



Cornell University  
ILR School

Cornell University ILR School  
**DigitalCommons@ILR**

---

Federal Publications

Key Workplace Documents

---

8-28-2014

## Social Security: What Would Happen If the Trust Funds Ran Out?

Noah P. Meyerson  
*Congressional Research Service*

Follow this and additional works at: [https://digitalcommons.ilr.cornell.edu/key\\_workplace](https://digitalcommons.ilr.cornell.edu/key_workplace)

Thank you for downloading an article from DigitalCommons@ILR.

**Support this valuable resource today!**

---

This Article is brought to you for free and open access by the Key Workplace Documents at DigitalCommons@ILR. It has been accepted for inclusion in Federal Publications by an authorized administrator of DigitalCommons@ILR. For more information, please contact [catherwood-dig@cornell.edu](mailto:catherwood-dig@cornell.edu).

If you have a disability and are having trouble accessing information on this website or need materials in an alternate format, contact [web-accessibility@cornell.edu](mailto:web-accessibility@cornell.edu) for assistance.

---

## Social Security: What Would Happen If the Trust Funds Ran Out?

### Abstract

[Excerpt] Each year when the Social Security trustees release their annual report, attention is focused on the projection of the year that the Social Security trust funds will become insolvent. In their 2014 report, the Trustees projected that, under their intermediate assumptions and under current law, the Disability Insurance (DI) trust fund will become exhausted in 2016 and the Old-Age and Survivors Insurance (OASI) trust fund will do so in 2034. Although the two funds are legally separate, they are often described in combination. The trustees project that the combined Social Security trust funds will become exhausted in 2033.

Some Americans may believe that if the trust funds were exhausted, Social Security would be unable to pay any benefits. In fact, in 2033, the first year of projected insolvency of the combined Social Security trust funds, the program is projected to have enough tax revenue to pay about 77% of scheduled benefits; that percentage would decline to 72% by the end of the 75-year projection period.

Although benefits would be paid in some form, it is unclear how the necessary reductions would be implemented, because the Social Security Act does not specify what would happen to benefits if a trust fund became exhausted. One option would be to pay full benefit checks on a delayed schedule; another would be to make timely but reduced payments.

This report explains what the Social Security trust funds are and how they work. It describes the historical operations of the trust funds and the Social Security trustees' projections of future operations. It explains what could happen if Congress allowed the trust funds to run out. It also analyzes two scenarios that assume Congress waits until the moment of insolvency to act, showing the magnitude of benefit cuts or tax increases needed and how such changes would affect beneficiaries.

### Keywords

Social Security, sustainability, insolvency, trust funds, Congress

### Comments

#### Suggested Citation

Myerson, N. P. (2014). *Social Security: What would happen if the trust funds ran out?* Washington, DC: Congressional Research Service.

An earlier version of this report can be found here: [http://digitalcommons.ilr.cornell.edu/key\\_workplace/1180/](http://digitalcommons.ilr.cornell.edu/key_workplace/1180/)



**Congressional  
Research Service**

Informing the legislative debate since 1914

---

# Social Security: What Would Happen If the Trust Funds Ran Out?

**Noah P. Meyerson**  
Analyst in Income Security

August 28, 2014

**Congressional Research Service**

7-5700

[www.crs.gov](http://www.crs.gov)

RL33514

## Summary

The Social Security Trustees project that, under their intermediate assumptions and under current law, the Disability Insurance (DI) trust fund will become exhausted in 2016 and the Old-Age and Survivors Insurance (OASI) trust fund will become exhausted in 2034. Although the two funds are legally separate, they are often considered in combination. The trustees project that the combined Social Security trust funds will become exhausted in 2033. At that point, revenue would be sufficient to pay only about 77% of scheduled benefits.

If a trust fund became exhausted, there would be a conflict between two federal laws. Under the Social Security Act, beneficiaries would still be legally entitled to their full scheduled benefits. But the Antideficiency Act prohibits government spending in excess of available funds, so the Social Security Administration (SSA) would not have legal authority to pay full Social Security benefits on time.

It is unclear what specific actions SSA would take if a trust fund were exhausted. After insolvency, Social Security would continue to receive tax income, from which a majority of scheduled benefits could be paid. One option would be to pay full benefit checks on a delayed schedule; another would be to make timely but reduced payments. Social Security beneficiaries would remain legally entitled to full, timely benefits and could take legal action to claim the balance of their benefits.

To delay insolvency of the DI trust fund, Congress could effectively transfer funds from the OASI to the DI trust fund, for example by increasing the share of Social Security payroll tax revenues that are credited to the DI trust fund. Such action would hasten the insolvency of the OASI trust fund, however.

Maintaining financial balance after trust fund insolvency would require substantial reductions in Social Security benefits, substantial increases in income, or some combination of the two. The trustees project that following insolvency of the combined funds in 2033, Congress could restore balance by reducing scheduled benefits by about 23%; the required reduction would grow gradually to 27% by 2088. Alternatively, Congress could raise the Social Security payroll tax rate from 12.40% to 16.2% following insolvency in 2033, then gradually increase it to 17.3% by 2088. To maintain balance in later years, larger benefit reductions or tax increases would be required.

Trust-fund insolvency could be avoided if outlays were reduced or income increased sufficiently. The sooner Congress acts to adjust Social Security policy, the less abrupt the changes would need to be, because they could be spread over a longer period and would therefore affect a larger number of workers and beneficiaries. Even if changes were not implemented immediately, enacting them sooner would give workers and beneficiaries time to plan and adjust their work and savings behavior.

## Contents

Introduction.....	1
The Social Security Trust Funds.....	1
How the Trust Funds Work.....	1
Trust Fund Receipts.....	2
Trust Fund Expenditures .....	2
Annual Surpluses and Deficits .....	2
Trust Fund Solvency .....	3
Historical Trust Fund Operations .....	3
Cash-Flow Surpluses and Deficits .....	3
Near-Insolvency in the Early 1980s.....	3
Social Security Financial Projections.....	4
Trust Fund Ratio.....	4
Legal Background on Trust Fund Insolvency.....	5
The Antideficiency Act.....	5
Legal Entitlement to Social Security Benefits.....	6
What Happens to Benefits in the Case of Insolvency?.....	6
What If Congress Waits to Act?.....	7
Benefit Cut Scenario.....	8
Size of Benefit Cuts.....	8
Payroll Tax Increase Scenario .....	11
Size of Payroll Tax Rate Increases .....	12
Impact of Payroll Tax Increases .....	12
Conclusion.....	13

## Figures

Figure 1. Social Security Trust Fund Ratios.....	5
Figure 2. Payable Benefits as a Share of Scheduled Benefits at Current Law Payroll Tax Rates, 2014-2088.....	8
Figure 3. Replacement Rates Under Benefit Cut Scenario, 2014-2088.....	10
Figure 4. Initial Real Annual Payable Benefits Under Benefit Cut Scenario, 2014-2088.....	11
Figure 5. Combined Payroll Tax Rate Needed To Fund Scheduled Benefits, 2014-2088.....	12

## Tables

Table 1. Current Social Security Benefit Payment Schedule.....	7
--	---

## Contacts

Author Contact Information.....	13
---------------------------------	----

Acknowledgments ..... 13

## Introduction

Each year when the Social Security trustees release their annual report, attention is focused on the projection of the year that the Social Security trust funds will become insolvent. In their 2014 report, the Trustees projected that, under their intermediate assumptions and under current law, the Disability Insurance (DI) trust fund will become exhausted in 2016 and the Old-Age and Survivors Insurance (OASI) trust fund will do so in 2034.<sup>1</sup> Although the two funds are legally separate, they are often described in combination. The trustees project that the combined Social Security trust funds will become exhausted in 2033.

Some Americans may believe that if the trust funds were exhausted, Social Security would be unable to pay any benefits. In fact, in 2033, the first year of projected insolvency of the combined Social Security trust funds, the program is projected to have enough tax revenue to pay about 77% of scheduled benefits; that percentage would decline to 72% by the end of the 75-year projection period.

Although benefits would be paid in some form, it is unclear how the necessary reductions would be implemented, because the Social Security Act does not specify what would happen to benefits if a trust fund became exhausted. One option would be to pay full benefit checks on a delayed schedule; another would be to make timely but reduced payments.

This report explains what the Social Security trust funds are and how they work. It describes the historical operations of the trust funds and the Social Security trustees' projections of future operations. It explains what could happen if Congress allowed the trust funds to run out. It also analyzes two scenarios that assume Congress waits until the moment of insolvency to act, showing the magnitude of benefit cuts or tax increases needed and how such changes would affect beneficiaries.

## The Social Security Trust Funds

### How the Trust Funds Work

Social Security provides retirement, disability, and survivor benefits to qualifying workers and their families. These benefits are funded from two trust funds: the OASI trust fund and the DI trust fund. The two funds operate separately but are closely linked. Several times in the past—most recently in 1994—Congress has reallocated the Social Security payroll tax rate to equalize the financial conditions of the two trust funds. In part because of those experiences, analysts often treat the two funds collectively.

---

<sup>1</sup> Social Security Administration, *2014 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds*, July 28, 2014, at <http://www.socialsecurity.gov/OACT/TR/2014>. (Hereinafter cited as *2014 Social Security Trustees Report*.)

## Trust Fund Receipts

The trust funds' primary source of income is the Social Security payroll tax, but they also receive income from income taxes on benefits and interest on the funds' balance. The payroll tax consists of a 12.4% tax on wages and self-employment earnings up to the taxable maximum, which is \$117,000 in 2014 and increases annually with average wages in the economy. Of the 12.4% total, 10.6% is credited to the OASI trust fund and 1.8% to the DI trust fund.<sup>2</sup> Some Social Security benefits paid to people with incomes above a certain threshold are subject to income tax. Most of the resulting revenue is credited to the Social Security trust funds, and some goes to the Medicare Health Insurance trust fund.<sup>3</sup> In 2013, payroll taxes accounted for 84.9% of Social Security income, interest accounted for 12.0%, and income taxes on benefits accounted for 2.5%.<sup>4</sup>

## Trust Fund Expenditures

In 2013, 98.7% of the trust funds' expenditures paid for benefits. Administrative expenses accounted for 0.7% of expenditures. The remaining 0.5% was transferred to the Railroad Retirement Board (RRB) as part of a financial interchange with the RRB.<sup>5</sup> This annual exchange of funds places the Social Security trust funds in the same financial position in which they would have been if railroad service had been covered by Social Security.

## Annual Surpluses and Deficits

In years when Social Security's total receipts, including interest, exceed expenditures, then the trust funds have a *surplus*. By law, that surplus is invested in special issue Treasury bonds.<sup>6</sup> In other words, Social Security's cash surpluses are borrowed by the general fund of the U.S. Treasury. The Treasury, in turn, incurs an obligation to repay the bonds with interest.

When the trust funds spend more than they receive in taxes and interest, they have a *deficit*, which requires Social Security to redeem bonds accumulated in previous years. Treasury pays benefits with cash from general revenues and writes down an equivalent amount of the trust fund's bond holdings.

An alternative measure of the trust funds' finances is given by the *cash-flow* balance. That measure does not consider interest income, so the trust funds run a *cash-flow surplus* when tax income exceeds expenditures, and they run a *cash-flow deficit* when they spend more than they receive in taxes.

---

<sup>2</sup> 42 U.S.C. §401. Both the total rate and the allocation between OASI and DI have changed many times; for historical rates, see Social Security Administration, *Annual Statistical Supplement, 2013*, February 2014, "Table 2.A3: Annual maximum taxable earnings and contribution rates, 1937–2013," at <http://www.ssa.gov/policy/docs/statcomps/supplement/2013/2a1-2a7.html#table2.a3>.

<sup>3</sup> See CRS Report RL32552, *Social Security: Calculation and History of Taxing Benefits*, by Noah P. Meyerson.

<sup>4</sup> Social Security Administration (SSA), *Trust Fund Data*, at <http://www.ssa.gov/OACT/ProgData/funds.html>. The remaining 0.6% came from transfers from the federal government's general fund, which occurred for several different reasons. See tablenote a in SSA, *Old-Age, Survivors, and Disability Insurance Trust Funds Receipts*, at <http://www.ssa.gov/OACT/STATS/table4a3.html>.

<sup>5</sup> See CRS Report RS22350, *Railroad Retirement Board: Retirement, Survivor, Disability, Unemployment, and Sickness Benefits*, by Scott D. Szymendera.

<sup>6</sup> See CRS Report RS20607, *Social Security: Trust Fund Investment Practices*, by Dawn Nuschler.



## Trust Fund Solvency

If the trust funds are not able to pay all of current expenses out of current tax income and accumulated trust fund assets, they are *insolvent*. Insolvency means that Social Security's trust funds are unable to pay full benefits on time. It does *not* mean that Social Security will be completely broke and unable to pay any benefits.<sup>7</sup>

## Historical Trust Fund Operations

The OASI trust fund was established in 1937; the DI trust fund was established in 1957. Neither of the Social Security trust funds has ever become insolvent. In 2013, the OASI trust fund had a surplus of \$64.3 billion, and the DI trust fund had a deficit of \$32.2 billion, for a combined surplus of \$32.1 billion, including interest. Interest income for the combined funds was \$102.8 billion, so on a cash-flow basis, there was a combined 2013 *deficit* of \$70.7 billion. At the end of 2013, the combined trust funds had total assets of \$2.8 trillion.<sup>8</sup>

## Cash-Flow Surpluses and Deficits

The trust funds have run annual surpluses in most years. Except for the first decades of the program and a few years beginning in the late 1960s, these annual surpluses were typically small relative to the size of the trust funds' expenditures. Beginning in 1975, the combined trust funds ran annual deficits.<sup>9</sup> The trust funds made up the difference between income and outgo during these years by redeeming some of the bonds accumulated in earlier years. In other words, in those years, the Social Security trust funds received net transfers from the Treasury's general fund.

## Near-Insolvency in the Early 1980s

The Social Security trust funds have never been exhausted. However, in the early 1980s, a solvency crisis loomed for the OASI trust fund. The 1982 Social Security Trustees Report projected that in the absence of legislative changes the OASI trust fund would become insolvent by July 1983.<sup>10</sup> To relieve the pressure on the OASI trust fund temporarily, Congress permitted the fund to borrow from the DI and Medicare Hospital Insurance (HI) trust funds.<sup>11</sup> Money was transferred to the OASI fund in 1982 and repaid by 1986.<sup>12</sup> Interfund borrowing authority expired at the end of 1989.<sup>13</sup>

---

<sup>7</sup> Different terminology can be used to refer to the same phenomenon. For example, instead of "insolvency" or "exhaustion," the Social Security trustees refer to "reserve depletion."

<sup>8</sup> At the end of 2013, the OASI trust fund had assets of \$2.7 trillion and the DI trust fund had assets of \$90 billion. For detailed data, see Social Security Administration, "Social Security Trust Fund Data," at <http://www.ssa.gov/OACT/ProgData/funds.html>.

<sup>9</sup> See CRS Report RL33028, *Social Security: The Trust Fund*, by Dawn Nuschler and Gary Sidor.

<sup>10</sup> Social Security Administration, *1982 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds*, April 1, 1982. (Hereinafter cited as *1982 Social Security Trustees Report*.)

<sup>11</sup> P.L. 97-123.

<sup>12</sup> The OASI trust fund borrowed \$17.5 billion in November and December of 1982; about \$5.1 billion was from the DI trust fund and \$12.4 billion was from Medicare's HI trust fund.

<sup>13</sup> For more information, see "Interfund Borrowing" in CRS Report R43318, *Social Security Disability Insurance (DI)* (continued...)

This temporary measure allowed policy makers time to develop a more sustainable solution to Social Security's solvency problem. The Social Security Amendments of 1983 (P.L. 98-21) increased Social Security income and reduced spending. As a result, the combined trust funds ran significant surpluses, which on average exceeded a quarter of outlays from 1987 to 2009.

The aging of the baby-boom population and the recent recession and subsequent weak economy have resulted in higher outlays and lower tax revenues for Social Security. Since 2010, the combined trust funds have run cash-flow deficits, which are projected to continue indefinitely under current law. However, because interest income has exceeded the cash-flow deficit, trust funds have continued to run surpluses, which averaged 7% of outlays from 2010 through 2013.

Cash-flow deficits do not affect Social Security directly. However, if the non-Social Security portion of the federal budget is in deficit, redemption of trust fund bonds puts additional pressure on the overall federal budget.

## **Social Security Financial Projections**

This CRS report focuses on the trustees' "intermediate" Social Security projections, which reflect their "best estimates" of future demographic and economic trends. Under that set of assumptions, the DI trust fund is exhausted in 2016 and the OASI trust fund is exhausted in 2034.<sup>14</sup> Considered on a combined basis, the trust funds would become insolvent in 2033. However, the trustees' projections—like all long-term projections—are uncertain. They estimate that there is a 10% chance that the combined trust funds would become insolvent in 2029 or earlier and a 10% chance that insolvency would occur in 2038 or later.<sup>15</sup> Using somewhat different assumptions and projection methods, the Congressional Budget Office projects that the combined trust funds will become insolvent in 2030.<sup>16</sup>

Even after insolvency, the trust funds will continue to receive income from payroll taxes and income taxes on benefits that will allow some benefits to be paid. The trustees project that, under their intermediate assumptions, tax income will be sufficient to cover about 77% of scheduled benefits following trust fund insolvency in 2033, declining to 72% in 2088.

## **Trust Fund Ratio**

To put the trust fund balance in context, analysts commonly consider the trust fund ratio: the balance in the trust funds at the beginning of a year divided by projected outlays for that year. The trust fund ratio thus represents the proportion of a year's cost that could be paid solely with the reserves at the beginning of the year. The ratio for the combined trust funds peaked at 358% at the end of 2008. They declined to 332% at the end of 2013 and are continuing to fall. By definition, the ratio will reach zero when the trust funds become exhausted.

---

(...continued)

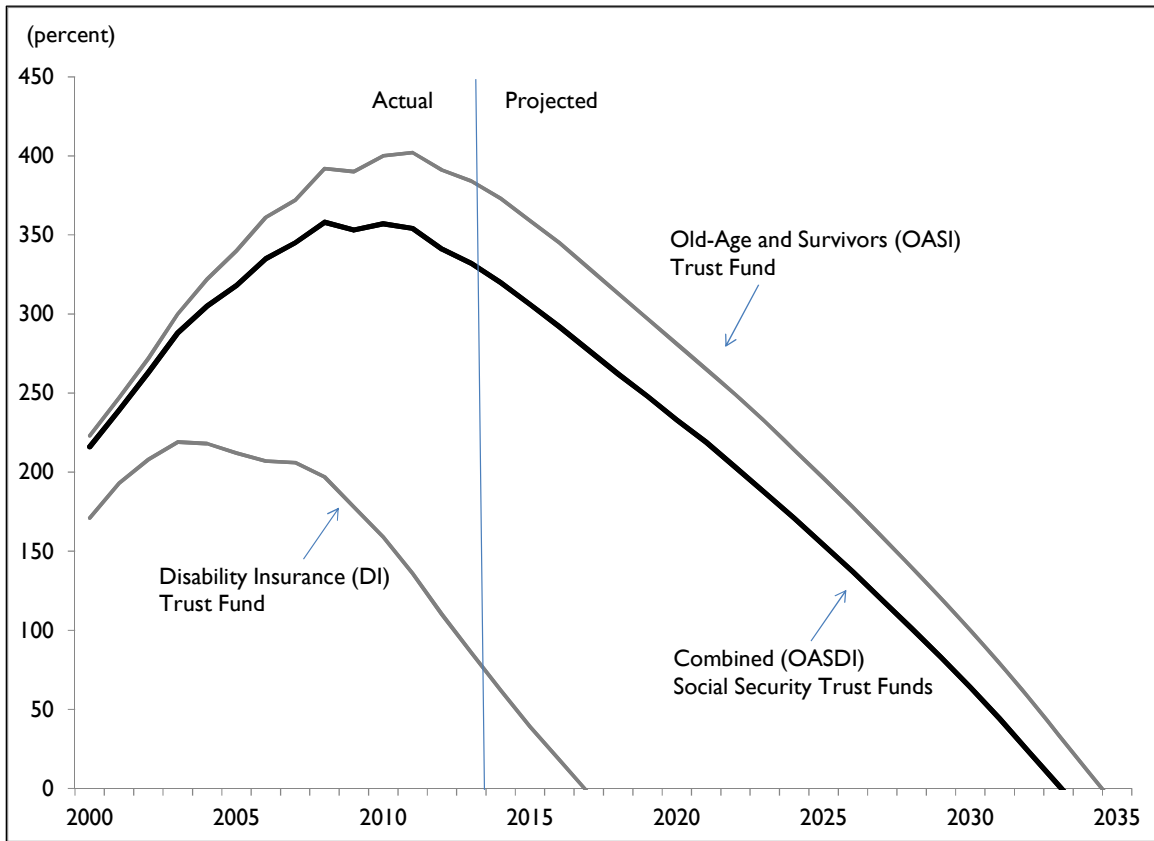
*Trust Fund: Background and Solvency Issues*, by William R. Morton.

<sup>14</sup> *2014 Social Security Trustees Report*, Table IV.B3.

<sup>15</sup> *2014 Social Security Trustees Report*, Table VI.E1.

<sup>16</sup> Congressional Budget Office, *The 2014 Long-Term Budget Outlook*, July 2014, at <http://cbo.gov/sites/default/files/cbofiles/attachments/45471-Long-TermBudgetOutlook.pdf>, p. 51.

**Figure I. Social Security Trust Fund Ratios**



**Source:** Social Security Trustees, 2014 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds, July 28, 2014, Table IV.B3, at <http://www.ssa.gov/oact/tr/2014/lr4b3.html>.

**Note:** The trust fund ratio equals the fund balance at the beginning of a year expressed as a percentage of the cost during the year.

## Legal Background on Trust Fund Insolvency

### The Antideficiency Act

The Social Security Act specifies that benefit payments shall be made *only* from the trust funds (i.e., accumulated trust fund assets).<sup>17</sup> Another law, the Antideficiency Act, prohibits government spending in excess of available funds.<sup>18</sup> Consequently, if the Social Security trust funds become insolvent—that is, if current tax income and accumulated assets are not sufficient to pay the benefits to which people are entitled—the law effectively prohibits full Social Security benefits from being paid on time.

<sup>17</sup> 42 U.S.C. §401(h).

<sup>18</sup> 31 U.S.C. §1341.

## Legal Entitlement to Social Security Benefits

The Social Security Act states that every individual who meets program eligibility requirements is entitled to benefits.<sup>19</sup> In other words, Social Security is an *entitlement program*, which means that the government is legally obligated to pay Social Security benefits to all those who are eligible for them as set forth in the statute.<sup>20</sup> If the government fails to pay the benefits stipulated by law, beneficiaries could take legal action. Insolvency would not relieve the government of its obligation to provide benefits.

## What Happens to Benefits in the Case of Insolvency?

The Antideficiency Act prohibits government agencies from paying for benefits, goods, or services beyond the limit authorized in law for such payments. The authorized limit in law for Social Security benefits is the balance of the trust fund. The Social Security Act does not stipulate what would happen to benefit payments if the trust funds ran out. As a result, either full benefit checks may be paid on a delayed schedule or reduced benefits would be paid on time.<sup>21</sup> In either case, total payable benefits would be lower than scheduled benefits.

To see how a delay could affect beneficiaries, consider the current Social Security benefit payment schedule, shown in **Table 1**. (This schedule may be changed at the discretion of the Social Security Commissioner.) New beneficiaries' payment dates are generally based on their day of birth—for example, if a retired worker was born on the first of the month (e.g., June 1); his or her benefit check is paid on the second Wednesday in the month.<sup>22</sup> If trust fund insolvency caused delays in the benefit payment schedule, benefit checks could be paid in the usual order—first to those who receive benefits on the third of the month, then to those on the second Wednesday of the month, and so on, until the remainder of the trust funds' balance reached zero. At that point, no benefits could be paid until more tax receipts were credited to the trust funds. Then benefit payments could be picked up where they left off when the trust funds ran out. This cycle could continue indefinitely. The timing of these checks would be unpredictable.

---

<sup>19</sup> 42 U.S.C. §§402 and 423.

<sup>20</sup> However, Congress retains the right to modify provisions of the Social Security Act at any time, which could affect the benefits current and future beneficiaries may receive. (42 U.S.C. §1304.) For more details, see CRS Report RL32822, *Social Security Reform: Legal Analysis of Social Security Benefit Entitlement Issues*, by Kathleen S. Swendiman and Thomas J. Nicola.

<sup>21</sup> The 1982 Trustees Report, which projected impending trust fund insolvency, stated that unless legislative changes were made, “inability to pay some benefits *on time* would result.” (1982 *Trustees Report*, p. 2 [emphasis added].) That language suggests that after insolvency, full benefit payments would have been made on a delayed schedule. The 2014 report uses more neutral language, stating that after insolvency, the trust funds would be “unable to pay scheduled benefits in full on a timely basis.” (2014 *Trustees Report*, p. 4.)

<sup>22</sup> For beneficiaries who receive Social Security benefits based on another person's work record (e.g., spouse benefits), their payment date depends on the birth date of the worker on whose record they receive benefits. The current benefit payment schedule was first implemented for new beneficiaries in May 1997.

**Table I. Current Social Security Benefit Payment Schedule**

Benefits Paid On	Birth Date of Worker on Whose Record Benefits are Paid
Third of every month	Any birth date for: (1) Social Security beneficiaries who also receive SSI benefits or who reside in a foreign country, and (2) Most beneficiaries who began to receive benefits prior to June 1997.
Second Wednesday	1 <sup>st</sup> to 10 <sup>th</sup> day of the month
Third Wednesday	11 <sup>th</sup> to 20 <sup>th</sup> day of the month
Fourth Wednesday	21 <sup>st</sup> to 31 <sup>st</sup> day of the month

**Source:** Social Security Administration, *Cyclical Payment of Social Security Benefits*, at <http://ssa.gov/OACT/ProgData/cyclicalpay.html>.

**Note:** For beneficiaries scheduled to receive payments on the third of the month, benefits may be paid earlier if the third is on a weekend or holiday.

## What If Congress Waits to Act?

There are many options to restore Social Security solvency, which could be combined or targeted in a variety of ways. For example, Congress could decrease Social Security benefits.<sup>23</sup> Benefit cuts could be applied proportionately to all beneficiaries or structured to protect certain people, such as disabled or low-income beneficiaries. Congress could also increase Social Security's income by raising payroll or other taxes or by transferring funds from the Treasury's general fund. Payroll tax increases could be applied proportionately to all workers or targeted to certain workers, such as those who earn more than the taxable maximum.

To extend the solvency of the DI trust fund, Congress could consider a variety of legislative changes to increase program revenues and reduce program costs. For example, the DI trust fund could be authorized to borrow from the OASI fund, or part of the Social Security payroll tax currently allocated to the OASI fund could be reallocated to the DI trust fund. Such action would hasten the insolvency of the OASI trust fund, however. For additional information, see CRS Report R43318, *Social Security Disability Insurance (DI) Trust Fund: Background and Solvency Issues*, by William R. Morton.

The next section presents two policy options that could be implemented after the trust funds' combined balance fell to zero to ensure a balanced system in later years:

- the *benefit cut scenario*, under which benefits would be cut across the board and
- the *tax increase scenario*, under which the payroll tax rate would increase.

Both scenarios assume that current law would remain in place until the combined trust funds became insolvent. If changes were made sooner, they could be smaller, since the burden of lower benefits or higher taxes would be shared by more beneficiaries or workers over a longer period.<sup>24</sup>

<sup>23</sup> Reducing administrative costs, which account for 1% of total Social Security outlays, would have little effect on overall spending.

<sup>24</sup> The trustees estimate that 75-year solvency could be restored through an immediate payroll tax increase of 2.83 percentage points (from the current 12.40% to 15.23%) or a benefit reduction of 17.4% for all current and future beneficiaries.

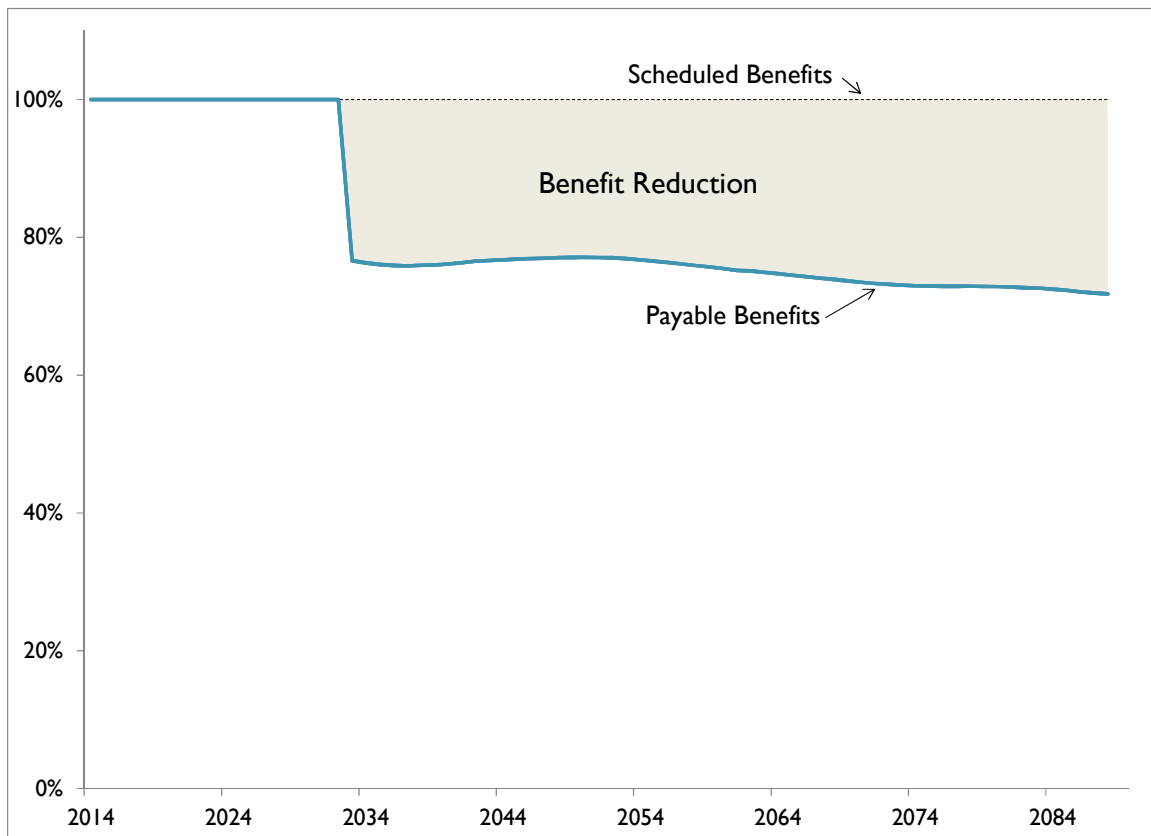
Either scenario would essentially convert Social Security to a pure pay-as-you-go system, in which income and outgo are equal on an annual basis and there are no trust fund assets. These scenarios are only two of a wide range of possibilities.

## Benefit Cut Scenario

### Size of Benefit Cuts

If the trust funds were allowed to run out, Congress could eliminate annual cash-flow deficits by cutting benefits so that spending equals tax income on an annual basis. According to the trustees, achieving annual balance would require benefit cuts of 23% in 2033, the first year of insolvency, rising to 28% by 2088. To maintain balance after 2088, the Social Security trustees project that larger benefit reductions would be needed, because people would continue to live longer and therefore collect benefits for longer periods. **Figure 2** shows the percentage of scheduled benefits that are payable each year with scheduled revenues.

**Figure 2. Payable Benefits as a Share of Scheduled Benefits at Current Law Payroll Tax Rates, 2014-2088**



**Source:** CRS, based on 2014 Social Security Trustees Report and Social Security Administration memorandum by Chris Chaplain and Daniel Nickerson, "Present-Law OASDI Payable Percentages: Present-Law Revenue as a Percent of the Cost of Providing Scheduled Benefits through Year 2087," July 2, 2013 (hereinafter cited as SSA Payable Benefits Memo).

One way to understand how such a reduction would affect beneficiaries is to examine the effect on projected replacement rates and real benefit amounts for hypothetical workers.

### **Replacement Rates**

One way of measuring the adequacy of Social Security benefits is the *replacement rate*, the ratio of a person's benefit to pre-retirement earnings. Replacement rates can be calculated in different ways. This report uses the methodology used by SSA's actuaries, which is to calculate a worker's initial Social Security benefit as a percentage of the worker's average indexed monthly earnings.<sup>25</sup> Social Security was established to replace income lost to a family as a result of the retirement, death, or disability of a worker. To ensure that average benefit levels grow along with average wages—thus keeping replacement rates generally steady—initial Social Security benefits are indexed to wage growth. Historically, wages have generally risen faster than prices, allowing the standard of living to rise from one generation to the next.

**Figure 3** shows projected replacement rates under the benefit cut scenario for hypothetical low, medium, and high earners who claim retirement benefits at the age of 65 from 2014 through 2088.<sup>26</sup> The Social Security benefit formula is progressive, so the replacement rate is higher for people with lower earnings than for people with higher earnings. In 2014, the estimated rates are 55% for low earners, 40% for medium earners, and 34% for high earners.<sup>27</sup>

Between 2014 and 2025, replacement rates for people aged 65 are projected to decrease by about 10% because of the scheduled increase in the full retirement age (FRA). Thereafter, the FRA would remain 67, and *scheduled* replacement rates would remain steady. But when the trust funds become exhausted, *payable* benefits and replacement rates would fall immediately by 23%.

Because lower earners have higher replacement rates, the 23% reduction would result in a larger *percentage point* reduction in replacement rates for low earners than for high earners. The replacement rate for low earners would fall from 49% in 2032 to 37% in 2033, a decline of 12 percentage points. In contrast, the replacement rate for high earners would fall from 30% in 2032 to 23% in 2033, a 7 percentage point drop.

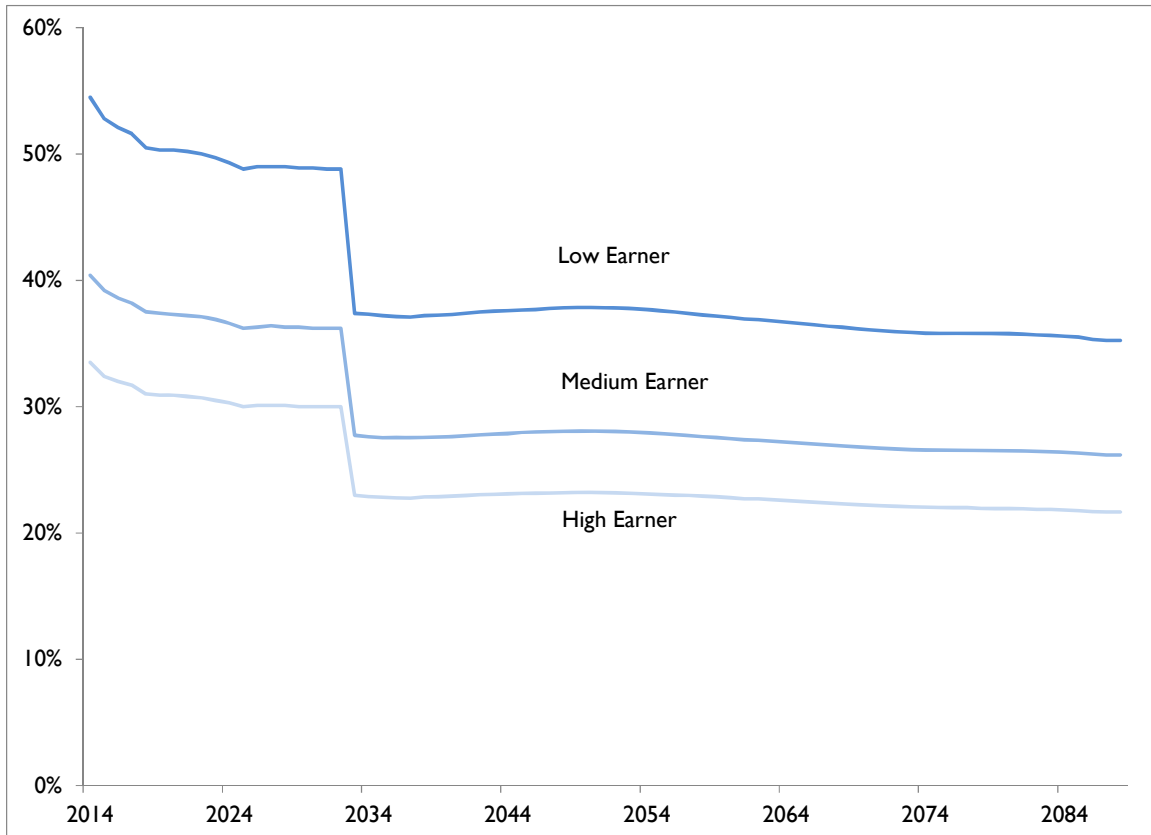
---

<sup>25</sup> This formula uses the highest 35 years of earnings covered by Social Security, indexed to wage growth using the SSA's Average Wage Index (AWI). Other ways to measure replacement rates are discussed in Andrew G. Biggs and Glenn R. Springstead, "Alternate Measures of Replacement Rates for Social Security Benefits and Retirement Income," *Social Security Bulletin*, vol. 68, no. 2, 2008, at <http://www.ssa.gov/policy/docs/ssb/v68n2/v68n2p1.html>, and in Social Security Administration, Office of the Chief Actuary, *Replacement Rates For Retirees: What Makes Sense For Planning And Evaluation?*, Actuarial Note 155, July 2014, at [http://www.ssa.gov/OACT/NOTES/pdf\\_notes/note155.pdf](http://www.ssa.gov/OACT/NOTES/pdf_notes/note155.pdf).

<sup>26</sup> The low earner is assumed to have earned 45% of the national average wage (\$21,054 in 2014) when working and to receive an annual Social Security benefit of \$11,077 in 2014. The medium earner is assumed to have earned the average wage (\$46,787 in 2014) and to receive a benefit of \$18,251 in 2014. The high earner is assumed to have earned 160% of the average wage (\$74,859 in 2014) and to receive a benefit of about \$24,198 in 2014. For information on the development of the hypothetical workers, see Social Security Administration, Office of the Chief Actuary, *Internal Rates of Return Under the OASDI Program for Hypothetical Workers*, Actuarial Note 144, June 2001, at <http://www.ssa.gov/OACT/NOTES/note2000s/note144.html>.

<sup>27</sup> See Social Security Administration, Office of the Chief Actuary, *Replacement Rates For Hypothetical Retired Workers*, Actuarial Note 2014.9, July 2014, at <http://www.ssa.gov/OACT/NOTES/ran9/an2014-9.pdf>.

**Figure 3. Replacement Rates Under Benefit Cut Scenario, 2014-2088**



**Source:** CRS, based on Social Security Administration, Office of the Chief Actuary, *Replacement Rates For Hypothetical Retired Workers*, Actuarial Note 2014.9, July 2014, and SSA Payable Benefits Memo.

**Notes:** Replacement rates are for hypothetical earners who claim retirement benefits at the age of 65.

### *Real Benefit Levels*

Another measure of benefit adequacy is initial annual benefit amounts. Since benefits are based on workers’ lifetime earnings, higher earners tend to receive higher benefit amounts than lower earners. In 2014, a hypothetical low earner is estimated to receive an annual Social Security benefit of \$11,077, a medium earner a benefit of \$18,251, and a high earner a benefit of \$24,198 in 2014.<sup>28</sup>

**Figure 4** shows future initial real benefit amounts in 2014 dollars (i.e., after adjusting for inflation), which illustrates how the purchasing power of benefits will change over time. Because average real earnings generally grow over time, scheduled real benefits also grow. The trustees project that scheduled initial real benefit amounts for hypothetical individuals claiming retirement benefits at the age of 65 will increase by 19% between 2014 and 2033.

Under the benefit cut scenario, real payable benefit levels are projected to drop by 23% after the trust funds become insolvent in 2033, then to once again rise gradually.<sup>29</sup> Under the trustees’

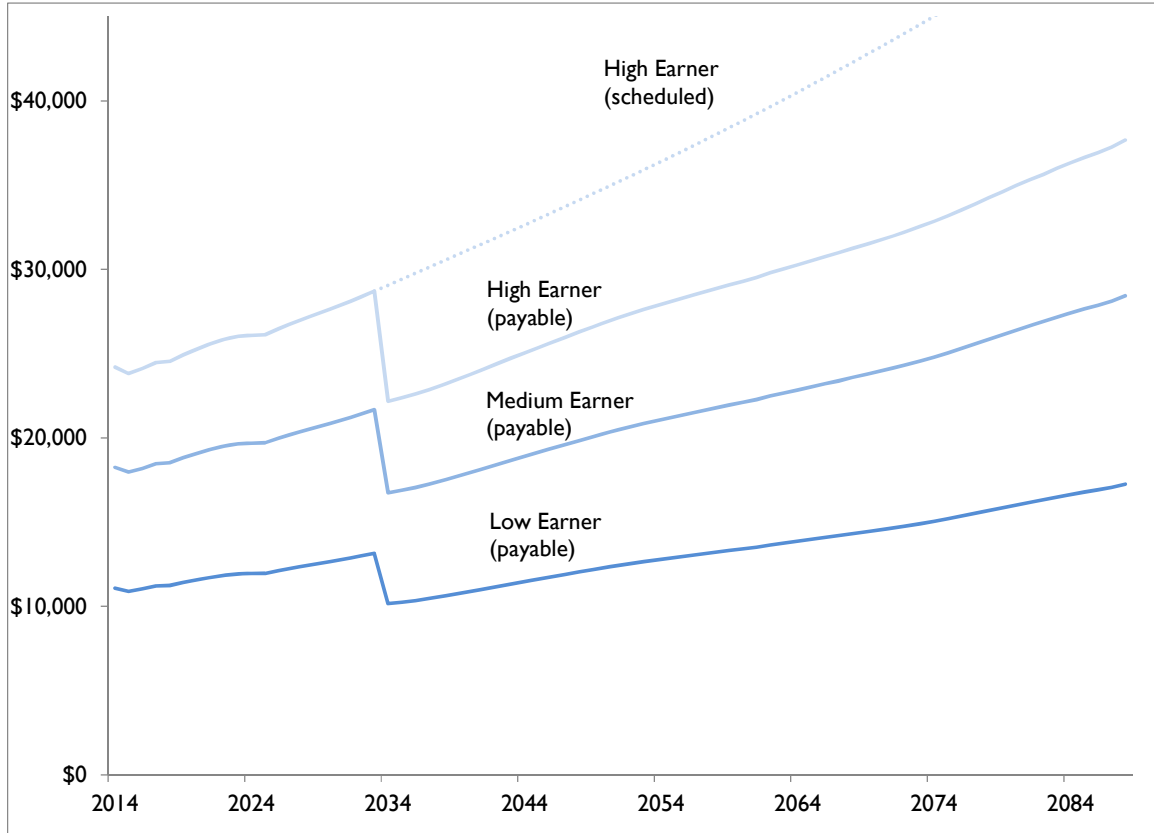
<sup>28</sup> 2014 Social Security Trustees Report, Table V.C7, at <http://www.ssa.gov/oact/tr/2013/lr5c7.html>.

<sup>29</sup> Immediately before the trust funds become insolvent in 2033, annual scheduled real benefits for individuals retiring (continued...)



projections, benefits in 2034 would be 8% lower than they are today, but by 2042 they would again exceed today's levels and would continue to increase thereafter.

**Figure 4. Initial Real Annual Payable Benefits Under Benefit Cut Scenario, 2014-2088**



**Source:** CRS, based on 2014 Social Security Trustees Report, table V.C7, at <http://www.ssa.gov/oact/tr/2014/Ir5c7.html>, and SSA Payable Benefits Memo.

**Note:** Benefits are for hypothetical earners who claim retirement benefits at the age of 65. After insolvency, scheduled benefits would continue to increase because average real earnings are projected to continue to grow. Payable benefits would therefore also grow over time following the drop upon insolvency, though they would be permanently lower than scheduled benefits. For clarity, scheduled benefits are shown only for high earners.

## Payroll Tax Increase Scenario

Upon trust fund exhaustion, the system could also be balanced by raising the payroll tax rate so that the tax income would be sufficient to pay scheduled benefits each year.

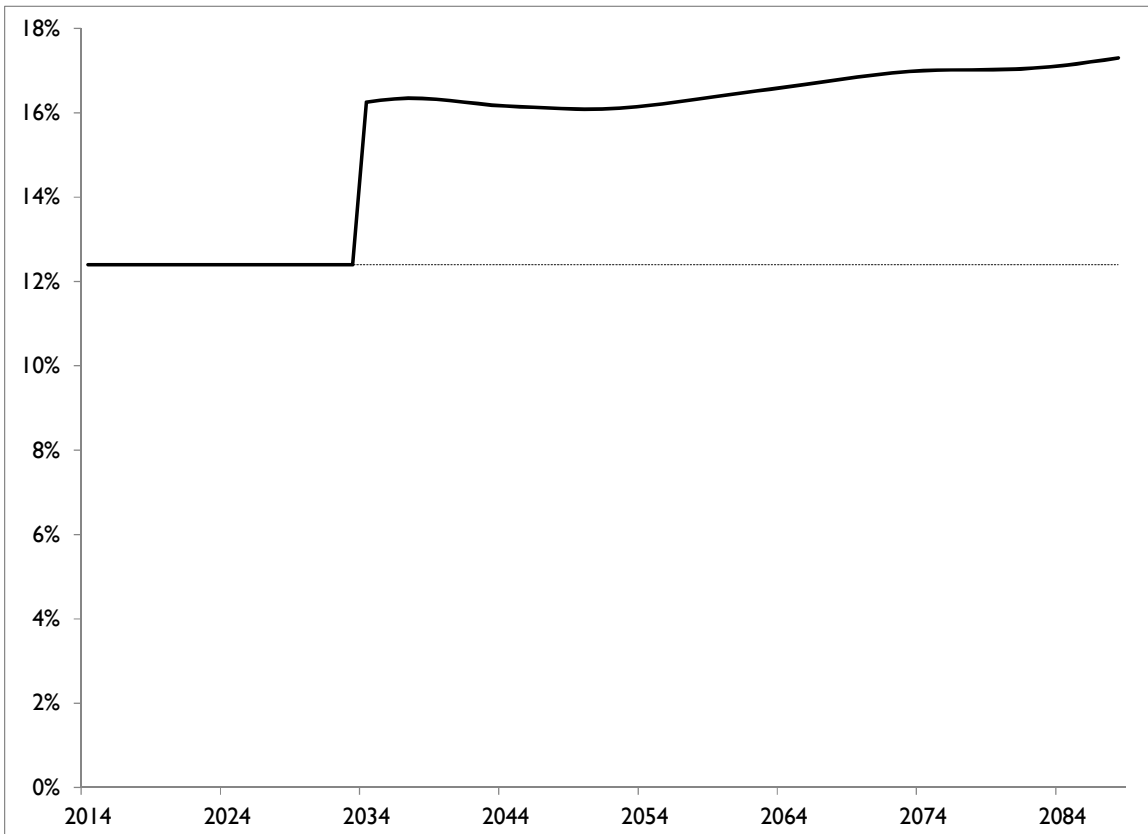
(...continued)

at the age of 65 are projected to be \$13,146 for the low earner, \$21,670 for the medium earner, and \$28,712 for the high earner. The annual payable real benefits would be 77% of these amounts.

## Size of Payroll Tax Rate Increases

The trustees project that paying scheduled benefits after exhaustion in 2033 would require an increase in the combined employee and employer payroll tax rate from the current 12.4% to 16.2% after insolvency in 2033. To sustain balance, the payroll tax rate would have to reach 17.3% by 2088, the last year of the 75-year projection period, and it would likely need to increase further in later years. **Figure 5** shows the payroll tax rates needed to pay scheduled benefits from 2014 to 2088.

**Figure 5. Combined Payroll Tax Rate Needed To Fund Scheduled Benefits, 2014-2088**



**Source:** CRS based on the 2014 Social Security Trustees Report.

**Note:** Under the trustees' projections, the current 12.4% payroll tax is sufficient to pay scheduled benefits prior to 2033.

## Impact of Payroll Tax Increases

Raising the payroll tax rate would increase most workers' taxes by the same proportion. However, because covered wages are taxable only up to a specified maximum (\$117,000 in 2014), the effective increase in the payroll tax would be smaller in percentage terms for people who earn more than the taxable maximum than for other workers. Unlike the federal income tax, the Social Security payroll tax is levied at a flat rate starting at the first dollar of wages.

## **Conclusion**

Under current law, the Social Security trust funds will almost certainly become insolvent. The sooner changes are made to the program, the smaller and less abrupt the changes would need to be to maintain solvency. Prompt action would also allow Congress to gradually phase in changes, rather than abruptly cutting benefits or raising taxes, thus allowing workers to plan in advance for their retirements.

## **Author Contact Information**

Noah P. Meyerson  
Analyst in Income Security  
nmeyerson@crs.loc.gov, 7-4681

## **Acknowledgments**

Earlier versions of this report were written by Kathleen Romig and Christine Scott, former CRS analysts. All questions should be directed to the current author.