DISAGGREGATION OF THE LONG-RANGE ACTUARIAL BALANCE FOR THE OLD AGE, SURVIVORS, AND DISABILITY INSURANCE (OASDI) PROGRAM SINCE 1983

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Introduction

Trustees Reports since 1983 have reflected the evolution of the law and other factors that determine the cost of the OASDI program. One measure that the Office of the Chief Actuary uses to summarize the long-range (75-year) actuarial status of the program is the long-range actuarial balance. This actuarial note documents the changes in actuarial status of the OASDI program since 1983 by providing a disaggregation of the actuarial balance into several components of change.

An actuarial balance of zero for any period indicates that cost for the period could be met for the period as a whole (but not necessarily at all points in the period), with a remaining trust fund reserve at the end of the period equal to 100 percent of the following year's cost. A negative actuarial balance for a period indicates that the present value of income to the program and the existing trust fund is less than the combined present value of the cost of the program and the cost of reaching a target trust fund reserve of one year's cost by the end of the period.[1]

Recent Trustees Reports include a table containing long-range OASDI actuarial balances shown in prior Trustees Reports. For example, the 2014 Trustees Report[2] provides Table VI.B1, which shows actuarial balances for Trustees Reports from 1982 through 2014, and total year-to-year changes.

For the 1982 Trustees Report, the long-range actuarial balance was -1.82 percent of taxable payroll. The 1983 Amendments restored the long-range actuarial balance to 0.02 percent of taxable payroll. Since then, the long-range actuarial balance has decreased, and the Office of the Chief Actuary has disaggregated the changes into effects based on the changes in the following six categories: (1) laws and regulations, (2) valuation period, (3) demographic data and assumptions, (4) economic data and assumptions, (5) disability data and assumptions, and (6) methods and programmatic data.

Table 1 of this actuarial note provides the disaggregation of these annual changes among the six categories. Each year's Trustees Report also provides that disaggregation and related discussion. For example, Table IV.B6 of the 2014 Trustees Report shows the effects of changes on the long-range actuarial balance between the 2013 and 2014 reports, and the surrounding text in the 2014 report provides detailed explanations of what changed and why. Table 1 also shows the actuarial balance for the 1982 Trustees Report to give a frame of reference for the magnitude of change achieved by the 1983 Amendments. Finally, Table 1 shows the total change since 1983, the disaggregation of this total by category of change, and the percent of the total attributable to each category.

Categories for Change in Actuarial Balance

Laws and Regulations

Laws and regulations affecting the Social Security program obviously have an effect on the long-range estimates of the actuarial status of the program.

In 1981, the Congress and the President appointed the National Commission on Social Security Reform (NCSSR), which was chaired by Alan Greenspan, to study and make recommendations regarding the short-term financing crisis facing Social Security. At that time, short-term estimates indicated that the OASI Trust Fund would deplete in July or August of 1983. The Greenspan Commission issued its Report in January of 1983. This Report became the basis for the 1983 Social Security Amendments, which President Reagan signed into law (HR 1900, Public Law 98-21) on April 20, 1983. The Office of the Chief Actuary prepared cost estimates for many possible changes considered by the Commission, and worked closely with the Congress on the development of the final Bill that was enacted in 1983.

Since 1983, several changes in laws, regulations, and court decisions have had significant effects on the long-range actuarial balance.

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[1] Table IV.B5 of the 2014 Trustees Report illustrates the calculation of the long-range actuarial balance as of January 1, 2014, using the intermediate assumptions of the 2014 Trustees Report.
[2] The 2014 Trustees Report is located at: www.ssa.gov/OACT/TR/2014/index.html.

Valuation Period

If all assumptions, methods, starting values, and the law had remained unchanged from the prior Trustees Report, the long-range actuarial balance would still have decreased from one year to the next after 1983. The decrease primarily results from including the relatively large negative annual deficit (difference between the cost of paying scheduled benefits and non-interest income) for the ending year of the new period.

Demographic Data and Assumptions

This category for change includes any changes in ultimate demographic assumptions (for example, fertility rates, mortality rates, and net immigration/emigration), any changes in historical values, any updates to starting values and, if applicable, their effect on the transition to ultimate levels.

Economic Data and Assumptions

This category for change includes any changes in ultimate economic assumptions (for example, the real-wage differential, and the annual rates of change in CPI, total employment, real GDP, and average annual wage in covered employment), as well as any changes in near-term economic assumptions. In addition, this category includes any updates to starting values and, if applicable, their effect on the transition to ultimate levels.

Disability Data and Assumptions

This category for change includes changes to ultimate disability incidence or termination rates from the prior report. In addition, this category includes any updates to historical disability experience and starting levels of beneficiaries and, if applicable, their effect on the transition to ultimate levels.

Methods and Programmatic Data

This category for change includes any enhancements to models used by the Office of the Chief Actuary for making its estimates, including demographic models (for example, immigration models), economic models (for example, models of labor force participation), and other actuarial models (for example, models used to project the population insured for and receiving benefits). In addition, this category includes new programmatic data, including any updates or changes to data relevant to the program in the near term (for example, updating the historical beneficiary sample used to project benefit levels for workers newly entitled in the future).

Table 1.—Changes in the Estimated Long-Range OASDI Actuarial Balance Since the 1983 Trustees Report
(as percent of taxable payroll)

Year of Report	Legislation/ Regulation	Valuation Period	Demographic Data and Assumptions	Economic Data and Assumptions	Disability Data and Assumptions	Methods and Programmatic Data	Total	Long-Range Actuarial Balance
1982[a]								-1.82
1983								0.02
1984	[b]	-0.03	0.04	-0.01	-0.11	0.03	-0.08	-0.06
1985	-0.01	-0.03	-0.02	0.09	-0.04	-0.33	-0.35	-0.41
1986	[b]	-0.04	0.19	-0.10	-0.05	-0.03	-0.03	-0.44
1987	-0.05	-0.04	-0.09	0.02	-0.02	[b]	-0.18	-0.62
1988	[b]	-0.05	0.17	-0.13	0.02	0.03	0.04	-0.58
1989	[b]	-0.04	0.07	-0.11	-0.04	[b]	-0.13	-0.70
1990	-0.01	-0.05	0.03	-0.17	-0.01	[b]	-0.21	-0.91
1991	0.17	-0.05	0.04	-0.11	-0.01	-0.22	-0.17	-1.08
1992	[b]	-0.05	0.17	-0.10	-0.20	-0.19	-0.38	-1.46
1993	[b]	-0.05	0.11	-0.01	-0.08	0.03	[b]	-1.46
1994	[b]	-0.05	[b]	-0.18	-0.11	-0.31	-0.66	-2.13
1995	[b]	-0.07	0.12	0.02	-0.05	-0.07	-0.05	-2.17
1996	0.03	-0.08	-0.03	-0.04	-0.03	0.14	-0.02	-2.19
1997	0.03	-0.08	-0.03	0.06	-0.02	[b]	-0.03	-2.23
1998	[b]	-0.08	-0.05	0.16	0.01	[b]	0.04	-2.19
1999	[b]	-0.08	0.03	0.15	0.00	0.02	0.12	-2.07
2000	[b]	-0.07	-0.07	0.14	0.00	0.17	0.17	-1.89
2001	[b]	-0.07	0.09	0.02	0.02	-0.02	0.03	-1.86
2002	[b]	-0.07	-0.05	0.12	0.03	-0.04	-0.01	-1.87
2003	[b]	-0.07	-0.04	[b]	[b]	0.06	-0.04	-1.92
2004	[b]	-0.07	0.02	-0.04	0.04	0.08	0.03	-1.89
2005	[b]	-0.07	0.03	-0.06	-0.01	0.07	-0.04	-1.92
2006	[b]	-0.06	0.03	-0.06	-0.04	0.04	-0.09	-2.02
2007	[b]	-0.06	-0.03	0.02	0.06	0.08	0.06	-1.95
2008	[b]	-0.06	[b]	[b]	[b]	0.32	0.26	-1.70
2009	[b]	-0.05	-0.11	-0.15	-0.01	0.03	-0.30	-2.00
2010	0.14	-0.06	-0.05	0.00	-0.02	0.07	0.08	-1.92
2011	[b]	-0.05	-0.14	-0.06	-0.01	-0.05	-0.30	-2.22
2012	[b]	-0.05	-0.05	-0.21	-0.04	-0.08	-0.44	-2.67
2013	-0.15	-0.06	-0.17	-0.03	0.01	0.35	-0.05	-2.72
2014	-0.01	-0.06	0.04	-0.10	0.02	-0.05	-0.16	-2.88
Total since 1983 Report	0.14	-1.83	0.25	-0.89	-0.70	0.13	-2.89	
Percent of Total	-5%	63%	-9%	31%	24%	-5%	100%	

[a] The table includes the actuarial balance in the 1982 Report to give a frame of reference for the magnitude of change achieved by the 1983 Amendments.
[b] Between -0.005 and 0.005 percent of taxable payroll.

Notes: 1. Data in this table is based on tables in the current and prior OASDI Trustees Reports.

   2. Totals do not necessarily equal the sum of rounded components.