



Office of Tax Policy
January 2021

Report on the Taxation of
Social Security and Railroad Retirement Benefits in
Calendar Years 2010 through 2014

Report to Congress, the Secretary of Health and Human Services, the
Social Security Administration, and the Railroad Retirement Board

Section 121 of the Social Security Amendments of 1983 (P.L. 98-21), directs the Secretary of the Treasury to transfer from the general fund of the Treasury to the Social Security and Railroad Retirement trust funds amounts equivalent to the tax liabilities attributable to the taxation of Social Security and Railroad Retirement benefits. Section 121 further provides that the Secretary of the Treasury shall submit annual reports concerning (1) the transfers made that year, and the methodology used in determining the amount of such transfers and the funds of accounts to which made, and (2) the anticipated operation of the transfers during the next five years. This report fulfills this requirement for Calendar Years 2010 through 2014.



**DEPARTMENT OF THE TREASURY
WASHINGTON, DC 20220**

January 14, 2021

The Honorable Michael R. Pence
President of the Senate
Washington, DC 20510

Dear Mr. President:

Section 121 of the Social Security Amendments of 1983 (P.L. 98-21), directs the Secretary of the Treasury to transfer from the general fund of the Treasury to the Social Security and Railroad Retirement trust funds amounts equivalent to the tax liabilities attributable to the taxation of Social Security and Railroad Retirement benefits. Section 121 further provides that the Secretary of the Treasury shall submit annual reports concerning (1) the transfers made that year, and the methodology used in determining the amount of such transfers and the funds of accounts to which made, and (2) the anticipated operation of the transfers during the next five years.

Pursuant to Section 121, I am pleased to submit the “Report on the Taxation of Social Security and Railroad Retirement Benefits in Calendar Years 2010 through 2014.”

This report is also being transmitted to the Speaker of the House, the Secretary of the Department of Health and Human Services, the Commissioner of the Social Security Administration, and the Chairman of the Railroad Retirement Board.

Sincerely,

Frederick W. Vaughan
Principal Deputy Assistant Secretary
Office of Legislative Affairs

cc: The Honorable Ronald L. Batory
Administrator, Federal Railroad Administration



**DEPARTMENT OF THE TREASURY
WASHINGTON, DC 20220**

January 14, 2021

The Honorable Nancy P. Pelosi
Speaker of the House of Representatives
Washington, DC 20515

Dear Madam Speaker:

Section 121 of the Social Security Amendments of 1983 (P.L. 98-21), directs the Secretary of the Treasury to transfer from the general fund of the Treasury to the Social Security and Railroad Retirement trust funds amounts equivalent to the tax liabilities attributable to the taxation of Social Security and Railroad Retirement benefits. Section 121 further provides that the Secretary of the Treasury shall submit annual reports concerning (1) the transfers made that year, and the methodology used in determining the amount of such transfers and the funds of accounts to which made, and (2) the anticipated operation of the transfers during the next five years.

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Sincerely,

Frederick W. Vaughan
Principal Deputy Assistant Secretary
Office of Legislative Affairs

cc: The Honorable Ronald L. Batory
Administrator, Federal Railroad Administration



**DEPARTMENT OF THE TREASURY
WASHINGTON, DC 20220**

January 14, 2021

The Honorable Alex M. Azar
Secretary
Department of Health and Human Services
200 Independence Ave., SW
Washington, DC 20201

Dear Secretary Azar:

Section 121 of the Social Security Amendments of 1983 (P.L. 98-21), directs the Secretary of the Treasury to transfer from the general fund of the Treasury to the Social Security and Railroad Retirement trust funds amounts equivalent to the tax liabilities attributable to the taxation of Social Security and Railroad Retirement benefits. Section 121 further provides that the Secretary of the Treasury shall submit annual reports concerning (1) the transfers made that year, and the methodology used in determining the amount of such transfers and the funds of accounts to which made, and (2) the anticipated operation of the transfers during the next five years.

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Sincerely,

Frederick W. Vaughan
Principal Deputy Assistant Secretary
Office of Legislative Affairs

cc: The Honorable Ronald L. Batory
Administrator, Federal Railroad Administration



**DEPARTMENT OF THE TREASURY
WASHINGTON, DC 20220**

January 14, 2021

The Honorable Andrew M. Saul
Commissioner
Social Security Administration
Altmeyer Building
6401 Security Blvd.
Baltimore, MD 21235

Dear Commissioner Saul:

Section 121 of the Social Security Amendments of 1983 (P.L. 98-21), directs the Secretary of the Treasury to transfer from the general fund of the Treasury to the Social Security and Railroad Retirement trust funds amounts equivalent to the tax liabilities attributable to the taxation of Social Security and Railroad Retirement benefits. Section 121 further provides that the Secretary of the Treasury shall submit annual reports concerning (1) the transfers made that year, and the methodology used in determining the amount of such transfers and the funds of accounts to which made, and (2) the anticipated operation of the transfers during the next five years.

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Sincerely,

Frederick W. Vaughan
Principal Deputy Assistant Secretary
Office of Legislative Affairs

cc: The Honorable Ronald L. Batory
Administrator, Federal Railroad Administration



**DEPARTMENT OF THE TREASURY
WASHINGTON, DC 20220**

January 14, 2021

Chairman Erhard R. Chorlé
Railroad Retirement Board
844 North Rush Street
Chicago, IL 60611-1275

Dear Chairman Chorlé:

Section 121 of the Social Security Amendments of 1983 (P.L. 98-21), directs the Secretary of the Treasury to transfer from the general fund of the Treasury to the Social Security and Railroad Retirement trust funds amounts equivalent to the tax liabilities attributable to the taxation of Social Security and Railroad Retirement benefits. Section 121 further provides that the Secretary of the Treasury shall submit annual reports concerning (1) the transfers made that year, and the methodology used in determining the amount of such transfers and the funds of accounts to which made, and (2) the anticipated operation of the transfers during the next five years.

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Principal Deputy Assistant Secretary
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cc: The Honorable Ronald L. Batory
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**Report to the Congress,
the Secretary of Health and Human Services,
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INTRODUCTION AND SUMMARY

I. Introduction

Since January of 1984, the Treasury Department has been required to estimate the individual income tax liabilities attributable to the inclusion of Social Security (Federal Old Age and Survivors and Federal Disability Insurance) and Railroad Social Security Equivalent benefits in adjusted gross income (AGI) for each liability year. These estimated tax liabilities are transferred from the general fund to the Federal Old Age and Survivors Insurance (FOASI), Federal Disability Insurance (FDI), and Railroad Social Security Equivalent Benefit Account (SSEBA) trust funds on a quarterly basis. Since 1994, transfers have also been made to the Federal Hospital Insurance (Medicare) trust fund (FHI). Both the taxation of benefits and the transfers to the trust funds are required by the Social Security Amendments of 1983 (SSA 83) (P.L. 98-21), as amended by the Railroad Retirement Solvency Act of 1983 (P.L. 98-76), the Consolidated Budget Reconciliation Act of 1985 (P.L. 99-272), and the Omnibus Budget and Reconciliation Act of 1993 (OBRA 93) (P.L. 103-66). P.L. 98-21 also requires that correcting adjustments be made to the amounts transferred to the trust funds if the estimates of the tax liability attributable to the benefits are subsequently shown to differ from final amounts.

In addition, P.L. 98-21 requires the Treasury Department to submit annual reports to the Congress, the Secretary of Health and Human Services, and the Railroad Retirement Board containing both a description of the methodology used to estimate the transfers to the trust funds and a forecast of transfers over the five subsequent years. The Treasury Department's Office of Tax Analysis (OTA) is responsible for estimating the original transfers to the trust funds, calculating the correcting adjustments when final amounts of liability become available, and preparing these mandated reports. This report covers a five year period, and describes (1) the original liability estimates and transfers to the trust funds for calendar years 2010 through 2014, (2) the necessary correcting adjustments to the transfers for those same calendar years, and (3) the forecast of liability and transfers for calendar years 2015 through 2019.

To determine if any benefits were taxable in calendar years 2010 through 2014, taxpayers were required to add both tax-exempt interest income and one-half of Social Security and Railroad Social Security Equivalent benefits to AGI. This augmented AGI is referred to as provisional income. If provisional income exceeded thresholds of \$25,000 for single filers and \$32,000 for joint filers, taxpayers were required to include in AGI the lesser of:

(1) one-half of the taxpayer's Social Security or Railroad Social Security Equivalent benefits

or

(2) one-half of the excess of provisional income over the thresholds.

If provisional income exceeded \$34,000 for single filers and \$44,000 for joint filers, taxpayers were required to include in AGI the lesser of:

- (1) 85 percent of the taxpayer's Social Security or Railroad Social Security Equivalent benefit
- or
- (2) the sum of
 - (a) the smaller of
 - (i) the amount included under the lower thresholds or
 - (ii) \$4,500 (for single filers) or \$6,000 (for joint filers)
 - Plus
 - (b) 85 percent of the excess of the recipient's provisional income over the applicable second provisional income threshold.

None of the provisional income thresholds are indexed for inflation. Certain married beneficiaries not filing joint returns had a provisional income threshold of zero. The AGI of these individuals included the lesser of 85 percent of the beneficiary's Social Security or Railroad Social Security Equivalent benefit or 85 percent of the recipient's provisional income. Overall, for the highest income beneficiaries, a maximum of 85 percent of Social Security or Railroad Social Security Equivalent benefits was includable in AGI.

Taken together, SSA 83 and OBRA 93 specify the rules for determining the amount of Social Security and Railroad Social Security Equivalent benefits includable in AGI and the transfers of tax liability attributable to those benefits to the FOASI, FDI, SSEBA and FHI trust funds. The first thresholds were enacted under SSA 83, which directed that the resulting increase in tax liability be transferred to the trust funds from which the benefits are paid (FOASI, FDI, and SSEBA). The inclusion rules apply to benefits received after December 31, 1983, in taxable years ending after that date. The second thresholds were enacted under OBRA 93, which directed that the additional tax liability resulting from such inclusion (in excess of any liability resulting from the first inclusion thresholds) be transferred to the FHI trust fund. The OBRA 93 inclusion rules apply to taxable years beginning after December 31, 1993.

For example, assume a non-married taxpayer with income of \$26,000 (including any tax exempt interest, but excluding any Social Security or Railroad Social Security Equivalent benefits). Further assume this taxpayer has \$4,000 in FOASI benefits. This taxpayer has \$28,000 in provisional income (\$26,000 plus one-half \$4,000), above the first inclusion threshold, but below the second threshold. Therefore, this taxpayer must include the lesser of one-half of his or her FOASI benefit (\$2,000) or one-half the excess of provisional income over the first threshold (one-half of \$28,000 minus \$25,000, or \$1,500). Thus, this taxpayer must include \$1,500 of FOASI benefits in AGI, and the tax on this amount would be transferred to the FOASI trust fund.

Now assume that this taxpayer's income is \$36,000 (again including any tax exempt interest, but excluding any Social Security or Railroad Social Security Equivalent benefits). As before, assume that this taxpayer has \$4,000 in FOASI benefits. This taxpayer's provisional income is now \$38,000, above the second inclusion threshold of \$32,000. If the second set of inclusion rules had not been enacted, the taxpayer would include the lesser of one-half of his or her FOASI benefit (\$2,000) or one-half the excess of provisional income over the first threshold (one-half of \$38,000 minus \$25,000, or \$6,500). However, under the second set of inclusion rules, the taxpayer must include the lesser of 85 percent of his or her FOASI benefit (\$3,400) or the sum of the smaller of the amount included due to the first thresholds (\$2,000) or \$4,500, plus 85 percent of the excess of provisional income over the second threshold (85 percent of \$38,000 minus \$32,000, or \$5,100). Since \$3,400 is less than \$2,000 plus \$5,100, the taxpayer must include \$3,400 in AGI. The tax on the additional amount attributable to the second set of inclusion rules, \$1,400 (\$3,400 total minus \$2,000 attributable to the first set of inclusion rules) would be transferred to the FHI trust fund while the tax on the total amount less the tax on the additional amount would be transferred to the FOASI trust fund.

To summarize, the Office of Tax Analysis estimates the income tax liability attributable to the partial inclusion of FOASI, FDI and SSEBA benefits in adjusted gross income and estimates the amounts to be transferred to the corresponding trust funds plus the FHI trust fund.¹ Subsequently, OTA makes adjustments to correct the amounts put into each fund. Throughout the report, some tables will show benefits and/or tax liability by income source (FOASI, FDI or SSEBA benefits) while others will show the amounts transferred to the various trust funds (FOASI, FDI, SSEBA or FHI).

II. Summary

The Summary Table shows OTA's original tax liability estimates by benefit source and the transfers made to the trust funds based on those estimates, the adjusting transfers subsequently made, and the resulting net amounts transferred to each trust fund for each calendar year. For example, for calendar year 2010, OTA initially estimated that the tax liability attributable to partial inclusion of Social Security and Railroad Social Security Equivalent benefits was \$38,380 million. Of this amount, \$35,401 million was attributable to the inclusion of FOASI benefits, \$2,720 million was attributable to the inclusion of FDI benefits, and \$259 million was attributable to the inclusion of SSEBA benefits.

Based on these estimates, transfers of \$21,931 million, \$1,848 million, \$14,442 million, and \$159 million were made from the general fund to the FOASI, FDI, FHI, and SSEBA trust funds, respectively. OTA subsequently determined that the amount of tax liability calculated from actual 2010 tax return data was \$4,004 million less than the amount originally transferred. Transfers to the FOASI, FDI, and FHI trust funds were overstated by \$2,350 million, \$703 million, and \$974 million respectively, while transfers to the SSEBA trust fund were understated by \$23 million. Correcting adjustments to the FOASI, FDI, and SSEBA trust funds were made in October 2013. Correcting adjustments to the FHI trust fund were made in January 2014. The resulting net amount transferred for calendar year 2010 liability was \$34,376 million. Of this amount, \$19,581 was transferred to the FOASI

trust fund, \$1,145 million was transferred to the FDI trust fund, \$13,468 was transferred to the FHI trust fund, and \$182 million was transferred to the SSEBA trust fund.

This report provides the detail supporting the tax liability and transfer amounts. Chapter 1 presents OTA's methodology for estimating the tax liability attributable to the inclusion of benefits in AGI and presents a comparison of estimates to actual amounts of income tax liability calculated from tax return data for calendar years 2010 through 2014. Chapter 2 presents the methodologies for estimating the initial amounts to be transferred to the trust funds and the subsequent correcting adjustments. The chapter also presents those initial transfer amounts and the correcting adjustments for 2010 through 2014 liabilities. Chapter 3 presents the forecast of transfers of estimated amounts to the trust funds for calendar years 2015 through 2019.

Summary Table

Calendar Years; Millions of Dollars

	2010	2011	2012	2013	2014
Original Liability Estimate Attributable To					
FOASI Benefits	35,401	36,657	41,362	42,178	46,706
FDI Benefits	2,720	2,977	3,043	2,924	2,688
SSEBA Benefits	259	263	308	337	399
Total Original Liability Estimates	38,380	39,897	44,713	45,439	49,793
Original Transfers Made To					
FOASI Trust Fund	21,931	22,109	25,764	25,224	27,773
FDI Trust Fund	1,848	1,935	1,994	1,960	1,676
FHI Trust Fund	14,442	15,693	16,761	18,056	20,094
SSEBA Trust Fund	159	160	194	199	250
Total Original Transfers	38,380	39,897	44,713	45,439	49,793
Subsequent Correcting Adjustments Made To					
FOASI Trust Fund Transfers	-2,350	-1,069	-2,536	981	1,185
FDI Trust Fund Transfers	-703	-733	-714	-650	-329
FHI Trust Fund Transfers	-974	-1,150	-598	527	590
SSEBA Trust Fund Transfers	23	32	17	31	1
Total Trust Fund Transfers	-4,004	-2,920	-3,831	889	1,447
Net Amounts Transferred To					
FOASI Trust Fund	19,581	21,040	23,228	26,205	28,958
FDI Trust Fund	1,145	1,202	1,280	1,310	1,347
FHI Trust Fund	13,468	14,543	16,163	18,583	20,684
SSEBA Trust Fund	182	192	211	230	251
Total Net Amounts	34,376	36,977	40,882	46,328	51,240

Department of the Treasury
Office of Tax Analysis

CHAPTER 1: METHODOLOGY AND ESTIMATES OF THE TAX LIABILITY ATTRIBUTABLE TO THE TAXATION OF BENEFITS FOR CALENDAR YEARS 2010 THROUGH 2014

I. Methodology for Estimating Tax Liability

The Office of Tax Analysis (OTA) is responsible for estimating the annual tax liability attributable to the partial inclusion of Social Security and Railroad Social Security Equivalent benefits in AGI, making quarterly transfers from the general fund to the trust funds based on these estimates, and calculating correcting adjustments to amounts initially transferred. OTA provides this information to the Treasury Department's Bureau of the Fiscal Service, which has the authority to transfer funds between the general revenue fund and the trust funds as necessary.

OTA estimated the amount of tax liability attributable to the inclusion of Social Security benefits in AGI for each of the years 2010 through 2014 using results from OTA's Individual Income Tax Model (ITM).^{2, 3} The ITM is OTA's primary tool for preparing revenue estimates and analyzing taxpayer behavior. For this application, the ITM was used to account fully for changes in all individual income tax provisions resulting from the inclusion of benefits in AGI. That is, in addition to the direct effect on tax liability of including benefit income, the use of deductions and credits, as well as the calculations of alternative minimum tax liabilities, can be affected by the inclusion of benefits in AGI.⁴

The ITM is built on a stratified random sample of a base-year's individual income tax returns contained in the Internal Revenue Service's Statistics of Income (SOI) file. A file of information returns including Forms SSA-1099 (which show total Social Security benefits paid to a beneficiary) and Forms RRB-1099 (which show Railroad Social Security Equivalent benefits paid to a beneficiary) are matched to the tax returns in the SOI file to determine the total benefits received by each individual on the tax return. The information returns are also used to impute to the ITM benefits paid to individuals who are not required to file a tax return and are thus not in the SOI sample. The Social Security Administration and the Railroad Retirement Board provide information on the total amounts of benefits paid to all recipients in the base year. Using the total amounts, the sample observations are then weighted to produce results that are representative of the entire population of taxpayers and non-filers. Records on the ITM are extrapolated to future years in accordance with the Administration's macroeconomic forecast in use at the time of the extrapolation. In general, the ITM is extrapolated twice per calendar year: once as part of the production of the Administration's budget, submitted to Congress each February, and once as part of the production of the Administration's mid-session review, submitted to Congress each summer. As part of each extrapolation, total Social Security and Railroad Social Security Equivalent benefits are projected to grow at the rates indicated in benefits forecasts provided by the Social Security Administration and the Railroad Retirement Board.

The base year for the ITM extrapolation is updated approximately every three years. The estimates for calendar year 2010 through 2013 were made using a 2007-based ITM. That is, OTA extrapolated sample tax returns, SSA-1099 forms and RRB-1099 forms for tax

year 2007. The estimates for calendar year 2014 were made using a 2010-based ITM.

The ITM uses the tax and information return data and extrapolations to estimate the amount of Social Security and Railroad Social Security Equivalent benefits included in AGI and the Federal income tax liability attributable to the inclusion of those benefits for all of the filing units in the model. To do this, each tax unit's liability is estimated with and without the inclusion of benefits received by that tax unit. The difference between those two levels of income tax liability equals the tax liability attributable to the inclusion of benefits. The ITM results are used to calculate both the percentage of total benefits included in AGI and the average effective marginal tax rates applicable to the taxable benefits. Final estimates of tax liability attributable to the partial inclusion of benefits are produced using a spreadsheet-based model. This model blends the estimates of the percent of benefits in AGI and the average effective marginal tax rates with more recent tax return information (not available when the ITM is extrapolated) and the most current tax collection information.

The Social Security Amendments of 1983 require adjustments to the trust funds if actual tax return data subsequently reveal that the initial transfers were incorrect. To determine if adjustments are required, it is necessary to determine the actual tax liability attributable to the inclusion of benefits in AGI. To calculate this actual tax liability, the IRS created data files based on Form 1040 records for calendar years 2010 through 2014. All filers who reported taxable Social Security or Railroad Social Security Equivalent benefits on their Form 1040 were included in these data files (as opposed to the data used to determine the original transfer estimates, which are sample data). The methodology for determining the adjustments to the estimated transfers is discussed in Chapter 2, Section II.

II. Estimates of Tax Liability Attributable to the Taxation of Benefits in Calendar Years 2010 through 2014

Tables 1.A through 1.E compare the assumptions and parameters used to determine the estimates of tax liability with the parameters calculated from actual tax return and benefit data for calendar years 2010 through 2014. As noted above, the parameters used in the estimates are determined from a base year of SOI sample data, other data sources, and an extrapolation algorithm while the parameters used to calculate actual liabilities are based on IRS population data.

For example, the top section of Table 1.A shows that OTA estimated that \$202,545 million of \$709,074 million in total benefits (28.56 percent) would be included in AGI for calendar year 2010. The estimated tax liability attributable to those benefits was \$38,380 million, for an average effective marginal tax rate of 18.95 percent. The bottom section of the table shows that, based on calendar year 2010 tax return and benefits data, \$186,091 million of \$707,352 million in total benefits (26.31 percent) were included in AGI. The actual tax liability attributable to those benefits was \$34,376 million, for an average effective marginal tax rate of 18.47 percent.

Continuing the example, the total liability estimate for calendar year 2010 was the sum of the estimates of the tax liability attributable to the partial inclusion of FOASI, FDI,

and SSEBA benefits. The top section of Table 1.A shows that OTA estimated that \$184,245 million of \$578,028 million in FOASI benefits (31.87 percent) would be included in AGI. The estimated tax liability attributable to those benefits was \$35,401 million, for an average effective marginal tax rate of 19.21 percent. The bottom section of the table shows that, based on calendar year 2010 tax return and benefits data, \$173,214 million of \$576,824 million in FOASI benefits (30.03 percent) were included in AGI. The actual tax liability attributable to those benefits was \$32,260 million, for an average effective marginal tax rate of 18.62 percent.

In 2010, the estimated inclusion rates for benefits in AGI and average effective marginal tax rates for FDI beneficiaries are lower than those for FOASI recipients. The top section of Table 1.A shows that OTA estimated that \$16,757 million of \$124,759 million in FDI benefits (13.43 percent) would be included in AGI. The estimated tax liability attributable to those benefits was \$2,720 million, for an average effective marginal tax rate of 16.23 percent. The bottom section of the table shows that, based on calendar year 2010 tax return and benefits data, \$11,173 million of \$124,176 million in FDI benefits (9.00 percent) were included in AGI. The actual tax liability attributable to those benefits was \$1,831 million, for an average effective marginal tax rate of 16.39 percent.

The estimated inclusion rates for benefits in AGI for Railroad SSEBA beneficiaries are slightly lower than for FOASI beneficiaries but higher than for FDI recipients. The top section of Table 1.A shows that OTA estimated that \$1,543 million of \$6,286 million in SSEBA benefits (24.54 percent) would be included in AGI. The estimated tax liability attributable to those included benefits was \$259 million, for an average effective marginal tax rate of 16.79 percent. The bottom section of the table shows that, based on calendar year 2010 tax return and benefits data, \$1,704 million of \$6,352 million in SSEBA benefits (26.83 percent) were included in AGI. The actual tax liability attributable to included SSEBA benefits was \$285 million, for an average effective marginal tax rate of 16.72 percent.

Table 1.A
Comparison of Parameters Used to Estimate Tax Liability Attributable to the
Partial Inclusion of Benefits in AGI with Parameters Calculated from Actual Amounts
Calendar Year 2010 /1

Benefit Source	Total Benefits Paid /2	Benefits Includable in AGI /2	Percent of Total Benefits Includable in AGI	Tax Liabilities on Benefits Includable In AGI /2	Average Effective Marginal Tax Rate on Benefits Includable In AGI
Estimate Parameters /3					
Federal Old-Age and Survivors Insurance	578,028	184,245	31.87%	35,401	19.21%
Federal Disability Insurance	124,759	16,757	13.43%	2,720	16.23%
Railroad Social Security Equivalent Benefits	6,286	1,543	24.54%	259	16.79%
Total	709,074	202,545	28.56%	38,380	18.95%
Actual Parameters /4					
Federal Old-Age and Survivors Insurance	576,824	173,214	30.03%	32,260	18.62%
Federal Disability Insurance	124,176	11,173	9.00%	1,831	16.39%
Railroad Social Security Equivalent Benefits	6,352	1,704	26.83%	285	16.72%
Total	707,352	186,091	26.31%	34,376	18.47%

Department of the Treasury
Office of Tax Analysis

1/ Estimated tax liabilities were updated on a semi-annual basis to conform with updates to the Administration's macroeconomic forecast.
The table compares the parameters used in the final estimates of tax liability with the parameters derived from actual tax return and benefits data.
Rounding of results may prevent exact matching of total. Benefits paid to non-resident aliens are not included in the FOASI or FDI benefits paid figures.

2/ Benefits amounts and tax liabilities in millions of dollars, excluding benefits paid to non-resident aliens.

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

4/ The total benefits paid data are derived from the 2014 Annual Statistical Supplement to the Social Security Bulletin and information supplied by the Railroad Retirement Board; the Benefits in AGI and tax liability data are derived from the Internal Revenue Service's Individual Masterfile.

Table 1.B
Comparison of Parameters Used to Estimate Tax Liability Attributable to the
Partial Inclusion of Benefits in AGI with Parameters Calculated from Actual Amounts
Calendar Year 2011 /1

Benefit Source	Total Benefits Paid /2	Benefits Includable in AGI /2	Percent of Total Benefits Includable in AGI	Tax Liabilities on Benefits Includable In AGI /2	Average Effective Marginal Tax Rate on Benefits Includable In AGI
<hr/> Estimate Parameters /3 <hr/>					
Federal Old-Age and Survivors Insurance	598,971	181,564	30.31%	36,657	20.19%
Federal Disability Insurance	129,623	18,109	13.97%	2,977	16.44%
Railroad Social Security Equivalent Benefits	6,316	1,516	24.00%	263	17.35%
Total	734,910	201,189	27.38%	39,897	19.83%
<hr/> Actual Parameters /4 <hr/>					
Federal Old-Age and Survivors Insurance	595,578	184,806	31.03%	34,750	18.80%
Federal Disability Insurance	128,919	11,777	9.13%	1,926	16.35%
Railroad Social Security Equivalent Benefits	6,392	1,801	28.18%	301	16.71%
Total	730,889	198,384	27.14%	36,977	18.64%

Department of the Treasury
Office of Tax Analysis

1/ Estimated tax liabilities were updated on a semi-annual basis to conform with updates to the Administration's macroeconomic forecast.
The table compares the parameters used in the final estimates of tax liability with the parameters derived from actual tax return and benefits data.
Rounding of results may prevent exact matching of total. Benefits paid to non-resident aliens are not included in the FOASI or FDI benefits paid figures.

2/ Benefits amounts and tax liabilities in millions of dollars, excluding benefits paid to non-resident aliens.

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

4/ The total benefits paid data are derived from the 2014 Annual Statistical Supplement to the Social Security Bulletin and information supplied by the Railroad Retirement Board; the Benefits in AGI and tax liability data are derived from the Internal Revenue Service's Individual Masterfile.

Table 1.C
Comparison of Parameters Used to Estimate Tax Liability Attributable to the
Partial Inclusion of Benefits in AGI with Parameters Calculated from Actual Amounts
Calendar Year 2012 /1

Benefit Source	Total Benefits Paid /2	Benefits Includable in AGI /2	Percent of Total Benefits Includable in AGI	Tax Liabilities on Benefits Includable In AGI /2	Average Effective Marginal Tax Rate on Benefits Includable In AGI
Estimate Parameters /3					
Federal Old-Age and Survivors Insurance	642,411	217,785	33.90%	41,362	18.99%
Federal Disability Insurance	138,590	19,608	14.15%	3,043	15.52%
Railroad Social Security Equivalent Benefits	6,571	1,878	28.57%	308	16.40%
Total	787,573	239,272	30.38%	44,713	18.69%
Actual Parameters /4					
Federal Old-Age and Survivors Insurance	637,286	204,196	32.04%	38,493	18.85%
Federal Disability Insurance	136,861	12,556	9.17%	2,056	16.37%
Railroad Social Security Equivalent Benefits	6,661	1,991	29.89%	333	16.73%
Total	780,808	218,743	28.01%	40,882	18.69%

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1/ Estimated tax liabilities were updated on a semi-annual basis to conform with updates to the Administration's macroeconomic forecast.
The table compares the parameters used in the final estimates of tax liability with the parameters derived from actual tax return and benefits data.
Rounding of results may prevent exact matching of total. Benefits paid to non-resident aliens are not included in the FOASI or FDI benefits paid figures.

2/ Benefits amounts and tax liabilities in millions of dollars, excluding benefits paid to non-resident aliens.

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

4/ The total benefits paid data are derived from the 2014 Annual Statistical Supplement to the Social Security Bulletin and information supplied by the Railroad Retirement Board; the Benefits in AGI and tax liability data are derived from the Internal Revenue Service's Individual Masterfile.

Table 1.D
Comparison of Parameters Used to Estimate Tax Liability Attributable to the
Partial Inclusion of Benefits in AGI with Parameters Calculated from Actual Amounts
Calendar Year 2013 /1

Benefit Source	Total Benefits Paid /2	Benefits Includable in AGI /2	Percent of Total Benefits Includable in AGI	Tax Liabilities on Benefits Includable In AGI /2	Average Effective Marginal Tax Rate on Benefits Includable In AGI
Estimate Parameters /3					
Federal Old-Age and Survivors Insurance	675,994	220,244	32.58%	42,178	19.15%
Federal Disability Insurance	141,648	18,500	13.06%	2,924	15.81%
Railroad Social Security Equivalent Benefits	6,760	1,970	29.15%	337	17.10%
Total	824,403	240,714	29.20%	45,439	18.88%
Actual Parameters /4					
Federal Old-Age and Survivors Insurance	671,479	221,773	33.03%	43,840	19.77%
Federal Disability Insurance	140,055	12,762	9.11%	2,119	16.60%
Railroad Social Security Equivalent Benefits	6,799	2,146	31.56%	369	17.20%
Total	818,332	236,681	28.92%	46,328	19.57%

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1/ Estimated tax liabilities were updated on a semi-annual basis to conform with updates to the Administration's macroeconomic forecast.
The table compares the parameters used in the final estimates of tax liability with the parameters derived from actual tax return and benefits data.
Rounding of results may prevent exact matching of total. Benefits paid to non-resident aliens are not included in the FOASI or FDI benefits paid figures.

2/ Benefits amounts and tax liabilities in millions of dollars, excluding benefits paid to non-resident aliens.

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

4/ The total benefits paid data are derived from the 2014 Annual Statistical Supplement to the Social Security Bulletin and information supplied by the Railroad Retirement Board; the Benefits in AGI and tax liability data are derived from the Internal Revenue Service's Individual Masterfile.

Table 1.E
Comparison of Parameters Used to Estimate Tax Liability Attributable to the
Partial Inclusion of Benefits in AGI with Parameters Calculated from Actual Amounts
Calendar Year 2014 /1

Benefit Source	Total Benefits Paid /2	Benefits Includable in AGI /2	Percent of Total Benefits Includable in AGI	Tax Liabilities on Benefits Includable In AGI /2	Average Effective Marginal Tax Rate on Benefits Includable In AGI
Estimate Parameters /3					
Federal Old-Age and Survivors Insurance	713,079	241,224	33.83%	46,706	19.36%
Federal Disability Insurance	143,947	16,305	11.33%	2,688	16.49%
Railroad Social Security Equivalent Benefits	6,881	2,340	34.01%	399	17.05%
Total	863,907	259,869	30.08%	49,793	19.16%
Actual Parameters /4					
Federal Old-Age and Survivors Insurance	706,100	241,572	34.21%	48,645	20.14%
Federal Disability Insurance	141,606	13,078	9.24%	2,189	16.74%
Railroad Social Security Equivalent Benefits	6,933	2,315	33.40%	406	17.54%
Total	854,638	256,965	30.07%	51,240	19.94%

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1/ Estimated tax liabilities were updated on a semi-annual basis to conform with updates to the Administration's macroeconomic forecast.
The table compares the parameters used in the final estimates of tax liability with the parameters derived from actual tax return and benefits data.
Rounding of results may prevent exact matching of total. Benefits paid to non-resident aliens are not included in the FOASI or FDI benefits paid figures.

2/ Benefits amounts and tax liabilities in millions of dollars, excluding benefits paid to non-resident aliens.

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

4/ The total benefits paid data are derived from the 2014 Annual Statistical Supplement to the Social Security Bulletin and information supplied by the Railroad Retirement Board; the Benefits in AGI and tax liability data are derived from the Internal Revenue Service's Individual Masterfile.

CHAPTER 2: METHODOLOGY FOR ESTIMATING TRANSFERS AND CALCULATING ADJUSTMENTS TO TRANSFERS FOR LIABILITY IN CALENDAR YEARS 2010 THROUGH 2014

I. Methodology for Estimating Quarterly Transfer Amounts

Taken together, SSA 83 and OBRA 93 specify the rules for determining the amount of Social Security and Railroad Social Security Equivalent benefits includable in AGI and the transfers of tax liability attributable to those benefits to the FOASI, FDI, SSEBA and FHI trust funds. The first thresholds were enacted under SSA 83, which directed the resulting increase in tax liability be transferred to the trust funds from which the benefits are paid (FOASI, FDI, and SSEBA). The second thresholds were enacted under OBRA 93, which directed that the additional tax liability resulting from such inclusion (in excess of any liability resulting from the first inclusion thresholds) be transferred to the FHI trust fund.

OTA uses the ITM to separate the total liability amounts described in Chapter 1 into amounts attributable to the SSA 83 inclusion rules and the additional amounts attributable to the OBRA 93 inclusion rules. To do this, OTA creates an intermediate set of liability estimates which assume that only the first inclusion thresholds enacted under SSA 83 are in place. These intermediate estimates are the pre-OBRA 93 liability estimates and equal the amounts to be transferred to the FOASI, FDI and SSEBA trust funds. The difference between these estimates and the total liability estimates shown in Chapter 1 equal the additional amounts attributable to the OBRA 93 inclusion rules (the post-OBRA 93 liability amounts) and are transferred to the FHI trust fund.

Separate methods were used to transfer the pre-OBRA 93 and post-OBRA 93 amounts due to differences in statutory requirements. With respect to pre-OBRA 93 transfers, statutory requirements dictate that liability should be transferred no less than quarterly as it accrues. Therefore, the transfers are made on the first day of the calendar quarters beginning with the months of January, April, July, and October. As noted in Chapter 1, Section I, the ITM generally is re-extrapolated twice per year, thus for a given liability year, the total amounts transferable to the FOASI, FDI, or SSEBA trust funds are the amounts of liability estimated from the most recent forecast of estimated annual liability (based on the most recent extrapolation), less any amounts of liability already transferred for that year (which were based on prior extrapolations). This net difference is divided over the remaining quarters still available for transfers.

With respect to post-OBRA 93 transfers, statutory requirements dictate that liability should be transferred quarterly as it is collected. Therefore, that calendar year liability is transferred in five installments, representing four quarterly estimated payments and one final payment of liability. Transfers to the FHI trust fund are made on the fifteenth day of the quarter beginning with the months April, June, September, and January. The total April 15 transfer to the FHI trust fund always contains two installments – one estimated payment for the current year’s liability and one final payment for the prior year’s liability. As with the pre-OBRA 93 transfers, the total amount transferable to the FHI trust fund for a given liability year is the amount of liability estimated from the most recent forecast of estimated

annual liability (again based on the most recent extrapolation), less any amounts of liability already transferred for that year (which were based on prior extrapolations). This net difference is divided over the remaining installments still available for transfers.

II. Methodology for Adjustments to Transfers of Estimated Amounts

The Social Security Amendments of 1983 require adjustments to the trust funds if actual tax return data subsequently reveal that the initial transfers differ from totals based on final liabilities. To calculate the actual tax liability for each of the calendar years 2010 through 2014 resulting from the partial taxation of Social Security and Railroad Social Security Equivalent benefits, the IRS created data files for each year based on Form 1040 records. All filers who report taxable Social Security or Railroad Social Security Equivalent benefits on their Form 1040 are included in these data files. Although the Form 1040 provides information on the total amount of benefits includable in taxable income, it does not indicate whether the filer received FOASI, FDI, or SSEBA benefits. Such information is needed to allocate revenues accurately to the trust funds. To obtain this information, the Form 1040 records belonging to those beneficiaries who reported taxable benefits are matched to Form SSA-1099 records provided by the Social Security Administration and Form RRB-1099 records provided by the Railroad Retirement Board.⁵

Using this matched file of Form 1040, Form SSA-1099 and RRB-1099 records, the IRS calculates the tax liability attributable to the taxation of Social Security and Railroad Social Security Equivalent benefits, for both pre-OBRA 93 and post-OBRA 93 liability. For each taxpayer, the total tax liability attributable to the taxation of benefits is calculated as the difference between tax liability with and without benefits included in AGI. The pre-OBRA 93 tax liability is calculated as the difference between tax liability with benefits includable under pre-OBRA 93 law and with no included benefits. The post-OBRA 93 tax liability is the difference between the total tax liability and the pre-OBRA 93 tax liability. The total difference taken over all taxpayers equals the tax liability attributable to the taxation of benefits.

After comparing the IRS liability calculations with the OTA liability estimates, OTA calculates adjustments to the original transfers. These adjustment amounts are equal to the difference between the IRS liability calculations and OTA's original liability estimates. The adjustment amounts are included as an adjustment to the estimated liability transfers described in Section I. Thus, the net transfer for a quarter reflects the transfer for the current period liability and any amounts attributable to adjustments of prior period liability. Adjustments are generally made in the first quarter after they are known.

III. Transfers of Estimated Amounts and Adjustments to Transfers for Liability in Calendar Years 2010 through 2014

Table 2 shows the estimated liability amounts transferred to the FOASI, FDI, FHI and SSEBA trust funds in calendar years from 2010 through 2014. For example, in calendar year 2010, estimated transfers of \$21,931 million, \$1,848 million, and \$159 million were made to the FOASI, FDI, and SSEBA trust funds, respectively, and estimated transfers of \$14,440 million were made to the FHI trust fund. Amounts were transferred quarterly to the FOASI, FDI and SSEBA trust funds between January 1 and October 1 of 2010. Amounts were transferred quarterly to the FHI trust fund between April 15th of 2010 and April 15th of 2011.

Table 2 also shows the IRS calculations of final trust fund amounts, and the resulting adjustments to the FOASI, FDI, FHI, and SSEBA trust funds due to the reconciliation of OTA estimates and IRS calculations. For example, as a result of the reconciliation of estimated and actual 2010 tax liability, adjustments of -\$2,350 million, -\$703 million, -\$974 million, and \$23 million were made, for the FOASI, FDI, FHI, and SSEBA trust funds, respectively. The final column of Table 2 shows the quarter in which each adjustment was made.

Table 2
Comparison of OTA Estimated Transfers, IRS Calculated Transfers, and
Corresponding Adjustments for Calendar Years 2010 through 2014 /1

Year and Trust Fund	OTA Estimated Transfers	IRS Calculated Transfers	Adjustment Amount	Adjustment Date
CY 2010 Liability				
FOASI	21,931	19,581	-2,350	October 1, 2013
FDI	1,848	1,145	-703	October 1, 2013
FHI	14,442	13,468	-974	January 15, 2014
SSEBA	<u>159</u>	<u>182</u>	<u>23</u>	October 1, 2013
Total	38,380	34,376	-4,004	
CY 2011 Liability				
FOASI	22,109	21,040	-1,069	January 1, 2015
FDI	1,935	1,202	-733	January 1, 2015
FHI	15,693	14,543	-1,150	January 15, 2015
SSEBA	<u>160</u>	<u>192</u>	<u>32</u>	January 1, 2015
Total	39,897	36,977	-2,920	
CY 2012 Liability				
FOASI	25,764	23,228	-2,536	January 1, 2016
FDI	1,994	1,280	-714	January 1, 2016
FHI	16,761	16,163	-598	January 15, 2016
SSEBA	<u>194</u>	<u>211</u>	<u>17</u>	January 1, 2016
Total	44,713	40,882	-3,831	
CY 2013 Liability				
FOASI	25,224	26,205	981	July 1, 2018
FDI	1,960	1,310	-650	July 1, 2018
FHI	18,056	18,583	527	September 15, 2018
SSEBA	<u>199</u>	<u>230</u>	<u>31</u>	July 1, 2018
Total	45,439	46,328	889	
CY 2014 Liability				
FOASI	27,773	28,958	1,185	October 1, 2018
FDI	1,676	1,347	-329	October 1, 2018
FHI	20,094	20,684	590	January 15, 2019
SSEBA	<u>250</u>	<u>251</u>	<u>1</u>	October 1, 2018
Total	49,793	51,240	1,447	

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1/ Amounts in millions of dollars.

CHAPTER 3: FORECAST OF TRANSFERS TO TRUST FUNDS FOR CALENDAR YEARS 2015 TO 2019

I. Forecasting Methodology

The Social Security Amendments of 1983 require that the annual report include a forecast of transfers to the trust funds for the next five years. The forecast years are currently calendar years 2015 to 2019, since no correcting adjustments have been made to those years' liability transfers. This forecast was produced using the same methods that were used to produce the estimates of calendar year 2010 through 2014 liability and trust fund transfers, described in Chapters 1 and 2. The calendar year forecasts for 2015 and 2016 were made using the 2010-based ITM described in Chapter 1. The calendar year forecasts for 2017 through 2019 were produced using results from an ITM based on 2014 SOI data and imputations. As noted in Chapter 1, OTA's Individual Tax Model consists of a sample of individual income tax returns matched to Form SSA-1099 and RRB-1099 information returns. The sample data are weighted to simulate the overall tax filing population and extrapolated to future years using a forecast of macroeconomic variables provided by the Administration and total benefit payments forecasts provided by the Social Security Administration and Railroad Retirement Board.

II. Forecast of Transfers to the Trust Funds

Table 3 presents the estimates of liability incurred for calendar years 2015 through 2019 and the amounts transferred to the trust funds. The transfers of estimated liability for calendar years 2015 through 2018 have been completed. The transfers of estimated liability for calendar year 2019 will be completed in April 2020 when the final estimated transfer to the FHI fund is made. The transfers for calendar years 2015, 2016 and 2018 include adjustments for prior years' liabilities. The transfers of calendar year 2015 FOASI, FDI, and SSEBA liability include adjustments for calendar year 2011 liabilities. The transfer of calendar year 2015 FHI liability includes an adjustment for calendar year 2012 liability. The transfers of calendar year 2016 FOASI, FDI, and SSEBA liability include adjustments for calendar year 2012 liabilities. The transfers of calendar year 2018 FOASI, FDI, FHI and SSEBA liability include adjustments for calendar years 2013 and 2014 liabilities.

In total, for liability incurred in calendar years 2015 through 2019, OTA forecasts that \$167,289 million, \$8,757 million, \$118,247 million, and \$1,358 million will be transferred from general revenues to the FOASI, FDI, FHI, and SSEBA trust funds. The adjustments for prior period liabilities total -\$1,439 million for FOASI, -\$2,426 million for FDI, \$591 million for FHI, and \$81 million for SSEBA. The net transfer to the trust funds after adjustments for prior period liabilities is estimated to be \$292,926 million.

Table 3
Forecast of Transfers, Net of Adjustments, to the FOASI, FDI, FHI and SSEB Trust Funds
for Calendar Years 2015 through 2019

Trust Fund	Calendar Years; Millions of Dollars					Totals
	2015	2016	2017	2018	2019	2015-2019
FOASI						
Estimated Transfer /1	31,432	33,960	35,670	32,105	34,662	167,829
Prior Year Adjustment /2	<u>-1,069</u>	<u>-2,536</u>	<u>0</u>	<u>2,166</u>	<u>0</u>	<u>-1,439</u>
Net Transfer	30,363	31,424	35,670	34,271	34,662	166,390
FDI						
Estimated Transfer /1	1,800	1,904	1,969	1,505	1,579	8,757
Prior Year Adjustment /2	<u>-733</u>	<u>-714</u>	<u>0</u>	<u>-979</u>	<u>0</u>	<u>-2,426</u>
Net Transfer	1,067	1,190	1,969	526	1,579	6,331
FHI						
Estimated Transfer /1	22,617	23,390	24,888	22,529	24,823	118,247
Prior Year Adjustment /2	<u>-598</u>	<u>0</u>	<u>0</u>	<u>1,117</u>	<u>0</u>	<u>519</u>
Net Transfer	22,019	23,390	24,888	23,646	24,823	118,766
SSEBA						
Estimated Transfer /1	263	281	292	255	267	1,358
Prior Year Adjustment /2	<u>32</u>	<u>17</u>	<u>0</u>	<u>32</u>	<u>0</u>	<u>81</u>
Net Transfer	295	298	292	287	267	1,439
Totals						
Estimated Transfer /1	56,112	59,535	62,819	56,394	61,331	296,191
Prior Year Adjustment /2	<u>-2,368</u>	<u>-3,233</u>	<u>0</u>	<u>2,336</u>	<u>0</u>	<u>-3,265</u>
Net Transfer	53,744	56,302	62,819	58,730	61,331	292,926

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Notes:

1/ Estimated Transfers are amounts transferred to the trust funds for liability incurred in the year indicated. Note that the final two estimated liability transfers to the FHI trust fund for a given year occur in January and April of the following year.

2/ Prior Year Adjustments are amounts transferred to or from the trust funds that correct the original estimated liabilities transferred for prior years. Because the final two estimated liability transfers to the FHI trust fund for a given year occur in January and April of the following year, a Prior Year Adjustment to a given year's FHI estimated transfer may occur in the next calendar year.

Adjustments to the FOASI, FDI and SSEBA transfers for CY 2015 liability were to correct estimates of liability incurred in CY 2011. The adjustments were made with the January 2015 transfer. The adjustment to the FHI transfer for CY 2015 was to correct estimates of liability incurred in CY 2012. The adjustment was made with the January 2016 transfer.

Adjustments to the FOASI, FDI and SSEBA transfers for CY 2016 liability were to correct estimates of liability incurred in CY 2012. The adjustments were made with the January 2016 transfer.

Adjustments to the FOASI, FDI, FHI and SSEBA transfers for CY 2018 liability were to correct estimates of liability incurred in CY 2013 and CY 2014. The adjustments attributable to CY 2013 FOASI, FDI and SSEBA liabilities were made with the July 2018 transfer. The adjustments attributable to CY 2014 FOASI, FDI, and SSEBA liabilities were made with the October 2018 transfer. The adjustment attributable to CY 2013 FHI liability was made with the September 2018 transfer. The adjustment attributable to CY 2014 FHI liability was made with the January 2019 transfer.

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ENDNOTES

1. Liability estimates and the associated transfers are updated semi-annually (in December and May) to conform with updates to the Administration's macroeconomic forecast. All transfers are made using the most recently created forecast.
2. A detailed description of the Individual Income Tax Model can be found in Cilke (1994).
3. OTA does not estimate the liability attributable to the receipt of FOASI and FDI benefits by non-resident aliens. Prior to calendar year 1995, one-half of any Social Security benefit received by a non-resident alien was subject to a 30 percent tax rate, and this amount was automatically withheld by the Social Security Administration. For calendar years 1995 and after, the portion of benefits subject to withholding is raised to 85 percent (P.L. 103-465).

Each month, the Social Security Administration sends a certification of the amount withheld to the Treasury Department's Bureau of the Fiscal Service. The withheld amount is transferred to general revenues and then back to the FOASI and FDI trust funds. Since the Social Security Administration has information on the actual amounts withheld, OTA does not estimate these withheld amounts.

Similarly, the Railroad Retirement Board automatically withholds taxes on Railroad Social Security Equivalent benefits received by non-resident aliens. However, a different procedure is used to transfer these amounts to the SSEBA. OTA includes an estimate of the withheld amounts in its initial estimates of transfers to the trust funds and subsequently verifies these estimates with the Railroad Retirement Board.

The tables in this report do not include FOASI or FDI benefits received by non-resident aliens or the taxes attributable to these benefits. However, the tables do show the Railroad Social Security Equivalent benefits received by non-resident aliens.

4. For example, as AGI increases, the amount of deductible medical, casualty and certain miscellaneous expenses may change. Similarly, the increased income tax liability resulting from the inclusion of benefits in AGI may enable some taxpayers to use tax credits that otherwise might not be usable in that year due to insufficient income tax liability.
5. The Form SSA-1099 records provided to the IRS distinguish between retirement and disability benefits, even though the Form SSA-1099s sent to taxpayers do not include this information.