilize this income-averaging option. This paper examines the extent to which benefits of the existing income-averaging law, and some commonly proposed amendments to the law, accrue to various categories of beneficiaries, especially those with substantial fluctuations in income.

In Section 1 the current law is described and data are provided on the increase in the number of taxpayers electing income-averaging over time. Section 2 contains a brief description of the five year panel study, notes some of its limitations, and provides summary statistics on characteristics of members of the sample. Section 3 examines in detail the characteristics of averagers, qualified nonelectors, and other non-averagers, with particular attention to characteristics of averagers in years subsequent to averaging and to growth rates of the various components of income for averagers. Section 4 details the impact of two proposed changes in the income-averaging law -- the inclusion of downside as well as upside averaging, and the elimination of any minimum amount of averagable income -- upon the number of persons eligible to average. Section 5 examines the impact on eligibility for income-averaging of other tax and non-tax parameters such as inflation and the relationship of taxable income to economic income. Finally, Section 6 discusses whether or not the limitations of the current income-averaging law can be eliminated without adding further complexity to the Internal Revenue Code.

I. Background

In 1964 Congress adopted the first broad income-averaging provision applicable to income from most sources. Essentially, this provision allowed lower marginal tax rates to apply to a portion of this years income in excess of prior years' income. Specifically, "averagable income", or income eligible for averaging, was defined to equal the portion of current adjusted taxable income which exceeded average base period income, while average base period income was defined as 133 percent of average adjusted taxable income in the previous four years. Averagable income was also required to be $3,000 or greater. Total tax equalled tax on average base period income plus the tax on averagable income. The tax on averagable income was then computed by finding the tax on average base period income plus one-fifth of "averagable income", subtracting the tax on average base period income, and multiplying that result by five. In effect, the tax brackets were made five times as wide for averagable income.

The Tax Reform Act of 1969 further liberalized the provisions for income averaging by lowering the floor for non-averagable income, i.e. average base period income, from 133 percent to 120 percent of average taxable income for the previous four years and by permitting long-term capital gains to be included in income eligible for averaging. 2/

The combined effect of the 1964 law and the 1969 amendments was to allow averaging for growth in income without distinction as to source of income and to apply a common five year period to the averaging of income. Prior to 1964, relief was allowed only for certain types of income attributable to efforts made prior to the current tax year. For instance, in the case of inventions or artistic work, the income could be spread back to the period over which the work was performed.

Table 1 presents data on the use of the income averaging provisions from 1964 to 1974.

Since the introduction of an averaging provision in 1964, there has been a substantial increase in the proportion of all filers utilizing these provisions. This proportion has grown eight-fold in eleven years and reached 3.29% by 1974. As might be expected, the largest increase occured in 1970, the first year in which the amendments in the 1969 Tax Act became fully effective. However, other prominent increases came in recent years even with no changes in the law. This growth in the use of the averaging provision over time may be attributed to several factors, primarily growth in nominal income and greater knowledge and familiarity with the law. The particular impact which growth of income has on the use of income averaging will be discussed in the text of this paper.

II. The Panel Study of Federal Individual Income Tax Filers

To analyze the characteristics of income tax averagers, this study used the Treasury Panel Study of Income Tax

Table 1

Returns Electing Income Averaging, 1964-1973

Year	Number of Returns (Thousands)	Percentage Growth from Previous Year (.....%.....)	Percent of All Returns (...%...)	Adjusted Gross Income ($ Millions)	Tax Savings ($ Millions)	Average Tax Savings (...$...)
1964	246	-	0.38%	$ 7,218	$133	$539
1965	306	+24.4	0.45	9,670	171	558
1966	382	+24.8	0.54	12,505	210	550
1967	442	+15.7	0.74	15,065	253	572
1968	528	+19.5	0.72	17,490	291	552
1969	593	+12.3	0.78	18,960	294	495
1970	1,006	+69.6	1.35	31,464	536	533
1971	1,191	+18.4	1.60	39,138	681	572
1972	1,383	+16.1	1.78	47,023	897	649
1973	2,174	+57.2	2.69	70,131	1,418	652
1974	2,745	+26.3	3.29	89,340	1,710	622

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Source: Statistics of Income

Filers. This panel represents a 1 in 5,000 sample of all individual tax returns for the years 1967 through 1971. The panel was chosen by the last four digits of individuals' Social Security Numbers and the number of returns filed remains fairly constant at about 14,500.

Since this study compares the effect of various averaging provisions on the number of taxpayers eligible to average, it is first necessary to limit the sample to the approximately 10,000 filers for whom taxable income in all five years is known. Unfortunately, it is impossible to know the reasons for which the remaining filers drop from the sample in any given year. It may be due to death, to retirement, to family reorganizations,3/ or merely to inability to trace the principal filer on tax records from year to year. However, note that non-liability for taxes will not necessarily remove someone from the panel file, since, as long as some tax is withheld during any portion of the year, a tax return will usually be filed.

Two further restrictions in the sample are sometimes necessary. Since it is impossible to trace the portion of taxable income attributable to the principle filer, it is also impossible to determine eligibility for a filer with a change in marital status. 8,338 records had no change in filing status over the five years. Secondly, whenever the subsample of eligible filers is to be examined, the sample file is further reduced by eliminating filers under the age of 25 with less than $3,000 in taxable income in any year. This age and income limitation serves as a proxy for the support test in the current law. 4/

Statistics reported in this paper will therefore be based upon various subsamples of the original sample, e.g. a subsample of returns with no change in marital status who were present in the file for all five years, and who met a proxy for the support test in the current law. The subsamples cannot be considered as purely representative of the population as a whole, and therefore no estimates reported here will be stated as population estimates. Nonetheless, a large portion of the population sample is represented in the data comparisons, and the characteristics of the subsamples (especially in relationship to income averaging) should depict similar characteristics in the population.

III. Characteristics of Averagers

The intent of the income averaging law is to correct for the inequities created by progressive taxation of fluctuating incomes; it is not meant to introduce any new inequities. New inequity, however, can be created when the benefits of income averaging are not received by the targeted population, or when differential patterns of utilization tend to provide varying benefits to individuals otherwise equally qualified to average.

This section will detail the characteristics of averagers, those eligible but not electing to average, and other nonaveragers. Eligibility is determined by use of the income eligibility requirement of current law, 5/ by satisfaction of the proxy for the support test, and by the requirement that tax savings from averaging be greater than zero. 6/

Table 2 illustrates the characteristics 7/ of all income averagers in the sample over the years 1967 to 1971.

Table 2

Characteristics of Averagers
in the Panel File

	1967	1968	1969	1970	1971
Number of Averagers	84	107	111	198	231
Percent of Total Sample	0.60%	0.73%	0.75%	1.35%	1.56%
Average Amount of Tax Savings	$ 747	$ 631	$ 319	$ 588	$ 501
Age - Averager	45	43	41	47	46
Age - Non-Averager	36	37	38	39	40
Race of Averager:					
White	78	102	110	191	224
Black	1	4	0	4	2
Other	0	1	0	1	2
Unknown	5	0	1	2	3
AGI - Averager	$ 34,004	$ 33,427	$ 28,704	$ 31,562	$ 31,093
AGI - Non-Averager	$ 5,129	$ 5,596	$ 6,110	$ 6,340	$ 6,740

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Compared to the total sample, a much greater proportion of averagers are white. In addition, the averager is a few years older than the population average, and has adjusted gross income in the averaging year 5 times larger than the adjusted gross income of non-averagers. His average tax savings was $501 in 1971.

Distributional breakdowns of eligible filers by age, race, and adjusted gross income are provided in Table 3. This table also separates eligible filers electing to average (electors) 8/ from those eligible but not electing to average (eligible nonelectors). In total, only 31.1 percent of all eligible averagers actually elected to average.

Between the ages of 30 and 70, there are few differences in the proportion of eligibles electing to average (29.5 - 36.7 percent). Whether the smaller percentage (19.7 percent) of eligibles under 30 electing to average is due to a learning process, differences in income, low potential tax savings from averaging or an inadequate proxy for the support test cannot be ascertained. The increase in the rate of

Table 3

Characteristics of Taxpayers*
Eligible for Income Averaging
-1971-

	Total Eligible	Number Electing	Percentage Electing	Average Savings for Electors	Average Potential Savings for Non-Electors
Age of Principal Filer					
30 or less	61	12	19.7	$ 217	$ 81
30 - 40	138	44	31.9	416	140
40 - 50	193	57	29.5	435	107
50 - 60	117	37	31.6	669	86
60 - 70	49	18	36.7	444	150
70 - 80	23	12	52.2	986	214
Over 80	10	4	40.0	412	110
All Ages	591	184	31.1	499	114
Race of Principal Filer					
White	596	182	30.5	502	109
Non-White	24	1	4.2	121	194
Unknown	2	1	50.0	454	98
Total	591	184	31.1	499	114
Adjusted Gross Income-1971					
Less than $5,000	0	0	-	-	-
5,000 - 6,999	4	0	0.0	-	71
7,000 - 9,999	35	1	2.9	58	70
10,000 - 14,999	134	23	17.2	117	62
15,000 - 19,999	151	31	20.5	129	71
20,000 - 49,999	236	104	44.1	338	176
50,000 - 99,999	25	20	80.0	1,933	751
100,000 or more	6	5	83.3	2,257	1,153
All Incomes	591	184	31.1	499	114

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* Panel returns present all five years with no change in marital status and meeting proxy for support test in the current law.

election by eligible taxpayers over the age of 70 might be explained by the higher than average tax savings which this group obtains from averaging.

Differences by race are more significant. Not only do non-whites comprise an exceedingly small portion (4.1%) of those eligible to average but they are almost non-existent in the sample of electors. Even though the sample size for non-whites is small, the differences are still statistically significant. The eligibility factor might be explained by the lower-than-average income and by the lower-than-average variance in income of nonwhites. 9/ The low election rate of non-whites (4.2%) relative to whites (32.2%) is not so easy to explain, except that a similarly low election rate is exhibited by tax filers with adjusted gross income less than $10,000 in 1971. However, foregone tax savings by non-electors among the non-whites is higher than that of the low income class, so that other factors may be involved.

The differences in the proportion of eligible taxpayers who elect to average by income level can be explained by several factors. First, it is less likely that low income filers use outside tax preparers to prepare their returns. Secondly, the complication involved in calculating taxes under income averaging can be more serious for those without adequate record-keeping or those with less education, a factor highly correlated with income. Finally, the potential savings for low-income individuals are likely to be smaller. Table 3 demonstrates that average realized savings for electors ($499) is over four times as large as the potential gains of eligible non-electors ($114).

Note the sharp increase in numbers of both eligibles and electors as adjusted gross income increases. This increase in eligibility is primarily due to the $3,000 minimum averagable income requirement of the law. Compare a tax filer with income of $10,000 in the year of filing to one with $50,000. The former must have an increase in taxable income of at least 71 percent over average taxable income in the previous four years to meet the $3,000 requirement, while the latter needs to have an increase of only 28 percent. As income rises further, the required increase falls to 20 percent and the $3,000 limitation becomes of trifling importance. Thus, the $3,000 limitation substantially limits eligibility for low income taxpayers but not for those with high incomes. A more detailed discussion of this aspect of the law is presented in Section V.

The principal justification for upside averaging is either that income in the averaging year represents an anomaly, a sizable payment in one year which is due to past efforts, or that this income is in large part composed of transitory, not permanent income, i.e., that it is an above average observation of a long-run income with large annual fluctuations. The sample file allows several tests of whether averagers display these characteristics.

First, if high income in the year of averaging truly represents an extraordinary amount of transitory income, then it would be unlikely that the averager would repeat averaging in the next year and even more unlikely in subsequent years. In fact, one would expect that his income might decline sharply in the year following the one in which he averaged. However, as demonstrated in Table 4, of those filers who averaged in any of the years 1967 through 1970, 34 percent averaged again in the following year. The pattern continues for those who average more than one year in succession. About 43 percent of filers utilizing the averaging provision in two consecutive years between 1967 and 1970 also elected averaging in a third consecutive year. Similarly, 32 percent of those who averaged three years in succession averaged again in the fourth year. 10/ Clearly, for these people, the growth in income which made averaging possible was due not to unusual circumstances but rather to sustained growth in income.

Repetition of income averaging from year-to-year implies that income grew over the period in which averaging was elected. However, the growth in income of averagers does not mean that their fluctuations in income differ substantially from those of non-averagers. Nor does it mean that averagers' fluctuations represent unstable or irregular realizations of income.

One method of comparing relative variations in income is to use the coefficient of variation -- the standard deviation of income divided by the mean. However, as mentioned above, deviation from a simple five-year mean may be caused by rapid growth as well as fluctuating income. Therefore, in measuring deviations or variances in income for averagers, it is also desirable to distinguish between growth in income and random deviations from that pattern of growth. Accordingly, for each member of the panel, income was regressed against time. This regression yielded a trend line which closely fit the pattern of income growth or decline for the panel member.11/ The standard deviation around the expected value of income or the trend line was then calculated. This deviation divided by mean income is a measure of the randomness of income relative to actual income. Table 5 provides the data on the coefficient of variation around both mean income and trend income for averagers and non-averagers. As would be expected the variation in income is generally larger for the averagers. However, above the categories with the least income variation, the percent distributions are not strikingly different. When trend in incomes is explicitly taken into account, the two distributions become more similar. The large number of averagers in the lower categories indicates that many averagers have experienced steady, albeit rapid, growth in income. Under either measure of variation, an overwhelming number of non-averagers demonstrate fluctuations in income greater than or equal to those of averagers.

Another comparison of averagers and non-averagers is provided by separating the panel returns into taxpayers electing and not electing averaging in a year and examining changes in their taxable incomes for the following year. If averaging mainly benefits taxpayers with fluctuating incomes, then taxpayers electing averaging will have either a decrease in income or a slower rate of increase in income than taxpayers not electing averaging.

For panel returns present all five years with no change in marital status, Table 6 gives the taxable income in 1970 and 1971 for returns electing and not electing averaging in 1970. 12/ Taxpayers electing averaging had a 7.7% decrease in taxable income between 1970 and 1971. Non-electing taxpayers had a 3.3% increase. For each income class except the $100,000 and over class, electing taxpayers had a smaller increase in income between 1970 and 1971 than did

Table 4

Examination of Repeat Averagers

	1967	1968	1969	1970	Total
Averaged in current year	84	107	111	198	500
Averaged in following year	32	33	38	67	170
Proportion of averagers who Averaged the next year	38.1%	30.8%	34.2%	33.8%	34.0%
Averaged in Third Consecutive Year	12	13	19	-	44
Proportion of Two Year Averagers Averaging Third Consecutive Year	37.5%	39.4%	50.0%	-	42.7%
Averaged in Fourth Consecutive Year	3	5		-	8
Proportion of Three Year Averagers Averaging Fourth Consecutive Year	25.0%	38.5%	-	-	32.0%

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Table 5

Income Averagers and Non-Averagers *
in 1971 by Coefficient of Variation in
Adjusted Gross Income for Five Years of the Panel

Coefficient of Variation	Normal				Corrected for Trend			
	Averagers		Non-Averagers		Averagers		Non-Averagers	
	Number	Cumulative Percent	Number	Cumulative Percent	Number	Cumulative Percent	Number	Cumulative Percent
0 - .10	0	0	1,557	19.1	48	25.5	4,292	52.7
.10 - .20	23	12.2	3,181	58.1	62	58.5	1,990	77.1
.20 - .30	51	39.4	1,451	75.9	28	73.4	893	88.0
.30 - .40	46	63.8	738	85.0	23	85.6	462	93.7
.40 - .50	19	73.9	423	90.1	7	89.4	208	96.3
.50 - .60	18	83.5	295	93.8	12	95.7	127	97.8
.60 - .70	12	89.9	213	96.4	5	98.4	73	98.7
.70 - .80	6	93.1	111	97.8	0	98.4	30	99.1
.80 - .90	5	95.7	66	98.6	0	98.4	18	99.3
.90 - 1.00	1	96.3	41	99.1	1	98.9	17	99.5
1.00 - 1.25	3	97.9	37	99.6	0	98.9	17	99.7
1.25 - 1.50	2	98.9	10	99.7	0	98.9	4	99.8
1.50 - 1.75	0	98.9	3	99.7	0	98.9	4	99.8
1.75 and over	2	100.0	24	100.0	2	100.0	15	100.0
TOTAL	188	100.0	8,150	100.0	188	100.0	8,150	100.0

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* Panel Returns present all five years with no change in marital status.

non-electing taxpayers. Given the small average amount of decrease for taxpayers electing averaging, apparently many averagers qualify because of a one-time quantum jump to a higher permanent income level.

Table 7 is the same as Table 6 except taxpayers are classified by date of birth instead of size of income. For taxpayers born before 1935, those electing averaging in 1970 had a smaller increase (or greater decrease) in income between 1970 and 1971 than those not electing averaging. However, for taxpayers born after 1934, the opposite is the case. Electing taxpayers had a greater increase in income than taxpayers not electing. The conclusion from Table 7 is that income averaging benefits many younger taxpayers with rapidly rising income.

Of course, to qualify for income averaging under the current law there <u>must</u> be growth in taxable income in the averaging year over the average of taxable income in the previous four years. In order to identify specific sources of growth, various components of income for income averagers in 1971 were examined. For each of nine components of

Table 6

Changes in Taxable Income for Electors and Non-electors by Adjusted Gross Income Class*

1970 Adjusted Gross Income Class ($000)	Taxpayers Electing Averaging in 1970: Number	Average Taxable Income, 1970	Average Taxable Income, 1971	Percent Change in Average Taxable Income	Taxpayers Not Electing Averaging in 1970: Number	Average Taxable Income, 1970	Average Taxable Income, 1971	Percent Change in Average Taxable Income
Taxable returns:								
0 - 5	0		0	-	1,040	$ 1,761	$ 1,850	5.1
5 - 10	3	$ 5,110	$ 1,974	-61.4	2,668	4,377	4,496	2.7
10 - 15	24	9,288	8,123	-12.5	2,235	7,929	7,959	0.4
15 - 20	32	13,136	13,337	1.5	846	11,864	12,128	2.2
20 - 25	34	16,647	17,277	3.8	305	15,842	16,583	4.7
25 - 30	19	20,427	16,331	-20.1	102	20,563	21,077	2.5
30 - 50	30	31,315	25,736	-17.8	96	28,713	29,716	3.5
50 - 100	15	52,397	45,439	-13.3	48	50,584	51,413	1.6
100 or more	7	111,802	115,782	3.6	10	132,777	128,878	- 2.9
Nontaxable returns:	0	0	---	-	824	26	886	3307.7
Total	164	25,126	23,197	- 7.7	8,174	6,696	6,914	3.3

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* Panel returns present all five years with no change in marital status.

Table 7

Changes in Taxable Income for Electors and
Non-electors by Date of Birth of Taxpayer*

Date of Birth	Taxpayers Electing Averaging in 1970: Number	Average Taxable Income, 1970	Average Taxable Income, 1971	Percent Change in Average Taxable Income	Taxpayers Not Electing Averaging in 1970: Number	Average Taxable Income, 1970	Average Taxable Income, 1971	Percent Change in Average Taxable Income
Taxable returns:								
1904 or before	18	$ 31,049	$ 27,291	- 12.1	532	$ 6,946	$ 6,579	- 5.3
1905 - 1909	10	53,131	39,070	- 26.5	556	7,029	6,375	- 9.3
1910 - 1914	16	27,511	25,341	- 7.9	703	8,538	8,741	2.4
1915 - 1919	20	19,164	17,578	- 8.3	821	9,550	9,626	0.8
1920 - 1924	28	21,206	17,949	- 15.4	886	9,005	9,544	6.0
1925 - 1929	23	21,110	20,707	- 1.9	870	8,364	8,659	3.5
1930 - 1934	21	30,851	30,709	- 0.5	722	7,513	7,968	6.1
1935 - 1939	20	18,530	19,848	7.1	736	6,827	7,157	4.8
1940 - 1971	8	13,659	16,234	18.9	1,524	4,960	5,042	1.7
Nontaxable returns:	0	---	---	---	824	26	886	3307.7
Total	164	25,126	23,107	- 8.0	8,174	6,696	6,914	3.3

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* Panel returns present all five years with no change in marital status.

income, Table 8 presents the distribution of averagers by increase in income for 1971 over average income from that source for the previous four years. Increases in wages and salaries are dominant; in fact, over 60 percent of all averagers had increases in wages and salaries of over $3,000. Other sources of growth are important to much smaller groups of averagers. The increase in net capital gains over losses exceeds $3,000 for only 14 percent of all averagers, while for business profits and losses the corresponding percentage is 15 percent. No other component of income exhibits a $3,000 increase for more than 10 percent of all averagers.

This section has demonstrated that averaging is confined to a subset of the taxpaying population that is predominantly white and, on average, slightly older, much richer, and with only slightly less stable income than the population as a whole. Many taxpayers eligible to average -- especially those in lower income and minority groups -- do not elect to do so. Of those who do elect, the majority have extraordinary growth only in wage and salary income. Clearly, then, the current income averaging provision for the most part does not provide benefits to those taxpayers

Table 8

Frequency of Occurrence of Extraordinary Growth From Specific Income Sources

--1971 Income Averagers--

Change in Income in 1971 From Average Income 1967-1970	Salaries and Wages #	Salaries and Wages Cum. %	Dividends before Exclusions #	Dividends before Exclusions Cum. %	Interest Received #	Interest Received Cum. %	Net Capital Gain/Loss #	Net Capital Gain/Loss Cum. %	Business Profits/ Loss #	Business Profits/ Loss Cum. %	Rent/ Royalty #	Rent/ Royalty Cum. %	Small Business Gain/Loss #	Small Business Gain/Loss Cum. %	Farm Gain/Loss #	Farm Gain/Loss Cum. %	Estate & Trust Gain/Loss #	Estate & Trust Gain/Loss Cum. %
0 or less	51	27.1	96	51.1	74	39.4	126	67.0	145	77.1	162	86.2	157	83.5	170	90.4	183	
0.1 - 1,000	10	32.5	64	85.1	84	84.0	26	80.9	12	83.5	20	96.8	- 7	87.2	6	93.6	3	
1,000 - 2,000	5	55.1	11	91.0	12	90.4	2	81.9	0	83.5	2	97.8	5	90.0	1	94.1	1	99.5
2,000 - 3,000	11	41.0	9	95.7	4	92.6	5	84.6	2	84.6	1	98.4	2	91.0	0	94.1	0	99.5
3,000 - 4,000	2	42.0	2	96.8	2	93.6	4	86.7	1	85.1	2	99.5	4	93.1	1	94.7	0	99.5
4,000 - 5,000	6	45.2	0	96.8	4	95.7	1	87.2	0	85.1	0	99.5	2	94.1	1	95.2	0	99.5
5,000 - 7,500	32	62.2	2	97.9	1	96.3	3	88.8	2	86.2	0	99.5	0	94.1	1	95.7	0	99.5
7,500 - 10,000	24	75.0	2	98.9	1	96.8	8	93.1	2	87.2	1	100.0	2	95.2	1	96.3	0	99.5
10,000 - 20,000	34	93.1	2	100.0	5	99.5	7	96.8	15	95.2	0	100.0	5	97.9	4	98.4	0	99.5
20,000 - 30,000	6	96.3	0	100.0	0	99.5	3	98.4	6	98.4	0	100.0	2	98.9	3	100.0	0	99.5
30,000 - 50,000	5	98.9	0	100.0	1	100.0	2	99.5	1	98.9	0	100.0	1	99.5	0	100.0	0	99.5
50,000 -100,000	0	98.9	0	100.0	0	100.0	1	100.0	1	99.5	0	100.0	1	100.0	0	100.0	1	100.0
over 100,000	2	100.0	0	100.0	0	100.0	0	100.0	1	100.0	0	100.0	0	100.0	0	100.0	0	100.0
Total over 300,000	111	59.0	8	4.3	14	7.4	29	15.4	24	12.8	3	1.6	17	9.0	11	5.9	1	0.5

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deserving of relief because of large fluctuations in income. It mainly benefits those with rapidly rising incomes.

IV. Proposals to Amend the Current Law

Since the adoption of the 1964 law, several proposals have been made to extend or liberalize its provisions. The most frequently mentioned proposals are: (1) allowance of downside averaging for those with negative fluctuations in income, and (2) elimination of the $3,000 minimum for averagable income. The effect of these proposals on the number and characteristics of averagers will be examined in this section.

Even if the averaging provisions of the current law were to benefit those with fluctuations in income, the benefits would accrue only to those with positive fluctuations. Such a bias against those with negative fluctuations has been criticized elsewhere; in fact, some have concluded that relief should be granted only to a taxpayer whose income has decreased in relation to his average income in previous years. 13/

The panel sample allows calculation of the number of tax filers who would be eligible to downside average under particular conditions. The reverse of the current law was therefore simulated. That is, where a tax filer's taxable income in the averaging year falls short of 5/6ths (or 83.3%) 14/ of the previous four years' average taxable income by an amount greater than $3,000, he was considered as eligible to downside average.

As Table 9 reveals, downside averagers under this provision would be older than the population and also older than eligible upside averagers. They would have incomes slightly less than those who currently use upside averaging. These results are in line with expectations. Declines in income are more frequent in years approaching and immediately following retirement, and the $3,000 minimum decline in income restricts the population of potential averagers to those with a fair amount of income in the base year.

There were probably two major reasons why Congress excluded downside averaging: (1) Downside averaging would

Table 9

Changes in Eligibility Resulting

From Changes in the Existing Law

	Number	Percent of Sample	Average AGI (5 year Avg.)	Average AGI (1971)
Current Law	591	7.1 %	15,339	45
Elimination of 3,000 minimum	1,551	18.6	11,672	45
Downside Averaging Only	251 1/	3.0	18,321	54
Downside Averaging with 3,000 eliminated	1,346 1/	16.1	10,434	50

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1/ These numbers include taxfilers who may meet all eligibility requirements,yet realize no tax savings from downside averaging.

imply negative tax liability for many in the year of averaging. For the most part, the tax laws do not allow refundability -- not only for taxes that might be averaged, but also for exemptions, deductions and credits, which could reduce taxes due or taxable income below zero. (2) Downside averaging would provide tax rewards for those retiring, leaving the labor force or converting their assets to sources from which income is not reported for tax purposes.

As demonstrated in Table 9, elimination of the $3,000 limitation would more than double the number of eligible averagers 15/ and would lower the average income of averagers considerably. The potential tax savings would naturally be much lower and, because of this, the increase in the number of electors would probably be less than the increase in number of eligibles.

V. Interaction With Other Tax and Non-Tax Parameters

The income averaging provisions do not operate in a vacuum but are affected by changes in the tax law and by conditions in the economy. This section will consider possible interactions of the current law on income averaging with: 1) the rate of growth of per capita income; 2) the elasticity of taxable income with respect to nominal income; and 3) a negative income tax.

A crucial parameter interacting with income averaging is the rate of growth of per capita income. Because of increases in productivity, per capita real income grows even in the absence of inflation. In an inflationary economy, most workers also experience an annual rise in income due to the effect of inflation. While the requirement for income averaging is growth in taxable income, that growth may reflect either inflationary or real gains in per capita income. In fact, it is possible to show a direct correspondence between the level of taxable income in a base year and the minimum annual rate of growth in income necessary to make a taxpayer perpetually eligible to average. 16/

In the absence of the $3,000 limitation, the required rate of growth for perpetual eligibility would be invariant with respect to base year income levels and would be constant at a little above 7.5 percent. However, for reasons stated above, there exists a negative relationship between base year taxable income and the required rate of growth in taxable income. To be exact, with the \$3,000 limitation,

$$Y_o\ (1 + R)^4 - .30\ [Y_o + (1 + R)\ Y_o + (1 + R)^2 Y_o +$$

$$(1 + R)^3 Y_o] \geq \$3,000 \quad \text{OR}$$

$$Y_o \geq \$3,000 \;.\; R\ /\ ((1 + R)^5 - 1.3\ (1 + R)^4 + .30)$$

is the condition necessary for averaging when Y_o is base year taxable income, and R is the constant rate of growth in taxable income.

Table 10 demonstrates these minimum constant rates of growth in taxable income and the base year taxable income necessary for eligibility to average. Below a 7.5 percent rate of growth of taxable income, no amount of taxable income is sufficient for eligibility. Yet at 10.0 percent, \$41,783 is sufficient; at 12 percent, \$21,471; and at 15 percent, \$11,953. Even under normal conditions these are not

Table 10

Taxable Income and Annual Growth Rates in

Taxable Income Sufficient for Eligibility to Income Average

Rate of Growth in Taxable Income (in percent)	Taxable Income Sufficient for Eligibility	
	Base Year	Fifth Year
7.5 %	--	--
8.0	$ 346,607	$ 471,558
8.5	124,977	173,193
9.0	79,677	112,472
9.5	53,984	77,607
10.0	41,783	61,174
11.0	28,530	43,311
12.0	21,471	33,785
13.0	17,091	27,867
14.0	14,110	23,832
15.0	11,954	20,908
20.0	6,478	13,433
25.0	4,215	10,291

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extraordinary growth rates for a substantial part of the population, and in a highly inflationary climate they could become ordinary for the majority.

Treating the inflationary part of growth in income alone, it was possible to re-examine the sample of filers to determine the extent to which eligibility for income averaging would decrease if all taxable incomes for the years 1967-1971 were stated in constant 1971 dollars. Taxable income prior to 1971 was therefore adjusted by the rate of growth in the Consumer Price Index to 1971. A re-examination of the number of filers eligible to average when all relevant quantities are in real terms reveals that the number of eligible income averagers is cut in half. 17/ The years 1967 to 1971 were not years of unusually rapid growth in the price level, particularly in light of more recent experience, yet the impact of that inflation on the volume of averaging is remarkable.

The elasticity of taxable income with respect to nominal income also affects eligibility for income averaging. As nominal income grows, taxable income grows, but often at a very different rate. Except in years when the tax statutes explicitly call for increases in the personal exemption or allowed deductions, the growth in taxable income will outpace growth in nominal income of the tax filer. One study 18/ of the impact of inflation on income taxes finds that a one percent increase in income due solely to inflation can lead to a 1.5 percent growth in nominal taxable income. Also, whenever Congress changes the law on credits, exemptions, allowed deductions' etc., it also changes the relationship of taxable income to adjusted gross income. Thus taxable income may show fluctuations because of legal changes in definitions rather than actual changes in income. 19/

One final interaction of income averaging with the tax laws should be noted. Under a negative income tax, marginal tax rates are usually higher in low income brackets than they are in middle income brackets. At certain levels of income, then, taxpayers with higher variances in income will pay lower taxes or receive greater payments than those with low variances in income -- the reverse of the case for taxpayers with positive taxes.

VI. Conclusion -- Alternative Approaches to Income Averaging Reform

Income averaging was originally proposed to eliminate the inequitable treatment (inherent in a progressive tax system) of those whose incomes are more volatile than others. Yet, in attending to these inequities, current income averaging provisions have been found to discriminate across socio-economic classes, to benefit primarily those with rising rather than variable incomes, to provide no benefits in case of falling incomes, to be so complex that a large portion of those taxpayers who are eligible to average do not actually elect to do so. In addition these provisions provide unintended benefits in the case of inflation or of normal growth in the economy, and interact poorly with other portions of the Code, especially those affecting the nontaxable population and those dealing with credits, deductions, exemptions, and other adjustments from adjusted gross income to taxable income.

There are four alternative approaches to meeting these problems: (1) eliminate the current income averaging provision; (2) adopt detailed provisions to deal with each inequity or deficiency in the current law; (3) extend the accounting period for measuring income; or (4) comprehensively revise the entire averaging system.

From the previous section it is clear that the current law is inadequate for meeting the inequity at which it is directed, and that, in fact, it may be fairer and less complex to simply drop the current provision. If desired, extraordinary rises or falls in certain incomes could still be given special treatment (as with lump-sum payments from pension plans) without the complexity of a comprehensive income averaging scheme.

Of course, the deficiencies in current averaging provisions theoretically could be corrected in piecemeal fashion. Inflation adjustments, IRS calculation of taxes due, 20/ elimination of minimum averagable income requirements, downside averaging, carryover of exemptions and deductions, etc., might better direct the benefits of income averaging to a subset of the population for whom they were originally intended. However, such adjustments would be complex, require much greater record-keeping and calculation, and would likely lead to sizable increases in the number of averagers. It is not at all obvious that the administrative costs inherent in such proposals would be justified given the tax savings that would go to beneficiaries.

Failing the adoption of complex provisions, a simpler method to lessen the effect of varying income on effective tax rates would be to extend the income accounting period beyond one year. An annual period is as arbitrary as any other one and is a compromise between a shorter period which better measures current welfare or means and a longer period which better measures long-run or permanent income. Biannual or triannual variance in income is substantially less than the annual variance, and therefore much of the inequity caused by a progressive tax system on those with highly variable incomes is lessened by a simple extension of the income accounting period. However, it would probably prove rather difficult to break the habit of using an annual period for income accounting purposes.

Finally, comprehensive revision of the averaging system could be undertaken. Two such revisions have been suggested elsewhere. William Vickrey's [6] cumulative averaging proposal solves some problems by simply making averaging apply to the universe of taxpayers, but it also requires interest rate adjustment for past income and taxes, more extensive record-keeping by the IRS, and it complicates greatly the necessary provisions dealing with family reorganizations and the allocation of income to members of the different family units.

David, et. al., [1] propose a 3-year averaging period (except where averaging took place in the past year, in which case the taxpayer would average current income and last year's average income), the broadening of the tax base to include retirement benefits and transfer payments, and lowering the minimum averagable income to $1,000 above or below the tax bracket applying to average base period income. To eliminate the complex calculations caused by family reorganizations, they recommend that a person only be allowed to average if labor force status and marital status remains unchanged. Under their proposal, some inequities are eliminated but new ones are created for those with changes in marital status, calculating minimum averagable income becomes even more complex than under current law, the interactions with other tax or non-tax parameters are ignored, and unintended benefits still accrue to those with rapidly rising incomes.

The authors believe that the first alternative --elimination of income averaging -- may be the simplest, fairest, and least costly approach. All other schemes at a minimum are inordinately complex, deal inadequately with family reorganizations,21/ interact poorly with the tax system as a whole, and give unwarranted benefits to many taxpayers. However, each of the four alternatives would be more equitable (although not always simpler) than the current provision for income averaging.

Footnotes

1/ See, for instance, Vickrey, [7].

2/ The exact formula is as follows: if Y_t = taxable income in the year t, and $Y = .30\,(Y_{t-1}+Y_{t-2}+Y_{t-3}+Y_{t-4})$, then averaging is allowed when Averagable Income = $Y^{av} = Y_{t}-Y \geq \$3{,}000$. The tax itself can be computed as follows: $\mathrm{Tax}(Y_t) = \mathrm{Tax}\,[(Y)] + 5\,[\mathrm{Tax}\,(Y + .20.Y^{av}) - \mathrm{Tax}\,(Y)\,]$.

3/ Under current law when there is a change in a taxpayer's marital or filing status, complex procedures are often required for allocating or combining income over the period of computation. For instance, newly married spouses are required to combine their incomes in previous years, while newly divorced individuals must allocate their income from prior years between themselves.

4/ For filers who have been full-time students in the year of averaging or in any of the prior four years, current law requires as a condition of eligibility that they provide 50 percent or more of their own support in those years.

5/ See Footnote 2.

6/ An individual with eligibility may still receive no tax savings from averaging in certain years despite $3,000 or more in "averagable income." In this case, his averagable income all falls within the same tax rate bracket.

7/ Demographic characteristics were obtained through a link of income tax return data with Social Security data.

8/ See, for instance, Steuerle and McClung [5].

9/ For purposes of this Table, only those electors who met the eligibility criteria are examined.

10/ Of the three filers in the sample who averaged four years in succession, none were found to average again in the fifth year. The sample size by this time was too small for any meaningful comparisons.

11/ The trend line which results from the regression is that line for which the variance in actual income from trend is minimized.

12/ The data would be much the same if the year chosen had been 1967, 1968, or 1969.

13/ See Martin David, et. al [1], p. 279.

14/ Current averaging requires that taxable income in the averaging year be 6/5th (or 120%) of the previous four years' average taxable income. This downside provision requires that the previous four years' average taxable income be 6/5ths of taxable income in the averaging year. Thus the ratio of income in high income years to income in low income years must remain at 6 to 5 or higher.

15/ The numbers of eligible averagers provided here exclude those who would realize no tax savings as a result of averaging despite satisfaction of all eligibility requirements.

16/ See footnote 5.

17/ If taxable income had been calculated in constant 1967 dollars, the decrease would have been even more dramatic.

18/ See [3].

19/ If Congress were to replace deductions or exemptions with credits, it would increase taxable income substantially for many filers. The Tax Reform Act of 1976 added a general tax credit of $35 or 2 percent of taxable income up to $9,000 and added a child care credit, but did not change the averaging provisions. On the other hand, the Tax Reduction and Simplification Act of 1977, made adjustments in the definition of the income eligible for averaging along with adjustments in definition of taxable income.

20/ IRS would have to keep records on filers for longer periods of time than the three years currently maintained.

21/ See footnote 3.

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