

## 2.5. REVENUES

### 2.5.a. Overview

Over the short-range projection horizon (i.e., first 10 years), REVENUES computes tax liabilities from wages and self-employment income, as well as the amount of taxes to be transferred from the trust funds to the general fund of the Treasury due to multi-employer refund wages. In Equation 2.5.1, WTL is the product of taxable wages and the combined OASDI employee-employer tax rate (TRW). In Equation 2.5.2, SEL is the product of SET and the OASDI self-employed tax rate (TRSE). In Equation 2.5.3, MERL is the product of MER and the OASDI employee tax rate (TRWEE).

$$\text{WTL} = \text{WTER} * \text{TRW} \quad (2.5.1)$$

$$\text{SEL} = \text{SET} * \text{TRSE} \quad (2.5.2)$$

$$\text{MERL} = \text{MER} * \text{TRWEE} \quad (2.5.3)$$

Also over the short-range horizon, REVENUES decomposes WTL into quarterly wage tax liabilities (WTLQ), then to quarterly wage tax collections (WTLQC). REVENUES also decomposes SEL into quarterly self-employment income tax collections (SELQC).

$$\text{WTLQ} = \text{WTLQ}(\cdot) \quad (2.5.4)$$

$$\text{WTLQC} = \text{WTLQC}(\cdot) \quad (2.5.5)$$

$$\text{SELQC} = \text{SELQC}(\cdot) \quad (2.5.6)$$

When determining the amount of payroll tax collections for the year, REVENUES subtracts the amount MERL from the sum of the WTLQC amounts.

Finally, over the first two projected quarters, REVENUES estimates of WTLQC and SELQC are replaced with ones from the most recent OMB FY Budget.

### 2.5.b. Input Data

*Data used to obtain values input directly to model*

1. Data obtained from ORES as tabulations of quarterly Form 941 data. Data currently used are the OASDI, HI, and income taxable wages by sector (Federal Civilian, military, farm, and State and Local) for the most recent five years. The data represent changes in reported wages since the prior quarterly report. The most recent data are appended to previously reported data. Annual totals are computed and used to derive estimates of OASDI taxable wages by sector for the latest historical years.
2. Data obtained from quarterly IRS Form 941 files, provided by OCIO. Data currently used

are the OASDI and HI taxable wages for 1978 to the most recent year available. The OASDI data include separate amounts for tips and for agricultural wages. The data represent changes in reported wages since the prior quarterly report. The most recent data are appended to previously reported data. Annual totals are computed and used to derive estimates of OASDI total and farm taxable wages for the most recent historical years.

3. Data from the DB2 database named MCWHS, maintained by OCIO. This database contains a table with MEF detail records for SSNs in the 1% CWHS sample. OCACT uses the table, in conjunction with sector information from the employee-employer and IRS Form 941 files described in items 11 and 12 of section 2.3.b, to produce estimates of OASDI and HI taxable wages for the Federal Civilian, military, and State and Local government sectors.

*Values input directly to model*

Historical and projected data from Sections 2.1, 2.2, and 2.3 are used as input. Data for the following variables have final year of 2105. Each variable is shown with the starting year of the data.

4. ADDSETREEOD	Total add factor to OASDI taxable to covered self-employment income ratio, 2015
5. ADDWSTREEOD	Total add factor to OASDI taxable to covered wage ratio, 2015
6. ADDWSTREEODTREND	Component of total add factor to OASDI taxable to covered wage ratio due to trend in ratio, 2015
7. AIW	Average wage index (\$), 1971
8. AWSCFM	Average covered wage for farm workers (\$), 1971
9. AWSCML	Average covered wage for military (\$), 1971
10. DMWCHI	Deemed military wage credits for HI (\$ millions), 1983
11. DMWCOD	Deemed military wage credits for OASDI (\$ millions), 1983
12. ECFCHO	Number of HI-only covered Federal Civilian workers (millions), 1983
13. ECFCOD	Number of OASDI covered Federal Civilian workers (millions), 1983
14. ECHITOT	Number of HI covered workers (millions), 1987
15. ECSEHI	Number of HI covered self-employed workers (millions), 1988
16. ECSENOMAX	Number of covered self-employed workers if no taxable maximum (millions), 1988
17. ECSEO	Number of OASDI covered self-employed only workers (millions), 1981
18. ECSEOD	Number of OASDI covered self-employed workers (millions), 1981

19. ECSLNOIS	Number of non-OASDI covered State and Local workers including students (millions), 1983
20. ECSLP91	Number of State and Local workers covered under OASDI under pre-1991 law (millions), 1983
21. ECSLRNP	Number of OASDI covered State and Local workers with no retirement plan (millions), 1983
22. ECSLOD	Number of OASDI covered State and Local workers (millions), 1983
23. ECWSHI	Number of HI covered wage workers (millions), 1981
24. ECWSOD	Number of OASDI covered wage workers (millions), 1981
25. ECWSOD_MEF	Number of OASDI covered wage workers on the Master Earnings File (MEF) in millions, 1981
26. ECWSOD(sex, age)_MEF	Number of OASDI covered wage workers on the Master Earnings File (MEF) in millions by sex (M/F) and age group (Under 16, 16-19, 20-24, 25-29, ..., 60-64, 65-69, 70 and over (millions), 1981
27. ESLCG	Number of State and Local workers not covered under HI (millions), 1983
28. ESLSTUD	Number of noncovered students at public schools employed by their school (millions), 1983
29. GAPLAG	Ratio of real to potential GDP (units), 1971
30. RTP	Ratio of real to potential GDP (units), 1971
31. RU	Civilian unemployment rate (percent), 1971
32. SEECCMB	Self-employed earnings of all SE workers who also earned wages in same year (\$ millions), 1991
33. SEECHI	HI covered self-employed earnings (\$ millions), 1991
34. SEECNOMAX	Covered self-employed earnings if no taxable maximum (\$ millions), 1991
35. SEECOD	OASDI covered self-employed earnings (\$ millions), 1991
36. SEECOD_OLD	OASDI covered self-employed earnings excluding self-employed earnings of workers with covered wages greater than or equal to the OASDI taxable maximum (\$ millions), 1971
37. SEETODCMB	OASDI taxable self-employment income of combination workers (\$ billions), 1995
38. SEETODEXOG	Total OASDI taxable self-employment income (\$ millions), 1995
39. SEETODSEO	OASDI taxable self-employment income of self-employed only workers (\$ billions), 1995
40. TAXMAXHI	HI taxable maximum (\$) – 0 indicates no maximum, 1971

41. TAXMAXOD	OASDI taxable maximum (\$), 1971
42. TCFCD	Proportion of annual Federal Civilian wages earned in each quarter (units), 1971
43. TCMD	Proportion of annual military wages earned in each quarter (units), 1971
44. TCPD	Proportion of annual private sector wages earned in each quarter (units), 1971
45. TCSLD	Proportion of annual State and Local wages earned in each quarter (units), 1971
46. TETODCMB	Total OASDI taxable income of combination workers (\$ millions), 1995
47. WSCCMB	Wages earned in same year by all SE workers with both types of earnings (\$ millions), 1991
48. WSCFCHO	HI Covered wages of Federal Civilian HI-only workers (\$ millions), 1983
49. WSCFCOD	OASDI Covered wages of Federal Civilian workers (\$ millions), 1971
50. WSCFM	Covered wages of farm workers (\$ millions), 1971
51. WSCHI	HI covered wages (\$ millions), 1971
52. WSCML	Covered wages of members of the Armed Forces (\$ millions), 1971
53. WSCOD	OASDI covered wages (\$ millions), 1971
54. WSCOD_SF	OASDI covered wages on the Suspense File (\$ millions), 1971
55. WSCPFFH	Covered wages of private household workers (\$ millions), 1971
56. WSCPNF	Covered wages of private nonfarm workers (\$ millions), 1971
57. WSCSLHI	HI covered State and Local wages (\$ millions), 1971
58. WSCSLNRP	Covered wages of State and Local workers with no retirement plan (\$ millions), 1991
59. WSCSLOD	OASDI covered State and Local wages (\$ millions), 1971
60. WSCSLP91	Wages of State and Local workers covered under OASDI under pre-1991 law (\$ millions), 1971
61. WSD	Total NIPA wages (\$ millions), 1971
62. WSP	Total NIPA private sector wages (\$ millions), 1971
63. WSS	Total NIPA compensation (\$ millions), 1971
64. WSSLCG	Wages of State and Local workers not covered under HI (\$ millions), 1983
65. WSSLNOIS	Wages of non-OASDI covered State and Local workers including students (\$ millions), 1983
66. WSSLSTUD	Wages of noncovered students at public schools employed by their school (\$ millions), 1983

67. WSMEREFODEXOG	OASDI multi-employer refund wages (\$ millions), 2014
68. WSTEEODEXOG	Total OASDI taxable wages (\$ millions), 2015
69. WSTRRTPHI	Wages of railroad workers taxable under HI (\$ millions), 1971
70. WSTTIPSSR	Taxable tips reported by tip earner instead of employer (\$ millions), 1978
71. WTWPO	Proportion of annual Postal Service wages earned in each quarter (units), 1971

*Other direct input data*

- 72. FICA, SECA, and Federal Employer tax transfers by month from the Department of the Treasury for years 1984 to the year prior to the Trustees Report year.
- 73. FICA and SECA tax transfers by month split by liability period from the Department of the Treasury for January 1984 to January of the Trustees Report year.
- 74. Historical annual HI taxable self-employment income for 1983 to 1993. (Values from 1994 on are equal to HI covered earnings and are obtained from subprocess COV.) **Does not affect SOSI**
- 75. Historical annual OASDI taxable self-employment income for 1971 to the second year prior to the Trustees Report year.
- 76. Historical annual HI multi-employer refund wages for 1983 to 1993 (Values for 1994 on are zero because of the elimination of the HI taxable maximum.) **Does not affect SOSI**
- 77. Historical annual OASDI multi-employer refund wages for 1971 to the second year prior to the Trustees Report year.
- 78. Historical annual HI single-employer refund wages for 1991 to 1993 (No values prior to 1991 because HI taxable maximum equals OASDI taxable maximum for those years. Values for 1994 on are zero because of the elimination of the HI taxable maximum.) **Does not affect SOSI**
- 79. Historical annual OASDI single-employer refund wages for 1971 to the second year prior to the Trustees Report year.
- 80. Historical annual HI taxable wages for 1983 to 1993. (Values from 1994 on are equal to HI covered wages and are obtained from subprocess COV.) **Does not affect SOSI**
- 81. Historical annual OASDI taxable wages for 1971 to the second year prior to the Trustees Report year.
- 82. Historical annual HI-only taxable Federal Civilian wages for 1983 to 1993. (Values

from 1994 on are equal to HI-only covered wages and are obtained from subprocess COV.) **Does not affect SOSI**

83. Historical annual OASDI taxable Federal Civilian wages for 1983 to the second year prior to the Trustees Report year.
84. Historical annual HI taxable Federal Civilian wages for 1983 to 1993. (Values from 1994 on are equal to HI covered wages and are obtained from subprocess COV.) **Does not affect SOSI**
85. Historical annual OASDI taxable farm sector wages for 1971 to the second year prior to the Trustees Report year.
86. Historical annual HI taxable farm sector wages for 1991 to 1993. (Values from 1994 on are equal to HI covered wages and are obtained from subprocess COV.) **Does not affect SOSI**
87. Historical annual OASDI taxable military sector wages for 1971 to the second year prior to the Trustees Report year.
88. Historical annual HI taxable military sector wages for 1991 to 1993. (Values from 1994 on are equal to HI covered wages and are obtained from subprocess COV.) **Does not affect SOSI**
89. Historical annual OASDI taxable State and Local government sector wages for 1971 to the second year prior to the Trustees Report year.
90. Historical annual HI taxable State and Local government sector wages for 1983 to 1993. (Values from 1994 on are equal to HI covered wages and are obtained from subprocess COV.) **Does not affect SOSI**
91. Historical annual OASDI taxable tips for employees as reported by employers for 1971 to the second year prior to the Trustees Report year.
92. Historical and projected annual OASDI taxable tips for employers as reported by employers for 1980 to 1987. (No tips were taxable for employers prior to 1980. Employer taxable tips equal employee in 1988 and after.)
93. Historical FICA and SECA appropriation adjustments for OASI, DI, and HI by month in 1968 to the year prior to the Trustees Report year. **HI values do not affect SOSI**
94. Preliminary FICA and SECA appropriation adjustments for OASI, DI, and HI in March of the year prior to the Trustees Report year. **HI values do not affect SOSI**
95. Historical single-employer refunds of excess taxes for OASI, DI, and HI by quarter for 1984 to the year prior to the Trustees Report year. **HI values do not affect SOSI**

96. Historical multi-employer refunds of excess taxes for OASI, DI, and HI by month for 1968 to the year prior to the Trustees Report year. **HI values do not affect SOSI**

*Miscellaneous historical covered employment and earnings data:*

97. HI Covered self-employed workers for 1986 to 1987 – variable ECSEHI. **Does not affect SOSI-**
98. Number of OASDI covered wage workers for 1971 to 1980 – variable ECWSOD.
99. HI covered self-employment net earnings for 1971 to 1990 – variable SEECHI. **Does not affect SOSI**
100. Covered self-employment net earnings if there were no taxable maximum for 1971 to 1990 – variable SEECNOMAX.
101. OASDI covered self-employment net earnings for 1971 to 1990 – variable SEECOD.

*Miscellaneous historical and fixed projected data:*

102. Quarterly distribution of annual OASDI taxable farm wages for 1971 to 2105 – variable TTFMD.
103. Quarterly OASDI covered private nonfarm sector wages for 1971 to 1975 – variable QWSCPNF.
104. Quarterly OASDI covered State and Local government sector wages for 1971 to 1977 – variable QWSCSLOD.
105. Quarterly OASDI covered military sector wages for 1971 to 1977 – variable QWSCML.
106. Quarterly OASDI covered Federal Civilian sector wages for 1971 to 1977 – variable QWSCFCOD.
107. Quarterly OASDI taxable private nonfarm sector wages for 1971 to 1977 – variable QWSTPNFEEOD.
108. Quarterly OASDI taxable State and Local government sector wages for 1971 to 1980Q1 – variable QWSTSLEED.
109. Quarterly OASDI taxable military sector wages for 1971 to 1977 – variable QWSTMLEEOD.
110. Quarterly OASDI taxable Federal Civilian sector wages for 1971 to 1977 – variable

QWSTFCEEOD.

111. Quarterly OASDI taxable farm sector wages for 1971 to 1980Q2 – variable QWSTFMEEOD.
112. OASDI employee, employer, and self-employment tax rates from 1971 to 2105. These contribution rates are set according to the Social Security Act of 1935 and subsequent changes to the Act and to the Internal Revenue Code. The rates are updated when legislation mandates a change. The rates were unchanged from 2000 to 2015. The Bipartisan Budget Act of 2015 reallocated the OASI and DI employee-employer and self-employment tax rates for years 2016 through 2018. The OASDI rates remain the same and the rates revert to the ones in effect for 2000 to 2015 in 2019 and thereafter – variables RATEEO, RATEED, RATEEH, RATERO, RATERD, RATERH, RATSEO, RATSED, RATSEH.
113. Annual OASDI employee credit tax rate for 1984 – variable CRATEEOD.
114. Annual OASDHI self-employment credit tax rates for 1984 to 1989 – variable CRATSEODH.
115. Annual reductions in OASDI employee and self-employment tax rates due to the payroll tax holiday for 2011 and 2012.
116. Annual trend variable for taxable to covered wage ratio calculation for 1971 to 2105 – variable TREND. (No longer used)
117. Annual trend variable for taxable to covered self-employment net earnings ratio calculation for 1971 to 2105 – variable SETRND. (No longer used)
118. Average OASDI covered wages by age groups and sex for 1996.
119. Ratio of OASDI taxable to covered wages by age groups and sex for 1996.
120. Corrections to prior FICA appropriation adjustments made in March 2000.
121. Projected single-employer refund wages by calendar year for the year prior to the Trustees Report year through the ninth year after the Trustees Report year.
122. Projected ratio of OASDI taxable tips for the current year to the prior year for the year prior to the Trustees Report year through the ninth year after the Trustees Report year.
123. FICA and SECA appropriation adjustments for OASI and DI related to HIRE Act of 2010.
124. Estimated quarterly transfers provided to OTA for 2000Q1 through the second quarter of the Trustees Report year.

125. Data needed to compute estimates of the ACA's additional HI tax effective starting 2013. **Does not affect SOSI**
126. Estimated tax transfers by liability period for the ACA's additional HI tax for 2013Q1 through the second quarter of the Trustees Report year used in computing adjustments. **Does not affect SOSI**
127. Estimated tax transfers for the ACA's additional HI tax for 2013Q1 through the second quarter of the Trustees Report year used in computing adjustments. **Does not affect SOSI**
128. Estimated SECA appropriation adjustments for OASI, DI, and HI in December of the Trustees Report year due to differences between estimated SECA tax liabilities for the second year prior to the Trustees Report year that were transferred in that year and the following year and the SECA tax liabilities implied by the estimated self-employment income for that year. **HI values do not affect SOSI**
129. Estimated FICA and SECA appropriation adjustments for OASI, DI, and HI for differences between estimated quarterly transfers provided to OTA for January through June of the Trustees Report year and estimated transfers based on tax liabilities for the taxable earnings estimated for that year in the Trustees Report. The FICA adjustments occur in June of the year after the Trustees Report year and the SECA adjustments occur in December of the second year after the Trustees Report year. **HI values do not affect SOSI**
130. Title of run and solution year parameters (no series values)
131. Year and quarter parameter to instruct Revearn to estimate a FICA adjustment for that quarter (no series values)
132. Year and quarter parameter to instruct Revearn to estimate a SECA adjustment for that quarter (no series values)
133. List of file names that are either input to Revearn or output from it (no series values)
134. Updates to the Revearn Fortran source code of the equations to produce estimates of the proportion of OASDI covered wage workers whose covered wages equal or exceed the contribution and benefit base (taxable maximum) and the ratio of OASDI taxable to covered wages for the two years prior to the Trustees Report year and later— **not used for the SOSI in Revearn**

- 135. Reearn Fortran source code added to program with equations to produce estimates of the proportion of OASDI covered wage workers whose covered wages equal or exceed the contribution and benefit base (taxable maximum) and the ratio of OASDI taxable to covered wages for the third year prior to the Trustees Report year– **not used for the SOSI**
- 136. Various updates to the Reearn Fortran source code to support the equations introduced in #134 and #135 – **changes do not impact the SOSI**
- 137. Updates to the Reearn Fortran source code of the equations to produce estimates of the proportion of OASDI covered self-employment workers whose covered earnings (wages, if any, plus self-employment net earnings) equal or exceed the contribution and benefit base (taxable maximum) and the ratio of OASDI taxable to covered self-employment income for 2017 and later– **not used for the SOSI in Reearn and not updated for the 2025 Trustees Report**
- 138. Various updates to the Reearn Fortran source code to support the equations introduced in #137 - **not updated for the 2025 Trustees Report**

### **2.5.c. Development of Output**

#### *Equation 2.5.1 – Annual Covered Wage Tax Liabilities (WTL)*

WTL is computed by multiplying the combined OASDI employee-employer tax rate by the OASDI taxable wages input from the PAYROLL subprocess. REVENUES estimates annual taxable wages for the Federal Civilian, Federal Military, S&L, Private Household, Farm, Self-reported Tips, and residual Private Nonfarm sectors. Liabilities by sector are computed by multiplying the combined OASDI employee-employer tax rate by OASDI taxable wages for each sector.

#### *Equation 2.5.2 – Annual Self-Employed Income Tax Collections (SEL)*

SEL is computed by multiplying the OASDI self-employment tax rate by the OASDI self-employment taxable income input from the PAYROLL subprocess.

#### *Equation 2.5.3 – Annual Multi-Employer Refund Wage Liabilities (MERL)*

MERL is computed by multiplying the OASDI employee tax rate by the OASDI multi-employer refund wages input from the PAYROLL subprocess.

#### *Equation 2.5.4 – Quarterly Covered Wage Tax Liabilities (WTLQ)*

Total WTLQ is summed from sector components that include Federal Civilian, Federal Military, S&L, Private Household, Farm, Self-reported Tips, and residual Private Nonfarm. Sector WTLQs are determined by computing ratios of quarterly to annual liabilities for each

quarter. These are calculated for the Private Nonfarm, S&L, Federal Civilian and Military sectors. Each is dependent on the quarterly distribution of WSD and the RWTEE for the relevant sector, and on a payday adjustment that takes into account the actual number of paydays that fall into a particular calendar quarter. WTLQ ratios for the other sectors are assumed to be constants over the projection horizon.

#### *Equation 2.5.5 - Quarterly Wage Tax Collections (WTLQC)*

Employers incur tax liabilities when they pay wages to their employees. These liabilities are required to be deposited in the general fund of the U.S. Treasury by employers based on the amount of total payroll tax liability (income taxes plus Social Security and Medicare taxes withheld) accumulated. Some very large employers must deposit their tax liabilities the next banking day after paying their employees. Other levels of accumulated tax liabilities require depositing within three days and by the middle of the following month. If employers follow these deposit requirements, the result is that all tax liability for a particular quarter is deposited by the last day of the month following the end of the quarter. Thus, the WTLQC for any particular quarter are the sum of the tax liabilities deposited for wages paid in the same quarter and the liabilities deposited for wages paid in the prior quarter.

WTLQC are summed from sector components that include the Federal Civilian, Federal Military, Farm, S&L, and residual Private Nonfarm (including Private Household and Self-Reported Tips). For the Federal Civilian and Military sectors, the WTLQC are set equal to their respective WTLQ since tax liabilities for the two sectors are considered collected immediately. The WTLQC for Farm is also set equal to its WTLQ, due in part to the fact that farms report tax liabilities annually. For the S&L and Private Nonfarm sectors, the WTLQC amount is computed by adding the product of WTLQ and the proportion of WTLQ that should be deposited in the same quarter in which the wages were paid to the WTLQ from the previous quarter which was not deposited in that quarter. Each quarter's proportion is based on the deposit requirements and estimates of accumulated tax liabilities, which in turn are based on firm size (or total wages paid). Separate proportions are estimated for the S&L and the Private Nonfarm sector because of the large difference in wage distributions between them.

#### *Equation 2.5.6 - Quarterly Self-Employed Income Tax Collections (SELQC)*

For wage workers, annual liabilities (WTL) are distributed to quarterly liabilities (WTLQ), which in turn are distributed to quarterly collections (WTLQC). However, for self-employed workers, annual liabilities (SEL) are distributed directly to SELQC, since self-employment income is only reported on an annual basis (on IRS Form 1040 Schedule SE).

SEL for a particular calendar year are distributed as collections to the four quarters of that year and to the first three quarters of the next year. This distribution uses quarterly proportions that are based on an historical pattern of the amount of SEL collected in each month, as estimated by the OTA. The OTA estimates reflect IRS regulations that require self-employed workers to deposit estimated tax liabilities four times a year (January, April, June, and September) and to make up any shortfall when filing Federal income tax returns in the

following year. The program computes the collection distribution ratios based on the OTA estimates, which are input to the program. The ratios for projected years are determined by averaging the ratios for all years 1997 through the most recent year for which the OTA estimates are complete.