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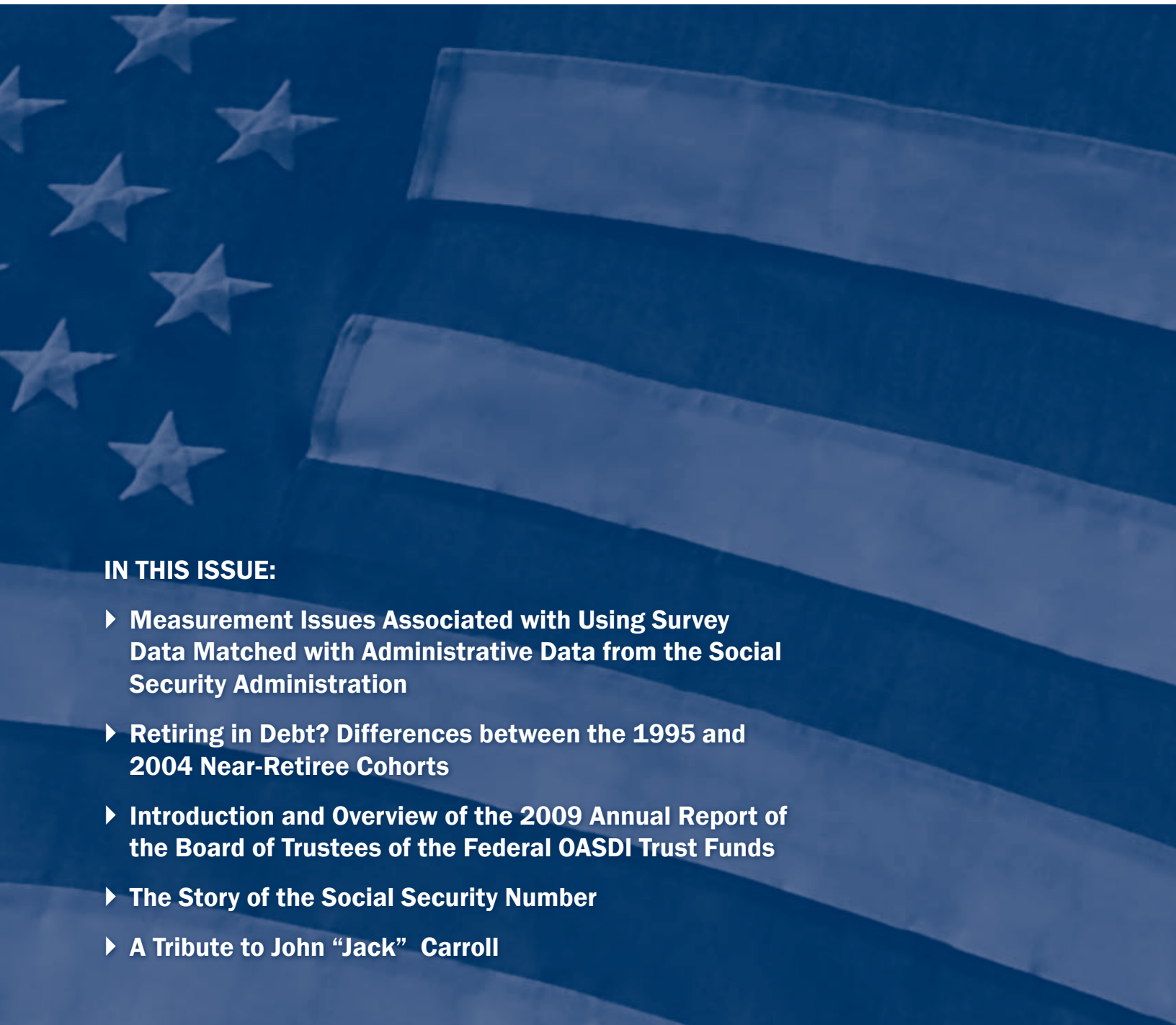

IN THIS ISSUE:

- Measurement Issues Associated with Using Survey Data Matched with Administrative Data from the Social Security Administration
- Retiring in Debt? Differences between the 1995 and 2004 Near-Retiree Cohorts
- Introduction and Overview of the 2009 Annual Report of the Board of Trustees of the Federal OASDI Trust Funds
- The Story of the Social Security Number
- A Tribute to John "Jack" Carroll

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SOCIAL SECURITY BULLETIN

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Articles

1 **Measurement Issues Associated with Using Survey Data Matched with Administrative Data from the Social Security Administration**
by Paul S. Davies and T. Lynn Fisher

Researchers using survey data matched with administrative data benefit from the rich demographic and economic detail available from survey data combined with detailed programmatic data from administrative records. This article focuses on survey data matched with administrative data from the Social Security Administration and addresses the strengths and weaknesses of each in four specific areas: program participation and benefits, disability and health information, earnings, and deferred compensation. The article discusses the implications of these strengths and weaknesses for decisions that researchers must make regarding the appropriate data source and definition for the concepts in question.

13 **Retiring in Debt? Differences between the 1995 and 2004 Near-Retiree Cohorts**
by Chris E. Anguelov and Christopher R. Tamborini

This article uses the U.S. Federal Reserve Board's Survey of Consumer Finances to examine near retirees' (aged 50 to 61) debt holdings in 1995 and 2004. Employing a variety of measures on household borrowing, our results show that near retirees in 2004—the leading edge of the baby-boom cohort—had more consumer and housing debt than their counterparts in 1995. We observe a modest increase in the median debt service and debt-to-assets ratios between the two cohorts, but no statistical difference in their respective average. Analysis of several demographic and socioeconomic subgroups reveals certain population segments, such as single female households, with significantly higher debt service ratios in 2004.

35 **Introduction and Overview of the 2009 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds**

The Board of Trustees reports each year on the current and projected financial condition of the Social Security program, which is financed through two separate trust funds: the Old-Age and Survivors Insurance Trust Fund and the Disability Insurance Trust Fund. The introduction and overview presented here is excerpted from the 2009 annual report, which is the 69th such report.

55 **The Story of the Social Security Number**
by Carolyn Puckett

The use of the Social Security number (SSN) has expanded significantly since its inception in 1936. Created merely to keep track of the earnings history of U.S. workers for Social Security entitlement and benefit computation purposes, it has come to be used as a nearly universal identifier. Assigned at birth, the SSN enables other government agencies to identify individuals in their records and private industry to track an individual's financial information. This article explores the history and meaning of the SSN and the Social Security card, as well as the Social Security Administration's (SSA's) SSN master file, generally known as the Numident. The article also traces the historical expansion of SSN use and steps SSA has taken to enhance SSN integrity.

Other

75 **Tribute to John "Jack" Carroll**

77 **OASDI and SSI Snapshot and SSI Monthly Statistics**

89 **Perspectives–Paper Submission Guidelines**

Program Highlights, inside back cover

Measurement Issues Associated with Using Survey Data Matched with Administrative Data from the Social Security Administration

by Paul S. Davies and T. Lynn Fisher*

Researchers using survey data matched with administrative data benefit from the rich demographic and economic detail available from survey data combined with detailed programmatic data from administrative records. The research benefits of using these matched data are too numerous to mention. But there are drawbacks as well, and those drawbacks have received less systematic attention from researchers. We focus on survey data matched with administrative data from the Social Security Administration and address the strengths and weaknesses of each in four specific areas: (1) program participation and benefits, (2) disability and health information, (3) earnings, and (4) deferred compensation. We discuss the implications of these strengths and weaknesses for decisions that researchers must make regarding the appropriate data source and definition for the concepts in question. From this discussion, some general conclusions are drawn about measurement issues associated with using matched survey and administrative data for research, policy evaluation, and statistics.

Introduction

Researchers using survey data matched with administrative data benefit from the best of both worlds—the rich demographic and economic detail available from survey data combined with detailed programmatic data from administrative records. Indeed, researchers at the Social Security Administration (SSA) have been using matched survey and administrative data for years, addressing topics spanning policy evaluation, economic research, program statistics, and microsimulation modeling.

The original use of matched survey and administrative data was to assess the accuracy of the survey data and use that information to adjust for error in statistics produced from survey data. SSA and the Census Bureau have a history of matching Census surveys with Social Security administrative data and limited tax return information from the Internal Revenue Service (IRS). The earliest matches with the decennial censuses and periodically with the March Current Population Survey (CPS) from 1964 through 1972 were limited in scope and sample size because of computing constraints. The earliest matched file still being used is the 1973 CPS/SSA/IRS Exact Match Study, which greatly expanded the sample being matched to SSA and IRS data compared with previous matched data sets (Aziz, Kilss, and Scheuren 1978; Kilss and Scheuren 1978). This file provides researchers with rich survey data matched with longitudinal earnings histories that were not available elsewhere, and thus greatly expanded the potential scope of research on many topics in labor economics and public policy. Since the 1973 match, these data also have been used as inputs to Social Security's simulation models (Scheuren and Herriot 1975).

Selected Abbreviations

CPS	Current Population Survey
DB	defined benefit
DC	defined contribution
DER	Detailed Earnings Record
DI	Disability Insurance
HRS	Health and Retirement Study

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Selected Abbreviations—*continued*

IRS	Internal Revenue Service
MBR	Master Beneficiary Record
NHANES	National Health and Nutrition Examination Survey
NHIS	National Health Interview Survey
NSCF	National Survey of SSI Children and Families
OASDI	Old-Age, Survivors, and Disability Insurance
PHUS	Payment History Update System
SIPP	Survey of Income and Program Participation
SSA	Social Security Administration
SSI	Supplemental Security Income

In response to limitations in the CPS with respect to analyzing government transfer programs, which required detailed data on income sources, program participation, and assets, the Income Survey Development Program was initiated in the mid-1970s (Ycas and Lininger 1981; Vaughan, Whiteman, and Lininger 1984). This program effectively served as the pilot study for the Census Bureau's Survey of Income and Program Participation (SIPP), for which the initial design called for matched administrative data on benefits and earnings from SSA (Lininger 1981). Pioneering work by Vaughan (1979) and others on errors in survey reports of program participation and type of beneficiary, some of which used the SIPP matched to SSA administrative data (Vaughan 1989), paved the way for a wide variety of uses of matched survey and administrative data by researchers at SSA.

Currently, researchers are using the SIPP[1] (1984, 1990–1993, 1996, 2001, and 2004 panels) and the CPS[2] (most years from the 1990s through the 2000s) matched to SSA administrative data and limited IRS earnings data. The matched data are accessed on a restricted basis subject to the terms of interagency agreements between the Census Bureau and SSA and of IRS laws and regulations. The use of matched administrative data as a tool to assess survey data is still a primary function, but other Census and IRS-approved uses of matched data have evolved. Other surveys that have been matched to SSA administrative data include the University of Michigan's Health and Retirement Study (HRS),[3] SSA's National Survey of SSI Children and Families (NSCF),[4] and the National Center for Health Statistics' National Health Interview Survey (NHIS)[5] and National Health and Nutrition Examination Survey (NHANES).[6] SSA's data are incomplete with respect to demographics and non-program oriented measures of income and wealth. The survey data on these elements supplement the administrative data, enabling the agency to produce a wide variety of research and statistical products about the Old-Age, Survivors, and Disability Insurance (OASDI, or Social Security) and Supplemental Security Income (SSI) programs. These products include detailed and complex microsimulation models that are used to assess the distributional implications of potential OASDI and SSI policy changes, basic economic research on OASDI and SSI beneficiaries, and statistics about beneficiaries and recipients of both programs.

The research benefits of using these matched data are too numerous to mention. But there are drawbacks as well, and those drawbacks have received less systematic attention from researchers. For example, in cases where disability diagnoses are available in both the survey and administrative data, which source is more accurate? In cases where program participation and benefit amounts are available in both the survey and administrative data, which source is correct? By and large, the answer to such questions is, "It depends." It depends on the research questions to be addressed. It depends on the data sources in question. It depends on the analytical techniques to be used. To complicate matters further, different administrative data sources can lead to different values for the same concept.

In this article, we do not attempt to provide definitive answers as to which sources are preferred in which situations. Rather, we attempt to draw together the available evidence on a number of important areas in which researchers using matched survey and administrative data must decide on the appropriate data source and definition for the concept in question. Specifically, in the next four sections of the article we examine and discuss the available evidence in the following areas.

- OASDI and SSI participation and benefits
- Disability diagnosis, health, and functional limitations
- Earnings
- Deferred compensation

Some concluding observations are then offered on these measurement issues and the importance of matched survey and administrative data for research,

policy evaluation, and program statistics. Finally, we highlight several areas for future research.

OASDI and SSI Participation and Benefits

The most basic area of comparison between survey and administrative data is program participation and benefit amounts. Several SSA researchers have addressed this issue using data from the SIPP and CPS matched with SSA administrative data on the receipt and amount of OASDI benefits and SSI payments. Survey data may differ from administrative records for three main reasons: (1) survey error, (2) administrative record error, or (3) error in matching survey and administrative records (Huynh, Rupp, and Sears 2002). Although SSA records on program participation and benefit amounts are generally regarded to be more reliable than survey reports, this is not always the case. Before the availability of the Payment History Update System (PHUS), the administrative records for OASDI came only from the Master Beneficiary Record (MBR), which reflected program eligibility, as opposed to the actual benefit amount that was paid in a given month.[7] Since 2003, however, the match has included PHUS data with actual payment amounts from 1984 to the present, which is thought to be more consistent with the benefit amount that would be reported by survey respondents.[8] The Supplemental Security Record, which provides data on SSI applicants and recipients, has always captured data on both program eligibility and actual payment amounts.

Huynh, Rupp, and Sears (2002) assessed discrepancies in reports of benefit receipt and benefit amounts between SSA's administrative records (Master Beneficiary Record and Supplemental Security Record) and the 1993 and 1996 panels of the SIPP.[9] They found that there is confusion among survey respondents as to whether an OASDI benefit or SSI payment was received. Table 1 shows that for the sample months analyzed by those authors, a nontrivial proportion of SSI recipient survey respondents (receiving SSI only or concurrent with OASDI) reported receiving OASDI only; respondents misreported receiving OASDI as SSI, but much less frequently. The authors offered a number of explanations for this pattern.

- Both OASDI and SSI benefits are administered by SSA.
- The OASDI program has greater visibility.
- Stigma may be attached to the receipt of SSI payments.
- The receipt of SSI for a few months often precedes the receipt of Disability Insurance (DI) for working-age individuals with disabilities.

Huynh, Rupp, and Sears (2002) also found that accuracy of SSI reports improved between their observation points within the 1993 and 1996 SIPP panels. In addition they evaluated the discrepancies between reported OASDI and SSI benefits and administrative amounts. The authors confirmed that after wave 1 of the 1993 SIPP, respondents were reporting their OASDI benefits net of the Medicare Part B premium, consistent with the revised questionnaire wording. They noted that use of these reported benefit amounts without adjusting for the Part B premium could substantially bias estimates of total income and poverty status. Also, they concluded that self-reported SSI payments in the SIPP reflect the sum of federal and federally administered state SSI payments, which are provided to recipients in a single payment (check or direct deposit). In addition, the authors found that reporting errors for OASDI and SSI differed dramatically by imputation status, and that errors may be systematically related to sample attrition and interview status. Finally Huynh, Rupp, and Sears (2002) found evidence of selectivity with respect to the survey respondents who were unable to be matched to administrative records.

Koenig (2003) followed a framework similar to that of Huynh, Rupp, and Sears (2002) by assessing the accuracy of self-reported OASDI and SSI data in the 1996 SIPP and the March 1997 Annual Demographic Supplement to the CPS. She compared the accuracy of reported OASDI and SSI receipt and benefit amounts in the two surveys relative to matched SSA administrative records and assessed the effect on poverty estimates when administrative benefit information is used with the survey data. Koenig (2003) found that although both surveys reflected aggregate benefits well, the SIPP overestimated the percentages of individuals who received OASDI and SSI, and the CPS underestimated them. The SIPP was better able than the CPS to identify both OASDI beneficiaries (99 percent versus 95 percent) and SSI recipients (93 percent versus 69 percent). For the sample of respondents receiving OASDI and/or SSI in both the survey and administrative records, the SIPP-reported benefit amount was within $100 of the benefit amount in the administrative records twice as often as the CPS-reported benefit amount for OASDI (47 percent versus 24 percent), but slightly less frequently than the CPS-reported benefit amount for SSI (47 percent

Table 1.
SIPP report of OASDI and SSI benefit receipt, by SSA administrative record of benefit receipt status and observation period for adults with matched SIPP records (in percent)

Administrative record receipt status and observation period	SIPP report of receipt				Total	N
	Both	Neither	OASDI only	SSI only		
Both OASDI and SSI						
1993 (January)	**76.08**	3.49	14.52	5.91	100.00	372
1995 (August)	**80.75**	2.48	10.87	5.90	100.00	322
1996 (March)	**74.71**	4.89	12.40	7.99	99.99	613
1998 (October)	**80.06**	3.81	12.02	4.11	100.00	341
Neither OASDI nor SSI						
1993 (January)	0.06	**98.32**	1.25	0.37	100.00	25,704
1995 (August)	0.07	**97.99**	1.44	0.50	100.00	22,436
1996 (March)	0.04	**98.81**	0.97	0.17	99.99	33,545
1998 (October)	0.05	**98.66**	1.07	0.23	100.01	16,677
OASDI only						
1993 (January)	0.30	3.38	**95.95**	0.38	100.00	6,068
1995 (August)	0.37	4.35	**94.73**	0.55	100.00	5,632
1996 (March)	0.41	4.31	**94.46**	0.82	100.00	7,886
1998 (October)	0.65	3.77	**94.78**	0.81	100.01	4,328
SSI only						
1993 (January)	6.01	6.56	8.74	**78.69**	100.00	366
1995 (August)	3.60	9.14	6.09	**81.16**	99.99	361
1996 (March)	4.81	8.94	7.70	**78.54**	99.99	727
1998 (October)	3.02	9.32	7.81	**79.85**	100.00	397

SOURCE: Huynh, Rupp, and Sears (2002, Table 2). Data are tabulated from the 1993 and 1996 panels of the SIPP matched to SSA's Master Beneficiary Record and Supplemental Security Record.

versus 55 percent). The impact on total income and poverty estimates of using administrative data in place of self-reported survey data was largest for the group with imputed records (Table 2). The overall poverty estimates were slightly lower in both surveys when administrative data were used in place of self-reported survey data; respondents in the CPS were more likely to exhibit a change in poverty status because of the use of administrative data.

Nicholas and Wiseman (2009) developed a detailed method for replacing self-reported survey data from the March 2003 Annual Social and Economic Supplement to the CPS with administrative data on SSI payments, OASDI benefits, and earnings. The authors also implemented a propensity scoring system to reweight CPS families in the matched CPS/SSA sample to reflect the U.S. population as a whole. Using a "high" and a "low" version of their matching and data replacement system, the authors then examined the implications of using the matched administrative data for measuring poverty among the general population and among SSI recipients. Their findings for absolute poverty were quite dramatic, especially among SSI recipients, as illustrated in Table 3. Based on public-use CPS data, 44.3 percent of all SSI recipients were in poverty in 2002. Depending on the exact definitions used, the poverty rate was reduced from 44.3 percent to between 38.0 percent and 40.9 percent when SSA administrative data on benefits and earnings were used in place of CPS self-reported data. The effects were the strongest for elderly SSI recipients, whose "official" poverty rate derived from public-use CPS data fell from 48.0 percent to between 38.6 percent and 40.6 percent based on CPS/SSA matched data. The effects were much more modest for the U.S. population in general, which confirms the authors' finding that SSI participation and benefits were substantially underreported in the CPS relative to SSA administrative data.

Huynh, Rupp, and Sears (2002) and Koenig (2003), among others, questioned the extent to which selectivity in the ability to match administrative records to SIPP and CPS survey records resulted in a match bias. Attrition bias in the SIPP was another prominent concern. To address these issues, SSA awarded a contract to Mathematica Policy Research, Inc. to determine the

Table 2.
Percentage distribution of persons aged 65 or older with poverty status change after substituting self-reported survey data with administrative data, by imputation status

	CPS		SIPP	
Poverty status	Imputed benefits	No imputed benefits	Imputed benefits	No imputed benefits
Poverty status does not change	89.9	95.8	95.7	98.1
Change from in poverty to not in poverty	5.7	2.2	2.5	1.1
Change from not in poverty to in poverty	4.4	2.0	1.8	0.8
Total	100.0	100.0	100.0	100.0
Unweighted N	2,097	8,956	2,322	6,513

SOURCE: Koenig (2003, Table 9). Data are tabulated from the 1996 SIPP and March 1997 CPS matched to the SSA's Master Beneficiary Record and Supplemental Security Record.

Table 3.
Poverty rates for the U.S. population and SSI recipients, by age group, source of data, and income-adjustment method, 2002 (in percent)

		CPS income adjusted based on SSA data; matched plus unmatched individuals		CPS income adjusted based on SSA data; matched individuals only	
Population and age group	Public-use CPS data	"Lower" income adjustment	"Higher" income adjustment	"Lower" income adjustment	"Higher" income adjustment
U.S. population					
0–17	16.7	16.4	13.3	16.3	13.0
18–64	10.6	10.5	8.4	10.5	7.9
65 or older	10.4	9.1	8.9	8.4	8.1
Total	12.1	11.8	9.7	11.8	9.3
SSI recipients					
0–17	36.2	26.5	21.8	26.5	21.8
18–64	43.9	42.3	40.9	44.6	43.0
65 or older	48.0	40.6	39.4	39.9	38.6
Total	44.3	39.8	38.0	40.9	39.0

SOURCE: Derived by authors from Nicholas and Wiseman (2009, Table 7). Data are from the 2003 CPS Annual Social and Economic Supplement and matched SSA administrative records.

extent to which attrition and match selectivity influence estimates of income receipt and amounts. After calibrating their sample from the 2001 SIPP to Census demographic controls, Czajka, Mabli, and Cody (2008) found little evidence of bias in estimates of a wide range of characteristics. They also found that although the proportion of SIPP respondents who could be matched with administrative records dropped substantially between the 1996 and 2001 panels of the SIPP, bias in the matched sample did not appear to have increased. Their more limited evaluation of match bias in the CPS focused on retired workers, with results similar to those for the SIPP. Personal, family, and household demographics among the matched sample mirrored the full CPS sample, although matched cases had slightly more income and were slightly less reliant on Social Security benefits.

Fisher (2005, 2008) examined the impact of survey choice and the use of administrative data in place of survey data on estimates of the importance of Social Security relative to total income for the elderly. In particular, she examined the proportion of the elderly receiving all of their income from Social Security. Using the 1996 SIPP and the March 1997 CPS, Fisher (2005) estimated that in 1996, 19.4 percent of the elderly in the CPS and 9.4 percent of the elderly in the SIPP received all of their income from Social Security. The author found that among those receiving all income from Social Security benefits, either in reported or administrative data, the SIPP had a

lower rate of beneficiary misclassification than the CPS, as shown in Table 4. In particular, respondents in the CPS were more likely to omit SSI and were also five times as likely to report having no income at all, despite being OASDI (Social Security) beneficiaries. The substitution of administrative data for self-reported survey data had a negligible effect on the estimates, however, because receipt of sources of income other than Social Security is what is essentially being measured.

Fisher (2008) found that the large differences in estimates of the elderly receiving all of their income from Social Security in the CPS and SIPP for 1996 is most likely the result of underreporting the receipt of asset income in the CPS, although most sources of income are significantly more likely to be reported in the SIPP than the CPS. To determine the extent to which these sources of income are underreported in the CPS, particularly asset income and pensions, SSA, the Census Bureau, and the IRS entered into an agreement to match a limited set of variables from individual income tax returns (Form 1040) and informational returns (Form 1099-R) to the March 2007 CPS. Research using these data will begin soon.

These articles and others in this same line of research suggest that self-reported data in the CPS slightly underreport OASDI receipt and significantly underreport SSI receipt. Self-reported data in the SIPP slightly overreport receipt of OASDI; however, the picture is more complicated for receipt of SSI depending on the year of analysis and whether the data are analyzed from a monthly or annual perspective. Estimates from both surveys indicate some confusion among respondents between the two sources of income. Misreporting of income is unlikely to be limited to the OASDI and SSI programs; other sources of income should be assessed in a similar fashion. Confusion between OASDI benefits and SSI payments, which are administered by SSA, is probably not unique; reported data on other programs that are also administered by the same agency, such as Medicare and Medicaid, may also benefit from examining administrative data. Additional research in these areas should lead to improvements in survey measurement of program participation and benefits, which in turn should lead to more accurate estimates of total income, poverty status, and well-being.

Disability Diagnosis, Health, and Functional Limitations

Although similar labels often are applied to the disability and health information available from surveys and administrative data sources, the concepts being measured may be fundamentally different. The SIPP, HRS, NSCF, NHIS, and NHANES contain detailed data on disabling conditions, health status,

Table 4.
Misclassification of beneficiary status of person observations 65 or older with an administrative record match

	SIPP		CPS	
Misclassification status	Number	Percent	Number	Percent
Persons showing all income from OASDI benefits	902	100	2,169	100.0
No beneficiary misclassification	827	91.7	1,813	83.6
100 percent reliance on self-report, but not on administrative records	52	5.8	196	9.0
Self-report omitted SSI income	29	3.2	138	6.4
Not an OASDI beneficiary	38	4.2	106	4.9
Both self-report omitted SSI income and not an OASDI beneficiary	15	1.7	48	2.2
100 percent reliance on administrative records, but not on self-report	23	2.5	160	7.4
Self-report included SSI income not in administrative records	15	1.7	41	1.9
OASDI beneficiary in administrative records, but not in self-report	11	1.2	128	5.9

SOURCE: Fisher (2005, Table 5). Data are tabulated from the 1996 SIPP and March 1997 CPS matched to the SSA's Payment History Update System and Supplemental Security Record.

and functional impairments. These data reflect the respondent's (or the respondent's proxy) subjective perceptions of his or her health and disability status at the time the survey was administered.[10] The data reported by the respondent typically are recoded in various ways by the survey administrator before being released to researchers. Social Security administrative records contain data on primary and secondary impairments for disability beneficiaries, which reflect the medical conditions considered in the medical decision about disability or blindness (initial application or continuing disability review). Those administrative records do not contain data on the general health status of disability beneficiaries, their functional limitations, or the severity of their disabling condition(s). For denied disability applicants, SSA's administrative records systems generally do not contain impairment codes. Moreover, SSA disability data document the condition that supports the medical decision regarding eligibility for disability benefits, which is not necessarily the same as the condition that is most disabling from the individual's perspective.

Given this limited background information, consider the data in Table 5 on the disabling conditions of children receiving SSI, which are derived from the NSCF and SSA administrative records and are reproduced from Rupp and others (2005/2006). The distribution of disability types (left side of table) differs greatly between NSCF data reported by the respondent and SSA administrative data. Nearly 44 percent of NSCF respondents report a physical disability, compared with 25.4 percent in SSA administrative data. Only 8 percent of NSCF respondents report mental retardation, compared with 32.5 percent in SSA administrative data. However, if individuals identified by SSA administrative data as being mentally retarded are removed from the sample, the distribution of disabilities in the NSCF more closely matches the distribution of disabilities in SSA administrative data (right side of table). This supports the hypothesis that some respondents are reluctant to report that their child is mentally retarded or that they did not consider mental retardation to be a health condition.

We conclude that the choice to use self-reported survey data on disabilities and health conditions or administrative disability data should depend on the specific application of the data. For studies that seek to understand the relationship between individual behavior and disabilities, self-reported survey data on disabilities may be more appropriate, whereas administrative disability data may be the better choice for programmatic studies or tabulations of disability beneficiaries. Both survey and administrative measures of disability and health are very complex. Survey data reflect the respondent's perception of his or her disability status and also may be influenced by proxy respondents, coding choices by survey administrators, social norms, and the quality of training provided to survey interviewers. Administrative data tend to be driven by programmatic requirements and complexities. Self-reported disability measures have been criticized in the literature as subjective, inconsistent, and endogenous (Sickles and Taubman 1997; Bound and Waidmann 1992; Kreider 1999). However, it is important to note that survey respondents may have much more detailed information about their own health and functional status than other more objective sources based on limited information. In addition, research has shown that self-reported disability measures at the time of the survey interview are highly correlated with long-term measures of mortality and disability program participation, even after controlling for a variety of demographic and economic characteristics (Rupp and Davies 2004).

Table 5.
Type of disability among children receiving SSI, by source of disability data (in percent)

	All children receiving SSI		Children receiving SSI who are not identified as mentally retarded in SSA records	
Type of disability	NSCF [a]	SSA records	NSCF [a]	SSA records
Physical	43.5	25.4	52.0	37.7
Mental	50.4	61.8	42.3	43.3
Mental retardation	7.9	32.5	3.9	…
Other mental	44.2	29.2	39.2	43.3
Other	14.8	7.7	14.3	11.5
None reported	0.4	…	0.3	…
Missing	2.8	5.1	2.6	7.6

SOURCE: Rupp and others (2006, Table 3 and note 15) and unpublished tabulations of NSCF data and SSA administrative data.

NOTES: NSCF interviews were conducted from July 2001 through June 2002.

… = not applicable.

a. Up to three health problems or conditions were coded in the NSCF. Because sample members can have more than one health problem or condition, the disability categories and subcategories are not mutually exclusive. Therefore, the percentages do not add to 100.

Earnings

The earliest benefit of matching administrative earnings records with survey data was to expand the scope and quality of research in labor economics and public policy. Earnings records derived from IRS W-2 Forms also are used to evaluate the accuracy of survey data, particularly in the SIPP. Bridges, Del Bene, and Leonesio (2003) used the Detailed Earnings Record (DER), which is an extract of SSA's Master Earnings File, matched to the 1992 and 1993 panels of the SIPP to study the accuracy of calendar year 1993 wage and self-employment income in the SIPP. Gottschalk and Huynh (2005) used the DER matched to the 1996 SIPP to determine the effect of measurement error on the mean and dispersion of the distributions of earnings for people of different ages and on the correlation in earnings across years. Individual earnings reported in the SIPP may differ from those in the DER for reasons other than error. Respondents may report on a maximum of two jobs in the survey, and the administrative records report all jobs. Administrative records exclude pretax health care premiums paid by the employee or contributions to 401(k) plans out of earnings that may be accurately reported in the survey as prededuction earnings.[11]

Gottschalk and Huynh (2005) found that the DER had consistently higher employment rates than those in the SIPP. Respondents with missing SIPP data on earnings tend to have lower earnings in the DER than respondents with observed earnings in both data sets. Similarly, respondents with positive SIPP earnings and no DER earnings had lower earnings than respondents with observed earnings in both data sets, possibly reflecting informal work arrangements. Bridges, Del Bene, and Leonesio (2003) obtained qualitatively similar results from their 1993 SIPP/DER earnings comparisons. Gottschalk and Huynh (2005) found that the number of individuals with positive SIPP earnings and no DER earnings was smaller than the number with positive DER earnings and no SIPP earnings. However, Bridges, Del Bene, and Leonesio (2003) found the opposite pattern. Gottschalk and Huynh (2005) also found that lifetime earnings patterns were similar in the two data sources. Men aged 25–59 had higher earnings in the DER than in the SIPP, but there were no systematic differences in earnings between the two data sources for older men or for women. Finally, correlations between SIPP nonimputed earnings and DER earnings are approximately 0.75 for men and women aged 25–59 and 65 or older. Bridges, Del Bene, and Leonesio (2003) found substantial measurement error in SIPP wage and salary data, with mean SIPP wages understated by 7.5 percent relative to DER wages. The absolute relative error in wage and salary income was 18 percent overall, but 28 percent for those with imputed earnings.

Measurement error for wage and salary income is an important and complex area for future research. Survey data on earnings are reported for different time periods (weekly, monthly, annual), different concepts (gross or net of income taxes), and different sources (primary job, secondary job, wage and salary income, self-employment income). Likewise, administrative earnings records may record different concepts depending on the programmatic purpose for which they are collected. Comparisons of survey data on earnings and matched administrative data on earnings may lead to improvements in survey imputations of missing earnings data, more accurate analyses of individual well-being, and improved policy estimates of the distributional effects of OASDI (Social Security) and SSI reform proposals.

Deferred Compensation

Many researchers have documented the dramatic shift in the employer-provided pension environment from defined benefit (DB) pensions to defined contribution (DC) pensions (Munnell and Sunden 2004; Costo 2006; Buessing and Soto 2006; Poterba and others 2006; Dushi and Iams 2007). Traditional DB pensions are funded by the employer and provide retirement benefits based on a formula that usually considers final salary, years of service, and age. All employees typically are included in the plan. Upon retirement, monthly benefits are generally paid in the form of a life annuity. Defined contribution plans (for example, 401(k) and 403(b) plans), on the other hand, place more risks and responsibilities on employees, and enrollment often is not automatic. After enrolling, employees must make decisions about contribution amounts and investment allocations. Employee contributions to DC pension plans are treated as deferred compensation, meaning that contributions are made on a pretax basis. Taxes are usually paid when funds are withdrawn. Upon retirement, employees face many options for withdrawing their DC account balances, including lump-sum withdrawals, the purchase of whole- or partial-life annuities, and rollover of funds into a tax-preferred individual retirement account from which withdrawals may be made.

The HRS has become a premier source of data for studying changes in the pension environment, pension

plan participation by employees, and pension income of retirees, among other important topics related to retirement and older Americans. Importantly, on a restricted basis, researchers can access HRS data matched to SSA administrative data on benefits and earnings. The earnings records are derived from IRS W-2 records submitted by employers on behalf of their employees. These records provide data on annual tax-deferred contributions by employees to DC pension accounts. Dushi and Honig (2008) compared the deferred compensation data from IRS W-2 tax records with the self-reported pension type and pension contributions of HRS respondents to determine the accuracy of the self-reports and to assess employee understanding of the mechanics of DB and DC pension plans.

Table 6 provides some estimates from Dushi and Honig (2008) on the accuracy of self-reported DB and DC pension plan participation among HRS respondents born in the period from 1931 through 1941 (aged 51–61 in 1992). Thirty percent of individuals who reported having a DB-only pension plan had positive contributions to a DC pension plan on their W-2 record, which suggests that these individuals misreported their pension plan type in the HRS. Thirty-nine percent of individuals who reported having a DC-only pension plan had zero contributions to a DC pension plan on their W-2 record. This may reflect misreporting of DB pension plans as DC pension plans, or it may reflect actual lack of contributions to the DC plan during the year in question. Finally, 6 percent of individuals who reported that they were not included in a pension plan had positive contributions to a DC pension plan on their W-2 record, again suggesting a nontrivial amount of misreporting of pension plan type in the HRS. This is clearly an important area for future research.

Table 6.
Mismatch between self-reported pension type in the HRS and pension contributions from matched W-2 data among the HRS cohort aged 51–61 in 1992 (in percent)

	Amount of contribution to DC pension from W-2 record			
Self-reported pension type in the HRS	Zero	Greater than zero	Total	N
DB only	70	30	100	1,084
DC only	39	61	100	1,406
Both DB and DC	44	56	100	85
Not included in a pension plan	94	6	100	1,333

SOURCE: Dushi and Honig (2008, Table 3).

NOTE: Percentages are weighted. Sample counts (N) are unweighted. Forty-two HRS observations with a missing pension plan type were excluded from the table.

Concluding Observations

The ability to use survey data matched with administrative data is tremendously beneficial for a wide variety of research applications, from policy evaluation to economic research and program statistics to microsimulation modeling. A fundamental use of matched survey and administrative data by researchers at SSA has been to assess the accuracy of the survey data and to adjust for error in research and statistics produced from survey data. The primary surveys used in these types of analyses are the SIPP, CPS, and HRS, which may be accessed only on a restricted basis, subject to the terms and conditions specified by their parent entities and the agencies with authority over the matched administrative data files. This article reports on some important findings from these surveys with respect to survey measurement in the areas of OASDI (Social Security) and SSI participation and benefit amounts, disability diagnosis, earnings, and deferred compensation. The general findings regarding OASDI and SSI participation and benefit amounts appear to be quite robust across data sources and in terms of their implications for analyses of beneficiary well-being and poverty status. Research on measuring disability diagnosis, earnings, and deferred compensation using matched survey and administrative data is in its infancy. We summarize the key findings as follows.

- Self-reported data in the CPS slightly underreport OASDI receipt and significantly underreport SSI receipt. Self-reported data in the SIPP slightly overreport receipt of OASDI; however, the picture is more complicated for receipt of SSI depending on the year of analysis and whether the data are analyzed from a monthly or annual perspective. Estimates from both surveys indicate some confusion among respondents between the two sources of income. When administrative data are used in place of self-reported survey data, estimated poverty rates fall, especially among SSI recipients.
- For disability research, both survey and administrative data have appreciable strengths depending on the specific application of the data. Survey data are more likely to better reflect the perspective of the individual and often contain measures of functional limitations and severity that are not available from

administrative records. The disability information in matched administrative records may better reflect the concepts of interest for more programmatically oriented studies.

- There appears to be substantial misreporting of pension type based on comparisons between self-reported pension type and administrative data on annual contributions to DC pension accounts. Matched administrative data from IRS W-2 records and other sources hold great promise for improving the measurement of pension plan participation and contribution amounts.

Future Research

One area that is ripe for future research is the extent to which self-reported earnings in the SIPP, CPS, and HRS agree with earnings captured in SSA's administrative records systems. This is an important measurement issue, especially for the working-age population. It is also a complex measurement issue. Survey data on earnings are captured in many forms (weekly, monthly, annual—gross or net of income taxes) and for different sources (primary job, secondary job, wage and salary income, self-employment income). In SSA's administrative records systems, earnings may be recorded differently depending on whether they are counted when earned or when received, or whether they are actual or countable, estimated or verified, monthly or annual. A systematic comparison of survey-based earnings measures and matched administrative data on earnings may lead to improvements in survey imputations of missing earnings data and more accurate analyses of individual well-being and the distributional implications of OASDI and SSI policies.

Finally, although they were not addressed in this article, some studies on mortality also have used SSA administrative records matched to survey data. Age-specific death rates typically are constructed by combining vital statistics on the number of deaths (numerator) with Census data on the size of the at-risk population (denominator). Administrative records provide these data from a single source (Lauderdale and Kestenbaum 2002), but do not necessarily contain the socioeconomic variables needed to compute subgroup-specific death rates that may be of interest to researchers. Survey data matched with administrative data provide a broader picture of the population; however, very few surveys were conducted long enough ago and have a sufficiently high match rate to administrative data to support detailed analyses.

Notes

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[1] See the SIPP home page for additional details (www.census.gov/sipp/).

[2] See the CPS home page for additional details (www.census.gov/cps/).

[3] See the HRS home page for additional details (www.hrsonline.isr.umich.edu/).

[4] See the NSCF home page for additional details (www.socialsecurity.gov/disabilityresearch/nscf.htm). See also Davies and Rupp (2005/2006) and Rupp and others (2005/2006).

[5] See the NHIS home page for additional details (www.cdc.gov/nchs/nhis.htm).

[6] See the NHANES home page for additional details (www.cdc.gov/nchs/nhanes.htm).

[7] Sizeable differences between the MBR and PHUS would arise predominantly for Social Security Disability Insurance (DI) beneficiaries who went through the appeals process. Upon the award of the DI benefit, the MBR would be updated to reflect benefits paid retroactively to the date of entitlement, whereas the PHUS would show one large lump-sum payment for the month of award and zero payments before award.

[8] Sears and Rupp (2003) compared results using the MBR and PHUS with Huynh, Rupp, and Sears (2002) and found the differences to be negligible. They found that the percentage of March 1996 respondents who reported the exact amount of the administrative OASDI benefit improved to 51 percent with the PHUS compared with 46 percent in the earlier study using the MBR, but there was no corresponding improvement in the estimated mean error between the survey and administrative benefit amounts. This suggests that large lump-sum payments to DI awardees occurred relatively rarely among SIPP respondents. However, Huynh, Rupp, and Sears (2002) did not disaggregate by age or type of OASDI benefit, so we can only speculate without further research.

[9] Olson (2002) analyzed the consistency between Social Security benefit amounts for May 1990 in the SIPP and the MBR.

[10] Beginning in 2006, the HRS also collects detailed data on physical performance measures, biomarkers, and psychological topics through enhanced face-to-face interviews with selected respondents. These data are not addressed in this article.

[11] Abowd and Stinson (2004) developed a procedure that allows for potential measurement error in both data sources.

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Retiring in Debt? Differences between the 1995 and 2004 Near-Retiree Cohorts

By Chris E. Anguelov and Christopher R. Tamborini*

This article uses the Federal Reserve Board's Survey of Consumer Finances to examine the debt holdings of near-retirees (aged 50–61) in 1995 and 2004. Employing a variety of measures of household borrowing, we find that near-retirees in 2004—the leading edge of the baby-boom cohort—had more consumer and housing debt than their counterparts in 1995. We observe a modest increase in the median debt service and debt-to-assets ratios between the two cohorts, but no statistical difference in the average ratios. Analysis of several demographic and socioeconomic subgroups reveals certain population segments, such as households headed by single women, with significantly higher debt service ratios in 2004. We discuss the implications of these trends for the retirement income security of older baby boomers and suggest further avenues of research.

Introduction

This article examines patterns of debt among households approaching retirement in 1995 and 2004.[1] Household debt in the United States has received increased academic and public policy focus in recent years.[2] Underlying this attention has been growth in aggregate household debt, as well as in personal bankruptcy claims since the end of the 1980s (Bucks, Kennickell, and Moore 2006; Kish 2006; Manning 2000; Masnick, Di, and Belsky 2006; Mishel, Bernstein, and Allegretto 2005, Tables 4.13–4.17; Sullivan, Warren, and Westbrook 2000). At the end of the first quarter of 2007, the debt outstanding in the U.S. household sector, including mortgage debt, totaled over $13 trillion, up from $3.6 trillion in 1990, adjusting for inflation (Board of Governors 2007).[3]

Debt is an increasingly substantive concern for retirement analysts and policymakers for several reasons. Although carrying substantial debt later in life is not an indication of financial risk by itself, it can have repercussions for retirement income security. The financial planning literature has shown that the more economic resources a family uses to service its debt, the less it will save for retirement (Cavanagh and Sharpe 2002; Yuh, Montalto, and Hanna 1998). Debt may affect retirement timing, as individuals with high debt may need to work longer to service that debt. If carried into retirement, debt can decrease the longevity of accumulated financial assets and savings, and more generally, mean less financial cushion for the debt holder. For example, the ability of an aged person to respond to health shocks and other costly life events may be negatively impacted if he or she holds a high debt burden.

A number of recent studies have examined various aspects of debt with a focus on retirement income security (for example, Lee, Lown, and Sharpe 2007; Munnell and Soto 2008; and Soto 2005). However, debt remains an understudied component of older Americans' financial circumstances. To advance our understanding of debt patterns among older workers, this article documents trends in debt among two recent cohorts approaching retirement. Specifically, data from the Federal Reserve Board's Survey of Consumer Finances (SCF) are used to compare debt among households headed by individuals aged 50–61 in 1995 (comprising persons born between 1934 and 1945, largely the war-baby cohort) with debt among those headed by individuals aged 50–61 in 2004 (comprising persons born between 1943 and 1954, largely the leading edge of the baby-boom cohort).[4] To gain a deeper understanding of trends across different population segments, debt measures are broken out by

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various demographic and socioeconomic subgroups of near-retirees.

The results document changes in household debt patterns among near-retirees in the leading edge of the baby-boom cohort, showing prominent increases in mortgage and home equity debt in particular. The level of debt, however, does not necessarily portend financial problems; more reliable indicators are debt's relation to household income and assets. Median debt service and debt-to-assets ratios of near-retirees in 2004 were modestly higher than those in 1995. Higher debt levels may be a concern for certain subgroups of near-retirees in 2004, particularly lower-income, less-educated, and single-female heads of households. Though it remains unclear exactly how debt may affect the retirement income security of individual members of these groups, it is likely that some will reach retirement age with less financial cushion than their predecessors because of greater debt levels.

This article begins with a summary of the background and significance of relevant issues. A discussion of our data and methods follows. Next, we report our findings, which include important differences between the debt patterns of the two near-retiree cohorts. The article concludes with a discussion of this study's implications for the economic well-being of future retirees.

Background

Increasing attention has been paid to the retirement preparedness of the near elderly given the looming retirement of the large baby-boom generation (Bridges and Choudhury 2007; Cashell 2008; CBO 2003; Dushi and Iams 2007; Iams and others 2007; GAO 2006; Lusardi and Mitchell 2006).[5] Overall, there have been substantial improvements in the financial circumstances of the elderly over the past 30 years, and the baby boomers, as a group, are expected to experience at least as much retirement income security as current retirees (Butrica, Iams, and Smith 2003). Since the distribution of income and wealth within the baby-boom cohort is uneven (Lusardi and Mitchell 2006, Table 2), some subgroups, such as high-income and college-educated households, may be expected to experience relative increases in real income and wealth compared with current retirees, while other subgroups, such as families headed by divorced women, the never-married, or low lifetime earners, may be more vulnerable in terms of poverty and relative well-being (Iams and others 2007; Tamborini 2007).

A small but growing body of work has focused on debt trends among the older population. Using the 2000 Health and Retirement Study, Lee, Lown, and Sharpe (2007) analyze the correlation between housing and consumer debt among persons aged 65 or older. Copeland (2006) employs SCF data and reports rising debt among the elderly and near elderly between 1992 and 2004, with substantial growth in debt among families in the lowest income quartile. That study also finds housing debt rising among families headed by persons aged 55 or older, from 24 percent holding some type of housing debt in 1992 to 36 percent in 2004.[6]

Debt has diverse implications for near-retirees. Servicing high levels of debt while working may hinder a family's ability to save for retirement,[7] particularly given recent shifts away from defined benefit pension plans and toward defined contribution plans (Munnell and Sunden 2004). As a result, a retiree might rely more on Social Security benefits for retirement income, which are meant as a floor of protection to be supplemented with employer pensions and private savings. Debt service obligations could lead individuals to work longer. Debt may also reduce the longevity of a household's accumulated financial assets and savings, which would have to be spent down to repay debt when income is more limited. Indebtedness, especially from high-interest consumer borrowing, could also leave elderly persons with fewer retirement resources in the face of health and other income shocks. For example, Munnell and Soto (2008) provide evidence that the recent decline in house prices marked by the 2007 subprime mortgage crisis is likely to reduce the retirement income security of about one-third of older households, notably those who extracted home equity lines of credit.[8]

Just as the consequences of debt are varied, so are its influences. On the macroeconomic level, broad financial and market conditions are prominent factors shaping household debt.[9] Lower interest rates, for example, may encourage consumers to borrow more, especially in a booming economy. On the household level, actual or expected real income growth may promote demand for credit from consumers confident that they will be able to repay their debt. Likewise, a "wealth effect," whereby persons consume more as assets such as housing equity and 401(k) account values increase, may encourage persons to incur more debt regardless of whether their income grows (Belsky and Prakken 2004).[10] Additionally, generational expectations about consumption and credit can influence

household debt. For example, baby boomers are often viewed as being more amenable to assuming debt than previous cohorts (Manning 2000).

A "life-cycle" perspective (Ando and Modigliani 1963) ties household debt levels to age. It suggests that younger workers, with relatively low earnings and few assets, will save little and borrow against their future earnings to finance consumption or a mortgage. As households enter their peak earning years (late middle ages), they save and begin paying off their debt. As they near retirement, their debt is expected to drop sharply, resulting in part from paying off mortgages on primary residences. Retirees then spend down their savings and tap into their accumulated assets to permit consumption beyond their immediate earning capacity. Some examples of recent studies giving empirical support to a life-cycle hypothesis of household assets and liabilities include Kennickell and Starr-McCluer (1997) and Yilmazer and DeVaney (2005).[11]

Even as debt generally declines with age, growing evidence shows considerable debt growth among the near-elderly population since the 1990s (Copeland 2006; Masnick and others 2006; McGhee and Draut 2004). Data from the SCF confirm this trend. The incidence of debt among families headed by persons aged 55 to 64 grew from 70.8 percent in 1989 to 76.3 percent in 2004. The median total debt of these families also rose, from $14,000 in 1989 to $48,000 in 2004, adjusted for inflation (Board of Governors 2004).[12]

Characteristics of Household Debt

Debt can be divided into several components. A typical portfolio consists of housing debt and consumer debt. Housing debt includes first mortgages, home equity loans, and other lines of credit on the household's primary and secondary residences. Consumer debt consists of revolving debt, such as credit card balances; and nonrevolving or installment debt, which must be paid at fixed intervals, such as automobile loans. Of the two broad categories, housing debt is generally viewed as more secure because it is backed by an asset. Compared with consumer debt, housing debt is also distinguished by lower interest rates, a longer time horizon, and favorable tax treatment.[13]

Evidence suggests that much of the recent growth in borrowing in the 1990s and early 2000s was driven by greater exposure to housing debt (Apgar and Di 2005; Li 2005; Masnick, Di, and Belsky 2006; Munnell and Soto 2008; Soto 2005). According to aggregate figures from the Federal Reserve Board's Flow of Funds Accounts (2007, Table D3), mortgage debt accounted for about 76 percent of aggregate household debt in the first quarter of 2007, up from 70 percent in 1990. For households headed by near-elderly individuals, the trend is parallel. Data from the SCF show that the share of U.S. households headed by persons aged 55–64 with some form of home-secured debt rose from 37 percent in 1989 to 51 percent by 2004, while the inflation-adjusted median housing debt for these families increased from $29,300 to $83,000 in 2004 dollars (Board of Governors 2004). This upward shift follows several changes in the housing market over the past 15 years, notably historically low mortgage interest rates, the rapid appreciation of home prices, and the proliferation of flexible mortgage products (Joint Center for Housing Studies 2007).

Consumer debt has also grown since the 1990s (Kish 2006; Manning 2000; White 2007). Data from the SCF show that the percentage of U.S. families headed by persons aged 55–64 with credit card debt rose from 32.9 percent in 1989 to 42.1 percent in 2004, and during the same period, their mean credit card balance increased from $2,600 to $5,700, adjusted for inflation (Board of Governors 2004). This upward trend follows several noteworthy financial and market developments in the 1990s: the deregulation of the credit system and the expansion of lending to formerly credit-constrained households (Kish 2006); the tendency of baby boomers to have less adverse attitudes toward consumer credit than previous cohorts (Manning 2000); and the increase in the use of credit cards as a means of convenience (to pay for everyday goods and services) rather than solely to expand household consumption through credit (Brito and Hartley 1995; Duca and Whitesell 1995).[14]

This article examines the debt carried by two different cohorts as they approached Social Security's early eligibility age of 62 for retired-worker benefits. We examine the distribution of consumer and housing debt across household types, analyze its impact by relating debt levels to household income and assets, and identify subgroups that appear most vulnerable to high debt burdens in both near-retiree cohorts.

Data and Methods

Data are from the 1995 and 2004 SCF. The SCF is considered one of the best sources of information on the financial characteristics of the U.S. population. It is a triennial cross-sectional survey sponsored by the Federal Reserve Board of Governors with the

cooperation of the Statistics of Income Division of the Internal Revenue Service. The survey collects data on household assets, debt, saving behavior, use of financial services, income, demographics, and labor force participation.[15]

The SCF uses a dual-frame sample consisting of both a standard random sample and a special oversample of wealthier households to correct for the underrepresentation of high-income families in the survey. The sampling frame requires that data from the SCF be weighted in descriptive analysis (Aizcorbe, Kennickell, and Moore 2003).[16] The SCF also uses multiple imputation techniques to deal with missing data. This procedure creates five data sets called "implicates" (Kennickell, Starr-McCluer, and Sunden 1997).

Our analysis compares debt in families headed by near-retirees (workers aged 50–61) in 1995 with debt in families headed by near-retirees in 2004. Near-retirees in 1995 are largely from the war-baby cohort (1934–1945) and near-retirees in 2004 are largely from the leading edge of the baby-boom cohort (1943–1954). Selecting this age range gives us a window into the financial readiness of persons approaching retirement. As previously noted, debt by itself is not necessarily an indication of financial risk, but carrying debt later in life can have repercussions for retirement income security. Selecting near-retirees in 2004 and 1995 also enables comparison of the leading edge of the baby-boom cohort with a previous cohort at the same life stage. Given the looming retirement of the large baby-boom generation, it is important to study the financial well-being of those in its leading edge (Bridges and Choudhury 2007).

All references to "households" or "families" in this analysis correspond with the primary economic unit (PEU) as defined by the SCF. The PEU consists of an economically dominant individual or couple (married or living as partners) and all other individuals in the household who are financially interdependent with that individual or couple. If a couple is the dominant PEU, then the head is taken to be the male in a mixed-sex couple or the older individual in the case of a same-sex couple.[17]

Note that households headed by persons between the ages of 62 and 64 are excluded from our analysis so as to focus on households still in the labor market. Although survey data suggest that many baby boomers plan to work beyond Social Security's early retirement age of 62 (GAO 2006, 19), many will also begin drawing retired-worker benefits once they are eligible.[18] Furthermore, this study does not limit the definition of near-retirees to those aged 56–61 because doing so would produce small sample sizes for certain household subgroups. However, to capture potential differences between younger and older near-retirees, detail for two age subgroups (50–55 and 56–61) is provided in the analysis of the cohort samples.

Table 1 reports the characteristics of our weighted sample. The selection of households headed by individuals aged 50–61 yields an unweighted count of 880 families in 1995 and 1,240 families in 2004. An important observation is that the 2004 near-retiree sample was much better educated than its predecessor: The percentage with at least a college degree rose from 29 percent in 1995 to 43 percent in 2004.[19] Real income was higher in the 2004 near-retiree cohort, partly as a result of general wage growth during the period. The middle third of the income distribution for households headed by persons aged 50–61 ranged between $30,264 and $65,571 in 1995 (2004 dollars) and between $36,968 and $84,204 in 2004. About one-quarter of the sample households in both survey years were headed by nonwhite persons, including African Americans, Hispanic Americans, Native Americans, and others. The proportion of married couples declined from 65 percent of the near-retirees in 1995 to 60 percent in 2004.

Measures and Analysis

There are many ways to measure household debt. As a starting point, we examine the mean and median amounts of debt holdings as well as the incidence (percentage of families holding debt) across both near-retiree cohorts. Debt is then broken out into consumer and housing debt and their respective components. Consumer debt is decomposed into credit card debt, installment debt, and other lines of credit. Housing debt is divided into mortgage debt for the primary residence, home equity loans, and other residential housing debt.

Several other measures enable further analysis of the impact of debt on a household's financial circumstances. One useful indicator is the debt service ratio (DSR). DSR measures the portion of a household's monthly disposable income dedicated to required minimum principal and interest payments on housing and consumer debt such as mortgages, automobile loans, and credit cards. Rent payments are excluded.[20]

Another valuable gauge is debt relative to assets. We calculate a debt-to-assets ratio, equal to a household's combined consumer and housing debt relative

Table 1.
Weighted sample of U.S. families headed by persons aged 50–61, by selected characteristics, 1995 and 2004

Variable	1995	2004
Debt holders (%)	80	83 †
Age of family head (%)		
50 to 55	55	54
56 to 61	45	46
Income thirds [a] (%)		
Lowest	33	33
Middle	33	33
Highest	33	33
Race and ethnicity of family head (%)		
White, non-Hispanic	77	75
Nonwhite or Hispanic	23	25
Family head marital status [b] (%)		
Married	65	60 *
Single man	10	14 *
Single woman	25	26
Education of family head (%)		
Less than high school	21	10 *
High school	35	29
Some college	15	18 *
College degree or higher	29	43 **
Number of households [c]	880	1,240

SOURCE: Authors' calculations using the 1995 and 2004 Survey of Consumer Finances.

NOTE: Designated 2004 estimates differ significantly from the comparable 1995 estimate at the following levels (two-tailed tests): † < .10, * < .05, ** < .01.

a. Middle third: $30,264–$65,571 in 1995, $36,968–$84,204 in 2004.

b. Married includes cohabiting couples; single includes separated, divorced, widowed, and never married.

c. To better reflect the real sample size of near retirees, our unweighted count reflects the total number of observations (all five SCF implicates) divided by 5. For more details see Aizcorbe, Kennickell, and Moore (2003).

to its combined financial and nonfinancial assets. This measure indicates the assets that would have to be sold to cover debt. In short, the greater the ratio, the greater a household's debt in relation to its total assets, such as a home, automobile, or 401(k) plan.

As a final point of analysis, we examine the prevalence of high debt burdens. In this article, a high debt burden denotes a household spending more than 40 percent of its monthly income on debt service (that is, a DSR of more than 0.40), a commonly used cutoff (Copeland 2006; Lee, Lown, and Sharpe 2007).

Since debt is not distributed uniformly across households, we analyze the aforementioned measures across different demographic and socioeconomic subsets of near-retirees. Variables of interest include age, income, race/ethnicity, marital status, and educational level. Looking at debt among these subgroups allows us to evaluate differences in debt across different sections of the population and to identify segments potentially vulnerable to high debt burdens.

All estimates reported in this study are expressed in 2004 dollars and apply survey weights supplied in the datasets. Because of SCF's complex survey design, analysts cannot rely on typical procedures for variance estimation. The standard errors of proportions, means, and medians reported herein were computed using replicate sample weights provided by the Federal Reserve Board (results can be provided upon request).[21] Our standard errors take account of both sampling and imputation error (Rubin 1987). The statistical significance of differences in the proportions, means, and medians reported in this article were calculated using *Z*-score values. Statistical differences between comparable 2004 and 1995 estimates are denoted with superscripts in the tables.

It is important to keep in mind that this article assesses the debt trends of two cohorts approaching retirement in different years. The article analyzes the data from a descriptive framework and focuses primarily on measures of central tendencies. The analysis does not attempt to establish causation or address questions related to the influence of particular socioeconomic factors on debt. Conclusions about the influence of household characteristics on debt loads therefore should not be drawn.[22]

Furthermore, household-level debt trends do not occur in a vacuum and are influenced by a variety of structural and temporal factors. These include macroeconomic conditions, the housing and consumer credit market, and the regulatory environment, all of which have changed dramatically since 2004. For example, economic good times may promote more borrowing along with rising asset values, while credit may be more restrained in a falling economy. Asset valuations are also highly sensitive to market conditions. Although it is outside the scope of this article to quantify the contribution of such factors on debt levels, the analysis calls attention to important connections between observed outcomes and wider structural conditions during the period of study.

Results

Total indebtedness of near-retirees, 1995 and 2004 cohorts

Table 2 reports the mean and median debt amounts and the incidence of debt among near-retirees in 1995 and 2004. First, note the sizable differences in mean and median debt estimates across the board. One would expect the mean and median figures to be comparable if the distribution of debt were roughly similar above and below the midpoint. However, debt levels, like many measures of income and assets, are heavily skewed with very high values concentrated among a relatively small portion of the population (and subgroups therein), which pulls the average away from the median.

Overall, the data reveal greater debt among the near-retiree cohort of 2004. This is indicated by a significant rise in median debt, from $19,697 in 1995 to $40,300 in 2004, and mean debt, from $58,124 in 1995 to $97,363 in 2004.[23] It is also evidenced by a rise in the proportion of near-retiree families holding debt,

Table 2.
Household debt among families headed by persons aged 50–61: Mean and median amounts, and incidence, by selected characteristics, 1995 and 2004

	1995			2004		
Variable	Mean debt ($)	Median debt ($)	Families holding debt (%)	Mean debt ($)	Median debt ($)	Families holding debt (%)
All households	58,124	19,697	79.8	97,363 **	40,300 **	82.7 †
Debt holders	72,854	36,932	100.0	117,709 **	59,300 **	100.0
Age of family head						
50 to 55	65,912	28,561	85.2	106,523 **	52,000 **	87.2
56 to 61	48,447	11,941	73.1	86,607 **	23,500 *	77.5
Income thirds [a]						
Lowest	20,283	4,924	66.7	26,392 †	4,500	70.9
Middle	43,950	20,928	84.7	74,536 **	46,600 **	88.0
Highest	112,469	68,817	88.6	192,547 **	130,000 **	89.4
Race and ethnicity of family head						
White, non-Hispanic	63,283	23,637	80.8	109,685 **	48,400 **	84.0 †
Nonwhite or Hispanic	40,881	7,239	76.2	60,045 **	17,700	78.7
Family head marital status [b]						
Married	72,525	32,254	83.4	128,633 **	61,000 **	87.2 †
Single man	44,697	7,977	72.6	60,031	17,000	72.9
Single woman	25,463	5,909	73.0	45,510 **	9,600	77.6
Education of family head						
Less than high school	23,650	6,586	65.9	20,840	1,000 *	63.7
High school	40,966	17,087	78.7	47,602	20,100	79.2
Some college	60,603	24,006	87.6	92,346 *	45,000 †	90.8
College degree or higher	101,492	42,361	87.0	150,580 **	84,500 **	86.0

SOURCE: Authors' calculations using the 1995 and 2004 Survey of Consumer Finances.

NOTES: All debt is measured in constant 2004 dollars. All observations are weighted for analysis.

Household debt includes housing debt (for example, primary residence mortgage, home equity lines of credit) and consumer debt (for example, credit card balances, installments).

Designated 2004 estimates differ significantly from the comparable 1995 estimate at the following levels (two-tailed tests): † < .10, * < .05, ** < .01.

a. Middle third: $30,264–$65,571 in 1995, $36,968–$84,204 in 2004.

b. Married includes cohabiting couples; single includes separated, divorced, widowed, and never married.

from 79.8 percent to 82.7 percent. Similar debt amount patterns occurred among the subsample consisting only of debt holders.

However, these general patterns were not experienced uniformly across household subgroups. Families headed by older individuals (aged 56–61) held less debt on average than younger near-retirees (aged 50–55); however, the average and median debt of both age groups were higher at a statistically significant level in 2004 than in 1995. As might be expected, there were sharp differences by income level, such that households with higher income also were those with the highest debt. For example, the median debt held by the top third of the income distribution in 2004 was $130,000, compared with $4,500 for the lowest third. Moreover, debt grew at a faster pace between 1995 and 2004 in the highest and middle income thirds than in the lowest third.

Heterogeneity in debt also appears by race/ethnicity, marital status, and educational attainment. The mean debt of both white and nonwhite near-retirees was significantly higher in 2004 than in 1995, but the mean and median amounts were significantly greater in white households in both years. Among marital status groups, married households held higher mean and median debt than those headed by single men and women in both years of analysis. Average debt was significantly higher in 2004 for married households and single women than for their counterparts in the 1995 cohort. Among educational groups, households with higher educational attainment were also those with the highest mean and median debt. Households headed by an individual with some college or with a college degree or higher recorded a significantly higher mean and median debt in 2004 than in 1995. By contrast, there was no statistical difference in mean debt among households headed by a high school graduate or a person with less than a high school diploma. The subgroup with the highest incidence of debt in 2004, at 90.8 percent, was households headed by a person with some college education.

Several structural developments likely contributed to these changes. The time span under examination was generally one of economic expansion in the United States. The U.S. economy grew rapidly in the 1990s, marked by real income gains, low unemployment, and low inflation (DeNavas-Walt, Proctor, and Lee 2006, Figure 1). Insofar as households believe that their income will rise faster than debt during periods of strong economic growth, more borrowing is likely to follow periods of strong economic performance.[24] Between 1996 and 1999, the economy recorded a 4.4 percent average annual real GDP growth (Su 2007). After slowing in the early 2000s, economic performance strengthened by mid-2003 with employment growth. Another factor may relate to generational differences in attitudes toward debt. The near-retiree cohort in 2004 was mostly made up of older baby boomers, a group likely to have less adverse attitudes toward debt than earlier cohorts (Manning 2000). Developments in the housing market in the 2000s, and the corresponding rise in housing debt, are also important factors underlying growth in total debt, as is shown later in the article.

Components of near-retirees' debt

Consumer debt. A better understanding of near-retirees' debt requires a more detailed analysis of their holdings. Table 3 focuses on the consumer debt of near-retirees in 1995 and 2004 and decomposes its associated components—credit card debt, installment loans, and other lines of credit. Credit card debt consists of revolving debt, or borrowing without fixed amounts and time horizons for repayment.[25] In contrast, installment debt is typically nonrevolving (or closed-ended), with fixed payments and terms; examples include automobile loans, student loans, and borrowing for durable goods such as furniture. Other consumer debt consists mainly of loans on the cash value of whole life insurance, loans against pension accounts, borrowing on margin accounts, and miscellaneous personal loans not explicitly categorized. Because the median amount of certain types of consumer debt was zero for some subgroups of near-retirees, Table 3 reports only the mean amount and the incidence of consumer debt (median amounts are provided in Appendix Table A.1).

Several differences between the cohorts stand out. Mean consumer debt grew significantly between 1995 and 2004, from $10,665 to $14,514, an increase of 36 percent. Of the types of consumer debt, credit card debt was about as common as installment debt, but the average amount of installment debt was larger. The 2004 cohort recorded increases in mean credit card debt over the 1995 cohort (from $1,786 to $2,824) and mean installment debt (from $5,530 to $8,683), but the overall incidence of these types of debt was relatively similar. Meanwhile, relatively large dollar amounts characterized "other consumer debt" among some demographic subgroups.

Table 3.
Consumer debt by type: Mean amount and incidence among families headed by persons aged 50–61, by selected characteristics, 1995 and 2004

Variable	Mean consumer debt ($)	Mean credit card debt ($)	Mean installment debt ($)	Mean other consumer debt ($)	Families with consumer debt (%)	Families with credit card debt (%)	Families with installment debt (%)	Families with other consumer debt (%)
				1995				
All households	10,665	1,786	5,530	3,349	65.0	46.9	41.4	11.6
Debt holders	13,368	2,239	6,932	4,197	81.5	58.7	51.9	14.6
Age of family head								
50 to 55	11,116	1,788	7,113	2,215	69.3	49.6	45.3	13.5
56 to 61	10,106	1,784	3,564	4,757	59.7	43.4	36.6	9.3
Income thirds [a]								
Lowest	5,176	1,527	3,133	515	58.1	41.6	32.6	13.0
Middle	6,583	1,351	4,382	850	71.1	51.9	47.4	6.7
Highest	20,618	2,503	9,229	8,887	66.2	47.2	44.5	15.2
Race and ethnicity of family head								
White, non-Hispanic	11,466	1,827	5,474	4,165	64.2	44.6	42.1	11.2
Nonwhite or Hispanic	7,988	1,650	5,718	621	67.9	54.3	39.0	13.0
Family head marital status [b]								
Married	13,255	1,850	7,148	4,257	68.1	50.9	45.8	12.2
Single man	8,442	2,285	2,237	3,920	57.2	33.9	29.9	15.9
Single woman	4,715	1,415	2,582	717	60.0	41.4	34.5	8.5
Education of family head								
Less than high school	5,556	1,135	3,409	1,011	54.2	41.6	36.1	10.9
High school	8,746	1,492	4,551	2,703	68.4	50.2	43.4	10.3
Some college	14,872	3,069	9,583	2,221	82.1	63.8	50.3	16.0
College degree or higher	14,437	1,950	6,154	6,333	60.2	38.2	38.3	11.5

(Continued)

Although the incidence of consumer debt was generally widespread, there are some noteworthy differences across demographic subgroups. Mean consumer debt rises with income, a pattern observed for both cohorts. Similarly, households headed by individuals with a college degree or with some college held more consumer debt than lesser-educated groups. Near-retirees in the middle income group and with some college education had the highest incidence of consumer debt in both cohorts. The incidence and average amount of consumer debt held by households headed by an individual with less than high school education in the 2004 cohort was not statistically different from those of their 1995 counterparts. Mean consumer debt was significantly higher, however, among middle-income, white, nonwhite, married, and single female households.

The incidence of credit card debt was high among middle-income families and households headed by an individual with some college education. Installment borrowing was more prevalent among households with higher income and those headed by individuals with at least some college, particularly in 2004. Average credit card and installment debt rose substantially in single female-headed households during the period. On average, "other" consumer debt was relatively large in higher-income and more educated families.

Housing debt. Table 4 reports housing debt among near-retirees in 1995 and 2004. Housing debt is borrowing secured by real estate, which includes debt from conventional mortgage loans on the primary residence, home equity lines of credit, and mortgage loans on other residential properties. Because the median for

Table 3.
Consumer debt by type: Mean amount and incidence among families headed by persons aged 50–61, by selected characteristics, 1995 and 2004—*Continued*

Variable	Mean consumer debt ($)	Mean credit card debt ($)	Mean installment debt ($)	Mean other consumer debt ($)	Families with consumer debt (%)	Families with credit card debt (%)	Families with installment debt (%)	Families with other consumer debt (%)
				2004				
All households	14,514 *	2,824 **	8,683 **	3,006	68.7	48.2	45.4 †	9.0
Debt holders	17,547 *	3,415 **	10,498 **	3,635	83.0	58.3 **	54.9	10.9 †
Age of family head								
50 to 55	14,442 †	3,232 **	8,603	2,608	72.7	52.7 *	46.8	9.8 †
56 to 61	14,598 †	2,346 †	8,777 **	3,475	64.0	43.0	43.7 *	8.1
Income thirds [a]								
Lowest	5,353	1,663	3,401	290	60.7	42.7	32.8	7.3 *
Middle	12,216 **	3,092 **	8,162 **	961	73.5	52.9	50.8	7.8
Highest	26,148	3,737 †	14,582 **	7,829	72.0	49.2	52.7 *	12.0
Race and ethnicity of family head								
White, non-Hispanic	15,760 *	2,912 **	9,176 **	3,672	68.0	47.8	44.2	8.8
Nonwhite or Hispanic	10,741 †	2,558 *	7,192	991	70.7	49.6	49.0 *	9.7
Family head marital status [b]								
Married	19,300 *	3,388 **	11,726 **	4,185	74.2 *	51.9	52.9 **	9.6
Single man	8,928	1,543	4,193 *	3,192	50.1	31.6	27.8	8.2
Single woman	6,513 *	2,207 †	4,082 *	224 †	65.8	48.6	37.3	8.1
Education of family head								
Less than high school	4,295	1,725	2,492	79 *	52.9	35.0	24.9 *	7.7
High school	9,806	2,120	6,816	870	69.1	50.0	43.9	6.8 †
Some college	11,958	3,450	8,095	414 **	82.3	58.6	56.3	11.9
College degree or higher	21,123	3,284 **	11,616 **	6,223	66.2 †	45.7 †	46.4 *	9.6

SOURCE: Authors' calculations using the 1995 and 2004 Survey of Consumer Finances.

NOTES: All debt is measured in constant 2004 dollars. All observations are weighted for analysis.

Designated 2004 estimates differ significantly from the comparable 1995 estimate at the following levels (two-tailed tests): † < .10, * < .05, ** < .01.

a. Middle third: $30,264–$65,571 in 1995, $36,968–$84,204 in 2004.

b. Married includes cohabiting couples; single includes separated, divorced, widowed, and never married.

some categories of housing debt, such as home equity, was zero, Table 4 reports only the mean amount and the incidence of housing debt (estimated medians are reported in Appendix Table A.2).

Comparing average housing debt between the 1995 and 2004 cohorts, considerable growth is evident almost across the board, with the overall mean rising from $47,458 to $82,849, an increase of about 74 percent. There is a particularly sharp increase in both the mean home equity debt (from $1,417 to $4,376) and the proportion of families that use it, from 4.6 percent to 11.9 percent. When restricting the sample to households with debt, a similar pattern emerges.

With respect to subgroups, households headed by older individuals (aged 56–61) continued to have a lower mean amount and incidence of housing debt than younger ones (aged 50–55) in 2004. However, compared with their counterparts in 1995, older near-retirees had significantly larger mean housing debt in 2004 ($72,009, up from $38,341). As expected, the amount and incidence of housing debt rises with income, with the top income third recording a mean

Table 4.
Housing debt by type: Mean amount and incidence among families headed by persons aged 50–61, by selected characteristics, 1995 and 2004

Variable	Mean housing debt ($)	Mean mortgage debt [a] ($)	Mean home equity debt ($)	Mean other residential housing debt ($)	Families with housing debt (%)	Families with mortgage debt [a] (%)	Families with home equity debt (%)	Families with other residential housing debt (%)
				1995				
All households	47,458	38,971	1,417	7,070	56.4	53.2	4.6	8.8
Debt holders	59,486	48,847	1,776	8,862	70.7	66.7	5.7	11.0
Age of family head								
50 to 55	54,796	46,430	1,344	7,022	61.9	59.0	5.0	8.9
56 to 61	38,341	29,703	1,509	7,130	49.5	45.9	4.1	8.7
Income thirds [b]								
Lowest	15,107	14,354	430	324	34.5	32.9	1.4	2.3
Middle	37,367	33,967	773	2,626	61.8	58.9	4.3	5.5
Highest	91,851	70,019	3,115	18,717	74.0	68.7	8.2	19.0
Race and ethnicity of family head								
White, non-Hispanic	51,817	42,352	1,647	7,817	60.5	57.0	5.1	9.4
Nonwhite or Hispanic	32,893	27,670	648	4,574	42.8	40.6	2.7	6.8
Family head marital status [c]								
Married	59,270	47,945	1,849	9,476	65.4	62.5	6.0	10.8
Single man	36,255	29,675	888	5,693	43.9	39.4	3.2	8.4
Single woman	20,748	18,992	489	1,267	37.6	34.0	1.4	3.6
Education of family head								
Less than high school	18,095	17,043	47	1,005	44.9	40.8	0.1	7.3
High school	32,220	25,896	1,480	4,844	54.1	51.6	3.0	6.3
Some college	45,731	36,882	1,627	7,178	52.8	52.1	6.4	7.8
College degree or higher	87,056	70,909	2,212	13,936	69.2	64.3	8.6	13.2

(Continued)

housing debt of $166,399 in 2004 compared with $21,038 for the low-income group. Near-retirees in the higher- and middle-income groups show exceptionally large increases in mortgage debt in the 2004 cohort. Middle- and higher-income groups were also more likely to have borrowed against their home equity in the 2004 cohort. This result likely relates, at least in part, to dramatic increases in home prices during the period. According to Munnell and Soto (2008), one characteristic associated with an increased likelihood of taking on home equity debt is substantial home value appreciation.

The incidence and mean amount of housing debt also diverged by racial and ethnic group, marital status, and education. Mean mortgage debt increased for both white and nonwhite near-retirees in 2004 relative to 1995, but was substantially higher for white households in both cohorts. Home equity lines of credit are considerably more prevalent in white households than in nonwhite households, and the gap widened from 1995 to 2004.

In terms of family status, housing debt increased across the board in 2004 relative to 1995. The mean housing debt increased more for married couples than single persons, but that is not to say that housing debt did not increase among single persons. Single women near retirement, for example, experienced a sharp increase in their mean housing debt from 1995 ($20,748) to 2004 ($38,997). Households headed by individuals with less than a high school diploma represented the only subgroup with lower and less prevalent housing debt in 2004 than in 1995.

Table 4.
Housing debt by type: Mean amount and incidence among families headed by persons aged 50–61, by selected characteristics, 1995 and 2004—*Continued*

Variable	Mean housing debt ($)	Mean mortgage debt [a] ($)	Mean home equity debt ($)	Mean other residential housing debt ($)	Families with housing debt (%)	Families with mortgage debt [a] (%)	Families with home equity debt (%)	Families with other residential housing debt (%)
				2004				
All households	82,849 **	66,265 **	4,376 **	12,207 †	59.5	54.7	11.9 **	7.0
Debt holders	100,162 **	80,113 **	5,291 **	14,758 †	71.9	66.1	14.4 **	8.4 †
Age of family head								
50 to 55	92,081 **	76,030 **	4,811 **	11,240 †	65.0	61.6	12.6 **	7.1
56 to 61	72,009 **	54,801 **	3,865 **	13,343	53.0	46.5	11.0 **	6.7
Income thirds [b]								
Lowest	21,038 †	19,370	616	1,052	33.5	31.5	3.3	2.2
Middle	62,320 **	54,935 **	2,132 **	5,253	67.2	61.7	14.3 **	4.7
Highest	166,399 **	125,384 **	10,460 **	30,555	78.2	71.1	18.2 **	14.1 †
Race and ethnicity of family head								
White, non-Hispanic	93,925 **	73,582 **	5,537 **	14,807 †	63.4	57.9	14.6 **	8.2
Nonwhite or Hispanic	49,304 *	44,108 **	860	4,335	47.5	44.7	3.8	3.3 †
Family head marital status [c]								
Married	109,334 **	86,604 **	6,111 **	16,619	68.8	63.6	14.4 **	7.9 †
Single man	51,103 †	40,537	1,769	8,797	46.0	38.5	8.2 *	8.3
Single woman	38,997 *	33,292 **	1,778	3,927 †	45.1 †	42.6 *	8.2 **	4.0
Education of family head								
Less than high school	16,545	15,597	411	538	28.8 **	25.7 **	2.9 †	0.2 **
High school	37,795 **	34,070 **	1,335	2,390 †	51.4	47.7	8.0 **	4.1
Some college	80,388 *	60,562 *	3,604 †	16,197	64.9 *	59.5	13.7 *	7.0
College degree or higher	129,457 **	102,001 **	7,664 **	19,792	69.6	63.9	15.8 **	10.4

SOURCE: Authors' calculations using the 1995 and 2004 Survey of Consumer Finances.

NOTES: All debt is measured in constant 2004 dollars. All observations are weighted for analysis.

Designated 2004 estimates differ significantly from the comparable 1995 estimate at the following levels (two-tailed tests): † < .10, * < .05, ** < .01.

a. For mortgage loans on primary residence only.

b. Middle third: $30,264–$65,571 in 1995, $36,968–$84,204 in 2004.

c. Married includes cohabiting couples; single includes separated, divorced, widowed, and never married.

Several factors related to the housing market help explain the observed expansion of housing debt among the 2004 near-retiree cohort. To begin with, historically low mortgage interest rates reduced the cost of borrowing for homeowners who may have wanted to "trade up" during the period or for renters who decided to purchase a home. In addition, substantial increases in home values, especially between 2001 and 2005, required new buyers to take on higher amounts of housing debt. According to the Standard & Poor's/Case-Shiller Home Price Index, which tracks house prices for repeat sales, values appreciated more than 60 percent from 2000 to their peak, around the third quarter of 2006 (cited in Munnell and Soto 2008).[26] That being said, near-retirees may be more likely to scale down as they approach retirement than to scale up, and are more likely already to be homeowners than younger adults, particularly those in their 20s and 30s. There is also evidence that rapidly appreciating home prices, when combined with low interest rates,

provided homeowners with opportunities to tap into the value of their homes by taking out home equity lines of credit or refinancing for greater than the outstanding balance (Belsky and Prakken 2004; Hurst and Stafford 2004; Masnick, Di, and Belsky 2006; Munnell and Soto 2008).[27]

Innovations in mortgage loan products from 1995 to 2004 are an additional factor. The growth of the subprime credit market made housing loans more affordable and accessible to groups previously rejected for mortgage loans.[28] Although less important for the near-retiree group than for younger adults, adjustable-rate mortgages—which typically reduce monthly payments for the first several years—likely encouraged some households headed by older individuals to take on larger mortgage loans.[29]

These findings raise the question of whether housing debt growth among near-retirees will translate to a potential asset gain after retirement. It could be argued that housing debt is an investment, as evidence indicates that housing wealth represents the largest asset for the majority of Americans, including the baby boomers (GAO 2006, 20; Hurst, Luoh, and Stafford 1998; Lusardi and Mitchell 2006). However, the financial rewards of incurring more housing debt near retirement are not straightforward (Apgar and Di 2005). Large increases in housing debt between 1995 and 2004 paralleled home value appreciation. If home prices face sustained downward pressure, such as the recent downturn resulting from the 2007 subprime mortgage crisis, some near-retirees may have to sell their homes after retiring and move to a cheaper area or find cheaper housing through downsizing or renting to offset their large housing debt.

Decomposing debt into its components, though useful, does not assess the impact of that debt on household finances. There are several ways to evaluate the influence of debt on a family's financial circumstances.

Debt service ratio (DSR). We begin by calculating near-retirees' DSR. The DSR is the ratio of monthly debt obligations (the estimated required monthly principal and interest payments on all outstanding mortgage and consumer debt) to monthly disposable (after-tax) family income.[30] The size of a household's debt payments is a function of a mix of complex terms of debt such as interest rate and time horizon. A low DSR (close to zero) indicates that a small share of monthly income is committed to debt repayment. A DSR greater than 1.0 would indicate that a household's after-tax monthly disposable income is lower than its monthly required debt service payments.

Table 5 reports the mean and median DSRs for the 1995 and 2004 cohorts. Because high DSRs are concentrated among small portions of the population, some mean and median estimates differ widely. Caution should therefore be used in extrapolating average or median DSRs, especially within smaller subgroups.

Overall, despite the fact that the 2004 near-retiree cohort amassed significantly more total debt than its 1995 counterpart, median DSR grew modestly over the interval (from 0.11 to 0.13), and the difference in mean DSR between the cohorts is not statistically significant. This result parallels that in Soto (2005), which found a similar share of income devoted to debt service across the period despite sharp growth in total debt from 1992 to 2004.

One factor helping keep DSRs relatively stable even in the face of aggregate debt increases may be the growing use of home equity loans, which often require lower monthly payments than consumer debt (McConnell, Peach, and Al-Haschimi 2003). In addition, historically lower mortgage interest rates and the growth of adjustable rate and other nontraditional mortgage loans over the period would tend to keep monthly payments relatively low for the 2004 cohort, at least for the short term. It is also noteworthy that real wages of the average worker grew sharply relative to inflation in the late 1990s and early 2000s (Mishel, Bernstein, and Allegretto 2005, Chapter 2).

Table 5 also reveals a diversity of DSRs across households with different characteristics. There are relatively small differences in the average and median DSRs between older and younger near-retirees. Lower-income near-retirees had an average DSR more than twice that of the top income group, but their median DSR was lower. This difference reflects a concentration of high DSRs in a relatively small segment of low-income families. It may also reflect the exclusion from the DSR calculation of rent payments, which tend to be concentrated in lower-income groups. A large disparity between the mean and median is also found among households headed by single women, whose average and median shares of income dedicated to debt payments were noticeably greater for the 2004 cohort than for the 1995 cohort. Middle-income families in 2004 had a significantly higher mean DSR (at .10 level) than their counterparts in 1995.

With respect to educational attainment, households headed by individuals with some college had relatively

Table 5.

Mean and median debt service ratio (DSR)[a] among families headed by persons aged 50–61, by selected characteristics, 1995 and 2004

Variable	1995		2004	
	Mean DSR	Median DSR	Mean DSR	Median DSR
All households	0.21	0.11	0.22	0.13 *
Debt holders	0.26	0.15	0.27	0.17 *
Age of family head				
50 to 55	0.21	0.12	0.23	0.15 **
56 to 61	0.20	0.10	0.21	0.11
Income thirds [b]				
Lowest	0.31	0.07	0.33	0.08
Middle	0.17	0.13	0.20 †	0.17 *
Highest	0.14	0.11	0.14	0.13 *
Race and ethnicity of family head				
White, non-Hispanic	0.21	0.11	0.22	0.13 *
Nonwhite or Hispanic	0.20	0.08	0.24	0.14 *
Family head marital status [c]				
Married	0.20	0.13	0.18	0.14
Single man	0.34	0.07	0.15	0.10
Single woman	0.19	0.08	0.37 **	0.13 *
Education of family head				
Less than high school	0.18	0.09	0.15	0.03 †
High school	0.22	0.11	0.17 †	0.12
Some college	0.31	0.13	0.41	0.19 *
College degree or higher	0.17	0.11	0.20	0.14 **

SOURCE: Authors' calculations using the 1995 and 2004 Survey of Consumer Finances.

NOTES: All income and debt measures were estimated in 2004 dollars. All observations are weighted for analysis.

Designated 2004 estimates differ significantly from the comparable 1995 estimate at the following levels (two-tailed tests): † < .10, * < .05, ** < .01.

a. Defined as the ratio of required monthly housing and consumer debt payments (excluding rent) to monthly disposable personal income.

b. Middle third: $30,264–$65,571 in 1995, $36,968–$84,204 in 2004.

c. Married includes cohabiting couples; single includes separated, divorced, widowed, and never married.

high mean and median DSRs in both years of analysis. In contrast, relatively low mean and median DSRs were recorded for high school graduates or less, which again may be related, in part, to the exclusion of rent from the measure. Recall that Table 4 showed that high school dropouts had the lowest proportion of families with housing debt, at 28.8 percent in 2004.

Debt-to-assets ratio. Another way to evaluate the impact of debt on household finances is to examine whether assets have been increasing along with debt. An increase in debt is not likely to lead to greater financial risk if that household has experienced corresponding gains in assets. Moreover, whether a household views asset appreciation as temporary or permanent may affect its willingness to take on new debt.

Table 6 presents the mean and median debt-to-assets ratios for the 1995 and 2004 cohorts. This measure divides the value of total household debt by the sum of the value of all its financial and nonfinancial assets. A high ratio indicates high household debt relative to the value of its asset portfolio.[31] Put another way, the higher the ratio, the more likely a household would face difficulties repaying its debts if its income was abruptly halted or its assets declined in value. A debt-to-assets ratio greater than 1.0 indicates negative net worth.

As with the DSR, the distribution of the debt-to-assets ratios is highly skewed, resulting in large differences between the mean and median.[32] Furthermore, given that housing is the largest nonpension asset among near-retirees, as it is for the majority of the U.S.

Table 6.

Mean and median debt-to-assets ratio[a] among families headed by persons aged 50–61, by selected characteristics, 1995 and 2004

Variable	1995		2004	
	Mean ratio	Median ratio	Mean ratio	Median ratio
All households	0.44	0.13	0.68	0.16 **
Debt holders	0.55	0.18	0.82	0.22 *
Age of family head				
50 to 55	0.37	0.16	0.74 **	0.21 **
56 to 61	0.52	0.08	0.61	0.10
Income thirds [b]				
Lowest	0.86	0.09	1.50	0.11
Middle	0.24	0.14	0.31 **	0.19 *
Highest	0.19	0.12	0.21	0.16 *
Race and ethnicity of family head				
White, non-Hispanic	0.26	0.12	0.32	0.15 *
Nonwhite or Hispanic	1.02	0.16	1.75	0.20
Family head marital status [c]				
Married	0.28	0.14	0.29	0.16 †
Single man	0.28	0.11	0.73	0.07
Single woman	0.91	0.08	1.54	0.17 *
Education of family head				
Less than high school	0.29	0.11	1.35 *	0.09
High school	0.29	0.11	1.05 *	0.14
Some college	1.35	0.16	0.71	0.24 †
College degree or higher	0.26	0.13	0.26	0.16 †

SOURCE: Authors' calculations using the 1995 and 2004 Survey of Consumer Finances.

NOTES: All income and debt measures were estimated in 2004 dollars. All observations are weighted for analysis.

Designated 2004 estimates differ significantly from the comparable 1995 estimate at the following levels (two-tailed tests): † < .10, * < .05, ** < .01.

a. Defined as the ratio of a household's combined consumer and housing debt to combined financial and nonfinancial assets. Financial assets include liquid assets, certificates of deposit, directly held mutual funds, stocks, bonds, savings bonds, cash value of whole life insurance, other trusts, annuities, and managed investment accounts. Nonfinancial assets include value of all vehicles, primary residence, other residential real estate, net equity in nonresidential real estate, and business interests.

b. Middle third: $30,264–$65,571 in 1995, $36,968–$84,204 in 2004.

c. Married includes cohabiting couples; single includes separated, divorced, widowed, and never married.

population (Hurst, Luoh, and Stafford 1998), home prices play an important role in influencing household assets. Consequently, a sharp decrease in home values would potentially increase a household's debt-to-assets ratio.

Overall, the 2004 near-retiree cohort recorded a slightly higher median debt-to-assets ratio than the 1995 cohort.[33] If the calculation is restricted to debt holders only, the trend is similar. Large differences between the mean and median (for example, 0.68 mean compared with 0.16 median in 2004) stem, in part, from a concentration of high debt-to-assets ratios among a relatively small portion of both cohorts.

Debt-to-assets ratios also vary according to household characteristics. For the lowest income group, the medians were considerably smaller than the corresponding means, implying a concentration of high levels of debt relative to assets among a small segment of low-income families. The average and median debt-to-assets ratios were significantly higher for middle-income families in 2004 than for their predecessors in 1995. For the top income group, the mean debt-to-assets ratio in 2004 was essentially unchanged relative to 1995, but the median was modestly higher. Debt-to-assets ratios also diverge by marital status and education level. Single women nearing retirement

had a significantly higher median debt-to-assets ratio in 2004 than in 1995. Note however that the median is much smaller than the mean in both years, reflecting a concentration of exceptionally high debt-to-assets ratios among a small portion of single women. Similarly, near-retirees without a high school diploma saw a significant jump in their mean debt-to-assets ratio, from 0.29 in 1995 to 1.35 in 2004, but recorded a much lower median figure in both years. This pattern of a sharply lower median relative to mean was present in all educational groups.[34]

Prevalence of high debt burdens. As a final line of analysis, Table 7 reports the distribution of near-retirees with high debt burdens.[35] For the purposes of this analysis, a high debt burden is indicated if the DSR exceeds 0.40 (debt service payments exceed 40 percent of family income). Because it can be argued that such families are more likely to experience financial distress due to debt, the 40 percent cutoff is commonly used in studies of household debt (Copeland 2006; Lee, Lown, and Sharpe 2007).

Overall, Table 7 indicates that the higher total debt carried by the 2004 cohort did not translate to a higher share of near-retirees with high debt burdens (10.3 percent in 1995 and 9.6 percent in 2004). As noted previously, this pattern may relate, in part, to the increasing use of home equity to reduce monthly debt payments in a period of low interest rates and rising home prices.

A more diverse picture emerges across subgroups. For example, the share of high-income families with high debt burdens was small, and was significantly lower in 2004 (1.7 percent) than in 1995 (4.3 percent). The share of families headed by a person with a college degree with high debt burdens was also significantly lower among the 2004 cohort. Conversely, although the absolute value of debt tended to be much lower among lower-income near-retirees, a strikingly higher fraction of low-income families had high debt burdens, both in 1995 (17.3 percent) and in 2004 (17.6 percent). This is consistent with other data suggesting that debt is more likely to be a financial burden for low-income households with little wealth (Mishel, Bernstein, and Allegretto 2005, Table 4.16).

Another noteworthy subgroup was single female-headed households, whose share with a high debt burden was 10.3 percent in the 1995 cohort and 16.2 percent in the 2004 cohort. The share of heavily indebted households was relatively high among nonwhite near-retirees (12.2 percent in 1995 and 14.6 percent in 2004), compared with households headed by white individuals (9.7 percent in 1995 and 7.9 percent in 2004). Among households headed by a person with some college education, the share with large debt service payments was relatively high in both cohorts. Such trends may reflect, in part, the extension of housing and consumer credit since the 1990s to households that would not have qualified for loans previously (Dynan, Johnson, and Pence 2003).

Table 7.
Percentage of families headed by persons aged 50–61 that carry high debt burdens,[a] by selected characteristics, 1995 and 2004

Variable	1995	2004	
All households	10.3	9.6	
Debt holders	12.9	11.6	
Age of family head			
50 to 55	10.5	11.0	
56 to 61	10.0	8.0	
Income thirds [b]			
Lowest	17.3	17.6	
Middle	8.9	9.4	
Highest	4.3	1.7	*
Race and ethnicity of family head			
White, non-Hispanic	9.7	7.9	
Nonwhite or Hispanic	12.2	14.6	
Family head marital status [c]			
Married	9.8	7.4	
Single man	13.3	6.6	
Single woman	10.3	16.2	
Education of family head			
Less than high school	9.9	11.0	
High school	8.7	9.9	
Some college	13.7	17.4	
College degree or higher	10.6	5.8	*

SOURCE: Authors' calculations using the 1995 and 2004 Survey of Consumer Finances.

NOTES: Monthly minimum debt payments and monthly income were measured in 2004 dollars. All observations are weighted for analysis.

Designated 2004 estimates differ significantly from the comparable 1995 estimate at the * < .05 level (two-tailed tests).

a. High debt burden is indicated if debt service payments exceed 40 percent of household income.

b. Middle third: $30,264–$65,571 in 1995, $36,968–$84,204 in 2004.

c. Married includes cohabiting couples; single includes separated, divorced, widowed, and never married.

Conclusions

The implications of debt for retirement income security are of interest to researchers and policymakers. A primary reason policymakers may care about debt among older Americans relates to potential interactions between debt and retirement outcomes. Debt near retirement may affect how long a person works, how much he or she saves, and the longevity of his or her accumulated financial assets in old age. The type and level of debt relative to income for a person nearing retirement may also affect the relative importance of Social Security benefits in retirement.

Using the SCF, this study compared general patterns of the debt holdings of a near-retiree cohort in 2004, the majority of which is part of the leading edge of the baby-boom generation, to a cohort in 1995, the majority of which is part of the war-baby generation. Overall, the results provide evidence of some differences in the debt carried by the two cohorts as they approached retirement. Compared to their 1995 predecessors, 2004 near-retirees had sharply higher mean and median total debt. Much of this increase appears to be driven by taking on greater amounts of housing debt rather than consumer debt. Despite this growth, we observe only a modest increase in the median DSR between the two cohorts, and no statistical difference in their respective average DSRs. However, the DSR measure may underestimate the share of households that will have high debt burdens as it may reflect "teaser" interest rates on adjustable rate mortgages or consumer debt. Relative to assets, the average debt of the 2004 cohort was not significantly different from its 1995 predecessor, giving evidence of a connection between rising assets and debt during the period (Soto 2005). However, near-retirees' median debt-to-asset ratios did increase slightly between 1995 and 2004.

As in previous work (Aizcorbe, Kennickell, and Moore 2003; Copeland 2006; Lee, Lown, and Sharpe 2007), our findings indicate the importance of family characteristics in the use of debt and its impact on household finances. For example, estimates show that increases in mean and median debt between the 1995 and 2004 cohorts were greater for high-income and higher-educated near-retirees, particularly with respect to mortgage and home equity credit. Although total debt is considerably higher for such households, signs of financial distress due to debt appeared elsewhere in the population. For example, we observed substantially greater debt burdens (families devoting more than 40 percent of their income to debt service) among low-income, less-educated, nonwhite and single-female near-retiree households in both 1995 and 2004.

Although debt patterns among near-retirees may provide insights into the financial circumstances of future retirees, caution should be used in extrapolating our findings to the retirement preparedness of the leading edge of the baby-boom cohort. An important remaining question relates to the impact of housing debt, the largest share of near-retirees' debt, on future retirement income security. Housing debt is secured by a home, which is often considered to be an asset. The consequences of taking on more housing debt later in life will depend on structural factors such as the condition of the general economy, the direction of the housing market, and prevailing interest rates. For example, if the value of a home increases over time, the debt associated with it can be eliminated by liquidating the asset. However, if overall economic conditions reduce a home's value, then having more housing debt in retirement could negatively impact a household's financial well-being. The downward adjustment in home prices that began in late 2006, coupled with the subprime credit market crises (Joint Center for Housing Studies 2007), raises serious questions about the potential effects of a prolonged housing downturn on the retirement income security of near-retirees with large amounts of housing debt.[36]

Additional research on debt patterns among the older population would be fruitful. One avenue of future work would focus on the emerging consequences of the economic and financial crises on near-retirees after 2004, particularly their debt-to-assets ratios. Essentially, the two periods observed in this paper were fairly similar in reflecting, in a sense, the tops of two bubbles: asset valuations and borrowing. In this context, the relative stability in debt-to-assets ratios observed across the two cohorts may not be surprising.

Another area to examine further is the extent to which debt reduces household savings for retirement, such as a 401(k) account, and how different types of debt may mediate this relationship. The higher debt

level carried by baby boomers nearing retirement relative to earlier cohorts also raises the question of whether high debt loads encourage older adults to delay retirement in order to pay down their debt before claiming Social Security retirement benefits. There is also the issue of untangling the factors underlying debt growth, and how debt may be used differently across subgroups. Multivariate analysis that focuses on establishing the factors driving debt loads among older Americans would be valuable. Finally, the impact of financial education programs informing consumers about the potential risks of approaching retirement with high debt obligations may also be of interest.

Appendix

Table A.1.
Consumer debt by type: Median amount (in 2004 dollars) among families headed by persons aged 50–61, by selected characteristics, 1995 and 2004

	1995				2004			
Variable	All consumer debt	Credit card debt	Installment debt	Other consumer debt	All consumer debt	Credit card debt	Installment debt	Other consumer debt
All households	1,847	0	0	0	4,100	0	0	0
Debt holders	4,924	369	308	0	7,300	400	2,300	0
Age of family head								
50 to 55	2,831	0	0	0	5,040	180	0	0
56 to 61	1,231	0	0	0	3,200	0	0	0
Income thirds [a]								
Lowest	616	0	0	0	550	0	0	0
Middle	1,847	66	0	0	7,200	250	1,900	0
Highest	5,417	0	0	0	9,000	0	3,100	0
Race and ethnicity of family head								
White, non-Hispanic	1,847	0	0	0	4,270	0	0	0
Nonwhite or Hispanic	1,847	99	0	0	4,000	0	0	0
Family head marital status [b]								
Married	3,570	12	0	0	7,000	190	2,400	0
Single man	862	0	0	0	90	0	0	0
Single woman	431	0	0	0	1,610	0	0	0
Education of family head								
Less than high school	259	0	0	0	210	0	0	0
High school	1,600	62	0	0	3,700	60	0	0
Some college	4,924	616	222	0	8,000	400	1,800	0
College degree or higher	1,847	0	0	0	5,050	0	0	0

SOURCE: Authors' calculations using the 1995 and 2004 Survey of Consumer Finances.

NOTE: All observations are weighted for analysis.

a. Middle third: $30,264–$65,571 in 1995, $36,968–$84,204 in 2004.

b. Married includes cohabiting couples; single includes separated, divorced, widowed, and never married.

Table A.2.
Housing debt by type: Median amount (in 2004 dollars) among families headed by persons aged 50–61, by selected characteristics, 1995 and 2004

Variable	1995				2004			
	All housing debt	Mortgage debt [a]	Home equity line of credit debt	Other residential housing debt	All housing debt	Mortgage debt [a]	Home equity line of credit debt	Other residential housing debt
All households	8,618	4,678	0	0	29,000	20,000	0	0
Debt holders	24,622	18,466	0	0	50,000	43,000	0	0
Age of family head								
50 to 55	14,773	12.311	0	0	43,000	37,000	0	0
56 to 61	0	0	0	0	9,600	0	0	0
Income thirds [b]								
Lowest	0	0	0	0	0	0	0	0
Middle	13,542	12,311	0	0	37,000	30,000	0	0
Highest	57,861	34,470	0	0	112,000	86,000	0	0
Race and ethnicity of family head								
White, non-Hispanic	14,773	10,464	0	0	38,000	29,000	0	0
Nonwhite or Hispanic	0	0	0	0	0	0	0	0
Family head marital status [c]								
Married	20,190	14,773	0	0	50,000	43,000	0	0
Single man	0	0	0	0	0	0	0	0
Single woman	0	0	0	0	0	0	0	0
Education of family head								
Less than high school	0	0	0	0	0	0	0	0
High school	6,155	1,847	0	0	4,500	0	0	0
Some college	4,924	4,924	0	0	39,000	35,000	0	0
College degree or higher	36,932	27,084	0	0	70,000	55,000	0	0

SOURCE: Authors' calculations using the 1995 and 2004 Survey of Consumer Finances.

NOTE: All observations are weighted for analysis.

a. For mortgage loans on primary residence only.

b. Middle third: $30,264–$65,571 in 1995, $36,968–$84,204 in 2004.

c. Married includes cohabiting couples; single includes separated, divorced, widowed, and never married.

Notes

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[1] This study analyzes trends before the financial market crisis starting in 2007. The findings are thus based on an economic environment that has changed significantly since the analyzed data were collected. As new data become available, it will be vital to undertake further analysis of debt among older Americans to ascertain how trends have changed since 2004.

[2] The theme of debt among older Americans has also been highlighted by the popular media in recent years (for example, see Bayot 2004 and Dugas 2002).

[3] The number of Americans who filed for personal bankruptcy rose from 288,000 in 1980 to 1.5 million in 2004, an increase more than five-fold (White 2007).

[4] "Baby-boom generation" typically refers to persons born from 1946 to 1964.

[5] About 78 million Americans born between 1946 and 1964 were living in 2005. As the baby-boom cohort retires, the share of the U.S. population aged 65 or older is projected to rise from 12.4 percent in 2000 to 19.6 percent in 2030 (GAO 2006).

[6] See also Apgar and Di (2005), McGhee and Draut (2004), and Soto (2005).

[7] For example, Cavanagh and Sharpe (2002) and Yuh, Montalto, and Hanna (1998) found that households with credit card or installment debt had significantly smaller accumulations on discretionary retirement savings balances.

[8] See also Masnick, Di, and Belsky 2006.

[9] A large body of work has focused on the interaction between household debt and macroeconomic factors, such as the effect of credit and liquidity constraints on consumer debt (Min and Kim 2003).

[10] Housing wealth is less liquid than financial assets. The greater the amount of assets, the more able (and willing) such households will be to take on more debt and pay off that debt.

[11] Using the 2001 SCF, Yilmazer and DeVaney (2005) provide evidence that households reduce their debt as they approach retirement and that the ratio of total debt to assets tends to decrease with age.

[12] During the same period, the mean debt per household with debt holdings increased from $46,700 to $113,600 (in 2004 dollars). Summary tables can be found in the *2004 Survey of Consumer Finances Chartbook*, available at www.federalreserve.gov/pubs/oss/oss2/2004/scf2004home.html.

[13] The Tax Relief Act of 1986 (TRA-86) phased out the deductibility of consumer interest paid before taxes over a 5-year period, but kept the deductibility of interest paid for housing debt.

[14] There are many other factors that may have contributed to the rise in consumer debt. McConnell, Peach, and Al-Haschimi (2003) argue that a historically low savings rate promoted an increase in debt. Another possible factor involves the interaction between economic growth, consumer expectations of income growth, and consumer debt trends.

[15] Lindamood, Hanna, and Bi (2007) provide useful summary of methodological issues in the SCF.

[16] About two-thirds of the respondents are selected from a standard multistage area-probability design, which provides coverage of characteristics broadly distributed in the population. However, since many assets are not widely distributed among households, the survey oversamples wealthy households from a "list sample" derived from tax records. Sample weights offset the effect to reflect the national population.

[17] The use of head of household reflects a means of analyzing the data based on the structure of SCF files, not as a basis of judgment of household responsibility.

[18] For example, in 2004, about 58 percent of current retirees elected their benefits at the early retirement age of 62 (Reznik, Shoffner, and Weaver 2005/2006, Table 4).

[19] Changes reported in this paper, such as shifts in educational attainment or debt levels among near-retirees, inevitably reflect a mix of period and cohort effects that are difficult to disentangle. For example, in the case of debt, trends can be influenced by period effects such as macroeconomic conditions. They can also be influenced by birth cohorts, which may have differing attitudes toward debt or consumption. Age can also influence debt trends, but our analysis implicitly controls for this by using samples of the same age in their respective periods. See Fienberg and Mason (1979) and Lauderdale (2001) for more general discussion on strategies to deal with age, period, and cohort effects in analysis of social and economic events.

[20] More detailed information on the DSR is available in Dynan, Johnson, and Pence (2003).

[21] The SCF uses a bootstrap technique to obtain standard errors and follows a standard weighting algorithm designed by the Federal Reserve Board. For more details, readers should refer to the SCF Codebook. Estimates reported in this article reflect the average of all five SCF implicates. This approach yields the same substantive results as not averaging the SCF implicates.

[22] Although this article does not aim to explain the factors influencing debt from a multivariate framework,

we wanted to confirm the global significance of the demographic and socioeconomic subgroups selected to assess debt across different population segments. An F-test statistic allows us to assess whether the subgroups in our system (as independent variables) are jointly statistically different from zero.

To compute the F-test, we ran a series of multivariate ordinary least square regression models for Tables 1–6 where the subgroups were employed as independent variables (dummy format), with the corresponding debt outcome as the dependent variable. Each year (cohort) was estimated separately. As an example, for Table 2, we regressed total near-retiree debt on dummy variables created from the age, income, race, marital status, and education subgroups for the years 1995 and 2004.

As expected, the *F* values allow us to reject the null hypothesis that the variables jointly do not help explain the debt measure, with 0.95 confidence for all tables (and both years), with the exception of Table 3 for 1995 and 2004. Such findings generally confirm the selection of the subgroups used in our descriptive analysis.

[23] The narrowing of the mean-to-median ratios indicates a modest increase in the equality of debt distribution among the 2004 near-retiree cohort.

[24] Credit and liquidity constraints also influence levels of household debt (see Min and Kim 2003).

[25] Most credit cards, such as Visa, MasterCard, Discover, store cards, and others, allow the borrower to carry a balance forward from month to month.

[26] Between 2000 and 2004, the median price of a single family home in the U.S. rose from $148,170 to $184,100 (Joint Center for Housing Studies 2005).

[27] An important line of research not elaborated upon here involves how the elderly use housing equity to smooth their consumption during retirement (Venti and Wise 2001).

[28] These groups include subprime or high risk borrowers—people with a credit rating below "A" (Li 2005).

[29] In terms of the regulatory environment, the Taxpayer Relief Act of 1997 (TRA-97) excused more of the profits of home selling from capital gains taxes, giving further incentives for homeownership. That is to say, the ensuing loss of deductibility of consumer debt provided homeowners with incentives to shift away from consumer debt and toward second mortgages and home-equity lines of credit (Maki 2001).

[30] When constructing the DSR variable, we avoided dividing by values of zero by assigning an income value of $100 for those respondents with zero income. This was done to avoid removing families with zero income, which would have introduced a potential bias in the sample. In both years of analysis the weighted share of households with zero income was relatively small, 1.6 percent in 1995 and 0.3 percent in 2004. This procedure should not be confused with imputation of missing data.

[31] Specific financial assets used in calculating debt-to-asset ratio include liquid assets, certificates of deposit, directly held mutual funds, stocks, bonds, savings bonds, whole life insurance (cash value), other trusts, annuities, and managed investment accounts. Nonfinancial assets include vehicles, primary residence, other residential real estate, net equity in nonresidential real estate, and business interests.

[32] To avoid dividing by values of zero, we assigned an asset value of $100 for those households with zero assets. This was done to avoid removing the families with zero assets, which would have introduced a potential bias in the sample. In both years of analysis the weighted share of households with zero assets was relatively small, 3.1 percent in 1995 and 2.2 percent in 2004. This procedure should not be confused with imputation of missing data.

[33] The difference in mean ratios between 1995 and 2004 appears substantial but is not statistically significant because the standard errors are large.

[34] It should be noted that declines in home prices since the 2004 survey was administered may lower the asset side of a household's balance sheet if that household also took out a home equity line of credit during that time, at least in the short term. According to Munnell and Soto (2008), between 2001 and 2008, taking on more home equity debt for the typical household headed by an individual aged between 50 and 62 in 2004 brought about a 14 percent decline in net worth (adjusting for the present discounted value of future rents).

[35] See DeVaney (1994) for more information on the concept of using ratios to measure a household's overall financial health.

[36] For more information on the impact of housing and home equity on retirement well-being see Munnell and Soto (2008) and Sinai and Souleles (2007).

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Introduction and Overview of the 2009 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds

I. INTRODUCTION

The Old-Age, Survivors, and Disability Insurance (OASDI) program in the United States makes available a basic level of monthly income upon the attainment of retirement eligibility age, death, or disability by insured workers. The OASDI program consists of two separate parts that pay benefits to workers and their families—Old-Age and Survivors Insurance (OASI) and Disability Insurance (DI). Under OASI, monthly benefits are paid to retired workers and their families and to survivors of deceased workers. Under DI, monthly benefits are paid to disabled workers and their families.

The Board of Trustees was established under the Social Security Act to oversee the financial operations of the OASI and DI Trust Funds. The Board is composed of six members. Four members serve by virtue of their positions in the Federal Government: the Secretary of the Treasury, who is the Managing Trustee; the Secretary of Labor; the Secretary of Health and Human Services; and the Commissioner of Social Security. The other two positions, which are currently vacant, are for members of the public, to be appointed by the President, subject to confirmation by the Senate. The Deputy Commissioner of the Social Security Administration (SSA) is designated as Secretary of the Board.

The Social Security Act requires that the Board, among other duties, report annually to the Congress on the actuarial (financial) status of the OASI and DI Trust Funds. This annual report, for 2009, is the 69th such report.

Reprinted from *The 2009 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds.* The full report is available at www.socialsecurity.gov/OACT/TR/2009.

II. OVERVIEW

A. HIGHLIGHTS

The report's major findings are summarized below.

In 2008

At the end of 2008, almost 51 million people were receiving benefits: 35 million retired workers and dependents of retired workers, 6 million survivors of deceased workers, and 9 million disabled workers and dependents of disabled workers. During the year, an estimated 162 million people had earnings covered by Social Security and paid payroll taxes. Total benefits paid in 2008 were $615 billion. Total income was $805 billion, and assets held in special issue U.S. Treasury securities grew to $2.4 trillion.

Short-Range Results

The OASI Trust Fund and the combined OASI and DI Trust Funds are adequately financed over the next 10 years under the intermediate assumptions. The DI Trust Fund is expected to remain solvent over the next 10 years, but does not satisfy the short-range test of financial adequacy because assets are estimated to fall below 100 percent of annual expenditures by the beginning of 2014. The combined assets of the OASI and DI Trust Funds are projected to increase from $2,419 billion at the beginning of 2009, or 354 percent of annual expenditures, to $3,874 billion at the beginning of 2018, or 338 percent of annual expenditures in that year. Combined assets were projected for last year's report to rise to 369 percent of annual expenditures at the beginning of 2009, and 378 percent at the beginning of 2018.

Long-Range Results

Under the intermediate assumptions, OASDI cost will increase more rapidly than tax income between about 2012 and 2030 because the retirement of the baby-boom generation will cause the number of beneficiaries to rise much faster than the labor force. After 2030, increases in life expectancy and the continued relatively low fertility rates experienced since the baby boom will generally cause Social Security system costs to increase relative to tax income, but more slowly. Annual cost will exceed tax income starting in 2016, at which time the annual gap will be covered with cash from redemptions of special obligations of the Treasury that make up the trust fund assets until these assets are exhausted in 2037. Individually, the DI fund is projected to be exhausted in 2020 and the OASI fund in 2039. For the 75-year projection period, the actuarial deficit is 2.00 percent of taxable payroll, 0.30 percentage point larger than in last year's report. The open group unfunded

obligation for OASDI over the 75-year period is $5.3 trillion in present value, and is $0.9 trillion more than the measured level of a year ago. In the absence of any changes in assumptions, methods, and starting values, the unfunded obligation would have risen to about $4.6 trillion due to the change in the valuation date.

The OASDI annual cost rate is projected to increase from 12.35 percent of taxable payroll in 2009, to 16.76 percent in 2030, and to 17.68 percent in 2083, a level that is 4.34 percent of taxable payroll more than the projected income rate for 2083. For last year's report, the OASDI cost for 2083 was estimated at 17.54 percent, or 4.25 percent of payroll more than the annual income rate for that year. Expressed in relation to the projected gross domestic product (GDP), OASDI cost is estimated to rise from the current level of 4.8 percent of GDP to 6.1 percent in 2030, and then to peak at almost 6.2 percent in 2034. Thereafter, OASDI cost as a percent of GDP is projected to decline, reaching a level around 5.8 percent for the period 2050 through 2083.

The worsening of the long-range actuarial status of the OASDI program indicated in this report is principally the result of projected lower levels of economic activity that reflect the recent economic downturn and updated data, and faster reductions in mortality assumed in the longer term. Changes in the economic assumptions and the mortality assumptions contribute to about the same degree to the reduction in the program's actuarial balance.

Conclusion

Under the long-range intermediate assumptions, annual cost will begin to exceed tax income in 2016 for the combined OASDI Trust Funds. The combined funds are then projected to become exhausted and thus unable to pay scheduled benefits in full on a timely basis in 2037. The separate DI Trust Fund, however, is projected to become exhausted in 2020.

For the combined OASDI Trust Funds to remain solvent throughout the 75-year projection period, the combined payroll tax rate could be increased during the period in a manner equivalent to an immediate and permanent increase of 2.01 percentage points, benefits could be reduced during the period in a manner equivalent to an immediate and permanent reduction of 13.3 percent, general revenue transfers equivalent to $5.3 trillion in present value could be made during the period, or some combination of approaches could be adopted. Significantly larger changes would be required to maintain solvency beyond 75 years.

For this year's intermediate projections, real GDP starts at a lower level than was assumed last year for 2008, declines through the second quarter of 2009, levels off in the third quarter, and then begins to grow, reaching the projected stable, sustainable path by the end of 2015. These revised economic assumptions account for about half of the estimated reduction in the program's actuarial balance relative to last year's report. The effect of the recession on the actuarial balance would be smaller than projected in this report if the recovery were such that economic output substantially overshoots the projected sustainable path, a phenomenon observed in some past business cycles.

The projected trust fund deficits should be addressed in a timely way so that necessary changes can be phased in gradually and workers can be given time to plan for them. Implementing changes sooner will allow their effects to be spread over more generations. Social Security plays a critical role in the lives of 52 million beneficiaries and 160 million covered workers and their families in 2009. With informed discussion, creative thinking, and timely legislative action, present and future Congresses and Presidents can ensure that Social Security continues to protect future generations.

B. TRUST FUND FINANCIAL OPERATIONS IN 2008

The table below shows the income, expenditures, and assets for the OASI, the DI and the combined OASDI Trust Funds in calendar year 2008.

Table II.B1.—Summary of 2008 Trust Fund Financial Operations
(In billions)

	OASI	DI	OASDI
Assets at the end of 2007	$2,023.6	$214.9	$2,238.5
Total income in 2008	695.5	109.8	805.3
Net contributions	574.6	97.6	672.1
Taxation of benefits	15.6	1.3	16.9
Interest	105.3	11.0	116.3
Total expenditures in 2008	516.2	109.0	625.1
Benefit payments	509.3	106.0	615.3
Railroad Retirement financial interchange	3.6	.4	4.0
Administrative expenses	3.2	2.5	5.7
Net increase in assets in 2008	179.3	.9	180.2
Assets at the end of 2008	2,202.9	215.8	2,418.7

Note: Totals do not necessarily equal the sums of rounded components.

In 2008, net contributions accounted for 83 percent of total trust fund income. Net contributions consist of taxes paid by employees, employers and the self-employed on earnings covered by Social Security. These taxes were paid on covered earnings up to a specified maximum annual amount, which was $102,000 in 2008 and is increased each year automatically (to $106,800 in 2009) as the average wage increases. The tax rates scheduled under current law for 2008 and later are shown in table II.B2.

Table II.B2.—Tax Rates for 2008 and Later

	OASI	DI	OASDI
Tax rate for employees and employers, each (in percent)	5.30	0.90	6.20
Tax rate for self-employed persons (in percent)	10.60	1.80	12.40

Two percent of OASDI Trust Fund income came from subjecting up to 50 percent of Social Security benefits above specified levels to Federal personal income taxation, and 14 percent of OASDI income came from interest earned on investment of OASDI Trust Fund reserves. Social Security's assets are invested in interest-bearing securities of the U.S. Government. In 2008, the combined trust fund assets earned interest at an effective annual rate of 5.1 percent. More than 98 percent of expenditures from the combined

OASDI Trust Funds in 2008 went to pay retirement, survivor, and disability benefits totaling $615.3 billion. The financial interchange with the Railroad Retirement program resulted in a payment of $4.0 billion from the combined OASDI Trust Funds, or about 0.6 percent of total expenditures. The administrative expenses of the Social Security program were $5.7 billion, or about 0.9 percent of total expenditures.

Assets of the trust funds provide a reserve to pay benefits whenever total program cost exceeds income. Trust fund assets increased by $180.2 billion in 2008 because income to each fund exceeded expenditures. At the end of 2008, the combined assets of the OASI and the DI Trust Funds were 354 percent of estimated expenditures for 2009, down from an actual level of 358 percent at the end of 2007.

C. ASSUMPTIONS ABOUT THE FUTURE

Future income and expenditures of the OASI and DI Trust Funds will depend on many factors, including the size and characteristics of the population receiving benefits, the level of monthly benefit amounts, the size of the workforce, and the level of workers' earnings. These factors will depend in turn on future birth rates, death rates, immigration, marriage and divorce rates, retirement-age patterns, disability incidence and termination rates, employment rates, productivity gains, wage increases, inflation, and many other demographic, economic, and program-specific factors.

The intermediate demographic and economic assumptions shown in table II.C1 reflect the Trustees' best estimates of future experience, and therefore most of the figures in this overview depict only the outcomes under the intermediate assumptions. Any projection of the future is, of course, uncertain. For this reason, alternatives I (low-cost) and III (high-cost) are included to provide a range of possible future experience. The assumptions for these two alternatives are also shown in table II.C1, and their implications are highlighted in a separate section, beginning on page 14, on the uncertainty of the projections.

Assumptions are reexamined each year in light of recent experience and new information. This annual review helps to ensure that the assumptions provide the Trustees' best estimate of future possibilities.

Table II.C1.—Ultimate[a] Values of Key Demographic and Economic Assumptions for the Long-Range (75-year) Projection Period

Ultimate assumptions	Intermediate	Low-cost	High-cost
Total fertility rate (children per woman)	2.0	2.3	1.7
Average annual percentage reduction in total age-sex-adjusted death rates from 2033 to 2083	.77	.35	1.24
Average annual net immigration (in thousands) over the period 2009-83	1,065	1,370	785
Annual percentage change in:			
Productivity (total U.S. economy)	1.7	2.0	1.4
Average wage in covered employment	3.9	3.5	4.3
Consumer Price Index (CPI)	2.8	1.8	3.8
Real-wage differential (percent)	1.1	1.7	.5
Unemployment rate (percent)	5.5	4.5	6.5
Annual trust fund real interest rate (percent)	2.9	3.6	2.1

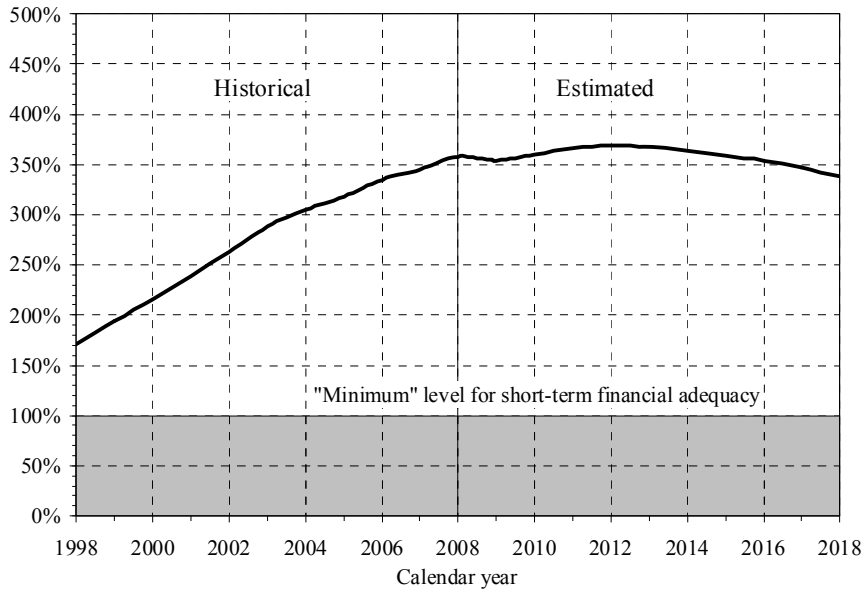
[a] Ultimate values are assumed to be reached within 25 years. See chapter V for details, including historical values and projected values prior to reaching the ultimate.

D. PROJECTIONS OF FUTURE FINANCIAL STATUS

Short-Range Actuarial Estimates

For the short range (2009-2018), the Trustees measure financial adequacy by comparing projected assets at the beginning of each year to projected program cost for that year under the intermediate set of assumptions. Having a trust fund ratio of 100 percent or more—that is, assets at the beginning of each year at least equal to projected cost for the year—is considered a good indication of a trust fund's ability to cover most short-term contingencies. The projected trust fund ratios for OASI alone, and for OASI and DI combined, under the intermediate assumptions exceed 100 percent throughout the short-range period and therefore OASI and OASDI satisfy the Trustees' short-term test of financial adequacy. Considering the DI program alone, however, its trust fund ratio is projected to fall below the 100 percent level by the beginning of 2014. Thus, DI fails to satisfy the Trustees' short-term test of financial adequacy. Figure II.D1 below shows that the trust fund ratios for the combined OASI and DI Trust Funds reach a peak level in 2012 and begin declining thereafter.

Figure II.D1.—Short-Range OASDI Trust Fund Ratios
[Assets as a percentage of annual expenditures]

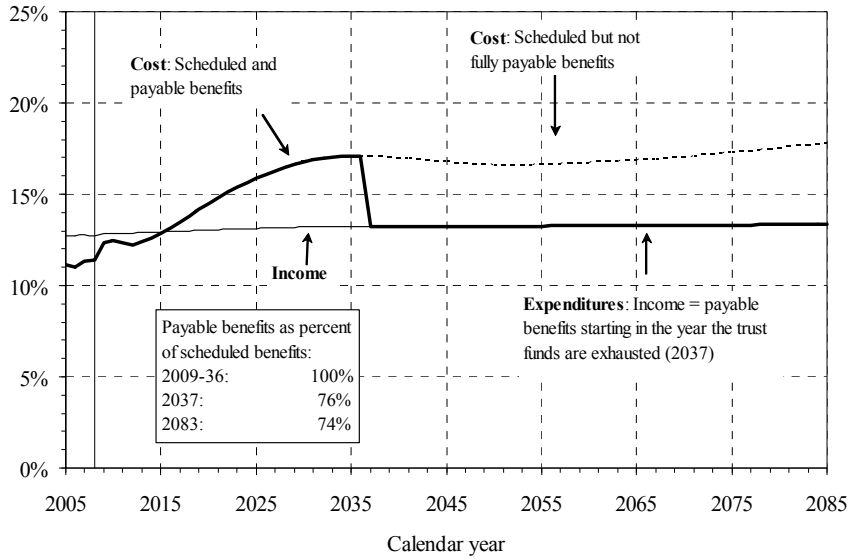


Long-Range Actuarial Estimates

The actuarial status of the program over the next 75 years is measured in terms of annual cost and income as a percentage of taxable payroll, trust fund ratios, the actuarial balance (also as a percentage of taxable payroll), and the open group unfunded obligation (expressed in present-value dollars and as percentages of taxable payroll and gross domestic product (GDP)). Considering Social Security's annual cost and income as a percentage of the total U.S. economic output or GDP provides an additional important perspective.

The year-by-year relationship between income and cost rates shown in figure II.D2 illustrates the expected pattern of cash flows for the OASDI program over the full 75-year period. Under the intermediate assumptions, the OASDI cost rate is projected to increase rapidly and first exceed the income rate in 2016, producing cash-flow deficits thereafter. Redemption of trust fund assets will allow continuation of full benefit payments on a timely basis until 2037, when the trust funds are projected to become exhausted. This redemption process will require a flow of cash from the General Fund of the Treasury. Pressures on the Federal Budget will thus emerge well before 2037. Even if a trust fund's assets are exhausted, however, tax income will continue to flow into the fund. Present tax rates are projected to be sufficient to pay 76 percent of scheduled benefits after trust fund exhaustion in 2037 and 74 percent of scheduled benefits in 2083.

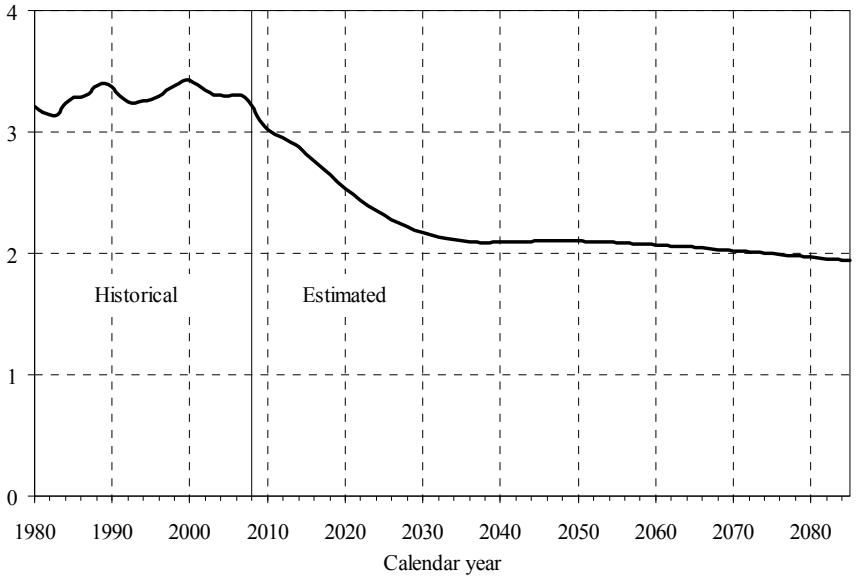
Figure II.D2.—OASDI Income and Cost Rates Under Intermediate Assumptions
[As a percentage of taxable payroll]



Social Security's cost rate is projected to rise rapidly from about 2012 through 2030 because the retirement of the baby-boom generation will cause the number of beneficiaries to rise much faster than the labor force. Thereafter, the cost rate is estimated to rise at a slower rate for about 5 years and then to remain fairly stable for the next 25 years. Continued reductions in death rates and maintaining birth rates at levels well below those from the baby-boom era and before will cause a continued increase in the average age of the population and will raise the cost rate from 16.7 percent of taxable payroll in 2060 to 17.7 percent by 2083 under the intermediate assumptions. After 2083, the increase in the average age of the population is likely to continue and to increase the gap between OASDI cost and income rates.

The estimated number of workers per beneficiary is shown in figure II.D3. There were about 3.2 workers for every OASDI beneficiary in 2008. This ratio has been extremely stable, remaining between 3.2 and 3.4 since 1974. However, the baby-boom generation will have largely retired by 2030, and the ratio of workers to beneficiaries is projected to be only 2.2 at that time. Thereafter, the number of workers per beneficiary will slowly decline, and the OASDI cost rate will continue to increase, largely due to projected reductions in mortality.

Figure II.D3.—Number of Covered Workers Per OASDI Beneficiary



The maximum projected trust fund ratios for the OASI, DI, and combined funds appear in table II.D1. The year in which the maximum projected trust fund ratio is attained and the year in which the assets are projected to be exhausted are shown as well.

Table II.D1.—Projected Maximum Trust Fund Ratios Attained and Trust Fund Exhaustion Dates Under the Intermediate Assumptions

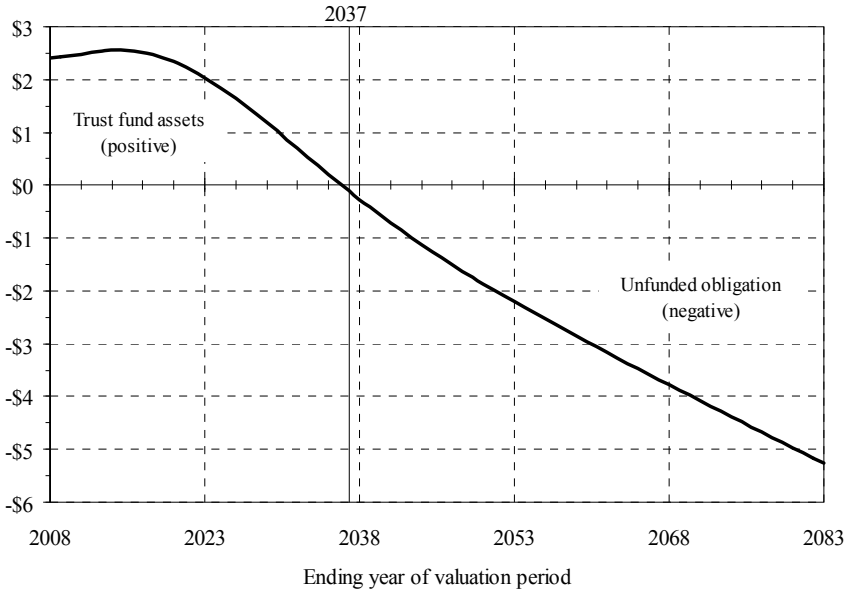
	OASI	DI	OASDI
Maximum trust fund ratio (percent)	422	179	369
Year attained	2012	2009	2012
Year of trust fund exhaustion	2039	2020	2037

The actuarial balance is a measure of the program's financial status for the 75-year valuation period as a whole. It is essentially the difference between income and cost of the program expressed as a percentage of taxable payroll over the valuation period. This single number summarizes the adequacy of program financing for the period. When the actuarial balance is negative, the actuarial deficit can be interpreted as the percentage that could be added to the current-law income rate for each of the next 75 years, or subtracted from the cost rate for each year, to bring the funds into actuarial balance. Because the effects of future changes are unlikely to follow this pattern, this measure should be viewed only as providing a rough indication of the amount of change that is needed over the 75-year period as a whole. In this report, the actuarial balance under the intermediate assumptions is a deficit of 2.00 percent of taxable payroll for the combined OASI and DI Trust Funds. The actuarial deficit was 1.70 percent in the 2008 report and has been in the range of 1.70 percent to 2.07 percent for the last 10 reports. The actuarial deficit increases relative to the level estimated in last year's report primarily because of revised economic data through 2008, the significant near-term effects of the current economic recession, and the longer-term effects of lower ultimate mortality rates.

Another way to illustrate the financial shortfall of the OASDI system is to examine the cumulative value of income less cost, in present value. Figure II.D4 shows the present value of cumulative OASDI income less cost through the next 75 years. The balance of the combined trust funds peaks at $2.6 trillion in 2016 (in present value) and then turns downward. This cumulative amount continues to be positive, indicating trust fund assets, or reserves, through 2036. However, after 2036 this cumulative amount becomes negative, indicating a net unfunded obligation. Through the end of 2083, the combined funds have a present-value unfunded obligation of $5.3 trillion. This unfunded obligation represents 1.9 percent of future taxable payroll and 0.7 percent of future GDP through the end of the 75-year

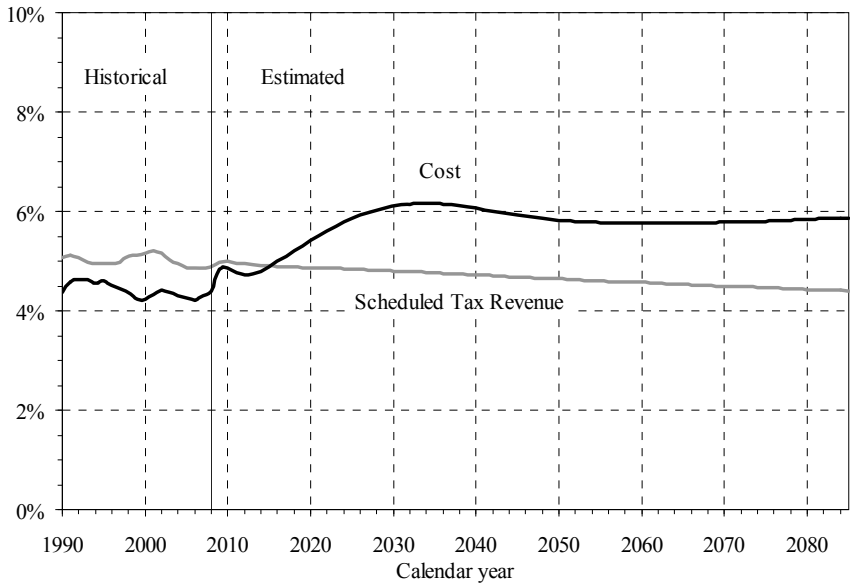
projection period. The 0.1 percentage point difference between the unfunded obligation as a share of taxable payroll (1.9 percent) and the actuarial balance (2.0 percent) reflects the additional requirement of an ending trust fund balance equal to 1 year's cost for the actuarial balance calculation.

Figure II.D4.—Cumulative OASDI Income Less Cost, Based on Present Law Tax Rates and Scheduled Benefits
[Present value as of January 1, 2009, in trillions]



Still another important way to look at Social Security's future is to view its annual cost and tax income as a share of U.S. economic output. Figure II.D5 shows that Social Security's cost as a percentage of GDP is projected to grow from 4.8 percent in 2009 to 6.1 percent in 2030, and then to peak at almost 6.2 percent in 2034. Thereafter, OASDI cost as a percent of GDP is projected to decline reaching a level around 5.8 percent for the period 2050 through 2083. However, Social Security's scheduled tax revenue is projected to decline from its current level of about 5.0 percent of GDP, reaching about 4.4 percent by 2083. Income from payroll taxes declines generally in relation to GDP in the future because an increasing share of employee compensation is assumed to be provided in fringe benefits, making wages a shrinking share of GDP.

Figure II.D5.—OASDI Cost and Scheduled Tax Revenue as a Percentage of GDP



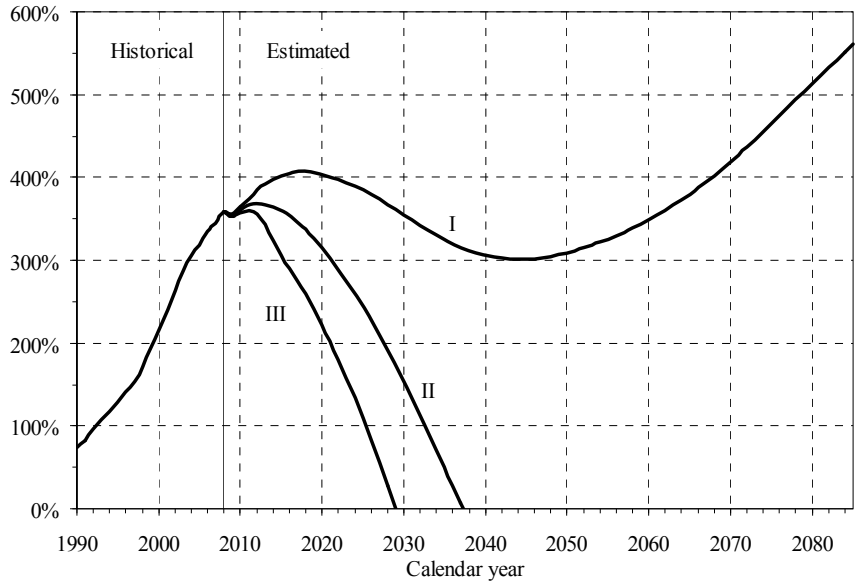
Figures II.D2, II.D4, and II.D5 show that the program's financial condition is worsening at the end of the period. Overemphasis on summary measures for a 75-year period can lead to incorrect perceptions and to policy prescriptions that do not achieve sustainable solvency. Thus, careful consideration of the trends in annual deficits and unfunded obligations toward the end of the 75-year period is important. In addition, summary measures for a time period that extends to the infinite horizon are included in this report. These measures provide an additional indication of Social Security's very long-run financial condition, but are subject to much greater uncertainty. These calculations show that extending the horizon beyond 75 years increases the unfunded obligation. Over the infinite horizon, the shortfall (unfunded obligation) is $15.1 trillion in present value, or 3.4 percent of future taxable payroll and 1.2 percent of future GDP. These calculations of the shortfall indicate that much larger changes may be required to achieve solvency beyond the 75-year period as compared to changes needed to balance 75-year period summary measures. The measured unfunded obligation over the infinite horizon is increased from $13.6 trillion in last year's report. In the absence of any changes in assumptions, methods, and starting values, the unfunded obligation over the infinite horizon would have risen to $14.3 trillion due to the change in the valuation date. The additional increase in the unfunded obligation over the infinite horizon is largely the result of the changes in near-term economic and ultimate mortality assumptions.

Expressed as percentages of taxable payroll and of GDP, the measured unfunded obligation over the infinite horizon increased from 3.2 percent and 1.1 percent, respectively, in last year's report.

Uncertainty of the Projections

Significant uncertainty surrounds the intermediate assumptions. The Trustees utilize several methods to help illustrate that uncertainty. One approach is the use of low-cost (alternative I) and high-cost (alternative III) assumptions. Figure II.D6 shows the projected trust fund ratios for the combined OASI and DI Trust Funds under the intermediate, low-cost, and high-cost assumptions. The low-cost alternative reflects a set of assumptions that improves the projected financial status of the trust funds relative to the financial status under the intermediate set of assumptions. The low-cost alternative includes a higher ultimate total fertility rate, slower improvement in mortality, a higher real-wage differential, and lower unemployment. The high-cost alternative, in contrast, includes a lower ultimate total fertility rate, more rapid improvement in mortality, a lower real-wage differential, and higher unemployment. These alternatives are not intended to suggest that all parameters would be likely to differ from the intermediate values in the same direction, but are intended to illustrate the effect of scenarios that are, on balance, very favorable or unfavorable for the program's financial status. The actual outcome for future costs is unlikely to be as extreme as either of the outcomes portrayed by the low- and high-cost projections. The method for constructing these low- and high-cost projections does not provide an estimate of the probability that actual experience will lie within or outside the range they define.

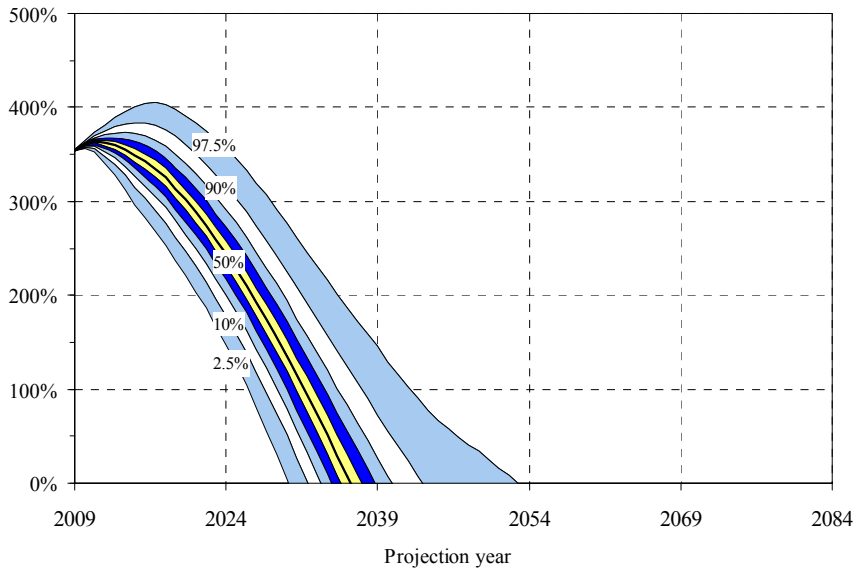
Figure II.D6.—Long-Range OASDI Trust Fund Ratios Under Alternative Assumptions
[Assets as a percentage of annual cost]



This report also provides long-range sensitivity analysis for the OASDI program, varying one parameter at a time, in Appendix D. These estimates provide further illustrations of the uncertainty surrounding projections into the future, but do not provide any measure of the probability that future outcomes will fall within or outside the ranges shown.

A third approach that measures uncertainty uses stochastic simulations to develop a range of projections and does provide estimates of the probability that future outcomes will fall within or outside a given range. The results of the stochastic simulations, discussed in more detail in Appendix E, suggest that trust fund exhaustion is highly probable sometime during the 75-year period (see figure II.D7). Further, the stochastic results suggest that outcomes as good as the low-cost alternative or as bad as the high-cost alternative are unlikely. However, the relationship between the stochastic results and the low- and high-cost alternatives may change as the methodology for the stochastic simulations is further developed. As noted in Appendix E, future improvements and refinements are expected to be more likely to expand rather than reduce the indicated range of uncertainty.

Figure II.D7.—Annual Trust Fund Ratios



Changes From Last Year's Report

The long-range OASDI actuarial deficit of 2.00 percent of taxable payroll for this year's report is larger than the deficit of 1.70 percent of taxable payroll shown in last year's report under intermediate assumptions. Changes in near-term economic growth and ultimate mortality assumptions, as well as changes in starting values, are the main reasons for the increase in the deficit.

For this year's intermediate projections, real GDP growth starts at a lower level than was assumed last year for 2008 and then declines through the second quarter of 2009. The recovery from the recession brings economic activity to the projected stable, sustainable path by the end of 2015. These revised economic assumptions account for about half of the estimated reduction in the program's actuarial balance relative to last year's report. The effect of the recession on the actuarial balance would be smaller than projected in this report if the recovery were such that economic output substantially overshoots the projected sustainable path, a phenomenon observed in some past business cycles. For a detailed description of the specific changes identified in table II.D2 below, see section IV.B7 on page 68.

Table II.D2.—Reasons for Change in the 75-Year Actuarial Balance Under Intermediate Assumptions
[As a percentage of taxable payroll]

Item	OASI	DI	OASDI
Shown in last year's report:			
Income rate	12.01	1.93	13.94
Cost rate	13.46	2.17	15.63
Actuarial balance	**-1.46**	**-.24**	**-1.70**
Changes in actuarial balance due to changes in:			
Legislation / Regulation	.00	.00	.00
Valuation period[a]	-.04	-.01	-.05
Demographic data and assumptions	-.11	.00	-.11
Economic data and assumptions	-.13	-.02	-.15
Disability assumptions	-.01	-.01	-.01
Methods and programmatic data	+.07	-.04	+.03
Total change in actuarial balance	-.22	-.08	-.30
Shown in this report:			
Actuarial balance	**-1.68**	**-.32**	**-2.00**
Income rate	12.08	1.93	14.02
Cost rate	13.76	2.25	16.02

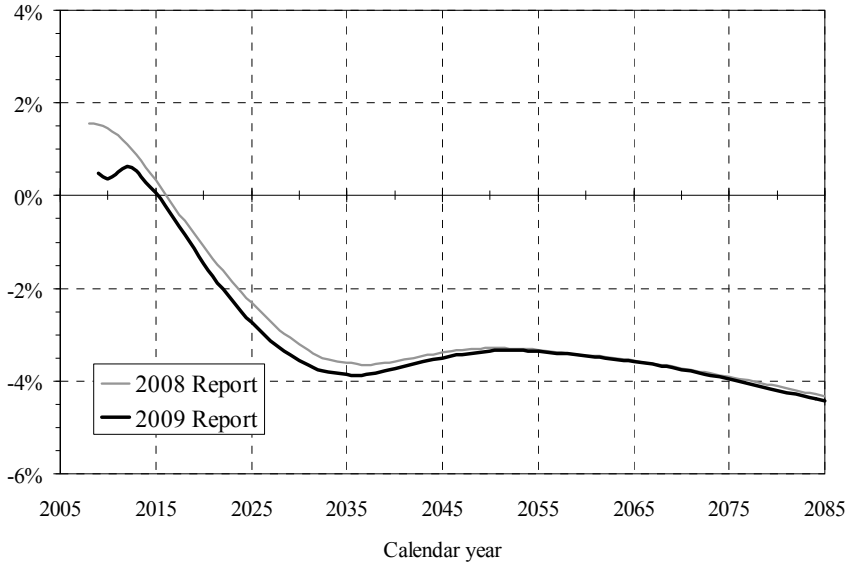
[a] In changing from the valuation period of last year's report, which was 2008-82, to the valuation period of this report, 2009-83, the relatively large negative annual balance for 2083 is included. This change in the valuation period results in a larger long-range actuarial deficit. The fund balance at the end of 2008, i.e., at the beginning of the projection period, is included in the 75-year actuarial balance.

Note: Totals do not necessarily equal the sums of rounded components.

The open group unfunded obligation over the 75-year projection period has increased from $4.3 trillion (present discounted value as of January 1, 2008) to $5.3 trillion (present discounted value as of January 1, 2009). The measured unfunded obligation would be expected to increase by about $0.3 trillion due to advancing the valuation date by 1 year and including the additional year 2083. Changes in methods, revisions in assumptions, and updated data further increased the measured unfunded obligation by about $0.7 trillion.

Figure II.D8 shows that this year's projections of annual balances (noninterest income minus cost) are lower than those in last year's report throughout the 75-year projection period.

Figure II.D8.—OASDI Annual Balances: 2008 and 2009 Trustees Reports
[As a percentage of taxable payroll under the intermediate assumptions]



E. CONCLUSION

Under current law, the cost of Social Security will soon begin to increase faster than the program's income because of the aging of the baby-boom generation, expected continuing low fertility (compared to the baby-boom period), and increasing life expectancy. Based on the Trustees' best estimate, program cost will exceed tax revenues starting in 2016 and throughout the remainder of the 75-year projection period. Social Security's combined trust funds are projected to allow full payment of scheduled benefits until they become exhausted in 2037. At that time, annual tax income to the trust funds is projected to equal about 76 percent of program costs. By 2083, annual tax income is projected to be about 74 percent as large as the annual cost of the OASDI program.

Separately, the OASI and DI funds are projected to have sufficient funds to pay full benefits on time until 2039 and 2020, respectively. The fact that the DI fund is projected to become exhausted in 2020 means that some action will likely need to be taken in the next 10 years. At a minimum, a reallocation of the payroll tax rate between OASI and DI would be necessary, as was done in 1994.

Over the full 75-year projection period, the actuarial deficit estimated for the combined trust funds is 2.00 percent of taxable payroll—0.30 percentage point greater than the 1.70 percent deficit projected in last year's report. This deficit indicates that solvency of the combined OASDI Trust Funds for the next 75 years could be restored under the intermediate assumptions if increases were made equivalent to immediately and permanently increasing the Social Security payroll tax from its current level of 12.40 percent (for employees and employers combined) to 14.41 percent. Alternatively, changes could be made that are equivalent to reducing all current and future benefits by about 13.3 percent. Other ways of reducing the deficit include making transfers from general revenues or adopting some combination of approaches.

If no substantial action is taken until the combined trust funds become exhausted in 2037, then changes necessary to make Social Security solvent over the next 75 years will be concentrated on fewer years and fewer cohorts:

- For example, payroll taxes could be raised to finance scheduled benefits fully in every year starting in 2037. In this case, the payroll tax would be increased to about 16.26 percent at the point of trust fund exhaustion in 2037 and continue rising to about 16.74 percent in 2083.

- Similarly, benefits could be reduced to the level that is payable with scheduled tax rates in each year beginning in 2037. Under this scenario, benefits would be reduced 24 percent at the point of trust fund exhaustion in 2037, with reductions reaching 26 percent in 2083.

Either of these examples would eliminate the shortfall for the 75-year period as a whole by specifically eliminating annual deficits after trust fund exhaustion. Because of the increasing average age of the population (due to expected improvement in life expectancy and continued low birth rates), Social Security's annual cost will very likely continue to grow faster than scheduled tax revenues after 2083. As a result, ensuring solvency of the system beyond 2083 would likely require further changes beyond those expected to be needed for 2083.

The projected trust fund deficits should be addressed in a timely way to allow for a gradual phasing in of the necessary changes and to provide advance notice to workers. Making adjustments sooner will allow them to be spread over more generations. In 2009, Social Security plays a critical role in the lives of 52 million beneficiaries and 160 million covered workers and their families. With informed discussion, creative thinking, and timely legislative action, present and future Congresses and Presidents can ensure that Social Security continues to protect future generations.

For further information related to the contents of this report, see the following websites.

- www.socialsecurity.gov/OACT/TR/TR09/index.html
- www.cms.hhs.gov/ReportsTrustFunds/
- www.treas.gov/offices/economic-policy/social_security.html

The Story of the Social Security Number

by Carolyn Puckett*

The use of the Social Security number (SSN) has expanded significantly since its inception in 1936. Created merely to keep track of the earnings history of U.S. workers for Social Security entitlement and benefit computation purposes, it has come to be used as a nearly universal identifier. Assigned at birth, the SSN enables government agencies to identify individuals in their records and businesses to track an individual's financial information. This article explores the history and meaning of the SSN and the Social Security card, as well as the Social Security Administration's (SSA's) SSN master file, generally known as the Numident. The article also traces the historical expansion of SSN use and the steps SSA has taken to enhance SSN integrity.

Introduction

The Social Security number (SSN) was created in 1936 for the sole purpose of tracking the earnings histories of U.S. workers, for use in determining Social Security benefit entitlement and computing benefit levels. Since then, use of the SSN has expanded substantially. Today the SSN may be the most commonly used numbering system in the United States. As of December 2008, the Social Security Administration (SSA) had issued over 450 million original SSNs, and nearly every legal resident of the United States had one. The SSN's very universality has led to its adoption throughout government and the private sector as a chief means of identifying and gathering information about an individual.

How did the SSN come to be, and why has it become an unofficial national identifier? This article explores the history and meaning of the SSN and the Social Security card, along with SSA's SSN master data file, generally known as the Numident. The article also traces how use of the SSN has expanded since its introduction and the steps SSA has taken to enhance the integrity of the SSN process.

Crafting the SSN

At its inception, the SSN's only purpose was to uniquely identify U.S. workers, enabling employers to submit accurate reports of covered earnings for use in administering benefits under the new Social Security program. That is still the primary purpose for the SSN.

However, creating the SSN scheme and assigning SSNs to U.S. workers was no easy task. Passage of the Social Security Act in August 1935 set in motion a huge effort to build the infrastructure needed to support a program affecting tens of millions of individuals. Many said the task was impossible (SSA 1952; SSA 1965, 26). Employers were to begin to deduct payroll taxes from worker's wages in January 1937, giving the agency little time to establish the SSN process.[1] Besides clarifying program policy, the agency needed to hire and train employees (7,500 by March 1938), set up facilities, develop public education programs, and create an earnings-tracking system (Corson 1938, 6).

Establishing the Social Security infrastructure was impeded for 3½ months by the lack of funds due to a filibuster of the 1936 Deficiency Bill (a government-wide appropriation bill similar to current Omnibus Budget Reconciliation bills) by Senator Huey Long (D–LA). The Roosevelt administration circumvented

Selected Abbreviations

DHS	Department of Homeland Security
DoS	Department of State
EAB	Enumeration at birth
EaE	Enumeration at entry
EIN	Employer identification number
EO	Executive order

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Selected Abbreviations—*continued*

FTC	Federal Trade Commission
INS	Immigration and Naturalization Service
IRS	Internal Revenue Service
IRTPA	Intelligence Reform and Terrorism Prevention Act of 2004
P.L.	Public Law
SS-4	Application for an employer identification number
SS-5	Application for a Social Security number
SSA	Social Security Administration
SSN	Social Security number
USES	U.S. Employment Service
WPA	Works Progress Administration

this obstacle by engineering a Works Progress Administration (WPA) allotment of $112,610 from the Department of Labor and by borrowing staff from the demobilizing National Recovery Administration, the Federal Emergency Relief Administration, and the National Youth Administration. On February 9, 1936, Congress finally passed the deficiency bill containing the fiscal year 1936 appropriation for the Social Security Board (precursor of the SSA), and Roosevelt signed it on February 11. As late as March 15, 1936, there were still only five employees of the Social Security Board's Bureau of Old-Age Benefits—including the director and his assistant (McKinley and Frase 1970, 18, 28, and 49).

Additionally, the U.S. Supreme Court declared the Agricultural Adjustment Act invalid in January 1936, raising the possibility that the Social Security Act might also be declared unconstitutional (McKinley and Frase 1970, 22–23; SSA 1952). It would not be until May 1937 that a series of Supreme Court decisions cemented the constitutionality of the Social Security Act (SSA n.d. a).

One of the first steps in administering the Social Security Act was to devise a means to track the earnings of each individual, as Social Security benefit computations consider a worker's earnings from 1937 on.

Why didn't the Social Security Board just use an individual's name and address as the identifier? The deficiency of such a scheme was already well known. A 1937 publication recounts, "A recent news account states that the Fred Smiths of New York City have had so much trouble in being identified by their creditors, the courts, and even their friends, that they have joined together in forming the 'Fred Smiths, Incorporated,' to serve as a clearing house for their identification problems." Some government agencies, such as the U.S. War and Navy Departments, the Veterans Administration (for paying pensions and for adjusted compensation certificates), and the Post Office Department (for Postal Savings depositors) used fingerprints for identification. However, the use of fingerprints was associated in the public mind with criminal activity, making this approach undesirable (Wyatt and Wandel 1937, 45–47). A numbering scheme was seen as the practical alternative. Thus, the employer identification number (EIN) and the SSN were created.

Today we take the 9-digit composition of the SSN as a given, but in 1935 and 1936 many other schemes were considered. In early November 1935, the Social Security Board adopted an identifier composed of 3 alphabetic characters representing geographic areas and 5 numeric characters. However, the Board made this decision without consulting other federal agencies. The U.S. Employment Service (USES), the Census Bureau, the Central Statistical Board, and the Bureau of Labor Statistics all used numeric symbols without alphabetic characters since most standard statistical machines used this scheme. With alphabetic symbols, these agencies, as well as many private companies, would have had to buy new machines. Only two companies manufactured tabulating machines using a combination of alphabetic and numeric characters, and the government had previously brought suit against them under the Sherman Antitrust Act for dividing market territory between them (McKinley and Frase 1970, 320–322).

The Board called a meeting of all interested agencies to discuss the numeration issues.[2] In a November 1935 report, a subcommittee of this interdepartmental group proposed three alternatives:

- a 9-digit number consisting of a 4-digit serial number, a 2-digit year of birth indicator, and a 3-digit number indicating the geographic area of registration;
- an 8-digit number with a 5-digit serial number and a 3-digit geographic indicator; or
- a 7-character version consisting of 4 digits and 3 alphabetic characters (McKinley and Frase 1970, 322).

On December 17, 1935, the Board approved the 9-digit option (McKinley and Frase 1970, 323). The Board planned to use the year one attained age 65

as part of the SSN, thinking that once an individual attained age 65, the SSN would be reassigned to someone else. But at a meeting on January 23, 1936, the unemployment compensation delegates objected to the use of digits to signify age because they thought a number of workers would falsify their age. As a result, a new scheme adopted by the Board on February 14 consisted of a 3-digit area code, a 2-digit month of birth, and a 4-digit serial number.

Finally, on June 2, 1936, the Board decided to keep the 9-digit scheme, although using the fourth and fifth digits to represent the month of birth was abandoned. Instead, those two digits would be a "group number" that could be used to maximize the utility of mechanical equipment and to verify the accuracy of punch cards. This scheme would permit the prenumbering of registration forms and was capable of expansion to nearly 1 billion accounts (McKinley and Frase 1970, 342–344). The numbering scheme would also facilitate storing the applications since the agency's files were organized by region as well as alphabetically.

Deconstructing the SSN

As a result of the June 1936 decision, the current SSN is composed of three parts:

- The first three digits are the **area number**
- The next two digits are the **group number**
- The final four digits are the **serial number**

Area Number

The 3-digit area number is assigned by geographic region. In 1936 the Social Security Board planned eventually to use area numbers to redistribute work to its 12 regional centers to serve workers in those areas. One or more area numbers were allocated to each state based on the anticipated number of SSN issuances in the state.[3] Prior to 1972, the numbers were issued to local offices for assignment to individuals; it was thought this would capture information about the worker's residence. So, until 1972, the area number represented the state in which the card was issued. (Barron and Bamberger 1982, 29).

Generally, area numbers were assigned in ascending order beginning in the northeast and then moving westward. For the most part, people on the east coast have the lowest area numbers and those on the west coast have the highest area numbers. However, area numbers did not always reflect the worker's residence. During the initial registration in 1936 and 1937, businesses with branches throughout the country had employees return their SS-5 Application for Account Number to their national headquarters, so these SSNs carried the area number where the headquarters were located. As a result, the area numbers assigned to big cities, such as New York, Philadelphia, Boston, and Chicago, were used for workers in many other parts of the country (McKinley and Frase 1970, 373). Also, a worker could apply in person for a card in any Social Security office, and the area number would reflect that office's location, regardless of the worker's residence.

Since 1972, when SSA began assigning SSNs and issuing cards centrally from Baltimore, MD, the area number has been assigned based on the ZIP code of the mailing address provided on the application for the original Social Security card. The applicant's mailing address may not be the same as the place of residence.

Some exceptions to the general east-to-west, ascending-order area numbering scheme exist:

- Sequence 700 through 728 was assigned to railroad workers until July 1963.
- 586 was divided among American Samoa, Guam, the Philippines, Americans employed abroad by American employers and, from 1975 to 1979, Indochinese refugees.
- 580 was assigned to Puerto Rico and the U.S. Virgin Islands; sequences 581 through 584 and 596 through 599 were also assigned to Puerto Rico.
- Sequence 577 through 579 was assigned to the District of Columbia.
- Sequences 587 through 588 and 589 through 595 were assigned to Mississippi and Florida, respectively, for use after those states exhausted their initial area number allotments.
- Sequence 729 through 733 has been allocated to the Department of Homeland Security (DHS) for SSNs issued through the Enumeration at Entry (EaE) program, described below.
- No SSNs with an area number in the 800s or 900s, or with a 000 area number, have been assigned.
- No SSNs with an area number of 666 have been or will be assigned.

SSA has many years' worth of potential SSNs available for future assignment. However, because of population shifts, SSA now faces an imbalance in the geographic allocation of area numbers. Some states have a current allocation of SSNs that will last for many years, while others have a pending shortage. As a result, given present rates of assignment and existing

geographic allocations, several states currently have fewer than 10 years' worth of SSNs available for assignment.

In a July 3, 2007, Federal Register notice, SSA solicited public comment on a proposal to change the way SSNs are assigned (SSA 2007b). Under this proposal, SSA would randomly assign SSNs from the remaining pool of available numbers, and the first three digits would no longer have any geographic significance. SSA contends that doing so would ensure a reliable supply of SSNs for years to come, and would also reduce opportunities for identity theft and SSN fraud and misuse. SSA plans additional discussion with other government entities and the private sector before implementing any change.

Group Number

The group number (the fourth and fifth digits of the SSN) was initially determined by the procedure of issuing numbers in groups of 10,000 to post offices for assignment on behalf of the Social Security Board's Bureau of Old-Age Benefits. The group numbers range from 01 to 99 (00 is not used), but for administrative reasons, they are not assigned consecutively. Within each area number allocated to a state, the sequence of group number assignments begins with the odd-numbered group numbers from 01 to 09, followed by even group numbers 10 through 98, then even numbers 02 through 08, and finally odd numbers 11 through 99.[4]

Serial Number

The last four digits of the SSN are the serial number. The serial number represents a straight numerical series of numbers from 0001–9999 within each group. Serial number 0000 is not assigned.

Designing the Social Security Card

Even at the inception of the program, the Social Security Board understood that individuals would need to have a "token" that would provide a record of the number that had been assigned to them. This token would help employers accurately report an individual's earnings under the program.

The Board first considered a small card similar to a credit union or trade union card, but some objected that it was too flimsy. Alternatively, a ¾ x 2⅞ inch metal card was proposed by a manufacturer of such cards. It was estimated that it would have taken 250 tons of metal for initial registration. The arguments in favor of the metal card were its permanence, accuracy (records could be imprinted from the embossed token), and economy (because of the imprinting capability). Still, in early June 1936, the Board decided to use a small paper card (McKinley and Frase 1970, 327 and 329).

In October 1936, the Social Security Board selected a design submitted by Frederick E. Happel, an artist and photo engraver from Albany, NY, for the original Social Security card, for which Happel was paid $60.[5] The Board placed an initial order for 26 million cards. In late 1937, a second version was adopted, and a version just for replacement cards was adopted in 1938 (SSA 1990, 1). Since 1976, the design of original and replacement Social Security cards has been the same. In all, over 50 designs have been used from 1936 to 2008. All versions remain valid since it would be cost-prohibitive to replace all cards previously issued.

Over time, as the use of the SSN expanded for other purposes, SSA recognized that changes were necessary to protect the integrity of the card. SSA has taken measures to prevent counterfeiting of the card, and a counterfeit-resistant version is now used for both original and replacement cards. Steps taken by SSA to improve the card are detailed later.

Deciding on Application Data

There was also considerable discussion in 1936 about the types of information to collect as part of the registration. Generally, SSA collected the information needed to uniquely identify and accurately report an individual's earnings covered under the new Social Security program. Race was considered a necessary piece of information for actuarial purposes because of differences in life expectancy among different races. However, the Board decided to use the term "color" rather than race on the original Form SS-5 application for an SSN (McKinley and Frase 1970, 325–326).

The original 1936 version of the SS-5 requested the following information:

- Employee name
- Employee address
- Name of current employer
- Employer address
- Age of employee
- Date of birth
- Place of birth
- Sex
- Color

- U.S. Employment Service (USES) registration card number, if applicable
- Date and place of previously completed an SS-5, if applicable
- Completion date for current SS-5
- Signature (SSA 1990)

Registering the Nation's Employers and Employees

Although issuing SSNs is still a large workload for SSA, one rarely thinks about the major undertaking it was to register workers for the first SSNs. Initial estimates were that 22 million SSNs would be issued immediately, with 50 million ultimately to be issued (McKinley and Frase 1970, 15). In fact, 35 million SSNs were issued in the first 8 months of the registration effort. The Social Security Board estimated it would also need to assign identifying numbers to 3.5 million employers during this same time (McKinley and Frase 1970, 309).

Assigning responsibility for the vast registration process was a real problem. Debate shifted back and forth over whether the Board's Bureau of Old-Age Benefits could handle the work. The Board first approached the USES about assuming the registration workload, but in early May 1936 USES declined because President Roosevelt was hoping for an upswing in industrial production that autumn, and USES wanted its personnel to concentrate on its job placement service. The Census Bureau also declined, citing legal restrictions on the disclosure of its information to other agencies and confidentiality promises to the public that census information would be used for statistical purposes only (McKinley and Frase 1970, 338–339).

In June 1936, the Social Security Board decided that its Bureau of Old-Age Benefits would handle the registration and that the registration process would begin after the November 3, 1936, presidential election (McKinley and Frase 1970, 29). In May, the executive committee of the interdepartmental committee on enumeration had recommended that the Bureau could handle the registration by setting up 202 field offices and hiring 12,000 to 16,000 employees. The Board estimated that these 202 field offices would cover approximately 67 percent of registrants. On July 17, 1936, the Social Security Board's regional directors were told that 600 Bureau field offices would be open by November, that SSN assignment would begin about November 15, and that registration would be completed within 60 days. Also in July, the Board talked to the Post Office Department about assigning post office personnel to assist in cities where the Board would not yet have field offices to handle the registration (McKinley and Frase 1970, 342–347).

However, difficulties in recruiting personnel and setting up offices would make it impossible for the Bureau to handle the workload. As of September 30, 1936, Bureau of Old-Age Benefits employees numbered only 164 (Corson 1938, 6). Fortunately, the Board was able to enlist the Post Office Department to issue SSNs, signing an agreement on September 25, 1936. The Post Office Department had 45,000 facilities and over 350,000 employees at that time (Wyatt and Wandel 1937, 52).

The Social Security Board also enlisted the Treasury Department to assure employer cooperation. Final Treasury regulations, published in the Federal Register on November 6, 1936, required employers to file Form SS-4 (employer's application for an EIN) with the post office not later than November 21, 1936, and employees to file Form SS-5 (employee's application for an SSN) not later than December 5 (McKinley and Frase 1970, 15 and 360). However, delays in getting registration started made these deadlines moot.

The Social Security Board's Informational Service, established in January 1936, prepared a publicity campaign at midyear to encourage employers and workers to complete the application forms, but did not plan to distribute the material until after the November 3 election. However, the Board accelerated the publicity release in response to a September effort to discredit the program launched by Alf N. Landon, the Republican candidate for president. Also that year, many employers, in conjunction with Landon and the Republican Party, began stuffing payroll envelopes with leaflets against the Social Security Act and the required deductions from employee wages. The Social Security Board was so alarmed that the Chairman, John G. Winant, resigned in order to campaign in defense of the Social Security Act. In addition, in October 1936 the Board released a film called "We the People and Social Security" along with a 4-page pamphlet entitled "Security in Your Old Age."[6] It is estimated that some 4 million people saw the film and nearly 8 million of the pamphlets were distributed by Election Day (McKinley and Frase 1970, 357–358).

On November 6, the campaign to encourage employers and employees to register began. A series of press releases outlined the procedure for assigning

SSNs and carried sample Forms SS-4 and SS-5, as well as a Social Security card specimen. The campaign included three releases on old-age benefits in 24 languages distributed to the country's foreign language press. The Associated Press, the United Press, the Hearst chain, and many individual papers ran a series of articles on old-age benefits and registration for weeks at a time. During the November and December initial registration period, there were also 12 nationwide radio broadcasts by well-known individuals and a host of local broadcasts arranged by the 56 skeletal field offices then in place. Over 3 million posters[7] were distributed, 50 million more pamphlets were dispersed, and three additional newsreel trailers were shown to some 42 million people (McKinley and Frase 1970, 364–366).

The registration process was largely directed by the local postmasters. The first task for the postmen was to make up lists of employers on their routes. Their effort resulted in a list of 2.4 million employers (McKinley and Frase 1970, 344–345 and 368).

Beginning November 16, 1936, the post offices sent Form SS-4s to employers based on the lists they had compiled earlier that month. Along with information about the business establishment, employers were asked for the number of workers they employed. The mail carriers collected the completed SS-4s a week or two later. Based on SS-4 information, the post offices delivered Form SS-5s to the employers the following week for distribution to employees (McKinley and Frase 1970, 368).

Employees were permitted to return the completed SS-5 application either to the employer, to any labor organization of which the employee was a member, to the letter carrier, to the post office by hand, or to the post office via mail (Wyatt and Wandel 1937, 54). This last possibility caused another round of negotiations between the Social Security Board and the Post Office Department about whether "return penalty privilege" (requiring no postage) applied. Postal regulations stated that this privilege could only be used if an individual was not required by law to submit the information. The Board argued that no postage was required as there was no law requiring employees to obtain an SSN. At the same time, however, the Board was requesting the Treasury Department to issue regulations mandating employees to obtain account numbers. In the end, the Board got it both ways—the Post Office Department agreed to accept returned SS-5s without postage on October 8, 1936, and the Treasury Department issued the regulations making the SSN mandatory on November 6, 1936 (McKinley and Frase 1970, 351–352 and 360).

Even at this early time, the public was concerned about privacy and confidentiality issues. Many employees were anxious to know how the information on the SS-5 would be used. The Social Security Board issued releases at various times assuring the public that the information on the application would be kept confidential, with access limited to government employees for whom job duties under the Social Security Act required it (Wyatt and Wandel 1937, 57). In June 1937, the Social Security Board would issue its very first regulation, formalizing its pledge of confidentiality for information collected and maintained.

The work of the Social Security Board to reassure the public was complicated by the actions of some employers, who circulated additional forms along with the SS-5. These extra forms requested information such as nationality, religion, education, and union affiliation. On February 26, 1937, the Board issued a press release warning employers against distributing unauthorized questionnaires that appeared to be required by the Social Security Board (Wyatt and Wandel 1937, 57).

Of the 45,000 post offices then in existence, 1,017 first-class offices were designated as "typing centers" to assign the SSNs, along with 57 "central accounting" post offices to assign SSNs for the second, third, and fourth class post offices within their area (McKinley and Frase 1970, 368). The Social Security Board supplied these centers with Office Record Form OA-702, in blocks of 1,000, with the account number preprinted. For each registrant, postal employees typed the information from the SS-5 onto the prenumbered OA-702 in duplicate. Each OA-702 had a detachable portion on which the employee's name was typed and then returned to the employee—the Social Security card. The post office mailed the completed Social Security cards to the employer, unless the employee had taken the SS-5 to the post office in person and waited for the typed card. Each completed card was accompanied by an informational circular briefly explaining the provisions of Title II (old-age benefits) and Title XVIII (the Social Security tax) of the Social Security Act (Wyatt and Wandel 1937, 54 and 58).

The post offices sent the completed SS-5 and the corresponding OA-702 forms in blocks of 500 to the Bureau of Old-Age Benefit's Records Office in Baltimore, where the SSN master files were to be kept. The post offices (and later the Bureau's field offices) kept carbon copies of the OA-702 to use should an

individual request a replacement card (Wyatt and Wandel 1937, 58).

The publicity campaign and the Post Office Department's efforts resulted in over 22 million completed applications as of December 22, 1936, 28 days after the initial distribution of employee applications (Wyatt and Wandel 1937, 62). During the first 4 months of the registration campaign, nearly 26 million SSNs and more than 2.6 million EINs were assigned (Corson 1938, 3).

In September 1936, when the Post Office Department signed the agreement to handle the initial registration, the Board had planned for the Bureau of Old-Age Benefits to have 554 field offices set up to take over the enumeration workload in January 1937. However, hiring field staff had to await the results of the "examination for administrative officer" (civil service test) given in August 1936. The resulting register was not made available to the Board until December 1936 (McKinley and Frase 1970, 129). So in November 1936 the Board instead assigned headquarters staff to 56 Bureau field offices, covering all but one of the cities where the Post Office Department had set up its "central accounting" offices. These 56 Bureau offices primarily answered questions and directed applicants to the post offices (McKinley and Frase 1970, 34–35 and 369). The Board twice had to ask the Post Office to extend its handling of the SSN applications, first through March 1937 and then through June 1937, before the Bureau of Old-Age Benefits could take over.

Effective July 1937, Bureau field offices, still numbering only 175 with 1,702 total employees, took over the enumeration workload from the post offices (Zwintscher 1952, 90; SSA 1965, 25). By that time, some 35 million SSNs had been issued at a cost of $5.7 million (SSA 1990, 1; McKinley and Frase 1970, 372).

And still the job was not finished. In July 1937 alone, Bureau field offices issued some 1.9 million additional SSNs (McKinley and Frase 1970, 368–373). Even with field office employees working evenings and Saturdays and with "managers and assistant managers, anyone who was available, pounding away at typewriters," the Bureau had to set up additional typing centers in its 12 regional offices to help with the workload (SSA 1985, 10; SSA 1965, 32; SSA 1952).

Not all U.S. workers obtained SSNs during the initial registration period. This was because the original Social Security Act had excluded some types of employment from coverage, such as agricultural workers, domestic servants, casual labor, maritime workers, government employees, and the employees of philanthropic, educational, and similar institutions. The self-employed were also excluded from coverage. Seventy years ago, these exempt workers comprised about 40 percent of the working population. These groups were not covered primarily because of the administrative difficulty in collecting taxes and obtaining accurate wage reports (Department of Treasury 1947, 1; DeWitt, Béland, and Berkowitz 2008, 4).

Initially, only employees working in covered employment and aged 64 or younger were eligible to obtain an SSN. However, almost from the start, state unemployment compensation agencies began using SSNs to identify workers, and some employers tended to prefer hiring individuals who already possessed an SSN (Social Security Board 1938, 53). So, after a few months the Bureau began issuing SSNs to anyone who applied.

For over 20 years, Bureau field offices assigned SSNs, using blocks of prenumbered Social Security cards furnished to each office. Office staff simply typed the number holder's name on one of the prenumbered cards. For replacement cards, field office staff manually typed the SSN and name on a blank card. In 1961, issuance of original SSNs was centralized in Baltimore, but local offices continued to issue replacement cards. In March 1972, SSA began assigning SSNs and issuing cards exclusively from Baltimore via a computer-based system.[8] It was also in 1972 that all applicants for federal benefits were required to have their own SSN.

Maintaining the SSN Records

Space to handle the SS-5 application forms was found on three floors of the Candler Building, a large warehouse converted from a Coca-Cola bottling factory on the harbor in downtown Baltimore (SSA 1961). Here the Bureau installed a "great battery" of International Business Machines (IBM) equipment[9] and deployed over 2,300 machine workers and checkers by December 9, 1936, to handle the applications as quickly as they came in (McKinley and Frase 1970, 33 and 364). At this time, a hiring "apportionment" was in effect, which meant the Bureau could only recruit a certain proportion of employees from each state. As a result, employees came from all parts of the country. It was thought that the central operation in the Candler building was temporary, and that the work would soon be dispersed to the 12 regions, so recruitment from

distant states was logical (SSA 1952). However, actual operations would reveal that decentralization was not really feasible.

The Baltimore Records Office used a nine-step process to create a permanent master record and to establish an earnings record for each individual.[10] One hundred applications and office record cards, numbered consecutively, were sent through each operation together with a control unit of nine cards (one for each step). The appropriate control card was removed at the end of a step and sent to a control file to track the status of each block (McKinley and Frase 1970, 375).

When the Records Office received the Form SS-5 and the accompanying OA-702 from the local offices, different clerks working independently converted the two sets of information into numerical codes that could be transferred to punch cards.

The first group of employees keyed information from the SS-5 into a *master punch card* for each individual. A tabulating machine used this master punch card to set up a numerical register of accounts stored in huge loose-leaf books. These volumes contained the SSN, name, and date of birth of each number holder. Each page contained 100 SSNs in numerical order. From these volumes, employees could learn the name and identifying information of an SSN's owner in a fraction of the time that would be required to locate the master punch card (Wyatt and Wandel 1937, 120–121). The master punch card was also used in the earnings-posting operation to establish an earnings ledger for each individual.

A second group of employees independently keyed the same information coded from the OA-702 to create an *actuarial punch card* (Fay and Wasserman 1938, 25). The actuarial punch card was created for actuarial and statistical purposes and was also used to set up the "visible index." Later known as the "National Employee Index Flexoline File" or just "Flexoline," the visual index consisted of strips of thin bamboo, 3/16 of an inch wide by 9 inches long—one for each SSN issued—set in a steel panel. The strips were inserted into the frame one by one, with some employees filing as many as 300 strips an hour. Each strip began with a 3-digit entry based on the Russell Soundex System (in which all surnames having the same basic consonants are grouped together), followed by the individual's surname, given name, middle initial, and SSN. The strips were mechanically prepared from the actuarial punch card and manually posted on the panel, sorted by the first letter of the surname and within each letter by phonetic code, then in each code group by the first seven letters of the first name, middle initial, year and month of birth, and SSN. Up to 1,600 panels were then hung on each rack (Staruch 1978, 29). The primary function of the visible index was to aid in the location of accounts when only the name of the owner and not the SSN was known (Wyatt and Wandel 1937, 121). For instance, employees referred to the index when a worker who had lost his or her card and did not know the SSN applied for a duplicate (SSA 1964 and Staruch 1978, 29). Reportedly, experienced clerks were able to find any name and its corresponding account number in less than 60 seconds (Fay and Wasserman 1938, 25).

In addition, the SS-5s were filmed on 16 millimeter, noninflammable film strips. In June 1938, officials bragged "This film is so compact that the entire file of 40 million photographed SS-5s is stored in 10 ordinary letter-size file cabinets" (Fay and Wasserman 1938, 25).

In all, eight separate files were maintained:

- The SS-5 applications, sorted in numerical order.
- Photographs on 16 millimeter film strips of the SS-5s, in numerical order.
- The master punch cards, in numerical order.
- The numerical register, in large loose-leaf books.
- Ledger sheets for maintaining earnings records, in numerical order.
- The OA-702 Office Records, in alphabetical order.
- The actuarial punch cards, in phonetic code surname order.
- The visible index, in phonetic code surname order (Fay and Wasserman 1938, 25–26).

By 1958, the Flexoline (visible index) contained 160 million strips in 750 steel A-frame stands, and SSA was adding an average of 7 million new strips each year. In August 1958, SSA began converting the Flexoline index to microfilm and began capturing new SSN records on magnetic tape, using a special machine to then transcribe the code directly from magnetic tape into a readable microfilm record (Staruch 1978, 29–30). By 1964, the 200 million names in the National Employee Index were contained on 2,005 reels of magnetic tape that Bureau employees accessed by means of high-speed microfilm readers (SSA 1964).[11]

In 1972, SSA created an electronic file, the Numerical Index File or Numident, to house the numerically-ordered master file of all assigned SSNs. In 1973,

SSA began converting its legacy SS-5 records to the Numident electronic database, completing the conversion in 1979. There is one Numident record for each SSN ever assigned.

SSA makes changes in Numident SS-5 data only upon receipt of updated information from the SSN holder. Changes in the Numident result in the addition of a new entry or iteration to the Numident record for the individual; information is never overlaid on a previous SSN Numident entry.[12] Most changes are initiated when an SSN holder completes an SS-5 requesting a replacement card or a change in the name, sex, or date of birth information on the Numident. Additionally, SSA employees may take action to change identifying information on the Numident for a person while taking a claim or processing postentitlement events. Each Numident record can contain up to 300 Numident entries (iterations) representing an addition or change to the Numident information for a person. About half of Numident records have multiple entries.

Until recently SSA also maintained a separate SSN master file indexed by cardholder name. The Alpha Index File or Alphident enabled SSA employees to search by name if the number was unknown. In the process of modernizing SSA's master files, this file was converted to an IBM DB2 relational database linked to the Numident file. This database provides the same basic functionality as the Alphident. Like the Flexoline, the DB2 uses the Russell Soundex Coding System to group all surnames that have the same basic consonant sounds. When an individual's identifying information is available, an SSA employee can attempt to locate the SSN using a key based on the Soundex version of the last name, plus the first 4 characters of the first name, plus the century, year, and month of birth. SSA has designated this database a sensitive file and access is restricted.

Handling SSN Assignment Problems

From the beginning, the process of assigning SSNs included quality checks. SSA employees had to account for every number and explain any missing serial numbers fully. Also, the SS-5s and the OA-702s were coded separately by different clerks and were later compared as a quality check (Fay and Wasserman 1938, 24).

Still, as one might expect, an undertaking as enormous as enumerating 35 million workers in one concentrated effort was bound to encounter some problems. Many individuals received multiple SSNs. Some people were under the impression that the more SSNs they received, the better. Others thought they needed a new SSN for each new job. Workers sometimes lost their original number and applied for a new one. Also, a great many unemployed and WPA employees applied for SSNs both during the initial registration and again through WPA or private employment registration. Sample studies in 1937 or early 1938 indicated that duplicate account numbers had been issued to not more than 3 or 4 percent of the applicants (Corson 1938, 4).

In 1938, a wallet manufacturer in Lockport, New York, the E.H. Ferree Company, decided to promote its product by showing how a Social Security card would fit into the wallet. The company vice president thought it would be clever to use a sample card with his secretary's actual SSN. The wallet was sold at Woolworth's[13] and many other large department stores, and the SSN was widely distributed. Many purchasers adopted the SSN as their own—5,755 people were using it in the peak year 1943, and 12 were still using it as late as 1977. In all, SSA received 40,000 incorrect earnings reports under this SSN, which had to be reassigned laboriously to proper SSNs. SSA voided the much-used number and issued a new SSN to the secretary (SSA n.d. c).

About a dozen similar cases of individuals adopting a made-up SSN shown on a facsimile card have occurred. In one case, the Social Security Board itself issued a pamphlet with the made-up number 219-09-9999 that was adopted by an individual (SSA n.d. c).

Also, prior to 1961 SSA field offices issued new SSNs. Only a fraction of these SSN assignments were screened at the central office for a previously assigned SSN, and then only manually (Long 1993, 84). Thus, issuing duplicate SSNs was possible. Beginning in 1961, the central office in Baltimore issued all new SSNs, but it was not until 1970 that an electronic method of checking for previously issued SSNs (called "EVAN" for "electronic verification of alleged numbers") was devised (SSA 1990, 4). Today, automated systems with sophisticated matching routines screen for previously issued SSNs.

SSA has since introduced more rigorous verification procedures. On April 15, 1974, SSA implemented evidence requirements (age, identity, and citizenship/alien status) for applicants for an original SSN who are foreign-born, or are U.S.-born and age 18 or older. Then, on May 15, 1978, SSA began requiring evidence of age, identity, and citizenship/alien status from all

applicants for original SSNs, and evidence of identity for replacement Social Security cards. In addition, all foreign-born applicants for replacement cards were required to submit evidence of citizenship/alien status.

Also, in 1979 SSA created an electronic file called MULTX from a set of punch cards identifying multiple SSNs that was maintained by SSA's Office of Earnings Operations. As of December 2007, SSA had identified and cross-referenced in the MULTX file over 4.7 million individuals with multiple SSNs, about 93 percent of whom have only two SSNs. Generally, those with multiple SSNs are the "very old" on the Numident; a study conducted in 2002 showed a weighted average age of 82.9 (SSA 2002). The requirement for proof of age and identity for SSN applicants beginning in 1974 combined with the implementation of an automated SSN screening system in 1984 have significantly reduced the multiple-SSN problems.

Under a few rare circumstances, SSA may legitimately issue a new SSN to a person with a prior SSN. The conditions are highly restrictive. SSA will assign a new SSN to a victim of harassment, abuse, or life endangerment if the individual provides evidence to substantiate the allegations. In addition, SSA may assign a new SSN to an individual who is a victim of SSN misuse, which means that the number has been used with criminal or harmful intent and the individual has been subjected to economic or personal hardship. Third party evidence is necessary for SSA to substantiate an individual's allegation of SSN misuse. However, an individual should consider changing his or her SSN only as a last resort because getting a new SSN may adversely impact one's ability to interact with federal agencies, state agencies, and employers, as all of the individual's records will be under the former SSN.

Applying for an SSN Today

Just as it was in 1936, today a person must complete an application to obtain an original or replacement SSN or to change the information in SSA's Numident records. There are a number of ways to initiate the application process.

The paper form a person completes to apply for an original SSN or a replacement card or to make changes to SSA's Numident record is still the SS-5. The SS-5 application is available online[14] or in any SSA field office. The application and required evidence can be taken or mailed to any Social Security office for processing. An in-person interview is required if the applicant is age 12 or older and is applying for an original SSN. The Veterans Affairs Regional Office (VARO) in Manila also accepts SS-5 applications for an original SSN or a replacement card, as do all U.S. Foreign Service posts and all military posts outside the United States. SSA employees key the SS-5 application data and evidence into the SSA computer system, which uses the information to create or update the Numident. The signed SS-5 application is retained for a short period in the field office, and then is sent to a records center in Pennsylvania for microfilming. Once microfilmed, the original SS-5 is destroyed.[15]

In August 1987, SSA began a three-state pilot of the "Enumeration at Birth" (EAB) process in which the parent of a newborn can request an SSN as part of the state's birth registration process. Additional states began to participate in EAB in July 1988. By the end of 1991, 45 states, the District of Columbia, Puerto Rico, and New York City had signed agreements (Long 1993, 83). Today, over 90 percent of parents use the EAB process offered in all 50 states plus Puerto Rico and the District of Columbia. SSA receives nearly three-quarters of original SSN applications through the EAB process and issues over 4 million SSNs via EAB each year (SSA 2006). No microfilm SS-5 exists for a record created through the EAB process.

Beginning in 2002, SSA began another pilot program referred to as Enumeration at Entry (EaE) that allows noncitizens admitted for permanent residence to obtain SSNs and Social Security cards based on data collected as part of the immigration process. This pilot was expanded worldwide in early 2003. EaE is a joint effort involving the Department of State (DoS), DHS, and SSA. Under EaE, a person aged 18 or older can apply for both an immigrant visa and an SSN at a DoS office in his or her home country. If the visa is granted, then DoS transmits the identifying data from the person's visa/SSN application to DHS. If and when the person is physically admitted to the United States, DHS updates certain data, if necessary, and sends it to SSA for the SSN to be assigned and the card to be issued. All noncitizens enumerated through EaE receive an SSN in the special area number series 729 through 733. As of January 20, 2009, SSA had issued 429,959 original and 114,714 replacement SSNs through the EaE process. SSA is currently working with DoS and DHS on expanding the EaE process to additional noncitizens.

Also in 2002, SSA began to open offices dedicated entirely to handling Social Security number business. The first Social Security Card Center (SSCC) opened in Brooklyn, NY, in November 2002. Six more SSCCs have since opened: Las Vegas, NV, in April 2005; Jamaica, NY, in July 2006; Downtown and North Phoenix, AZ, in October 2007; Orlando, FL, in March 2008; and Sacramento, CA, in November 2008. Generally, any individuals who live in the service area of a Card Center and need an original or replacement card must visit the Card Center rather than their local field office.

The Intelligence Reform and Terrorism Prevention Act (IRTPA) of 2004 (Public Law (P.L.) 108-458) placed limits on the number of replacement Social Security cards an individual can receive. Beginning with cards issued on or after December 17, 2005, individuals may only receive three Social Security cards per year and 10 in a lifetime, with certain exceptions, such as correcting errors or name changes.

The information currently requested on the SS-5 is:

- Name to be shown on the card
- Full name at birth, if different
- Other names used
- Mailing address
- Citizenship or alien status
- Sex
- Race/ethnic description (SSA does not receive this information under EAB)
- Date of birth
- Place of birth
- Mother's name at birth
- Mother's SSN (SSA collects this information for the Internal Revenue Service (IRS) on an original application for a child under age 18. SSA does not retain these data.)
- Fathers' name
- Father's SSN (SSA collects this information for IRS on an original application for a child under age 18. SSA does not retain these data.)
- Whether applicant ever filed for an SSN before
- Prior SSNs assigned
- Name on most recent Social Security card
- Different date of birth if used on an earlier SSN application.
- Date application completed
- Phone number
- Signature
- Applicant's relationship to the number holder

Evidentiary Requirements

At the inception of the program, all SSNs were assigned and cards issued based solely on information provided by the applicant. However, in the 1970s, SSA began requiring proof of age, identity, and citizenship.

SSA has instituted numerous evidentiary requirements to further safeguard and preserve the integrity of the SSN and to ensure assignment of SSNs and issuance of cards only to eligible individuals. Exhibit 1 shows the effective dates of changes in policy on evidentiary requirements.

Exhibit 1.
Changes in Social Security card evidence requirements, 1936–2008

Date	Evidence requirements
November 1936	SSNs are assigned based on the applicant's allegations.
November 1971	Evidence of identity required of applicants aged 55 or older for original SSNs.
October 1972	Evidence required establishing age, true identity, and citizenship or alien status of SSN applicants.
April 1974	Evidence required establishing age, identity, and citizenship or alien status of U.S.-born applicants aged 18 or older for original SSNs and all foreign-born applicants for original SSNs.

(Continued)

Exhibit 1.
Changes in Social Security card evidence requirements, 1936–2008—*Continued*

Date	Evidence requirements
May 1978	All applicants are required to provide evidence of: • Age, identity, and U.S. citizenship or lawful alien status for original SSNs; and • Identity for replacement cards. In-person interviews are required for individuals aged 18 or older applying for original or new SSNs. An individual signing the SS-5 on behalf of another (for example, a parent for his or her child) must establish his or her own identity.
May 1987–May 1988	Aliens living in the United States since before 1982 are offered lawful temporary resident status. Because many aliens were unable to submit the proper identity documents, SSA accepted Immigration and Naturalization Service (INS) documents as proof of identity.
January 1996	A "valid nonwork reason" for an alien to have an SSN is defined as a federal, state, or local statute or regulation requiring an individual to have an SSN in order to obtain a benefit or service.
June 2002	SSA begins verifying birth records for all U.S.-born individuals aged 1 or older when requesting an original SSN or when changing the date of birth on the Numident record.
September 2002	SSA begins verifying all immigration documents for all aliens requesting original or new SSNs, or replacement cards.
October 2003	In-person interviews are required of all applicants aged 12 or older applying for original SSNs. Evidence of identity is required of all applicants regardless of age. A valid nonwork reason is defined as a federal statute requiring an SSN to receive a benefit or a state/local statute requiring an SSN to receive a public assistance benefit. (SSNs are no longer assigned for the sole purpose of obtaining a driver's license.)
October 2004	Foreign students who do not have an employment authorization document from the DHS and are not authorized for curricular practical training (CPT) as shown on the student's Student and Exchange Visitor Information System (SEVIS) Form I-20, Certificate of Eligibility for Nonimmigrant (F-1) Student Status, will no longer be presumed to have authority to work without additional evidence. Before SSA will assign an SSN that is valid for work in such cases, the F-1 student must provide evidence that he or she has been authorized by the school to work and has secured employment.
December 2005	IRTPA of 2004 changes evidence requirements for SSN applications and sets limits on the number of replacement cards an individual may receive: • SSA verifies birth records for all U.S.-born individuals requesting an original SSN (except for those who obtain an original SSN through the EAB process). Additionally, SSA verifies birth records for U.S.-born applicants (nonclaimants) who want to change the date of birth on the Numident. • Applicants for replacement cards beyond the 3-card yearly or 10-card lifetime limits need to provide evidence to establish that a valid exception to the limits applies. • Acceptable evidence of identity is revised; there are new guidelines for evaluating these documents and their acceptability for SSA purposes. In addition, the evidence of identity must show the applicant's legal name. In name change situations, the applicant must submit the document that shows the name change event.
February 2008	Domestic birth records are no longer verified with the custodian of the record unless the document appears to have been modified or is questionable. (Change is based on study results). For foreign-born individuals requesting a change to the Numident date of birth, SSA continues to verify with DHS any immigration document presented as evidence.

SOURCE: SSA n.d. b, section RM 00203.001.

Expanding Uses of the SSN

The original purpose of the SSN was to enable the Social Security Board to maintain accurate records of the earnings of individuals who worked in jobs covered under the Social Security program. The card was never intended to serve as a personal identification document—that is, it does not establish that the person presenting the card is actually the person whose name and SSN appear on the card. Although SSA has made the card counterfeit-resistant, the card does not contain information that would allow it to be used as proof of identity. However, the simplicity and efficiency of using a unique number that most people already possess has encouraged widespread use of the SSN by both government agencies and private enterprises, especially as they have adapted their recordkeeping and business systems to automated data processing. Use of the SSN as a convenient means of identifying people in large systems of records has increased over the years and its expanded use appears to be an enduring trend. Generally, there are no restrictions in federal law precluding the use of the SSN by the private sector, so businesses may ask individuals for an SSN whenever they wish (Streckewald 2006).

The expansion of SSN use began in 1943 with Executive Order (EO) 9397 requiring federal agencies to use the SSN for the purpose of identifying individuals in any new record systems. Although there was considerable delay in other agencies adopting its use, the coming of the computer age in the 1960s led government agencies and private industry alike to find many uses for the SSN.

In 1971, an SSA task force studied issues raised by nonprogram use of the SSN and proposed that SSA take a "cautious and conservative" position and do nothing to promote its use as an identifier. In 1973, a report of the Department of Health, Education, and Welfare (now Health and Human Services) concluded that the adoption of a national identifier was not desirable, and that the SSN was not suitable for such a purpose (SSA 1997). Nevertheless, Congressional legislation and federal agency regulations require the collection of SSNs for myriad purposes, as detailed in Exhibit 2.

Exhibit 2.
Legislated and regulatory requirements for using Social Security numbers (SSNs), 1943–2008

Date	Requirements
1943	EO 9397 requires all federal agencies to use SSNs whenever the head of the agency finds it advisable to establish a new system of permanent account numbers for individuals.
1957	Military personnel are covered under Social Security and are enumerated in mass.
1961	The Civil Service Commission adopts the SSN to identify federal employees.
1962	IRS begins using the SSN for federal tax reporting.
1964	The Department of Treasury requires Series H savings bond buyers to provide SSNs.
1965	Medicare enrollment requires enumerating those aged 65 or older.
1966	The Veterans Administration begins to use SSNs to keep hospital admissions and patient records, and U.S. Indian programs begin using SSNs.
1969	The Department of Defense starts using the SSN as a military identification number.
1970	Legislation requires banks, savings and loan associations, credit unions, and securities dealers to obtain the SSNs of all customers.
1972	Legislation authorizes SSA to assign SSNs to all legally admitted noncitizens at entry and to anyone receiving or applying for a federal benefit.
1973	SSNs are used for the Supplemental Security Income program. Also, the Department of Treasury requires buyers of Series E savings bonds to provide an SSN.
1975	Legislation requires an individual to have an SSN as a condition of eligibility for federal benefits.

(Continued)

Exhibit 2.
Legislated and regulatory requirements for using Social Security numbers (SSNs), 1943–2008—*Continued*

Date	Requirements
1976	Legislation authorizes states to require an SSN for taxes, eligibility for state programs, driver's licenses, and motor vehicle registrations.
1977	Legislation requires disclosure of SSNs for members of Food Stamp households.
1981	Legislation requires disclosure of SSNs of all adult members of a household that includes children applying for the school lunch program.
1982	Legislation requires applicants for federal loan programs to furnish SSNs.
1983	Legislation requires an SSN for all interest-bearing accounts.
1984	Legislation authorizes states to require SSNs for beneficiaries of certain state-administered programs, requires persons engaged in a trade or business to file a report including an SSN to the IRS for cash transactions over $10,000, and requires an alimony payer to furnish the IRS with the SSN of the ex-spouse receiving the payments.
1986	Legislation requires an SSN for all dependents older than age 5 reported on a tax return, for commercial motor vehicle operator's licenses, and for student loan applicants.
1988	Legislation requires an SSN for eligibility under Housing and Urban Development programs, for the parents of newborn children when a state issues a birth certificate, for dependents aged 2 or older of tax filers, for blood donors, and for all Title II (Old-Age, Survivors, and Disability Insurance) beneficiaries.
1989	Legislation requires that the National Student Loan Data system include SSNs of borrowers and that the SSNs of the parents of school lunch program applicants be provided.
1990	Legislation requires an SSN for eligibility for Department of Veterans Affairs benefits, for each dependent aged 1 or older claimed by a tax filer, and for officers of stores that redeem Food Stamps.
1994	Legislation authorizes SSN use for jury selection and federal workers' compensation.
1996	Welfare reform legislation requires the SSN to be recorded on numerous official documents, including professional licenses, driver's licenses, death certificates, birth records, divorce decrees, marriage licenses, support orders, and paternity determinations. (In 1999, Congress would repeal the requirement for SSNs to be displayed on some of these documents, such as driver's licenses and birth records).
1997	Legislation authorizes the Attorney General to require noncitizens to provide an SSN for any records maintained by the Attorney General or the INS. It also mandates that an SSN appear on driver's licenses (repealed in 1999). Additional legislation requires an SSN applicant under age 18 to provide his or her parents' names and SSNs.
2003	SSA no longer issues SSNs solely for the purpose of obtaining a driver's license.
2004	SSA is required to verify the last four digits of the SSN, name, and date of birth for voter registration in federal elections only when an individual cannot provide a driver's license, except where a waiver applies.
2008	EO 13478 rescinds the 1943 EO 9397 requiring federal agencies to use the SSN when establishing a system of permanent account numbers and makes such use optional.

SOURCE: SSA n.d. d.

With the many purposes legally requiring an SSN, the need for a U.S. resident to possess one has become nearly universal. The universality of SSN ownership has in turn led to the SSN's adoption by private industry as a unique identifier.

Unfortunately, this universality has led to abuse of the SSN. Most notoriously, the SSN is a key piece of information used to commit identity theft. According to the Federal Trade Commission (FTC), "Identity theft occurs when someone uses your personally identifying information, like your name, Social Security number, or credit card number, without your permission, to commit fraud or other crimes." The FTC estimates that as many as 9 million Americans have their identities stolen each year (FTC n.d.). Identity theft has reached such proportions that President George W. Bush issued Executive Order 13402 on May 10, 2006, establishing the President's Identity Theft Task Force. The task force reported:

> The simplicity and efficiency of using a seemingly unique number that most people already possessed encouraged widespread use of the SSN as an identifier by both government agencies and private enterprises, especially as they adapted their record-keeping and business systems to automated data processing. The use of SSNs is now common in our society.
>
> Employers must collect SSNs for tax reporting purposes. Doctors or hospitals may need them to facilitate Medicare reimbursement. SSNs also are used in internal systems to sort and track information about individuals, and in some cases are displayed on identification cards. In 2004, an estimated 42 million Medicare cards displayed the entire SSN, as did approximately 8 million Department of Defense insurance cards. In addition, although the Veterans Health Administration (VHA) discontinued the issuance of Veterans Identification Cards that display SSNs in March 2004, and has issued new cards that do not display SSNs, the VHA estimates that between 3 million and 4 million previously issued cards containing SSNs remain in circulation with veterans receiving VA health care services. Some universities still use the SSN as the students' identification number for a range of purposes, from administering loans to tracking grades, and may place it on students' identification cards, although usage for these purposes is declining.
>
> SSNs also are widely available in public records held by federal agencies, states, local jurisdictions, and courts. As of 2004, 41 states and the District of Columbia, as well as 75 percent of U.S. counties, displayed SSNs in public records. Although the number and type of records in which SSNs are displayed vary greatly across states and counties, SSNs are most often found in court and property records (President's Identity Theft Task Force 2007, 23–24).

Verifying SSNs

Because individuals sometimes use SSNs that do not belong to them, either through error or deliberately, it is important to ensure that an SSN matches SSA records before accepting it.

Today, SSA electronically verifies that an SSN and the name associated with it match those in SSA's records before issuing a replacement Social Security card, posting a wage item to the Master Earnings File, or establishing a claims record. Also, when disclosure laws allow, many federal and state agencies use an SSA verification system to verify SSNs. Registered private employers can also verify a worker's SSN. In addition, SSA receives requests for SSN verification from third parties who have obtained the consent of the individuals involved.

However, SSNs were in use for many years before electronic verification was in place. During the 1950s, SSA initiated a manual screening routine of the microfilm file to search for a previously assigned number.

SSA's first electronic system was not developed until 1970, when electronic verification of alleged numbers (EVAN) was introduced for internal use at field offices with Advanced Records System (ARS) submission. In 1975, SSA's Bureau of Data Processing implemented the Full Registration and Identification System (FRIS) which expanded electronic screening capabilities and added electronic validation of SSNs (SSA 1990, 5). In 1983, SSA implemented the Enumeration Verification System (EVS) for verifying batches of SSNs; EVS employed a series of verification routines that are still in use. In 1984, SSA created the Automated Enumeration Screening Process (AESP) to run every application for an original or replacement card through the Alphident (since converted to a database linked to the Numident file) to determine if the data on the incoming record match one or more existing records using a complex scoring system. If a potential match is indicated between an existing record and an application for an original SSN, the field office is alerted to resolve the matter. If

no previously established record is found, an original SSN is issued to the applicant (SSA 2003, 8–12).

In more recent years, SSA has developed a number of SSN verification systems for internal and external use. Having multiple systems allows SSA to customize the input and output. Those for external entities generally indicate whether the data submitted match SSA records, and whether the SSN holder has died, but will not disclose additional information to the requestor. A few examples are described below.

The Consent Based SSN Verification Service (CBSV) is available to enrolled private companies and federal, state, and local agencies to verify that the submitted name and SSN match SSA records. The recent consent of the SSN holder to release the information is required.[16]

When a person lacking a valid driver's license registers to vote, the individual can provide his or her name, date of birth, and the last four digits of his or her SSN instead. The state then submits this information to SSA's Help America Vote Verification (HAVV) system to verify that the submitted data match SSA records.

State Departments of Motor Vehicles use the Social Security OnLine Verification (SSOLV) system to verify names and SSNs for the issuance of new and renewal driver's licenses and identity cards.

The SSN Verification Service (SSNVS) is a free Internet-based system that can be used by registered employers for SSN verification prior to wage reporting. Real-time service is provided for 10 requests or less, and overnight processing is provided for up to 250,000 SSNs.[17]

The E-Verify program (previously known as the Basic Pilot/Employment Eligibility Verification System), administered by DHS with SSA's support, can be used by employers to verify the SSN and confirm employment authorization under immigration law for newly hired employees. The employer enters the name, SSN, date of birth, and alleged citizenship/alien status from DHS Form I-9 Employment Eligibility Verification into the E-Verify system. E-Verify automatically matches this information against SSA's Numident, as well as DHS immigration records if the hire is a noncitizen. The employer receives an electronic response indicating either that employment is authorized or that the data do not match the information in SSA's or DHS' records. Use of the verification program is voluntary in most parts of the United States, but 13 states require certain employers to use it for new hires. The U.S. Citizenship and Immigration Services website indicates that 109,211 employers, representing close to 434,000 worksites, were registered to use E-Verify as of February 2009.

A proposed amendment to the 2009 Omnibus Appropriations Act to extend authorization for the E-Verify program for 5 years was tabled; the bill instead extended authorization through September 30, 2009.

Enhancing the Social Security Card

In addition to developing verification systems to allow authorized users to determine if SSN information matches SSA data, SSA has also taken steps to help guard against fraudulent Social Security cards. Because an SSN is needed for work and has been adopted for many other uses, a market for counterfeit Social Security cards has developed.

SSA has taken and continues to take steps to strengthen the integrity of the Social Security card and guard against its misuse. One of the first steps was to distinguish whether cards were valid for work purposes. In 1974, SSA began assigning SSNs for nonwork purposes when such use of an SSN was authorized by law. Initially, the nonwork cards looked the same as cards issued to citizens and aliens authorized to work. In May 1982, SSA began annotating cards issued for nonwork purposes with the legend "not valid for employment."

The 1981 Omnibus Reconciliation Act (P.L. 97-123) added alteration and forgery of a Social Security card to the list of prohibited acts and also increased the penalties for such acts. In 1983, section 205(c)(2)(G) of the Social Security Act was amended to require that the "social security card shall be made of banknote paper and (to the maximum extent practicable) shall be a card which cannot be counterfeited" (P.L. 98-21). SSA worked with the Bureau of Engraving and Printing, the Secret Service, and the Federal Bureau of Investigation (FBI) to design a card that met these requirements. Changes were made to the card stock to make any attempt to erase or remove data easily detectable, and a form of printing with a raised effect that is difficult to replicate was used. Other features not obvious to the naked eye were also added.

In 1988, to prevent photocopy counterfeits, a security feature that displays as "void" when photocopied was added. Also in 1988, legislation increased the monetary penalties for SSN violations. In September 1992, SSA began to annotate Social Security cards

for aliens with temporary work authorization "valid for work only with INS [now DHS] authorization."

Immigration and welfare reform legislation enacted in August 1996 (P.L. 104-208 and P.L. 104-193, respectively) directed SSA to develop a prototype of a counterfeit-resistant Social Security card and report to Congress on the feasibility of using such cards. The prototype was to be made of a durable, tamper-resistant material such as plastic or polyester; was to employ technologies that provide security features, such as magnetic stripes, holograms, and integrated circuits; and was to provide individuals with reliable proof of citizenship or legal resident alien status.

SSA interpreted this provision as calling for consideration of techniques that could link the card to the assigned number holder, such as including identifying information about the card holder on the card itself, or adding the number holder's picture, fingerprint, biometric identifier, or some combination of such features in or on the card (Donnelly 1999).

In September 1997, SSA published its findings in the *Report to Congress on Options for Enhancing the Social Security Card.* The seven options that SSA developed included:

- Plastic card
- Card with the number holder's picture
- Card with a secure barcode data storage stripe
- Card with an optical memory storage stripe
- Card with magnetic stripe
- Card with magnetic stripe and the number holder's picture
- Microprocessor card with a magnetic stripe and a picture

SSA estimated that the cost at that time of issuing an enhanced card to almost 300 million card holders would range, depending on the type of card, from $5.1 billion to $10.5 billion. The estimates included the costs of verifying the identity of the applicant and establishing a system to collect a user fee (Donnelly 1999). SSA was not required to adopt any of the options. To some extent, passage of the REAL ID Act in 2005, which imposes standards on states for the issuance of driver's licenses and identification cards, diminished the need for SSA to develop a card for identification (SSA 2008).

In 2004, the IRTPA legislation required SSA, in consultation with DHS, to form an interagency task force to establish requirements for further improving the security of Social Security cards and numbers and to provide for implementation of those requirements. The task force was formed in January 2006 and included several other agencies, such as the FBI, the DoS, and the Government Printing Office. The task force issued its recommendations in May 2006. As a result, additional security features were added to the card in 2007. These include:

- Latent images that can be seen when the card is viewed at an angle.
- Color shifting ink (similar to that used on $20 bills) that changes colors when the card is viewed from different angles.
- A new production method that blends different color inks on the background of the card (colors flow from blue to aqua).
- Adding issuance date to the front of the card.

Other features added to the card are not apparent to the naked eye and for security reasons are not disclosed to the public.

Another change made to the Social Security card in 2007 was to put the first name and last name of the card holder on separate lines. This change was recommended by employer groups to help them distinguish the correct last name of an employee.

The expertise of counterfeiters and the widespread availability of state-of-the-art technology make it increasingly difficult to develop and maintain a document that cannot be counterfeited. SSA continues to evaluate new technology as it becomes available to determine if additional features should be included to make it more difficult to alter or counterfeit the card. In addition to the physical changes made to the Social Security card, SSA has taken many other steps to strengthen the integrity of the enumeration process by requiring evidence of age, citizenship, and identity, and by verifying this information, as noted in the section on evidentiary requirements.

Conclusion

The use of the SSN has expanded substantially since its inception in 1936. Created merely to keep track of the earnings history of U.S. workers for Social Security entitlement and benefit computation purposes, it has become a number assigned at birth and used by many government agencies to identify individuals and by private industry to track an individual's financial history.

That trend has begun to shift. As early as December 2004, IRTPA legislation prohibited states from displaying the SSN on driver's licenses or motor vehicle registrations. In 2007, the President's Identity Theft Task Force (2007, 3) included among its SSN recommendations that "federal agencies should reduce the unnecessary use of SSNs, the most valuable commodity for an identity thief."

On November 18, 2008, President George W. Bush issued EO 13478 rescinding the 1943 EO requiring all federal agencies to use the SSN as an identifier. Then in December, the FTC (2008) issued a plea to companies, schools, and other private entities to find better ways to authenticate identities than using the SSN. State and local entities have begun to delete SSNs on electronic versions of public records. Congress has also considered legislation that would require the Centers for Medicare and Medicaid Services to use an alternative to the SSN as the Medicare claim number. Even SSA, which created the SSN for its program use, has ceased to print the full SSN on some of its correspondence with beneficiaries (Lockhart 2002). The agency now advises individuals to keep their Social Security card in a safe place and not to carry it with them (SSA 2007a).

Federal survey-takers are also finding that as respondents have become more aware of the risk of identity theft, they are less willing to supply SSNs that are useful in linking the agency's survey data with administrative records from other agencies. For the Census Bureau's Survey of Income and Program Participation, the share of respondents who did not provide their SSN increased from 12 percent in 1996 to 35 percent in 2004. Likewise, the share of respondents who did not provide an SSN for the Census Bureau's Current Population Survey increased from 10 percent in 1994 to almost 23 percent in 2003 (Bates 2004, 4). The National Center for Health Statistics reports a similar problem.

Still, it is highly unlikely that use of the SSN as a unique identifier will cease entirely. In order to share data among government agencies or between commercial firms, a unique identifier to match records is critically important, and the SSN is the one unique tag that follows an individual throughout life. People may change their names and addresses throughout their lives, but their SSNs generally will remain the same. Of course, the SSN will also still be used for its original purpose—to track earnings in SSA records. The SSN is here to stay for the foreseeable future.

SSA will continue to assess its policies and procedures to further strengthen the integrity of the enumeration process to prevent SSN fraud and misuse, as well as to protect the important personal information with which it is entrusted. SSA is a member of the Identity Theft Task Force and will continue to work with other members to protect, to the maximum extent possible, the integrity of the SSN.

Notes

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[1] In addition, effective January 1, 1937, workers attaining age 65 could apply for a lump-sum payment (equal to 3.5 percent of wages earned after December 31, 1936) in lieu of monthly benefit payments. Payment of monthly benefits was initially postponed until January 1942; the 1939 Amendments to the Social Security Act moved the date up to January 1940.

[2] Stuart Rick, a Census Bureau representative on this committee, foresaw that the SSN would eventually become part of three registration episodes—birth, employment, and death—and looked "toward the ultimate acceptance of universal registration" (McKinley and Frase 1970, 322).

[3] Assignment of area numbers by state is available at www.socialsecurity.gov/employer/stateweb.htm.

[4] SSA makes a list of which groups of SSNs have been assigned available at www.socialsecurity.gov/employer/ssnvhighgroup.htm.

[5] An image of the original design of the Social Security card is available at www.socialsecurity.gov/history/ssn/designssn.html.

[6] This pamphlet is available at www.socialsecurity.gov/history/ssb36.html.

[7] Images of the posters are available at www.socialsecurity.gov/history/pubaffairs.html.

[8] For the number of original SSNs issued each year, see www.socialsecurity.gov/history/ssn/ssnvolume.html.

[9] Some early SSA officials credit SSA with providing the specifications for the collating machine that was responsible for IBM's takeoff in the business world. See *Interview with Jack Futterman* at www.socialsecurity.gov/history/jackforal.html and *The Bureau—a profile* at www.socialsecurity.gov/history/oasis/oasisnews3.html.

[10] For a more detailed explanation of the early SSN records maintenance process, see the June 1938 *Social*

Security Bulletin at www.socialsecurity.gov/history/fay638.html and *Your Social Security Record—1955* at www.socialsecurity.gov/history/ssa/yourss55.html.

[11] For pictures of the Flexoline and the subsequent magnetic tape operation, see www.socialsecurity.gov/history/ssa/usa1964-3.html and also www.socialsecurity.gov/history/candlerops.html.

[12] In certain limited situations, SSA may delete an iteration and add a new one to correct errors.

[13] A major retailer, Woolworth's was the Wal-Mart of its era.

[14] The Form SS-5 Application for a Social Security Number is available at www.socialsecurity.gov/online/ss-5.pdf.

[15] However, SS-5s for applicants aged 18 or older for original SSNs are retained for 5 years before being destroyed.

[16] See www.socialsecurity.gov/cbsv/ for additional information about CBSV.

[17] See www.socialsecurity.gov/employer/ssnvs_handbk.htm for additional information about SSNVS.

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In Memory of John "Jack" Carroll

It is with deep regret that we inform readers of the death of John "Jack" Carroll, former head of the Social Security Administration's Office of Research and Statistics (ORS). Jack died May 7, 2009, at age 90. His life and work were distinguished by his service and devotion to people.

Jack received a bachelor's degree in economics from the University of Michigan in 1941. During World War II, he enlisted and served as a flight navigator. It was through his courage and determination that he evaded capture when his plane was shot down. After the war, Jack resumed his education and completed his Ph. D. in economics at the University of Michigan, writing his dissertation on Social Security financing. For 13 years he worked as a professor at St. Lawrence University, where he headed the economics department and published research papers on Social Security and other government programs. From 1962 through 1966, Jack was an economic advisor to the government of Calcutta, India.

Jack began his career with ORS in 1966. Before becoming Assistant Commissioner for Research and Statistics in 1972, he served as Director of the Division of Economic and Long-Range Studies and as Deputy Assistant Commissioner for Research and Statistics. He retired from SSA in 1984.

Respected for both his technical and people skills, Jack very successfully managed the ORS research staff of more than 500 persons. In addition to the current functions of the Office of Research, Evaluation, and Statistics, ORS, as it was known then, had the additional function of studying Medicare and other related health programs. Under his leadership, ORS produced a large number of significant studies related not only to the Social Security program but also to the Supplemental Security Income and Medicare programs and to other social welfare programs. Jack led pioneering efforts in data matching and microsimulation. He insisted that the work of ORS be high quality, objective, and relevant to the broad area of social welfare policy. He strove to make ORS work useful to all segments of the social welfare policy community. Jack treated his staff members and others with respect, honesty, and kindness. He was greatly respected and liked by his staff and by members of the social welfare policy community.

Jack was very active in his retirement. He attended numerous conferences and meetings that dealt with social welfare policy. He was very active in his church and did a huge amount of volunteer work. He held various church offices and for many years served food to the homeless. He was also treasurer of a nonprofit geriatric day care center.

OASDI and SSI Snapshot and SSI Monthly Statistics

Each month, the Social Security Administration's Office of Retirement and Disability Policy posts key statistics about various aspects of the Supplemental Security Income (SSI) program at www.socialsecurity.gov/policy. The statistics include the number of people who receive benefits, eligibility category, and average monthly payment. This issue presents SSI data for May 2008–May 2009.

The Monthly Statistical Snapshot summarizes information about Social Security and the SSI programs and provides a summary table on the trust funds. Data for May 2009 are given on pages 78–79. Trust Fund data for May 2009 are given on page 79. The more detailed SSI tables begin on page 80. Persons wanting detailed monthly OASDI information should visit the Office of the Actuary's Web site at www.socialsecurity.gov/OACT/ProgData/beniesQuery.html.

Monthly Statistical Snapshot

Table 1. Number of people receiving Social Security, Supplemental Security Income, or both
Table 2. Social Security benefits
Table 3. Supplemental Security Income recipients
Table 4. Operations of the Old-Age Survivors Insurance and Disability Insurance Trust Funds

The most current edition of Tables 1–3 will always be available at www.socialsecurity.gov/policy/docs/quickfacts/stat_snapshot. The most current data for the trust funds (Table 4) are available at www.socialsecurity.gov/OACT/ProgData/funds.html.

Table 1.
Number of people receiving Social Security, Supplemental Security Income, or both, May 2009 (in thousands)

Type of beneficiary	Total	Social Security only	SSI only	Both Social Security and SSI
All beneficiaries	56,760	49,163	4,960	2,637
Aged 65 or older	37,065	35,032	884	1,149
Disabled, under age 65 [a]	12,366	6,802	4,076	1,488
Other [b]	7,329	7,329	. . .	. . .

SOURCE: Social Security Administration, Master Beneficiary Record, 100 percent data. Social Security Administration, Supplemental Security Record, 100 percent data.

NOTES: Data are for the end of the specified month. Only Social Security beneficiaries in current-payment status are included.

. . . = not applicable.

a. Includes children receiving SSI on the basis of their own disability.

b. Social Security beneficiaries who are neither aged nor disabled (for example, early retirees, young survivors).

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Table 2.
Social Security benefits, May 2009

Type of beneficiary	Beneficiaries		Total monthly benefits (millions of dollars)	Average monthly benefit (dollars)
	Number (thousands)	Percent		
All beneficiaries	51,800	100.0	54,797	1,057.90
Old-Age Insurance				
Retired workers	32,922	63.6	38,127	1,158.10
Spouses	2,360	4.6	1,347	570.80
Children	564	1.1	321	568.00
Survivors Insurance				
Widow(er)s and parents [a]	4,354	8.4	4,766	1,094.60
Widowed mothers and fathers [b]	156	0.3	130	829.50
Children	1,972	3.8	1,473	747.00
Disability Insurance				
Disabled workers	7,563	14.6	8,032	1,062.00
Spouses	156	0.3	44	284.10
Children	1,751	3.4	558	318.30

SOURCE: Social Security Administration, Master Beneficiary Record, 100 percent data.

NOTES: Data are for the end of the specified month. Only beneficiaries in current-payment status are included.

Some Social Security beneficiaries are entitled to more than one type of benefit. In most cases, they are dually entitled to a worker benefit and a higher spouse or widow(er) benefit. If both benefits are financed from the same trust fund, the beneficiary is usually counted only once in the statistics, as a retired-worker or a disabled-worker beneficiary, and the benefit amount recorded is the larger amount associated with the auxiliary benefit. If the benefits are paid from different trust funds the beneficiary is counted twice, and the respective benefit amounts are recorded for each type of benefit.

a. Includes nondisabled widow(er)s aged 60 or older, disabled widow(er)s aged 50 or older, and dependent parents of deceased workers aged 62 or older.

b. A widow(er) or surviving divorced parent caring for the entitled child of a deceased worker who is under age 16 or is disabled.

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Table 3.
Supplemental Security Income recipients, May 2009

Age	Recipients		Total payments [a] (millions of dollars)	Average monthly payment [b] (dollars)
	Number (thousands)	Percent		
All recipients	7,597	100.0	4,078	500.80
Under 18	1,174	15.5	738	601.40
18–64	4,390	57.8	2,504	516.60
65 or older	2,033	26.8	835	408.70

SOURCE: Social Security Administration, Supplemental Security Record, 100 percent data.

NOTE: Data are for the end of the specified month.

a. Includes retroactive payments.

b. Excludes retroactive payments.

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Table 4.
Operations of the Old-Age and Survivors Insurance and Disability Insurance Trust Funds, May 2009 (in millions of dollars)

Component	OASI	DI	Combined OASI and DI
		Receipts	
Total	$47,149	$8,003	$55,153
Net contributions	47,038	7,988	55,026
Income from taxation of benefits	12	0	13
Net interest	99	15	114
Payments from the general fund	0	0	0
		Expenditures	
Total	42,882	9,011	51,893
Benefit payments	42,544	8,742	51,285
Administrative expenses	339	269	608
Transfers to Railroad Retirement	0	0	0
		Assets	
At start of month	2,076,500	216,082	2,292,582
Net increase during month	4,267	-1,007	3,259
At end of month	2,080,767	215,075	2,295,842

SOURCE: Data on the trust funds were accessed on June 22, 2009, on the Social Security Administration's Office of the Actuary's web site: http://www.socialsecurity.gov/OACT/ProgData/funds.html.

NOTE: Totals may not equal the sum of the components because of rounding.

SSI Federally Administered Payments

Table 1. Recipients (by type of payment), total payments, and average monthly payment
Table 2. Recipients, by eligibility category and age
Table 3. Recipients of federal payment only, by eligibility category and age
Table 4. Recipients of federal payment and state supplementation, by eligibility category and age
Table 5. Recipients of state supplementation only, by eligibility category and age
Table 6. Total payments, by eligibility category, age, and source of payment
Table 7. Average monthly payment, by eligibility category, age, and source of payment

Awards of SSI Federally Administered Payments

Table 8. All awards, by eligibility category and age of awardee

The SSI Monthly Statistics are also available at www.socialsecurity.gov/policy/docs/statcomps/ssi_monthly/index.html.

Table 1.
Recipients (by type of payment), total payments, and average monthly payment, May 2008–May 2009

Month	Number of recipients				Total payments [a] (thousands of dollars)	Average monthly payment [b] (dollars)
	Total	Federal payment only	Federal payment and state supplementation	State supplementation only		
2008						
May	7,408,267	5,096,218	2,014,736	297,313	3,777,113	477.70
June	7,453,089	5,129,012	2,025,843	298,234	3,841,233	477.00
July	7,450,629	5,125,978	2,025,538	299,113	3,769,838	475.70
August	7,468,701	5,138,210	2,030,920	299,571	3,809,124	477.40
September	7,509,397	5,168,764	2,040,252	300,381	3,866,226	476.70
October	7,504,271	5,163,780	2,039,238	301,253	3,838,166	476.80
November	7,533,795	5,185,746	2,046,378	301,671	3,820,243	477.30
December	7,520,501	5,176,902	2,042,110	301,489	3,880,433	477.80
2009						
January	7,533,922	5,192,985	2,047,850	293,087	4,009,142	504.10
February	7,566,208	5,217,483	2,055,832	292,893	4,044,694	502.80
March	7,599,464	5,243,129	2,063,657	292,678	4,162,308	503.70
April	7,607,994	5,248,781	2,066,071	293,142	4,126,381	505.10
May	7,596,745	5,253,853	2,067,978	274,914	4,077,881	500.80

SOURCE: Social Security Administration, Supplemental Security Record, 100 percent data.

NOTE: Data are for the end of the specified month.

a. Includes retroactive payments.

b. Excludes retroactive payments.

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Table 2.
Recipients, by eligibility category and age, May 2008–May 2009

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
2008						
May	7,408,267	1,201,557	6,206,710	1,124,418	4,263,373	2,020,476
June	7,453,089	1,202,416	6,250,673	1,140,154	4,289,159	2,023,776
July	7,450,629	1,202,303	6,248,326	1,137,327	4,288,179	2,025,123
August	7,468,701	1,203,846	6,264,855	1,136,978	4,302,730	2,028,993
September	7,509,397	1,205,505	6,303,892	1,147,765	4,328,605	2,033,027
October	7,504,271	1,206,466	6,297,805	1,138,706	4,330,689	2,034,876
November	7,533,795	1,210,023	6,323,772	1,152,268	4,341,446	2,040,081
December	7,520,501	1,203,256	6,317,245	1,153,844	4,333,096	2,033,561
2009						
January	7,533,922	1,203,955	6,329,967	1,153,684	4,344,951	2,035,287
February	7,566,208	1,204,781	6,361,427	1,165,415	4,362,970	2,037,823
March	7,599,464	1,204,671	6,394,793	1,172,224	4,388,753	2,038,487
April	7,607,994	1,205,349	6,402,645	1,173,714	4,393,945	2,040,335
May	7,596,745	1,199,665	6,397,080	1,173,700	4,389,985	2,033,060

SOURCE: Social Security Administration, Supplemental Security Record, 100 percent data.

NOTE: Data are for the end of the specified month.

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Table 3.
Recipients of federal payment only, by eligibility category and age, May 2008–May 2009

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
2008						
May	5,096,218	605,553	4,490,665	898,091	3,080,232	1,117,895
June	5,129,012	605,097	4,523,915	910,658	3,099,644	1,118,710
July	5,125,978	604,523	4,521,455	907,961	3,099,058	1,118,959
August	5,138,210	604,910	4,533,300	906,983	3,110,480	1,120,747
September	5,168,764	605,337	4,563,427	915,806	3,130,287	1,122,671
October	5,163,780	605,292	4,558,488	908,584	3,132,083	1,123,113
November	5,185,746	606,874	4,578,872	919,557	3,140,406	1,125,783
December	5,176,902	602,347	4,574,555	920,836	3,135,122	1,120,944
2009						
January	5,192,985	604,209	4,588,776	920,828	3,148,016	1,124,141
February	5,217,483	604,285	4,613,198	930,292	3,162,043	1,125,148
March	5,243,129	603,315	4,639,814	936,012	3,182,658	1,124,459
April	5,248,781	603,076	4,645,705	937,186	3,186,808	1,124,787
May	5,253,853	602,826	4,651,027	937,302	3,191,392	1,125,159

SOURCE: Social Security Administration, Supplemental Security Record, 100 percent data.

NOTE: Data are for the end of the specified month.

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Table 4.
Recipients of federal payment and state supplementation, by eligibility category and age, May 2008–May 2009

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
2008						
May	2,014,736	494,441	1,520,295	223,909	1,034,682	756,145
June	2,025,843	495,450	1,530,393	227,132	1,040,607	758,104
July	2,025,538	495,842	1,529,696	226,878	1,039,642	759,018
August	2,030,920	496,836	1,534,084	227,526	1,042,646	760,748
September	2,040,252	497,843	1,542,409	229,530	1,048,281	762,441
October	2,039,238	498,613	1,540,625	227,594	1,048,053	763,591
November	2,046,378	500,397	1,545,981	230,264	1,050,271	765,843
December	2,042,110	497,841	1,544,269	230,458	1,048,077	763,575
2009						
January	2,047,850	500,080	1,547,770	230,668	1,050,539	766,643
February	2,055,832	500,584	1,555,248	233,092	1,054,940	767,800
March	2,063,657	501,483	1,562,174	234,221	1,060,209	769,227
April	2,066,071	502,230	1,563,841	234,559	1,061,010	770,502
May	2,067,978	502,842	1,565,136	234,659	1,061,666	771,653

SOURCE: Social Security Administration, Supplemental Security Record, 100 percent data.

NOTE: Data are for the end of the specified month.

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Table 5.
Recipients of state supplementation only, by eligibility category and age, May 2008–May 2009

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
2008						
May	297,313	101,563	195,750	2,418	148,459	146,436
June	298,234	101,869	196,365	2,364	148,908	146,962
July	299,113	101,938	197,175	2,488	149,479	147,146
August	299,571	102,100	197,471	2,469	149,604	147,498
September	300,381	102,325	198,056	2,429	150,037	147,915
October	301,253	102,561	198,692	2,528	150,553	148,172
November	301,671	102,752	198,919	2,447	150,769	148,455
December	301,489	103,068	198,421	2,550	149,897	149,042
2009						
January	293,087	99,666	193,421	2,188	146,396	144,503
February	292,893	99,912	192,981	2,031	145,987	144,875
March	292,678	99,873	192,805	1,991	145,886	144,801
April	293,142	100,043	193,099	1,969	146,127	145,046
May	274,914	93,997	180,917	1,739	136,927	136,248

SOURCE: Social Security Administration, Supplemental Security Record, 100 percent data.

NOTE: Data are for the end of the specified month.

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Table 6.
Total payments, by eligibility category, age, and source of payment, May 2008–May 2009
(in thousands of dollars)

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
			All sources			
2008						
May	3,777,113	470,934	3,306,179	668,912	2,309,775	798,426
June	3,841,233	471,815	3,369,418	683,340	2,357,134	800,758
July	3,769,838	470,803	3,299,034	665,779	2,304,600	799,459
August	3,809,124	471,801	3,337,323	674,981	2,332,418	801,724
September	3,866,226	473,306	3,392,920	683,173	2,378,779	804,274
October	3,838,166	473,343	3,364,824	671,832	2,361,694	804,640
November	3,820,243	475,770	3,344,472	680,894	2,331,667	807,682
December	3,880,433	475,880	3,404,553	684,552	2,386,554	809,328
2009						
January	4,009,142	496,179	3,512,964	718,597	2,445,116	845,429
February	4,044,694	496,670	3,548,024	727,249	2,470,398	847,048
March	4,162,308	499,779	3,662,529	747,164	2,563,702	851,443
April	4,126,381	500,346	3,626,035	741,838	2,531,720	852,824
May	4,077,881	488,153	3,589,728	738,370	2,504,478	835,033
			Federal payments			
2008						
May	3,400,489	367,931	3,032,558	650,593	2,108,041	641,855
June	3,460,281	368,409	3,091,872	664,631	2,152,097	643,554
July	3,392,740	367,562	3,025,179	647,315	2,102,976	642,450
August	3,430,320	368,265	3,062,055	656,424	2,129,688	644,208
September	3,483,686	369,382	3,114,304	664,311	2,173,220	646,155
October	3,457,102	369,367	3,087,735	653,337	2,157,278	646,487
November	3,440,107	371,338	3,068,768	662,297	2,128,868	648,941
December	3,497,759	371,512	3,126,247	665,678	2,181,608	650,473
2009						
January	3,630,829	392,284	3,238,545	699,999	2,243,606	687,225
February	3,664,119	392,537	3,271,582	708,369	2,267,299	688,451
March	3,775,713	394,882	3,380,831	727,912	2,355,990	691,811
April	3,741,381	395,105	3,346,276	722,880	2,325,840	692,660
May	3,735,175	394,849	3,340,327	723,168	2,319,309	692,698

(Continued)

Table 6.
Total payments, by eligibility category, age, and source of payment, May 2008–May 2009 (in thousands of dollars)—*Continued*

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
			State supplementation			
2008						
May	376,624	103,003	273,621	18,319	201,734	156,571
June	380,952	103,406	277,546	18,710	205,038	157,204
July	377,097	103,241	273,856	18,464	201,624	157,009
August	378,804	103,536	275,268	18,557	202,730	157,516
September	382,540	103,924	278,616	18,862	205,558	158,120
October	381,064	103,976	277,089	18,496	204,416	158,153
November	380,136	104,432	275,704	18,597	202,799	158,740
December	382,674	104,368	278,306	18,875	204,946	158,854
2009						
January	378,313	103,895	274,418	18,599	201,511	158,204
February	380,575	104,133	276,442	18,880	203,098	158,597
March	386,595	104,897	281,698	19,252	207,711	159,632
April	385,001	105,242	279,759	18,958	205,879	160,163
May	342,706	93,305	249,401	15,202	185,169	142,335

SOURCE: Social Security Administration, Supplemental Security Record, 100 percent data.

NOTE: Data are for the end of the specified month and include retroactive payments.

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Table 7.
Average monthly payment, by eligibility category, age, and source of payment, May 2008–May 2009 (in dollars)

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
			All sources			
2008						
May	477.70	391.00	494.50	571.20	492.70	394.00
June	477.00	391.10	493.50	567.70	492.00	394.10
July	475.70	391.00	492.10	562.70	491.30	393.90
August	477.40	391.20	494.00	569.90	492.30	394.20
September	476.70	391.20	493.10	566.00	491.90	394.10
October	476.80	391.50	493.20	566.30	492.20	394.30
November	477.30	391.90	493.70	567.10	492.40	394.60
December	477.80	393.50	493.90	561.30	494.00	396.00
2009						
January	504.10	411.10	521.80	603.00	519.90	414.30
February	502.80	410.60	520.30	597.90	518.80	413.90
March	503.70	411.60	521.00	599.40	519.40	414.70
April	505.10	412.20	522.60	605.40	520.10	415.30
May	500.80	404.80	518.80	601.40	516.60	408.70
			Federal payments			
2008						
May	446.70	333.70	467.40	557.00	464.60	341.60
June	446.10	333.80	466.50	553.60	463.90	341.60
July	444.80	333.60	465.10	548.50	463.30	341.50
August	446.60	333.90	467.10	555.80	464.30	341.70
September	445.90	333.80	466.20	551.90	464.00	341.70
October	446.00	333.90	466.30	552.10	464.30	341.80
November	446.50	334.40	466.90	553.00	464.50	342.10
December	447.00	336.00	467.00	547.10	466.10	343.60
2009						
January	473.90	354.40	495.40	588.60	492.60	362.60
February	472.60	353.80	493.90	583.60	491.50	362.20
March	473.50	354.80	494.70	585.10	492.10	362.90
April	475.00	355.20	496.30	591.20	492.80	363.40
May	474.80	355.40	496.10	590.20	492.80	363.60

(Continued)

Table 7.
Average monthly payment, by eligibility category, age, and source of payment, May 2008–May 2009 (in dollars)—*Continued*

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
			State supplementation			
2008						
May	156.40	171.70	151.10	76.60	159.60	172.30
June	156.20	171.70	150.80	76.30	159.40	172.20
July	156.10	171.70	150.70	76.30	159.20	172.20
August	156.10	171.70	150.70	76.20	159.30	172.30
September	156.00	171.80	150.60	76.10	159.10	172.20
October	156.10	171.90	150.70	76.30	159.10	172.30
November	156.00	171.90	150.50	76.00	159.10	172.40
December	156.20	172.30	150.70	76.10	159.30	172.70
2009						
January	156.00	172.20	150.40	76.00	159.00	172.50
February	155.80	172.10	150.20	75.80	158.80	172.50
March	155.90	172.30	150.20	75.80	158.80	172.60
April	155.90	172.40	150.20	75.80	158.80	172.70
May	139.50	154.80	134.30	59.80	143.40	155.20

SOURCE: Social Security Administration, Supplemental Security Record, 100 percent data.

NOTE: Data are for the end of the specified month and exclude retroactive payments.

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Table 8.
All awards, by eligibility category and age of awardee, May 2008–May 2009

Month	Total	Eligibility category		Age		
		Aged	Blind and disabled	Under 18	18–64	65 or older
2008						
May	76,256	8,981	67,275	15,150	51,979	9,127
June	85,974	8,769	77,205	18,261	58,787	8,926
July	73,646	8,965	64,681	14,822	49,738	9,086
August	75,295	9,126	66,169	14,244	51,789	9,262
September	85,720	9,076	76,644	16,499	59,986	9,235
October	79,082	9,769	69,313	13,874	55,273	9,935
November	72,635	9,945	62,690	13,521	49,048	10,066
December	77,917	8,074	69,843	15,287	54,422	8,208
2009						
January	67,577	8,475	59,102	13,239	45,743	8,595
February	72,924	8,932	63,992	14,379	49,500	9,045
March	93,218	9,425	83,793	18,985	64,651	9,582
April [a]	80,794	9,756	71,038	15,747	55,164	9,883
May [a]	84,511	9,234	75,277	16,075	59,049	9,387

SOURCE: Social Security Administration, Supplemental Security Record, 100 percent data.

NOTE: Data are for all awards made during the specified month.

a. Preliminary data. In the first 2 months after their release, numbers may be adjusted to reflect returned checks.

CONTACT: Art Kahn (410) 965-0186 or ssi.monthly@ssa.gov for further information.

Perspectives—Paper Submission Guidelines

The *Social Security Bulletin* is the quarterly research journal of the Social Security Administration. It has a diverse readership of policymakers, government officials, academics, graduate and undergraduate students, business people, and other interested parties.

To promote the discussion of research questions and policy issues related to Social Security and the economic well being of the aged, the *Bulletin* welcomes submissions from researchers and analysts outside the agency for publication in its Perspectives section.

We are particularly interested in papers that:

- assess the Social Security retirement, survivors, and disability programs and the economic security of the aged;
- evaluate changing economic, demographic, health, and social factors affecting work/retirement decisions and retirement savings;
- consider the uncertainties that individuals and households face in preparing for and during retirement and the tools available to manage such uncertainties; and
- measure the changing characteristics and economic circumstances of SSI beneficiaries.

Papers should be factual and analytical, not polemical. Technical or mathematical exposition is welcome, if relevant, but findings and conclusions must be written in an accessible, nontechnical style. In addition, the relevance of the paper's conclusions to public policy should be explicitly stated.

Submitting a Paper

Authors should submit papers for consideration via e-mail to Michael V. Leonesio, Perspectives Editor, at perspectives@ssa.gov. To send your paper via regular mail, address it to:

Social Security Bulletin
Perspectives Editor
Social Security Administration
Office of Research, Evaluation, and Statistics
500 E Street, SW, 8th Floor
Washington, DC 20254-0001

We regard the submission of a paper as your implied commitment not to submit it to another publication while it is under consideration by the *Bulletin*. If you have published a related paper elsewhere, please state that in your cover letter.

Disclosures—Authors are expected to disclose in their cover letter any potential conflicts of interest that may arise from their employment, consulting or political activities, financial interests, or other affiliations.

Copyright—Authors are responsible for obtaining written permission to publish any material for which they do not own the copyright.

Formatting Guidelines

To facilitate the editorial process, papers submitted for publication must be prepared in Microsoft Word (**except for tables and charts—see below**) and be formatted as outlined below.

- **Title Page**—Papers must include a title page with the paper's title, name(s) of author(s), affiliation(s), address(es), including the name, postal address, e-mail address, telephone and fax numbers of a contact person. Any Acknowledgments paragraph should also be on this page. In the Acknowledgements, reveal the source of any financial or research support received in connection with the preparation of the paper. Because papers undergo blind review, the title page will be removed from referee copies. Eliminate all other identifying information from the rest of the paper before it is submitted. Once papers are accepted for publication, authors are responsible for reinserting self-identifying citations and references during preparation of the paper for final submission.
- **Synopsis**—For the *Bulletin's* table of contents include a separate synopsis, including the title of the paper along with one to three sentences outlining the research question.
- **Abstract**—Prepare a brief, nontechnical abstract of the paper of not more than 150 words that states the purpose of the research, methodology, and main findings and conclusions. This abstract will be used in the Bulletin and, if appropriate, be submitted to the Journal of Economic Literature for indexing. Below the abstract supply the JEL classification code and two to six keywords. JEL classification codes can be found at www.aeaweb.org/journal/jel_class_system.html.
- **Text**—Papers should average 10,000 words, including the text, the notes, and the references (but excluding the tables and charts). Text is double-spaced, except notes and references, which are double spaced only after each entry. **Do not embed tables or charts into the text. Create separate files (in the formats outlined in "Tables/Charts" below) for the text and statistical material**. Tables should be in one file, with one table per page. Include charts in a separate file, with one chart per page.
- **End Notes**—Number notes consecutively in the text using superscripts. Only use notes for brief substantive comments, not citations. (See the *Chicago Manual of Style* for guidance on the use of citations.) All notes should be grouped together and start on a new page at the end of the paper.
- **References**—Verify each reference carefully; the references must correspond to the citations in the text. The list of references should start on a new page and be listed alphabetically by the last name of the author(s) and then by year, chronologically. Only the first author's name is inverted. List all authors' full names and avoid using *et al*. The name of each author and the title of the citation should be exactly as it appears in the original work.
- **Tables/Charts**—Tables must be prepared in Microsoft Excel. Charts or other graphics must be prepared in or exported to Excel or Adobe Illustrator. The spreadsheet with plotting data must be attached to each chart with the final submission. Make sure all tables and charts are referenced in the text. Give each table and chart a title and number consecutive with the order it is mentioned in the text. Notes for tables and charts are independent of Notes in the rest of the paper and should be ordered using lowercase letters, beginning with the letter a (including the Source note, which

should be listed first). The sequence runs from left to right, top to bottom. The order of the notes as they appear below the tables or charts is (1) Source, (2) general notes to the table or chart, if any, and (3) letter notes.

For specific questions on formatting, use the *Chicago Manual of Style* as a guide for notes, citations, references, and table presentation.

Review Process

Papers that appear to be suitable for publication in Perspectives are sent anonymously to three reviewers who are subject matter experts. The reviewers assess the paper's technical merits, provide substantive comments, and recommend whether the paper should be published. An editorial review committee appointed and chaired by the Associate Commissioner, Office of Research, Evaluation, and Statistics, makes the final decision on whether the paper is of sufficient quality, importance, and interest to publish, subject to any required revisions that are specified in a letter to the author(s). The entire review process takes approximately 12 weeks.

Data Availability Policy

If your paper is accepted for publication, you will be asked to make your data available to others at a reasonable cost for a period of 3 years (starting 6 months after actual publication). Should you want to request an exception from this requirement, you must notify the Perspectives Editor when you submit your paper. For example, the use of confidential or proprietary data sets could prompt an exemption request. If you do not request an exemption, we will assume that you have accepted this requirement.

Questions

Questions regarding the mechanics of submitting a paper should be sent to our editorial staff via e-mail at ssb@ssa.gov. For other questions regarding submissions, please contact Michael V. Leonesio, Perspectives Editor, at perspectives@ssa.gov.

Program Highlights, 2009

Old-Age, Survivors, and Disability Insurance

Tax Rates for Employers and Employees, Each [a] (percent)	
Social Security	
Old-Age and Survivors Insurance	5.30
Disability Insurance	0.90
Subtotal, Social Security	6.20
Medicare (Hospital Insurance)	1.45
Total	7.65
Maximum Taxable Earnings (dollars)	
Social Security	106,800
Medicare (Hospital Insurance)	No limit
Earnings Required for Work Credits (dollars)	
One Work Credit (One Quarter of Coverage)	1,090
Maximum of Four Credits a Year	4,360
Earnings Test Annual Exempt Amount (dollars)	
Under Full Retirement Age for Entire Year	14,160
For Months Before Reaching Full Retirement Age in Given Year	37,680
Beginning with Month Reaching Full Retirement Age	No limit
Maximum Monthly Social Security Benefit for Workers Retiring at Full Retirement Age (dollars)	2,323
Full Retirement Age	66
Cost-of-Living Adjustment (percent)	5.8

a. Self-employed persons pay a total of 15.3 percent—10.6 percent for OASI, 1.8 percent for DI, and 2.9 percent for Medicare.

Supplemental Security Income

Monthly Federal Payment Standard (dollars)	
Individual	674
Couple	1,011
Cost-of-Living Adjustment (percent)	5.8
Resource Limits (dollars)	
Individual	2,000
Couple	3,000
Monthly Income Exclusions (dollars)	
Earned Income [a]	65
Unearned Income	20
Substantial Gainful Activity (SGA) Level for the Nonblind Disabled (dollars)	980

a. The earned income exclusion consists of the first $65 of monthly earnings, plus one-half of remaining earnings.

Social Security Administration
Office of Retirement and Disability Policy
Office of Research, Evaluation, and Statistics
500 E Street, SW, 8th Floor
Washington, DC 20254

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