July 20, 2017
The Honorable Ted Deutch
United States House of Representatives
Washington, D.C. 20515
The Honorable Mazie K. Hirono
United States Senate
Washington, D.C. 20510

Dear Representative Deutch and Senator Hirono:
I am writing in response to your request for estimates of the financial effects on Social Security of H.R. 3302 and S. 1600, the "Protecting and Preserving Social Security Act," which you introduced today. These Bills (hereafter referred to as the proposal) include three provisions with direct effects on the Social Security Trust Funds. We have enjoyed working closely with Joel Richard, Ben Strand, and Dee Williams of your staffs in developing this proposal to meet your goals. The estimates and analysis provided here reflect the combined effort of many in the Office of the Chief Actuary, but most particularly Karen Glenn, Christopher Chaplain, Daniel Nickerson, Kyle Burkhalter, Anna Kirjusina, and Tiffany Bosley.

The enclosed tables provide estimates of the effects of the three provisions on the cost, income, and combined trust fund reserves for the Old Age, Survivors, and Disability Insurance (OASDI) program, as well as estimated effects on retired worker benefit levels for selected hypothetical workers and effects on payroll tax levels. In addition, tables 1 b and $1 \mathrm{~b} . \mathrm{n}$ provide estimates of the federal budget implications of the three provisions with direct effects on the OASDI program. The estimates provided here reflect the intermediate assumptions of the 2016 Trustees Report. Estimated proposal effects would not be materially different if estimated under the intermediate assumptions of the 2017 Trustees Report, released on July 13.

Assuming enactment of the proposal, the projected trust fund reserve depletion year for theoretical combined OASDI and DI Trust Funds would be extended to 2059. Under current law, the projected trust fund reserve depletion year for the combined trust funds is 2034.

The following list briefly identifies each of the three provisions of the proposal:
Section 102. Use the Consumer Price Index for the Elderly (CPI-E) increase rather than the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) increase to calculate the cost-of-living adjustment (COLA), effective for December 2019 and later

COLAs. We assume this change would increase the COLA by an average of 0.2 percentage point per year.

Section 201. Eliminate the OASDI taxable maximum for years 2024 and later; thus the full 12.4 percent OASDI payroll tax rate would apply to all OASDI covered earnings. The tax rate that would apply to covered earnings over the current law taxable maximum would increase linearly, starting at 1.8 percent ( $12.4 \times 1 / 7$ ) for 2018 and reaching the full 12.4 percent for 2024 and later.

Section 202. Provide benefit credit on earnings taxed above the current-law taxable maximum. The primary insurance amount (PIA) would be augmented using an "AIME+" method.

The balance of this letter provides a summary of the effects of the three provisions on the actuarial status of the OASDI program, our understanding of the specifications and intent of each of the three provisions, and descriptions of our detailed financial estimates for trust fund operations, benefit levels, and implications for the federal budget. See the "Specification for Provisions of the Proposal" section of this letter for a more detailed description of these three provisions.

## Summary of Effects of the Proposal on OASDI Actuarial Status

Figure 1 illustrates the projected OASDI Trust Fund ratio through 2090 under current law and assuming enactment of the proposal. The trust fund ratio is defined as the combined Social Security Trust Fund reserves expressed as a percent of annual program cost. Assuming enactment of the proposal, the combined Social Security Trust Fund reserves would deplete in 2059, 25 years later than the projected reserve depletion date under current law.

Figure 1. Current-Law and Proposal OASDI Trust Fund Reserves as Percent of Annual Cost: 2016 TR Intermediate Assumptions


Note: Trust Fund Ratio for a given year is the ratio of reserves in the combined Social Security Trust Fund at the beginning of the year to the cost of the program for the year.

Under current law, 79 percent of scheduled benefits are projected to be payable on a timely basis in 2034 after depletion of the combined trust fund reserves, with the percentage payable declining to 74 percent for 2090. Under the proposal, the OASDI program would be able to pay 100 percent of scheduled benefits through 2058, 91 percent in 2059 after combined trust fund reserve depletion, with the percentage payable declining to 85 percent in 2090.

Enactment of the three provisions of this proposal would reduce the long-range OASDI actuarial deficit from 2.66 percent of taxable payroll under current law to 0.88 percent of payroll under the proposal.

Figure 2 illustrates annual projected levels of cost, expenditures, and non-interest income as a percent of the current-law taxable payroll. The projected level of cost reflects the full cost of scheduled benefits under both current law and the proposal. Under the proposal, projected expenditures equal the full cost of scheduled benefits until combined trust fund reserve depletion in 2059.

Figure 2. Proposal and Current-Law Cost, Expenditures, and Non-Interest Income as Percent of Taxable Payroll: 2016 TR Intermediate Assumptions


OASDI program annual cost under the proposal is higher than under current law, starting in 2020. This difference between proposal and current-law cost increases from 0.03 percent of current-law payroll for 2020 to about 0.5 percent of current-law payroll for 2041, and thereafter increases more gradually, reaching 0.6 percent of current-law payroll by 2090. Beginning in 2018, non-interest income under the proposal is projected to be higher than under current law. This difference between proposal and current-law income increases from 0.4 percent of currentlaw payroll for 2018 to 2.3 percent of payroll for 2024, and thereafter increases very gradually, reaching 2.4 percent of payroll by 2090. For 2018 and later, the proposal improves the annual balance (non-interest income minus program cost).

It is also useful to consider the projected cost, expenditures, and income for the OASDI program expressed as a percentage of Gross Domestic Product (GDP). Figure 3 illustrates these levels under both current law and the proposal.

Figure 3. Proposal and Current-Law Cost, Expenditures, and Non-Interest Income as Percent of GDP: 2016 TR Intermediate Assumptions


## Specification for Provisions of the Proposal

Section 102. Use the CPI-E increase rather than the CPI-W increase to calculate the COLA, effective for December 2019 and later COLAs.

Under current law, the annual cost-of-living adjustment (COLA) applied to Social Security benefits is calculated using the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W). We estimate that using the Consumer Price Index for the Elderly (CPI-E) increase rather than the CPI-W increase in each year beginning with the December 2019 COLA would increase the effective COLA by 0.2 percentage points per year on average.

We estimate that enactment of this provision alone would increase the long-range OASDI actuarial deficit by 0.37 percent of taxable payroll and would increase the annual deficit for the $75^{\text {th }}$ projection year (2090) by 0.52 percent of payroll.

Section 201. Eliminate the OASDI taxable maximum starting in 2024, phased in starting in 2018 through 2024.

Under current law, payroll taxes totaling 12.4 percent apply to OASDI covered earnings in a year up to the contribution and benefit base, or taxable maximum. This taxable maximum is
$\$ 118,500$ for 2016 and increases in the future in line with increases in the national average wage index (AWI). All covered earnings subject to the payroll tax are also potentially creditable toward computation of potential benefits as well as attainment of insured status.

Under this provision, all earnings above the current-law taxable maximum would be subject to the full OASDI payroll tax of 12.4 percent in 2024 and later. The payroll tax rate that would apply to covered earnings over this taxable maximum would increase linearly, starting at 1.8 percent ( $12.4 \times 1 / 7$ ) for 2018 and reaching 12.4 percent for 2024 and later. Therefore, all covered earnings above and below the present-law taxable maximum would be taxed at the 12.4 percent payroll tax rate for 2024 and later.

We estimate that enactment of this provision alone, without any resultant increase in benefits based on the additional taxed earnings, would decrease the long-range OASDI actuarial deficit by 2.20 percent of taxable payroll and would decrease the annual deficit for the $75^{\text {th }}$ projection year (2090) by 2.45 percent of payroll.

Section 202. Provide benefit credit for earnings taxed above the current-law taxable maximum.

Under this provision, the primary insurance amount (PIA) would be determined in two components. The first component would be computed exactly as under current law, based on the average indexed monthly earnings (AIME), limited to earnings up to the level of the current-law OASDI taxable maximum ( $\$ 118,500$ for 2016) for each year. The second component of the PIA would be computed using the "AIME+", which would be equal to the sum of the indexed earnings in excess of the current-law taxable maximum for the 35 years with the highest indexed excess amounts, divided by 420. For years 2018 through 2024, excess earnings would be multiplied by $1 / 7,2 / 7, \ldots, 6 / 7,1$, respectively. The second component of the PIA would be equal to 3 percent of AIME + up to $\$ 10,958$ (equal to $(\$ 250,000-\$ 118,500) / 12$ ) and 0.25 percent for AIME+ above this level for beneficiaries newly eligible in 2018. For beneficiaries becoming newly eligible for benefits after 2018, the "bend point" of $\$ 10,958$ would be indexed by the national average wage index (AWI) in the same manner as for the bend points in the first component of the PIA.

We estimate that enactment of this provision (given enactment of Section 201) would increase the long-range OASDI actuarial deficit by 0.05 percent of taxable payroll and would increase the annual deficit for the $75^{\text {th }}$ projection year (2090) by 0.11 percent of payroll. Sections 201 and 202 combined would decrease the long-range OASDI actuarial deficit by 2.15 percent of taxable payroll and would decrease the annual deficit for the $75{ }^{\text {th }}$ projection year (2090) by 2.35 percent of payroll.

## Detailed Financial Results for the Provisions of the Proposal

## Summary Results by Provision

Table A provides estimates of the effects on the OASDI long-range actuarial balance of the three provisions of the proposal separately and on a combined basis. The table also includes estimates
of the effect of the provisions on the annual balance (the difference between income rate and the cost rate, expressed as a percent of current-law taxable payroll) for the $75^{\text {th }}$ projection year, 2090. Interaction among individual provisions is reflected only in the total estimates for the combined provisions.

## Benefit Illustrations

Tables B1 and B2 provide illustrative examples of the projected change in benefit levels under the provisions of the proposal for beneficiaries retiring and starting benefit receipt at age 65 in future years at six selected earnings levels, with selected numbers of years of work. Table B3 provides additional important information on characteristics of retired workers represented by these illustrations for the year 2007. The hypothetical workers represented in these tables reflect average career-earnings patterns of workers who started receiving retirement benefits under the Social Security program in recent years. The tables subdivide workers with very low, low, and medium career-average earnings levels by their numbers of years of non-zero earnings.

The change from CPI-W to CPI-E for the COLA calculation affects all earnings levels. The "Maximum-AIME Steady Earner" is assumed to have earnings at ages 22 through 64 that equal the current-law taxable maximum level (equivalent to $\$ 118,500$ for 2016) and the "Twice Maximum-AIME Steady Earner" is assumed to have earnings at ages 22 through 64 that equal twice the current-law taxable maximum level (equivalent to $\$ 237,000$ for 2016). As a result, the provision to tax and credit earnings above the current-law taxable maximum affects only the "Twice Maximum-AIME Steady Earner" benefit level.

The first several columns of Table B1 compare the initial scheduled benefit levels, assuming retirement at age 65 under the provisions of the proposal, to scheduled current-law benefit levels. All scheduled benefit amounts under the proposal are higher than those scheduled in current law. The final three columns of this table show the level of scheduled benefits under the proposal as a percentage of current-law scheduled benefits, the level of scheduled benefits under the proposal as a percentage of current-law payable benefits, and the level of payable benefits under the proposal as a percentage of current-law payable benefits, respectively. Because combined OASDI Trust Fund reserves deplete in 2059 under the proposal, the proposal payable to current law payable column is lower in 2080 than in 2050.

Table B2 compares the change in scheduled benefit levels at ages 65, 75,85 , and 95 under the proposal to scheduled benefits under current law, assuming retirement and start of benefit receipt at age 65. Table B2 shows that, for all earnings levels, projected scheduled benefits under the provisions of the proposal increase in relation to current-law scheduled benefits between ages 65 and 95, because of the change in computing the COLA.

Table B3 provides information helpful in interpreting the benefit illustrations in Tables B1 and B2. Percentages in Table B3 are based on tabulations from a 10-percent sample of newlyentitled retired workers in 2007. Table B3 displays the percentages of these newly-entitled retired workers in 2007 that are closest to each of the illustrative examples and are:

1) "Dually Entitled", meaning they received a higher spouse or widow(er) benefit based on the career earnings of their husband or wife,
2) "WEP" (Windfall Elimination Provision), meaning that they received a reduced benefit due to having a pension based on earnings that were not covered under the OASDI program (primarily certain government workers), and they had less than 30 years of substantial earnings that were taxable under the OASDI program,
3) "Foreign Born", meaning that they entered the Social Security coverage area after birth (and generally after entering working ages), and
4) "All Others", meaning they had none of the three characteristics listed above.

The extent to which retired-worker beneficiaries represented by each of the illustrative examples have any of the characteristics listed above (dually entitled, WEP, foreign born) is important because such individuals are less dependent on the OASDI benefit that relates to their own career-average earnings level. It should be noted that the distributions shown in Table B3 for retirees in 2007 will be changing somewhat for beneficiaries becoming entitled as retired-worker beneficiaries in the future.

## Payroll Tax Effects

Table T compares the scheduled payroll tax levels under the provisions of the proposal to scheduled current-law payroll tax levels at various earnings levels for selected years. Under the proposal, the payroll tax rate of 12.4 percent would apply to all covered earnings above the current-law taxable maximum in 2024 and later. As a result, the worker with earnings at twice the current-law taxable maximum would have payroll tax contributions increased by 100 percent for 2030, 2050, and 2080. All other workers shown in the table earn at or below the current law taxable maximum, so their payroll tax contributions would not change.

## Detailed Tables Containing Annual and Summary Projections

Enclosed with this letter are tables 1, 1a, 1b, 1b.n, 1c, and 1d, which provide annual and summary projections for the proposal.

## Trust Fund Operations

Table 1 provides projections of the financial operations of the OASDI program and shows that the combined Social Security Trust Fund would deplete in 2059 assuming enactment of this proposal. The table shows the annual cost and income rates, annual balances, and trust fund ratios (reserves as percent of annual program cost) for OASDI, as well as the change from current law in these cost rates, income rates, and annual balances. Included at the bottom of this table are summarized rates for the 75-year (long-range) period.

For 2018 and later, the proposal improves the annual balance (non-interest income minus program cost). The improvement in the annual balance increases from 0.4 percent of current-law payroll for 2018 to 2.2 percent for 2024, and thereafter decreases gradually, reaching 1.8 percent by 2090. Under the proposal, the annual deficit declines from 1.1 percent of current-law payroll for 2016 and becomes positive for 2021 through 2024. The annual balance becomes negative
again in 2025 and generally decreases (becomes more negative) thereafter. The annual deficit is 1.5 percent of payroll for 2040, 1.6 percent for 2060, and 2.5 percent for 2090. Under current law, the projected annual deficit for 2090 is 4.3 percent of payroll.

The actuarial balance for the OASDI program over the 75 -year projection period is improved by 1.78 percent of taxable payroll, from an actuarial deficit of 2.66 percent of payroll under current law to a deficit of 0.88 percent of taxable payroll under the proposal.

## Program Transfers and Trust Fund Reserves

Column 4 of Table 1a provides a projection of the level of reserves for the combined Social Security Trust Fund, assuming enactment of the three Social Security provisions of the proposal. These trust fund reserve amounts are expressed in present value dollars discounted to January 1, 2016. The table indicates that the provisions include no new specified transfers of general revenue to the combined Social Security Trust Fund. For purpose of comparison, the OASDI Trust Fund reserves, expressed in present value dollars, are also shown for the current-law Social Security program both without and with the added proposal general fund transfers (zero in this case) in columns 6 and 7.

Note that negative values in columns 6 and 7 represent the "unfunded obligation" for the program through the year. The unfunded obligation is the present value of the shortfall of revenue needed to pay full scheduled benefits on a timely basis from the date of trust fund reserve depletion through the end of the indicated year. Gross Domestic Product (GDP), expressed in present value dollars, is shown in column 5 for comparison with other values in the table.

## Effect of the Social Security Provisions on the Federal Budget

Table 1b shows the projected effect, in present value discounted dollars, on the federal budget (unified-budget and on-budget) annual cash flows and balances, assuming enactment of the three Social Security provisions of the proposal. Table 1b.n provides the estimated nominal dollar effect of enactment of the proposal on annual budget balances for years 2016 through 2026. All values in these tables represent the amount of change from the level projected under current law. In addition, changes reflect the budget scoring convention that presumes benefits, not payable under the law after depletion of trust fund reserves, would still be paid using revenue provided from the General Fund of the Treasury. The reader should be cautioned that this presumption of payment of benefits beyond the resources of the trust funds is prohibited under current law and is also inconsistent with all past experience under the Social Security program.

Column 1 of Table 1b shows the added proposal general fund transfers (zero for this proposal). Column 2 shows the net changes in OASDI cash flow from all provisions of the proposal.

We project the net effect of the proposal on unified budget cash flow (column 3) to be positive in years 2018 and later. The phased-in elimination of the current law taxable maximum starting in 2018 through 2024 more than offsets the additional benefits from these additional earnings taxed, and the switch from the CPI-W to the CPI-E for the Social Security COLA.

Column 4 of Table 1 b indicates that the effect of implementing the proposal is a reduction of the theoretical federal debt held by the public, reaching about $\$ 8.1$ trillion in present value at the end of the 75 -year projection period. Column 5 provides the projected effect of the proposal on the annual unified budget balances, including both the cash flow effect in column 3 and the additional interest on the accumulated debt in column 4 . Columns 6 and 7 indicate that the provisions of this proposal would have no expected direct effects on the on-budget cash flow, or on the total federal debt, in the future.

The estimates provided in these tables do not include any direct or indirect effects from provisions in this proposal on other federal programs (such as Supplemental Security Income). In addition, it is important to note that we base these estimates on the intermediate assumptions of the 2016 Trustees Report, so these estimates are not consistent with estimates made by the Office of Management and Budget or the Congressional Budget Office based on their assumptions. In particular, all present values are discounted using trust fund yield assumptions under the intermediate assumptions of the 2016 Trustees Report.

## Annual Trust Fund Operations as a Percent of GDP

Table 1c provides annual cost, annual expenditures (amount that would be payable), and annual tax income for the OASDI program expressed as a percentage of GDP for both current law and assuming enactment of the three Social Security provisions of the proposal. Showing the annual trust fund cash flows as a percent of GDP provides an additional perspective on these trust fund operations in relation to the total value of goods and services produced in the United States. The relationship between income and cost is similar when expressed as a percent of GDP to that when expressed as a percent of taxable payroll (Table 1).

## Effects on Trust Fund Reserves and Unfunded Obligations

Table 1d provides estimates of the changes in trust fund reserves and unfunded obligations on an annual basis. Values in this table are expressed in present value dollars discounted to January 1, 2016.

For the 75-year (long-range) period as a whole, the current-law unfunded obligation of $\$ 11.4$ trillion is reduced to $\$ 3.2$ trillion in present value. This change of $\$ 8.1$ trillion results from:

- A $\$ 10.0$ trillion net increase in revenue (column 2), primarily from additional payroll tax revenue, minus
- A $\$ 1.8$ trillion net increase in cost (column 3), primarily from the change in computing the COLA and additional benefits from earnings taxed above the current-law taxable maximum.

We hope these estimates are helpful. Please let me know if we may provide further assistance.

Sincerely,


Enclosures

| Table A—Estimated Long-Range OASDI Financial Effects of H.R. 3302 and S. 1600, the Protecting and Preserving Social Security Act, introduced by Representative Deutch and Senator Hirono |  |  |
| :---: | :---: | :---: |
| Provision | Estimated Change in Long-Range OASDI Actuarial Balance ${ }^{1}$ (as a percent of payroll) | Estimated Change in Annual Balance in $75^{\text {th }}$ year ${ }^{2}$ <br> (as a percent of payroll) |
| Section 101. Use the increase in the Consumer Price Index for the Elderly (CPI-E) rather than the increase in the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) to calculate the cost-of-living adjustment (COLA), effective for December 2019 and later COLAs. We estimate this new computation would increase the annual COLA by about 0.2 percentage point, on average $\qquad$ | -0.37 | -0.52 |
| Section 201. Eliminate the OASDI taxable maximum for years 2024 and later, and apply full 12.4 percent payroll tax rate to all earnings. Phase-in the application of the full tax rate for earnings above the current-law taxable maximum in years 2018 through 2024 $\qquad$ | 2.20 | 2.45 |

Section 202. Under this provision, the primary insurance amount (PIA) would be determined in two components. The first component would be computed exactly as under current law, based on the average indexed monthly earnings (AIME), including earnings up to the level of the current-law OASDI taxable maximum ( $\$ 118,500$ for 2016) for each year. The second component of the PIA would be computed using the "AIME+", which would be equal to the sum of the indexed earnings in excess of the current-law taxable maximum for the 35 years with the highest indexed excess amounts, divided by 420. The second component of PIA would be equal to 3 percent of AIME+ up to $\$ 10,958$ (equal to ( $\$ 250,000-$ $\$ 118,500) / 12$ ) and 0.25 percent for AIME+ above this level, for beneficiaries becoming newly eligible in 2018. For beneficiaries becoming newly eligible for benefits after 2018, the "bend point" of $\$ 10,958$ would be indexed by the national average wage index (AWI) in the same manner as for the bend points in the first component of the PIA -0.05 -0.11

Total for all provisions, including interaction ............ 1.78 1.82
${ }^{1}$ Under current law, the estimated long-range OASDI actuarial balance is -2.66 percent of taxable payroll.
${ }^{2}$ Under current law, the estimated $75{ }^{\text {th }}$ year annual balance is -4.35 percent of taxable payroll.
Notes: All estimates are based on the intermediate assumptions of the 2016 OASDI Trustees Report.
Estimates of individual provisions appear on a stand-alone basis relative to current law, unless otherwise stated.

Table B1. Changes in Benefits for Hypothetical Workers Beginning Benefit Receipt at age 65
H.R. 3302, S. 1600, the "Protecting and Preserving Social Security Act", Introduced by Representative Deutch and Senator Hirono



## Table B3. Important Characteristics of Hypothetical Workers in 2007

## Percent of Beneficiaries Within Each Category That Are:

| Category | Dually Entitled ${ }^{2}$ | WEP $^{3}$ | Foreign Born | All Others ${ }^{4}$ |
| :---: | :---: | :---: | :---: | :---: |
| Very-Low-AIME (\$10,101 for 2007 ${ }^{1}$ ): |  |  |  |  |
| 30-Year Scaled Earner (9.3\% of Retires) | 47 | 6 | 11 | 40 |
| 20-Year Scaled Earner (5.8\% of Retires) | 38 | 16 | 21 | 31 |
| 14-Year Scaled Earner (5.3\% of Retires) | 22 | 21 | 45 | 20 |
| Low-AIME (\$18,182 for 2007 ${ }^{1}$ ): |  |  |  |  |
| 44-Year Scaled Earner (13.1\% of Retires) | 15 | 2 | 6 | 78 |
| 30-Year Scaled Earner (5.9\% of Retirees) | 16 | 9 | 18 | 59 |
| 20-Year Scaled Earner (3.1\% of Retires) | 10 | 23 | 35 | 37 |
| Medium-AIME (\$40,405 for 2007) : |  |  |  |  |
| 44-Year Scaled Earner (23.0\% of Retires) | 1 | 1 | 5 | 93 |
| 30-Year Scaled Earner (4.4\% of Retires) | 1 | 8 | 26 | 67 |
| High-AIME (\$64,649 for 2007) ${ }^{1}$ |  |  |  |  |
| 44-Year Scaled Earner (20.5\% of Retires) | 0 | 0 | 6 | 93 |
| Maximum-Current-Law-AIME (\$82,224 | 071): |  |  |  |
| Steady Earner (9.4\% of Retires) | 0 | 0 | 7 | 93 |
| Note 1: Table B3 displays the percentages of these newl | ed retired workers in 2007 t | osest to each | strative examples. |  |
| Note 2: The percents in each category are based on tabu percent confident that each of the values shown above is Note 3: The sum of the percentages for each category | of a 10 -percent sample of n <br> 1.4 percentage points of the | led retirede would fin | ficiaries in 2007 (169,7 percent of the retirees neficiaries can be class | ords). We can be 95 |
| following groups: dually entitled, WEP, and foreign bo | ss rows could be greater th | ercent beca | ficiaries can be classif | re than one |
| ${ }^{1}$ Average of highest 35 years of taxable earnings wage | do 2007. |  |  |  |
| ${ }^{2}$ Under current law, entitled to an additional benefit ba dually entitled could become dually entitled in the fut | someone else's account. T | entitled perc | mum value. Some bene | sthat are not curren |
| ${ }^{3}$ Covered by pension from government employment a <br> ${ }^{4}$ Neither foreign born, subject to WEP, or dually entit | ubject to the windfall elimin | vision (WE |  |  |
| Office of the Chief Actuary, Social Security Administra |  |  |  | March 21, 2017 |

Table T. Changes in Payroll Tax Contributions (Employee + Employer) for Workers with OASDI Covered Earnings in the Year H.R. 3302, S. 1600, the "Protecting and Preserving Social Security Act", Introduced by Representative Deutch and Senator Hirono


Table 1 - OASDI Cost Rate, Income Rate, Annual Balance, and Trust Fund Ratio
H.R. 3302 and S. 1600, the "Protecting and Preserving Social Security Act" Introduced by Representative Deutch and Senator Hirono


| Summarized Rates: OASDI |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 2016-2090 | Cost Rate 16.91\% | Income Rate 16.03\% | Actuarial Balance -0.88\% | Year of reserve depletion ${ }^{1}$ 2059 |


Office of the Chief Actuary
Based on Intermediate Assumptions of the 2016 Trustees Report.
ocial Security Administration
${ }^{1}$ Under present law the year of combined Trust Fund reserve depletion is 2034

Table 1a - General Fund Transfers, OASDI Trust Fund Reserves, and Theoretical OASDI Reserves
H.R. 3302 and S. 1600, the "Protecting and Preserving Social Security Act" Introduced by Representative Deutch and Senator Hirono

|  | Proposal General Fund Transfers |  |  | Present Value in Billions as of 1-1-2016 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Present Value in Billions as of 1-1-2016 |  |  | Proposal Total OASDI Trust Fund |  | Theoretical So with Borrowin <br> Net OASDI Trust Fund | Security ${ }^{1}$ Authority <br> erves at End of Year |
|  | Percentage | Annual | Accumulated as of | Reserves | Gross Domestic | Without General | With Plan General |
| Calendar | of Payroll | Amounts | End of Year | at End of Year | Product | Fund Transfers | Fund Transfers |
| Year | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| 2016 | 0.0 | 0.0 | 0.0 | 2,741.0 | 18,368.5 | 2,741.0 | 2,741.0 |
| 2017 | 0.0 | 0.0 | 0.0 | 2,687.5 | 18,780.3 | 2,687.5 | 2,687.5 |
| 2018 | 0.0 | 0.0 | 0.0 | 2,650.5 | 19,199.4 | 2,625.9 | 2,625.9 |
| 2019 | 0.0 | 0.0 | 0.0 | 2,629.8 | 19,590.0 | 2,554.4 | 2,554.4 |
| 2020 | 0.0 | 0.0 | 0.0 | 2,622.3 | 19,948.3 | 2,471.7 | 2,471.7 |
| 2021 | 0.0 | 0.0 | 0.0 | 2,629.2 | 20,275.2 | 2,378.9 | 2,378.9 |
| 2022 | 0.0 | 0.0 | 0.0 | 2,644.3 | 20,546.2 | 2,270.6 | 2,270.6 |
| 2023 | 0.0 | 0.0 | 0.0 | 2,662.2 | 20,765.2 | 2,142.4 | 2,142.4 |
| 2024 | 0.0 | 0.0 | 0.0 | 2,683.1 | 20,965.2 | 1,994.9 | 1,994.9 |
| 2025 | 0.0 | 0.0 | 0.0 | 2,682.9 | 21,141.0 | 1,827.2 | 1,827.2 |
| 2026 | 0.0 | 0.0 | 0.0 | 2,667.8 | 21,283.5 | 1,645.4 | 1,645.4 |
| 2027 | 0.0 | 0.0 | 0.0 | 2,638.1 | 21,355.9 | 1,450.6 | 1,450.6 |
| 2028 | 0.0 | 0.0 | 0.0 | 2,595.0 | 21,346.6 | 1,244.3 | 1,244.3 |
| 2029 | 0.0 | 0.0 | 0.0 | 2,539.6 | 21,259.6 | 1,028.4 | 1,028.4 |
| 2030 | 0.0 | 0.0 | 0.0 | 2,473.7 | 21,099.1 | 804.8 | 804.8 |
| 2031 | 0.0 | 0.0 | 0.0 | 2,398.7 | 20,898.2 | 575.3 | 575.3 |
| 2032 | 0.0 | 0.0 | 0.0 | 2,315.8 | 20,696.5 | 341.0 | 341.0 |
| 2033 | 0.0 | 0.0 | 0.0 | 2,227.0 | 20,500.4 | 103.7 | 103.7 |
| 2034 | 0.0 | 0.0 | 0.0 | 2,134.3 | 20,306.0 | -134.7 | -134.7 |
| 2035 | 0.0 | 0.0 | 0.0 | 2,039.4 | 20,116.5 | -372.8 | -372.8 |
| 2036 | 0.0 | 0.0 | 0.0 | 1,940.6 | 19,925.6 | -612.3 | -612.3 |
| 2037 | 0.0 | 0.0 | 0.0 | 1,839.1 | 19,743.3 | -852.1 | -852.1 |
| 2038 | 0.0 | 0.0 | 0.0 | 1,737.0 | 19,571.8 | -1,090.4 | -1,090.4 |
| 2039 | 0.0 | 0.0 | 0.0 | 1,635.4 | 19,401.7 | -1,326.1 | -1,326.1 |
| 2040 | 0.0 | 0.0 | 0.0 | 1,535.6 | 19,234.9 | -1,558.1 | -1,558.1 |
| 2041 | 0.0 | 0.0 | 0.0 | 1,438.2 | 19,071.7 | -1,786.1 | -1,786.1 |
| 2042 | 0.0 | 0.0 | 0.0 | 1,343.1 | 18,908.8 | -2,010.0 | -2,010.0 |
| 2043 | 0.0 | 0.0 | 0.0 | 1,250.7 | 18,751.3 | -2,229.8 | -2,229.8 |
| 2044 | 0.0 | 0.0 | 0.0 | 1,160.9 | 18,594.5 | -2,445.4 | -2,445.4 |
| 2045 | 0.0 | 0.0 | 0.0 | 1,073.0 | 18,429.9 | -2,657.8 | -2,657.8 |
| 2046 | 0.0 | 0.0 | 0.0 | 987.2 | 18,269.6 | -2,866.7 | -2,866.7 |
| 2047 | 0.0 | 0.0 | 0.0 | 903.7 | 18,107.9 | -3,072.2 | -3,072.2 |
| 2048 | 0.0 | 0.0 | 0.0 | 821.9 | 17,944.3 | -3,274.5 | -3,274.5 |
| 2049 | 0.0 | 0.0 | 0.0 | 741.9 | 17,781.3 | -3,473.9 | -3,473.9 |
| 2050 | 0.0 | 0.0 | 0.0 | 663.4 | 17,618.6 | -3,670.6 | -3,670.6 |
| 2051 | 0.0 | 0.0 | 0.0 | 585.6 | 17,454.0 | -3,865.4 | -3,865.4 |
| 2052 | 0.0 | 0.0 | 0.0 | 507.8 | 17,289.8 | -4,059.0 | -4,059.0 |
| 2053 | 0.0 | 0.0 | 0.0 | 429.6 | 17,125.7 | -4,251.9 | -4,251.9 |
| 2054 | 0.0 | 0.0 | 0.0 | 350.4 | 16,960.9 | -4,444.5 | -4,444.5 |
| 2055 | 0.0 | 0.0 | 0.0 | 269.9 | 16,796.5 | -4,637.2 | -4,637.2 |
| 2056 | 0.0 | 0.0 | 0.0 | 187.7 | 16,631.9 | -4,830.5 | -4,830.5 |
| 2057 | 0.0 | 0.0 | 0.0 | 103.7 | 16,467.6 | -5,024.3 | -5,024.3 |
| 2058 | 0.0 | 0.0 | 0.0 | 17.8 | 16,304.7 | -5,218.8 | -5,218.8 |
| 2059 | 0.0 | 0.0 | 0.0 | -69.8 | 16,142.6 | -5,413.9 | -5,413.9 |
| 2060 | 0.0 | 0.0 | 0.0 | -159.3 | 15,981.3 | -5,609.6 | -5,609.6 |
| 2061 | 0.0 | 0.0 | 0.0 | -250.6 | 15,821.7 | -5,805.8 | -5,805.8 |
| 2062 | 0.0 | 0.0 | 0.0 | -343.5 | 15,664.2 | -6,002.5 | -6,002.5 |
| 2063 | 0.0 | 0.0 | 0.0 | -438.1 | 15,508.7 | -6,199.6 | -6,199.6 |
| 2064 | 0.0 | 0.0 | 0.0 | -534.3 | 15,355.7 | -6,397.1 | -6,397.1 |
| 2065 | 0.0 | 0.0 | 0.0 | -632.0 | 15,204.5 | -6,595.0 | -6,595.0 |
| 2066 | 0.0 | 0.0 | 0.0 | -731.4 | 15,055.3 | -6,793.3 | -6,793.3 |
| 2067 | 0.0 | 0.0 | 0.0 | -832.5 | 14,907.9 | -6,992.1 | -6,992.1 |
| 2068 | 0.0 | 0.0 | 0.0 | -935.1 | 14,762.2 | -7,191.4 | -7,191.4 |
| 2069 | 0.0 | 0.0 | 0.0 | -1,039.3 | 14,618.0 | -7,391.0 | -7,391.0 |
| 2070 | 0.0 | 0.0 | 0.0 | -1,144.9 | 14,476.2 | -7,591.0 | -7,591.0 |
| 2071 | 0.0 | 0.0 | 0.0 | -1,251.7 | 14,336.4 | -7,791.2 | -7,791.2 |
| 2072 | 0.0 | 0.0 | 0.0 | -1,359.4 | 14,198.6 | -7,991.1 | -7,991.1 |
| 2073 | 0.0 | 0.0 | 0.0 | -1,467.7 | 14,062.2 | -8,190.5 | -8,190.5 |
| 2074 | 0.0 | 0.0 | 0.0 | -1,576.2 | 13,927.2 | -8,389.1 | -8,389.1 |
| 2075 | 0.0 | 0.0 | 0.0 | -1,684.6 | 13,793.7 | -8,586.7 | -8,586.7 |
| 2076 | 0.0 | 0.0 | 0.0 | -1,792.5 | 13,661.5 | -8,782.6 | -8,782.6 |
| 2077 | 0.0 | 0.0 | 0.0 | -1,899.5 | 13,530.3 | -8,976.7 | -8,976.7 |
| 2078 | 0.0 | 0.0 | 0.0 | -2,005.4 | 13,399.9 | -9,168.8 | -9,168.8 |
| 2079 | 0.0 | 0.0 | 0.0 | -2,110.0 | 13,271.0 | -9,358.6 | -9,358.6 |
| 2080 | 0.0 | 0.0 | 0.0 | -2,213.3 | 13,143.2 | -9,546.2 | -9,546.2 |
| 2081 | 0.0 | 0.0 | 0.0 | -2,315.5 | 13,016.0 | -9,731.8 | -9,731.8 |
| 2082 | 0.0 | 0.0 | 0.0 | -2,416.9 | 12,889.1 | -9,915.6 | -9,915.6 |
| 2083 | 0.0 | 0.0 | 0.0 | -2,517.7 | 12,762.3 | -10,098.0 | -10,098.0 |
| 2084 | 0.0 | 0.0 | 0.0 | -2,618.3 | 12,635.6 | -10,279.3 | -10,279.3 |
| 2085 | 0.0 | 0.0 | 0.0 | -2,719.0 | 12,509.3 | -10,459.9 | -10,459.9 |
| 2086 | 0.0 | 0.0 | 0.0 | -2,820.0 | 12,383.5 | -10,639.8 | -10,639.8 |
| 2087 | 0.0 | 0.0 | 0.0 | -2,921.5 | 12,258.4 | -10,819.4 | -10,819.4 |
| 2088 | 0.0 | 0.0 | 0.0 | -3,023.6 | 12,134.0 | -10,998.8 | -10,998.8 |
| 2089 | 0.0 | 0.0 | 0.0 | -3,126.4 | 12,010.4 | -11,177.9 | -11,177.9 |
| 2090 | 0.0 | 0.0 | 0.0 | -3,229.9 | 11,887.6 | -11,356.8 | -11,356.8 |
| 2091 | 0.0 | $\underline{0.0}$ | 0.0 | -3,334.0 | 11,765.8 | -11,535.6 | -11,535.6 |

Total 2016-2090
0.0

Based on the Intermediate Assumptions of the 2016 Trustees Report. Ultimate Real Trust Fund Yield of 2.7\%.

Table 1b- OASDI Changes \& Implications for Federal Budget and Debt of Specified Plan Provision Effects on OASDI ${ }^{1}$ (Present Value Dollars) H.R. 3302 and S. 1600, the "Protecting and Preserving Social Security Act" Introduced by Representative Deutch and Senator Hirono


Based on Intermediate Assumptions of the 2016 Trustees Report.
Ultimate Real Trust Fund Yield of 2.7\%.
Note: Changes reflect the budget scoring convention that presumes benefits not payable after reserve depletion would
nonetheless be paid, based on transfers from the General Fund of the Treasury resulting in additional borrowing from the public.
Office of the Chief Actuary
Social Security Administration
${ }^{1}$ Effects of tax provisions on the On-Budget are not reflected in this table.

Table 1b.n - OASDI Changes \& Implications for Federal Budget and Debt of Specified Plan Provision Effects on OASDI ${ }^{1}$ (Nominal Dollars)
H.R. 3302 and S. 1600, the "Protecting and Preserving Social Security Act" Introduced by Representative Deutch and Senator Hirono


Based on Intermediate Assumptions of the 2016 Trustees Report.
Note: Changes reflect the budget scoring convention that presumes benefits not payable after reserve depletion would
nonetheless be paid, based on transfers from the General Fund of the Treasury resulting in additional borrowing from the public.
Office of the Chief Actuary
${ }^{1}$ Effects of tax provisions on the On-Budget are not reflected in this table.

Table 1c - Current Law and Proposal Cost, Expenditures, and Income: As Percent of Gross Domestic Product H.R. 3302 and S. 1600, the "Protecting and Preserving Social Security Act" Introduced by Representative Deutch and Senator Hirono

|  | Current Law OASDI |  |  | Proposal OASDI |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Calendar Year | Cost <br> (1) | Expenditures (Payable) (2) | Non-Interest Income (3) | Cost <br> (4) | Expenditures (Payable) (5) | Non-Interest Income <br> (6) |
| 2016 | 4.98 | 4.98 | 4.59 | 4.98 | 4.98 | 4.59 |
| 2017 | 4.91 | 4.91 | 4.62 | 4.91 | 4.91 | 4.62 |
| 2018 | 4.98 | 4.98 | 4.65 | 4.98 | 4.98 | 4.78 |
| 2019 | 5.05 | 5.05 | 4.68 | 5.04 | 5.04 | 4.94 |
| 2020 | 5.12 | 5.12 | 4.70 | 5.13 | 5.13 | 5.09 |
| 2021 | 5.18 | 5.18 | 4.72 | 5.20 | 5.20 | 5.23 |
| 2022 | 5.28 | 5.28 | 4.75 | 5.31 | 5.31 | 5.38 |
| 2023 | 5.39 | 5.39 | 4.77 | 5.43 | 5.43 | 5.51 |
| 2024 | 5.50 | 5.50 | 4.79 | 5.55 | 5.55 | 5.64 |
| 2025 | 5.60 | 5.60 | 4.81 | 5.66 | 5.66 | 5.66 |
| 2026 | 5.67 | 5.67 | 4.81 | 5.73 | 5.73 | 5.66 |
| 2027 | 5.73 | 5.73 | 4.81 | 5.80 | 5.80 | 5.66 |
| 2028 | 5.78 | 5.78 | 4.81 | 5.87 | 5.87 | 5.66 |
| 2029 | 5.83 | 5.83 | 4.81 | 5.92 | 5.92 | 5.66 |
| 2030 | 5.87 | 5.87 | 4.81 | 5.97 | 5.97 | 5.66 |
| 2031 | 5.91 | 5.91 | 4.80 | 6.02 | 6.02 | 5.65 |
| 2032 | 5.94 | 5.94 | 4.80 | 6.06 | 6.06 | 5.65 |
| 2033 | 5.96 | 5.96 | 4.80 | 6.09 | 6.09 | 5.65 |
| 2034 | 5.98 | 5.29 | 4.80 | 6.11 | 6.11 | 5.64 |
| 2035 | 5.98 | 4.79 | 4.79 | 6.12 | 6.12 | 5.64 |
| 2036 | 6.00 | 4.79 | 4.79 | 6.14 | 6.14 | 5.64 |
| 2037 | 6.01 | 4.79 | 4.79 | 6.15 | 6.15 | 5.63 |
| 2038 | 6.01 | 4.78 | 4.78 | 6.16 | 6.16 | 5.63 |
| 2039 | 6.00 | 4.78 | 4.78 | 6.16 | 6.16 | 5.63 |
| 2040 | 5.99 | 4.78 | 4.78 | 6.15 | 6.15 | 5.62 |
| 2041 | 5.97 | 4.77 | 4.77 | 6.14 | 6.14 | 5.62 |
| 2042 | 5.96 | 4.77 | 4.77 | 6.13 | 6.13 | 5.62 |
| 2043 | 5.94 | 4.77 | 4.77 | 6.11 | 6.11 | 5.61 |
| 2044 | 5.93 | 4.76 | 4.76 | 6.10 | 6.10 | 5.61 |
| 2045 | 5.92 | 4.76 | 4.76 | 6.09 | 6.09 | 5.61 |
| 2046 | 5.91 | 4.76 | 4.76 | 6.08 | 6.08 | 5.61 |
| 2047 | 5.90 | 4.76 | 4.76 | 6.07 | 6.07 | 5.60 |
| 2048 | 5.89 | 4.76 | 4.76 | 6.06 | 6.06 | 5.60 |
| 2049 | 5.88 | 4.75 | 4.75 | 6.06 | 6.06 | 5.60 |
| 2050 | 5.87 | 4.75 | 4.75 | 6.05 | 6.05 | 5.60 |
| 2051 | 5.87 | 4.75 | 4.75 | 6.05 | 6.05 | 5.60 |
| 2052 | 5.87 | 4.75 | 4.75 | 6.05 | 6.05 | 5.59 |
| 2053 | 5.88 | 4.75 | 4.75 | 6.06 | 6.06 | 5.59 |
| 2054 | 5.89 | 4.75 | 4.75 | 6.06 | 6.06 | 5.59 |
| 2055 | 5.90 | 4.74 | 4.74 | 6.08 | 6.08 | 5.59 |
| 2056 | 5.91 | 4.74 | 4.74 | 6.09 | 6.09 | 5.59 |
| 2057 | 5.92 | 4.74 | 4.74 | 6.10 | 6.10 | 5.59 |
| 2058 | 5.94 | 4.74 | 4.74 | 6.12 | 6.12 | 5.58 |
| 2059 | 5.95 | 4.74 | 4.74 | 6.13 | 5.77 | 5.58 |
| 2060 | 5.97 | 4.74 | 4.74 | 6.15 | 5.58 | 5.58 |
| 2061 | 5.98 | 4.73 | 4.73 | 6.16 | 5.58 | 5.58 |
| 2062 | 5.99 | 4.73 | 4.73 | 6.18 | 5.58 | 5.58 |
| 2063 | 6.01 | 4.73 | 4.73 | 6.19 | 5.57 | 5.57 |
| 2064 | 6.02 | 4.73 | 4.73 | 6.20 | 5.57 | 5.57 |
| 2065 | 6.03 | 4.72 | 4.72 | 6.22 | 5.57 | 5.57 |
| 2066 | 6.04 | 4.72 | 4.72 | 6.23 | 5.56 | 5.56 |
| 2067 | 6.06 | 4.72 | 4.72 | 6.24 | 5.56 | 5.56 |
| 2068 | 6.07 | 4.71 | 4.71 | 6.26 | 5.56 | 5.56 |
| 2069 | 6.08 | 4.71 | 4.71 | 6.27 | 5.55 | 5.55 |
| 2070 | 6.09 | 4.71 | 4.71 | 6.28 | 5.55 | 5.55 |
| 2071 | 6.10 | 4.70 | 4.70 | 6.30 | 5.54 | 5.54 |
| 2072 | 6.11 | 4.70 | 4.70 | 6.31 | 5.54 | 5.54 |
| 2073 | 6.12 | 4.70 | 4.70 | 6.31 | 5.54 | 5.54 |
| 2074 | 6.12 | 4.69 | 4.69 | 6.32 | 5.53 | 5.53 |
| 2075 | 6.13 | 4.69 | 4.69 | 6.32 | 5.53 | 5.53 |
| 2076 | 6.12 | 4.68 | 4.68 | 6.32 | 5.52 | 5.52 |
| 2077 | 6.12 | 4.68 | 4.68 | 6.32 | 5.52 | 5.52 |
| 2078 | 6.11 | 4.67 | 4.67 | 6.31 | 5.51 | 5.51 |
| 2079 | 6.11 | 4.67 | 4.67 | 6.30 | 5.51 | 5.51 |
| 2080 | 6.10 | 4.66 | 4.66 | 6.30 | 5.50 | 5.50 |
| 2081 | 6.09 | 4.66 | 4.66 | 6.29 | 5.50 | 5.50 |
| 2082 | 6.09 | 4.66 | 4.66 | 6.29 | 5.49 | 5.49 |
| 2083 | 6.09 | 4.65 | 4.65 | 6.29 | 5.49 | 5.49 |
| 2084 | 6.09 | 4.65 | 4.65 | 6.29 | 5.48 | 5.48 |
| 2085 | 6.09 | 4.64 | 4.64 | 6.29 | 5.48 | 5.48 |
| 2086 | 6.10 | 4.64 | 4.64 | 6.30 | 5.48 | 5.48 |
| 2087 | 6.11 | 4.64 | 4.64 | 6.31 | 5.48 | 5.48 |
| 2088 | 6.12 | 4.64 | 4.64 | 6.32 | 5.47 | 5.47 |
| 2089 | 6.13 | 4.63 | 4.63 | 6.33 | 5.47 | 5.47 |
| 2090 | 6.14 | 4.63 | 4.63 | 6.34 | 5.47 | 5.47 |
| Based on Intermediate Assumptions of the 2016 Trustees Report. |  |  |  |  | Office of the Chief Actuary Social Security Administration July 20, 2017 |  |

Table 1d - Change in Long-Range Trust Fund Reserves / Unfunded Obligation
H.R. 3302 and S. 1600, the "Protecting and Preserving Social Security Act" Introduced by Representative Deutch and Senator Hirono

|  | (Billions of Dollars, Present Value on 1-1-2016) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Current Law OASDI |  |  | Basic |  | Proposal OASDT |
|  | Trust Fund Reserves / | Changes | Changes | Changes | Total Change | Trust Fund Reserves / |
|  | Unfunded Obligation | in OASDI | in OASDI | in OASDI | Through | Unfunded Obligation |
| Year | Through End of Year | Income | Cost | Cash Flow | End of Year | Through End of Year |
|  | (1) | (2) | (3) | (4) = (2)-(3) | (5) = cumulative sum(4) | (6) = (1)+(5) |
| 2016 | 2,741.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2,741.0 |
| 2017 | 2,687.5 | 0.0 | 0.0 | 0.0 | 0.0 | 2,687.5 |
| 2018 | 2,625.9 | 24.6 | 0.0 | 24.6 | 24.6 | 2,650.5 |
| 2019 | 2,554.4 | 50.8 | -0.1 | 50.9 | 75.4 | 2,629.8 |
| 2020 | 2,471.7 | 77.1 | 1.8 | 75.2 | 150.7 | 2,622.3 |
| 2021 | 2,378.9 | 103.4 | 3.8 | 99.6 | 250.3 | 2,629.2 |
| 2022 | 2,270.6 | 129.3 | 5.9 | 123.5 | 373.7 | 2,644.3 |
| 2023 | 2,142.4 | 154.1 | 8.0 | 146.1 | 519.8 | 2,662.2 |
| 2024 | 1,994.9 | 178.7 | 10.3 | 168.4 | 688.2 | 2,683.1 |
| 2025 | 1,827.2 | 180.0 | 12.5 | 167.5 | 855.8 | 2,682.9 |
| 2026 | 1,645.4 | 181.2 | 14.6 | 166.6 | 1,022.3 | 2,667.8 |
| 2027 | 1,450.6 | 181.8 | 16.6 | 165.2 | 1,187.5 | 2,638.1 |
| 2028 | 1,244.3 | 181.7 | 18.5 | 163.1 | 1,350.6 | 2,595.0 |
| 2029 | 1,028.4 | 180.9 | 20.3 | 160.6 | 1,511.3 | 2,539.6 |
| 2030 | 804.8 | 179.5 | 21.8 | 157.6 | 1,668.9 | 2,473.7 |
| 2031 | 575.3 | 177.7 | 23.3 | 154.5 | 1,823.4 | 2,398.7 |
| 2032 | 341.0 | 175.9 | 24.5 | 151.4 | 1,974.8 | 2,315.8 |
| 2033 | 103.7 | 174.2 | 25.7 | 148.5 | 2,123.3 | 2,227.0 |
| 2034 | -134.7 | 172.5 | 26.7 | 145.8 | 2,269.1 | 2,134.3 |
| 2035 | -372.8 | 170.8 | 27.6 | 143.2 | 2,412.2 | 2,039.4 |
| 2036 | -612.3 | 169.1 | 28.5 | 140.7 | 2,552.9 | 1,940.6 |
| 2037 | -852.1 | 167.6 | 29.2 | 138.3 | 2,691.2 | 1,839.1 |
| 2038 | -1,090.4 | 166.1 | 29.9 | 136.2 | 2,827.4 | 1,737.0 |
| 2039 | -1,326.1 | 164.6 | 30.4 | 134.1 | 2,961.5 | 1,635.4 |
| 2040 | -1,558.1 | 163.1 | 30.9 | 132.3 | 3,093.7 | 1,535.6 |
| 2041 | -1,786.1 | 161.7 | 31.2 | 130.5 | 3,224.2 | 1,438.2 |
| 2042 | -2,010.0 | 160.3 | 31.5 | 128.9 | 3,353.1 | 1,343.1 |
| 2043 | -2,229.8 | 159.0 | 31.6 | 127.3 | 3,480.4 | 1,250.7 |
| 2044 | -2,445.4 | 157.6 | 31.7 | 125.9 | 3,606.4 | 1,160.9 |
| 2045 | -2,657.8 | 156.2 | 31.8 | 124.5 | 3,730.8 | 1,073.0 |
| 2046 | -2,866.7 | 154.9 | 31.7 | 123.1 | 3,854.0 | 987.2 |
| 2047 | -3,072.2 | 153.5 | 31.6 | 121.9 | 3,975.8 | 903.7 |
| 2048 | -3,274.5 | 152.1 | 31.5 | 120.6 | 4,096.4 | 821.9 |
| 2049 | -3,473.9 | 150.7 | 31.3 | 119.4 | 4,215.8 | 741.9 |
| 2050 | -3,670.6 | 149.3 | 31.1 | 118.2 | 4,334.0 | 663.4 |
| 2051 | -3,865.4 | 147.9 | 30.9 | 117.0 | 4,451.0 | 585.6 |
| 2052 | -4,059.0 | 146.5 | 30.7 | 115.8 | 4,566.8 | 507.8 |
| 2053 | -4,251.9 | 145.1 | 30.4 | 114.6 | 4,681.5 | 429.6 |
| 2054 | -4,444.5 | 143.6 | 30.2 | 113.4 | 4,794.9 | 350.4 |
| 2055 | -4,637.2 | 142.2 | 30.0 | 112.3 | 4,907.1 | 269.9 |
| 2056 | -4,830.5 | 140.8 | 29.8 | 111.0 | 5,018.2 | 187.7 |
| 2057 | -5,024.3 | 139.4 | 29.6 | 109.8 | 5,128.0 | 103.7 |
| 2058 | -5,218.8 | 138.0 | 29.4 | 108.6 | 5,236.7 | 17.8 |
| 2059 | -5,413.9 | 136.6 | 29.2 | 107.4 | 5,344.1 | -69.8 |
| 2060 | -5,609.6 | 135.2 | 29.0 | 106.2 | 5,450.2 | -159.3 |
| 2061 | -5,805.8 | 133.8 | 28.9 | 105.0 | 5,555.2 | -250.6 |
| 2062 | -6,002.5 | 132.4 | 28.7 | 103.7 | 5,658.9 | -343.5 |
| 2063 | -6,199.6 | 131.1 | 28.6 | 102.5 | 5,761.5 | -438.1 |
| 2064 | -6,397.1 | 129.7 | 28.4 | 101.3 | 5,862.8 | -534.3 |
| 2065 | -6,595.0 | 128.4 | 28.3 | 100.1 | 5,962.9 | -632.0 |
| 2066 | -6,793.3 | 127.1 | 28.1 | 99.0 | 6,061.9 | -731.4 |
| 2067 | -6,992.1 | 125.8 | 28.0 | 97.8 | 6,159.7 | -832.5 |
| 2068 | -7,191.4 | 124.5 | 27.9 | 96.6 | 6,256.3 | -935.1 |
| 2069 | -7,391.0 | 123.3 | 27.8 | 95.5 | 6,351.8 | -1,039.3 |
| 2070 | -7,591.0 | 122.0 | 27.6 | 94.4 | 6,446.2 | -1,144.9 |
| 2071 | -7,791.2 | 120.8 | 27.5 | 93.3 | 6,539.4 | -1,251.7 |
| 2072 | -7,991.1 | 119.6 | 27.4 | 92.2 | 6,631.7 | -1,359.4 |
| 2073 | -8,190.5 | 118.4 | 27.2 | 91.2 | 6,722.8 | -1,467.7 |
| 2074 | -8,389.1 | 117.2 | 27.1 | 90.1 | 6,812.9 | -1,576.2 |
| 2075 | -8,586.7 | 116.0 | 26.9 | 89.1 | 6,902.0 | -1,684.6 |
| 2076 | -8,782.6 | 114.8 | 26.8 | 88.1 | 6,990.1 | -1,792.5 |
| 2077 | -8,976.7 | 113.7 | 26.6 | 87.1 | 7,077.2 | -1,899.5 |
| 2078 | -9,168.8 | 112.5 | 26.4 | 86.1 | 7,163.4 | -2,005.4 |
| 2079 | -9,358.6 | 111.4 | 26.2 | 85.2 | 7,248.6 | -2,110.0 |
| 2080 | -9,546.2 | 110.3 | 26.0 | 84.3 | 7,332.8 | -2,213.3 |
| 2081 | -9,731.8 | 109.2 | 25.8 | 83.4 | 7,416.2 | -2,315.5 |
| 2082 | -9,915.6 | 108.1 | 25.6 | 82.5 | 7,498.7 | -2,416.9 |
| 2083 | -10,098.0 | 106.9 | 25.3 | 81.6 | 7,580.3 | -2,517.7 |
| 2084 | -10,279.3 | 105.8 | 25.1 | 80.7 | 7,661.0 | -2,618.3 |
| 2085 | -10,459.9 | 104.8 | 24.9 | 79.8 | 7,740.9 | -2,719.0 |
| 2086 | -10,639.8 | 103.7 | 24.7 | 79.0 | 7,819.8 | -2,820.0 |
| 2087 | -10,819.4 | 102.6 | 24.5 | 78.1 | 7,897.9 | -2,921.5 |
| 2088 | -10,998.8 | 101.5 | 24.3 | 77.2 | 7,975.1 | -3,023.6 |
| 2089 | -11,177.9 | 100.5 | 24.1 | 76.4 | 8,051.5 | -3,126.4 |
| 2090 | -11,356.8 | 99.4 | $\underline{24.0}$ | 75.5 | 8,127.0 | -3,229.9 |
| Total 2016-2090 |  | 9950.7 | 1823.7 | 8127.0 |  |  |

Based on Intermediate Assumptions of the 2016 Trustees Report.

