

Taxation of Social Security and Railroad Retirement Benefits, 1985-1990

By Janet Holtzblatt*

The Treasury Department transfers to the Social Security and Railroad Retirement Trust Funds income tax collections derived from the taxation of social security and railroad retirement benefits as required by the Social Security Amendments of 1983 [1]. The 1983 Amendments require that beginning in January 1984 social security and "tier 1" railroad retirement benefits be partially taxable for high-income taxpayers and the estimates of the tax liability attributable to these benefits be transferred to the Federal Old Age and Survivors Insurance (FOASI), Federal Disability Insurance (FDI), and Railroad Retirement Trust Funds [2]. The Amendments require adjustments in the amounts transferred to the trust funds in the event that the estimates of the tax liability attributable to the benefits, made before the year's tax returns become available, are subsequently shown to be incorrect. The 1985 individual income tax return data for the required adjustments were obtained in 1987 from the Internal Revenue Service (IRS) [3].

The amounts transferred to the Social Security Trust Funds are calculated as the difference between tax liabilities with and without the inclusion of benefits in "adjusted gross income" (AGI) for returns with taxable social security and tier 1 railroad retirement benefits. A taxpayer adds taxable wages, interest, dividends, and other taxable income to one-half of social security and tier 1 railroad retirement benefits plus tax-exempt interest on State and local government obligations to obtain a sum which is compared to certain thresholds. The threshold for single taxpayers is \$25,000 and for joint returns it is \$32,000. A maximum of 50 percent of the social security and tier 1 railroad retirement benefits are includable in AGI if a taxpayer's income exceeds the threshold. For taxpayers with incomes slightly above the threshold amounts or with relatively large social security and tier 1 railroad retirement benefits, the percentage of such benefits includable in AGI is often lower than the 50 percent maximum.

The initial Calendar Year 1985 transfers of \$3,428 million to the Trust Funds were \$12 million higher than the amount of income tax liability calculated from actual 1985 tax return

data. Transfers to the FDI and Railroad Retirement accounts were initially overstated by \$114 million and \$43 million, respectively. These overpayments were partially offset by an underpayment to the FOASI account of \$145 million. Correcting adjustments were made in the July 1987 Trust Fund transfers. Transfers for Calendar Years 1986 through 1990, including the adjustment for 1985 and an anticipated adjustment for 1986, are estimated to be \$18,948 million.

METHODOLOGY AND ESTIMATES OF BENEFIT TAXATION FOR THE INITIAL CALENDAR YEAR 1985 TRUST FUND TRANSFERS

The Treasury Department's Office of Tax Analysis (OTA) has responsibility for making the transfers of additional income tax liability attributable to the Social Security Amendments of 1983 to the Social Security and Railroad Retirement Trust Funds. OTA estimated the tax liability effects of the benefit taxation provision of the Amendments using the Office's Individual Income Tax Model.

The Individual Income Tax Model contains information from a stratified random subsample of 75,000 tax returns selected from the IRS' Statistics of Income file of sampled returns, various imputations of data not available from tax returns, and a tax calculator which computes changes in tax liabilities attributable to changes in the tax code. Computations based on this model are weighted to produce results that are representative of the population that filed returns in the year the sample was selected [4]. The imputations and the tax calculator are described below, after which the initial 1985 transfers are discussed.

Imputation of data items not available from tax returns was necessary to make initial revenue estimates of the additional tax liability attributable to the taxation of social security and tier 1 railroad retirement benefits. First, the Individual Income Tax Model had to be modified to include data on taxable pension benefits. For example, payable benefits, as provided by the Social Security Administration and the Railroad Retirement Board, had to be distributed among appro-

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appropriate taxpayers. This distribution was based on the most recent Current Population Survey data from the Census Bureau [5]. Second, an imputation was made for tax-exempt interest on State and local government obligations because it is included in the benefit inclusion formula but was not reported in IRS statistics [6].

Calculation of the tax liability effect of the new legislation required forecasts of 1985 revenue when 1983 tax data were the latest available. Forecasts of tax effects beyond 1983 required that the data items on the Individual Income Tax Model be adjusted for three types of growth. First, an adjustment was made for the forecasted growth in social security and tier 1 railroad retirement pension benefits provided by the Social Security Administration and the Railroad Retirement Board.

Second, an adjustment was made to capture the maturing of the beneficiary population. The current structure of the social security system ensures that for the near future new beneficiaries subject to tax have both greater benefits and higher incomes than prior entrants. Finally, the thresholds were adjusted to reflect the effect of inflation on their real value. The thresholds which trigger taxation of social security and tier 1 railroad retirement benefits are unadjusted for inflation, so the real value of the thresholds erode with some beneficiaries becoming taxable as inflation raises their incomes over the thresholds.

These imputations and forecasts are inputs to the tax calculator which utilizes information from each potential filing unit to calculate each unit's Federal income tax liability. For purposes of making the initial 1985 transfers, the Individual Income Tax Model was used to estimate 1985 tax liabilities with and then without social security and tier 1 railroad retirement benefits included in AGI. The tax calculator takes account of changes in itemized deductions which are affected by AGI (e.g., as AGI increases, it becomes more difficult to meet the criteria for deducting medical and casualty expenses), the individual minimum tax, and the usage of tax credits (the increased liability resulting from inclusion of social security benefits in AGI enables some taxpayers to use credits which otherwise might not be usable for that year) [7]. The Tax Model yielded the percentage of total benefits included in AGI as a result of the special benefit inclusion formula, and associated marginal tax rates.

Estimates of the additional tax liability from the partial taxation of social security benefits for Calendar Year 1985 were made in late 1984 and were adjusted as new information was obtained. Transfers to the Trust Funds are authorized by Treasury Department regulations to be made on a quarterly basis. The amount of each quarter equals one-fourth of the estimated change in calendar year tax liability

as a result of the 1983 Amendments (plus adjustments for prior transfers). The transfers required by the Amendments are allocated to the following accounts:

- Federal Old Age and Survivors Insurance (FOASI)
- Federal Disability Insurance (FDI)
- Railroad Retirement (Tier 1):
 - Social Security Equivalent Benefit Account (SSEBA)
 - Railroad Retirement Account (RRA)

Since October 1984, the tax attributable to receipt of tier 1 railroad retirement benefits has been transferred into two trust funds maintained by the Railroad Retirement Board. The Social Security Equivalent Benefit Account (SSEBA) was established in October 1984 by the Railroad Retirement Solvency Act of 1983. From the SSEBA, the Railroad Retirement Board pays retired rail workers the amount of tier 1 railroad retirement benefits which is equivalent to the social security benefits they would have received had their service been covered under the social security system rather than the railroad retirement system. The tax liability attributable to the social security equivalent benefits is transferred into the SSEBA. The remaining portion of tier 1 benefits is paid from the Railroad Retirement Account (RRA), and consequently, the tax liability attributable to this portion is transferred into the RRA. For 1985, the first full calendar year in which taxes on the tier 1 railroad retirement benefits were divided between the two accounts, 84 percent of these benefits were classified as SSEBA payments, while 16 percent were classified as RRA benefits.

Figure A compares the assumptions used to estimate the initial transfers for Calendar Year 1985 with the actual results. The top section of the table indicates that for FOASI, it was initially assumed that 5.3 percent of the \$167,877 million of benefits paid out in 1985 would be included in AGI at a marginal tax rate of 35.3 percent, yielding an initial transfer of \$3,133 million. Similar assumptions were used to obtain the initial estimates of the tax liability associated with tier 1 railroad retirement benefits: 5.1 percent of the \$4,195 million paid out in tier 1 railroad retirement benefits were included in AGI at a 35.2 percent marginal tax rate, yielding a \$77 million transfer. Relative to retirees, recipients of social security disability benefits have lower incomes. As a result, smaller tax parameters were used in the estimation of the initial transfer of disability benefits: 3.3 percent of the \$19,072 million in FDI benefits were included at a 34.4 percent marginal tax rate resulting in a transfer of \$218 million. The actual results are discussed in the following section.

Figure A.—Comparison of Assumptions Used to Estimate Initial Transfers with Actual Results, Calendar Year 1985

[Amounts in millions]

Trust funds	Initial transfer assumptions ¹			
	Totals benefits paid	Benefits includable in adjusted gross income (AGI)		Initial transfers
		As a percentage of total benefits	Average marginal tax rates used	
	(1)	(2)	(3)	(4)
Total	\$191,143	5.1%	35.2%	\$3,428
Federal Old Age and Survivors Insurance	167,877	5.3	35.3	3,133
Federal Disability Insurance ..	19,072	3.3	34.4	218
Railroad Retirement Tier 1	4,195	5.1	35.2	77

Trust funds	Actual results ²			
	Totals benefits paid	Benefits includable in adjusted gross income (AGI)		Actual results
		As a percentage of total benefits	Average marginal tax rates used	
	(5)	(6)	(7)	(8)
Total	\$190,271	5.2%	34.8%	\$3,416
Federal Old Age and Survivors Insurance	167,248	5.6	35.2	3,278
Federal Disability Insurance ..	18,827	2.0	27.9	104
Railroad Retirement Tier 1	4,196	3.0	27.4	34

¹ The total benefits paid data were estimates provided by the Social Security Administration and the Railroad Retirement Board; the other data are from the Individual Income Tax Model of the Office of Tax Analysis.

² The total benefits paid data are from the *Annual Statistical Supplement for 1986* of the *Social Security Bulletin* and the Railroad Retirement Board; the other data are from IRS Individual Master File data.

NOTE: Different assumptions were used for each quarterly transfer. Figure A presents a weighted average of these quarterly transfer assumptions. Details may not add to totals because of rounding.

Source: U.S. Department of the Treasury, Office of Tax Analysis, July 10, 1987.

ADJUSTMENTS TO TRANSFERS FOR ACTUAL 1985 TAX RETURN INFORMATION

The Social Security Amendments of 1983 require that transfers made on the basis of estimates be subsequently adjusted when actual tax return data become available. Calculations of the additional tax liability for Calendar Year 1985 resulting from partial taxation of social security and railroad retirement benefits were made by the IRS using two sets of forms: 1) All Form 1040 individual income tax returns showing some of these taxable benefits; and 2) payment forms provided to beneficiaries, the Forms 1099-SSA and 1099-RRB, which respectively inform social security and railroad retirement beneficiaries of payments potentially includable in AGI. The IRS calculated the number of tax returns with benefits which might be includable in AGI, the gross dollar amount of benefits ultimately paid to beneficiaries who filed tax returns, the amount of benefits included in AGI, and the additional taxes resulting from inclusion. Additional taxes resulting from inclusion were obtained by comparing for all returns the tax liability with and without social security and railroad retirement benefits in AGI.

The lower section of Figure A shows the additional tax liability attributable to partial inclusion of social security and

railroad retirement benefits calculated from actual 1985 tax returns. In 1985, the Social Security Administration and the Railroad Retirement Board paid out \$190,271 million in FOASI, FDI, and tier 1 railroad retirement benefits. As a result of the Social Security Amendments of 1983, \$9,894 million in benefits were added to AGI for Tax Year 1985. On the average, these benefits were taxed at a marginal rate of 34.8 percent, yielding \$3,416 million in additional revenues. For all Trust Funds, initial transfers exceeded actual receipts by \$12 million. In the aggregate, this compares favorably with the previous year, when subsequent data on 1984 actuals required a transfer from the Trust Funds of \$157 million back to general revenues in April, 1987.

The aggregate data, however, mask offsetting adjustments among the Trust Funds. While transfers to the FDI and tier 1 railroad retirement accounts exceeded actual receipts by \$157 million, transfers to the FOASI account fell short of actual receipts by \$145 million. For both the FDI and tier 1 railroad retirement benefit accounts, the assumptions concerning the tax parameters were too high. In the FDI account, the initial estimates assumed that 3.3 percent of benefits would be taxable at a marginal rate of 34.4 percent. The actual results showed, instead, that 2.0 percent of benefits were taxable at a marginal rate of 27.9 percent. Similarly, the initial estimates for the tier 1 railroad retirement benefit accounts overstated the amount of benefits includable in AGI and the applicable marginal tax rate by 2.1 and 7.8 percentage points, respectively.

In the FOASI account, the initial estimate of the marginal tax rate again erred on the positive side, though by only 0.1 percentage point. In addition, initial estimates of total benefits paid in 1985 were in excess of the actual amount by \$629 million. But, in contrast to the other accounts, the proportion of benefits includable in AGI was initially understated by 0.3 percentage points, and the total amount of tax liabilities transferred consequently fell short by \$145 million.

As a result of the reconciliation of estimated and actual 1985 tax liability, the July 1, 1987 transfer included an upward adjustment in the FOASI account and downward adjustments in the FDI and railroad retirement accounts. These adjustments reflect the changes from the initial transfers and are presented in Figure B.

Figure B.—Adjustments to Trust Funds Based on Comparison of the Initial Transfers with Actual Results, Calendar Year 1985

[Amounts in millions]

Trust funds	Initial transfers for calendar year	Actual results	Change from initial transfer
	(1)	(2)	(3)
Total	\$3,428	\$3,416	-\$12
Federal Old Age and Survivors Insurance	3,133	3,278	+ 145
Federal Disability Insurance	218	104	- 114
Railroad Retirement Tier 1	77	34	- 43

Source: U.S. Department of Treasury, Office of Tax Analysis, July 10, 1987.

FORECAST OF TRANSFERS TO TRUST FUNDS FOR 1986-1990

The Social Security Amendments of 1983 required that the Treasury Department annual report include a forecast of transfers to the Trust Funds for the next 5 years. The forecast is produced by OTA using the methodology described above. Social security and railroad retirement benefit forecasts are obtained from the respective agencies, and the percentage of aggregate retirement benefits includable in AGI and marginal tax rates are obtained by extrapolating the Individual Income Tax Model in accordance with the Administration's budget forecasts. In addition, the estimates of future transfers reflect the information obtained from the IRS computation of marginal tax rates and benefits includable in AGI reported on tax returns for Calendar Year 1985. Downward adjustments have been made in the percentages of FDI and tier 1 railroad retirement benefits includable in AGI for 1987 through 1990 as a result of the information from actual 1984 and 1985 tax returns (the amounts estimated for Calendar Year 1986 have already been transferred).

The estimated transfers for Calendar Years 1986-1990, including the 1984 and 1985 adjustments and anticipated adjustments for 1986, are presented in Figure C. It is expected that the 1983 Amendments will result in \$18,948 million being transferred to the Social Security and Railroad Retirement Trust Funds in Calendar Years 1986-1990. It should be noted that the transfers for Calendar Years 1987-1990 take account of the Tax Reform Act of 1986. The Tax Reform Act of 1986 lowers the tax liability effect of the Social Security Amendments of 1983, causing approximately a \$2.0 billion decline over the 1987-1990 period due to decreases in marginal tax rates [8].

Figure C.—Forecast of Net Transfers Due to the Social Security Amendments of 1983, Calendar Years 1986-1990¹

[Amounts in millions]

Trust funds net transfers	Total transfers, 1986-1990	1986 initial transfer already made	Estimated transfers			
			1987	1988	1989	1990
	(1)	(2)	(3)	(4)	(5)	(6)
Total net transfers	\$18,948	\$3,656	\$3,123	\$3,572	\$4,019	\$4,578
Federal Old Age and Survivors Insurance, net transfer	18,082	3,353	3,190	3,509	3,756	4,274
Federal Disability Insurance, net transfer	688	234	-39	49	205	239
Railroad Retirement Tier 1, net transfer	178	69	-28	14	58	65

¹ Transfers for 1985 and 1986 have already been made. The estimates for 1987-1989 include the impact of the Tax Reform Act of 1986 and expected adjustments. The 1987 data reflect the adjustment for 1984 actuals (made in the initial April 1987 transfer when data on 1984 actual receipts became available) and for the 1985 actuals.

Source: U.S. Department of the Treasury, Office of Tax Analysis, July 10, 1987.

NOTES AND REFERENCES

[1] These Amendments call for annual reports by the Secretary of the Treasury on transfers from general revenue tax collections to the social security and railroad retire-

ment trust funds for each calendar year, as soon as data from individual income tax returns on income tax liability are complete. As required by the Amendments, the annual reports also include descriptions of the methodology used to effect the transfers and estimates of the transfers anticipated for the 5 subsequent years.

The "Report on the Taxation of Social Security and Railroad Retirement Benefits in Calendar Year 1984," released in March 1987 by the Office of Tax Analysis, contains a description of the methodology used to estimate and adjust transfers of the 1984 tax liability attributable to receipt of social security and tier 1 railroad retirement benefits.

- [2] As mentioned below, "tier 1" benefits consist of two parts (a) benefit equivalent in amount to what a rail worker would have received if covered under social security, and (b) certain other benefits. In contrast, "tier 2" benefits are analogous to those received from private pension plans.
- [3] Reports are filed approximately 1-1/2 years after the close of the applicable calendar year due to the normal lags in tax return filing, processing, transcription, and analysis.
- [4] For a detailed description of the Individual Income Tax Model, see Cilke, James C., Nelson, Susan C., and Wyscarver, Roy A., "The Tax Reform Data Base," Proceedings of the Seventy-Ninth Annual Conference, National Tax Association-Tax Institute of America, 1986.
- [5] U.S. Department of Commerce, Bureau of the Census, Current Population Survey, March 1983, (Machine Readable Data File). (The Survey was conducted for the Bureau of Labor Statistics; the File was produced and distributed by the Bureau of the Census in 1983.)
- [6] While Form 1040 has a place where taxpayers are asked to report how much tax-exempt interest on State and local government obligations is included in the social security (and tier 1 railroad retirement) benefit inclusion calculation, only limited information on it was tabulated by IRS for 1986 (for the first time). Beginning with Tax Year 1987, all taxpayers with tax-exempt interest are required to report the amount on Forms 1040 or 1040A, as a result of the Tax Reform Act of 1986. Total tax-exempt interest will then be tabulated by IRS for Statistics of Income.

[7] The Tax Reform Act of 1986 will have a variety of impacts on the Social Security and Railroad Retirement Trust Funds. Some of these impacts, like the one referred to in this report, will reduce trust fund balances, while other effects, such as the expansion of the income of self-employed workers subject to payroll taxation, will increase trust fund balances. No attempt is made here to quantify all of these impacts.