THE BUDGETARY AND DISTRIBUTIONAL EFFECTS OF S. 2016

Staff Memorandum
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SUMMARY

S. 2016 would lower scheduled Social Security payroll taxes in 1990 through 2014 and raise them after 2019. The Congressional Budget Office (CBO) estimates that, if enacted retroactively to January 1, 1990, S. 2016 would reduce federal revenues by $4.4 billion in fiscal year 1990 and by $63.4 billion in fiscal year 1995. If the reduction in federal revenues were not offset elsewhere in the federal budget, resulting higher interest costs would further increase the deficit, causing a net increase in the deficit of $4.5 billion in 1990 and $83.9 billion in 1995.

The effects of S. 2106 on the distribution of federal tax liabilities and after-tax incomes in 1991 are summarized in Figure 1. These results reflect the assumption that the employer share of payroll taxes ultimately is paid by workers in the form of lower wages. The largest reduction in taxes would go to families in the highest income quintile while the smallest reduction in taxes would go to families in the lowest quintile. The largest percentage change in taxes, however, would go to families with the lowest incomes, while the smallest percentage changes would go to high-income families. The best measure of the effect of S. 2016 on the economic standing of families is the percentage change in after-tax income. Families in the middle three income quintiles would have the largest percentage increase in after-tax income.

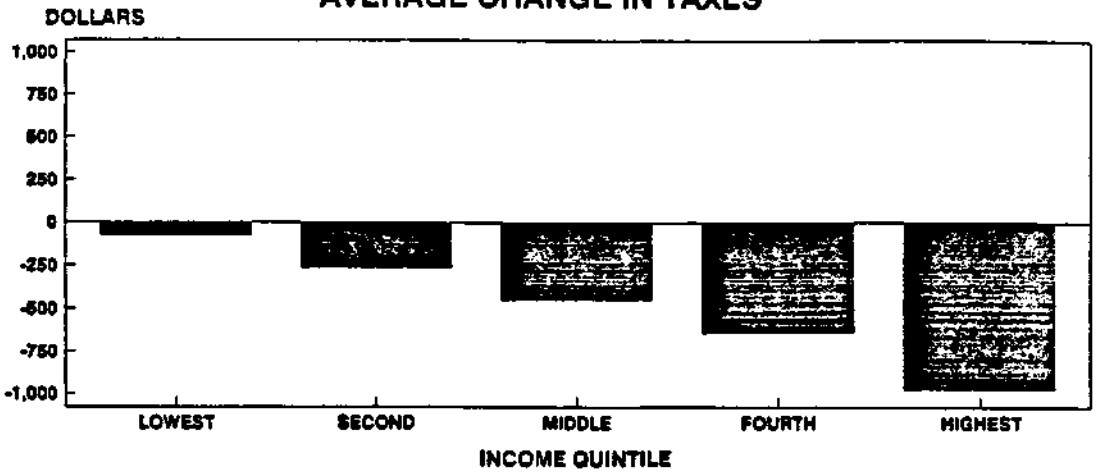
If the Balanced Budget Act deficit targets remain unchanged, the payroll tax reduction would have to be offset elsewhere in the budget. This analysis focuses on two illustrative offsets through broad-based tax increases. Figure 2 summarizes the effects of S. 2016 if the reduction in payroll taxes were accompanied by an offsetting individual income tax surcharge. This combination would be a more progressive change than S. 2016 alone. Although taxes for families in the lowest income quintile would fall by a slightly smaller percentage and the increase in their after-tax income also would be somewhat less, the combination of a payroll tax reduction and an individual income tax surcharge would reduce taxes and raise after-tax incomes for the 80 percent of families in the four lowest quintiles and would raise taxes and reduce after-tax incomes for the 20 percent of families in the highest income quintile.

Figure 3 summarizes the effects of S. 2016 if the reduction in payroll taxes were accompanied by an offsetting federal value-added tax (VAT). The value-added tax simulated is a narrowly-based consumption tax that exempts purchases of necessities. The combination of a payroll tax reduction and an offsetting value-add tax would make the federal tax system less progressive. Taxes would increase by a large percentage for families in the lowest income quintile and their after-tax income would fall. Taxes would decrease for the 60 percent of families in the three highest quintiles.

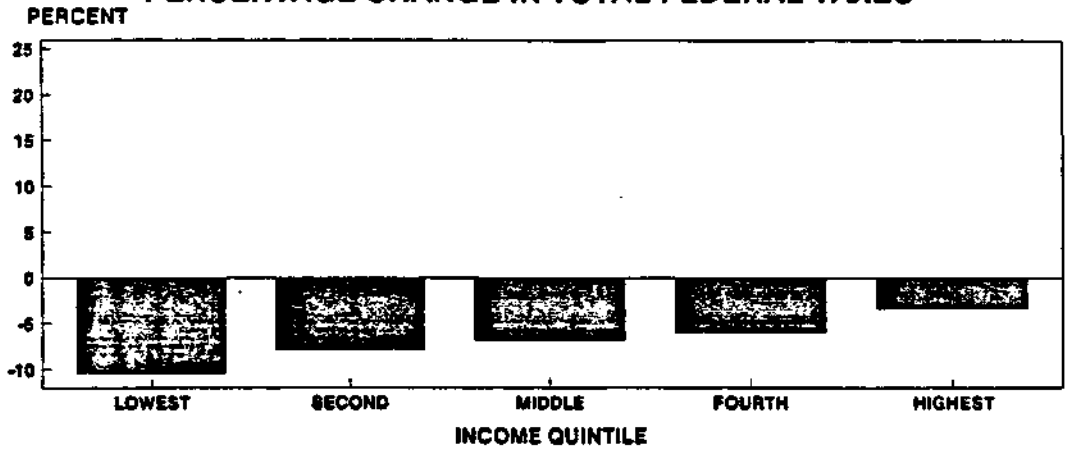
The following memorandum contains an analysis of the effects of S. 2016 on the distribution of federal tax liabilities and after-tax family incomes in calendar year 1991. The first section summarizes Social Security contribution rates under current law. The next section indicates the proposed changes in Social Security contribution rates under S. 2016. The third section presents CBO estimates of the budgetary effects of S. 2016. The fourth section discusses the changes in the progressivity of the federal tax system over the past decade. The fifth section presents the distributional effects of the changes in payroll tax rates in 1991 and also shows the results if the revenues lost under S. 2016 were offset by increases in other federal taxes. The final section discusses some of the longer-term implications of S. 2016 for the distribution of federal taxes.

FIGURE 1. S. 2016

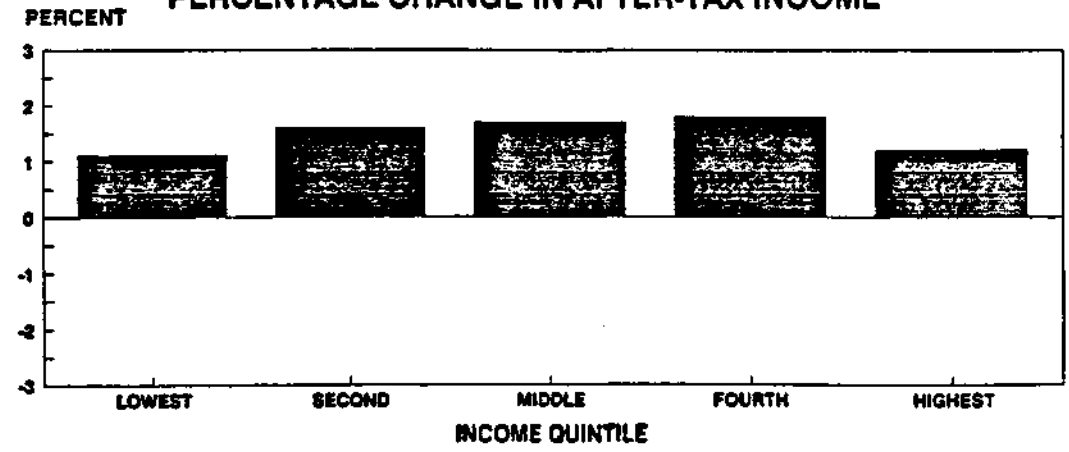
AVERAGE CHANGE IN TAXES



PERCENTAGE CHANGE IN TOTAL FEDERAL TAXES

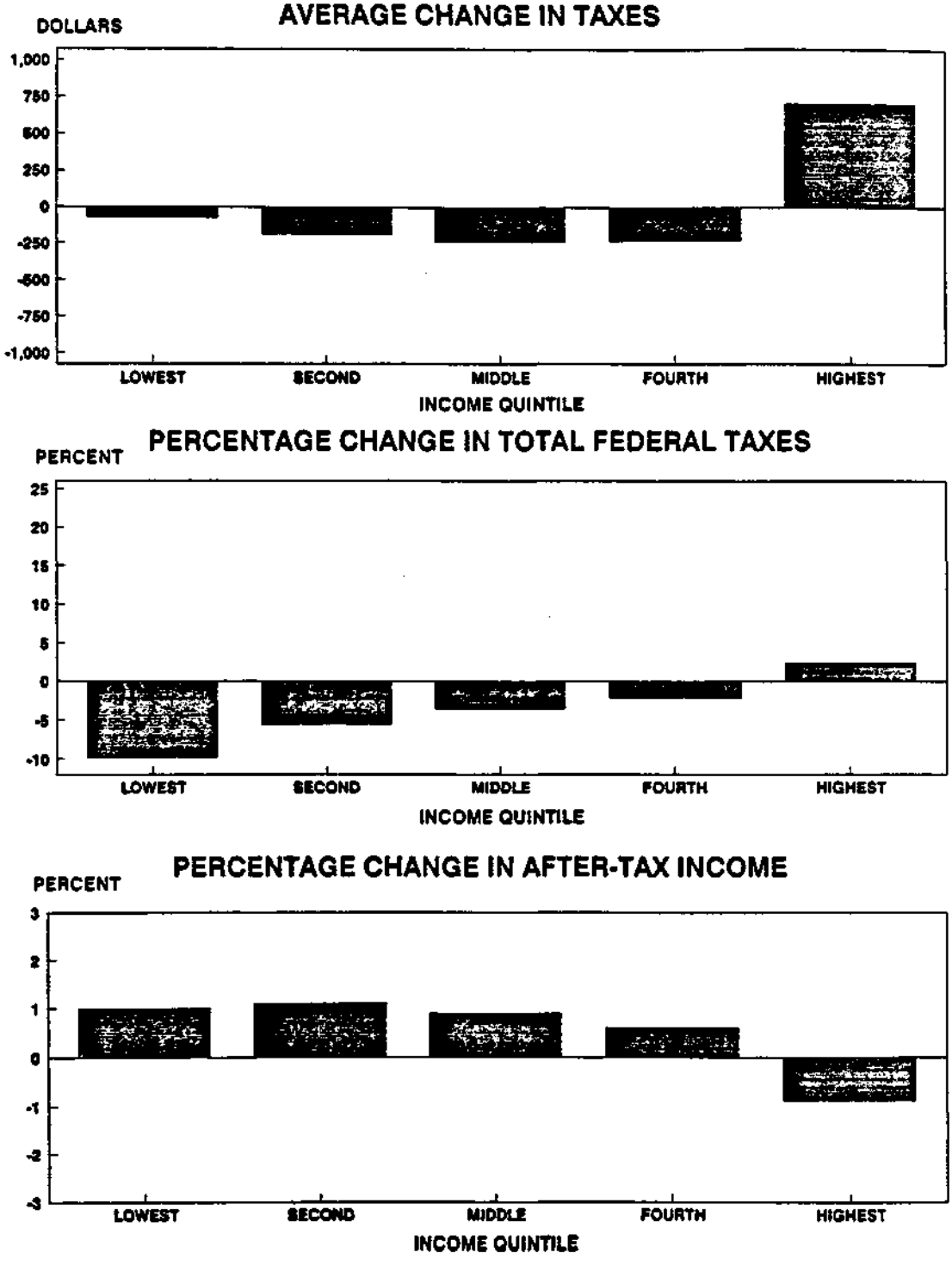


PERCENTAGE CHANGE IN AFTER-TAX INCOME



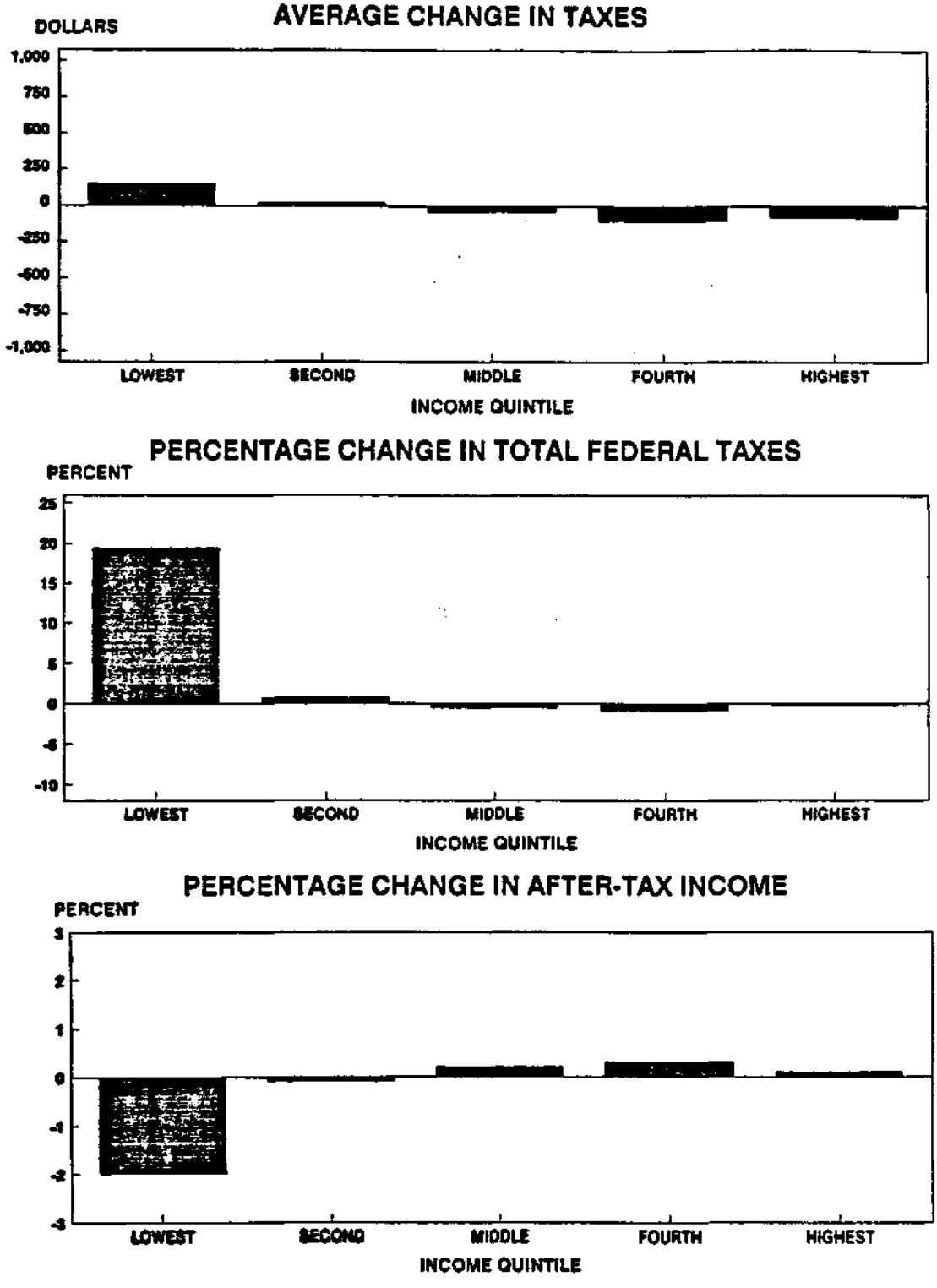
SOURCE: CONGRESSIONAL BUDGET OFFICE TAX SIMULATION MODELS.

FIGURE 2. S. 2016 WITH OFFSETTING INCOME TAX SURCHARGE



SOURCE: CONGRESSIONAL BUDGET OFFICE TAX SIMULATION MODELS.

FIGURE 3. S. 2016 WITH OFFSETTING VALUE-ADDED TAX



SOURCE: CONGRESSIONAL BUDGET OFFICE TAX SIMULATION MODELS.

SOCIAL SECURITY TAX RATES UNDER CURRENT LAW

The federal Old-Age, Survivors, Disability and Hospital Insurance programs (OASDHI) are financed primarily through taxes on covered wages and self-employment income. Only earnings and self-employment income up to a specified maximum amount are subject to the tax. Employees and employers each pay Social Security taxes at the same rate and on the same earnings. In 1990, the tax rate for the combined Old-Age, Survivors and Disability Insurance programs (OASDI) is 6.2 percent of earnings up to $51,300. An additional tax of 1.45 percent of earnings up to the same maximum is levied to finance the Hospital Insurance program (HI), yielding a combined OASDHI rate of 7.65 percent. Self-employed workers pay both the employee and employer share of the tax but are allowed to deduct one-half of the contributions from the amount of their income subject to individual income and Social Security payroll taxes.

The 1990 OASDI tax rate reflects an increase of 0.14 from the 1989 rate of 6.06 percent. The 1990 HI tax rate is unchanged from 1989. The increase in the OASDI rate, which took effect on January 1, 1990, is the last of the scheduled increases in the tax rate enacted in the Social Security Amendments of 1977. No further changes in either the OASDI or the HI tax rates are scheduled for the future. The maximum amount of earnings subject to the tax is increased annually, however, to reflect the growth in average wages.

SOCIAL SECURITY TAX RATES UNDER S. 2016

S.2016 would repeal the 1990 OASDI rate increase and further cut the rate to 5.1 percent, effective January 1, 1991. The tax rate would increase starting in 2012 in order to maintain pay-as-you-go financing of the Social Security system. The following table shows the proposed OASDI tax rates under S. 2016. The HI rate would remain the same as under current law.

1990	6.06
1991 through 2011	5.10
2012 through 2014	5.60
2015 through 2019	6.20
2020 through 2024	7.00
2025 through 2044	7.70
2045 and thereafter	8.10

BUDGETARY EFFECTS OF S. 2016

CBO estimates that, if enacted retroactively to January 1, 1990, S. 2016 would reduce federal revenues by $4.4 billion in fiscal year 1990, $38 billion in fiscal year 1991, and by $52 billion in fiscal year 1992. Estimates for fiscal years 1990 through 1995 are shown in Table 1. The change in revenues includes the reduction in both the employee and employer share of the payroll tax and is net of increases in federal taxes that would result from higher taxable wages. The estimate also includes a small revenue gain from

increases in the contribution rate for the Federal Employees' Retirement System (FERS) that would occur automatically under S. 2016.[1]

If the reduction in federal revenues were not offset elsewhere in the federal budget, resulting higher interest costs would further increase the deficit, causing a net increase in the deficit of $4.5 billion in 1990 and $83.9 billion in 1995. The estimated increase in interest payments assumes that interest rates are unchanged from the CBO baseline forecast.

Most experts agree that the contingency balance in the Social Security trust fund should be no less than one year's reserves. Under current law, this minimum level of reserves would be reached in 1992. Under S. 2016, it would be reached at the beginning of fiscal year 1995 if the advance tax transfers from the income taxation of Social Security benefits for that year are included.

CHANGES IN THE DISTRIBUTION OF INCOME AND TAXES, 1977-1991

Over the 1980-1990 decade, the distribution of income before taxes became less equal. Over the same period, the fraction of income paid in federal taxes fell for the 40 percent of families with the highest incomes while it rose for the 60 percent of families with the lowest incomes.

Table 2 shows average pre-tax adjusted family incomes for people ranked in quintiles by their adjusted family income, for 1977, 1980, 1985, and 1990 and the percentage change between each of the earlier years and 1990.[2] Average pre-tax adjusted family income for families in the lowest income quintile is projected to fall by 3.2 percent between 1980 and 1990. The average income of families in the highest quintile is projected to rise by 31.7 percent over the same period. Families in other income quintiles are projected to have more modest increases, ranging from 4.3 percent for families in the second lowest income quintile to 12.6 percent for families in the

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1 The FERS contribution rate is established as a base tax rate of 7.0 percent minus the OASDI tax rate. (For workers in "hazardous occupations", Members of Congress, and Congressional staff members, the base tax rate is 7.5 percent, rather than 7.0 percent). S. 2016 would have the effect of increasing the FERS tax rate from its current rate of .80 percent to .94 percent in 1990, and to 1.90 percent in 1991 through 2011. The FERS rate would be reduced thereafter as the OASDI rate increased.

Unlike wages for OASDI tax purposes, wages for FERS are not subject to a maximum. Therefore, federal workers enrolled in FERS earning more than the OASDI taxable maximum would face higher combined OASDI and FERS taxes under S. 2016 than under current law. Federal workers earning less than the OASDI taxable maximum would merely shift payment between OASDI and FERS, but would not change their total payment.

2 Adjusted pre-tax income includes all cash income plus realized capital gains and is measured before all federal taxes, including those collected from business but assumed to be borne by families. Thus, adjusted pre-tax income includes each family's share of the corporate income tax and the employer share of payroll taxes. Many people incur "paper losses" for tax purposes. To better approximate the economic income of families, rental losses and most partnership losses were not subtracted from family income. All losses of sole proprietorships were allowed. People are assigned to quintiles based on family income divided by the poverty threshold for the appropriate family size. Tax rates for the lowest quintile were calculated excluding families with negative or zero incomes. A discussion of tax incidence assumptions, data sources, and the use of adjusted family income is contained in the appendix.

second highest quintile. The distribution of family income in 1990 is projected to be more unequal than in 1977, 1980 or 1985.

Table 3 shows effective tax rates--the percent of income paid in taxes--by family income level for 1977, 1980, 1985, and 1990. The top panel shows the combined effective rate for all federal taxes. The remaining panels show separate tax rates for individual and corporate income taxes, social insurance taxes, and excise taxes. Federal taxes in 1990 are projected to be less progressive than in 1977 or 1980, but more progressive than in 1985.[3]

The increased reliance on social insurance payroll taxes is the major explanation for the reduced progressivity of the tax system since 1980. The share of taxes collected through the progressive income tax has fallen, while the share of taxes from less progressive social insurance taxes has grown. The individual income tax is actually projected to be more progressive in 1990 than it was in 1980, but the increase in progressivity has been more than offset by the shift towards less progressive tax sources.

Table 4 shows projected effective federal tax rates in 1991 for total federal taxes and the four major tax sources. By 1991, effective social insurance taxes (which include both the employee and employer contribution to Social Security as well as other social insurance taxes) are projected to exceed effective income tax rates on average for families in the lower four quintiles of the income distribution. Only in the highest quintile are average individual income taxes projected to be higher than social insurance taxes.

Table 5 shows a detailed comparison of individual income taxes and the Social Security payroll tax portion of social insurance taxes in 1991 for families projected to pay either income and payroll taxes or both. Overall, 69 percent of families are projected to pay higher payroll taxes than income taxes. In the lowest income quintile, almost all families will pay higher payroll taxes. In the highest quintile, only about 28 percent of families will pay higher payroll taxes. If income taxes are compared with only the employee share of payroll taxes, the percentage of families projected to pay more in payroll taxes falls to 34 percent.

NEAR-TERM EFFECTS OF S.2016 ON THE DISTRIBUTION OF FEDERAL TAXES

While S. 2016 would reduce federal taxes for almost all workers paying taxes to the Social Security program, the size of the reduction would vary among families.[4] To analyze the effects of a reduction in payroll taxes across families, CBO has simulated the 1.1 percentage point reduction in employee and employer payroll taxes for calendar year 1991. The estimated effect includes the reduction in both the employee and employer share of the payroll tax and is net of increases in federal taxes that would

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3. The distribution of taxes is progressive if the ratio of taxes to income rises as incomes rise, is regressive if the ratio falls as incomes rise, and is proportional if the ratio is the same at all income levels.

4. For federal employees covered by the Federal Employees' Retirement System (FERS), the combined OASDI and FERS contribution would not be reduced by S. 2016.

result from higher taxable wages. These results are shown in Table 6. This change would lower tax liabilities by about $50 billion.

The first three columns of Table 6 show average combined federal taxes under current law, the dollar amount of the tax reduction, and the percentage change in taxes for people ranked in quintiles by their adjusted family incomes. Separate results are shown for families with a household head age 65 or over and for families with a nonelderly head of household.

The average tax reduction for all families in 1991 would be about $480. The average varies a great deal across income quintiles, however, from a low of $81 for families in the bottom income quintile to a high of $974 for families in the top quintile.

While the dollar reduction in average taxes would be the greatest for families in the highest quintile, the percentage reduction in taxes would be the greatest for families with the lowest incomes. The percentage decrease in taxes would range from 10.5 percent for families in the lowest income quintile to 3.4 percent for families in the highest quintile.

Elderly families would receive relatively small benefit from S. 2016. Overall, the average reduction for all elderly families would be just over $100, and only $6 for elderly families in the lowest income quintile.

The reason elderly families would benefit little from a payroll tax reduction is both because relatively few elderly families have taxable earnings and because for those that do, earnings are a smaller percentage of total income than for the rest of the population. About 31 percent of all elderly families have taxable earnings, compared with 91 percent of all nonelderly families. Among elderly families with earnings, the share of income from earnings is about 42 percent, compared with 86 percent for all nonelderly families with earnings. Only 9 percent of elderly families in the bottom fifth of the income distribution have taxable earnings, and their earnings are only about one-third of their total incomes.

The fourth and fifth columns of Table 6 show average after-tax income--family income net of all federal taxes--and the percentage change in after-tax income with the payroll tax reduction. While low income families would receive the largest percentage decrease in taxes, the effects of these reductions on their after-tax incomes would be small because they pay relatively little of their income in taxes. As a result, the tax reduction would raise after-tax incomes of families in the lowest income quintile by 1.1 percent and raise after-tax income of families in the highest income quintile by 1.2 percent. Middle-income families would receive the largest increase in after-tax income, ranging between 1.6 percent and 1.8 percent.

The increases in after-tax income would be larger for families with earnings. If only families that have earnings are included, the increase in after-tax income would be 1.8 percent for families in the lowest quintile, which is about 90 percent of the 2.0 percent increase in after-tax income for families with earnings in the second, middle and fourth quintiles. The increase in after-tax income for families with earnings in the highest quintile would be 1.3 percent.

The final two columns of Table 6 show effective federal tax rates under current law and after the reduction in payroll taxes. The payroll tax reduction in S. 2016 would reduce the 1991 average effective tax rate for all families from 23.1 to 22.0 percent. The effective tax rate for elderly families would change little, falling from 16.2 percent to 15.9 percent.

NEAR-TERM EFFECTS OF S.2016 IN COMBINATION WITH OTHER REVENUES INCREASES

Unless federal expenditures were reduced or other taxes were increased, a payroll tax reduction would increase the federal deficit. Many possible combinations of spending cuts or tax increases could meet the requirements of the Balanced Budget Act for offsetting deficit reduction if a bill such as S. 2016 were enacted. CBO has simulated the effects of two possible tax increases that might be used to offset the increased deficit from the payroll tax reduction: an income tax surcharge of approximately 10 percent and a narrowly-based federal value-added tax (VAT) of about 3.3 percent.[5] The size of the income tax surcharge and the VAT were selected to keep the federal deficit unchanged when combined with the simulated reduction in payroll taxes.

Individual Income Tax Surcharge. Table 7 shows the combined effects of the payroll tax reduction and an income tax surcharge. Replacing payroll taxes with income taxes would increase the progressivity of the U.S. tax system. Nearly 80 percent of taxpayers would receive net cuts in taxes paid, including about one-half the families in the highest income quintile. The average reduction in tax would be about $75 for families in the lowest income quintile, and about $240 on average for families in the middle quintile. Although one-half of the families in the highest quintile would have a reduction in taxes, the average change in taxes for all families in the highest quintile would be about a $700 increase.

The combination of the payroll tax reduction and an income tax surcharge would lower the tax burden of the poorest fifth of families by almost 10 percent while raising taxes of the richest fifth by 2.4 percent. The changes would return the distribution of total effective federal tax rates among income quintiles almost back to where it was in 1980.

The combined payroll tax reduction and income tax surcharge would have a relatively small change on the distribution of after-tax incomes. The bottom 60 percent of families would have about a 1 percent increase, while the 20 percent of families with the highest incomes would have about a 1 percent decrease.

The elderly would be more likely to pay higher net taxes than younger taxpayers. For example, elderly families in the top 20 percent of the income distribution would face a net tax increase of about $1,225 compared with $700 for all families in the top fifth.

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5 The simulated VAT excludes food purchased for home consumption, housing expenditures (including utilities), medical care, educational expenditures and contributions to religious and charitable organizations. The value-added tax is assumed to be passed forward to consumers through higher prices for taxable goods and services. With an increase in the price level and no change in nominal incomes, individual income taxes would fall under an indexed tax system. Indexed transfer payments, such as Social Security benefits and Supplemental Security Income payments, would rise. The effects of the VAT are estimated net of changes in taxes and incomes that result from a higher price level.

Despite these changes, effective tax rates for elderly families would remain considerably lower than the rates for other families.

Federal Value-Added Tax. Table 8 shows the combined effects of the payroll tax reduction and a federal value-added tax. If the revenue lost from lowering payroll taxes were made up through such a value-added tax, the federal tax system would become less progressive. Net taxes for the bottom fifth of families would increase by about $150, while net taxes for the top fifth of families would decrease by $85. The fifth of families with the lowest annual incomes would face the largest net increase in taxes. Many of these families spend much more than their annual income by borrowing or by selling assets, as for example would be likely among the elderly. Families in such circumstances would pay relatively little in payroll taxes and thus would receive little or no tax relief from lowering such taxes, but they would pay value-added taxes on their taxable purchased consumption.

These changes would increase net taxes for the families in the lowest income quintile by 19.1 percent, while changing the net taxes of other families by small percentages. As in the case of an offsetting income tax surcharge, these changes represent fairly small changes in the after-tax incomes of families. Unlike the combined payroll tax decrease and income tax surcharge, the percentage change in taxes from the combined payroll tax reduction and VAT would be regressive. Families in the bottom two-fifths of the income distribution would have a decrease in after-tax incomes with the largest decrease for families in the bottom fifth, while families in the upper three-fifths of the income distribution would have an increase in after-tax incomes.

This change in progressivity is reflected in the change in effective tax rates. With the combined payroll tax reduction and a VAT, the effective tax rate for families in top three quintiles would fall slightly while the effective tax rate for families in the second quintile would rise by a small amount. For families in the lowest quintile, however, the effective tax rate would rise by almost two percentage points to a rate of 11.3 percent, a very high rate by recent historical standards.

While replacing a portion of payroll taxes with a VAT would make the present tax system less progressive, the decrease in progressivity measured by changes in effective tax rates overstates the change because some portion of families with low incomes in a single year are not poor by other standards. Elderly families, for example, are able to sell assets to pay for spending that exceeds income. A value-added tax would take up a larger share of the income of such elderly families than it would for families that finance spending entirely from their annual income. The same is true for young families who borrow against future income to pay for current consumption. In these cases, a value-added tax would appear regressive, even though families able to pay for spending out of existing wealth or from future high earnings are not poor.

A new value-added tax would incur significant administrative and compliance costs. Based on a 1984 estimated by the Treasury Department, the administrative cost to government of instituting and collecting a value-added tax could be about $1 billion.

LONG-TERM EFFECTS OF S.2016 ON THE DISTRIBUTION OF FEDERAL TAXES

Current financing of OASDI allows for the buildup of substantial trust fund reserves over the next 25 years. Over that period, annual payroll tax receipts are projected to exceed annual expenditures by the program. Income in excess of expenditures is credited to the OASDI trust funds. The funds are also credited with interest on accumulated reserves. The trust funds hold government securities which represent a claim on government resources. After 2017, annual payroll tax receipts are projected to be less than annual expenditures. The system will then need to draw on interest payments as well as tax receipts to make annual benefit payments. By 2030, tax receipts plus interest payments will not be sufficient to meet expenditures and the trust funds will need to redeem securities to make benefit payments. The monies needed either for interest payments or to redeem securities will have to come from the general fund, requiring reductions in other government spending or increases in taxes or borrowing. Drawing down projected trust fund reserves should be sufficient to offset the shortfall in payroll tax revenues until 2046, at which time some adjustment to either Social Security revenues or expenditures will be required.

S. 2016 would switch the financing of OASDI from a partially advanced funded system to a pay-as-you-go system. The bill would establish a payroll tax rate schedule designed to produce sufficient total trust fund income to pay benefits and to maintain a one-year contingency reserve in the trust funds. Payroll tax rates would be lower under current law from now until 2014, and higher after 2019. S. 2016 would eliminate the projected long-term deficit in OASDI because payroll taxes would rise after 2045 to meet expenditure requirements.

Switching from a partially advanced funded system to a pay-as-you-go system has important implications for the distribution of total federal tax burdens. Under the current system, benefit obligations after the year 2017 will be met partially through payroll taxes and partially through other federal revenues. According to the 1989 Social Security Trustees' Report, about 75 percent of benefits in the year 2030 will be supported through payroll tax revenues, 5 percent through income from taxation of benefits, and 20 percent through interest payments. The money needed to meet that claim on government funds when the trust funds redeem securities will have to come from either reduced government spending, increased borrowing, or higher taxes. The additional revenues needed in excess of payroll taxes and income from taxation of benefits are projected to be about 1.3 percent of GNP, or an amount roughly equivalent to raising current individual income taxes by 15 percent or corporate income tax revenues by two-thirds.

Under the S. 2016, benefit obligations in all years would be met almost totally through payroll taxes and the taxation of benefits. Additional payroll taxes would substitute for monies needed from the general funds. Depending on how the government would choose to meet general fund revenue requirements when the trust funds redeem securities, the federal tax system in 2030 could be either more or less progressive under S. 2016 than under current law. If payroll taxes are a less progressive revenue source than the alternatives that would be selected under current law, S. 2016 would make the tax system less progressive in the future.

Switching from a partially advanced funded system to a pay-as-you-go system has important implications for the distribution of total lifetime Social Security tax payments. Under current law, Social Security benefits depend on a formula based on earnings, not tax payments. There is no direct link between the benefit a worker receives and the Social Security taxes the worker has paid. Even if payroll taxes were reduced, beneficiaries would receive their payments so long as adequate spending authority (regardless of its source) resided in the Social Security trust funds.

Although in the near-term Social Security contribution rates would be lower under S. 2016, starting in 2020, payroll taxes would be higher under S. 2016 than under current law. By reducing Social Security contribution rates now and increasing rates in the future, S. 2016 would change the relationship between lifetime Social Security benefits and tax payments for workers in different age cohorts, unless benefit payments were also changed. Unequal payroll taxes would produce unequal "rates of return" for workers in different cohorts. The ratio of lifetime Social Security benefits to lifetime payroll tax contributions would fall for workers paying higher payroll taxes in the future under S. 2016, while returns would increase for current workers paying lower payroll taxes through 2020.

TABLE 1. ESTIMATED COST OF S. 2016 TO THE FEDERAL GOVERNMENT
(By fiscal year, in billions of dollars)

	1990[a]	1991	1992	1993	1994	1995
Net[b] Revenues from OASDI Tax Rate Decrease	-4.4	-38.3	-52.4	-56.2	-60.1	-64.0
Revenues from Automatic FERS Tax Rate Increase	*	0.4	0.4	0.5	0.6	0.6
Net Revenue Reduction	-4.4	-37.9	-52.0	-55.7	-59.5	-63.4

This reduction in revenues, if not offset elsewhere in the federal budget, would result in increased outlays for debt service of the following amounts (by fiscal year, in billions of dollars):

	1990	1991	1992	1993	1994	1995
Outlays, Increased Interest for Debt Service[c]	0.1	1.8	5.5	10.1	15.1	20.5

This would result in the following net deficit effect (by fiscal year, in billions of dollars):

Net Increase in Deficit	4.5	39.7	57.5	65.8	74.6	83.9

Source: Congressional Budget Office Tax Simulation Model
Note: * = Revenue gain of less than $0.1 billion.

a. Full fiscal year effect. Delayed enactment would move some receipts into fiscal year 1991.
b. Assuming nominal GNP is held constant, a reduction in Social Security taxes would increase income and, therefore, increase tax liability. These estimates are net of increased tax revenues.
c. These estimates assume that interest rates are unchanged from the CBO baseline forecast.

TABLE 1A. SOCIAL SECURITY RESERVES FOR FISCAL YEARS 1990-1995
(In billions of dollars and as a percentage of outgo)

	1990	1991	1992	1993	1994	1995
Proposed Law -- S. 2016						
Start-of-Year Balances						
In Billions	157	218	248	270	295	325
As a Percentage of Outgo	63	82	87	90	92	96
Current Law						
Start-of-Year Balances						
In Billions	157	223	297	383	481	593
As a Percentage of Outgo	63	83	105	127	150	175

NOTE: Start-of-year balances in this table do not include the advanced tax transfers that occur on the first day of the fiscal year. Inclusion of these transfers would increase the balances by about 9 percent to 10 percent under current law and about 7 percent to 8 percent under S. 2016.

TABLE 2. AVERAGE ADJUSTED FAMILY INCOME
(Income expressed as multiples of the poverty thresholds)

Quintile[a]	1977	1980	1985	1990[b]	Percentage Change 1977-90	Percentage Change 1980-90	Percentage Change 1985-90
Lowest[c]	0.95	0.86	0.80	0.84	-11.8	-3.2	4.5
Second	2.06	1.92	1.86	2.00	-2.7	4.3	7.4
Middle	3.09	2.93	2.96	3.18	2.8	8.4	7.2
Fourth	4.34	4.17	4.35	4.70	8.4	12.6	8.0
Highest	8.70	8.61	9.83	11.34	30.3	31.7	15.3
Top 10 Percent	11.46	11.39	13.39	15.76	37.6	38.4	17.7
Top 5 Percent	15.22	15.42	18.65	22.52	48.0	46.1	20.8
TOTAL[d]	3.84	3.69	3.96	4.39	14.3	18.7	10.8

Source: Congressional Budget Office Tax Simulation Model

a. Ranked by size of adjusted family income.
b. Projected based on Internal Revenue Service and Census Bureau data, using CBO economic forecast.
c. Excludes families with zero or negative incomes.
d. Includes families with zero or negative incomes not shown separately.

TABLE 3. FEDERAL EFFECTIVE TAX RATES (In Percent)

Quintile[a]	1977	1980	1985	1990[b]	Percentage Change 1977-90	Percentage Change 1980-90	Percentage Change 1985-90
All Federal Taxes							
Lowest[c]	9.5	8.4	10.6	9.7	2.6	16.1	-8.1
Second	15.6	15.7	16.1	16.7	6.6	6.0	3.8
Middle	19.6	20.0	19.3	20.3	3.6	1.2	5.1
Fourth	21.9	23.0	21.7	22.5	2.6	-2.2	3.6
Highest	27.1	27.3	24.0	25.8	-4.6	-5.5	7.4
Top 10 Percent	28.7	28.4	24.4	26.4	-8.1	-7.3	8.2
Top 5 Percent	30.5	29.5	24.5	26.7	-12.5	-9.5	9.0
TOTAL[d]	22.8	23.3	21.7	23.0	1.2	-1.0	5.9
Individual Income Taxes							
Lowest[c]	-0.6	-0.4	-0.1	-1.5	e	e	e
Second	3.5	4.5	4.0	3.5	1.0	-22.0	-10.2
Middle	7.0	8.1	6.8	6.7	-3.7	-17.2	-1.6
Fourth	9.6	11.0	9.2	9.0	-6.3	-17.9	2.4
Highest	16.0	17.1	14.4	15.6	-2.4	-8.8	8.6
Top 10 Percent	18.1	18.9	15.8	17.3	-4.0	-8.5	9.6
Top 5 Percent	20.1	20.7	17.2	18.9	-6.0	-8.6	10.4
TOTAL[d]	11.1	12.3	10.7	11.3	1.8	-8.4	5.5
Social Insurance Taxes							
Lowest[c]	5.3	5.4	6.9	7.6	43.8	41.1	10.6
Second	7.6	7.9	9.2	10.1	32.8	27.6	9.6
Middle	8.1	8.7	9.8	10.7	31.4	23.3	9.1
Fourth	7.8	8.7	9.8	10.6	35.3	22.1	7.5
Highest	5.2	5.9	6.7	6.8	31.3	16.5	1.9
Top 10 Percent	4.1	4.7	5.5	5.5	33.4	16.2	0.6
Top 5 Percent	3.0	3.5	4.0	4.0	33.9	15.6	-0.2
TOTAL[d]	6.5	7.2	8.2	8.6	31.0	19.7	5.0

(Continued)

TABLE 3. (Continued)

Quintile[a]	1977	1980	1985	1990[b]	Percentage Change 1977-90	Percentage Change 1980-90	Percentage Change 1985-90
Corporate Income Taxes							
Lowest[c]	1.8	1.3	1.0	1.1	-38.2	-15.1	17.1
Second	2.7	1.9	1.3	1.6	-39.9	-15.7	22.7
Middle	3.0	2.2	1.5	1.8	-39.3	-17.1	19.5
Fourth	3.2	2.4	1.7	2.0	-36.8	-17.1	20.9
Highest	5.0	3.7	2.4	2.8	-43.3	-23.6	19.7
Top 10 Percent	5.8	4.2	2.6	3.1	-46.6	-27.0	18.4
Top 5 Percent	6.8	4.9	2.9	3.3	-50.6	-31.2	15.8
TOTAL[d]	3.9	2.9	1.9	2.3	-39.6	-19.1	20.5
Excise Taxes							
Lowest[c]	2.9	2.1	2.9	2.4	-17.0	17.8	-15.3
Second	1.8	1.3	1.6	1.4	-24.2	3.8	-11.4
Middle	1.5	1.1	1.2	1.0	-28.3	-1.3	-9.0
Fourth	1.3	0.9	0.9	0.9	-31.6	-5.3	-8.4
Highest	0.9	0.6	0.6	0.5	-39.3	-15.6	-7.8
Top 10 Percent	0.7	0.5	0.5	0.5	-38.4	-15.6	-6.7
Top 5 Percent	0.6	0.4	0.4	0.4	-35.0	-11.7	-4.0
TOTAL[d]	1.3	0.9	1.0	0.8	-32.7	-5.9	-11.1

Source: Congressional Budget Office Tax Simulation Model

a. Ranked by size of adjusted family income.
b. Projected based on Census Bureau and Internal Revenue Service data, using CBO economic forecast.
c. Excludes families with zero or negative incomes.
d. Includes families with zero or negative incomes not shown separately.
e. Not meaningful.

TABLE 4. EFFECTIVE FEDERAL TAX RATES BY SOURCE, 1991 (In Percent)

Quintile[a]	Individual Income	Social Insurance Taxes	Corporate Income Tax	Excise Taxes	All Federal Taxes
Lowest[b]	-1.4	7.6	1.2	2.1	9.5
Second	3.6	10.1	1.7	1.2	16.6
Middle	6.8	10.7	1.9	0.9	20.2
Fourth	9.1	10.6	2.1	0.7	22.5
Highest	15.8	6.9	2.9	0.4	26.0
Top 10 Percent	17.5	5.5	3.2	0.4	26.6
Top 5 Percent	19.2	4.0	3.5	0.3	27.0
TOTAL[c]	11.4	8.6	2.4	0.7	23.1

Source: Congressional Budget Office Tax Simulation Model.

a. Ranked by size of adjusted family income.
b. Excludes families with zero or negative incomes.
c. Includes families with zero or negative incomes not shown separately.

TABLE 5. COMPARISON OF INDIVIDUAL INCOME AND SOCIAL SECURITY PAYROLL TAXES BY INCOME LEVEL, 1991

Quintile[a]	Percentage of Families Whose Social Security Payroll Taxes Exceed Their Individual Income Taxes	
	Employee and Employer Share	Employee Share Only
Lowest[b]	98.1	97.0
Second	90.5	68.3
Middle	79.2	26.5
Fourth	68.2	9.5
Highest	27.7	2.7
Top 10 Percent	13.9	1.8
Top 5 Percent	4.9	0.8
TOTAL[c]	69.1	34.2

Source: Congressional Budget Office Tax Simulation Model

Note: Percentages are calculated for families paying either individual income taxes or Social Security payroll taxes or both.

a. Ranked by size of adjusted family income.
b. Excludes families with zero or negative incomes.
c. Includes families with zero or negative incomes not shown separately.

TABLE 6. THE EFFECT OF S. 2016 ON THE DISTRIBUTION OF FEDERAL TAXES AND AFTER-TAX INCOMES, BY INCOME AND AGE OF FAMILY HEAD, 1991

Quintile [a]	All Federal Taxes [b]			After-Tax Income		Effective Tax Rates	
	Current Law Average ($)	Average Change ($)	Percent Change (%)	Current Law Average ($)	Percent Change (%)	Current Law (%)	Under Option (%)
All Families							
Lowest [c]	770	-81	-10.5	7,316	1.1	9.5	8.5
Second	3,355	-266	-7.9	16,917	1.6	16.6	15.2
Middle	6,558	-452	-6.9	25,896	1.7	20.2	18.8
Fourth	10,579	-642	-6.1	36,481	1.8	22.5	21.1
Highest	28,800	-974	-3.4	81,934	1.2	26.0	25.1
TOTAL [d]	10,039	-481	-4.8	33,401	1.4	23.1	22.0
Families with Head Age 65 or Older							
Lowest [c]	185	-6	3.1	7,025	0.1	2.6	2.5
Second	741	-32	-4.4	14,646	0.2	4.8	4.6
Middle	2,144	-78	-3.6	23,425	0.3	8.4	8.1
Fourth	4,959	-153	-3.1	33,904	0.5	12.8	12.4
Highest	23,589	-307	-1.3	82,227	0.4	22.3	22.0
TOTAL [d]	5,916	-107	-1.8	30,531	0.4	16.2	15.9
Families with Head Under 65							
Lowest [c]	960	-105	-10.9	7,411	1.4	11.5	10.2
Second	4,192	-341	-8.1	17,643	1.9	19.2	17.6
Middle	7,658	-545	-7.1	26,511	2.1	22.4	20.8
Fourth	11,822	-750	-6.3	37,051	2.0	24.2	22.7
Highest	30,075	-1,138	-3.8	81,862	1.4	26.9	25.9
TOTAL [d]	11,141	-581	-5.2	34,168	1.7	24.6	23.3

Source: Congressional Budget Office Tax Simulation Model.

a. Ranked by size of adjusted family income. In the distribution for families with aged and nonaged heads, families are classified according to their ranking among all families.
b. Federal taxes include the individual and corporate income taxes, social insurance taxes, and excise taxes.
c. Excludes families with zero or negative incomes.
d. Includes families with zero or negative incomes not shown separately.

TABLE 7. THE EFFECT OF S. 2016, WITH AN OFFSETTING INCOME TAX SURCHARGE, ON THE DISTRIBUTION OF FEDERAL TAXES AND AFTER-TAX INCOMES, BY INCOME AND AGE OF HEAD, 1991

Quintile [a]	All Federal Taxes [b]			After-Tax Income		Effective Tax Rates	
	Current Law Average ($)	Average Change ($)	Percent Change (%)	Current Law Average ($)	Percent Change (%)	Current Law (%)	Under Option (%)
All Families							
Lowest [c]	770	-75	-9.8	7,316	1.0	9.5	8.6
Second	3,355	-188	-5.6	16,917	1.1	16.6	15.6
Middle	6,558	-239	-3.6	25,896	0.9	20.2	19.5
Fourth	10,579	-231	-2.2	36,481	0.6	22.5	22.0
Highest	28,800	703	2.4	81,934	-0.9	26.0	26.6
TOTAL [d]	10,039	0	0.0	33,401	0.0	23.1	23.1
Families with Head Age 65 or Older							
Lowest [c]	185	-5	-2.9	7,025	0.1	2.6	2.5
Second	741	-22	-2.9	14,646	0.1	4.8	4.7
Middle	2,144	-6	-0.3	23,425	0.0	8.4	8.4
Fourth	4,959	74	1.5	33,904	-0.2	12.8	12.9
Highest	23,589	1,224	5.2	82,227	-1.5	22.3	23.4
TOTAL [d]	5,916	238	4.0	30,531	-0.8	16.2	16.9
Families with Head Under 65							
Lowest [c]	960	-98	-10.2	7,411	1.3	11.5	10.3
Second	4,192	-241	-5.8	17,643	1.4	19.2	18.1
Middle	7,658	-296	-3.9	26,511	1.1	22.4	21.5
Fourth	11,822	-298	-2.5	37,051	0.8	24.2	23.6
Highest	30,075	576	1.9	81,862	-0.7	26.9	27.4
TOTAL [d]	11,141	-64	-0.6	34,168	0.2	24.6	24.4

Source: Congressional Budget Office tax simulation models.

a. Ranked by size of adjusted family income. In the distribution for families with aged and nonaged heads, families are classified according to their ranking among all families.
b. Federal taxes include the individual and corporate income taxes, social insurance taxes, and excise taxes.
c. Excludes families with zero or negative incomes.
d. Includes families with zero or negative incomes not shown separately.

TABLE 8. THE EFFECT OF S. 2016, WITH AN OFFSETTING VALUE-ADDED TAX, ON THE DISTRIBUTION OF FEDERAL TAXES AND AFTER-TAX INCOMES, BY INCOME AND AGE OF HEAD, 1991

Quintile [a]	All Federal Taxes [b]			After-Tax Income		Effective Tax Rates	
	Current Law Average ($)	Average Change ($)	Percent Change (%)	Current Law Average ($)	Percent Change (%)	Current Law (%)	Under Option (%)
All Families							
Lowest [c]	770	147	19.1	7,316	-2.0	9.5	11.3
Second	3,355	22	0.6	16,917	-0.1	16.5	16.7
Middle	6,558	-43	-0.6	25,896	0.2	20.2	20.1
Fourth	10,579	-106	-1.0	36,481	0.3	22.5	22.3
Highest	28,800	-85	-0.3	81,934	0.1	26.0	25.9
TOTAL [d]	10,039	0	0.0	33,401	0.0	23.1	23.1
Families with Head Age 65 or Older							
Lowest [c]	185	72	39.0	7,025	-1.0	2.6	3.6
Second	741	77	10.4	14,646	-0.5	4.8	5.3
Middle	2,144	106	4.9	23,425	-0.5	8.4	8.8
Fourth	4,959	139	2.8	33,904	-0.4	12.8	13.1
Highest	23,589	266	1.1	82,227	-0.3	22.3	22.5
TOTAL [d]	5,916	128	2.2	30,531	-0.4	16.2	16.6
Families with Head Under 65							
Lowest [c]	960	172	17.9	7,411	-2.3	11.5	13.5
Second	4,192	4	0.1	17,643	0.0	19.2	19.2
Middle	7,658	-80	-1.0	26,511	0.3	22.4	22.2
Fourth	11,822	-160	-1.4	37,051	0.4	24.2	23.9
Highest	30,075	-171	-0.6	81,862	0.2	26.9	26.7
TOTAL [d]	11,141	-34	-0.3	34,168	0.1	24.6	24.5

SOURCE: Congressional Budget Office tax simulation models.

a. Ranked by size of adjusted family income. In the distribution for families with aged and nonaged heads, families are classified according to their ranking among all families.
b. Federal taxes include the individual and corporate income taxes, social insurance taxes, and excise taxes.
c. Excludes families with zero or negative incomes.
d. Includes families with zero or negative incomes not shown separately.

THE INCIDENCE OF FEDERAL TAXES

Estimated federal tax rates combine the effects of the individual and corporate income taxes, the employee and employer portion of social insurance payroll taxes, and federal excise taxes. Consequently, the tax rates reflect specific assumptions about which families bear the economic burden of each tax.

The burden of the individual income tax and the employee portion of the payroll tax is attributed to the families who directly pay these taxes. The portion of the payroll tax collected from employers is assumed to be shifted back onto employees in the form of lower wages. Excise taxes are assumed to be passed forward to individual consumers in the form of higher prices on goods subject to the tax. Finally, although the corporate income tax is collected from corporations, families are assumed ultimately to bear its economic burden. Economists disagree, however, about who is affected by the corporate income tax. These estimates assume that one-half the corporate income tax is allocated to capital income and one-half to labor income.

If the entire corporate income tax were allocated to capital income, higher-income families would pay a larger share of the tax. If the entire corporate tax were allocated to labor income, middle- and lower-income families would pay a larger share. Alternative allocations of the corporate income tax would not affect the average change in taxes or the percentage change in disposable income, but could have some effect on the measured percentage change in federal taxes.[6]

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6 For a discussion of these assumptions as well as more information on the distribution of federal taxes, see the following Congressional Budget Office publications: The Changing Distribution of Federal Taxes: 1975-1990 (October 1987) and "The Changing Distribution of Federal Taxes: A Closer Look at 1980," Staff Working Paper (July 1988).

DATA SOURCES

The distribution of family incomes and federal taxes for 1977, 1980, 1985, and the projected distribution for 1990 and 1991 based on data from four sources. The primary source is the March Current Population Survey (CPS) for 1978, 1981, 1986, and 1988. The CPS is a monthly survey of approximately 60,000 families, conducted by the Bureau of the Census. Each March, the survey collects detailed information on family characteristics and family income in the previous calendar year. The reported data on income from taxable sources from the CPS file were adjusted for consistency with reported income from Statistics of Income (SOI) samples for calendar years 1977, 1980 and 1985 and early data for 1987. The SOI is an extensive annual sample of actual individual income tax returns. Data on consumer expenditures were taken from the 1980/1981 and the merged 1984 and 1985 Consumer Expenditure Survey (CES) Interview Surveys. The CES Interview Survey is a quarterly panel survey conducted by the Bureau of Labor Statistics. The survey collects detailed data on household expenditures over a 12-month period. The 1980/81 CES data were adjusted to 1977 levels by changes in per capita personal consumption expenditures as reported in the National Income and Product Accounts (NIPA). Data from each of the files were adjusted to 1990 and 1991 using actual growth rates in population, income and expenditures as reported in the NIPA through 1988, and growth rates projected by CBO for 1989 through 1991.

ADJUSTING FAMILY INCOMES FOR FAMILY SIZE

Comparing taxes among families with different incomes can present a misleading picture unless some adjustment is made for different family sizes. For example a single person with income of $40,000 has a much higher standard of living than a family of four with the same income. At one extreme, income could be measured on a per-capita basis. This approach removes all differences based on family size including economies of scale from shared living arrangements. A different alternative is to adjust family income based on some equivalence scale. One such equivalence scale is the family-size adjustment used to construct official poverty thresholds. This scale assumes, for example, that a family of four needs about twice the income of a single person to maintain the same standard of living.

The income of families of different sizes are made comparable by dividing each family's income by its poverty threshold (see Table 9). Poverty thresholds differ not only by family size but also by the number of children under age 18 in the family and, for one- and two-person families, by whether or not the head of the family is age 65 or older. Families are ranked by their adjusted family income (AFI)--family income divided by the appropriate poverty threshold--and an equal number of people are assigned to each quintile. The following table shows the minimum and average AFI for each quintile in 1991, measured as multiples of the poverty thresholds.

	Minimum AFI	Average AFI
Lowest Quintile	----	0.84
Second Quintile	1.44	2.01
Middle Quintile	2.59	3.20
Fourth Quintile	3.85	4.73
Highest Quintile	5.82	11.44

Thus, for example, the average income for a family in the lowest quintile is 0.84 percent of the poverty threshold--$5,877 for a nonelderly single-person family, $7,565 for a nonelderly couple or $11,456 for a couple with two children under age 18. The average income for a family in the highest quintile is 11.44 percent of the poverty threshold--$80,034 for a nonelderly single-person family, $103,029 for a non-elderly couple or $156,019 for a couple with two children under age 18.

TABLE 9. PROJECTED POVERTY THRESHOLDS IN 1991, BY SIZE OF FAMILY AND NUMBER OF RELATED CHILDREN UNDER 18 (In dollars)

Size of family	Number of Related Children under 18								
	0	1	2	3	4	5	6	7	8 or more
1[a]	6,996								
1[b]	6,449								
2[a]	9,006	9,270							
2[b]	8,128	9,234							
3	10,520	10,824	10,835						
4	13,871	14,098	13,638	13,686					
5	16,728	16,971	16,452	16,049	15,804				
6	19,240	19,316	18,918	18,537	17,970	17,633			
7	22,138	22,276	21,800	21,467	20,849	20,127	19,335		
8	24,760	24,978	24,529	24,135	23,576	22,867	22,128	21,940	
9 or more	29,785	29,928	29,530	29,196	28,648	27,893	27,210	27,041	25,999

Source: Congressional Budget Office projections based on official poverty thresholds.

a. Head of family under age 65.
b. Head of family age 65 or older.