

Chapter 5

QUANTITATIVE ANALYSIS

This chapter presents quantitative analyses of the two model plans and compares them to present law. The first section discusses briefly the nature of the data base used to develop and simulate the effects of the model plans. The chapter then discusses the estimated magnitudes of the various income concepts used in the report and the following section uses these data to derive exemption and rate structures for the comprehensive income tax consistent with achieving present revenue yield. This is followed by estimates of the magnitude of the cash flow tax base. Finally, the chapter develops specific provisions of the cash flow tax -- exemptions and rates -- and compares the two model plans and current law.

THE DATA BASE

The first step in the quantitative analysis of the reform plans was to construct a data base representative of the relevant characteristics of the U.S. population. A file of records was created and stored in a computer, with each record containing information for a tax return filing unit, such as the amount of wages earned by the member or members of that unit, dividends received, etc. In all, some 112,000 records are contained in the file.

Each of these records stands for a group of taxpayers with similar characteristics. Thus, a given record may be taken to represent 100 or 1,000 filing units in the U.S. population as a whole. To simulate the effect of some change on the whole population, the effect on each record in the file is calculated and multiplied by the number of units represented by that record.

The records in the file were constructed by combining information from two separate sources: a sample of 50,000 tax returns provided by the Statistics Division of the Internal Revenue Service, and a sample of 50,000 households (representing about 70,000 tax filing units) from the Current Population Survey of the Census Bureau. The two data sets were needed because the reform plans base tax liabilities on information not now provided on tax returns. Furthermore, a realistic picture of the U.S. economy requires

obtaining characteristics of "nonfilers," individuals and families who are not obliged to file income tax returns because they do not have sufficient taxable income.

To represent the incomes generated by the U.S. economy, these two data sets were merged by matching records of taxpayers from the sample of tax returns with records of participants in the Current Population Survey. Since confidentiality strictures on the release of identifier information from each of these sources prevented the literal pairing of data on any given taxpayer, the matching was accomplished by matching records of similar characteristics (age, race, total income, etc.). The resulting file of records is not quite the same as if the information in each record had been obtained for the same individual or family. For technical reasons, it has been possible to achieve a more faithful representation of the U.S. population by using some records more than once. Therefore, the number of records in the final data file reflects an artificial expansion of the number of records in the two original files.

Both samples use 1973 data. Because more recent data would be more relevant, the 1973 population and its attributes were adjusted by extrapolation to represent the 1976 population.

The resulting simulations of the U.S. population should be interpreted with some sense of the nature of the data set. The original data were subject to the usual sampling and processing errors. The processes of merging the two data sources and extrapolating the resulting file to a later year represent further sources of error. Furthermore, many items needed were not recorded in either of the original surveys, and had to be estimated and imputed to each record. For these reasons, the file should not be regarded as a perfect description of the U.S. population.

Nonetheless, the data have been assembled with great care. In some cases, adjustments were made to insure that the data file produces aggregate figures (say, on total wages paid in the economy) in line with those derived from independent statistical sources. In other cases, such aggregates were used to "validate" the file; that is, to check its reasonableness. By and large, the data pass the test of these checks, and the file may be used with some confidence. At the same time, it would be a mistake to equate the data file with the real world, for example, by being concerned about small differences in a simulated tax burden.

ESTIMATION OF THE INCOME CONCEPTS

The first few tables present various definitions of income that were used in the computer simulations.

Table 1 describes adjusted gross income, or AGI, the broadest before-tax concept used for the present income tax. Like all of the income concepts, its source is primarily current money wages and salaries. The remainder, labeled "other AGI" in the table, comes from net self-employment and partnership income, capital income, such as interest and dividends, capital gains, and miscellaneous other elements of income. The table shows that "other AGI" is a larger share of adjusted gross income in the highest income classes.

The data in table 1 cannot be compared directly with AGI as reported on tax returns because information is included for nonfilers as well as filers. Thus, table 1 shows adjusted gross income that would be reported if all families and individuals were required to file tax returns under current law, and displays the distribution of all such filing units by income class.

The income classes in table 1 are defined in terms of "economic income," the broadest before-tax income concept used in this report. As discussed more fully below, this income concept is even broader than the tax base described in the comprehensive income tax proposal of chapter 3. Economic income is used as the classifier in the early tables of this chapter. In later tables, other classifiers are used for reasons explained below.

Adjusted gross income is not the base of the present individual income tax. Starting from AGI, taxpayers are allowed several kinds of deductions to arrive at income subject to tax. Table 2 displays the major elements of the present individual income tax base. Again, as in table 1, the information shown includes data for nonfilers as well as filers, although nonfilers do not add anything to the aggregate taxable income under present law because their exemptions and deductions reduce their taxable incomes to zero.

In each category of table 2, the amounts shown include only income that enters into the calculation of AGI. Thus, for example, portfolio income includes only one-half of

Table 1
Present Law
Adjusted Gross Income
(1976 levels)

Economic income class (\$000)	Number of filing units ^{1/} (... millions)	Current money wage income (..... \$ billions	Other adjusted gross income (..... \$ billions	Total adjusted gross income (..... \$ billions
Less than 0	0.2	0.9	-1.8	-0.9
0 - 5	38.0	29.5	12.2	41.7
5 - 10	19.5	81.3	20.6	101.9
10 - 15	13.9	117.4	16.1	133.5
15 - 20	12.1	151.9	16.3	168.1
20 - 30	15.0	261.0	25.8	286.8
30 - 50	7.1	157.1	34.4	191.5
50 - 100	2.3	56.0	30.9	86.9
100 or more	<u>0.5</u>	<u>20.0</u>	<u>25.7</u>	<u>45.7</u>
Total	108.6	875.1	180.1	1,055.2

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^{1/} Includes all filing units whether or not they actually file returns or pay tax under present law. The estimated number of filing units that do not currently file tax returns is 21.5 million; their adjusted gross income is \$4.1 billion.

Table 2
 Components of the Present Law Individual Income Tax Base
 (1976 levels)

Economic income class	Net money wage income	Pension income	Self-employment income	Portfolio income	Deductions for State and local taxes	Miscellaneous income minus deductions	Total ^{1/}	Tax base ^{2/}	Standard deductions	Exemptions ^{3/}	Present law income subject to tax
(\$000)	(\$ Billions)										
Less than 0	0.8	0.2	-4.2	1.5	-0.1	0.2	-1.6	0.5	0.0	-0.1	0.4
0 - 5	29.2	5.5	0.1	4.9	-0.5	0.8	40.0	40.6	-26.3	-7.7	6.6
5 - 10	80.4	4.7	4.3	10.3	-1.9	-1.6	96.2	96.7	-28.7	-24.3	43.7
10 - 15	115.6	2.6	5.6	5.5	-4.1	-3.9	121.3	121.5	-19.2	-26.5	75.8
15 - 20	149.8	1.9	6.9	2.5	-7.3	-5.9	147.9	148.1	-14.6	-27.8	105.7
20 - 30	257.5	2.1	11.2	3.6	-15.2	-10.3	248.9	249.3	-16.9	-37.2	195.2
30 - 50	154.8	1.7	16.4	11.1	-12.1	-8.5	163.4	163.7	-5.4	-18.0	140.3
50 - 100	55.1	0.8	15.2	12.6	-6.1	-4.7	72.9	73.1	-1.5	-5.8	65.8
100 or more	<u>19.7</u>	<u>0.3</u>	<u>9.8</u>	<u>14.2</u>	<u>-3.3</u>	<u>-3.7</u>	<u>37.0</u>	<u>37.3</u>	<u>-0.1</u>	<u>-1.4</u>	<u>35.8</u>
Total	863.0	19.8	65.3	66.3	-50.6	-37.6	926.0	930.7	-112.7	-148.7	669.2

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Note: The amounts shown in each category include only the income that actually enters into adjusted gross income under present law.

^{1/} The amounts shown in this column are the sum of the amounts in the preceding columns.

^{2/} The amounts shown in this column differ from the amounts in the "total" column because of the exclusion of negative amounts in the total column for individual filing units.

^{3/} The amounts shown in this column exclude the value of exemptions that would reduce income subject to tax to below zero.

realized net long-term capital gains. As appropriate, expenses were netted against the associated income. Thus, wage receipts are net of the recognized expenses of earning it. Similarly, "portfolio income," consisting of interest, dividends, rent, estate and trust income, and realized capital gains, is net of interest expense. "Miscellaneous income minus deductions" is an amalgam of income not otherwise classified, net of all deductions not directly allocable to particular income sources. Its negative value results from the fact that the itemized deductions allowed under present law and not separately deducted from other components of income are much larger than the miscellaneous income items included here, such as State income tax refunds, alimony received, prizes, and the like.

The present tax base is shown in the column labeled "tax base." Exemptions and standard deductions (but not itemized deductions) are thus treated here as part of the rate structure. As table 2 shows, the tax base under present law is somewhat larger than AGI less itemized deductions because negative net income is never allowed to reduce the tax base for an individual return to below zero. Similarly, the value of the standard deduction and exemptions cannot reduce income subject to tax to below zero.

Table 2 indicates that present law income subject to tax is only about 63 percent of adjusted gross income. Exemptions, the standard deduction, and itemized deductions account for this difference.

The major components of economic income are tabulated separately in table 3. Many of these components require some explanation. "Deferred compensation" consists of employer contributions to pension and insurance plans, including social security. "Household property income" consists of rents, interest income net of interest expense, estate and trust income, dividends, capital income of the self-employed, and imputed returns from homeownership, life insurance policy reserves, and pension plans. "Noncorporate capital gains accruals" represents the growth in the real value of assets held by individuals except for corporate stock. The latter accruals are assumed to be included in corporate retained earnings, as indicated in the next column. In constructing the simulation of the U.S. taxpayer population, corporate retained earnings were allocated to shareholders in proportion to their dividend income.

Table 3
Economic Income
(1976 levels)

Economic income class	Net money wage income	Deferred compensa- tion	Self- employ- ment labor income	House- hold property income	Non- corporate capital gains accruals	Corporate retained earnings	Corpora- tion income tax	Implicit taxes	Net trans- fers	State and local income tax deduc- tions	Economic income
(\$000)	(\$ billions)										
Less than 0	0.8	0.0	0.1	-3.9	0.1	0.1	-0.6	0.4	0.3	-0.1	-2.8
0 - 5	29.2	2.6	1.0	4.3	0.6	0.3	0.9	-0.5	41.4	-0.1	79.9
5 - 10	80.4	8.8	4.7	11.5	1.4	1.1	2.5	-1.2	34.3	-0.3	143.2
10 - 15	115.6	14.4	5.9	11.6	1.8	1.0	2.6	-1.0	20.8	-1.0	171.9
15 - 20	149.8	18.7	9.0	14.3	2.9	1.1	3.4	-0.7	15.1	-2.1	211.5
20 - 30	257.5	33.7	14.8	30.4	5.2	2.3	7.1	-0.8	17.8	-4.9	362.9
30 - 50	154.8	20.9	17.7	44.8	6.2	3.4	10.5	0.3	9.6	-4.7	263.5
50 - 100	55.1	6.8	13.9	51.9	5.8	4.0	12.3	2.6	3.0	-3.0	152.4
100 or more	<u>19.7</u>	<u>1.6</u>	<u>9.4</u>	<u>28.5</u>	<u>3.6</u>	<u>6.2</u>	<u>7.5</u>	<u>0.8</u>	<u>10.2</u>	<u>-2.0</u>	<u>85.4</u>
Total	863.0	107.6	76.5	193.3	27.7	19.6	46.0	0.0	152.4	-18.1	1,467.9

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The entries in the columns "corporation income tax" and "implicit taxes" are derived from concepts that may not be generally familiar. Since the corporation income tax is before-tax income that would be received by individuals were it not taken by taxation first, this tax is included in before-tax economic income. The burden of the corporation income tax was assumed to fall evenly on all individual owners of capital. The logic underlying this position is that, in a market system, capital is allocated to equalize rates of return. Because of the corporation income tax, the capital stock in the corporate sector is smaller than it would be otherwise, and the before-tax rate of return higher. By the same reasoning, the capital stock in the noncorporate sector is higher and rates of return lower than they would be otherwise. Through this tax-induced movement of capital from the corporate to the noncorporate sector, the burden of the corporate tax, that is, its effect on reducing after-tax returns, is spread across all capital income.

Cases can be constructed in which labor income as well as capital income bears the real burden of the corporation income tax, but for the simulations presented in this chapter, this tax has been allocated in proportion to all capital income, with the result shown in table 3. Capital income in this table is composed of household property income, noncorporate capital gains accruals, corporate retained earnings, corporation income tax, and implicit taxes.

The "implicit taxes" shown in table 3, although small in amount, illustrate an important phenomenon affecting the progressivity of the tax structure. Implicit taxes, which are quite subtle in concept, are best explained by an example. Present law does not tax the interest on municipal bonds; therefore, a holder of such bonds receives less interest than he might receive if he invested his funds in fully taxable securities. The difference between what he receives and what he could receive is his implicit tax. It is implicit because no revenue is paid to the U.S. Treasury. It is nonetheless a tax because the bondholder's after-tax income is reduced in the same way as if he paid a tax. Of course, the implicit tax may be lower than the actual tax payable on fully taxable bonds, and this is why tax-exempt securities are attractive to high-bracket taxpayers.

Other persons receive benefits from the tax-exemption of municipal bonds. The attractiveness of municipal bonds draws capital out of the private sector, thereby increasing slightly the before-tax return to investors in other forms of capital. The increase in their return is an implicit subsidy or negative implicit tax. If total income is kept constant in the economy, and efficiency losses ignored, the positive and negative implicit taxes must balance exactly in the aggregate, although not for any particular taxpayer or any income class.

There is an implicit tax corresponding to many tax benefits to capital income in the current tax structure. The simulations included implicit taxes for real estate, agriculture, mining, and capital gains arising from corporate retained earnings and tax-exempt bonds. In each case, the tax preference accorded to the activity in question attracts capital that would otherwise be applied elsewhere, and thus reduces the before-tax returns. Since the advantages of these tax benefits -- even taking into account the reduced before-tax returns -- are worth more to those in high tax brackets, positive implicit taxes are paid by higher income taxpayers. Therefore, implicit taxes make the present tax structure as measured by effective tax burdens somewhat more progressive than it may at first appear.

Nonetheless, some positive implicit taxes are borne by filing units in the below-zero income class. This income class consists of households sustaining real economic losses. To the extent that these losses occurred in tax-preferred activities, they are even greater than they would have been in the absence of the tax preference, and, accordingly, implicit taxes are generated for this income class.

"Net transfers" include income support in cash and in kind and the excess of accruing claims to future social security benefits over current employer and employee contributions.

Finally, economic income is net of some State and local taxes. Since property taxes are netted in calculating capital income in the previous columns and sales taxes as discussed in chapter 3 are treated as consumption outlays, only State and local income taxes are subtracted here.

Economic and Comprehensive Income

Economic income is an accrual concept. However, as chapter 3 makes clear, a pure accrual income concept is not practical as a tax base. Table 4 shows the difference between economic income and "comprehensive income," which was the starting point for developing the tax base used in the comprehensive income tax proposal.

Four categories of adjustments are involved in moving from economic income to comprehensive income. The first adjustment is for pensions. Economic income includes the accruing value of future pension benefits for both private pensions and social security. Comprehensive income, however, is on a realization basis in that actual social security and pension benefits, rather than their accruing value, are included. The difference is shown in column 2.

The second adjustment is for homeowner preferences and agricultural income. Comprehensive income does not include the imputed rental income from owner-occupied housing. Furthermore, all agricultural activity cannot reasonably be placed on the accrual accounting standard applied in calculating economic income. The third adjustment accounts for the fact that capital gains on noncorporate assets are included in comprehensive income when realized rather than accrued. Finally, in-kind transfers, such as Medicaid, are not included in comprehensive income. As table 4 makes evident, the partial shift from an accrual to a realization concept of income results in a substantial shrinkage in the value of the income measure that serves as the starting point for the model comprehensive income tax.

As discussed in chapter 3, it was principally the difficulties in measuring income on an accretion basis that underlay the decision to use comprehensive rather than economic income as the tax base. This decision also influenced the way in which taxpayers were classified and tax burdens calculated in the simulations. While economic and comprehensive income are generally highly correlated, there are some classes of taxpayers for whom income as accrued and income as realized are quite different. This is especially the case for taxpayers receiving pension income, who are drawing down their past accruals of pension plan assets. Such taxpayers would find themselves in relatively low economic income classes but would be in higher comprehensive income classes as a result of realizing the benefits of past contributions to pension plans.

Table 4
Economic and Comprehensive Income
(1976 levels)

Economic income class	Economic income	Adjustments (subtract)				Comprehensive income
		Pensions	Nontaxed homeowner preferences and agricultural income	Non- corporate capital gains	In-kind transfers	
(\$000)	(.....)	\$ billions (.....)				
Less than 0	-2.8	-0.2	0.1	0.1	0.1	-2.8
0 - 5	79.9	-18.4	1.0	0.4	6.4	90.4
5 - 10	143.2	4.6	2.1	0.9	4.0	131.6
10 - 15	171.9	21.5	4.4	1.1	1.5	143.4
15 - 20	211.5	26.2	8.3	1.7	0.8	174.5
20 - 30	362.9	43.7	15.9	3.1	0.8	299.4
30 - 50	263.5	24.5	10.7	3.7	0.4	224.1
50 - 100	152.4	7.0	3.6	3.5	0.1	138.3
100 or more	<u>85.4</u>	<u>11.3</u>	<u>1.0</u>	<u>2.2</u>	<u>0.0</u>	<u>71.0</u>
Total	1,467.9	120.1	47.2	16.6	14.1	1,269.9

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Table 5 presents a cross-tabulation by economic income and comprehensive income of the number of filing units receiving pensions in excess of \$500. While this table indicates that pensioners in higher economic income classes are in higher comprehensive income classes as well, it also reveals that, in general, their comprehensive income tends to be larger than their economic income. If taxes were assessed on the basis of comprehensive income and filing units were arrayed by economic income class, the tax structure would appear less progressive. This is because pensioners, who are generally in lower income classes, have comprehensive income that exceeds economic income. During their earning years, both economic and comprehensive income are relatively high but economic exceeds comprehensive income.

Both of these effects tend to tilt the structure of effective tax rates as measured using economic income in the direction of lower effective rates on higher economic income and higher effective rates on lower economic income. What appears to be a phenomenon of the aggregate distribution of the tax burden is actually a matter of the timing of taxes at different points in the life cycle of the same taxpayer. A consequence of these lifetime effects, which are discussed in more detail later in this chapter, is that comprehensive income is a more meaningful classifier for analyzing a tax system using a realization basis. Hence, in the tables that follow, comprehensive rather than economic income is used to identify the income classes of the taxpayers. Even more desirable would be a comparison of lifetime tax burdens with lifetime income.

Present Law Tax

Table 6 displays the progressivity of the present income tax system, the total amount of revenue that it raises, and the effective tax rates by comprehensive income class. The individual income tax is only part of the present tax structure. The proposals in this report also would replace the corporation income tax and, by including virtually all income in the tax base, would reduce implicit taxes to near zero. Present tax burdens, however, include all three forms of tax. As shown in table 6, effective tax rates so derived rise continually with comprehensive income.

Table 5

Cross-Tabulation of the Number of Filing Units with Substantial
Pension Income by Economic Income and by Comprehensive Income 1/

(1976 levels)

Economic income (\$000)	Comprehensive income (\$000)									Total
	Up to 0	0 - 5	5 - 10	10 - 15	15 - 20	20 - 30	30 - 50	50 - 100	100 or more	
	(..... thousands)									
Less than 0	<u>49.</u>	22.	7.	4.	0.	0.	0.	0.	0.	81.
0 - 5	4.	<u>9,705.</u>	3,221.	526.	88.	33.	3.	0.	0.	13,581.
5 - 10	4.	453.	<u>2,839.</u>	1,539.	318.	70.	6.	0.	0.	5,230.
10 - 15	1.	61.	170.	<u>1,080.</u>	472.	172.	22.	0.	0.	1,978.
15 - 20	0.	27.	17.	152.	<u>640.</u>	382.	55.	1.	0.	1,273.
20 - 30	1.	22.	4.	13.	185.	<u>914.</u>	208.	12.	0.	1,360.
30 - 50	0.	10.	2.	1.	4.	118.	<u>681.</u>	77.	0.	894.
50 - 100	0.	6.	0.	0.	0.	0.	26.	<u>276.</u>	22.	331.
100 or more	0.	4.	2.	0.	0.	0.	0.	6.	<u>55.</u>	68.
Total	60.	10,311.	6,262.	3,316.	1,707.	1,689.	1,001.	372.	77.	24,796.

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1/ Pension income of \$500 or more.

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Table 6
Present Law Tax and Effective Tax Rates
(1976 levels)

Comprehensive income class (\$000)	Individual income tax	Corporation income tax	Implicit taxes	Total present law income tax	Effective tax rate 1/
Less than 0	0.2	-0.6	0.4	0.0	-0.6
0 - 5	1.0	0.7	-0.3	1.4	1.7
5 - 10	9.5	2.5	-1.1	10.9	6.4
10 - 15	17.8	3.6	-0.9	20.5	9.9
15 - 20	22.9	4.3	-0.7	26.5	12.7
20 - 30	32.6	7.3	-0.8	39.1	15.4
30 - 50	22.8	10.1	0.5	33.4	19.8
50 - 100	16.5	11.3	2.5	30.3	25.2
100 or more	<u>13.3</u>	<u>6.7</u>	<u>0.5</u>	<u>20.6</u>	<u>32.4</u>
Total	136.6	46.0	0.0	182.6	14.4

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1/ Tax as a percentage of comprehensive income.

A Proportional Comprehensive Income Tax

It would be possible to replace the present individual and corporate income tax with a proportional or flat-rate tax on individuals, choosing the rate in such a way as to raise the same total revenue. A reasonable exemption could be allowed for a taxpayer and dependent, or the exemption could be eliminated altogether in favor of a lower rate. Two versions of a proportional tax on comprehensive income, raising the same revenue as the present income tax, are shown in table 7. One has no exemption and a tax rate of 14.35 percent of the comprehensive income base, and the other has an exemption of \$1,500 per taxpayer and dependent and a flat rate of 19.35 percent of comprehensive income in excess of exemptions. Table 7 shows comprehensive income by income class, present law tax burdens, and the results of the two proportional rate plans. As compared to present law, both plans would result in a tax decrease for the higher income taxpayers and an increase for those with lower incomes. The plan that allows an exemption would come somewhat closer to the present distribution of tax burdens, but some form of graduated rates is required to achieve a close approximation.

THE MODEL COMPREHENSIVE INCOME TAX

Table 8 shows the steps from comprehensive income to the income subject to tax under the model comprehensive income tax plan and compares that amount to present law taxable income.

The first adjustment is for child care and secondary workers and applies to joint and head-of-household returns. Only 75 percent of the first \$10,000 of earnings of workers other than the primary wage earner is included in income subject to tax. A deduction of one-half of child care expenses, up to a maximum deduction of \$5,000, is allowed against wage earnings of unmarried heads of households and against the included wages of secondary workers on joint returns.

The combination of exemptions and structure of rates is designed to yield about the same total revenue, with about the same distribution by income class, as the present tax. The model comprehensive income tax would allow exemptions of \$1,000 per taxpayer and dependent, plus \$1,600 per return (half for married persons filing separately). The value of these exemptions is shown in table 8. A deduction for

Table 7
Distribution of the Tax Burden under Present Law and Illustrative Proportional Rate Income Taxes
(1976 levels)

Comprehensive income class	Comprehensive income	Amount of income tax under:		
		Present law	Proportional rate of 14.35 percent	Proportional rate of 19.35 percent with exemption ^{1/}
((\$000)	(.....)
Less than 0	-3.6	0.0	0.0	0.0
0 - 5	81.0	1.4	11.6	5.7
5 - 10	171.2	10.9	24.6	19.6
10 - 15	205.7	20.5	29.5	26.6
15 - 20	209.1	26.5	30.0	29.5
20 - 30	253.7	39.1	36.4	39.1
30 - 50	169.0	33.4	24.2	28.6
50 - 100	120.2	30.3	17.2	21.6
100 or more	<u>63.5</u>	<u>20.6</u>	<u>9.1</u>	<u>11.9</u>
Total	1,269.9	182.6	182.6	182.6

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^{1/} Exemption of \$1,500 per taxpayer and dependent.

Table 8

Tax Base for Comprehensive Income Tax Proposal

(1976 levels)

Comprehensive income class (\$000)	Comprehensive income (.....)	Child care and secondary worker provisions	Exemptions <u>1/</u>	Comprehensive income subject to tax <u>2/</u>	Present law taxable income	Change in taxable income
				\$ billions		
Less than 0	-3.6	0.0	0.0	0.0	0.8	-0.8
0 - 5	81.0	-0.1	-68.0	12.9	10.1	2.8
5 - 10	171.2	-1.5	-83.5	86.1	69.2	16.9
10 - 15	205.7	-4.4	-71.7	129.6	111.3	18.3
15 - 20	209.1	-6.6	-57.1	145.4	129.9	15.5
20 - 30	253.7	-8.2	-51.4	194.1	164.6	29.5
30 - 50	169.0	-3.1	-21.4	144.5	97.0	47.5
50 - 100	120.2	-1.0	-8.5	110.7	54.7	56.0
100 or more	<u>63.5</u>	<u>-0.3</u>	<u>-2.0</u>	<u>61.2</u>	<u>31.7</u>	<u>29.5</u>
Total	1,269.9	-25.3	-363.6	884.5	669.2	215.2

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1/ The amounts shown do not include the value of exemptions that, if allowed, would reduce comprehensive income subject to tax to below zero.

2/ Since comprehensive income subject to tax cannot be less than zero, it is greater than the sum of the first three columns by the amount of the negative income in the first comprehensive income class.

these amounts yields "comprehensive income subject to tax," the amount to which the rate schedule is applied in the model tax.

Table 8 also indicates the change in taxable income from current law as a result of using the model comprehensive income tax. The increase in income subject to tax is extremely large, approximately one-third of present taxable income. Such a substantial broadening of the tax base can permit a marked reduction in tax rates throughout the entire income range.

The rate structure for joint returns would be as follows:

<u>Income Bracket</u>	<u>Marginal Tax Rate</u>
\$ 0 - \$ 4,600	8 percent
\$ 4,600 - \$40,000	25 percent
Over \$40,000	38 percent

For single returns, the rate structure would be as follows:

<u>Income Bracket</u>	<u>Marginal Tax Rate</u>
\$ 0 - \$ 2,800	8 percent
\$ 2,800 - \$40,000	22.5 percent
Over \$40,000	38 percent

"Heads of households," as under present law, would pay the average of the amounts they would pay using the single and joint schedules.

The tax revenues that would be raised by this plan, and their distribution by income class, are shown in table 9, along with the corresponding information for the present tax. The agreement is quite close and the aggregate tax change for each income class is small. Table 10 shows tax liabilities by filing status under both the present law and the comprehensive income tax proposal. Again, the changes are small. The proposed tax plan would favor larger families

Table 9

Amount of Tax and Effective Tax Rates under the Present Law Income Tax
and Model Comprehensive Income Tax

(1976 levels)

Comprehensive income class (\$000)	Present law		Comprehensive income tax	
	Tax (.. \$ billions ...)	Effective tax rate <u>1/</u> (.... percent)	Tax (... \$ billions ..)	Effective tax rate <u>1/</u> (.... percent)
Less than 0	0.0	-0.6	0.0	0.0
0 - 5	1.4	1.7	1.0	1.3
5 - 10	10.9	6.4	10.4	6.1
10 - 15	20.5	9.9	20.5	10.0
15 - 20	26.5	12.7	27.0	12.9
20 - 30	39.1	15.4	40.1	15.8
30 - 50	33.4	19.8	32.6	19.3
50 - 100	30.3	25.2	31.2	26.0
100 or more	<u>20.6</u>	<u>32.4</u>	<u>20.8</u>	<u>32.7</u>
Total	182.6	14.4	183.7	14.5

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Table 10

Amount of Tax According to Filing Status under the Present Law Income Tax and Model Comprehensive Income Tax
(1976 levels)

Filing status	Present law income tax	Model comprehensive income tax
	(..... \$ billions))	
Single	32.3	32.3
Married filing separately	2.5	3.0
Head of household	6.4	6.9
Joint and certain surviving spouses	141.4	141.5
No dependents	54.3	57.3
One dependent	28.2	27.8
Two dependents	29.0	27.9
Three dependents	17.5	16.8
Four dependents	7.8	7.4
Five or more dependents	4.6	4.3
All returns	182.6	183.7
Returns with one or more aged	21.6	25.8

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slightly compared to present law. Filing units with one or more aged members would pay somewhat higher taxes because they would lose the extra age exemption and because social security cash grants are included in the tax base.

Although tax liabilities by income class and filing status do not change greatly on the average, the proposed comprehensive income tax would alter significantly the tax liabilities of many individual taxpaying units. Those whose income is not fully taxed under current law would pay more tax under this comprehensive plan, while others would benefit from the generally lower rates. Also, many would be relieved of the burden of double taxation on corporate income.

Table 11 shows the number of filing units in various categories that would have their tax liabilities either increased or decreased by more than 5 percent of present law tax or by more than \$20. The average amount of decrease for those returns with decreases is almost \$380, while the average amount of increase among the gainers is nearly \$650. The average gains and losses are similarly large for virtually all the categories shown on the table.

This finding of large average amounts of gains and losses should be interpreted with great care. It is inevitable that any such tax change will involve substantial redistribution within income classes even if the total tax collected within each class remains the same. Furthermore, to some degree, the simulated comparisons are spurious because it is not proposed to adopt the model plan overnight. Indeed, the existence of a large number of gainers and losers is in itself evidence that careful transition rules are needed to facilitate the movement toward a reformed tax structure.

It should also be noted that the nature of the data base biases the result in the direction of a finding of extensive redistribution. This is so because the individual records in the file of taxpayers in the simulation were constructed by matching information about different individuals in the taxpayer and Current Population Survey samples. As a result, current and new tax liabilities for a given record in the data base may, in fact, be based on information concerning different people.

Table 11

Filing Units with Gains and Losses under the Comprehensive Income Tax
as Compared to the Present Law Income Tax 1/

(1976 levels)

	Tax decrease			Tax increase		
	Number of: filing units	Amount of: tax change	Average decrease: for filing units with decrease	Number of: filing units	Amount of: tax change	Average increase: for filing units with increase
	(millions)	(\$ billions)	(dollars)	(millions)	(\$ billions)	(dollars)
All filing units with gains and losses	60.9	23.0	378	37.2	24.1	648
Filing units with \$500 or more of pension income	5.0	2.2	431	17.7	13.5	764
Filing units with less than \$500 of pension income	55.9	20.9	373	19.5	10.6	543
Single filers	27.7	4.1	148	3.6	1.2	331
Age less than 22	13.7	0.6	46	1.0	0.1	107
Age 22 to 61	13.0	3.2	245	2.4	1.0	427
Age 62 or over	1.0	0.3	293	0.2	0.1	254
Joint filers	24.2	15.8	654	12.9	8.4	653
Earning status:						
One earner	10.2	6.7	657	8.6	5.2	608
Two or more earners	14.0	9.1	652	4.3	3.2	742
Dependency status:						
No dependents	6.9	5.1	745	4.4	2.9	643
Two dependents	5.8	3.5	607	2.8	1.7	624
Four dependents	1.7	1.1	649	0.7	0.5	747
Filing units with means-tested cash grant income	2.7	0.2	59	3.9	1.1	270

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1/ Filing units whose tax liabilities would change by more than 5 percent of present law tax or by more than \$20.

Aside from such statistical details and the question of transition rules, comparisons of gainers and losers may be misleading on other grounds. The redistributions of income indicated may reflect not only changes in tax burdens among different taxpayers, but, perhaps more importantly, changes between the taxpayer at one point in his life and the same taxpayer at another point. For example, employee contributions to social security are excluded from taxable income, but social security benefits are included. As a result, the simulations show a decrease in tax for present wage earners and an increase in tax for pensioners.

Indeed, table 11 shows that almost half of those with tax increases are receiving \$500 or more in pension income. This gives a misleading impression of the distributional consequences of the change, because present wage earners are future retirees. A more satisfactory comparison would be one that reflected the overall lifetime tax burden of different individuals under various plans. It has not been possible to perform simulations of such lifetime effects. Thus, the simulations that are shown tend to be biased toward a finding of greater redistribution than actually would be implied by the model plan.

THE CASH FLOW TAX

Table 12 shows, for each comprehensive income class, the derivation of gross consumption from comprehensive income. "Imputed consumption from owner-occupied housing" consists of the net rental value of owner-occupied dwellings, and is included in gross consumption even though a cash outlay may not be made for the rental services. "Corporate retained earnings" are deducted because they represent saving on behalf of households. Similar saving occurs in the form of earnings on life insurance policies, contributions to and earnings of private pension plans, and employee contributions to social security. "Direct saving" represents household net purchases of real and financial assets. In table 12, gross consumption is derived by subtracting the sum of all forms of saving from the sum of comprehensive income plus imputed consumption.

The term "gross consumption" is used because consumption is here considered to be gross of income taxes paid under current law; in other words, gross consumption represents before-tax consumption. Gross consumption is the starting point of the cash flow tax in the same way that comprehensive income is the starting point of the comprehensive income tax.

Table 12
Comprehensive Income and Gross Consumption
(1976 levels)

Comprehensive income class	Comprehensive income	Imputed consumption from owner- occupied housing	Saving			Gross consumption
			Corporate retained earnings	Saving in life insurance, pension plans, and social security	Direct saving	
(\$000)	(.....)		\$ billions			
Less than 0	-3.6	0.1	0.1	0.0	-5.9	2.3
0 - 5	81.0	1.3	0.3	0.4	3.0	78.6
5 - 10	171.2	3.6	0.9	2.1	8.1	163.7
10 - 15	205.7	7.0	1.1	3.3	14.0	194.4
15 - 20	209.1	8.3	1.3	4.0	18.3	193.8
20 - 30	253.7	9.7	2.4	5.6	26.7	228.7
30 - 50	169.0	4.9	3.5	3.2	18.9	148.3
50 - 100	120.2	2.1	4.0	1.3	16.8	100.2
100 or more	<u>63.5</u>	<u>0.7</u>	<u>6.0</u>	<u>0.5</u>	<u>6.8</u>	<u>51.0</u>
Total	1,269.9	37.8	19.6	20.5	106.7	1,160.9

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Note: Gross consumption equals comprehensive income plus imputed consumption from owner-occupied housing minus all of the following forms of savings: corporate retained earnings, saving in life insurance plans, social security contributions, and direct saving.

As was explained earlier in connection with the comprehensive income tax, taxpayers must be classified properly before the distribution of tax burdens can be analyzed. All tables dealing with the cash flow tax will use gross consumption for classification purposes.

Table 13 shows the derivation of the cash flow tax base. The provisions for child care and secondary workers are the same for the cash flow tax as for the comprehensive income tax. Exemptions under the cash flow tax are \$1,500 per return and \$800 per taxpayer and dependent. Adjusting gross consumption for the child care and secondary worker provisions and for exemptions yields the amount of cash flow subject to tax. A comparison of the amounts subject to tax in the two model plans, as shown in tables 8 and 13, indicates that the amount of cash flow subject to tax is about 7 percent less than the amount of comprehensive income subject to tax. Nonetheless, the amount of cash flow subject to tax is 23 percent more than present taxable income, as shown in table 8. Thus, even though saving is deducted, the model cash flow tax accomplishes a substantial broadening of the tax base.

The rate structure for joint returns under the cash flow tax would be as follows:

<u>Income Bracket</u>	<u>Marginal Tax Rate</u>
\$ 0 - 5,200	10 percent
5,200 - 30,000	28 percent
Over 30,000	40 percent

For single returns, the rate structure would be as follows:

<u>Income Bracket</u>	<u>Marginal Tax Rate</u>
\$ 0 - 3,200	10 percent
3,200 - 30,000	26 percent
Over 30,000	40 percent

Heads of households, as under present law, would pay the average of the amounts under the single and joint schedules.

Table 14 shows the distribution of tax liabilities and effective rates of tax under the model cash flow tax and present law. The model cash flow tax nearly reproduces the

Table 13
Cash Flow Tax Base
(1976 levels)

Gross consumption class	Number of filing units <u>1/</u>	Gross consumption	Child care and secondary worker provisions	Exemptions <u>2/</u>	Cash flow subject to tax
(\$000)	(... millions ...)	(\$ billions)			
Less than 0	0.0	0.0	0.0	0.0	0.0
0 - 5	40.7	84.2	-0.1	-66.2	17.9
5 - 10	24.3	178.9	-1.8	-76.6	100.5
10 - 15	17.9	221.4	-5.7	-67.1	148.6
15 - 20	11.8	202.9	-7.3	-47.8	147.8
20 - 30	8.7	208.5	-6.8	-36.0	165.6
30 - 50	3.7	136.3	-2.6	-14.9	118.8
50 - 100	1.3	88.2	-0.8	-5.5	81.9
100 or more	<u>0.3</u>	<u>40.6</u>	<u>-0.2</u>	<u>-1.1</u>	<u>39.2</u>
Total	108.6	1,160.9	-25.3	-315.2	820.4

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1/ Includes all filing units whether or not they actually file returns or pay tax under current law.
2/ The amounts shown do not include the value of exemptions that, if allowed, would reduce cash flow subject to tax to below zero.

Table 14

Amount of Tax and Effective Tax Rates under the Present Law Income Tax and under Model Cash Flow Tax
(1976 levels)

Gross consumption class (\$000)	Present law tax		Cash flow tax	
	Tax (... \$ billions ..)	Effective tax rate ^{1/} (..... percent ...)	Tax (... \$ billions ..)	Effective tax rate ^{1/} (..... percent ...)
Less than 0	0.0	0.0	0.0	0.0
0 - 5	1.8	2.2	1.8	2.1
5 - 10	13.2	7.4	13.7	7.7
10 - 15	26.2	11.8	26.3	11.9
15 - 20	30.0	14.8	30.6	15.1
20 - 30	37.5	18.0	38.2	18.3
30 - 50	32.2	23.6	31.4	23.1
50 - 100	27.1	30.7	26.8	30.3
100 or more	<u>14.6</u>	<u>36.0</u>	<u>14.5</u>	<u>35.7</u>
Total	182.6	15.7	183.3	15.8

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^{1/} Tax as a percentage of gross consumption.

progressivity of the present tax structure. It is clear that taxing consumption is perfectly consistent with a progressive structure of tax liabilities.

Although the model cash flow tax preserves the average progressivity of current law, it would extensively redistribute tax burdens. Table 15 tabulates filing units whose tax change would be more than 5 percent of present law tax or more than \$20. This table yields essentially the same results as those presented in table 11 for the comprehensive income tax. The caveats in interpreting the results of table 11 apply with equal force to table 15.

COMPARISONS OF TAX LIABILITIES UNDER THE DIFFERENT PLANS

Up to this point, this chapter has presented simulations of the effects of the model tax plans on all taxpayers. This section examines the tax liabilities of taxpayers in particular situations. These materials illustrate the differences among the present law income tax and the two model plans. Since the data are hypothetical, they do not represent the situations for any particular taxpayer.

The Marriage Penalty

A subject of continuing controversy and interest is the division of the tax burden between married and unmarried individuals. Table 16 shows, for current law, the additional tax paid by a married couple filing a joint return over what would be paid if both persons could file single returns. The left-hand column shows the couple's total income. The subsequent columns present different shares of the total income earned by the lesser-earning spouse. For example, in the first column, one spouse earns all of the income. This column shows that a married couple would pay a lower tax than would a single individual with the same income because of the favorable rate structure of the joint return schedule. In the last column, earnings are derived equally from the wages of both spouses. In this case, the married couple would pay a higher tax than would two unmarried individuals, with a marriage penalty of \$4,815 on a joint income of \$100,000.

Table 17 shows the same data for the model comprehensive income tax plan. The area of marriage penalty has increased somewhat as compared to current law. However, the rate structure and exclusion of a portion of the earnings of

Table 15

Filing Units with Gains and Losses under the Cash Flow Tax Compared with Present Law Income Tax ^{1/}

(1976 levels)

	Tax decrease			Tax increase		
	Number of filing units	Amount of tax change	Average decrease for filing units with decrease	Number of filing units	Amount of tax change	Average increase for filing units with increase
	(millions)	(\$ billions)	(dollars)	(millions)	(\$ billions)	(dollars)
All filing units with gains and losses	53.6	31.0	577	44.7	31.7	708
Filing units with \$500 or more of pension income	5.1	3.5	700	17.9	13.7	765
Filing units with less than \$500 of pension income	48.6	27.4	564	26.8	18.0	671
Single filers	24.5	4.9	199	6.6	2.0	309
Age less than 22	12.6	0.5	43	2.0	0.3	130
Age 22 to 61	11.0	3.9	360	4.3	1.7	392
Age 62 or over	0.9	0.4	410	0.3	0.1	313
Joint filers	20.6	21.4	1,037	16.6	14.6	880
Earning status:						
One earner	8.9	9.6	1,075	10.0	8.8	876
Two or more earners	11.7	11.8	1,007	6.6	5.9	885
Dependency status:						
No dependents	6.8	8.0	1,174	4.6	4.1	889
Two dependents	4.6	4.3	933	4.0	3.5	884
Four dependents	1.3	1.3	1,060	1.1	1.0	924
Filing units with means-tested cash grant income	2.4	0.2	73	4.4	1.5	352

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^{1/} Filing units whose tax liabilities would change by more than 5 percent of present law tax or by more than \$20.

Table 16

Marriage Penalties in 1976 Law

The Marriage Penalty is the Excess of the Tax a Couple Pays with a Joint Return
Over What It Would Pay if Both Persons Could File Single Returns

Total family income	Dollar amount of marriage penalty when share of income earned by lesser-earning spouse is:					
	None	10 percent	20 percent	30 percent	40 percent	50 percent
	(..... No Marriage Penalty)					
\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
3,000	-42	0	0	0	0	0
5,000	-233	-149	-69	12	87	130
7,000	-266	-137	-18	101	201	212
10,000	-383	-163	43	191	216	221
15,000	-527	-187	97	162	237	263
20,000	-762	-240	56	189	258	243
25,000	-1,085	-324	29	235	319	365
30,000	-1,406	-442	13	320	497	565
40,000	-2,013	-657	149	661	1,034	1,188
50,000	-2,697	-799	334	1,188	1,743	1,910
100,000	-6,810	-2,532	605	2,819	4,275	4,815
	(..... Marriage Penalty)					

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Note: In all tax calculations, deductible expenses are assumed to be 16 percent of income, and the maximum tax is not used.

Table 17

Marriage Penalties in the Model Comprehensive Income Tax

The Marriage Penalty is the Excess of the Tax a Couple Pays with a Joint Return
Over What It Would Pay if Both Persons Could File Single Returns

Total family income	Dollar amount of marriage penalty when share of income earned by lesser-earning spouse is:					
	None	10 percent	20 percent	30 percent	40 percent	50 percent
	(..... No Marriage Penalty)					
\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
3,000	-32	-8	0	0	0	0
5,000	-80	-50	-20	10	40	62
7,000	-312	-169	-25	46	72	58
10,000	-441	-278	-116	15	97	122
15,000	-316	-72	140	263	300	206
20,000	-191	134	347	425	300	175
25,000	-66	340	555	456	300	300
30,000	59	515	675	488	425	425
40,000	309	847	800	675	675	675
50,000	244	1,477	1,432	1,432	1,432	1,432
100,000	244	1,835	3,385	4,935	6,485	6,888
	(..... Marriage Penalty)					

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the secondary worker would result in some changes relative to current law. This may be seen most clearly in the last column. Although the marriage penalty paid by a couple earning \$100,000 would increase, for all other families in which equal earners marry, the marriage penalty would be reduced compared to current law. As the first column shows, the differences between married couples and unmarried individuals are, in general, reduced in the model comprehensive income tax plan compared to current law. This is because the broader tax base permits a less steep progression of marginal tax rates. Table 18 shows the marriage penalties under the model cash flow tax.

Lifetime Comparisons

As suggested above, a desirable point of view from which to assess the relative tax burdens among individuals is that of the complete lifetime. The tables presented thus far do not reflect this lifetime perspective. If either of the model tax plans had been in effect as long as the present tax, the income and tax situations of taxpayers would be different from those shown in the simulated results.

This is particularly true of saving, which is subject to considerably different treatment under the model plans. For persons accumulating for their retirement years in savings accounts, the present law would collect tax on the income from which the saving is made and again on the interest earned on the savings. Withdrawal of funds, however, would have no tax consequence. Under the cash flow tax, savings would not be subject to tax; rather, taxes would be assessed when the proceeds are withdrawn for consumption. The comprehensive income tax would be levied both on income saved as well as on interest earned, but the broader base would permit lower rates than under present law.

Since one objective of saving is the reallocation of lifetime consumption, these three tax systems would be expected to alter the timing of income, consumption, and tax liabilities. Table 19 summarizes these effects. It shows summary statistics for a family whose saving strategy is to maintain a constant level of consumption throughout working and retirement years. This table provides a very direct and convenient way of comparing the different systems, since tax burdens may be determined directly from the level of consumption. The higher is the level of consumption attainable, the lower is the tax burden. In this example, the

Table 18

Marriage Penalties in the Model Cash Flow Tax

The Marriage Penalty is the Excess of the Tax a Couple Pays with a Joint Return
Over What It Would Pay if Both Persons Could File Single Returns

Total family income	Dollar amount of marriage penalty when share of income earned by lesser-earning spouse is:					
	None	10 percent	20 percent	30 percent	40 percent	50 percent
	(..... No Marriage Penalty)					
\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
3,000	-70	-40	-10	0	0	0
5,000	-80	-42	-5	32	70	88
7,000	-320	-156	9	77	80	63
10,000	-494	-304	-114	6	96	106
15,000	-394	-109	106	241	296	191
20,000	-294	86	296	396	256	116
25,000	-194	261	486	391	216	216
30,000	-94	406	596	386	316	316
40,000	-144	886	1,244	1,044	1,044	1,044
50,000	-144	1,086	1,366	2,066	2,444	2,444
100,000	-144	1,366	2,766	4,166	4,488	4,488
	(..... Marriage Penalty)					

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Table 19

Lifetime Comparison of Present Law Income Tax and Model Tax Plans
 (Married couple; one earner, wages \$16,000 per year for 40 years;
 consumes at maximum possible steady rate over entire lifetime)

	Present : law tax :	Comprehensive : income tax :	Cash flow tax
Consumption:			
All ages	\$ 11,456	\$ 11,524	\$ 11,713
Savings account balance:			
Age 40	60,114	53,759	58,764
Age 60	151,185	137,651	164,900
Taxes:			
Working years:			
Age 21	2,102	2,318	2,100
Age 40	2,272	2,696	2,100
Age 60	2,582	3,312	2,100
Retirement years:			
Age 61	845	42	2,100
Age 75	505	0	2,100

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Note: This example assumes a 3-percent real rate of return (before taxes) on savings and that the corporation income tax under present law is borne by the return from all savings at the rate of 19.1 percent.

present law tax burden is somewhat higher (consumption is lower) than that implied by the model comprehensive income tax, which in turn is higher than that under the cash flow tax.

